

APPENDIX O VECTOR MANAGEMENT PLAN

Vector Management Plan

for the
El Monte Sand Mining Project
PDS2015-MUP-98-014W2, PDS2014-RP-15-001

Submitted To:



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El Monte Sand Mining Project Vector Management Plan – May 2018

1.0 INTRODUCTION

This Vector Control Plan has been created in consultation with the San Diego County Department of Environmental Health, Vector Control Program (DEH-VCP).

Implementation of this plan will ensure the minimization of vectors, such as rodents, flies and mosquitoes that may breed in standing water. This plan is created to meet the vector control requirements for the El Monte Sand Mining Project.

The goals of this Vector Management Plan are to:

1. Protect public health
2. Control and reduce public exposure to vectors and human diseases
3. Reduce nuisance characteristics that are associated with vectors

1.1 Project Description

El Monte Nature Preserve, L.L.C. (Proponent) is proposing the El Monte Sand Mining Project (Project). This project will have two major components. The first is the extraction 12.5 million tons of surface mineral over a 12-year period in El Monte Valley on land that is zoned for extractive use. The second element is the reclamation of the site to open space as the end use which will include habitat creation/restoration and a recreational/equestrian trail network. The combined mineral extraction and reclamation project would be located in El Monte Valley on approximately 479.5 acres. A vicinity map of the El Monte Valley and overall project is attached as Figure 1.

The project includes property within San Diego County Assessor Parcel Numbers:

392-150-17, 391-061-01, 391-071-04, 393-011-01, 390-040-51, 392-060-29

The proposed MUP and Reclamation Plan area within these parcels totals approximately 479.5 acres.

Mineral extraction would occur on approximately 228 acres. The mining area, staging, trails, and fuel modification areas would total approximately 262 acres. Reclamation will occur on the extraction area and about 12 acres of a previously excavated area.

Mineral Extraction

The mineral extraction project will include the modification of existing Major Use Permit P98-014 and the approval of a Reclamation Plan by the County of San Diego for extraction of 12.5-million tons of construction aggregate and reclamation of the mined lands (i.e. the areas disturbed by mineral extraction activities). The requested MUP modification would authorize a maximum production limit of 1.1 million tons in any



SOURCE: ESRI

El Monte Sand Mining Project . 140957

Figure 1
Project Vicinity

calendar year. Total material production from the site is estimated to be 12.5-million tons. Phased mineral extraction would occur over an approximate 228 acre area with an average depth of excavation of 36 to 41 feet and approximately 4 feet above the existing water table.

Operations are expected to begin in July 2019 and are anticipated to require approximately 12 years. With four years to complete reclamation, the project life would total 16 years. Thus the proposed end of mine life is approximately December 2035 assuming a startup date of July 2019.

Mineral extraction operations will consist of 4 phases to minimize surface disturbance and occur from east to west within the central areas of the project site. Water will be provided by a public water utility and would be used for material washing, dust control and, if necessary, irrigation of landscaping and reclaimed areas. A series of settling ponds located in the processing area will be used to recycle water and capture fine sediment removed from the sand during processing.

Reclamation/Restoration

Following cessation of mineral extraction activities in any given phase, the mine site would be reclaimed to a condition suitable for an alternate end use including restored riparian/upland vegetation and a recreational trail network. Reclamation of the site would occur in four phases such that the acreage under active excavation at any one time would be minimized. The final reclaimed surface would be characterized by a large pit and a re-contoured valley floor. Side slopes will have a maximum 3:1-Horizontal:Vertical (H:V) gradient. The pit floor will have a fairly flat surface that is gently sloped downward to the west. The mined lands will be planted with native riparian along the center of the reclaimed pit and upland vegetation on the side slopes.

The pit will not be backfilled with imported material and a depression in the valley floor will remain.

Multiple sources of water will contribute to standing water in the pit including; water released from the El Capitan Reservoir (historically every 17-20 years); rainfall runoff; and daylighting of the local groundwater table due to the lowering of land surface from pit excavation and pumping out of surface water.

The current vegetation on site is comprised of mostly disturbed vegetation/agriculture, non-native grasslands, and invasive plant species (tamarisk) with small areas of coastal sage scrub/baccharis scrub, riparian scrub, and riparian/oak woodland. As each mineral extraction phase is completed, vegetation would be planted in the reclaimed areas after finish grading.

Restoration will include riparian and upland vegetation. Recreational features will include open space and trails adjacent to the reclaimed extraction areas.

1.2 Existing Conditions

The site is situated in the El Monte Valley within the San Diego River watershed and in the floodplain of the San Diego River. The project site is located approximately 1.5 miles east of where the San Diego River is crossed by Highway 67 and is 4.8 miles west of the El Capitan Reservoir dam. The entrance to the project site is from El Monte Road, approximately 0.5 miles northeast of the intersection of El Monte Road and Lake Jennings Project Road.

This vector management plan is necessary to address collection of water within the proposed open pit, the processing plant settling ponds and any pond that may develop as a result of the release of water from the reservoir that may result in breeding grounds for vectors. At times, water may collect in the reclaimed pit from direct precipitation, runoff from the contributing watershed and groundwater inflow.

2.0 VECTOR MANAGEMENT

Vector sources occur where site conditions provide habitat suitable for breeding. These can include any source of standing water, including wetlands, irrigation ponds, detention basins and infiltration basins. A standard requirement for projects of this type is the incorporation of measures, or Best Management Practices (BMPs), to reduce the health risks and nuisance factors associated with the vectors which can result from the standing, stagnant water and water detention systems (County of San Diego 2007).

Water released from the El Capitan Reservoir would flow through the San Diego River channel and be retained in the pit after reclamation for approximately 6 years at which point the surface will dry out. Small sediment basins and other BMPs (fiber rolls, hydroseeding, etc.) will be used to control runoff and sediment. Therefore, water that collects in the pit, settling ponds and any detention basins will need to be monitored and managed to achieve proper vector management. This type of management is described in the conditions listed below. The project will also operate under an Industrial Storm Water Pollution Prevention Plan (SWPPP).

2.1 Management Practices

2.1.1 Mosquitoes

Extraction Pit

Groundwater is currently located approximately 40 feet below the existing ground surface and will be approximately 4 feet below the bottom of the pit after excavation. Multiple sources of water will contribute to standing water in the pit including; water released from the El Capitan Reservoir (historically every 17-20 years); rainfall runoff; and daylighting of the local groundwater table due to the lowering of land surface from pit excavation and pumping out of surface water. Extraction and reclamation will be an active, ongoing process which will preclude invasive or exotic vegetation, vegetation overgrowth and vandalism. Trash and debris collection and removal will occur continuously by the site personnel

Process Settling Ponds

The settling ponds will be used to recycle water used in the screening and washing process and will be under constant circulation during operation. These ponds will be moved as the plant moves to the west in advance of the main pit. During operation, the ponds will be maintained by the routine removal of vegetation, sediment, trash and debris.

The operator will control mosquito breeding using BMPs in accordance with requirements of the San Diego County DEH. Following is a list of conditions to ensure that water collected in the pit pond, storm water detention basins and process settling ponds does not propagate the breeding of vectors.

Monitoring

The operator will implement an active management plan to control mosquitoes as described below:

1. As water is pumped to the processing plant area settling basins for use in material processing and dust control, excess water will be collected in the settling ponds and allowed to infiltrate or return to process cycle after a short retention period. Therefore, this water will be constantly circulating and will help to prevent propagation of vectors.
2. During the wet season (October through March) the open pit, processing plant area ponds and any detention basins will be visually inspected monthly, by the operations staff, for the presence of vectors. If necessary, corrective measures will be initiated, including more frequent inspections if vector issues are identified by the public and/or routine inspections.
3. In the dry season (July through September) the open pit, processing plant area ponds and any detention basins will be visually inspected weekly, by the operations staff, for the presence of vectors, including more frequent inspections if vector issues are identified by the public and/or routine inspections.

Corrective Measures

If necessary, corrective measures described below will be initiated.

- The removal of emergent vegetation will occur when recommended by the DEH San Diego County, Vector Control Program or when emergent vegetation (e.g., cattails, sedges, etc.) is in excess of 50% of the surface area.
- Emergent vegetation will be controlled by hand labor, mechanical means or by frequent clear cutting. No herbicides will be used in submerged or aquatic habitat areas, as the project site is a recharge area for the groundwater aquifer.
- Vegetation clearing is intended to prevent habitat for mosquito larvae and refuge from predation by predatory fish, if present.

- Removal of the vegetation by hand will be the preferred method in order to lessen the re-growth frequency and density.
- Eliminate floating vegetation conducive to mosquito production (i.e., water hyacinth [*Eichhornia* spp.], duckweed [*Lemna* and *Spirodela* spp.], and filamentous algal mats).
- Foot pathways will be maintained for surveillance and abatement methods. Sizing of pathways will be a minimum of 5 feet wide to allow access to any ponded area.

The pit will be part of the San Diego River (California natural waters) and it is against California Department of Fish and Game regulations for private citizens to plant mosquitofish in waters of the State without a permit. (Title 14 CCR, Fish and Game Code, Section 1.63, Section 6400, and Section 238.5). Because the mosquitofish is not native to California, this species will not be used on the project for mosquito control.

El Monte Nature Preserve, LLC will work with the CA Department of Fish and Wildlife and the San Diego County DEH to evaluate alternative controls methods. These may include predatory insects, other natural controls and/or introducing native fish species if ponded water is expected to be long term.

2.1.2 Rodents

Rodents are not expected to be a problem on the site as no building structures will be installed other than a scale module. Good housekeeping practices will be followed such as:

- Placing all trash and debris in trash containers
- Covering/closing trash of all containers.

If evidence of rat activity is observed, the operator will utilize electric or snap traps to control the rodents. Dead rats will be placed in a plastic bag and disposed of in a trash container.

2.2 Education

Employees engaged in the operation and maintenance of the sand mine and employees of monitoring companies will be trained on how to control vectors. Training sessions will be held at least once per year for all staff. The training shall cover all of the MUP conditions set forth to avoid and/or discourage vector breeding including:

- Vegetation removal procedures for non-wetland standing water.
- Biological controls and vegetation maintenance for wetland waters.
- Inspection and maintenance procedures for any open water source.
- Routine inspection and maintenance of storm water basin BMPs.

3.0 LONG-TERM MAINTENANCE

Ongoing maintenance shall include monitoring of the pit, processing plant area ponds and any detention basins for the existence of vector conditions. Appropriate mitigation measures approved by the Department of Environmental Health – Vector Control Program will be utilized. Maintenance shall continue until reclamation has been completed and approved.

4.0 SUMMARY OF MITIGATION MEASURES TO MINIMIZE VECTORS

Following is a summary of the management practices that the project will implement to minimize vectors:

- Circulate water in settling ponds constantly.
- During the wet season (October through March), visually inspect the open pit, processing plant area ponds and detention basins for the presence of vectors monthly. Implement corrective measures if needed, including more frequent inspections if vector issues are identified by the public and/or routine inspections
- During the dry season (July through September) visually inspect the open pit, processing plant area ponds and detention basins weekly for the presence of vectors. Implement corrective measures if needed, including more frequent inspections if vector issues are identified by the public and/or routine inspections.
- Remove emergent vegetation when recommended by the DEH San Diego County, Vector Control Program or when emergent vegetation (e.g., cattails, sedges, etc.) is in excess of 50% of a water surface area.
- Collect and place all trash and debris in trash containers
- Cover/close all trash containers.

5.0 REFERENCES

County of San Diego. 2007. Guidelines for Determining Significance – Vectors, July 30.

6.0 LIST OF PERSONS AND ORGANIZATIONS CONTACTED

Greg Slawson, Senior Vector Ecologist, San Diego County Department of Environmental Health Vector Control Program.

7.0 SIGNATURES

The measures identified herein are considered part of the proposed project design and will be carried out as part of project implementation. I understand the breeding of mosquitoes is unlawful under the State of California Health and Safety Code Section 2060-2067. I will permit the County of San Diego, Vector Surveillance and Control program to place adult mosquito monitors and to enforce this document as needed.

Property Owner _____

Project Applicant _____

Greg Slawson, DEH VCP _____