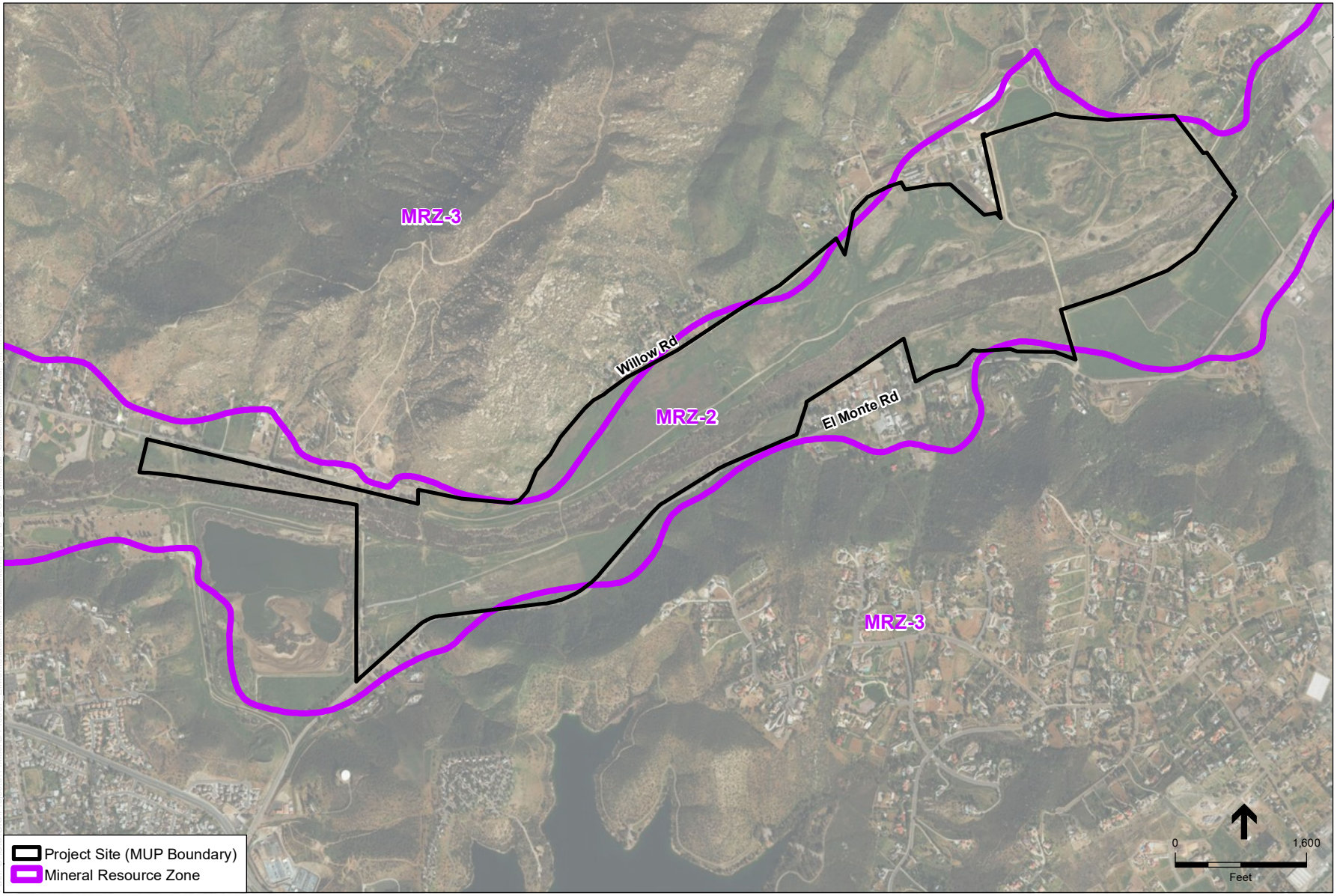



SOURCE: ESRI; EnviroMine; The Altum Group; Chang Consultants; ESA; SanGIS

El Monte Sand Mining Project . 140957

**Figure 1.9-3**

DOC Mineral Classification

**Mineral Commodity**

Construction aggregate

**Surface Mining Initiation Date**

March 1, 2019

**Proposed Closure Date**

January 31, 2035. Operations may continue beyond the proposed termination date if required to fully exhaust permitted volumes. This would require a time extension to the Major Use Permit and would be subject to approval by the County Planning Commission.

**Total Anticipated Production**

12.5 million tons

**Maximum Anticipated Depth of Surface Mining**

400 feet AMSL (approximately 36 to 41 feet bgs)

## 2.2 Operational Characteristics

Operations in the RP area would extract, process, and market aggregate using conventional earth moving and processing equipment. The proposed project would extract approximately 12.5 million tons of PCC-grade construction sand and gravel (aggregate) over a 12-year period, subject to market conditions. . The Plot Plan for the extractive operations is presented as Attachment B - Plot Plan. Table 1 outlines estimated mining dates, duration, and acreages.

**Table 1. Acres Mined & Volumes**

| Mining Phase | Area Affected by Mining Operations (acres)* | Mining Duration (years) | Mining Initiation Date (est.) | Mining Completion Date (est.) | Reclamation Completion Date (est.) |
|---|---|---|---|---|---|
| 1 | 93 | 4 | 2019 | 2023 | 2027 |
| 2 | 52 | 3 | 2023 | 2026 | 2030 |
| 3 | 48 | 3 | 2026 | 2029 | 2033 |
| 4 | 50 | 2 | 2029 | 2031 | 2035 |
| Total | 243 | 12 | - | - | - |

*rounded to nearest acre

## 2.3 Topsoil Removal

The end use of the proposed project would be open space with recreational trail easements. Materials in the area are very sandy with depth and very similar to the existing topsoil. Some topsoil would be salvaged from the disturbed area and stored in berms around the pit and at the entrance to the site. The majority of materials would be utilized as fill or sold. Topsoil material stored in the berms would be mixed with wash fines and used as a final cover on areas that have reached final grade.

The topsoil within the plan boundary is known to be heavily infused with a massive, subterranean seed bank containing the seeds of the noxious, non-native, invasive species. These are not desirable as end-product plants. Aggressive weed eradication is an important objective as the pit develops and during reclamation. As a result, any re-applied top dressing material would likely require aggressive weed control in order to meet the revegetation goals of the proposed project.

## 2.4 Extraction and Phasing

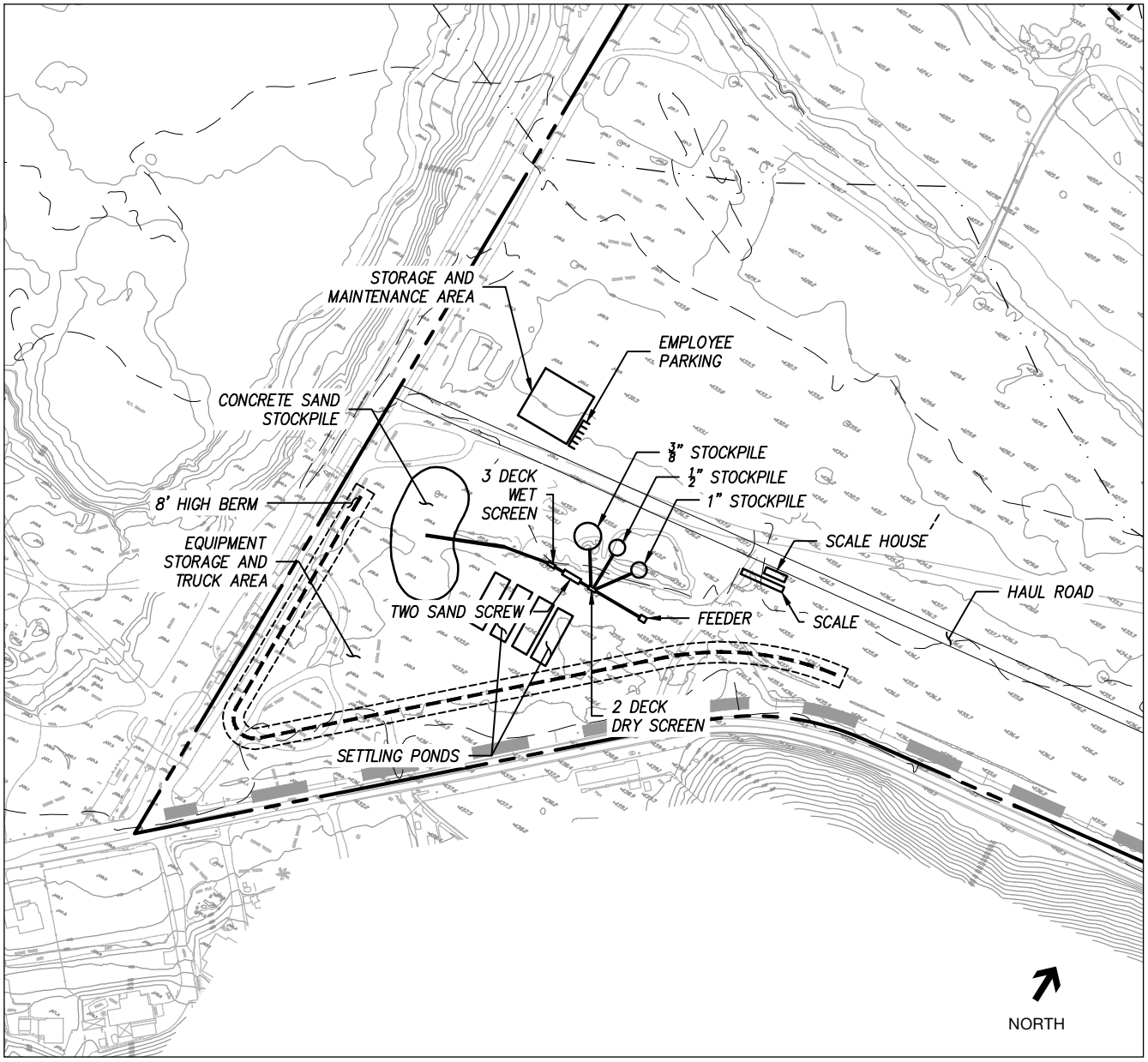
### 2.4.1 Mine Phases

Mining operations would occur in four (4) overlapping phases which would progress from east to west. The precise location and timing of mining and reclamation is subject to market demand, variations in geologic conditions encountered in the field, and technological advancements in the mining process. Each phase would include vegetation removal, topsoil salvaging, resource extraction and reclamation. Concurrent reclamation would occur with mining where practicable on areas that have achieved final contours. Final reclamation of the RP area would be completed in Phase 4 and during a Final Reclamation phase. It is anticipated that all four phases of mining and final reclamation would be completed in approximately 16 years. Sheet 2 in Attachment B shows the locations of each phase.

Operations would begin with the excavation of the Plant Site #1, located north of the channel in Phase 1. Initial excavation would establish a pad for the processing plant approximately 10 feet below the existing ground surface (bgs) located in the southwestern and northeastern segment of the project excavation area. A processing plant would be constructed in the southwestern area of the project site and remain at this location during all 4 phases of the project. A second mobile processing plant would be constructed in the northeastern segment of the excavation area, and would move from east to west during mining. Earthen berms would be constructed around the top sides of the plant area to screen the equipment and operation from public view. Temporary power lines and the processing plant equipment would also be installed. The processing plant is portable and would move to a variety of locations (east to west) as operations proceed (Figure 2.4-1).

A two-lane, onsite access road, which would connect to the haul road from El Monte Road to the location of the processing plant, would be excavated to approximately 10 feet bgs to accommodate over-the-road truck access to the processing plant. Initially, the processing pad would be located north of the river channel near the eastern excavation boundary and would be moved westward as the mining phases advance. As mining progresses, the previous plant area and access road would be consumed by removal of materials.

Initial segments of the planned trail system would be established during the first mining phase within the setback areas north and south of the area to be disturbed by the operation (see Attachment B). The remainder of the planned trail system would be installed after Phase 4 when mining extraction is complete. A three-strand, barbed wire fence and an earthen berm would separate the temporary trails from the operation (see Attachment B). Once installation of the trail system is complete, split-rail fencing and signing would be installed to keep users on the trails.




SOURCE: Environmine

El Monte Sand Mining Project . 140957

**Figure 2.4-1**
Processing Pad Area

All plans including the Reclamation Plan and Revegetation Plan (ESA 2018a) have been coordinated regarding the proposed trail network. As previously stated, the project applicant coordinated with the County Department of Planning and Development Services (PDS) to revise the proposed trail system configuration. The trail system, which has been analyzed as permanent impacts, has been accounted for and excluded from the planned reclamation revegetation areas and habitat mitigation areas. In addition, wood split-rail fence is proposed for the trail system to keep users on the trails and to prevent unauthorized access and impacts to habitat revegetation and restoration areas.

As mining progresses, a grade control structure (drop structure) would be constructed across the San Diego River floodway approximately 300 feet west of Dairy Road to prevent headward channel erosion during periods of water flow for a 4-year duration. Mining would continue and progress in a series of westerly advancing phases (1-4) and a meandering, low flow channel would be developed within the pit floor as part of the final contour. This channel would have a westward gradient and direct drainage from local runoff.

Wash fines (silt and clay sized particles) from the plant are expected to be approximately 13 percent of the washed material and would be collected in a series of earthen basins near the wash plant. These basins would be used to protect surface water quality and to recycle the process water through the settling of silts and clays (wash fines). The basins would also be used to collect local runoff which may be transporting earthen solids. These basins would be cleaned occasionally by removing the sediment collected.

Initially, the collected wash fines would be used to fill in the dry depression, previously excavated as a golf course pond east of Dairy Road and the extraction area. This approximately 12.8-acre depression would be backfilled with about 450,000 tons of wash fines as part of the project. Fill would be transported to the golf course pond area by truck or pumped using a slurry pipe. If transported by truck, the excavated overburden/topsoil removed would be placed in short berms near the basins parallel to the prevailing wind direction for dewatering prior to being sold or used as fill. Fugitive dust control measures for these stockpiles would include surface watering, use of wind barriers and if necessary, covering with polyethylene tarps. If a stockpile is not moved within six months, it would be revegetated with an erosion control seed mix using native species.

After filling the depression, wash fines material would be sold as a soil amendment or used as cover on the areas to be reclaimed. Once spread these fines would be mixed with available topsoil and incorporated into the surface by ripping or a disc. These settling basins would be moved westward in conjunction with the plant relocation.

Fill materials in depression would be spread in near-horizontal layers, approximately 8 inches thick. Thicker lifts may be approved by the geotechnical engineer if testing indicates that the grading procedures are adequate to achieve the required compaction. Each lift would be spread evenly, thoroughly mixed during spreading to attain uniformity of the material and moisture in each layer, brought to near optimum moisture content and compacted to a minimum relative compaction of 90 percent.

A maintenance program to control weeds on un-reclaimed disturbed ground would be established and implemented at the start of the mining process. The purpose of this effort is to prevent weed infestation of areas that are to be reclaimed in the future. This program would continue during the revegetation and monitoring periods of the project.

Reclamation and habitat mitigation restoration would be completed as final reclaimed surfaces are established. All temporary impact areas not specified for habitat mitigation restoration would be subject to reclamation revegetation. Within the temporary impact area of the mining phases totaling 226.40 acres, 114.46 acres are specified for habitat mitigation for impacts to sensitive habitats (which includes mitigation for a 0.18-acre temporary impact to disturbed riparian scrub in 2005 from the previously approved golf course project which was halted) and the remainder, 111.94 acres, are specified for reclamation revegetation. Revegetation for the purpose of habitat restoration and mitigation is provided in the Conceptual Revegetation Plan (ESA 2018a) and is not part of this Reclamation Plan; however, it is appropriate to note that habitat mitigation restoration includes more stringent performance standards than reclamation revegetation and therefore meets and exceeds reclamation standards. In Phase 4 (final mine phase), the western portion of the project would be extracted, all equipment would be removed from the property, and the final area of mining related disturbance would be reclaimed.

At the start of each mining phase, the mining area boundary would be established through land surveying that would identify the top of the cut at a minimum of 150 feet from El Monte Road and Willow Road. Other setbacks from areas not to be disturbed would also be established as needed. A bulldozer or front-end loader would begin removing vegetation and other deleterious debris from areas to be excavated. Tree stumps and roots would be removed. Clearing and grubbing would extend to the limits of the proposed excavation and fill areas.

Phase 1

Phase 1 would include site development for the construction of the drop structure, access road, processing area pad, settling basins and screening berms. Following these initial site development activities, extractive operations would commence at the far eastern portion of the mining area and include an area of approximately 93 acres, including the dry depressions, previously excavated as golf course ponds.

Initial extractive operations would remove all materials from the surface, generally in an east to west direction, to approximately 9-19 feet above the water table (which is currently approximately 40–50 ft. bgs) with an excavator or wheeled front-end loaders. Large front-end loaders would transport the mined material to the processing plant where it would be washed if necessary, stockpiled and loaded for delivery. A low flow channel would be constructed in the pit floor as part of the final contours to direct any localized runoff events to the west. This channel would be approximately 5 feet deep, have a 25 feet wide bottom and have 4:1 side slopes.

As Phase 1 comes to completion the plant would be moved to a new location along the haul road. This process would repeat a number times during the project life in order to maintain the plant in proximity to the active excavation area.

Phase 2

Phase 2 would continue the identical extraction process in an east to west direction on the adjacent area of approximately 52 acres. The processing plant area and access road would be moved westward. This phase is anticipated to last approximately 3 years. Excavation of the materials would continue and proceed westward in the same fashion as utilized in Phase 1. Total depth of the excavation is expected to be approximately 30 feet. Excavated materials would be loaded directly into the processing plant by a wheeled front-end loader. Reclamation (and also implementation of habitat mitigation) of the Phase 1 area would begin as the final land forms are established. Reclamation would include establishment of all final slopes, placement of final cover, revegetation, weed control, and monitoring.

Phase 3

The excavation process in Phase 3 would continue in a similar nature as in Phase 2 on approximately 48 acres of the valley, west of the Phase 2 area. Phase 3 is anticipated to last approximately 3 years and develop using the same procedure as the two previous phases. During Phase 3, the processing plant would be moved south of the existing channel. At the same time, reclamation (and also implementation of habitat mitigation) of the Phase 2 disturbance would begin, and monitoring of the Phase 1 reclamation would continue.

Phase 4

Phase 4 would continue from Phase 3 on approximately 50 acres in the western portion of the project site. Any remaining reserves within the RP area would be extracted during Phase 4, allowing for full resource depletion. Following the cessation of extractive operations (approximately 2 years), equipment and temporary structures would be removed from the project site. Remaining access road segments and operational related disturbance would be scarified and graded to the final reclamation contours and then revegetated. Reclamation (and also implementation of habitat mitigation) of Phase 3 would begin and monitoring of Phase 2 would continue as Phase 4 commences.

### 2.4.2 Reclamation Specifics

Reclamation (and habitat mitigation) would be completed for each phase after the completion of mining in that specific area. For example, as mining progresses into the Phase 2 area, final reclamation would begin in the Phase 1 area. Final landforms would be established and the area planted with the native species identified in Section 3.0. This procedure would result in approximately 47 percent of the site (i.e., 226.4 acres within the mining phases of the total of 479.5 acres onsite) being revegetated with native species. And approximately 50 percent of the existing non-native habitats would be revegetated with native species via reclamation and habitat mitigation (i.e., of the total 452.6 acres of disturbed lands and non-native habitats onsite, 224 acres would be revegetated with native species in the mining phases) by the time extractive operations are complete, in addition to the enhancement of 51 acres of disturbed habitat (i.e., 43.8 acres of tamarisk scrub and 7.2 acres of non-native grassland as

part of the overall mitigation enhancement of 64.16 acres) outside of the mining phases.

Reclamation is expected to continue for up to 4 years after the cessation of mining. Work completed during this period would include removal of all equipment, final grading, removal of roads, preparation of seed beds and planting. Monitoring of the revegetation effort and weed control of all the reclaimed areas would continue to be implemented. Erosion and sediment control would also be monitored and repaired if necessary.

## 2.5 Equipment and Personnel

Mining and processing equipment would be on site over the duration of the project. Approximately eight individuals would be employed onsite. The location of processing equipment, the storage yard, vehicle parking area, and maintenance area, as well as the storage of materials, equipment, and any other materials would be situated in accordance with the applicable sections of the County Zoning Ordinance. No materials, vehicles, or equipment would be stored in the floodway that could pose a health or safety hazard to humans or property pursuant to Section 5472 of the Zoning Ordinance.

Open pit excavation would be completed with front-end loaders and/or excavator. After mining, the materials are transported to the processing plant by front-end loader, conveyor and occasionally an off-road haul truck.

The processing of sand and gravel, to produce PCC aggregates, involves the use of screens, wash circuits, classifiers to segregate materials by particle size, and stockpile materials for loading.

After transport to the processing plant, the sand and gravel raw feed is stockpiled or emptied directly into a hopper, covered with a "grizzly" of parallel bars to screen out large cobbles and rock. From the hopper, the material is moved to the screens by belt conveyors.

Screening separates the sand and gravel into different size ranges. Water is sprayed onto the material throughout the screening process for dust control and to wash any impurities (silt and clay-sized particles) from the material. After screening, the sized-sands and gravel is transported to a stockpile.

A radial stacker/conveyor would be used to stockpile the sized-material into individual stockpiles. Processed material would be ground loaded into over-the-road haul trucks using a front-end loader and transported off site.

Processed material would be stockpiled onsite. Raw material would also be stockpiled to stay in equilibrium with processing capabilities. Stockpile size would depend on production and market demand.

All equipment associated with the mining operations would be located at the processing plant pad. As many as 15 over-the-highway trucks may be parked each day near the entrance to the site (Figure 2.5-2). This parking area would be on the interior of the earthen berm in order to screen the parked vehicles from public view. The processing area would be located initially near the eastern end of the project and progress to the west in advance of the pit. All equipment, structures and the road leading to the processing yard would be removed prior to final reclamation of the property.

## 2.6 Waste

All excavated material not destined for the commercial market would be utilized for reclamation purposes. Domestic refuse would be collected in approved trash bins and hauled to the nearest approved landfill for disposal by a commercial service. Equipment would be maintained onsite and all used oils, fuels and solvents collected in accordance with the Department of Toxic Substances Control regulations and picked up by an approved hauler for recycling.

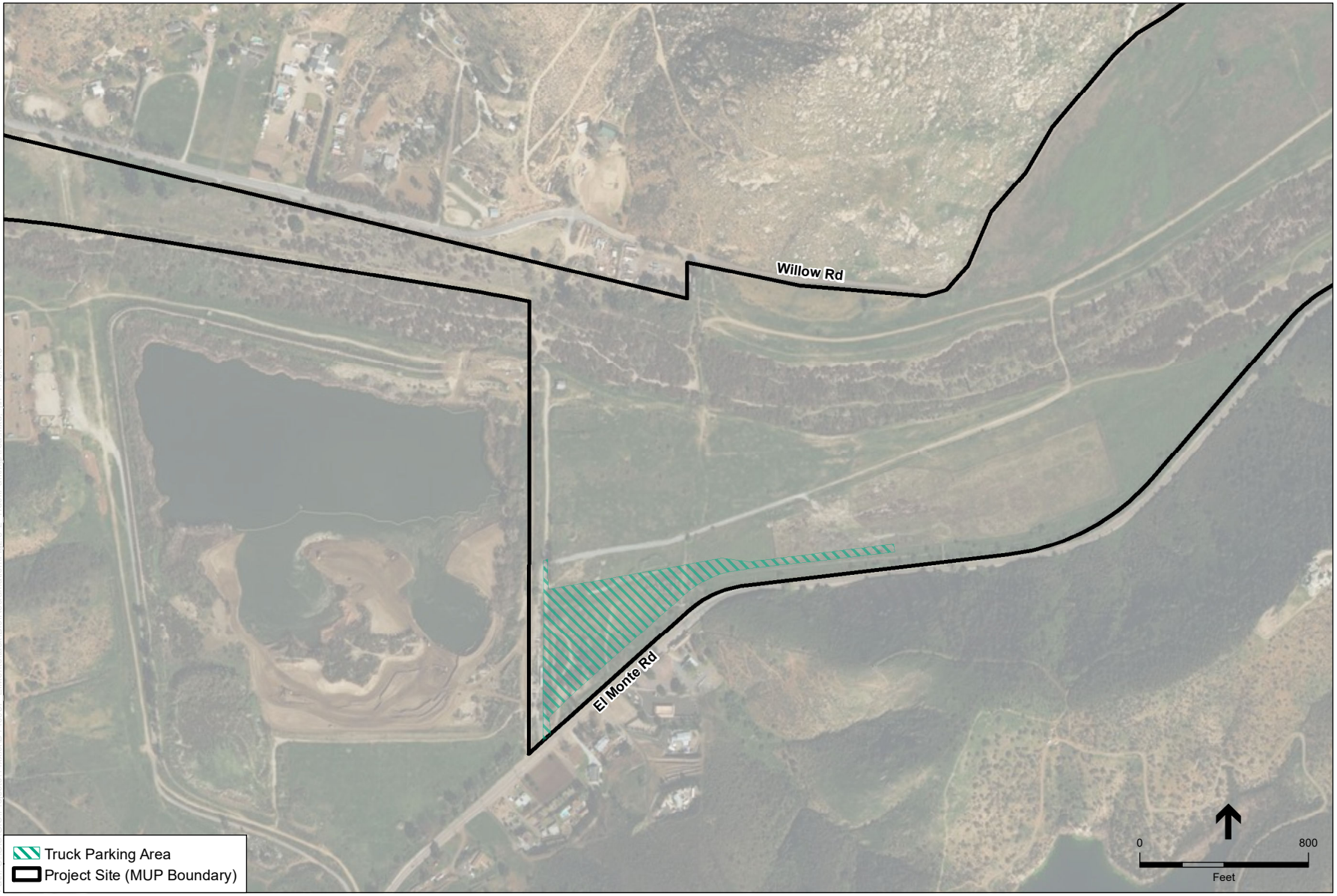
## 2.7 Traffic

Processed and sorted materials would be loaded directly onto over-the-road haul trucks from stockpiles located in the plant area. The loaded trucks would be weighed to comply with state regulations and sprayed with water to minimize dust. Watering of the load would occur at the scales.

Haul trucks would approach the project site from I-8 on Lake Jennings Park Road, or SR-67 on Maple View Street. Trucks would enter the project site at the staging/access point on El Monte Road and proceed to the processing area over the onsite access road. When not in active service, approximately 15 trucks would be stored onsite in a designated parking area. All other trucks would be parked off-site at individual trucking company storage yards, arrive at the site empty, and leave with a full load. Most vehicle maintenance and repair would be conducted off-site. Maintenance and repairs of mining and construction equipment would be completed onsite in the processing area.

Sand extraction and trucking operations would be conducted approximately 306 days per year between the hours of 7:00 a.m. to 5:00 p.m. Monday through Friday and from 7:00 am to 1:00 pm on Saturdays with the majority of the truck activity occurring in the morning hours. Approximately 157 trucks would enter and exit the site daily (Table 2). Approximately 14 other traffic (vendor or light vehicle) trips (one way) would be performed per day (Table 3).

Loaded trucks would utilize El Monte Road to Lake Jennings Park Road, to either Highway 8 or Maple View Street to Highway 67, to deliver the construction aggregate to local markets. Seasonal and daily peaking factors were used to generate conservative (worst-case-scenario) estimates; actual truck trips would be dependent on market conditions.




SOURCE: ESRI; EnviroMine; The Altum Group; Chang Consultants; ESA; SanGIS

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**Figure 2.5-2**

Truck Parking Area

### 2.7.1 Truck Trips

**Table 2. Daily Truck Trips**

| End Product | % of Total | Quantity | t/load | Loads/day | Round Trips |
|---|---|---|---|---|---|
| Aggregate | 100 | 1,100,000 tons | 27 | 157 | 314 |
| Total | | 1,100,000 tons | | 157 | 314 |

* A cubic yard of concrete contains 1.5 tons of aggregate.

**Other Vehicle Trips**

**Table 3. Other Traffic Trips**

| Trip Type | One way trips/day | Round Trips/day |
|---|---|---|
| Light Vehicle Trips | 12 | 24 |
| Vendor Trips[1] | 2 | 4 |

[1]Vendor trips include fuel, supplies, service companies, etc.

## 2.8 Storm Water and Erosion Control

### 2.8.1 Erosion Control

Erosion control for the project would be accomplished through a combination of permanent and temporary structures. Permanent structures include the drop structure to prevent head cutting of the channel during infrequent, high flow events and appropriate slopes, terraces, ditches and down drains where needed. This section addresses temporary erosion control measures that would be used on the active, disturbed areas of the project.

A Notice of Intent (NOI) and Storm Water Pollution Prevention Plan (SWPPP) would be prepared and submitted to the State Water Resources Board for the project site prior to construction. It would reflect the conditions expected to be encountered on the project site. Industrial Best Management Practices (BMPs) and post-extraction BMPs would be designed to protect water quality and be in compliance with CCR section 3706, the Federal Clean Water Act, and the Porter–Cologne Water Quality Control Act. A copy of the SWPPP would also be maintained at the project site. The SWPPP would include an erosion control plan prepared per State and/or County guidelines

The SWPPP and erosion control plan would define BMPs to prevent erosion and the discharge of sediment to surface waters. BMPs would be specified for soil stabilization, sediment control, vehicle track out, and transport of soil by wind (e.g. dust control and wind erosion BMPs). Typical soil stabilization BMPs include preservation of existing vegetation to the maximum extent practicable, mulch, hydroseeding, soil binders, geotextiles, silt fences, fiber roles, gravel bag berms, stockpile management, lining of drainage ditches and/or velocity control structures if needed.

Vehicle track out and dust-related BMPs may include paved or stabilized roadway surfaces, tire washes, use of grates at vehicle entrances or exits, soil stabilizers, regular street sweeping, and water spray. The final plan may incorporate these or additional BMPs as appropriate on the site.

In compliance with CCR section 3710, additional BMPs that would be implemented to protect water quality from pollutants, include, but are not limited to, ensuring fueling would occur in a designated staging area where spills could be contained, storing other hydrocarbon compounds, such as lubricants for equipment, in small quantities at the staging areas in proper containment, and collecting and transporting waste oil generated at the project site off-site for disposal by properly trained and licensed personnel. In addition, proper material handling and storage BMPs would be defined in and enforced through the SWPPP.

Erosion and sedimentation control measures, at a minimum, would be designed for the 20-year 1-hour storm event in accordance with SMARA guidelines. These measures shall be implemented throughout the project life to control surface runoff and drainage for the protection of surrounding land and water resources. Silt fencing, earthen dikes or other erosion control measures would be installed to ensure the overall direction of flow toward the pit or small settling basins. These treatments would also be used to control erosion and sedimentation in areas with the potential for offsite transport of sediment (Attachment A - Hydraulic Analyses and CEQA Drainage Study). These erosion control measures would be maintained until vegetation becomes established to serve as an effective storm water and erosion control measure.

Slopes and perimeter berms would be revegetated with native species common to the Coastal Sage Scrub or Southern Willow Scrub vegetation communities depending on location on the site. Successful revegetation would minimize the potential for erosion and sedimentation. If necessary, straw wattles or silt fencing may be used on slopes to help control erosion during the revegetation process. All areas disturbed by the project would be revegetated as soon as feasible.

Erosion control measures would be implemented in accordance with the following criteria:

**Class 1**: No soil loss or erosion; topsoil layer intact; well-dispersed accumulation of litter from past year's growth plus smaller amounts of older litter.

NO ACTION NECESSARY

**Class 2**: Soil movement slight and difficult to recognize; small deposits of soil in form of fans or cones at end of small gullies or fills, or as accumulations back of plant crowns or behind litter; litter not well dispersed or no accumulation from past year's growth.

ACTION: Monitor to see if any further deterioration and action is required.

**Class 3**: Soil movement or loss more noticeable; topsoil loss evident, with some plants on pedestals or in hummocks; rill marks evident, poorly dispersed litter and bare spots not protected by litter.

ACTION: Any rills or gullies in excess of 8 square inches in cross sectional area and more than 10 linear feet located on finished slopes shall be arrested using straw mulch and hay bales

**Class 4**: Soil movement and loss readily recognizable; topsoil remnants with vertical sides and exposed plant roots; roots frequently exposed; litter in relatively small amounts and washed into erosion protected patches.

ACTION: Replant via hydroseeding or spread seed and cover with straw mulch. Re-grade, compact with equipment and install silt fences if necessary.

### 2.8.2 Potential Impacts to Groundwater

**Groundwater in Storage**

As detailed in the Groundwater Evaluation Technical Memorandum included in Attachment C, aquifer watershed boundaries are generally assumed to be consistent with surface topographic boundaries within El Monte Valley. The project site is part of the larger El Monte Basin watershed (tributary watershed) that begins at the toe of the El Capitan dam on the east and exits to the larger San Diego River watershed to the west.

Sparse groundwater level records have been maintained in the tributary watershed. According to the Technical Memorandum, inspection of the El Monte #14 hydrograph reveals that the groundwater rose to an elevation of roughly 446 feet above mean sea level, or 6 feet below ground surface, in 1984, 1994, 1995, and 1996. This elevation is roughly equal to the ground surface elevation within the San Diego River at that cross-section, indicating the groundwater basin was essentially full (AECOM 2018).

Current annual groundwater consumption within the study area includes a combination of residential water usage; Helix Water District pumping; City of San Diego pumping; County of San Diego pumping for El Monte Regional Park; and agricultural irrigation, transpiration of groundwater-dependent vegetation, and surface water evaporation in Hanson Pond. Annual groundwater consumption within the tributary watershed the last 40 years has fluctuated based on area wide water levels affecting pond evaporation and phreatophyte demand, gradual buildout of the residential water demand, and changes in Helix Water District and City of San Diego pumping. Total groundwater demands over the last 40 years have ranged from approximately 1,240 afy to approximately 2,300 afy with a 40-year average annual groundwater demand of approximately 1,700 afy.

The surface mining and resultant pit will remove material that would have otherwise had the potential to store groundwater. Under current conditions groundwater levels would be below the bottom of the pit, in which case, the excavated material would not affect groundwater storage. In the event of a dam overtopping, the water table may rise above the pit bottom and a pond would form. The quantity of water stored as surface water (approximately 1200 acre-feet) would be greater than if it was stored as groundwater. However, this increase in available storage would be subject to evaporation and induce groundwater inflow into the pit.

- A total of approximately 26,800 acre-feet of groundwater is thought to be in storage in the alluvium, residuum, and fractured rock in the study area.
- Under current conditions and buildout (no project) of the 40-year evaluation period (1976–2015), the minimum amount of groundwater in storage after the drought conditions of the mid-1970s is about 72% in 1991/1992; over the last 4 years

(2011–2015), the minimum amount of groundwater in storage is about 77% in 2014–2015.

- Proposed project extraction of approximately 13.5 million tons of material would result in the loss of about 600 acre-feet of groundwater storage capacity.
- Under future conditions and buildout (with an unmitigated project) of the 40-year evaluation period (with a repeat of the climatic conditions from 1976–2015), the minimum amount of groundwater in storage after the drought conditions similar to those in the mid-1970s is about 65% in 2006/2007; over the last 4 years of the water balance, the minimum amount of groundwater in storage is about 70% in the last year of the water balance.
- Under future conditions and buildout (with a mitigated project) of the 40-year evaluation period (with a repeat of the climatic conditions from 1976–2015), the minimum amount of groundwater in storage after the drought conditions similar to conditions in the mid-1970s is about 71% in 2003/2004; over the last 4 years, the minimum amount of groundwater in storage is about 79% in the last year of the water balance.

**Water Quality**

In August 2016, AECOM collected water samples from three wells to establish a water quality baseline. In addition, water quality data was obtained from one of the El Monte Regional Park supply wells. These samples were analyzed for nitrate (as nitrogen [N]) and total dissolved solids (TDS) (Attachment C). Due to the findings of the Groundwater Evaluation Technical Memorandum (Attachment C), water quality of the aquifer shall not be diminished (AECOM 2018).

**Water Balance**

Sources of groundwater recharge include precipitation, runoff, soil moisture, El Capitan Dam periodic overtopping, and streambed infiltration. The average annual rainfall for the project site has been about 16 inches per year over the last 40 years, and has ranged between 5 and 31 inches (AECOM 2018). As stated above, the most recent overtopping event was in 1993 and thus, groundwater levels have been declining thereafter for the past 15 years. Based on this declining trend, groundwater levels have declined by approximately 1.7 feet per year (ft/yr) on average, with existing levels being about 40 to 45 feet below ground surface (bgs) (AECOM 2018).

The following water balance evaluation is based on the draft Groundwater Evaluation Technical Memorandum (Attachment C) prepared by AECOM in September 2017.

- Under current conditions (no project), the total groundwater recharge over the last 40 years was estimated to range from about 140 afy to about 8,600 afy with a 40-year average annual groundwater recharge about 1,800 afy.
- Under future conditions, with a similar rainfall pattern as the last 40 years, the total groundwater recharge is estimated to range from about 160 afy to about 9,300 afy with a 40-year average annual groundwater recharge about 2,100 afy.
- The potential for a reduction to 50 percent or more of the basin storage is analyzed based upon the “water budget” of the tributary watershed (i.e., the amount of

watering entering the groundwater basin and the amount of water leaving the groundwater basin) with implementation of the proposed project.

- While the proposed project would not use on-site surface or groundwater, effects from the proposed project would result in changes to the "water budget" as a result of three factors: (1) stormwater runoff from precipitation events that flow into the excavation pit, (2) potential evapotranspiration losses if exposed water stands within the excavation pit, and (3) potential changes in the amount of evapotranspiration (ET) of on-site groundwater dependent habitat, which is comprised of phreatophytes.
- Once the excavation pit has been fully restored as revegetated open space per the Reclamation Plan and Revegetation Plan, approximately 368 afy is anticipated to be retained and stored in the groundwater basin as an addition.
- Based on periodic overtopping events from the El Capitan Reservoir that would result in temporary standing water in the excavation pit, evaporation losses from the standing water are estimated at 4.66 afy per year of exposed water as a subtraction.
- ET rates of phreatophytic habitats were compared against the predicted basin-wide groundwater elevation each year (ranging from 15-20 feet to 40-45 feet below the bottom of the excavation pit), which would remove 325 to 366 afy, depending on the groundwater levels, from ET of on-site groundwater dependent habitat.
- When combining all three factors, the proposed project would be considered a net benefit to the groundwater basin as the amount of water estimated to infiltrate the groundwater basin through capture of stormwater runoff would be greater than the amount of water estimated to be lost through evaporation and ET. In addition, the planned removal of exotic species outside of the mining phases (but within the MUP boundary) for habitat mitigation including the deep rooted species, tamarisk (*Tamarix ramosissima*), would equal a net savings of approximately 71 afy, which provides an additional project benefit.

For these reasons, the proposed project would not result in a 50 percent reduction of groundwater in storage and would provide environmental benefits to the tributary watershed. Thus, based on the above stated factors, the storage capacity, water quality, and recharge potential of the groundwater aquifer shall not be diminished.

**Recommendations**

- Since open wells could provide a conduit for groundwater contamination and could present a safety hazard, existing (and any future) onsite wells should be secured with locking covers. Wells that would not be used in the future should be properly abandoned.

### 2.8.3 In-Stream Mine Impacts

In-stream surface mining operations shall be conducted in compliance with Section 1600 et seq. of the California Fish and Game Code, section 404 of the Clean Water Act, and Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403). Surface mining and reclamation activities shall be conducted to protect on-site and downstream beneficial uses of water in accordance with the Porter-Cologne 47 Water

Quality Control Act, Water Code section 13000, et seq., and the Federal Clean Water Act, 33 U.S.C. section 1251, et seq.

Any federal or state jurisdictional features would require appropriate permits from the applicable regulatory agencies. Jurisdictional features would be managed in accordance with the requirements of the applicable permits from the agencies to minimize and avoid impacts to the resources, and mitigate for impacts where appropriate and required.

**Waters of the United States**

Waters of the United States that are subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE) include the ephemeral channel (Ordinary High Water Mark: OHWM limits) within the San Diego River floodplain. The San Diego River, a non-RPW through this portion of the project site, functions as a riverine and palustrine system that conveys water flow downstream toward the Pacific Ocean, a Traditional Navigable Waters (TNW). The San Diego River within the project site is mapped as palustrine by the USFWS Wetlands Mapper; however, based on data collected during the field survey, the river contains riparian habitat but lacks hydric soils to be considered a federally protected wetland. Additionally, no hydric soils are mapped for the entire San Diego River. Therefore, a total of 1.66 acres of non-wetland waters of the United States (ephemeral channel), subject to USACE jurisdiction under Section 404 of the Clean Water Act, occurs in the project boundary. Additionally, the ponded area in the northeastern portion of the project boundary contains all three wetland parameters to be considered a federally protected wetland. Therefore, 0.39 acre of wetland waters of the United States subject to USACE jurisdiction occur in the project boundary. The total waters of the United States delineated on the project boundary is 2.05 acres. Waters of the U.S., including wetlands would be avoided to them maximum extent practicable. Impacts to Waters of the U.S. require the submission of a section 404 permit application, pursuant to Section 401 of the Clean Water Act.

**Waters of the State**

The features described above as subject to USACE's jurisdiction also potentially fall under the authority of the San Diego Regional Water Control Board (RWQCB) in accordance with Section 401 of the CWA. Therefore, 1.66 acres of non-wetland waters of the State and 0.39 acre of wetland waters of the State are subject to RWQCB jurisdiction within the project site, for a total of 2.05 acres of waters of the State. Impacts to Waters of the State require the submission of a Water Quality Certification application to the RWQCB, pursuant to Section 401 of the Clean Water Act.

**CDFW Jurisdiction**

Areas potentially under CDFW jurisdiction include the San Diego River floodplain and associated riparian habitat (tamarisk scrub), as well as the ponded area in the northeast portion of the project boundary. Based on the data collected during the delineation survey, the ephemeral floodplain of the San Diego River displays evidence of flow, and the outer limits of the tamarisk scrub canopy provide habitat for a number of species. Therefore, the 86.14 acres of the San Diego River within the project site is potentially subject to CDFW jurisdiction. Additionally, the ponded area in the

northeast portion of the project contains surface water at least periodically and associated southern willow scrub vegetation that provides habitat for species. Therefore, the ponded area contains 0.39 acre of wetland habitat subject to CDFW jurisdiction. The total waters and wetlands present on the project boundary, potentially subject to CDFW jurisdiction, is 86.53 acres. Impacts to CDFW jurisdictional streambed and riparian habitat would require the submission of a Streambed Alteration Agreement application to CDFW, pursuant to Section 1600 of the CFGC.

**County of San Diego Wetlands**

Areas potentially considered County of San Diego wetlands and subject to regulation under the County RPO include the 86.14 acres of the San Diego River and associated tamarisk scrub habitat, and the 0.39-acre ponded area in the northeast portion of the project boundary. These areas contain a dominance of hydrophytes and the presence of a perennial stream, and a total 86.53 acres of County of San Diego wetlands occur in the project boundary.

**Potential Impacts to Jurisdictional Resources**

Table 4 provides a summary of the area of potential direct impacts that would occur to jurisdictional resources from project implementation within the 479.5-acre proposed project area. Mining activities would temporarily and permanently affect jurisdictional non-wetland waters and/or riparian habitats as defined by USACE, RWQCB, CDFW, and the County of San Diego through removal of vegetation, grading, placement of temporary structures, mineral extraction, and placement of fill to create a bench around the mined pit. The proposed project would result in 0.01 acre of permanent impacts and 0.35 acre of temporary impacts to non-wetland waters of the U.S./State (USACE/RWQCB); 0.36-acre total. The proposed project would also result in 39.18 acres of temporary impacts and 2.28 acres of permanent impacts to State waters and associated riparian habitat, and County of San Diego wetlands; 41.46 acres total. In permitting projects, the USACE (and CDFW) seeks to meet the goal of no net loss of functions and values of wetlands and often other waters of the United States and would require at a minimum the restoration of disturbed areas to original contours and a revegetation program to restore jurisdictional areas disturbed by the proposed project. While San Diego County defined wetlands would be impacted by the proposed project, no federal or state protected wetlands would be impacted.

**Table 4. Impacts to Jurisdictional Resources**

| Jurisdiction | Temporary Impacts | Permanent Impacts | Total Impacts |
|---|---|---|---|
| Federal (USACE)/State (RWQCB) | 0.35 | 0.01 | 0.36 |
| State (CDFW)/County (San Diego) | 39.18 | 2.28 | 41.46 |
| Total | 39.53 | 2.29 | 41.82 |

**MM-BIO10: Jurisdictional resources.** Direct impacts to jurisdictional wetlands and waters shall be mitigated through implementation of the Revegetation Plan (i.e., mitigation plan), resulting in habitat restoration of higher quality than the habitat that

is being impacted. Impacts to riparian resources would total 41.46 acres, with a required mitigation ration of 3:1, required mitigation for riparian resources shall be 124.38 acres (Table 5). Impacts to non-vegetated streambed/non-wetland waters would total 0.36 acre, with a mitigation ratio of 1:1, required mitigation shall be 0.36 acre. No USACE-defined wetlands would be impacted by the project. Mitigation ratios are based on the requirements in the County's Guidelines for Determining Significance (County 2010) for areas outside of the MSCP (Table 6).

**Table 5. Mitigation for Impacts to Jurisdictional Resources (acres)**

| Jurisdictional Resource | Impacts | Mitigation Ratio[1] | Required Mitigation |
|---|---|---|---|
| Riparian (CDFW and County) | 41.46 | 3:1 | 124.38 |
| Unvegetated Streambed/Non-Wetland Waters (CDFW and USACE) | 0.36 | 1:1 | 0.36 |

[1]Wetland mitigation shall include a minimum 1:1 creation or restoration component, while enhancement of existing habitats may be used to make up the remaining requirements.

**Analysis of Impacts to Jurisdictional Resources**

The *County of San Diego Guidelines for Determining Significance for Biological Resources* was used to evaluate adverse environmental effects the project may have on jurisdictional wetlands and waterways. *The project would have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.* A total of 0.36 acre of non-wetland waters of the United States would be affected by the project. However, no project impacts would occur to federally-defined wetlands and the area would be reclaimed and revegetated via habitat mitigation restoration with higher quality self-sustaining wetlands and riparian habitats. No federal vegetated wetlands occur on-site and therefore the project would not result in impacts to federal wetlands. due to draw down of the groundwater table. The project would not result in impacts to federal wetlands due to the absence of an adequate protective wetland buffer.

## 2.9 Utilities

### 2.9.1 Water and Wastewater

**Operational Water**

A water truck is used to water material stockpiles and unpaved areas periodically throughout the day for dust suppression purposes. Other water requirements include surface watering of outgoing loads, dust suppression for the processing equipment material washing and irrigation (if used). Water needs at the site would be provided by a local water district pipeline. Water needs are not permitted to be met by groundwater from on-site well and may not be used from any surface water that may pond within the excavation pit.

Water used to wash the excavated material would be retained in a series of connected settling basins near the plant. Two submersible pumps enclosed in a waterproof casing would feed and circulate the wash water. Of the 203 gallons per minute (gpm) of water used in the washing operation, 90 percent would be continuously reused and recycled. Approximately 25 gpm of continuous water input would be required to make up for the 10 percent lost through evaporation and retention on material.

Mining operations require water for dust control on roads and at the processing plants. Water is also required for washing some of the material as it is processed in the secondary plant. Water usage depends on production volume of material to be washed. Production volume would vary from year-to-year with market demand. A single water truck would be required to control dust at the site. Water required to suppress dust from the mining operations is estimated to require an additional 20 acre feet of water per year. Irrigation, if used, would utilize approximately 12 acre feet per year for a total water use of 100 acre feet per year.

**Sewage Disposal**

Mining operations would utilize portable restrooms provided by a private vendor. The portable restrooms are serviced at appropriate intervals.

**Drinking Water**

Drinking water would be provided by a private vendor.

### 2.9.2 Electricity and Telephone

Electrical power is required for mining and processing operations, which is provided by San Diego Gas & Electric through an overhead transmission line that would enter the site from the south.

Telephone service would be provided by cellular service.

### 2.9.3 Fire and Law Enforcement Services

A fire station operated by the Lakeside Fire Protection District is located at 14008 Highway 8 Business El Cajon, CA, 92021. This station is approximately 2.5 road miles southwest of the project site. Access to the site from the fire station is provided by Lake Jennings Park Road and El Monte Road. A second fire station, also operated by the Fire District, is about the same distance to the west of the project site at 12216 Lakeside Avenue, Lakeside, CA, 92040.

Law enforcement services are provided by the San Diego County Sheriff's Department from the Santee substation.

### 2.9.4 Equipment Fuel

Diesel would be delivered to the site by a private supplier to fill a portable, trailer mounted, tank onsite. This fuel wagon would be utilized to service the onsite mining equipment and would be stored in compliance with all regulations. If gasoline is

needed on the site for small tools, it would be contained in approved, five-gallon fuel cans with a maximum of 10 gallons stored at the site at any time. These containers would be stored in a locked container away from flammable materials. Small trucks and passenger vehicles would utilize local commercial stations for fuel.

### 2.10 Safety and Security

Fencing (3-strand barbed wire) would be installed along the exterior edges of the pit (see Attachment B). This would allow public use of the trail easements in the setback area but restrict public access to the operational areas of the site. The trail easement adjacent to El Monte Road would not be accessible to recreationists during the work week. Signage would be placed along the fence at appropriate intervals warning the public of hazards and restricted access.

A gate would be installed at the ingress/egress roads to restrict public vehicular access. This gate would be closed and locked during periods of non-operation. Signs would be posted at the entrance identifying the name of the operation, permit number and emergency contact information. The site would be patrolled on a regular basis to discourage trespass.

## 3.0 Reclamation and Revegetation

The Reclamation Plan describes reclamation of the extraction area and sets forth standards to assure adequacy of the plan measures. Attachment B - Plot Plan shows the proposed reclaimed landform that would be developed upon resource depletion and final backfilling.

The goals of this Reclamation Plan are to:

1. Maximize the recovery of aggregate in a safe and efficient manner.
2. Return extracted areas to a useful purpose following depletion of natural mineral resource.
3. Restore vegetation through the use of native species.
4. Mitigate, by design, potential environmental impacts on the land that might otherwise be created by extraction.

Resource extraction would lower the existing elevation of the area by approximately 30 feet and create perimeter slopes with a nearly level 20-foot wide bench separated by 3H:1V slopes. Slopes, at maximum 3H:1V overall, would constitute the perimeter of the site. Exterior slopes would be cut to a maximum 3H:1V and would be setback 150 feet from the property limits on the north and south, 300 feet from Dairy Road on the east, and 30 feet on the west.

Following completion of the mining and reclamation activities, the entire site would be reclaimed and revegetated with the exception of recreational trail easements.

## 3.1 Roads

Access to the project site would be through an existing entrance (ingress driveway) located off of El Monte Road approximately 0.5 miles east of the intersection of El Monte Road and Lake Jennings Park Road. The existing access point is located in the north central part of the extraction area and would be retained for post mining use. An egress point from El Monte Road would be installed approximately 0.4 miles east of the ingress driveway. Onsite roads would be reclaimed. Lead Agency approval would be required should the property owner request that specific roads remain in place. Reclaimed roads would be stripped of road base materials, covered with 4 inches of topsoil or wash fines if needed, ripped to relieve compaction, and revegetated by hydroseeding with the Coastal Sage Scrub seed mix. The haul road within the pit would be mined out as part of the mine plan and revegetated with the appropriate seed mix.

## 3.2 Removal of Equipment

All equipment used in the operation is portable and would be removed from the site prior to final reclamation. This includes all loaders, bulldozers, haul trucks, storage containers and water trucks, as well as, the portable processing equipment. The truck scales and office trailer would be removed. Surplus equipment and supplies stored onsite would be moved from the excavation area and transported off-site. All trash and miscellaneous debris would be collected and hauled to an appropriate waste disposal facility.

All existing hazardous materials located onsite shall be disposed of and transported in accordance with all applicable regulations/ordinances. Any wells located on the property shall be destroyed under permit and inspection by Department of Environmental Health. Wells owned by entities other than the operator would be retained at the owner's request.

## 3.3 Slope Grading & Compaction

All slopes would be cut from native materials in compliance with geotechnical recommendations (see attached Geotechnical Report, Attachment D). These recommendations address issues including, but not limited to, compacted fills, fill slope construction, periodic observation of mine benches above working areas, and slope protection, as follows:

- Overall final cut slopes in soil/alluvial materials should be no steeper than 3h:1v up to the maximum proposed height (approx. 30 feet).
- Periodic observations of mine benches above working areas for indications of potential instability during mine operations.
- If engineered fills are needed, the on-site soils and production by products should provide adequate quality fill material provided they are free from organic matter and other deleterious materials.
- Fills should be spread in near-horizontal layers, approximately 8 in. thick. Thicker lifts may be approved by the geotechnical engineer if testing indicates that the grading procedures are adequate to achieve the required compaction. Each lift

should be spread evenly, thoroughly mixed during spreading to attain uniformity of the material and moisture in each layer, brought to near optimum moisture content and compacted to a minimum relative compaction of 90 percent in accordance with ASTM D1557.

- Project slopes should be protected from erosion by establishment of vegetation as soon as possible. Also, slopes should be protected with drainage improvements such as berms and/or levees as necessary to prevent slope erosion.

The bench, cut slopes and pit floor would be continuously developed as the pit progresses to the west using wash fines incorporated with topsoil as a cover material. The bench would consist of a 20-foot wide, relatively flat top at 10 feet below the existing ground surface and 20 feet above the pit floor. Slopes above and below the bench top would be at a 3H:1V gradient (see Figure 3.3-1). The bench surface would slope gently towards the rear of the bench. There would be approximately 20 feet of elevation difference between the surface of the bench and the bottom of the pit. See Attachment B, Plot Plans, for the location of proposed trail easements.

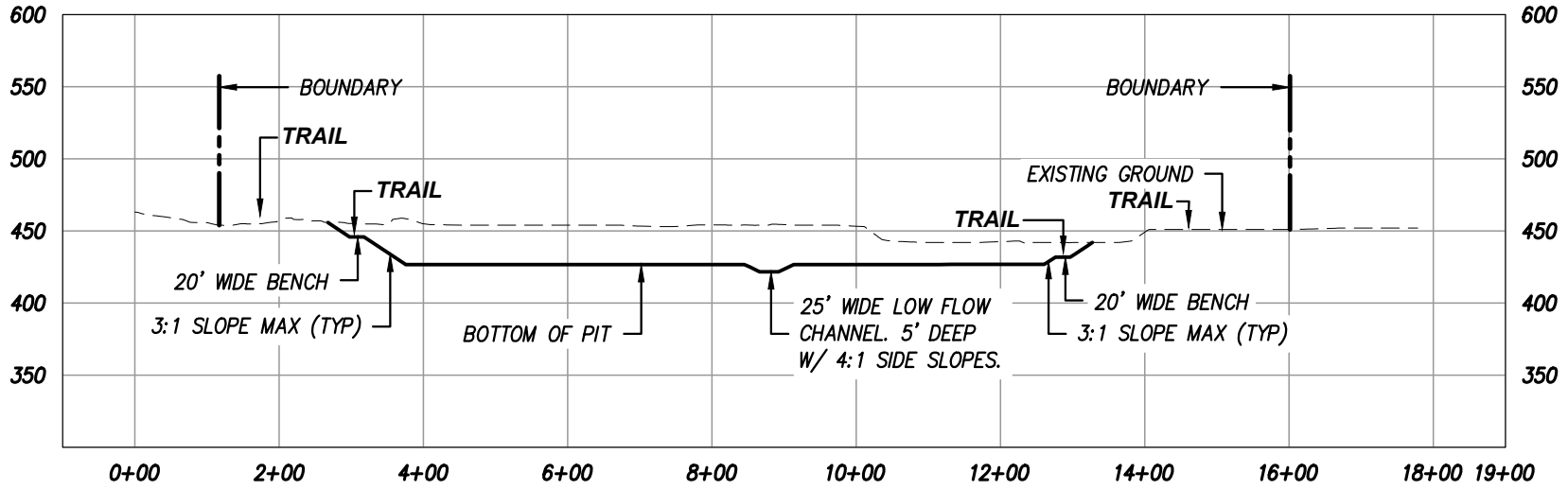
All final cut slopes, on the perimeter of the excavated area would be reclaimed to a maximum 3H:1V gradient. A single bench would be cut between the pit bottom and the 150-foot setback. Brow ditches and berms would be placed at the top of the slopes to prevent slope erosion. Disturbed land to be reclaimed (including reclamation revegetation and habitat mitigation restoration), including the golf course pit and roads would be approximately 226 acres (i.e., the entire temporary impact area associated with the mining phases). Based on the slope stability study conducted for the site, all final, slopes would have a factor of safety of 1.5 for static and 1.0 for pseudostatic conditions. (Attachment D)

The onsite materials and sand production by-products should provide adequate quality fill material provided they are free from organic matter and other deleterious materials. Fill should be inorganic, non-expansive granular soils.

Fill would be spread in near-horizontal layers, approximately 8 inches thick. Thicker lifts may be approved by the geotechnical engineer if testing indicates that the grading procedures are adequate to achieve the required compaction. Each lift would be spread evenly, thoroughly mixed during spreading to attain uniformity of the material

and moisture in each layer, brought to near optimum moisture content and compacted to a minimum relative compaction of 90 percent in accordance with ASTM D1557 or as approved by the geotechnical engineer.

The final slopes would also be track-walked to compact/stabilize the soils and create depressions for erosion control and water retention. Disturbed areas would be seeded at regular rainy season intervals during the course of the project as final slope areas become available for hydroseeding or planting. If necessary, over compaction of the surface soil would be relieved by ripper and/or disc to improve seed bed conditions for plant growth.




SOURCE: Enviromine



**Figure 3.3-1**
Reclaimed Bench Design

## 3.4 SMARA Revegetation

The objective of revegetation discussed in this plan is to provide vegetative cover for disturbance created by extractive operations, controlling erosion, and stabilizing slopes. Revegetation for the purpose of habitat mitigation and restoration is provided in the Conceptual Revegetation Plan and is not part of this Reclamation Plan. Plant materials to be used are capable of self-regeneration without continued dependence on irrigation, soil amendments or fertilizer. Revegetation would be sufficient to stabilize the surface against the effects of long-term erosion and is designed to meet the post-extraction land use objectives of the site. Native species seed mixes would be used to establish vegetative cover and are designed to meet the variety of physical characteristics present.

In response to a request from the County to revise some of the plant palettes and seed mixes to include a higher proportion of transitional and upland species (due to fluctuations in hydrology conditions onsite and a drier climatic trend including potentially lower groundwater elevations over time), particular plant palettes and seed mixes were revised below. The County approved the revised plant palettes and seed mixes on August 15, 2017.

Seed mixes and container plants for the RP area are presented in Tables 6A through 6H. Container plants are not required for reclamation but may be used to supplement seed application and the reclamation process.

**Table 6A Vegetated Streambed Seed Mix**

| Species | Common Name | Lbs per Acre | Min. Percent Purity/ Germination | Lbs Pure Live Seed (PLS) per Acre |
|---|---|---|---|---|
| *Ambrosia psilostachya* | Western ragweed | 5.0 | 45/45 | 1.01 |
| *Artemisia douglasiana* | Douglas' mugwort | 6.0 | 15/40 | 0.36 |
| *Artemisia palmeri* | San Diego sagewort | 4.0 | 20/50 | 0.40 |
| *Iva hayesiana* | San Diego Marsh elder | 4.0 | 30/30 | 0.36 |
| *Juncus bufonius* | Toad rush | 3.0 | 95/60 | 1.71 |
| | Total: | 22 | | 3.84 |

**Table 6B Riparian Forest Seed Mix**

| Species | Common Name | Lbs per Acre | Min. Percent Purity/ Germination | Lbs Pure Live Seed (PLS) per Acre |
|---|---|---|---|---|
| *Ambrosia psilostachya* | Western ragweed | 4.0 | 45/45 | 0.81 |
| *Artemisia californica* | California sagebrush | 3.0 | 30/60 | 0.54 |
| *Artemisia douglasiana* | Douglas' mugwort | 4.0 | 15/40 | 0.24 |
| *Artemisia palmeri* | San Diego sagewort | 3.0 | 20/50 | 0.30 |
| *Baccharis pilularis* | Coyote brush | 3.0 | 10/50 | 0.15 |
| *Camissoniopsis bistorta* | California sun cup | 1.0 | 90/80 | 0.72 |
| *Isocoma menziesii* var. *menziesii* | Coastal goldenbush | 3.0 | 18/40 | 0.22 |
| *Lupinus hirsutissimus* | Stinging lupine | 1.0 | 98/75 | 0.74 |
| *Oenothera elata* ssp. *elata* | Tall evening primrose | 1.0 | 98/84 | 0.82 |
| *Phacelia cicutaria* | Catterpillar phacelia | 1.0 | 98/90 | 0.88 |
| *Pluchea sericea* | Arrowweed | 5.0 | 7/20 | 0.07 |
| *Rosa californica* | California rose | 1.0 | 85/53 | 0.45 |
| | Total: | 30.0 | | 5.94 |

**Table 6C Riparian Scrub Seed Mix**

| Species | Common Name | Lbs per Acre | Min. Percent Purity/ Germination | Lbs Pure Live Seed (PLS) per Acre |
|---|---|---|---|---|
| Acmispon glaber | Deerweed | 3.0 | 95/80 | 2.28 |
| *Amsinckia menziesii* var. *intermedia* | Fiddleneck | 3.0 | 45/65 | 0.87 |
| *Artemisia californica* | California sagebrush | 4.0 | 30/60 | 0.72 |
| *Artemisia dracunculus* | Tarragon | 3.0 | 10/50 | 0.15 |
| *Baccharis pilularis* | Coyote brush | 2.0 | 10/50 | 0.10 |
| *Camissoniopsis bistorta* | California sun cup | 2.0 | 90/80 | 1.44 |
| *Heterotheca grandiflora* | Telegraph weed | 2.0 | 60/55 | 0.66 |
| *Isocoma menziesii* var. *menziesii* | Coastal goldenbush | 3.0 | 18/40 | 0.21 |
| *Lupinus bicolor* | Dove lupine | 2.0 | 98/85 | 0.83 |
| *Lupinus hirsutissimus* | Stinging lupine | 2.0 | 98/75 | 0.74 |
| *Oenothera elata* ssp. *Hookeri* | Evening primrose | 2.0 | 98/84 | 0.82 |
| *Phacelia cicutara* | | 2.0 | 98/90 | 0.88 |
| *Pseudognaphalium beneolens* | Fragrant everlasting | 3.0 | 5/45 | 0.06 |
| *Pseudognaphalium biolettii* | Bicolor cudweed | 3.0 | 4/45 | 0.06 |
| | Total: | 32.0 | | 9.82 |

**Table 6D Coastal Sage Scrub Seed Mix**

| Species | Common Name | Lbs per Acre | Min. Percent Purity/ Germination | Lbs Pure Live Seed (PLS) per Acre |
|---|---|---|---|---|
| *Acmispon glaber* | *Deerweed* | 5.0 | 95/80 | 3.80 |
| *Amsinckia menziesii* var. *intermedia* | Fiddleneck | 2.0 | 45/65 | 0.58 |
| *Artemisia californica* | California sagebrush | 5.0 | 30/60 | 0.90 |
| *Camissoniopsis bisorta* | California suncup | 2.0 | 90/80 | 1.44 |
| *Chaenactis glabriuscula* | Yellow pincushion | 2.0 | 15/55 | 0.16 |
| *Croton californicus* | California croton | 2.0 | 90/40 | 0.72 |
| *Eschscholzia californica* | California poppy | 1.0 | 98/80 | 0.78 |
| *Heterotheca grandiflora* | Telegraph weed | 2.0 | 60/55 | 0.66 |
| *Lupinus bicolor* | Dove lupine | 3.0 | 98/85 | 2.49 |
| *Mimulus aurantiacus* | Bush monkeyflower | 2.0 | 4/70 | 0.06 |
| *Pseudognaphalium biolettii* | Bicolor cudweed | 3.0 | 4/45 | 0.06 |
| *Pseudognaphalium californicum* | California everlasting | 3.0 | 5/50 | 0.06 |
| *Sisyrinchium bellum* | Blue-eyed grass | 1.0 | 98/80 | 0.78 |
| *Stipa lepida* | Foothill needlegrass | 3.0 | 90/71 | 1.92 |
| *Stipa pulchra* | Purple needlegrass | 2 .0 | 90/75 | 1.36 |
| *Vulpia microstachys* | Small fescue | 4.0 | 90/80 | 2.88 |
| | Total: | 42.0 | | 18.65 |

**Table 6E Vegetated Streambed Container Plants**

| Species | Common Name | Container Size | Spacing (feet on center) | Density per Acre |
|---|---|---|---|---|
| *Artemisia douglasiana* | Douglas' mugwort | 1 gallon | 6 | 220 |
| *Artemisia palmeri* | San Diego sagewort | 1 gallon | 12 | 140 |
| *Iva hayesiana* | San Diego Marsh elder | 1 gallon | 12 | 60 |
| *Muhlenbergia rigens* | Deergrass | 1 gallon | 8 | 130 |
| *Rosa californica* | California rose | 1 gallon | 6 | 130 |
| | Total: | | | 680 |

**Table 6F Riparian Forest Container Plants**

| Species | Common Name | Container Size | Spacing (feet on center) | Density per Acre |
|---|---|---|---|---|
| *Artemisia douglasiana* | Douglas' mugwort | 1 gallon | 10 | 100 |
| *Artemisia palmeri* | San Diego sagewort | 1 gallon | 12 | 60 |
| *Baccharis salicifolia* | Mulefat | 1 gallon | 14 | 160 |
| *Ericameria palmeri var. Palmeri* | Palmer's sagewort | 1 gallon | 25 | 50 |
| *Muhlenbergia rigens* | Deergrass | 1 gallon | 10 | 82 |
| *Platanus racemosa* | Western sycamore | 5 gallon | 60 | 20 |
| *Pluchea sericea* | Arrow weed | 1 gallon | 15 | 70 |
| *Populus fremontii* | Fremont cottonwood | 5 gallon | 40 | 40 |
| *Quercus agrifolia* | Coast live oak | 5 gallon | 60 | 16 |
| *Salix exigua* | Sandbar willow | 1 gallon | 15 | 50 |
| *Salix gooddingii* | Black willow | 1 gallon | 50 | 16 |
| *Salix laevigata* | Red willow | 1 gallon | 20 | 64 |
| *Salix lasiolepis* | Arroyo willow | 1 gallon | 16 | 92 |
| *Sambucus mexicana* | Blue elderberry | 5 gallon | 35 | 40 |
| *Thalictrum fendleri* var. *polycarpum* | Many fruit meadow-rue | 1 gallon | 30 | 30 |
| | Total: | | | 890 |

**Table 6G Riparian Scrub Container Plants**

| Species | Common Name | Container Size | Spacing (feet on center) | Density per Acre |
|---|---|---|---|---|
| *Artemisia californica* | California sagebrush | 1 gallon | 25 | 70 |
| *Artemisia dracunculus* | Tarragon | 1 gallon | 12 | 80 |
| *Artemisia palmeri* | San Diego sagewort | 1 gallon | 14 | 110 |
| *Baccharis pilularis* | Coyote brush | 1 gallon | 35 | 50 |
| *Baccharis salicifolia* | Mulefat | 1 gallon | 10 | 270 |
| *Ericameria palmeri* var. *palmeri* | Palmer's sagewort | 1 gallon | 30 | 80 |
| *Isocoma menziesii* var. *menziesii* | Coastal goldenbush | 1 gallon | 35 | 50 |
| *Pluchea sericea* | Arrow weed | 1 gallon | 16 | 50 |
| *Salix exigua* | Sandbar willow | 1 gallon | 16 | 40 |
| *Salix lasiolepis* | Arroyo willow | 1 gallon | 35 | 30 |
| *Sambucus mexicana* | Blue elderberry | 5 gallon | 40 | 60 |
| | Total: | | | 890 |

**Table 6H Coastal Sage Scrub Container Plants**

| Species | Common Name | Container Size | Spacing (feet on center) | Density per Acre |
|---|---|---|---|---|
| *Artemisia californica* | California sagebrush | 1 gallon | 10 | 235 |
| *Eriogonum fasciculatum* | California buckwheat | 1 gallon | 30 | 30 |
| *Isocoma menziesii* var. *menziesii* | Coastal goldenbush | 1 gallon | 20 | 60 |
| *Malacothamnus fasciculatus* | Bush mallow | 1 gallon | 30 | 30 |
| *Malosma laurina* | Laurel sumac | 1 gallon | 50 | 15 |
| *Mimulus aurantiacus* | Bush monkeyflower | 1 gallon | 30 | 40 |
| *Stipa lepida* | Foothill needlegrass | 1 gallon | 12 | 160 |
| *Stipa pulchra* | Purple needlegrass | 1 gallon | 12 | 110 |
| | Total: | | | 680 |

Reclamation revegetation and habitat mitigation restoration would be conducted on the entire area disturbed from mining and processing activities. Prior to seeding, materials utilized as final cover would be analyzed to determine the presence of elements essential for plant growth. If the soils analysis shows that fertility levels or soil constituents are inadequate to successfully implement the revegetation program, amendments may be incorporated into the soil through hand planting, sowing and/or hydroseeding. Wire cages would be installed as necessary to protect to plants from herbivore damage if necessary.

The planned distribution of reclamation revegetation areas and sensitive habitat mitigation areas is presented in Figure 3.4-1. Within the temporary impact area of the mining phases totaling 226.40 acres, 114.46 acres are specified for habitat mitigation for impacts to sensitive habitats (including mitigation for temporary impacts from the previously approved golf course project which was halted) and the remainder, 111.94 acres, are specified for reclamation revegetation. This figure also depicts the proposed trail system.

Four seed mixes have been developed (see Tables 6A-6D). The following seed specifications shall be followed to the extent practicable.

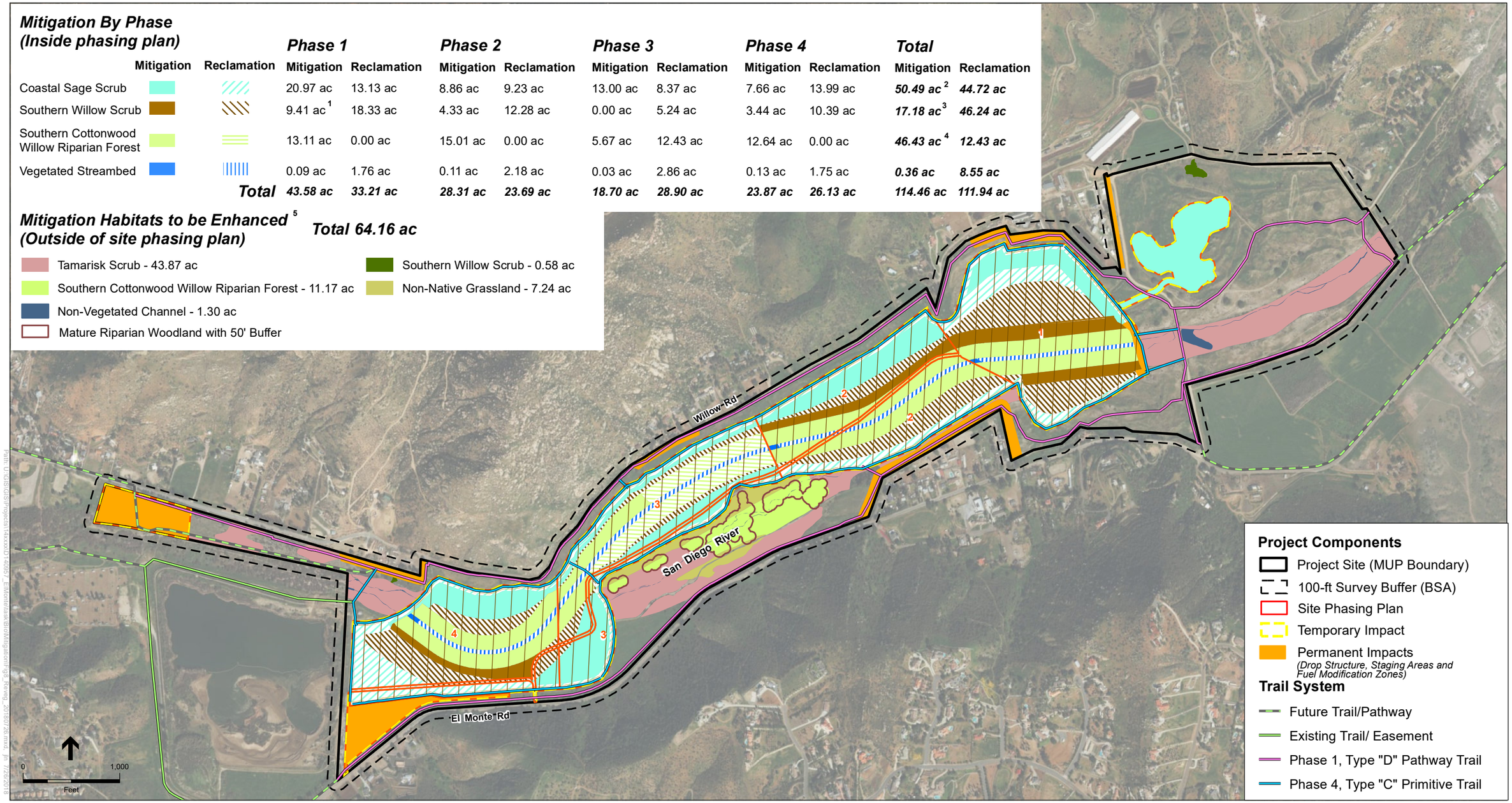
- Seed shall be provided by a qualified supplier and seed shall be collected from the project vicinity (within the same watershed or a 25-mile radius) to the extent feasible. Preferably, seed shall be legally collected from the immediate project area. All seed must be delivered to the site in sealed and labeled packaging along with a California State Agricultural Code seed certification including the supplier's name, geographic location and collection date, and the tested purity and germination percentage rates. The restoration ecologist shall inspect the seed prior to its application onsite and shall reject seed lacking certified tags or not conforming to specifications.
- Seed application rates are provided in Tables 6A-6D. If the delivered seed differs from specified purity and germination rates, the total pounds per acre rates shall be adjusted accordingly to achieve the specified pounds of pure live seed (PLS).
- Prior to seeding, the restoration ecologist shall confirm that the seed bed is properly prepared. Site preparation shall include removal of weed species and weed litter/debris and trash, sufficient de-compaction and roughening (i.e., scarification) of the soil surface, and implementation of erosion-control materials where necessary. Seed shall be applied after site preparation, container plant installation (in areas where container plants are proposed), and the installation of any erosion-control measures.
- The specified seed mixes for the riparian areas shall be applied as dry-seed mixes. Hydroseed mixes tend to float when exposed to stream flows, transporting the seeds downstream. The riparian transitional and upland mixes shall be applied as a hydro seed mix and shall include natural fiber mulch or bonded fiber matrix in the slurry for erosion control. The seeds shall be ordered and delivered in separate, original containers by species and inspected by the restoration ecologist. The restoration ecologist shall reject any seed that contains weeds or is otherwise not as specified.

## *Mitigation By Phase (Inside phasing plan)*

| | Mitigation | Reclamation | Phase 1 Mitigation | Phase 1 Reclamation | Phase 2 Mitigation | Phase 2 Reclamation | Phase 3 Mitigation | Phase 3 Reclamation | Phase 4 Mitigation | Phase 4 Reclamation | Total Mitigation | Total Reclamation |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Coastal Sage Scrub | | | 20.97 ac | 13.13 ac | 8.86 ac | 9.23 ac | 13.00 ac | 8.37 ac | 7.66 ac | 13.99 ac | ***50.49 ac*** [2] | ***44.72 ac*** |
| Southern Willow Scrub | | | 9.41 ac [1] | 18.33 ac | 4.33 ac | 12.28 ac | 0.00 ac | 5.24 ac | 3.44 ac | 10.39 ac | ***17.18 ac*** [3] | ***46.24 ac*** |
| Southern Cottonwood Willow Riparian Forest | | | 13.11 ac | 0.00 ac | 15.01 ac | 0.00 ac | 5.67 ac | 12.43 ac | 12.64 ac | 0.00 ac | ***46.43 ac*** [4] | ***12.43 ac*** |
| Vegetated Streambed | | | 0.09 ac | 1.76 ac | 0.11 ac | 2.18 ac | 0.03 ac | 2.86 ac | 0.13 ac | 1.75 ac | ***0.36 ac*** | ***8.55 ac*** |
| ***Total*** | | | ***43.58 ac*** | ***33.21 ac*** | ***28.31 ac*** | ***23.69 ac*** | ***18.70 ac*** | ***28.90 ac*** | ***23.87 ac*** | ***26.13 ac*** | ***114.46 ac*** | ***111.94 ac*** |

## *Mitigation Habitats to be Enhanced [5] (Outside of site phasing plan)* *Total 64.16 ac*

- Tamarisk Scrub - 43.87 ac
- Southern Willow Scrub - 0.58 ac
- Southern Cottonwood Willow Riparian Forest - 11.17 ac
- Non-Native Grassland - 7.24 ac
- Non-Vegetated Channel - 1.30 ac
- Mature Riparian Woodland with 50' Buffer




**Project Components**

- Project Site (MUP Boundary)
- 100-ft Survey Buffer (BSA)
- Site Phasing Plan
- Temporary Impact
- Permanent Impacts *(Drop Structure, Staging Areas and Fuel Modification Zones)*

**Trail System**

- Future Trail/Pathway
- Existing Trail/ Easement
- Phase 1, Type "D" Pathway Trail
- Phase 4, Type "C" Primitive Trail

Path: U:\GIS\GIS\Projects\14xxxx\D140957_ElMonteHabitatBioMitigationFigs_Reveg_20180726.mxd jin 7/26/2018

SOURCE: ESRI; ESA 2016; EnviroMine 2016

[1] Southern Willow Scrub mitigation in Phase 1 includes 0.54 acre to address mitigation at a 3:1 ratio for previous golf course impacts to 0.18 acre of riparian scrub.

[2] Coastal sage scrub mitigation includes mitigation for coastal sage scrub (7.22 acres) and nonnative grassland (43.27 acres).

[3] Southern willow scrub mitigation includes mitigation for southern willow scrub (0.36 acre) and a portion of mitigation for tamarisk scrub (16.28 acres) within the site phasing plan.

[4] Southern cottonwood willow riparian forest mitigation includes mitigation for a portion of mitigation for tamarisk scrub within the site phasing plan (46.43 acres)

[5] Mitigation habitats to be enhanced include restoration of riparian and transitional habitat via exotic plant removal and activities to promote native plant revegetation (62.72 acres required, rounded to 64.16 acres).

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**Figure 3.4-1**

Habitat Mitigation and Reclamation / Revegtation

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Container plants are not required for reclamation but shall be potentially used at the discretion of the project to supplement seed mixes (see Tables 6E-6H) in order to achieve site stabilization and reclamation standards. If container plants are used, the restoration ecologist shall direct the final placement of container plants in the field. If container plants are used for reclamation activities, the following container plant specifications shall be followed to the extent practicable.

- Container plants shall be provided by a qualified nursery and plants shall be propagated from propagules from the project vicinity (within a 10-mile radius) to the extent feasible. Preferably, plants shall be propagated from materials from the immediate project area. Plants shall be certified to be free of Argentine ants prior to delivery onsite.
- The restoration ecologist shall confirm all plants are delivered to the site in a healthy and vigorous condition before they are installed. Larger container sizes are acceptable if approved by the restoration ecologist. The restoration ecologist shall also help direct plant layout before they are installed.
- Container Plant Installation Steps:
    - Dig a hole 2 times as deep and 3 times as wide as the container. Break up soil clods and avoid a smooth-sided "bathtub" effect in the hole. Fill the planting hole with water and allow it to drain completely into the soil.
    - Partially backfill the hole with native soil to allow planting at the proper depth. Moisten and gently tamp the backfill into place. Remove the plant from its container and place on top of the moistened backfill so the plant collar is approximately 1 inch above finish grade. Then backfill the remaining hole with native soil.
    - Create a planting basin berm, roughly 2 feet in diameter around the plant, and apply 1 to 2 inches of coarse, organic, weed-free mulch inside the berm. Then water thoroughly and allow to drain.

### 3.5 Irrigation

If needed to assist with the reclamation revegetation, irrigation of reclaimed lands shall be used during the first two years after planting to augment natural precipitation. If used, an irrigation plan shall be developed in accordance with County Ordinance and submitted to the County for approval prior to implementation. Watering shall only occur to assist in initial establishment and/or in long periods of extended dryness. Irrigation shall not be used continuously after seeding.

Water purchased from a public utility shall be utilized if irrigation is implemented. Irrigation shall be completed in compliance with County's Water Conservation in Landscaping Ordinance (10427, April 2016).

### 3.6 Interim Seeding

Where final landforms have been established, but are not yet available for final reclamation, erosion control shall be provided through revegetation with a general erosion control seed mix. The application of the seed mix shall be completed on an as-needed basis to control erosion and weed propagation.

## 3.7 Timing

Seeding shall be performed and completed between November 1 and January 15.

During this time period, seeding shall follow the first soaking rains of the season. All efforts shall be made to plant during this time period since beneficial temperatures and anticipated rainfall shall aid in germination, establishment and growth of target species.

## 3.8 SMARA Revegetation Performance Standards

Following seeding and before release of financial assurance, the revegetated areas must meet performance criteria. For this site, the most meaningful performance criteria for erosion control and visual mitigation are based on vegetative cover and species-richness. Comparison with off-site reference areas is not necessary as the revegetation project consists of common native plant species and habitats whose parameters are well known. Also, no currently suitable reference conditions exist in the El Monte Valley floor as the available reference sites are either too disturbed or otherwise undesirable in their species composition (non-native or invasive species. While it is expected that the revegetated slopes would have benefit to wildlife, the revegetation efforts within this plan are not intended to meet natural habitat performance standards. Habitat restoration and mitigation are presented in the conceptual Revegetation Plan (ESA 2018a). The performance standards presented in Table 7 are considered to be sufficient for SMARA.

**Table 7. Revegetation Performance Standards**

| Vegetative Cover (m: meters) | Species Composition / Species Richness | Percent Cover | Density |
|---|---|---|---|
| Seed Mixes | Target Goal:<br>100% of the most prevalent species shall be native species<br>12 randomly placed 50 - meter by 1-meter transects. | Target Goal:<br>50% cover (all native species combined)<br>12 randomly placed 50 - meter by 1-meter transects. | N/A |

Revegetated areas shall be monitored once per year to compare the actual revegetation success rates with the success criteria.

Since revegetation would occur concurrently with extractive operations, revegetation practices shall be continually evaluated as revegetation is completed throughout the site. Records shall be kept of soil preparation, including the addition of amendments as determined to be necessary, seeding techniques and erosion control measures.

Revegetated areas shall be identified on a map and tested to assure that standards are adequately achieved to within a minimum of 80 percent confidence interval. Annual monitoring reports shall be submitted to the County until the approved success criteria have been met and approved by the County. When the County agrees that revegetated areas meet success criteria for two consecutive years, no further monitoring would be required and the operator may apply for release of financial assurances.

### 3.9 Test Plots Locations and Treatment

Two test plot areas shall be placed on the site, with the first to be located on the pit bottom of the eastern end of the extraction area, and the second one to be located on the bench and slopes further to the west from Test Plot 1. The approximate location of each test plot is indicated on Sheet 5 of the Grading Plan Sheets included as Attachment B. Test plots would help to ensure successful implementation of the revegetation plan. The lead agency may waive any requirement to conduct test plots when the success of the proposed revegetation plan can be documented from experience with similar species and conditions or by relying on competent professional advice based on experience with the species to be planted.

Success of these test plots shall be judged based upon the effectiveness of the vegetation for the approved end use, and by comparing the quantified measures of vegetative cover, density and species richness of the reclaimed mined-lands similar to that of the surrounding area. Comparisons shall be made by a qualified individual until performance standards have been met.

### 3.10 Weed Control

Primary weed species to be addressed in weed control efforts include Giant Reed, Arundo (*Arundo donax),* Mustard (*Brassica sp.),* Ripgut Brome *(Bromus diandrus),* Cheat Grass, Downy Brome *(Bromus tectorum),* Pampas Grass *(Cortaderia spp.),* Eucalyptus *(Eucalyptus spp.),* Pepperweed *(Lepidium latifolium),* Tree Tobacco *(Nicotiana glauca),* Castor Bean *(Ricinus communis),* Russian Thistle, Tumbleweed *(Salsola tragus),* Tamarisk, Salt Cedar *(Tamarix spp.)*

After start up, the project site shall be monitored periodically by means of visual observation to identify the potential for uncontrolled weed propagation. Should weed control be necessary, the operator shall hire the services of a biologist or agriculturalist to make recommendations for the control of noxious weeds that may invade the project area. The operator shall carry out treatments recommended to eradicate the undesired vegetation.

### 3.11 Post Extraction Land Use

Upon completion of resource extraction, the extraction area site shall be reclaimed to passive open space uses and recreational trails. After reclamation is complete and financial assurances mechanisms released, other uses may require separate permitting requirements. Reclamation of the site shall be considered complete when revegetation standards are met on the areas disturbed by the mining operation.

### 3.12 Post Extraction Drainage and Erosion Control

Small de-siltation basins shall be constructed as appropriate on the surface of the bench and bottom of slopes to capture sediment and avoid potential off-site impacts. In addition, silt fences, straw waddles geotextiles or lined drains shall be installed as appropriate as BMPs during the revegetation process. Erosion control measures shall be designed for the 20-year 1-hour storm intensity event or higher intensity storm. These measures shall be implemented to control surface runoff and drainage to

protect surrounding land and water resources. Silt fences or other temporary erosion control devices shall be removed from the site after vegetation has been established.

Slope rounding shall be used along the top of slopes to prevent runoff from flowing from flat areas onto slopes. The proposed bench shall be graded at approximately 1 percent slope to minimize the potential for erosion and sediment transport. Additional erosion and sediment controls shall be implemented around work areas as mining progresses to avoid increased erosion and sedimentation from the project area. Permanent measures to be installed to address erosion for post-extraction drainage and erosion control include the drop structure that would be installed in mining phase 4 at the western extent of the mining phases to control headward erosion, and implementation of the habitat mitigation program within the mining basins and reclamation revegetation which would stabilize soil and minimize sediment transport. In addition, after mining is complete the project applicant intends to transfer the property in fee title to a qualified land steward (non-profit) conservancy so that the property would be maintained and managed in perpetuity. Part of this management would include adaptive management and installation of erosion control measures as needed to address areas that may be subject to erosion. For detailed analysis of how post extraction drainages would avoid increased erosion and sedimentation, please see the project CEQA Drainage Study in Attachment A. Additionally, for an evaluation of whether proposed storage of materials within the floodway would create a hazard to the health and safety of persons or property in the event the materials are inundated, please see the project CEQA Drainage Study.

### 3.13 Post-Extraction Public Safety

No refuse or dangerous material would remain onsite. Access onto the property would be blocked by a locked gate at the site entrance. Where appropriate, the site would be protected from intruder access by fencing and warning signs posted to restrict unlawful access. Fencing would consist of a four-strand barbed wire. Security fencing would be removed after reclamation is complete. Fencing shall be consistent with any required County or other oversight agency guidelines.

### 3.14 Effect of Reclamation on Future Recovery of Mineral Resources

Extractive operations would recover unrestricted, economically recoverable resources within the project footprint, at the western end of the overall site. The establishment of open space areas within the overall project site, after the planned removal of the available resources at the western end of the site, would eliminate the ability to extract the remainder of the resource at the eastern end of the site, and that remaining resource would effectively be lost as a result.

The Mineral Resource Technical Report (MRTR) states that the alluvial materials that are of MRZ 2 quality on the site are a potentially significant resource that currently could be recovered if the County were to approve the modification of the existing MUP (PDS2015-MUP-98-014W2) for their extraction. However, with the extraction of only the western portion of the available resource followed by site restoration, the remainder of this resource may effectively be lost once the pit excavation and habitat restoration are complete. The planned removal of 12.5 million tons of sand and aggregate provides only a partial recovery of this resource. Specifically, the MRTR

estimates that roughly 19.7 million tons of sand and aggregate would be effectively lost following mitigation (reclamation and restoration) associated with the proposed mining activities at the project site.

### 3.15 Reclamation Monitoring and Maintenance

Reclamation and post-reclamation efforts would be monitored pursuant to SMARA requirements and according to the approved Revegetation Plan. Data for cover, density, and species richness would be collected along 12 randomly placed 50-meter by 1-meter transects. The operator would be required, under SMARA (Public Resources Code §2207), to submit an annual status report on forms provided by the Department of Conservation and directs the lead agency to conduct an inspection of the operations within six months of receipt of the required Annual Report.

## 4.0 Financial Assurances

In addition to annual monitoring, all SMARA regulated sites are required to provide financial assurances. The financial assurances are required to ensure that the site can be reclaimed, should the operator default on this obligation. The financial assurances may be in the form of surety bonds, irrevocable letter of credit, trust funds, or other forms of financial assurances approved by the Lead Agency. The amount of the financial assurance is reviewed annually by the lead agency to determine the adequacy for completing reclamation.

## 5.0 Compliance with Reclamation Standards

### 5.1 Purpose

The Surface Mining and Reclamation Act requires that all newly approved Reclamation

Plans incorporate verifiable standards to assure adequate completion of Reclamation Plan objectives. The verifiable standards were adopted by the State Board of Mining and Geology as regulations to implement these requirements. These regulations are known as the “Reclamation Standards” (PRC Article 9, Sections 3700 *et seq.*). The following discussion addresses compliance with these standards as outlined in the

El Monte Mine & Nature Preserve Reclamation Plan dated May 30, 2012.

### 5.2 Financial Assurances (§3702)

The project is required to provide financial assurances to ensure reclamation is performed in accordance with the reclamation plan. Financial assurances are reviewed annually by the lead agency and adjusted as necessary.

### 5.3 Wildlife Habitat (§3703)

No federal or state threatened or endangered species were found onsite as the site has been disturbed and active for several decades. Although wildlife is likely to utilize the reclaimed site, this reclamation plan does not propose reclamation specifically for wildlife habitat uses.

## 5.4 Backfilling, Regarding, Slope Stability, and Recontouring (§3704)

The reclamation plan calls for continued resource extraction and reclamation over an area of about 236 acres, and would result in the creation of nearly level areas and maximum slopes of 3H:1V. All cut and fill slopes shall have a minimum slope stability factor of safety that is suitable for the proposed end use and conforms to the surrounding topography. All reclaimed slopes shall follow the recommendations of the geotechnical report (See Attachment D, Geotechnical Report). Areas within the reclamation boundary would be backfilled to specific elevations as shown on the Plot Plan to achieve final, reclaimed contours.

## 5.5 Revegetation (§3705)

The objective of reclamation revegetation is to provide vegetative cover on final slopes that would visually integrate the site with surrounding areas and stabilize the site against erosion and sedimentation. Native plant species would be used for reclamation. Section 3.4 of this Reclamation Plan sets forth planting and maintenance practices, as well as verifiable monitoring standards to assure vegetative success. Examples of maintenance practices and verifiable monitoring standards include, but are not limited to: managing noxious weeds, planting during appropriate seasons, planting methods, and soil fertility analysis. Test plots are required to assist with determination of successful revegetation measures. Irrigation is not expected to be necessary for revegetation as seeding (and potentially planting) during the correct time of the year would allow for comparable revegetation success to surrounding areas.

## 5.6 Drainage, Diversion Structures, Waterways, and Erosion Control (§3706)

The quality of water, recharge potential, and storage capacity of groundwater aquifers are not expected to be diminished as a result of reclamation of this extraction operation. Operational erosion control methods are designed in compliance with storm water regulations. Erosion and sedimentation control would be implemented during all phases of operations, according to the CEQA Drainage Study (Attachment A of this Reclamation Plan).

As discussed in the preliminary CEQA drainage study, preliminary CEQA existing and proposed condition 100-year hydrologic analyses have been performed for the reclamation plan submittal of the El Monte Sand Mining Project. The analyses cover the processing plant, which would be outside of the proposed condition floodplain. Separate hydraulic analyses have been performed for the extraction area, which would be within the floodplain. The hydrologic/hydraulic results show that the processing plant would not cause an adverse increase in flow rates. The proposed time of concentration over the ground surface is long at over 20 minutes, which indicates that the overall velocities would not be erosive.

The existing drainage patterns would not be altered. Under existing conditions, the processing plant area is in the floodplain. Under proposed conditions, runoff from the processing plant would be directed north to the realigned floodplain. The 100-year flow rates at the processing plant are less than 4 cfs, while the 100-year flow rate in the river is 20,000 cfs. Therefore, the processing plant would not cause substantial

erosion or siltation on- or offsite. In addition, the processing plant would not result in flooding on- or offsite since its flow contribution is so small.

The processing plant runoff would be conveyed by the San Diego River. The relatively small runoff generated by the plant would not create or contribute runoff that would exceed the capacity of downstream drainage facilities beyond their current capacities. The project does not propose housing, so would not place housing in a 100-year flood hazard area.

### 5.7 Prime Agricultural Land Reclamation (§3707)

Not applicable. The land is classified as Farmland of Local Importance, (G) Grazing and Other by the Department of Conservation. The land would not be reclaimed to agricultural uses.

### 5.8 Other Agricultural Land (§3708)

In the past, the property has been used for agricultural purposes including production of animal feed crops and livestock grazing. Heavy irrigation is required for some crops due to the porosity of the soil materials at the site. The property has not been used for agricultural purpose for more than 20 years. The RP area is not located on lands that are currently under a Williamson Contract agreement.

### 5.9 Building, Structure and Equipment Removal (§3709)

All structures and portable equipment would be removed from the excavation area unless they are to be used by the property owner following reclamation.

### 5.10 Stream Protection, Including Surface and Groundwater (§3710)

Mining and reclamation activities include storm water protection measures to eliminate the potential for erosion and sedimentation discharges off-site. These measures are compliant with appropriate sections of the Federal Clean Water Act, Porter-Cologne Act, and the California Regional Water Quality Control Board. The revegetation practices outlined in Section 3.4 of this Reclamation Plan identify measures to establish a self-regenerating vegetative complex that is designed to control erosion and sedimentation. In addition to these plan measures, the Lead Agency would conduct annual inspections to ensure implementation of these water quality protection measures.

### 5.11 Topsoil Management (§3711)

Topsoil would be salvaged to aid in reclamation. It is expected that topsoil would be stripped in advance of the pit and directly placed on previously disturbed surfaces immediately prior to revegetation. This would limit damage to soil structure and preserve soil biological processes. Top soil and suitable growth stockpiles shall be clearly identified to distinguish them from mine waste dumps.

## 5.12 Tailing and Extraction Waste Management (§3712)

Most extracted material would be transported off-site. If not, the material would be used as backfill. No stockpiles would be left on site.

## 5.13 Closure of Surface Openings (§3713)

Not Applicable.

## 5.14 Public Safety

Public health and safety are protected in accordance with County standards for open space. Access is controlled through locked gates at the site entrance and fencing.

Initial segments of the planned trail system would be established during Phase 1 within the setback areas north and south of the area to be disturbed by the mining operations (see Attachment B). The remaining planned segments of the trail system would be installed in Phase 4 when mining extraction activities are complete. A three-strand, barbed wire fence and an earthen berm would separate the initial trail segments from the operation (see Attachment B). Once installation of the trail system is complete, wood split-rail fence will be installed to keep users on the trails.

A gate would be installed at the ingress/egress roads to restrict public vehicular access. This gate would be closed and locked during periods of non-operation. Signs would be posted at the entrance identifying the name of the operation, permit number and emergency contact information. The site would be patrolled on a regular basis to discourage trespass.

## 5.15 Administrative Contacts

Lead Agency Information:

| | |
|---|---|
| Lead Agency: | County of San Diego, |
| Staff Contact: | Ms. Heather Steven |
| Address: | 5510 Overland Avenue, Suite 310, San Diego, CA 92123 |
| Telephone: | (858) 495-5802 |

## 6.0 Project Summary

A summary of pertinent details for the project is presented in Table 8 as follows:

**Table 8. Project Summary**

| General Site Information | |
|---|---|
| Applicant | El Monte Sand Mine |
| Project Proponent | El Monte Nature Preserve, LLC |
| Property Owner (s) | El Monte Nature Preserve, LLC |
| Project APN's | 392-150-17, 391-061-01, 391-071-04,393-011-01, 390-040-51, 392-060-29 |
| Major Use Permit Boundary | 479.5 acres |
| Reclamation Plan Boundary | 479.5 acres |
| Surface Elevation | Approximately 430' to 490' AMSL |
| General Plan Designation | Public Agency Lands |
| Zoning | S-82, Extractive Use; A-70, Agriculture |
| Williamson Act Contract | No |
| MRZ Designation | MRZ-2 |
| Current Land Use | Undeveloped Land |
| **Mining** | |
| Mining Area | Approximately 243 acres including the depression from golf course excavation that will be filled |
| Maximum Mining Depth | 400 feet AMSL |
| Average Groundwater Elevation | Approximately 390 feet AMSL. (40 feet bgs) |
| Mining Slopes | 3H:1V (horizontal:vertical) maximum |
| Type of Minerals | Alluvium |
| Maximum Total Production | 12.5 million tons |
| Commencement of Mining | Within 1 Year After Permit Approval |
| Duration of Mining | 12 years |
| Mining Permit Expiration | January 31, 2035 |
| **Reclamation** | |
| Revegetated Area | Approximately 226 acres of temporary impact areas (111.94 acres of reclamation revegetation and 114.46 acres of sensitive habitat mitigation) |
| Duration of Reclamation | Continuous extending for 4 years following cessation of mining |
| Completion of Reclamation | 2035 estimated |
| Post Mining Land-Use | Open Space with recreational trail easements |

## 7.0 Statement of Responsibility

I, the undersigned, hereby agree to accept full responsibility for reclamation of all mined lands as described and submitted herein and in conformance with the applicable requirements of Articles 1 and 9 (commencing with Sections 3500 et seq. and 3700 et seq., respectively) of Chapter 8 of Division 2 of Title 14 of the California

Code of Regulations, the Surface Mining and Reclamation Act commencing with

Section 2710 et seq., and with any modifications requested by the administering agency as conditions of approval.

El Monte Nature Preserve, LLC:

Signature: _____

Title: _____

Date: _____

## 8.0 References


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