Monarchs Observed ___Yes ___No

Western Monarch Overwintering Habitat Assessment (Long Form)

Please fill out as much information on this form as you can, but feel free to skip any sections for which you do not have the right equipment or you are uncertain about the question. Any information you are able to provide is valuable! Refer to the *Instructions and Definitions* on page 5 for additional information about how to fill out this data sheet.

Date 11/22/2022 Site Name Clement & Hwy 1, Davenport Site ID # 3009
County Santa Cruz Property Owner BLM and possible Caltrans and/or the RTC
Observers Bill Henry Start Time 07:30 End Time 10:15
Current Land Use (i.e. State, County or National Park; State or National Forest; Golf Course; or Residential Area)
Vacant Lot, County Road, Caltrans easment (?), BLM is currently paused in construction of an access point for the Contoni-Coast Dairies National Monument due to legal/proceedural reasons.

Location Information

Site Location/Directions___60 m NW of the intersection of Warnella Rd and Cement Plant Road._____

Please provide GPS coordinates of the grove's boundaries. If the grove is an odd-shaped polygon, please provide additional GPS points as needed or as a shapefile/kmz utilizing ArcGIS or Google Earth.

GPS Point of Grove's Northern corner: _____N _____W Accuracy (ft): _____
GPS Point of Grove's Eastern corner: _____N _____W Accuracy (ft): _____
GPS Point of Grove's Western corner: _____N _____W Accuracy (ft): _____
GPS Point of Grove's Southern corner: _____N _____W Accuracy (ft): _____
Grove boundaries confirmed with Ashley Fisher 11/21/22

GPS Point of Cluster tree #1: 37° 1'20.92"N N 122°12'31.47"W W Accuracy (ft): 25
GPS Point of Cluster tree #2: 37° 1'20.53"N N 122°12'31.68"W W Accuracy (ft): ____

Datum of GPS Unit: __ NAD27 __ NAD83 _x WGS84 __ Unknown __
Other, please specify (e.g., recreational GPS): _____

37° 1'19.86"N 122°12'31.71"W
37° 1'19.67"N 122°12'31.39"W

Weather

Cloud/Fog Cover: __0_ %
Precipitation: _0None __ Drizzle __ Rain __ Downpour

Topography

Aspect: _0 N __ NE __ E __ SE __ S __ SW __ W __NW
Slope: __2__ % (The data was collected: __ with a clinometer /rangefinder or _x_ by ocular estimate)

Microclimate INSIDE Overwintering Grove

Temperature (°F or C): _51_____
Relative Humidity: _na_____

Dewpoint: ___na_____
Wind: ___2 mph__ (mph or m/s or bft)
Wind Direction: __ N __ NE __ E _x_ SE __ S __ SW __ W __NW

Wind OUTSIDE Overwintering Grove
Wind: __3_____ (please circle: mph or m/s or Bft)
Wind Direction (direction wind is coming FROM): __ N __ NE _x_ E __ SE __ S __ SW __ W __NW

Wind Protection
Is there a buffer between predominant and storm winds and the cluster trees? Yes x / No
Please describe the tree arrangement (including tree species) _____
_____provide protect from NW and S winds. S wind protection now compromised by recent_____
_____removal of a multiple large mature E. globulus trees_____

Light
Do the cluster trees get morning sunlight Yes x / No

Fresh Water Source
Fresh Water Source Present at the Site: __x stream/river __ lake/pond __ abundant dew __ other __ none
About how many meters is the fresh water source from the monarch cluster trees? __225m_____

Community Structure (total can be >100% for all layers combined)
Tree cover _75_% Shrub cover __15% Herbaceous cover ____% Leaf litter layer ____%
Bare soil cover ___25___%

Nectar Species In Bloom
(Rate the amount per species: A= abundant; M= moderate; S= scarce)
__ no nectar species in bloom

Native Species:	Native Species (cont.):	Non-native Species (cont.):
__Narrow leaf milkweed (*Asclepias fascicularis*)	__ Red alder (*Alnus rubra*)	_s German ivy (*Senecio mikanioides*)
__ Mule fat/seep willow (*Baccharis glutinosa*)	__ Aster (*Aster* sp.)	__ Passionflower vine (*Passiflora* sp.)
__ Coyote brush (*Baccharis pilularis*)	__ Redclaw (*Escallonia* sp.)	__ Bull thistle (*Cirsium vulgare*)
__ Arroyo willow (*Salix lasiolepis*)	Other: _____	__ Wild radish (*Raphanus sativus*)
__ Other willow (*Salix* sp.)	_____	__ English daisy (*Bellis perennis*)
__ Monkeyflower (*Mimulus* sp.)	_____	__ White nightshade (*Solanum nodiflorum*)
__ Morning glory (*Calystegia* sp.)		__ Ice plant (*Mesembryanthemum* sp.)
__ Miner's lettuce (*Montia perfoliata*)	Non-native Species:	__ Field bindweed (*Convolvulus arvensis*)
__ Dune groundsel/ragwort (*Senecio blochmaniae*)	_a Blue gum (*Eucalyptus globulus*)	__ Chrysanthemum (*Chrysanthemum* sp.)
__ Mock heather (*Ericameria ericoides*)	__ Red gum (*Eucalyptus camaldulensis*)	__ Klamath weed/tansy mustard (*Senecio* sp.)
__ Crisp dune mint (*Monardella crispa*)	_s Black mustard (*Brassica nigra*)	__ Lily-of-the-Nile (*Agapanthus africanus*)
__ California blackberry (*Rubus ursinus*)	__ Unknown or other mustard (*Brassica* sp.)	__ Sweet fennel (*Foeniculum vulgare*)
	__ Common dandelion (*Taraxacum officinale*)	__ Bottlebrush (*Callistemon* sp.)
	__ Ox-eye daisy (*Chrysanthemum*	__ Lantana (*Lantana* sp.)
		__ Lemon (*Citrus limon*)

__ Morro manzanita (*Arctostaphylos morroensis*) __ Bottle brush (*Ceanothus thyrsiflorus*) __ Western goldenrod (*Euthamia occidentalis*)	*leucanthemum*) __ Periwinkle (*Vinca major*) __ Butterfly bush (*Buddleia* sp.) __s English ivy (*Hedera helix*)	__ Pride of madeira (*Echium fastuosum*) Other: _____ _____ _____ _____

How many meters is the closest nectar source from the monarch cluster trees? _____

Did you observe monarchs feeding on nectar? ___ Yes _x__ No

If yes, which species? _____

Monarch Cluster Trees

Record the species that monarchs are actively clustering on. A cluster is considered 3 or more adjacent monarch butterflies with closed wings:

x Blue gum (*Eucalyptus globulus*) __ Red river gum (*Eucalyptus camaldulensis*) __ Unknown or other Eucalyptus species (*Eucalyptus spp.*) __ Monterey pine (*Pinus radiata*) __ Unknown or other pine (Pinus spp.) __ Monterey cypress *(Cupressus macrocarpa*)	__ Coastal redwood (*Sequoia sempervirens*) __ Coast live oak *(Quercus agrifolia*) __ Western sycamore (*Platanus racemosa*) __ Willow (*Salix spp*.) __ Acacias (*Acacia spp*.) Other: _____

Tree Species Composition

Other tree species present at the site that monarchs are not clustering on:

x Blue gum (*Eucalyptus globulus*) __ Red river gum (*Eucalyptus camaldulensis*) __ Unknown or other Eucalyptus species (*Eucalyptus spp.*) __ Monterey pine (*Pinus radiata*) __ Unknown or other pine (Pinus spp.) _x_ Monterey cypress *(Cupressus macrocarpa*)	__ Coastal redwood (*Sequoia sempervirens*) __ Coast live oak *(Quercus agrifolia*) __ Western sycamore (*Platanus racemosa*) __ Willow (*Salix spp*.) __ Acacias (*Acacia spp*.) Other: _____
C macropcarpa minor component and not in direct sphere of influence	

Visible Disturbances within the Overwintering Site

_x Cut trees __ Trimmed trees __ Possibly too dense of trees (i.e. too much shade) __ Trees diseased from pitch canker __ Trees diseased from Eucalyptus leaf beetle __ Trees diseased from Eucalyptus lerp psyllid __ Trees diseased from Eucalyptus longhorn borer __ Trees diseased from unknown source __ Dead/dying trees from non- disease source __ Old/aging trees x High visitation load potential for __ Erosion	__ Cattle grazing __ Pesticide/herbicide use at site (observed) __ Pesticide/herbicide use at site (likely) __ Fire destroyed a portion of site x Construction __ Buildings _x Pavement _x Parking lot under contruction __ Mowing/plowing of nectar plants __ Railroad tracks __ Extensive trails x Road (within the site) Other: _____

__ Campsite __ Picnic area	_____

Visible Disturbances in the Landscape (Outside of the Overwintering Site)

_x Roads/Highways _x High vehicle traffic area __ Housing Developments __ Shopping Malls/Restaurants __ Pavement	__ Parking lot __ Pesticide/herbicide use in landscape (observed) __ Pesticide/herbicide use in landscape (likely) __ Construction Other: __agriculture_____

Possible Future Threats

__ High possibility that overwintering trees will be cut __ Site might become too dense/shady in the future _x_ Site might not offer enough wind protection in the future __ Proposed housing development	_x Proposed expansion of facilities or buildings within the site Other: _____ _____

Is the site protected by staff/docent presence? ___ Yes _x_ No

Describe the disturbances/threats in greater detail, if possible. (For example, if you observed dead/dying trees or cut trees at the site, how many did you observe and how important are these trees to the site? If the site is affected by erosion, what is the cause of the erosion?) _____

BLM recently cleared the directly area under the grove and clustering monarch disturbing roots and area under the drip line of the clustering trees. The clearing resulted in bare mineral soil and significant disturbance.

Photopoints

Camerapoint Description: Looking S

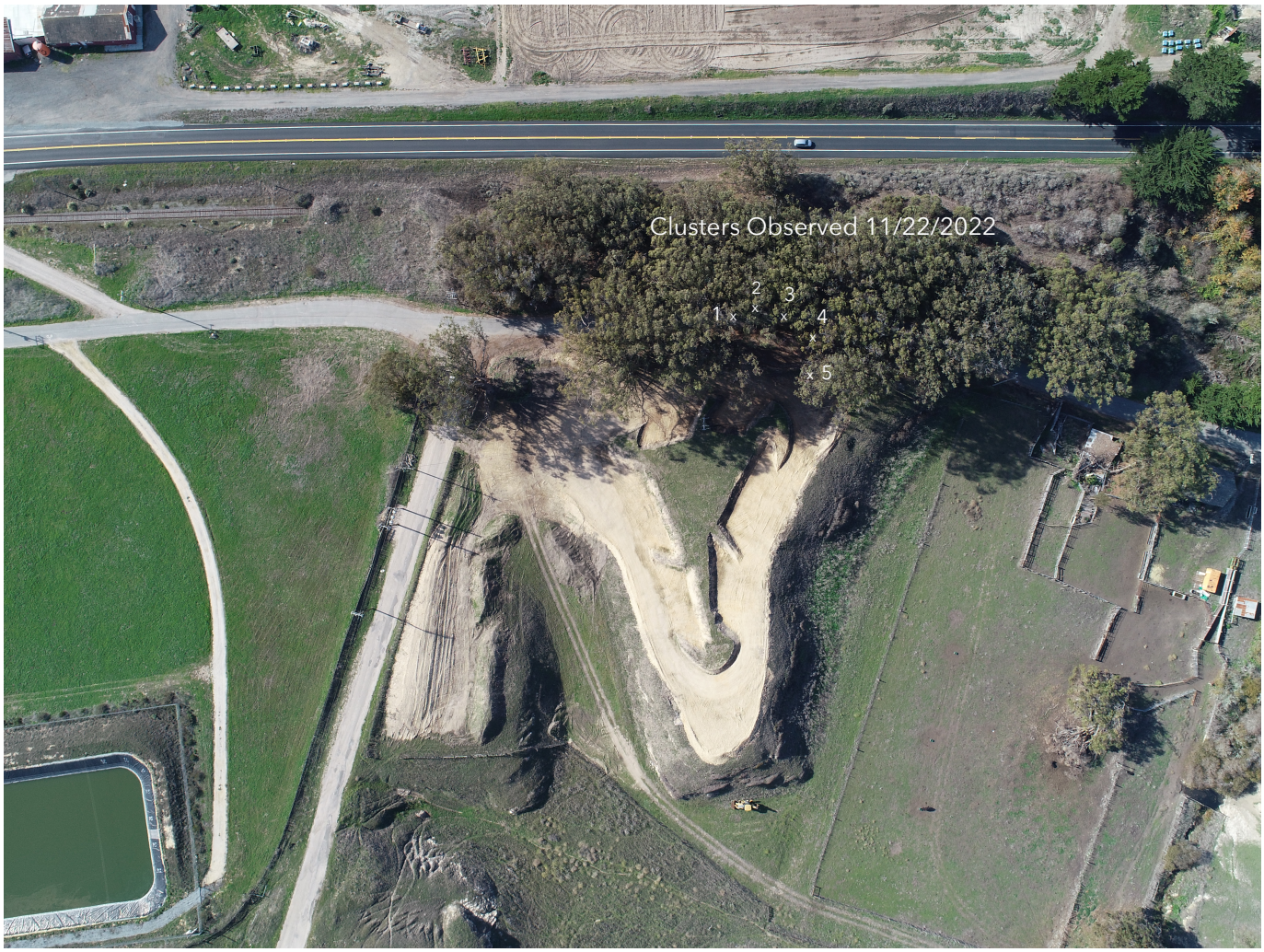
Photopoint #1 Description: Looking W

Photopoint #2 Description: Looking N

Notes

Site is compromised by access point development that is in progress. Dripline aronnd affected trees should be covered with topsoil and mulched with clean mulch.

Overall Site Sketch *(here or on the back of the datasheet)*



Count - 11/22/2022

Cluster 1 - 6 monarchs
Cluster 2 - 17 monarchs
Cluster 3 - 44 monarchs
Cluster 4 - 12 monarchs
Cluster 5 - 100 monarchs

4 fliers.