

8.1.9.g West Otay A + B (J 32)

Site Description and Existing Conditions

West Otay A + B (J 32) is approximately nine acres within four separately owned parcels that total 177 acres. The site is located near the San Diego Gas and Electric substation south of Old Otay Mesa Road in Otay Mesa. The vernal pool basins occur on conserved lands: two parcels were owned and managed by The Environmental Trust prior to the bankruptcy proceedings, and the third parcel is owned by a private entity. The site is located in Otay Mesa, is zoned Open space and is adjacent to the MHPA. Surrounding land uses include transportation, residential, utility and open space.

Forty-four vernal pools were mapped at West Otay A+B, including seven basins restored as part of the mitigation for the Sweetwater Union High School project (see USFWS Biological Opinion 1-6-99-F-77 and *Vernal Pool Mitigation Plan for the SUHSD Otay Mesa High School Site* [Helix, 2000]). The vernal pools total 1,360 m² (0.336 acres) and are underlain by Huehuero loam. Upland vegetation is disturbed southern mixed chaparral and non-native grasslands.

Fifty-seven vernal pools were mapped—including 54 restored basins, two natural basins, and one road rut—and cover a total of 11,557 m² (2.856 acres). The site is characterized by Stockpen gravelly clay loam on 0 to 2 percent slopes, and upland areas have been re-vegetated with native grasslands. Sensitive species include *E. aristulatum*, *M. minimus*, *N. fossalis*, *P. nudiuscula*, *B. sandiegonensis*, and *S. woottoni*.

Prior to restoration, impacts to the site by recreational off-road vehicle, immigrant and Border Patrol traffic contributed to invasion by exotic species. Several of the vernal pools appear to have been graded and/or trenched, although vernal pool species continue to persist.

Threats

Restoration Success

The *Vernal Pool Mitigation Plan for the SUHSD Otay Mesa High School Site* (Helix, 2000) specifies success criteria for the restored vernal pools, including species richness, vegetative cover, target species, and hydrologic regime. Remedial measures will be required if restoration success criteria are not met within the specified time period.

Invasive Species

Non-native invasive species occur in both uplands and vernal pools. Restoration areas are being re-vegetated in accordance with the accepted *Mitigation Plan*. Other areas within West Otay A+B continue to be impacted by these species.

Edge Effects

The restoration site is adjacent to an SDGE substation, but the location is relatively remote from existing development. The area is connected to a large open space/MHPA area, including additional vernal pool sites, which minimizes impacts from isolation.

Trespass

Fencing was installed upon conservation of the property; however, it was stolen and has not been replaced. Trespass is primarily due to foot traffic by immigrants, although Border Patrol, off-road vehicle users and transients also impact the site.

Required Management Activities

Pursuant to Biological Opinion 1-6-99-F-77, issued through a Section 7 consultation for a U.S. Army Corps of Engineers 404 permit, the following mitigation and management activities have been required as conditions of incidental take of San Diego fairy shrimp (*Branchinecta sandiegonensis*) and spreading navarretia (*Navarretia fossalis*) resulting from the Sweetwater Union High School project.

The *Vernal Pool Mitigation Plan for the SUHSD Otay Mesa High School Site* (Helix, 2000) was accepted by the permitting agencies as mitigation for vernal pool impacts. The plan requires preservation and restoration of 4,762 ft² of vernal pool basin area.

Implementation of the *Plan* will require a 5-year mitigation and monitoring program, including trash removal, weed control, hydrological/topographical modification, and any necessary remedial measures, under the supervision of a re-vegetation specialist. Success criteria for the restoration are detailed in the *Plan* and final completion of the project shall be subject to review by the Army Corps of Engineers.

Management Recommendations

Active habitat restoration shall continue, as necessary, until the success criteria are met. These criteria, detailed in the approved mitigation plans shall be used by the restoration specialist and permitting agencies to determine the completeness of mitigation. Only upon written notice from the permitting agencies shall the restoration be deemed complete.

If additional restoration is proposed, priority should be given to preservation of the large population of *M. minimus* that naturally occurs in these basins. This species was found at only 17 natural basins in 2003, with fourteen of these at West Otay A+B. All other major populations within the City occur in created vernal pool basins. All restoration activities shall utilize seed collected from West Otay A+B.

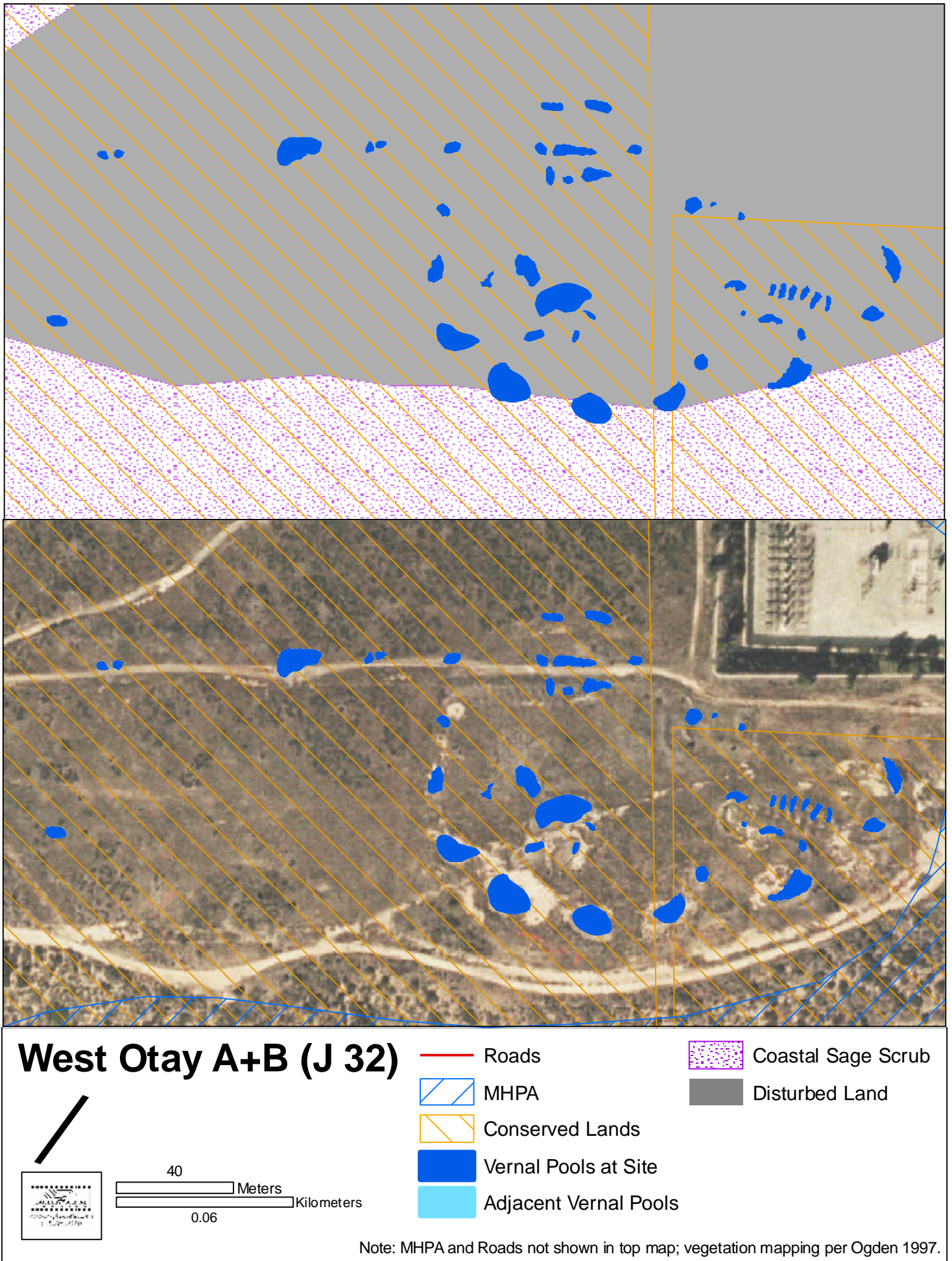
A new fence should be installed and repaired as necessary in perpetuity. Semi-annual maintenance patrols should occur to determine the need for fence repair and/or signage replacement, as well as litter and invasive species assessment.

Weeding within and immediately adjacent to vernal pools should be done by hand. In upland areas, mechanical removal may be necessary; however, herbicides should not be used in or adjacent to vernal pools. Targeted species for removal include, but are not limited to Italian ryegrass (*Lolium multiflorum*), rabbitfoot grass (*Polypogon monspeliensis*), yard knotweed (*Polygonum arenastrum*), fennel (*Foeniculum vulgare*) and curly dock (*Rumex crispus*).

If the maintenance patrols determine that active management is necessary after completion of the mitigation period, all work should take into the consideration the sensitive nature of on-site habitats, including adequate training of crews and supervision by a qualified biologist.

Land managers should encourage research opportunities, especially relating to the long-term success of restored vernal pools and upland vegetation.

Figure 49



8.1.9.h *J 34*

Site Description and Existing Conditions

The J 34 vernal pools occur on three parcels located south of Otay Mesa Road and east of Caliente Avenue. All parcels are in private ownership and are not conserved. The site is zoned for residential development and freeways; nearby land uses include residential development, transportation, educational facilities, MHPA open space, the Sweetwater High vernal pool preserve, and un-developed land.

Fourteen vernal pools and road ruts (602 m² combined basin area [6479.874 ft²]) were mapped at the 246-acre site. Hueruero loam supports non-native grasslands, and sensitive plant and animal species were not observed in 2003.

This site has been disturbed by off-road vehicle use, foot traffic, and illegal dumping.

Threats

Development

The J 34 parcels are privately owned and not conserved. They are located outside of the MHPA and community plan open space, and may be impacted during the development of Otay Mesa.

Trespass

Impacts occur from foot-traffic and off-road vehicle use.

Litter

The site may be impacted by wind-blown debris, itinerant encampments and illegal dumping.

Invasive Species

Invasive species, particularly grasses, occur in both upland and vernal pool habitats at J 34.

Fire and Fire Suppression

The J 34 vernal pools are currently surrounded by open space. However, development is being proposed throughout Otay Mesa and remaining open space areas may be impacted by fire suppression efforts following construction of defensible structures.

Current Management Activities

No management activities are planned or on-going.

Management Recommendations

Due to the presence of vernal pools, J 34 is recommended for conservation through public acquisition or private mitigation. However, development is not precluded; if development or conservation occurs, the following recommendations shall be implemented.

Restoration and/or enhancement may be appropriate given the higher species diversity of nearby vernal pool sites, and should be considered if conservation occurs.

Restoration and reintroduction efforts shall utilize seeds from within the smallest possible geographic range, in the following order, as necessary: complex, series, geographic region (i.e. Otay Mesa).

Proposed development should consider vernal pools on adjacent parcels during mitigation and preserve design to minimize impacts from isolation.

Fencing shall be installed to preclude access and appropriate bilingual signage shall be developed with both educational and no-trespassing elements.

A qualified biologist shall assess the site for non-native, invasive species, and shall recommend and implement a removal plan. Weeding within and immediately adjacent to vernal pools should be done by hand. In upland areas, mechanical removal may be necessary; however, herbicides should not be used in or adjacent to vernal pools. If development occurs, non-native, invasive species shall not be utilized for landscaping purposes.

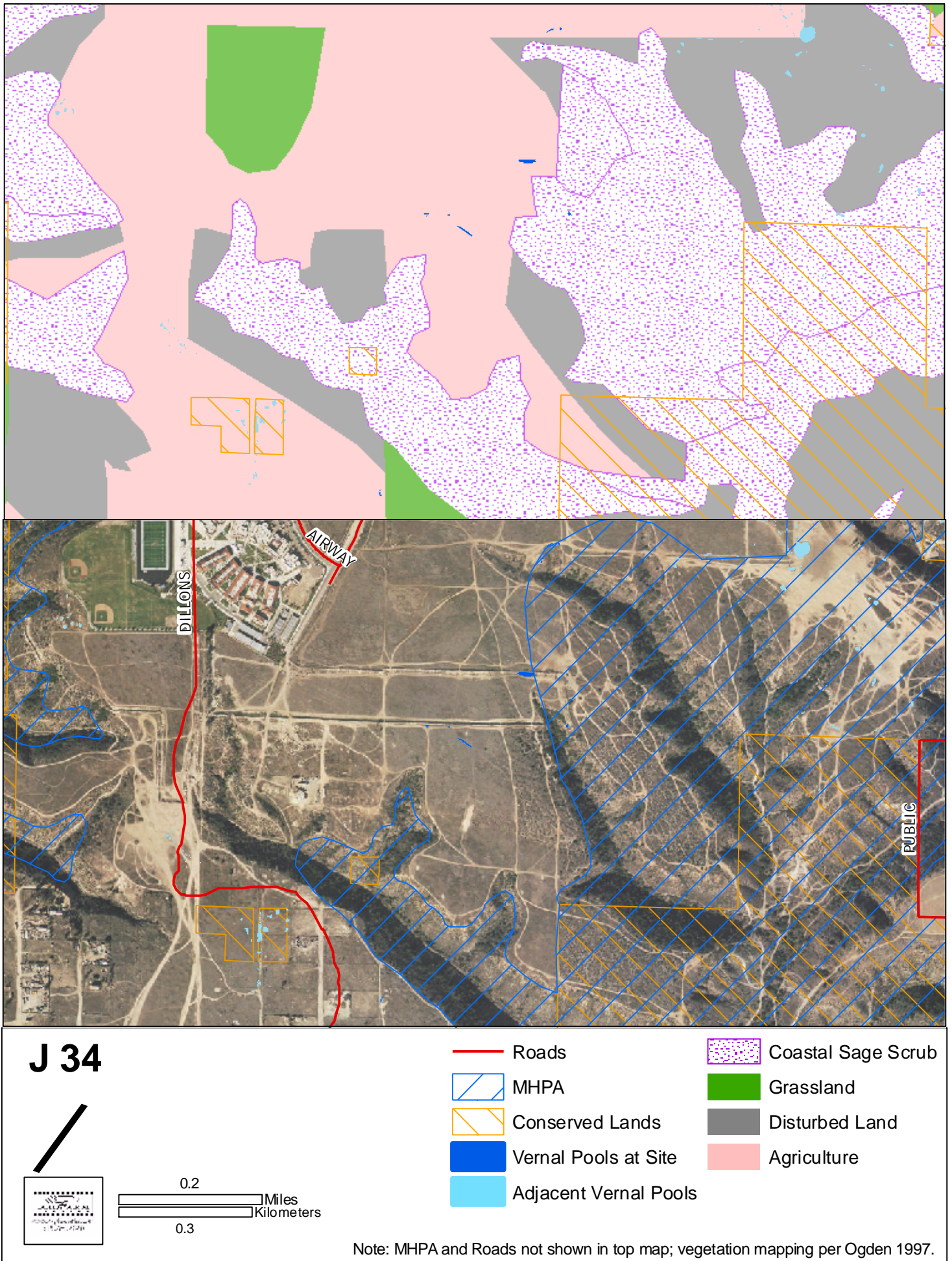
Annual maintenance shall be required to provide fence and sign repair and trash removal, as necessary. A sufficient endowment should be established to provide for necessary maintenance and management in perpetuity.

If the site is used for mitigation, a fire management plan shall be prepared and included in the adopted Habitat Management Plan.

Adaptive management shall include management of the site to improve habitat conditions for native, solitary bees known as obligate pollinators for vernal pool species.

Due to the proximity of the site to residential and educational land uses, it is recommended that educational programs be provided through local schools, Home-Owner's Associations (HOAs), community groups, etc. Topics may include the local ecosystem, including vernal pools, habitat preservation (i.e. MSCP), and should incorporate hands-on learning via neighborhood hikes, etc. Programs should strive to present information in a manner that will increase interest in the natural world and cultivate local stewardship of open space, with the overall goal of developing positive neighborhood awareness of the preserve.

Figure 50



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8.1.9.i 905 Basins (J 14)

Site Description and Existing Conditions

The SR 905 (J 14) vernal pool site is comprised of two parcels—one conserved and one partially conserved—located along Heritage Road near the intersection of Camino Maquiladora. One parcel is in private ownership and the other is held by the City of San Diego. The site is within the MHPA and is zoned Open Space; nearby land uses include commercial development, transportation, open space, a section of the Cal Terraces vernal pool preserve, and un-developed land.

Seven vernal pools and road ruts (277 m² [2981.603 ft²] combined basin area) were mapped at the 38-acre site. Stockpen gravelly clay loam and Olivenhain cobbly loam supports non-native grasses, ruderal vegetation, and disturbed coastal sage scrub. *B. sandiegonensis* were observed in 2003.

This site has been disturbed by off-road vehicle use, foot traffic, illegal dumping and construction-related earth moving activities.

Although considered separately here due to ownership and conservation status, the 905 basins and Cal Terraces vernal pools south of SR 905 are geographically related and part of the same complex and series (J 14). However, extensive restoration has occurred at Cal Terraces while the 905 vernal pools are in a natural and often disturbed state. Vernal pools in the J complex have been identified as necessary for the reclassification of the federally listed *E. aristulatum* and *N. fossalis* by the adopted Recovery Plan (USFWS, 1998) for these species.

Threats

Development

Four of the seven vernal pools occur on conserved lands. The construction of State Route 905 may directly or indirectly impact these vernal pools.

Invasive Species

Invasive species occur in both upland and vernal pool habitats at the 905 site.

Trespass

Impacts from trespass occur both from foot traffic and off-road vehicle use.

Litter

The site may be impacted by wind-blown debris, motorist litter from Otay Mesa Road and illegal dumping.

Fire and Fire Suppression

This site may be impacted by fire and/or fire suppression activities if defensible structures are built in the vicinity.

Current Management Activities

No management activities are planned or currently underway.

Management Recommendations

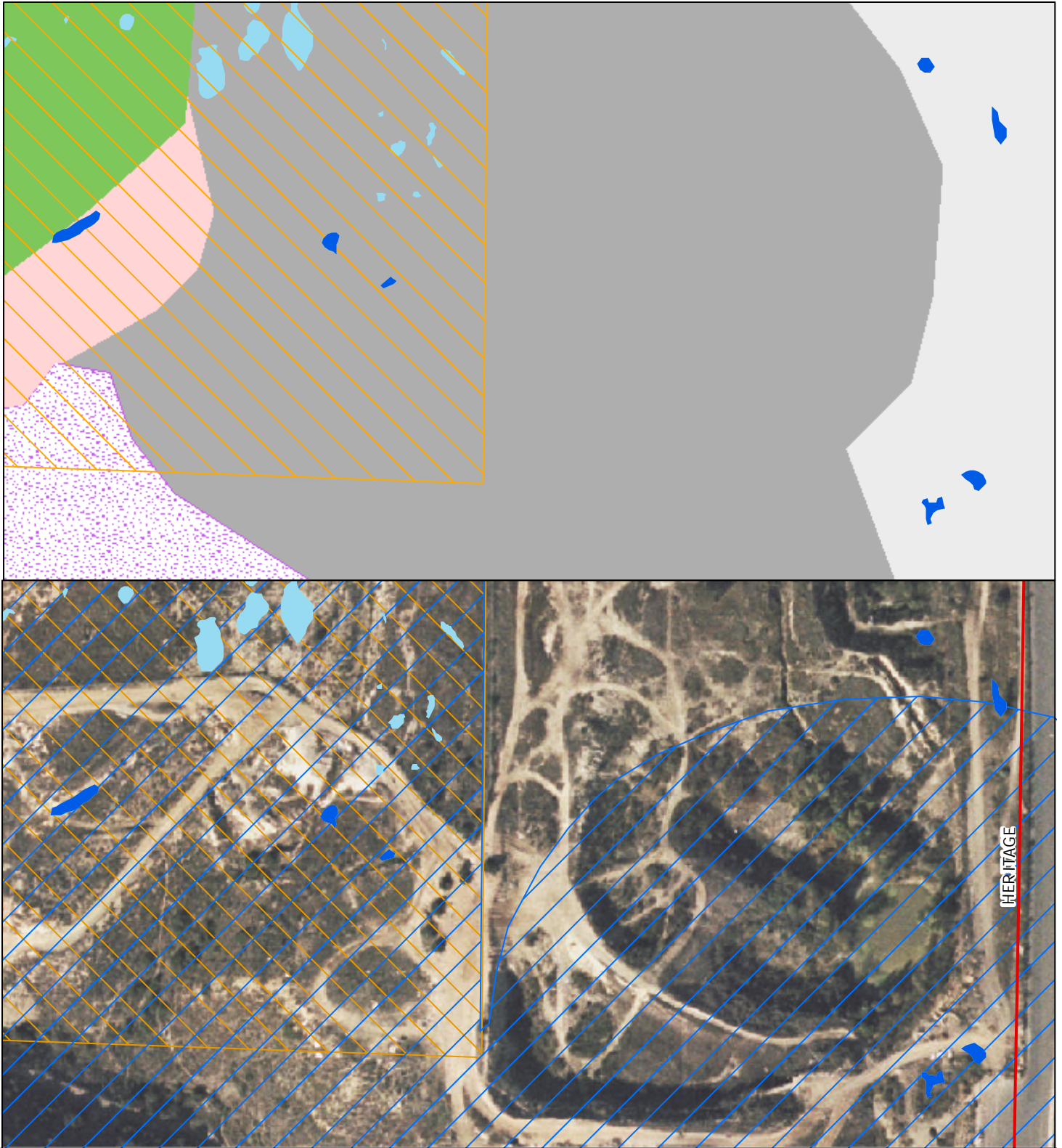
Restore vernal pools as habitat for *E. aristulatum* and *N. fossalis* to promote the reclassification of these federally listed species in accordance with the adopted *Recovery Plan for Vernal Pools of Southern California* (U.S. Fish and Wildlife Service 1998).

Restoration plans/goals shall strive to create basins that mimic the natural, undisturbed vernal pools in the Otay Mesa region.

Fencing should be installed and maintained to preclude access, and appropriate bilingual signage shall be developed with both educational and no-trespassing elements.

If necessary, a qualified biologist should assess the site for non-native, invasive species, and should recommend and implement a removal plan. If weed control is deemed necessary, weeding within and immediately adjacent to vernal pools should be done by hand. In upland areas, mechanical removal may be necessary, however, herbicides should not be used in or adjacent to vernal pools. If a portion of the site is developed, non-native, invasive species shall not be utilized for landscaping purposes.











Figure 51



905 Basins (J 14)



0.02 Miles
0.06 Kilometers

-  Roads
-  Coastal Sage Scrub
-  MHPA
-  Grassland
-  Conserved Lands
-  Disturbed Land
-  Vernal Pools at Site
-  Agriculture
-  Adjacent Vernal Pools
-  Urban/Developed

Note: MHPA and Roads not shown in top map; vegetation mapping per Ogden 1997.

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