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Stable Waste, Fly, and Vector Control Plan

ResQue Ranch
PDS2015-AD-15-019, PDS2016-LDGRMJ-30067

November 2018 | CGS-02

Prepared for:

The County of San Diego
5510 Overland Ave., Suite 310
San Diego CA 92123

Owner:
4030 Goldfinch Investments, LLC
3750 Sports Arena Blvd., #6
San Diego, CA 92110

Consultant:
HELIX Environmental Planning, Inc.
7578 El Cajon Blvd.
La Mesa, CA 91942

Stable Waste, Fly, and Vector Control Plan

ResQue Ranch

PDS2015-AD-15-019, PDS2016-LDGRMJ-30067

Site Location:

Highland Valley Road
San Diego, CA 92123
APN 276-030-61-00

Off-site Manure Processing Location:

15365 Paseo Penasco
Escondido, CA 92025

Prepared for:

The County of San Diego

Owner:

4030 Goldfinch Investments, LLC
3750 Sports Arena Blvd., #6
San Diego, CA 92110
(619) 814-0050

Consultant:

HELIX Environmental Planning, Inc.
7578 El Cajon Blvd.
La Mesa, CA 91942
(619) 462-1515

November 2018 | CGS-02

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ACRONYMS AND ABBREVIATIONS

BMPs	Storm-water Best Management Practices
IPM	Integrated Pest Management
project	ResQue Ranch horse rescue and equine therapy center
SWQMP	Stormwater Quality Management Plan

1.0 INTRODUCTION

1.1 PURPOSE OF THE REPORT

This Vector Management Plan has been created in consultation with the County of San Diego Department of Environmental Health, Vector Surveillance and Control Program. The purpose of this Vector Management Plan is to identify management practices that will be implemented on the project site to minimize vector breeding sources associated with a non-profit horse rescue and equine therapy center. Vectors that may be attracted to an equestrian facility include flies, mosquitoes, and rodents. This plan is created to meet the requirements of Ordinance No. 10285 related to equine uses. The overall goals of the plan are to minimize fly production, discourage breeding of other pests, reduce odors, create better public relations, reduce the amount of waste that enters landfills, and minimize manure content and sediment in stormwater runoff. Principles of Integrated Pest Management (IPM) will be used with little or no use of pesticides.

1.2 PROJECT DESCRIPTION

The ResQue Ranch horse rescue and equine therapy center (project) will include a horse stable, horse corral, open stables, vineyard, and driveway on a five-acre property. The two-story horse stable will include a tack room, veterinary area, horse wash area, office, laundry room, restroom, and viewing deck. The facility will be used for housing up to 25 horses at a time (except during fire or other emergency conditions when ResQue Ranch may be used as a haven, when the number of animals could be temporarily higher). Manure will be exported off site three times a week and subsequently converted into a soil amendment that will be used on the ResQue Ranch parcel and other property owned by 4030 Goldfinch Investments, LLC's managing member, including his adjacent residence at 15365 Paseo Penasco. This Vector Management Plan has been developed to address the pests (including flies, mosquitoes, and rodents) that may be attracted to the feed and water provided to the horses and the manure generated on site. The development of the ResQue Ranch Equestrian Facility will be subject to a Grading Permit, Administrative Permit, and California Environmental Quality Act review.

1.3 ENVIRONMENTAL SETTING (EXISTING CONDITIONS)

The project site is in the San Pasqual Valley area, east of Interstate 15 and south of State Route 78, in the Ramona Community Plan Area of unincorporated San Diego County (Figure 1). The project site is in Section 4 of Township 13 South, Range 1 West of the San Pasqual U.S. Geological Survey 7.5-minute topographic quadrangle map (Figure 2). The site is located north of Highland Valley Road and east of Paseo Penasco. The property is bordered by rural residential homes and cultivated land, including orchards and vineyards.

The site has been graded and currently consists of a large graded pad with graded slopes. A stable and three corrals have been constructed within the site and an access driveway has been graded connecting the site to Highland Valley Road. Prior to grading, the project site supported coast live oak woodland, Diegan coastal sage scrub, non-native grassland, disturbed habitat, orchards, and urban/developed land.

2.0 VECTOR MANAGEMENT

This Vector Management Plan proposes management practices and an educational program to reduce the amount of pests attracted to equine activities on ResQue Ranch.

2.1 MANAGEMENT PRACTICES

The following management practices are proposed for ResQue Ranch to minimize vector breeding sources for flies, mosquitoes, and rodents and maintain water quality.

2.1.1 Flies

Manure Management Methods

As flies breed in manure and other rotting material, managing manure is the primary means of controlling fly populations on a horse ranch. Soiled bedding and manure will be removed from the stables and corrals daily and moved to a manure storage area at the northeast corner of the property (Figure 3). The manure storage area is located approximately 440 feet from the nearest neighboring home and meets the Zoning Ordinance's Animal Enclosure setbacks (at least 10 feet from side and rear lot lines). Daily manure removal is required to prevent the accumulation of flies, the spread of disease, and offensive odor. Manure will be stored in two covered, concrete bins with good drainage provided around storage structures. Every Monday, Wednesday, and Friday, manure will be transported off site to 15365 Paseo Penasco, Escondido 92025 where it will be processed into a soil amendment.

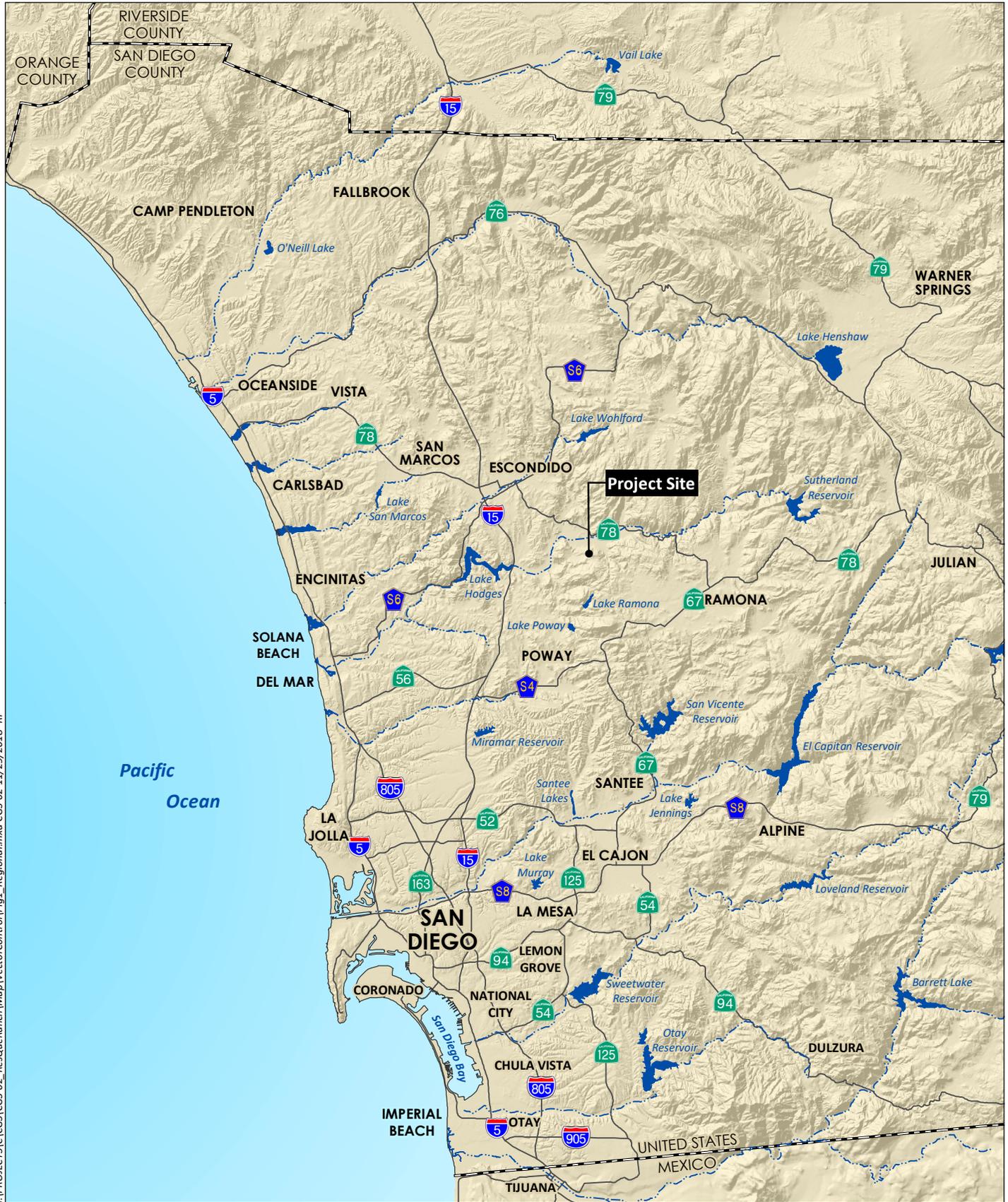
At the off-site manure processing area, manure is placed in piles, covered with plastic, and allowed to heat up to over 100 degrees Fahrenheit. The heat generated by the composting manure kills any non-native plant seeds, microbes, and fly larvae present within the material. Material in the manure piles will be turned and wetted with water, as needed, to treat the entire pile. Subsequently, the processed manure will be used as organic fertilizer on the ResQue Ranch parcel the manure processing location, and other property owned by 4030 Goldfinch Investments, LLC's managing member. Storage of the processed manure is not anticipated.

The San Diego County Code general requirement for garbage and organic wastes are for weekly removal except as approved by the Director of Environmental Health. Horse manure will be removed from the site three times per week. Manure that has been processed into usable fertilizer will be spread on the owner's property, including the project site, as a fertilizer.

Water Management Methods

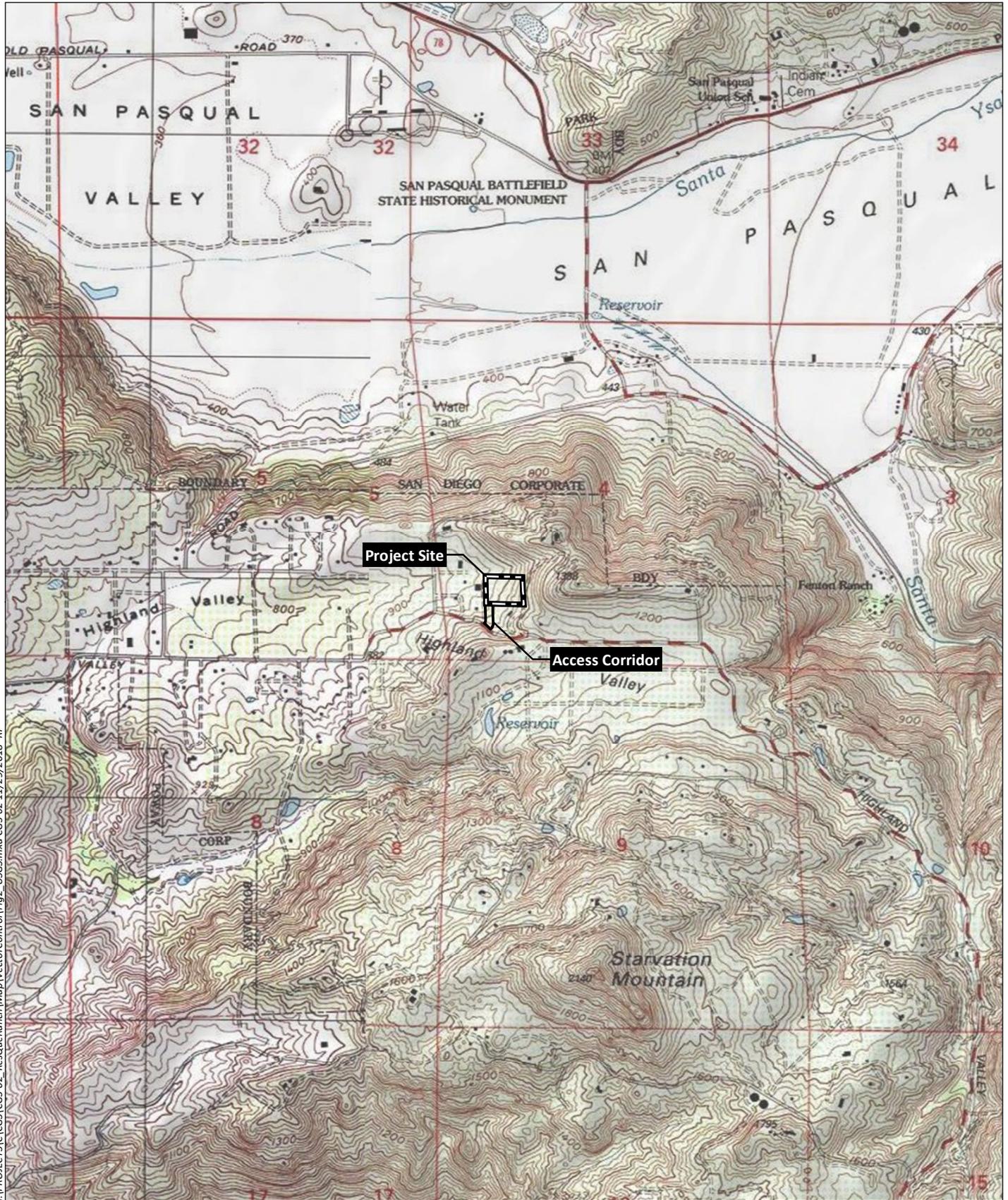
In addition to daily removal of the manure to the storage area, a more thorough cleaning of the facility will be conducted prior to the expected rainy season (approximately September through March). These cleaning efforts should remove any excess accumulations of manure from the facility to prevent fly breeding and reduce the amount of manure transported by stormwater runoff.

Stormwater Best Management Practices (BMPs) for the ranch, related to fly control, include the manure cleanup and containment practices described above and keeping the manure storage area dry (maintaining good drainage around the storage area and covering storage piles). Runoff will be diverted around the proposed corral using an earthen swale and retaining wall.



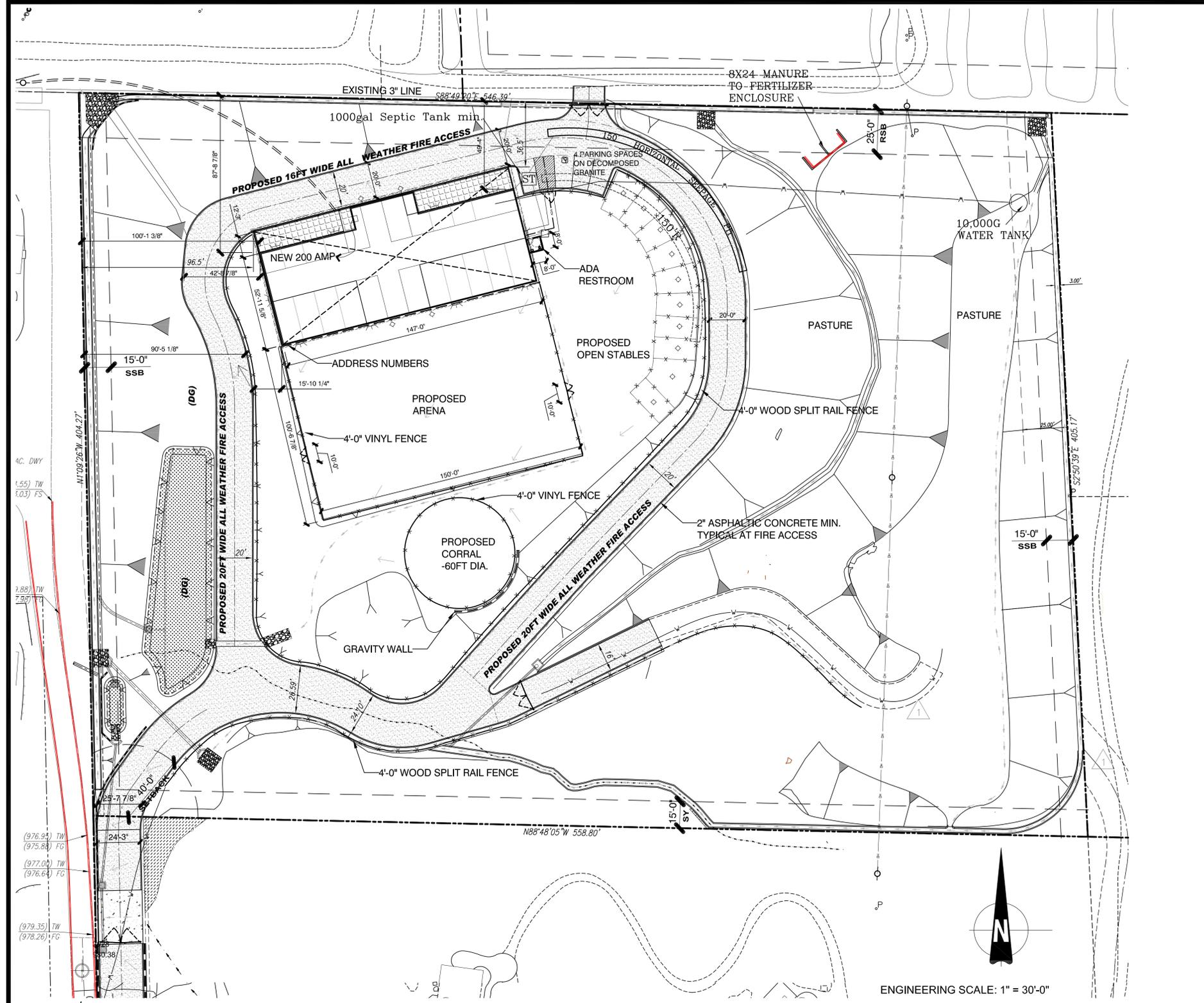
I:\PROJECTS\CGS\CGS-02_ ResQueRanch\Map\VectorControl\Fig1_Regional.mxd CGS-02_11/29/2018 -RP

Source: Base Map Layers (SanGIS, 2016)



I:\PROJECTS\IC\CGS\CGS-02_ResQueRanch\Map\VectorControl\Fig2_USGS.mxd 11/29/2018 -RP

Source: San Pasqual 7.5' Quad (USGS)



SHEET INDEX

CS	COVER SHEET
CIVIL	GRADING PLAN
SS	STANDARD SPECIFICATIONS
C1	MB COVER SHEET
S101	MB SCHEDULE PLAN
S102	MB FLOOR PLAN
S103	MB ROOF PLAN
S104	MB FRAMING PLAN
S201	MB ELEVATIONS
S501	MB DETAILS
S502	MB DETAILS
S503	MB DETAILS
S504	MB DETAILS
S505	MB DETAILS

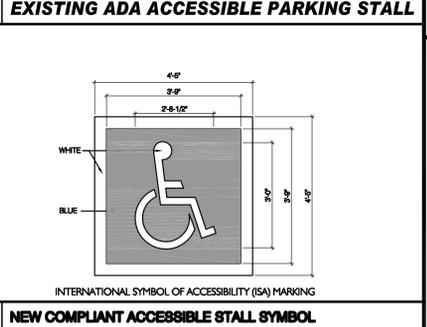
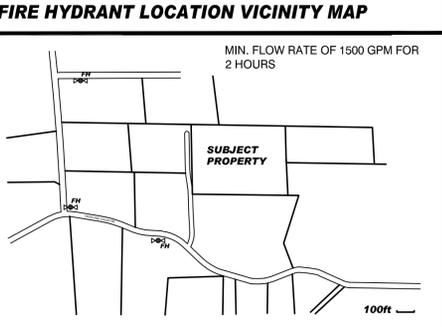
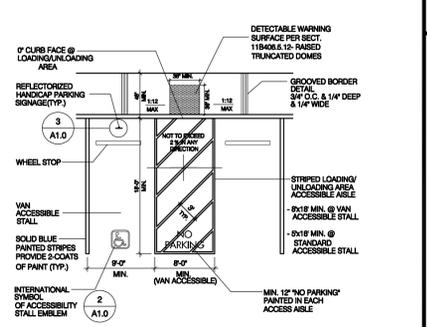
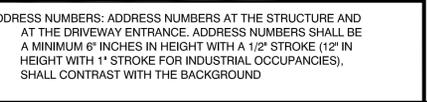
SYMBOLS

	WOOD FENCE
	GATE
	EX. POWER POLE
	LE 50W SUPER BRIGHT OUTDOOR LED FLOOD LIGHT, WATERPROOF 3250 LUM.
	GOODRICH UNION PORCELAIN LED GOOSENECK -12-150-G15-110-2000 LUM.
	BARN LIGHTS- THE BULLET LED CAST GUARD- 10-CGG-3500K 1600 LUM.

NOTES

ADDRESS NUMBERS: ADDRESS NUMBERS AT THE STRUCTURE AND AT THE DRIVEWAY ENTRANCE. ADDRESS NUMBERS SHALL BE A MINIMUM 6" INCHES IN HEIGHT WITH A 1/2" STROKE (12" IN HEIGHT WITH 1" STROKE FOR INDUSTRIAL OCCUPANCIES), SHALL CONTRAST WITH THE BACKGROUND

Site Area: 5 AC. OR 217,800 SF
 Usable Area: 2.1 AC. OR 91,476 SF
 HORSES PROPOSED: 50 HORSES MAX. PRIVATE OWN
 (N) HORSE STABLE: 10,791 SF
 (N) MANURE MGMT: 192 SF



RESERVED FOR COUNTY STAMPS

OWNER INFORMATION

NAME: CHARLES PACE AND JEFFREY LOYA
 ADDRESS: 15635 PASEO PENASCO
 CITY: ESCONDIDO
 STATE: CA.
 ZIP: 92029
 PHONE: 619-814-0050
 FAX:
 EMAIL: PHIL@PHILSBQBQ.NET

CONTACT INFORMATION

NAME: GARY SEWARD
 ADDRESS: 234 VENTURE ST., STE 100
 CITY: SAN MARCOS
 STATE: CA.
 ZIP: 92078
 PHONE: 760-759-2260 X325
 FAX:
 EMAIL: GARY@RRCONSTRUCTION.COM

PARCEL INFORMATION

APN: 276-030-48,49-00
 SITE ADDRESS: HIGHLAND VALLEY ROAD ESCONDIDO CA. 92029
 ZONE: RL-20
 SITE AREA: 5.12 AC. OR 223,027SF
 FIRE SPRINKLERS: YES- DEFERRED SUBMITTAL NFPA 13 STANDARD

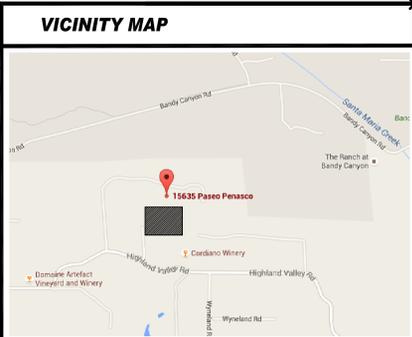
I CERTIFY THAT I HAVE READ ALL ZONING REGULATIONS AND BEST MANAGEMENT PRACTICES (BMPs) NOTES AND THAT I AM THE DESIGNER OF THE PROPOSED PROJECT:

DESIGNER SIGNATURE REQUIRED DATE

PROJECT INFORMATION

PROPOSED: NEW 10,791 SF PRE-FAB TWO STORY HORSE STABLE, 200 AMP ELECTRICAL PANEL AND INSTALL SEPTIC SYSTEM.

NO OUTDOOR LIGHTING BETWEEN 10PM TO 7 AM
 COMPLIANCE WITH NOISE LIMITS PURSUANT TO SEC. 3130 AND Z.O. SECTION 6300
 COMPLIANCE WITH PARTICULATE MATTER AND AIR CONTAMINANTS PURSUANT TO Z.O. SEC. 6316
 COMPLIANCE WITH ODORS PURSUANT TO Z.O. SEC. 6318 (SEE VECTOR MGMT PLAN)
 COMPLIANCE WITH LIGHTING STANDARDS PURSUANT TO Z.O. SEC. 6322-6326 AND COUNTY CODE SECTION 59.101
 PROVIDE FIRE SPRINKLER SYSTEM DESIGNED TO NFPA 13 STANDARD.



PHIL'S PREFAB STABLE
 HIGHLAND VALLEY ROAD
 ESCONDIDO, CA 92029

NO.	REVISION	DATE:
1	PLANNING RESUBMITTAL	10-21-15

DATE: 07-30-18
 JOB #: WO-1473

SHEET NUMBER
CS

Pesticides, Larvicides, and Traps

In addition to removing the manure, manure can be made less hospitable for insects. The horse feed is supplemented with diatomaceous earth, which acts as a natural insecticide. Diatomaceous earth passes through the horses' digestive systems and reduces the number of flies on the "treated" manure. Similarly, hydrated lime may be spread in some areas to reduce fly breeding and odors. Automatic fly spray devices or strips will be utilized as required in building or structure areas to reduce the adult fly population.

Chemical pesticides/larvicides should only be used when management practices are insufficient, to minimize potential negative effects on the health of animals and water quality. When required, chemical control should be implemented by a licensed pest control agent.

Sanitary Methods

In addition to manure, other common materials may be suitable for controlling fly breeding on the ranch, including bedding, feed, organic matter from birthing, garbage, and vegetation. The following sanitary methods are required to reduce the amount of other decomposing material accessible for breeding flies:

1. Using as little bedding material as possible;
2. Maintaining bedding, feed, and manure in dry condition (i.e., by using non-leak valves on all water troughs, bowls, cups and other water devices; using automatic valves or sanitary drains for large troughs or cups if water flow is continuous; maintaining drainage within fields and corrals; and reporting and repairing water leaks as soon as possible);
3. Regular cleaning of feed areas and water troughs and locating these away from each other (because spilled feed attracts flies and makes a good breeding site);
4. Removing stillborns and afterbirths at once to tight lid containers or off-grounds disposal;
5. Storing garbage in tight lid containers prior to off-grounds disposal;
6. Not storing abandoned vehicles, equipment, and materials on site;
7. Controlling weeds to promote dry grounds, which are less likely to breed flies, rodents, mosquitoes, and other pests (weeds should be removed by mechanical means; herbicide is not allowed per the Stormwater Quality Management Plan [SWQMP; Spear & Associates 2018]); and
8. Conducting regular landscape maintenance (lawns shall be regularly mowed/trimmed, trees and shrubs shall be trimmed at least one foot up from the ground and from structures, and no thick groundcovers shall be used).

2.1.2 Mosquitoes

Mosquitoes lay their eggs in standing water. Managing water sources on the ranch is necessary to control mosquito populations. The facility should maintain good drainage to prevent standing pools of water and potential mosquito breeding. As required by the project's SWQMP, standing water must be

removed if it contributes to the development of aquatic plant communities or mosquito breeding areas. Standing water may remain a maximum of 72 hours. The owner will regularly maintain the outlet structures and monitor the site after every storm event to ensure that the biofiltration and bioretention basins are dewatered in less than 72 hours and will clear any standing water after 72 hours of ponding to prevent mosquito breeding, pursuant to County requirements. The project does not include any other ponds or standing water, which may breed mosquitoes. The horse wash area will be inside the stable and will drain to the sanitary sewer.

Drinking buckets and troughs shall be thoroughly drained and refilled daily to eliminate breeding areas for insects. Weekly checks of all watering devices should be conducted, such that they are working, have proper air-gap back-flow prevention and are not breeding mosquitoes. If mosquito larvae are found, the water container should be emptied, cleaned, and filled with fresh water. Measures described above to maintain bedding, feed, and manure in dry condition and to control weeds also reduce the potential for breeding mosquitoes. The use of automatic fly spray devices or strips, which are recommended to control flies, may also control mosquitoes. Chemical pesticides/larvicides should only be used when best management practices are insufficient, to minimize potential negative effects on the health of animals and water quality. When necessary, chemical control should be implemented by a licensed pest control agent.

2.1.3 Rodents

As rodents are attracted to horse feed and bedding, management practices include those related to proper storage. Hay and straw will be stored off the ground on wooden pallets both to protect the these from spoilage and to discourage rodents from nesting. Grains and pellets, if used, will be stored in pest-proof storage containers. The oldest materials will be used first. Sanitary methods described above for flies may also reduce the suitability for rodents.

As required by the SWQMP, animal burrows will be filled and steps will be taken to remove the animals if burrowing problems continue to occur (filling and compacting). As a first measure, snap traps or live traps will be used to control rodents. Should these be inadequate to treat the infestation, vector control specialists will be consulted regarding removal steps. This consulting is necessary as the threat of rabies in some areas may necessitate the animals being destroyed rather than relocated. As rodent poison is dangerous to horses, any rodent baits used shall be contained in approved tamper resistant bait stations and used according to the label.

2.1.4 Best Management Practices

The project's SWQMP (Spear & Associates 2018) requires implementation of additional BMPs to maintain water quality that are not specific to manure or pest control. As part of this plan, the facility will be inspected for erosion after each rain event, and any damaged areas will be repaired. Vehicle maintenance is not expected to occur on site. To minimize potential for chemical contamination in stormwater runoff, inactive vehicles will be covered with a tarp, with a drip pan placed underneath the vehicle.

2.2 EDUCATION

An educational program will be implemented at ResQue Ranch to provide training to staff and volunteers regarding the management practices described in this vector control plan. All new staff and volunteers will receive training within 30 days of their start date. Training will be updated annually.

Training will include instruction on the importance of implementing the vector control plan, and methods for managing flies, mosquitoes, and rodents. Training will include an explanation of the fly breeding cycle, and the importance of management interrupting the fly breeding cycle within seven days (five days during the hot and humid summer days). Similarly, training should describe how a portion of the mosquito life cycle requires standing water, and management should eliminate potential breeding areas for mosquitoes. Rodents are attracted to feed and bedding and may be discouraged by proper storage and housekeeping practices. Additionally, training should include discussion of the importance of stormwater BMPs and what staff and volunteers can do to protect the watershed and water supply. It is noted that the SWQMP requires its own training program.

3.0 LONG-TERM MAINTENANCE

Ongoing maintenance will be consistent with this plan. There are no ongoing enforceable conditions associated with a Zoning Verification Permit.

4.0 SUMMARY OF MITIGATION MEASURES TO MINIMIZE VECTORS

In summary, vector minimization measures include the elimination of vector breeding areas, use of natural insecticide and traps, protection of horse bedding and feed from moisture and pests, removal and processing of manure, proper waste containment and disposal, regular cleaning and maintenance of facilities, stormwater BMPs, elimination of standing water, and training staff and volunteers.

5.0 REFERENCES

San Diego, County of. 2007. Report Format and Content Requirements: Vectors. July 30.

Spear & Associates, Inc. Civil Engineering and Land Surveying. 2018. County of San Diego Priority Development Project (PDP) SWQMP for ResQue Ranch. April 6.

6.0 LIST OF PERSONS AND ORGANIZATIONS CONTACTED

HELIX contacted Mr. Gregory Slawson at the County of San Diego Department of Environmental Health Vector Surveillance and Control Program to request information about their manure plan guidelines, and he sent a report template, which was used in combination with the Report Format and Content Requirements (County of San Diego 2007). Any changes to the stable waste, fly, and vector control plan should be made with consultation and approval of the County of San Diego Department of

Environmental Health Services Vector Surveillance and Control Program by contacting Robert Murillo, Senior Technician at 858-694-3603.

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.”

4030 Goldfinch Investments, LLC
(Property Owner and Project Applicant)
By: Charles P. Pace, Managing Member

Date _____

Reviewed and Approved by

Robert Murillo, Supervisor
Department of Environmental Health
Vector Surveillance and Control Program

Date _____