

# City of Morro Bay

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## *Mission Statement*

*The City of Morro Bay is dedicated to the preservation and enhancement of the quality of life. The City shall be committed to this purpose and will provide a level of municipal service and safety consistent with and responsive to the needs of the public.*

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**NOTICE OF SPECIAL JOINT MEETING  
OF THE CITY COUNCIL AND  
WATER RECLAMATION FACILITY  
CITIZEN ADVISORY COMMITTEE (WRFCAC)  
TUESDAY, FEBRUARY 9, 2016 AT 4:00 P.M.  
MORRO BAY VETERAN'S MEMORIAL BUILDING  
209 SURF STREET, MORRO BAY, CA**

ESTABLISH QUORUM AND CALL TO ORDER

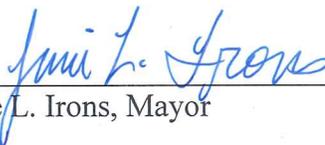
PUBLIC COMMENT RE: ITEMS ON THE AGENDA

SPECIAL MEETING AGENDA ITEM:

- I. WATER RECLAMATION FACILITY (WRF) SITE SELECTION UPDATE AND REVISED REPORT

ADJOURNMENT

DATED: February 4, 2016

  
\_\_\_\_\_  
Jamie L. Irons, Mayor

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\_\_\_\_\_  
John Diodati, WRFCAC Chair

MATERIALS RELATED TO AN ITEM ON THIS AGENDA SUBMITTED TO THE CITY COUNCIL AFTER DISTRIBUTION OF THE AGENDA PACKET ARE AVAILABLE FOR PUBLIC INSPECTION AT CITY HALL LOCATED AT 595 HARBOR STREET; MORRO BAY LIBRARY LOCATED AT 625 HARBOR STREET; AND MILL'S COPY CENTER LOCATED AT 495 MORRO BAY BOULEVARD DURING NORMAL BUSINESS HOURS.

IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT, IF YOU NEED SPECIAL ASSISTANCE TO PARTICIPATE IN A CITY MEETING, PLEASE CONTACT THE CITY CLERK'S OFFICE AT LEAST 24 HOURS PRIOR TO THE MEETING TO INSURE THAT REASONABLE ARRANGEMENTS CAN BE MADE TO PROVIDE ACCESSIBILITY TO THE MEETING.



AGENDA NO: I

MEETING DATE: February 9, 2016

## Staff Report

**DATE:** February 4, 2016

**TO:** Honorable Mayor and City Council  
Honorable Chair and Members of the Water Reclamation Facility Citizens  
Advisory Committee (WRFCAC)

**FROM:** John Rickenbach, AICP – Water Reclamation Facility Deputy Program  
Manager

**SUBJECT:** Water Reclamation Facility (WRF) Site Selection Update and Revised Report

### RECOMMENDATION

Staff recommends the City Council and WRFCAC review an updated report that updates a May 2014 report comparing the Rancho Colina and Righetti sites as possible locations for a new WRF in the Morro Valley. Based on changed circumstances and new information described in the updated report, staff recommends the Righetti site as the preferred location for the WRF.

### Water Reclamation Facility Citizens Advisory Committee (WRFCAC) Recommendation

The WRFCAC has not yet provided a formal recommendation, but was provided a preview of the results of the report at its meeting held on February 2, 2016. Input from WRFCAC during that meeting suggested general concurrence with information provided.

### ALTERNATIVES

No alternatives are recommended.

### FISCAL IMPACT

Overall, fiscal impacts of moving to the Righetti site are likely neutral to positive relative to pursuing WRF development at Rancho Colina. Fiscal impacts are possible relative to property acquisition, construction, operations/maintenance, and technical consultant costs, as described in more detail below.

1. Property acquisition costs have not been established for either site, so it is not known how these compare. It is likely acquisition costs are higher at Righetti, because it would involve purchasing the entire 250-acre site rather than the 8 acres now available at Rancho Colina.
2. Construction and operations/maintenance (O-M) costs are likely somewhat lower at Righetti,

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Prepared By:    JFR   

Dept Review:    RL   

City Manager Review:           

City Attorney Review:    JWP

because much less pipeline would be required due to the fact the Righetti site is about 3,000 feet closer to the City's existing wastewater infrastructure network.

3. While the Facility Master Plan (FMP) underway assumed the new WRF would be at the Rancho Colina site, it has so far focused on aspects of the Plan that are not site-specific. A change to the Righetti site at this time could be accommodated in the FMP consultant's existing budget. There also would be no effect on the existing budget for CEQA/NEPA consultant, since their work is based on the completion of the FMP, regardless of location.

## **DISCUSSION**

In 2013, the City of Morro Bay examined many potential sites for building a new WRF, which included a large area within the Morro Valley among six other possible locations. To inform that process, there were several public workshops and stakeholder interviews, which culminated in the release of the *Options Report*, which the City Council considered and adopted on December 10, 2013. Based on the evidence presented, the Council chose the Morro Valley as the highest-ranking location for citing a new WRF to serve the City, and confirmed its goals related to the WRF. The Morro Valley location, as examined in the *Options Report*, included both the Rancho Colina and Righetti sites.

At that time, the Council also directed staff to further investigate the top three sites in the *Options Report*, for the purpose of establishing the best overall location for a new WRF. With respect to the Morro Valley location, the Council directed further investigation of both the Rancho Colina and Righetti sites in more detail. The result of that analysis was included in the *Report on Reclamation and Council Recommended WRF Sites* (JFR Consulting, May 2014).

On May 13, 2014, the City Council chose the Rancho Colina site as its preferred location for a new WRF, and authorized further investigation of the site as part of a preliminary planning process leading to the construction and operation of the facility. The Righetti site was determined to be the second best site, although in some respects was equal to or better than the Rancho Colina site.

The primary comparative advantages of Rancho Colina at that time were as follows:

- *A highly motivated property owner at Rancho Colina; uncertainty at Righetti relative to the City's ability to buy part or all of the property;*
- *Relatively fewer visual impacts, because the Rancho Colina site would be located in the southeasterly portion of the property, at lowest elevation, relatively farther from Highway 41 and nearby residences;*
- *More flexibility to locate potential facilities on the Rancho Colina site, because of a relatively larger, flatter area, if the WRF were located in the southeastern portion of the site;*
- *Rancho Colina would be farther from potential residential neighbors, if built on the southeastern portion of that site;*
- *Potentially easier to be operational in 5 years (a City goal) because of the cooperative landowner, site flexibility, and ability to more easily avoid jurisdictional waters with respect to permitting.*

However, since the Council's May 2014 direction, several conditions have changed that affect the outcome of that investigation. Some of those changes are the result of further technical studies

authorized by the Council at that time, while others are related to evolving property ownership issues, including limitations imposed on the development of the Rancho Colina property by the property owner.

Specifically, the conditions that have changed include the following:

- *The Rancho Colina property owner now wishes to limit WRF-related development to a less favorable 8-acre portion of the property not previously investigated in the May 2014 report;*
- *The property owner does not want any City facilities other than those related to the WRF and possibly the City Water Treatment Plant developed there, including a corporation-yard;*
- *Subsequent geotechnical investigation of the 8+/- acre portion of the property reveals shallow rock and steep slopes that would add substantial earthwork cost to the development of a WRF at that location as compared to the original location on the property;*
- *The neighboring Righetti property has been offered for sale, and the City has entered into an MOU under which it could acquire the entire Righetti property to help meet other City goals in addition to siting a new WRF.*

As a result of investigations conducted since the Council's direction in May 2014, and other conditions that have changed since that time, the **Righetti site is now recommended as the preferred site for the new WRF**. It should be noted, however, recent technical investigations on both sites found both sites are suitable for a new WRF, and neither site is fatally flawed with respect to biological resources, cultural resources, and geotechnical considerations.

Key considerations in this determination include:

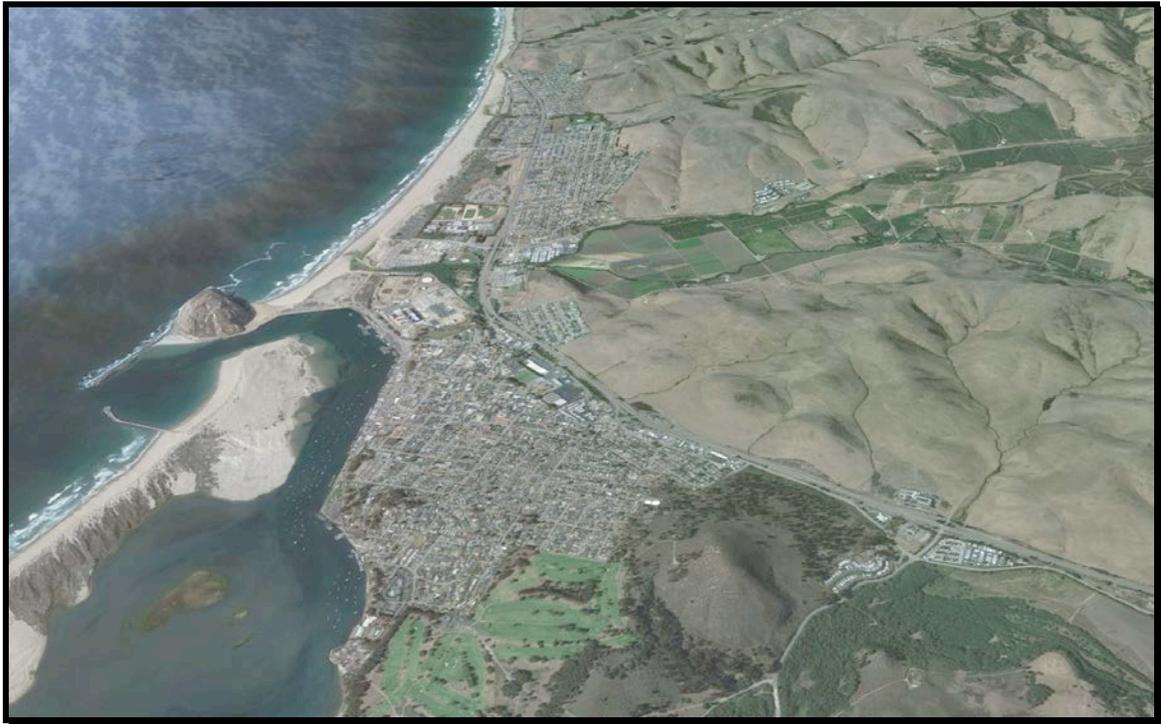
- *City control of the Righetti site, as compared to substantial restrictions placed on the use and development location of the Rancho Colina site by that property owner;*
- *Likely lower costs at the Righetti site because less pipeline would be required, and less energy to pump wastewater to the site from the existing collection system;*
- *Closer proximity of the Righetti site to the deeper portion of the Morro Valley groundwater basin, which will likely be an important reclamation opportunity;*
- *Development on the Righetti site will be less visually prominent than on the portion of the Rancho Colina site available to the City, which may be an important consideration to the Coastal Commission in their permitting process.*

The attachment to this staff report includes the complete updated study that compares the two sites in detail, based on the same criteria applied in May 2014. The report also includes the January 2016 Biological Resources Assessment prepared by Kevin Merk Associates for the two sites, which provides additional detail with respect to that important issue. The cultural resources investigation prepared by Far Western in January 2016 is not included, due to the confidential nature of some of the information it includes, though the general conclusions of that report are reflected in the comparative site analysis.

#### **ATTACHMENT**

*New Water Reclamation Facility Project – Updated Report on Council Recommended WRF Sites (JFR Consulting, February 3, 2016)*

***New Water Reclamation Facility Project***  
**Updated Report on Council  
Recommended WRF Sites**



*Submitted to:*  
**City of Morro Bay**  
**Department of Public Services**

**February 3, 2016**



**John F. Rickenbach Consulting**  
7675 Bella Vista Road  
Atascadero, California 93422

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# Updated Report on Council Recommended WRF Sites

*for the*  
**City of Morro Bay**  
**New Water Reclamation Facility Project**

*Prepared for:*  
**City of Morro Bay**  
595 Harbor Street  
Morro Bay, California 93442

*Prepared by:*  
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*In association with:*  
Michael K. Nunley & Associates

February 3, 2016

## TABLE OF CONTENTS

Section	Page
1. Purpose of the Report .....	1
2. Background and Summary .....	1
3. Sites Under Consideration.....	5
4. Key Issues and Questions .....	7
5. Comparative Site Analysis .....	7
6. Conclusions and Recommended WRF Site .....	29
7. References and Report Preparers .....	31

### List of Tables

1. Summary of Morro Valley Site Analysis and Findings in May 2014 Report.....	2
2. Updated Summary of Site Analysis and Findings (January 2016).....	4
3. Sites Examined in This Report .....	5
4. Updated Summary of Site Analysis and Findings (January 2016).....	29

### List of Figures

1. Sites 1 and 2: Rancho Colina and Righetti .....	6
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### Appendices

Appendix A: *Letter from California Coastal Commission to City of Morro Bay, December 10, 2013*

Appendix B: *Biological Resources Assessment for the Righetti and Rancho Colina Sites (January 2016)*



# City of Morro Bay

## New Water Reclamation Facility Project

### Updated Report on Council Recommended WRF Sites

#### 1. Purpose of this Report

This report provides analysis in support of a final recommended site to construct a new Water Reclamation Facility (WRF) in the Morro Valley, building on direction provided by the City Council in May 2014. Since that time, significant new analysis has been performed and other information has become available that have a bearing on site selection. Specifically, this report updates the *Report on Reclamation and Council Recommended WRF Sites* (JFR Consulting, May 2014), which formed the basis of Council direction at that time with respect to site selection.

#### 2. Background and Summary

In 2013, the City of Morro Bay examined many potential sites for building a new WRF, which included a large area within the Morro Valley among six other possible locations. To inform that process, there were several public workshops and stakeholder interviews, which culminated in the release of the *Options Report*, which the City Council considered and adopted on December 10, 2013. Based on the evidence presented, the Council chose the Morro Valley as the highest-ranking location for citing a new WRF to serve the City, and confirmed its goals related to the WRF. The Morro Valley location, as examined in the *Options Report*, included both the Rancho Colina and Righetti sites.

At that time, the Council also directed staff to further investigate the top three sites in the *Options Report*, for the purpose of establishing the best overall location for a new WRF. With respect to the Morro Valley location, the Council directed further investigation of both the Rancho Colina and Righetti sites in more detail. The result of this analysis was included in the *Report on Reclamation and Council Recommended WRF Sites* (JFR Consulting, May 2014).

On May 13, 2014, the City Council chose the Rancho Colina site as its preferred location for a new Water Reclamation Facility (WRF), and authorized further investigation of the site as part of a preliminary planning process leading to the construction and operation of the facility. The Righetti site was determined to be the second best site, although in some respects was equal to or better than the Rancho Colina site. Table 1 summarizes the findings of the May 2014 site analysis with respect to the two Morro Valley sites in question, based on the criteria used in that report.



<b>Table 1. Summary of Morro Valley Site Analysis and Findings in May 2014 Report</b>		
<b>Key Issue</b>	<b>Site</b>	
	<i>Rancho Colina</i>	<i>Righetti</i>
	<b>Site Suitability (high, moderate or low)</b>	
<b>Ownership and Unique Opportunities</b>		
Cooperative Property Owner?	Very High	Unknown
Unique opportunities associated with the site?	High	Moderate
<b>Environmental and Physical Site Issues</b>		
Environmental/Coastal Issues?	High	Moderate-High
<i>Coastal Proximity and Access</i>	High	High
<i>Visual Impacts</i>	High	Low-Moderate
<i>Biological Resources/ESHA</i>	Moderate	Moderate
<i>Cultural Resources</i>	Moderate	Moderate
<i>Agriculture/Prime Soils</i>	High	High
<i>Minimize Carbon Footprint</i>	Moderate	High
Physical site constraints affecting design flexibility?	High	Moderate
<b>Regulatory and Permitting Issues</b>		
Unique regulatory or logistical constraints?	High	Moderate
Complex or unusual permitting requirements?	High	Moderate
<b>Proximity Issues</b>		
Nearby residential neighbors?	High	Moderate
Suitability as a regional facility?	High	High
<b>Cost and Timing Issues</b>		
Relative cost savings compared to the other sites?	Moderate	Moderate
<i>Proximity to existing infrastructure</i>	Moderate	High
<i>Proximity to reclamation opportunities</i>	High	High
<i>Site Elevation</i>	High	High
<i>Site Size and Configuration</i>	High	High
<i>Permitting Requirements</i>	High	Moderate
Ability to achieve a 5-Year timeframe?	High	Moderate
<i>Cooperative Property Owner</i>	Very High	Unknown
<i>Site Size and Configuration</i>	High	High
<i>Permitting Requirements</i>	High	Moderate
<i>Relatively Lower Costs</i>	Moderate	Moderate
<b>OVERALL</b>	<b>High</b>	<b>Moderate-High</b>

As noted in the table, the primary comparative advantages of Rancho Colina at that time were as follows:

- *A highly motivated property owner at Rancho Colina; uncertainty at Righetti relative to the City's ability to buy part or all of the property;*
- *Relatively fewer visual impacts, because the Rancho Colina site would be located in the southeasterly portion of the property, at lowest elevation, relatively farther from Highway 41 and nearby residences;*
- *More flexibility to locate potential facilities on the Rancho Colina site, because of a relatively larger, flatter area, if the WRF were located in the southeastern portion of the site;*



- *Rancho Colina would be farther from potential residential neighbors, if built on the southeastern portion of that site;*
- *Potentially easier to be operational in 5 years (a City goal) because of the cooperative landowner, site flexibility, and ability to more easily avoid jurisdictional waters with respect to permitting.*

As an ancillary benefit to the Rancho Colina property owner, development of a new WRF at that location would provide an opportunity to improve water and wastewater services to the adjacent Rancho Colina residential community by connecting this area to city services. These services are currently provided by the Rancho Colina property owner.

However, since the Council's May 2014 direction, several conditions have changed that affect the outcome of that investigation. Some of these changes are the result of further studies authorized by the Council at that time, while others are related to evolving property ownership issues, including limitations posed on the development of the Rancho Colina property by the property owner.

Specifically, the conditions that have changed include the following:

- *The Rancho Colina property owner now wishes to limit WRF-related development to a less favorable 8-acre portion of the property not previously investigated in the May 2014 report;*
- *The property owner does not want any City facilities other than those related to the WRF and possibly the City Water Treatment Plant developed there, including a corporation yard;*
- *Subsequent geotechnical investigation of the 8+/- acre portion of the property reveals shallow rock and steep slopes that would add substantial earthwork cost to the development of a WRF at that location as compared to the original location on the property;*
- *The neighboring Righetti property has been offered for sale, and the City has entered into an MOU under which it could acquire the entire Righetti property to help meet other City goals in addition to siting a new WRF.*

As a result of investigations conducted since the Council's direction in May 2014 study, and other conditions that have changed since that time, the **Righetti site is now recommended as the preferred site for the new WRF.**

Key considerations in this determination include:

- *City control of the Righetti site, as compared to substantial restrictions placed on the use and development location of the Rancho Colina site by that property owner;*
- *Likely lower costs at the Righetti site because less pipeline would be required, and less energy to pump wastewater to the site from the existing collection system;*
- *Proximity to the deeper portion of the Morro Valley groundwater basin, which will likely be an important reclamation opportunity;*
- *Development on the Righetti site will be less visually prominent than on the portion of the Rancho Colina site available to the City, which may be an important consideration to the Coastal Commission in their permitting process.*

Table 2 summarizes the suitability of the two sites with respect to locating a new WRF, based on the updated investigation included in this report.



<b>Table 2. Updated Summary of Site Analysis and Findings (February 2016)</b>		
<b>Key Issue</b>	<b>Site</b>	
	<b>Rancho Colina</b>	<b>Righetti</b>
	<b>Site Suitability (high, moderate or low)</b>	
<b>Ownership and Unique Opportunities</b>		
Cooperative Property Owner?	Low-Moderate	Very High
Unique opportunities associated with the site?	Moderate-High	High
<b>Environmental and Physical Site Issues</b>		
Environmental/Coastal Issues?	Moderate-High	Moderate-High
<i>Coastal Proximity and Access</i>	High	High
<i>Visual Impacts</i>	Low-Moderate	Moderate
<i>Biological Resources/ESHA</i>	Moderate	Moderate
<i>Cultural Resources</i>	Moderate	Moderate
<i>Agriculture/Prime Soils</i>	High	High
<i>Minimize Carbon Footprint</i>	Moderate	High
Physical site constraints affecting design flexibility?	Low	Moderate
<b>Regulatory and Permitting Issues</b>		
Unique regulatory or logistical constraints?	High	Moderate-High
Complex or unusual permitting requirements?	High	High
<b>Proximity Issues</b>		
Nearby residential neighbors?	Moderate	Moderate
Suitability as a regional facility?	High	High
<b>Cost and Timing Issues</b>		
Relative cost savings compared to the other sites?	Moderate	Moderate-High
<i>Proximity to existing infrastructure</i>	Moderate	High
<i>Proximity to reclamation opportunities</i>	High	High
<i>Site Elevation</i>	High	High
<i>Site Size and Configuration</i>	Low	Moderate
<i>Permitting Requirements</i>	High	Moderate-High
Ability to achieve a 5-Year timeframe?	Moderate	Moderate-High
<i>Cooperative Property Owner</i>	Low-Moderate	Very High
<i>Site Size and Configuration</i>	Low	Moderate
<i>Permitting Requirements</i>	High	Moderate-High
<i>Relatively Lower Costs</i>	Moderate	Moderate-High
<b>OVERALL</b>	<b>Moderate</b>	<b>High</b>



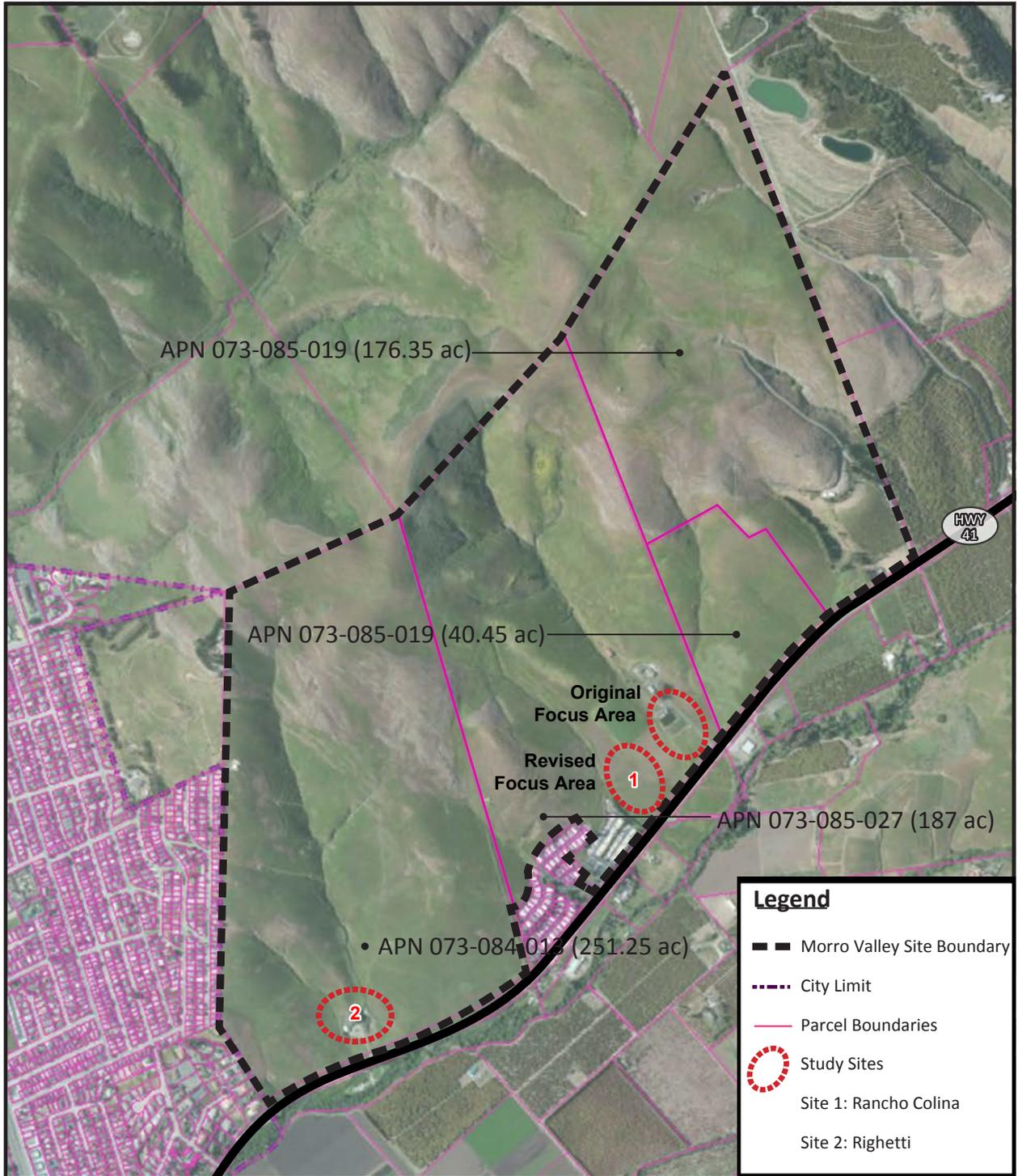
### 3. Sites Under Consideration

In December 2013, the City Council chose three general sites studied in the *Options Report* for possible development of a new WRF, with the Morro Valley considered the highest ranking of the three. The *Options Report* also identified the most suitable locations within these sites for such a facility. Within Morro Valley, two specific locations stood out, which are identified in this report as the Rancho Colina and Righetti sites. The characteristics of these two sites are summarized in Table 3.

<b>Table 3. Sites Examined in this Report</b>				
<b>Site</b>	<b>Site Name in this Report</b>	<b>Options Report Site</b>	<b>Parcel Information</b>	<b>Discussion of the Study Site</b>
1	Rancho Colina	Morro Valley (part of Options Report Site B)	APN 073-085-027 (187.4 ac)  <u>Ownership:</u> W. Macelvaine  <u>Jurisdiction:</u> SLO County	The May 2014 report examined a roughly 10-15 acre area in the lowest portion of the property, focused on the southeastern portion of the property, generally in the vicinity of the location of the existing WWTP that serves the nearby Rancho Colina residential community. The study site is about 150 to 160 feet above sea level.  Now, based on direction from the property owner, the investigation in this report focuses on an 8-acre location in the southwestern corner of the site adjacent to Highway 41.
2	Righetti	Morro Valley (part of Options Report Site B)	APN 073-084-013 (259.3 ac)  <u>Ownership:</u> P. Madonna  <u>Jurisdiction:</u> SLO County	The study site is limited to a roughly 10-15 acre area in the lowest portion of the property, at the location of an existing ranch house. The study site is about 80 to 100 feet above sea level.  For this report, this site has not changed from what was previously investigated.

Figure 1 shows the two sites relative to one another, and the differences in location on the Rancho Colina site regarding what had been the previous focus of the investigation relative to the current focus.





**Figure 1: Sites 1 and 2: Rancho Colina and Righetti**



*Note: Map data obtained from County Assessor's mapping database*



## 4. Key Issues and Questions

The *Options Report* found that either site would be generally suitable for a new WRF. This analysis refines the evaluation included in the *Options Report*, and compares their relative suitability in terms of the following key questions embodied within that analysis:

- A. *Is the property owner willing to work with the City?*
- B. *Are there other unique opportunities associated with the site?*
- C. *Are there environmental issues that may be of concern to the Coastal Commission or the general public?*
- D. *Are there additional physical site constraints that may limit project design flexibility?*
- E. *Are there unique regulatory or logistical constraints affecting site development?*
- F. *Are there complex studies or unusual permitting requirements associated with the site?*
- G. *Are there nearby neighbors that may object to a new WRF, and what would be their likely concerns?*
- H. *Does the site have potential as a regional facility serving other agencies or users?*
- I. *Are there potential cost savings compared to the other sites?*
- J. *Are there site-related challenges to achieving the City's 5-Year timeframe?*

## 5. Comparative Site Analysis

It should also be noted that in general, the May 2014 report found that the two sites would be generally suitable for locating a new WRF. Thus, this analysis will not attempt to eliminate one site or the other through a numerically-based evaluation. Rather, the analysis is more qualitative in nature, with the key differences between the sites clearly highlighted. The City Council can then determine which issues are the most important in the context of achieving its goals relative to the purpose and timing of constructing the facility.

### A. Is the Property Owner willing to work with the City?

***Why This Issue is Important.*** Identifying a willing property owner is crucial for a number of reasons, all of which relate to achieving the 5-year schedule set forth by the City Council. A strong working relationship between the City and property owner would allow for the possibility of a variety of potential agreements that serve the interests of both parties. The range of possibilities include a sale of the property, a lease agreement of some sort, or shared use arrangement. Partnering with a willing seller is expected to minimize overall project cost (including both purchase price and legal costs) and minimize overall project schedule as compared to acquiring property from an unwilling seller.

***Comparative Site Analysis.*** The following discussion compares the sites with respect to this key issue.



## Site 1: Rancho Colina

The Rancho Colina site (APN 073-085-027) is owned by Steve Macelvaine, who has been a willing potential partner for the City in the development of a new WRF. This has been a fundamental reason why this site has been relatively attractive for the City to pursue.

However, during the Facility Master Plan process initiated in 2015, the property owner has placed crucial limitations on both the area for potential development, and the scope of development that could be pursued.

The conclusions of the May 2014 report were based on the assumption that the new WRF would be located in the least-constrained portion of the property, specially the southeastern corner of the site, more or less between the location of the existing treatment plant on the site that serves the adjacent residential community, and Highway 41. This would be the lowest portion of the site, with the best access, lowest and most level visual profile, deepest soils, and farthest distance from neighboring residential properties offsite.

The property owner, in recent consultation with his family, has determined that this portion of the site is no longer available to the City. Instead, they desire to limit the City development to an 8-acre portion of the property, in the southwestern corner of the site closer to the neighboring Rancho Colina residential community. This portion of the site is more visually prominent from both the highway and neighboring property, and is on a small rise, so not as topographically advantageous.

The property owner also desires to limit the scope of the City's future development to only those facilities necessary to support the WRF and possibly the City Water Treatment Plant. Other non-WRF related City goals, such as development of a corporation yard, could not be pursued at this location.

This is a fundamental change in the property owner's stance from the time the May 2014 report was prepared. Although he is still a willing partner, it is on strictly limited terms. In addition, any future negotiations with respect to the site will need the full support of his family, if recent events are any indication. Based on program management staff's recent meetings with the property owner and family, it is uncertain whether the family will present a unified voice on key matters related to the long-term use of the property, or the conditions related to the sale of the portions of the property needed to build the WRF.

*Site Suitability: Low-Moderate*

## Site 2: Righetti

The area commonly known as the "Righetti site" (APN 073-084-013) is owned by Paul Madonna et al. In 2015, the property was put on the market for sale, and the property owner indicated a willingness to sell it to the City. The City has recently entered into an MOU with the property owner that pending the outcome of various diligence steps related to the WRF, the City can purchase the property at its option.

With the MOU, the City could own the entire property, and control all future activities there. There would be no limitations on the location of the site, other than to avoid key environmental constraints, and there would be no limitations on what could be built there related to achieving the City's goals.

As with the Rancho Colina site, this is a fundamental change to what was known during the preparation



of the May 2014 report, and makes the Righetti site much more attractive than was previously the case.

*Site Suitability: Very High*

**Summary and Conclusions.** *Property ownership issues are the most important change since the preparation of the May 2014 report. The Righetti site can now be controlled by the City without limitation, while the property owner of the Rancho Colina site has placed many restrictions on the location and use of that site, which could affect the achievement of the city's goals, as well as a variety of other issues, including visual compatibility and cost.*

**Top-Rated Site: Righetti**

## **B. Are there other unique opportunities associated with the site?**

**Why This Issue is Important.** The City has established diverse goals associated with the new WRF that go beyond improving water quality and reclamation potential. A site or design that can help the City achieve other ancillary goals related to cost savings, timing, water rights acquisition, land use or environmental protection would also be considered favorably. While the previous discussion already captures the sites' potential to address many of these issues, this analysis focuses on these unique opportunities, and expands the discussion as appropriate.

**Comparative Site Analysis.** The following discussion compares the sites with respect to this key issue.

### **Site 1: Rancho Colina**

Potential development at the Rancho Colina site presents some unique opportunities, including:

- *Potentially new water rights for City.* The property owner has established appropriative rights to water in Morro Creek that are second only to the City through existing private wells that he has indicated a willingness to transfer to the City as part of a potential negotiation for use of the site.
- *Potential removal of an existing outdated package wastewater facility.* The existing wastewater treatment plant on the site that serves the nearby Rancho Colina residential area was originally built in 1971 but has been improved and modified to meet current demands and regulatory requirements. The RWQCB has repeatedly expressed interest in the concept of removing that standalone, privately-owned facility and transferring those residents to City services. Development of a new WRF would provide this opportunity.
- *More Customers and Revenue.* Adding customers would increase the amount of revenue available for debt service and operation/maintenance costs, as long as the City could charge those customers directly in the same manner as other City customers.

*Site Suitability: Moderate-High*



## Site 2: Righetti

Potential development at the Righetti site also presents several unique opportunities, which include:

- *The City can own the entire site without restrictions.* The City has entered into an MOU with the existing property owner to purchase and control the site.
- *Closest to existing wastewater infrastructure.* The site is adjacent to the City, and slightly closer to the heart of the City's existing wastewater conveyance system than any other site. This factor would be important with respect to minimizing both construction and maintenance costs.
- *Ability to achieve multiple City goals.* Since the City will own the entire site, it can be relatively flexible in the location and design of the WRF. It can also integrate other non-WRF facilities onto the site that address other City goals, including the development of a corporation yard.

*Site Suitability: High*

**Summary and Conclusions.** *Each site has unique opportunities. The Righetti site, however, has other relative advantages related to City ownership control, and proximity to the existing wastewater collection system, both of which could lower the overall cost of the project somewhat as compared to development at the Rancho Colina site. Righetti also provides greater flexibility to achieve multiple City goals, including those not related to the WRF, which could also result in potential cost savings.*

**Top-Rated Site: Righetti**

## C. Are there environmental issues that may be of concern to the Coastal Commission or the general public?

**Why This Issue is Important.** The California Coastal Commission denied the development of a new WRF at the location of the existing WWTP largely because of its potential inconsistency with Coastal Act and LCP policies. These were discussed in extensive detail in the Options Report. A project that is consistent with Coastal policies would achieve the following:

- *Avoid Coastal Hazards*
- *Avoid Steep Slopes and High Elevation*
- *Promote Public Access/Recreation*
- *Minimize Visual Impacts*
- *Sustainable Use of Public Resources*
- *Avoid Environmentally Sensitive Habitat Areas (ESHA)*
- *Avoid Cultural Resources*
- *Avoid Agricultural Resources*
- *Promote Coastal Dependent Development*
- *Minimize Greenhouse Gas Emissions*

Each site is in the Coastal Zone. However, neither is near the ocean or estuary, and in general can avoid impacted coastal resources. Although not specifically addressed by the Coastal Act, the concept of minimizing greenhouse gas emissions has been frequently cited by the public,



and is becoming increasingly important from a state and local regulatory perspective. A site-specific analysis that builds on the policy consistency discussion in the *Options Report* is included below.

**Comparative Site Analysis.** The following discussion compares the sites with respect to this key issue.

### Site 1: Rancho Colina

*Coastal Proximity and Access.* The site is about 1.7 miles from the ocean, and separated by intervening topography. It is not subject to coastal hazards such as tsunami and possible sea-level rise. A project at this location would not impede coastal access, or otherwise affect future development along the coastline.

*Visual Impacts.* There are no visual impacts relative to the coast, since the site cannot be seen from the ocean or estuary, nor would development on the site block views of these features. The area where potential development could occur is as close as 100 feet from Highway 41, and can easily be seen from that roadway. It is in the direct line of viewing for motorists traveling on that highway. The site of potential development is as close as 200 feet east of the Rancho Colina residential complex, and potentially visible from homes within the Rancho Colina community.

In a December 10, 2013 letter to the City, the California Coastal Commission responded to the City's December 2013 *Options Report*, which found that development of a new WRF within the Morro Valley was preferred to any other location in or near the City (see Appendix A). Coastal staff concurred in this conclusion, and indicated preliminary support for either the Righetti or Rancho Colina site. At the same time, Coastal staff noted that minimizing visual impacts would be an important consideration with respect to development of a new WRF. As noted above, the site restrictions associated with Rancho Colina would make a new WRF at that location more visually prominent than one located at Righetti. For that reason, it may be surmised that because Rancho Colina would have a greater visual impact, and from this perspective Coastal staff would likely preferentially support the Righetti site in its permitting process.

*Biological Resources/ESHA.* The site contains some areas that qualify as designated Environmentally Sensitive Habitat Area (ESHA) per the City's LCP and California Coastal Commission (CCC) definition. These include the onsite drainage features, which are considered coastal streams per CCC definition. There is also ESHA along the riparian margins of Morro Creek, but that is outside of the potential WRF development area (Kevin Merk Associates, January 2016).

The California Natural Diversity Database (CNDDDB) identified 30 special status plant species and three lichen species known to occur within a 5-mile radius of the study area (see Appendix B). No special status plant species were observed during recent field surveys conducted in late 2015. Based on negative survey results and lack of suitable habitat conditions, the potential for special status species to be present within the study area is not expected.

The CNDDDB also contained occurrence data for 22 special status animal species to occur within the general site vicinity. However, as with plant species, the majority are not expected to occur because of lack of suitable habitat and generally disturbed conditions of the site investigated. Overall, the majority of the site is highly disturbed from development, agriculture, traffic, and human presence.



*Cultural Resources.* No cultural resources have been previously identified on portions of the site where development could occur (Far Western, January 2016). In general, the portions of the Morro Valley nearest to Morro Creek have a fairly high potential for encountering cultural resources, and the fact that the area has a long history of human habitation. The presence of Morro Creek along the southern boundary of the site (and throughout much of the Morro Valley in general) would have represented an attractive food resource for prehistoric populations migrating between the coast and the interior areas. Many properties within Morro Valley feature prominent ridgelines that are known to have been attractive for hunting camps and temporary activity areas. The potential for encountering such resources diminishes with elevation and with distance from the coast (Applied Earthworks, informal evaluation, March 2014). The potential for encountering unknown resources on this site is considered low, except for the southeasternmost edge of the 8-acre developable portion of the site, which is considered to have a high (Far Western, January 2016). Because the survey report conducted for the site includes sensitive information related to the protection of the resources identified within the general area, it is not publicly available.

*Agriculture.* Much of the land in Morro Valley features gently rolling hillsides trending to steeper topography to the north, particularly north of Highway 41. Most of this area is in rangeland, although some of this land supports avocado orchards. There are no prime soils on or near the most developable portions of the site.

The 8-acre portion of the Rancho Colina site that could be developed is underlain by Los Osos-Diablo complex soils, which consist of loamy top layer overlying clay, sandy loam and bedrock, which is typically found at a depth of 39 to 59 inches (NRCS Soil Survey). It is not considered prime farmland by the NRCS, with a land capability classification of 6e. These soils are well-drained, and not prone to flooding or ponding. The depth to the water table is typically greater than 80 inches.

The portion of the property closest to Highway 41 (southeastern part of the developable 8-acre area of the site) is Marimel silty clay loam, which consists of silty clay loam stratified loam and/or clay loam. This soil is considered prime farmland if irrigated, though it is not currently nor has it historically been irrigated on this property. Therefore, this property does not support prime farmland. The soil has a land classification of 1 (if irrigated), and 3c (if nonirrigated). The potential development of a new WRF would not preclude continued agricultural uses on the property, which consists of grazing. Grazing land (uphill of the existing treatment plant site) has historically been provided from treated wastewater from the existing plant.

*Minimize Greenhouse Gas Emissions.* Energy (electricity) use during operation of the new facility, and lift stations and pumps used convey effluent from the facility, would generate GHG emissions. Although the pumps would not directly result in GHG emissions, use of pumps would indirectly release GHG emissions through the purchase/use of electricity. The site is located about 1.7 miles from the existing ocean outfall, and it is expected that the new WRF would need to tie into the existing infrastructure network at this location, with lift stations needed to pump wastewater uphill to the new site, which is at an elevation of about 150 to 160 feet.

From a comparative perspective, this is a slightly higher in elevation and farther from the existing infrastructure network than the Righetti site, so energy use and resulting GHG emissions would be expected to be slightly higher.

*Site Suitability: Moderate to High*



## Site 2: Righetti

*Coastal Proximity and Access.* The site is about 1.1 miles from the ocean, and separated by intervening topography. It is not subject to coastal hazards such as tsunami and possible sea-level rise. A project at this location would not impede coastal access, or otherwise affect future development along the coastline.

*Visual Impacts.* There are no visual impacts relative to the coast, since the site cannot be seen from the ocean or estuary, nor would development on the site block views of these features. The Righetti property is also directly adjacent to an existing neighborhood to the west within the City limits, but only visible from the backyards of the homes on the east side of Nutmeg Avenue, since the other homes are blocked by the ridgeline that separates this parcel from the neighborhood. The most developable portion of the site is about 1,100 feet from the nearest homes, and directly visible from those homes. It is also within 350 feet of Highway 41, and can be seen for about 500 feet along the highway. It is near the eastern gateway to the City, and that may be of some concern relative to establishing a visually inviting entrance to the City from that direction.

In a December 10, 2013 letter to the City, the California Coastal Commission responded to the City's December 2013 Options Report, which found that development of a new WRF within the Morro Valley was preferred to any other location in or near the City (see Appendix A). Coastal staff concurred in this conclusion, and indicated preliminary support for either the Righetti or Rancho Colina site. At the same time, Coastal staff noted that minimizing visual impacts would be an important consideration with respect to development of a new WRF. As noted above, the site restrictions associated with Righetti would make a new WRF at that location less visually prominent than one located at Rancho Colina. For that reason, it may be surmised that because Righetti would have a lesser visual impact, and from this perspective Coastal staff would likely preferentially support the Righetti site in its permitting process.

*Biological Resources/ESHA.* The site contains some areas that qualify as designated Environmentally Sensitive Habitat Area (ESHA) per the City's LCP and California Coastal Commission (CCC) definition. These include onsite drainage features that include saltgrass (which indicate a coastal wetland) and Morro Creek, which are considered coastal streams per CCC definition. Morro Creek is out of the likely development footprint of the WRF, and it is possible that impacts to the other drainages could be either avoided or mitigated, depending on the project design (Kevin Merk Associates, January 2016).

The eastern portion of the site also contains native bunchgrass and related habitat, which is also considered ESHA. However, this area is likely outside the footprint of potential development on the site.

The California Natural Diversity Database (CNDDDB) identified 30 special status plant species and three lichen species known to occur within a 5-mile radius of the study area (see Appendix B). No special status plant species were observed during recent field surveys conducted in late 2015. Based on negative survey results and lack of suitable habitat conditions, the potential for special status species to be present within the study area is not expected. However, because full floristic seasonally-timed surveys were not conducted, and native bunchgrass habitat was observed on the eastern portion of the site, absence of special status species cannot be determined without further study.

The CNDDDB also contained occurrence data for 22 special status animal species to occur within the general site vicinity. However, as with plant species, the majority are not expected to occur because of



lack of suitable habitat and generally disturbed conditions of the site investigated. Overall, the majority of the site is highly disturbed from development, agriculture, traffic, and human presence.

*Cultural Resources.* No cultural resources have been previously identified on portions of the site where development could occur (Far Western, January 2016). In general, the portions of the Morro Valley nearest to Morro Creek have a fairly high potential for encountering cultural resources, and the fact that the area has a long history of human habitation. The presence of Morro Creek along the southern boundary of the site (and throughout much of the Morro Valley in general) would have represented an attractive food resource for prehistoric populations migrating between the coast and the interior areas. Many properties within Morro Valley feature prominent ridgelines that are known to have been attractive for hunting camps and temporary activity areas. The potential for encountering such resources diminishes with elevation and with distance from the coast (Applied Earthworks, informal evaluation, March 2014). The potential for encountering unknown resources on this site is considered moderate, particularly on the flat area in the vicinity of the existing ranch house. At higher elevations, the potential for encountering previously unknown resources is low (Far Western, January 2016). Because the survey report conducted for the site includes sensitive information related to the protection of the resources identified within the general area, it is not publicly available.

*Agriculture.* Much of the land in Morro Valley features gently rolling hillsides trending to steeper topography to the north, particularly north of Highway 41. Most of this area is in rangeland, although some of this land supports avocado orchards. There are no prime soils on or near the most developable portions of the site.

The most developable portion of the site (where a ranch complex is located) is underlain by Cropley clay soils, which consist of clay overlying silty clay loam, which is typically found at a depth of 36 to 60 inches (NRCS Soil Survey). This soil is considered prime farmland if irrigated, though it is not currently nor has it historically been irrigated on this property. Therefore, this property does not support prime farmland. The soil has a land classification of 2s (if irrigated), and 3s (if nonirrigated). These soils are moderately well-drained, and not prone to flooding or ponding. The depth to the water table is typically greater than 80 inches.

The steeper slopes above the more level area consist of Diablo and Cibo clays, which consist of clay over weathered bedrock, which is typically encountered at a depth of 58 to 68 inches below the surface. It is not considered prime farmland by the NRCS, with a land capability classification of 4e. These soils are well-drained, and not prone to flooding or ponding. The depth to the water table is typically greater than 80 inches.

The potential development of a new WRF would not necessarily preclude continued agricultural use of the property, which consists of grazing. However, it would require the relocation of the ranch complex that serves as headquarters for this use.

*Minimize Greenhouse Gas Emissions.* Energy (electricity) use during operation of the new facility, and lift stations and pumps used convey effluent from the facility, would generate GHG emissions. Although the pumps would not directly result in GHG emissions, use of pumps would indirectly release GHG emissions through the purchase/use of electricity. The site is located about 1.1 miles from the existing ocean outfall, and it is expected that the new WRF would need to tie into the existing infrastructure network at this location, with lift stations needed to pump wastewater uphill to the new site, which is at an elevation of about 80 to 90 feet.



From a comparative perspective, this is a slightly lower in elevation and closer to the existing infrastructure network than the Rancho Colina site, so energy use and resulting GHG emissions might be expected to be slightly lower.

*Site Suitability: Moderate to High*

**Summary and Conclusions.** *Each site is at least a mile from the coast and separated by intervening topography, so a new WRF at either location will not be visible from the coast or block coastal access. Similarly, neither are subject to coastal hazards because of their elevation and distance from the ocean or estuary. The developable portion of both sites contains some ESHA. With respect to encountering cultural resources, the two sites are similar; Rancho Colina includes a small area where the potential is high, while Righetti contains a larger area where the potential is moderate. The Righetti site is slightly closer to the City's existing infrastructure network, and thus development on that site may use slightly less energy—which translates into slightly lower greenhouse gas emissions.*

**Top-Rated Site:** They are similar, with a slight edge to Righetti. Development at Righetti would result in slightly lower energy use (less distance to pump wastewater), and thus a smaller carbon footprint. It would also result in lesser visual impacts, which Coastal staff indicated would be important in making a policy consistency determination. Impacts to ESHA and cultural resources are potentially similar at the two sites.

#### **D. Are there additional physical site constraints that may limit project design flexibility?**

**Why This Issue is Important.** A flexible location is important, because it can provide opportunities to explore design options that can either reduce cost, impacts to environmental resources, or the timing of construction. While larger sites typically allow more opportunities for a flexible design, a variety of other physical issues may restrict the location of a new facility, including:

- *Slope*
- *Elevation*
- *Drainage/Floodplain*
- *Seismic Hazards*

**Comparative Site Analysis.** The following discussion compares the sites with respect to this key issue. The sites selected for consideration were chosen because they are generally free of these sorts of physical constraints. Neither is at high elevation or has conditions that prevent construction of a new facility using conventional construction methods and equipment. Both have suitable geology on which to construct a facility.



### **Site 1: Rancho Colina**

The property owner has limited future development to an 8-acre portion of the site, which will severely restrict the flexibility of a design at that location. It also precludes the possibility of developing any other facilities that would fulfill other non-WRF related City goals, including the development of a new corporation yard. These are significant physical constraints.

This portion of the site is slightly sloping on a knoll and located about 150 to 160 feet above sea level. This is well below the 250-foot contour, above which a new facility could likely require several lift stations and/or high pressure mains to convey untreated wastewater. The site would require substantial grading to accommodate the new facility.

The site is not within a 100-year floodplain. While an ephemeral drainage feature traverses the property, it is possible to avoid this through the design of the project.

Fugro Consultants, Inc. performed a geological hazards evaluation and geophysical survey of the Rancho Colina site (Fugro, 2016). They collected samples and performed laboratory analysis to identify any fatal flaws for the site and performed a seismic refraction survey in order to evaluate bedrock structure. Based on their work, the site is considered to have low landslide potential, with higher landslide potential on the steeper slopes well above the most developable part of the site. The site is considered to have very low liquefaction potential. The site has expansive clays but this condition can be mitigated for constructing new facilities through foundation design and/or overexcavation.

The area is subject to seismic hazards. The potentially active Cambria fault and two other unnamed faults are mapped trending through the Rancho Colina property on published geologic maps. Because there are no active or potentially active faults that traverse the proposed WRF site within the property, the potential for ground-surface rupture is low to very low.

In their samples, Fugro observed the depth to bedrock varied from 1½ feet to 12 feet below ground surface and the rock may include Naturally Occurring Asbestos, requiring special handling requirements, but this is a typical condition in the region. According to the Fugro report, the bedrock can likely be graded and prepared for foundations using typical earthmoving equipment.

*Site Suitability: Low*

### **Site 2: Righetti**

The most developable 10 to 15-acre portion of the site is relatively level and located about 80 to 100 feet above sea level. This is well below the 250-foot contour, above which a new facility would likely require several lift stations and/or high-pressure mains to convey untreated wastewater. The site is already pre-graded to accommodate an existing ranch house and related ancillary facilities. Development on the site would result in the removal of the existing development.

The site is not within a 100-year floodplain. There is an ephemeral drainage trending north-south that comes from the higher elevations on the site, and passes directly through the site on its way toward Morro Creek across Highway 41. The drainage is identified by San Luis Obispo County as “Coastal Zone stream”. It is unlikely that development could avoid this typically dry drainage feature, and would most likely need to be elevated to avoid be subject to runoff during heavy rain events. This issue will require further investigation in the design and environmental review processes for a facility at this location.



As summarized in the 2011 Fine Screening Evaluation (Dudek), Earth Systems Pacific, Inc., performed a geological hazards evaluation of the Righetti Property. They collected samples and performed laboratory analysis to identify any fatal flaws for the site. The site is considered to have low landslide potential, with higher landslide potential on the steeper slopes well above the most developable part of the site. The site is considered to have very low liquefaction potential. The site has expansive clays but this condition can be mitigated for constructing new facilities through foundation design and/or overexcavation.

The area is subject to seismic hazards. The Cambria fault crosses the northern part of the property trending in a northwesterly direction. Since the fault does not cross the site proposed for the new WRF, the potential for ground rupture due to seismic activity is considered to be low.

They observed the depth to bedrock varied from 8 feet to over 26 feet below ground surface and the rock may include Naturally Occurring Asbestos, requiring special handling requirements, but this is a typical condition in the region. According to the Dudek report, the bedrock can likely be graded and prepared for foundations using typical earthmoving equipment.

*Site Suitability: Moderate*

**Summary and Conclusions.** *Restrictions placed on the Rancho Colina site by the property owner significantly restrict the design flexibility at that location. Each site is subject to generally similar physical geological constraints. The developable portion of the Righetti site is generally more level than the Rancho Colina site, although both will require substantial grading to accommodate the facility. Each is located near an existing drainage feature that will require further investigation in the design and environmental review processes. The Righetti site is within the path of an ephemeral drainage feature.*

**Top-Rated Site: Righetti**

## **E. Are there unique regulatory or logistical constraints affecting site development?**

**Why This Issue is Important.** Independent of property ownership, a site could present regulatory or logistical challenges that could make site development problematic. Such constraints could include the presence of conservation easements or other legal restrictions on development. Many drainages are protected as Waters of the United States or Waters of the State, the alteration of which would be limited by the conditions of a permit. Similarly, if a formal Habitat Conservation Plan was in place on the site, development could be restricted. The presence of a Land Conservation Act contract on the site would potentially restrict development at that location pending cancellation of the contract. Another type of challenge would include the presence of identified Alquist-Priolo Fault Zones, which restrict development in areas immediately adjacent to active fault lines. The presence of any of these restrictions may lead to more difficult permitting requirements, or could affect the location or design of the facility on the site.

**Comparative Site Analysis.** The following discussion compares the sites with respect to this key issue.



### Site 1: Rancho Colina

The site is not encumbered with any of the regulatory challenges described above, including Land Conservation Act contracts, Habitat Conservation Plan restrictions, conservation easements, or Alquist-Priolo Fault Zones. There are no drainages on the 8-acre portion of site that may qualify as Waters of the United States or Waters of the State. Based on investigations conducted for this site in 2015 with respect to biological resources, cultural resources, and geologic hazards, preliminary indications appear to be that the site does not face unusual or unique challenges with respect to these issues that may result in substantial restrictions on the design and resulting permitting timeframe for the project.

The site is adjacent to Caltrans right-of-way (Highway 41), but development of the new WRF would not affect nor encroach upon Caltrans property other than driveway access and utility service to/from the site. It may be necessary build pipelines within or across the Caltrans right-of-way either to bring wastewater to the site, or to distribute reclaimed water to potential users.

*Site Suitability: High*

### Site 2: Righetti

Except as noted below, the site is not encumbered with any of the regulatory challenges described above, including Land Conservation Act contracts, Habitat Conservation Plan restrictions, conservation easements, or Alquist-Priolo Fault Zones. There are drainages on the site that may qualify as Waters of the United States or Waters of the State, but it may be possible to avoid these areas in the design. However, based on investigations conducted for this site in 2015 with respect to biological resources, cultural resources, and geologic hazards, preliminary indications appear to be that the site does not face unusual or unique challenges with respect to these issues that may result in substantial restrictions on the design and resulting permitting timeframe for the project.

The site is adjacent to Caltrans right-of-way (Highway 41), but development of the new WRF would not affect nor encroach upon Caltrans property other than driveway access and utility service to or from the site. It may be necessary build pipelines within or across the Caltrans right-of-way either to bring wastewater to the site, or to distribute reclaimed water to potential users.

*Site Suitability: Moderate-High*

**Summary and Conclusions.** *The most developable portion of the Righetti site is within an area that may qualify for protection under the Clean Water Act as a Waters of the United States and Waters of the State. Although potentially avoidable through design, mitigation may be required through the CEQA and permitting process. Development on either site will likely require encroaching on Caltrans property as part of the pipeline system either to bring wastewater to the site, or to distribute reclaimed water to potential users.*

**Top-Rated Site:            Rancho Colina**



## **F. Are there complex studies or unusual permitting requirements associated with the site?**

***Why This Issue is Important.*** The City's 5-year goal to bring a new WRF online would be much more achievable at a site relatively free from complex permitting requirements or special studies. The reality is that each site will require similar studies and permits, and all will need to undergo an Environmental Impact Report under CEQA. Each will require a Local Coastal Plan Amendment, and be subject to the California Coastal Commission's permitting process, since both are in the Coastal Zone.

Several environmental resources receive special protection under either state or federal the law, notably areas near creeks or waterways. Such areas are potentially in the jurisdiction of one or more agencies, including the Army Corps of Engineers, US Department of Fish and Wildlife, California Department of Fish and Wildlife, and the State Department of Water Resources. The degree to which the sites under consideration can avoid (or minimize) the need for permitting from regulatory resource agencies will potentially expedite the schedule, and make the 5-year operational goal more attainable.

***Comparative Site Analysis.*** The following discussion compares the sites with respect to this key issue. It should be noted that there may be complex permitting requirements associated with potential stream discharge for the purpose of reclaiming the water to augment streamflow or provide habitat enhancement.

### **Site 1: Rancho Colina**

As with any of the sites, development of a new WRF at this location will require considerable time, but there are no unique regulatory or logistical constraints facing development at this site.

The basic steps include site and pipeline easement acquisition, a preliminary project design, CEQA evaluation, other regulatory agency permitting requirements, revised project design that responds to the CEQA and permitting process, annexation approval from LAFCo, City and Coastal Commission approval, and construction.

All project-related activities must be considered in the Environmental Impact Report (EIR) for this project. This would include steps ranging from property acquisition, property design, grading, construction and operation. The facility planning and preliminary design must be completed before CEQA so that project definition is developed in sufficient detail for thorough environmental impact analyses. While the CEQA process and must be completed before resource agency permitting can be completed (since resource agencies will rely on the CEQA document), the permit process can be initiated during the CEQA process, which will save some time in the overall project implementation timeframe.

The site is likely able to accommodate the new WRF outside Waters of the United States, Waters of the State of California, and other resources under federal or state regulatory protection, although there is ESHA located along the drainages on the site. In addition, if there is any discharge into Morro Creek as part of the reclamation effort, the project will be required with the RWQCB Waste Discharge regulations. Depending on the nature of the activity, it may also require a Streambed Alteration



Agreement from the State Department of Fish and Wildlife, a Section 404 permit pursuant to the Clean Water Act from the U.S. Army Corps of Engineers, and Section 401 certification from the RWQCB.

A Caltrans encroachment permit will be needed for driveway access and for pipelines located within the Caltrans right-of-way, which is not unique in comparison with the other sites under consideration.

Key permitting agencies potentially include the U.S. Army Corps of Engineers (pursuant to Section 404 of the Clean Water Act), Regional Water Quality Control Board (NPDES permit; meeting Porter-Cologne Act requirements; Section 401 certification), California Department of Fish and Wildlife (Streambed Alteration Agreement). Although the permit process for these actions may be initiated during the CEQA process, their completion will depend to a large extent on agency evaluation and acceptance of the final CEQA document. If there are disagreements between permitting agencies and the City, it may require additional supplemental CEQA studies to satisfy resource permitting agency concerns.

As described in the Fine Screening Report, other key permitting agencies for this site include:

- California Environmental Protection Agency, Department of Toxic Substances Control (Site Assessment / Remedial Action Plan)
- California Coastal Commission / San Luis Obispo County Department of Planning & Building (Local Coastal Plan Amendment)
- California Department of Transportation (Caltrans Encroachment Permit)
- San Luis Obispo County Air Pollution Control District (SLOCAPCD)
- LAFCo (annexation to the City)

These agencies will use the final CEQA document to assist in their permitting processes. As noted above, the 5-year schedule assumes that regulatory permits can be obtained with 6 months from the end of the CEQA process, which depends on the permit process being initiated during the CEQA evaluation, and assumes that resource agencies engage in a timely review within their permitting processes.

In addition, several site surveys, studies and other activities are needed in support of the permit application and CEQA process. Some of these related to biological and cultural resources, as well as hydrology, have already been completed. These are the studies likely needed at this site, with those that have been completed indicated:

- Jurisdictional Determination (Waters of the United States and State of California) – *completed*
- Focused Special-Status Species Surveys - *completed*
- Biological Assessment - *completed*
- Prepare Habitat Mitigation and Monitoring Plan (if any)
- Hydrologic and Hydraulic Analysis - *completed*
- Phase I Archeological Survey (Section 106) - *completed*
- Phase I / II Site Assessment
- Site Remediation (if necessary as a result of the Phase I/II Site Assessment)
- Air Quality Tech Report
- CDP/CUP Permit Application Review
- CEQA Documentation



The final steps in the regulatory process, which depend on the completion of the above steps, include:

- LAFCo Annexation
- LCP Amendment

Note that if federal funding is involved, the project would also be subject to the requirements of the federal National Environmental Policy Act (NEPA). If so, the project could be evaluated in a joint CEQA/NEPA document, but this would likely take more time than if the project were subject only to CEQA.

*Site Suitability: High*

## **Site 2: Righetti**

Permit requirements at the Righetti site are similar to those at the Rancho Colina site, except as noted below.

The site is large, but the most buildable portion is located directly in the path of the main drainage traversing the property, which may be within Waters of the United States, Waters of the State of California, and thus potentially subject to regulatory requirements under the Clean Water Act and Porter-Cologne Act. The potential for being within these jurisdictional boundaries is somewhat higher than at the Rancho Colina site.

In a December 10, 2013 letter to the City, the California Coastal Commission responded to the City's December 2013 Options Report, which found that development of a new WRF within the Morro Valley was preferred to any other location in or near the City (see Appendix A). Coastal staff concurred in this conclusion, and indicated preliminary support for either the Righetti or Rancho Colina site. At the same time, Coastal staff noted that minimizing visual impacts would be an important consideration with respect to development of a new WRF. As noted previously, the site restrictions associated with Rancho Colina would make a new WRF at that location more visually prominent than one located at Righetti. For that reason, it may be surmised that because Righetti would have a lesser visual impact, Coastal staff would likely preferentially support this site in its permitting process.

As with Rancho Colina, several site surveys, studies and other activities are needed in support of the permit application and CEQA process. Technical studies related to biological and cultural resources, as well as hydrology, have already been completed, similar to what has been done at Rancho Colina.

*Site Suitability: High*

**Summary and Conclusions.** *Both sites are suitable and present relatively few major permitting challenges. The most developable portion of the Righetti site is within an area that may qualify for protection under the Clean Water Act as a Waters of the United States and Waters of the State. Although potentially avoidable through design, mitigation may be required through the CEQA and permitting process. Development on the Rancho Colina property will be visually prominent to public views along Highway 41, which is an issue that the Coastal Commission has indicated will be an important consideration in the permitting process. Development on either site will likely require encroaching on Caltrans property as part of the pipeline system either to bring wastewater to the site, or to distribute reclaimed water to potential users.*



**Top-Rated Sites:**        **Rancho Colina** (*because of fewer jurisdictional waters constraints*);  
                                 **Righetti** (*because of fewer visual impacts related to Coastal permitting*)

**G. Are there nearby neighbors that may object to a new WRF, and what would be their likely concerns?**

**Why This Issue is Important.** Proximity to residents is undesirable because of the potential for a variety of land use conflicts, whether real or perceived. These could include noise, odor, and visual impacts. During the workshops leading to the *Options Report*, many residents expressed concerns related to these issues.

**Comparative Site Analysis.** The following discussion compares the sites with respect to this key issue.

**Site 1: Rancho Colina**

The nearest residence is located on the property, about 375 feet from the existing wastewater facility, and about 700 feet from the nearest portion of the site where the new WRF could be built. That home is occupied by the property owner, who has stated the intention of remaining on the site if a new WRF is constructed. Based on recent site visits, there is no discernable odor from existing spreading ponds more than 50 feet away, although this could vary depending on the materials being treated, wind velocity, and air temperature. Nearby property owners living to the south and east of the site (generally downwind) have indicated anecdotally that they have occasionally noticed odors from this existing facility in the past. While the property owner has expressed support for constructing a new WRF at this location, his family has also expressed concern for odors, and could potentially object in the future to potential nuisance issues based on proximity.

The site of potential development is east of the existing Rancho Colina residential complex, within 200 feet of the nearest temporary residential trailer, and within about 500 feet of the nearest permanent home along Santa Barbara Avenue. The WRF would be visible from homes within the Rancho Colina community, although partially blocked by intervening landscaping and other residential structures.

Since prevailing winds tend to come from the northwest, it is anticipated that odor-related impacts to these residents would not be substantial. That said, conditions may vary and winds could occasionally blow toward the residential area, which may give rise to complaints, for issues either real or perceived.

With respect to noise, informal measurements at the existing treatment plant on the site indicated intermittent noise levels up to about 80 dB at a distance of 20 feet from the source. Since point-source noise attenuates at a rate of 6 dB for every doubling of distance, this suggest that noise levels would be reduced to about 50 dB at a distance of 740 feet. Based on the distance between the new WRF site and the nearest permanent homes (about 500 feet), and the fact that there would be no substantial topographic barrier between them, it is anticipated that noise from this source would likely exceed 45 dB at the nearest home. Without mitigation, this is potentially inconsistent with the City's nighttime standard of 45 dB Leq for point source noise.

*Site Suitability: Moderate*



## Site 2: Righetti

The nearest residence on the property is an existing ranch house that would need to be removed to accommodate the new WRF.

The site of potential development is about 800 feet east of the nearest homes along Nutmeg Avenue and Ponderosa Street. The backyards of homes along those streets have a direct line of sight, and are slightly elevated relative to the site under consideration. The site is also about 1,400 feet west of the nearest homes within the Rancho Colina community, again with a direct line of sight. There is also a ranch home on the south side of Highway 41 about 1,100 feet to the south directly across from the site. Some residents may perceive a new WRF at this location to be a visual nuisance, even if it is well-designed to blend in with the surroundings.

Although odor-related impacts are not anticipated at these distances, there may be the potential for temporary concerns under certain wind conditions, especially downwind.

As noted above, this analysis assumes there may be intermittent noise levels up to about 80 dB at a distance of 20 feet from the source. Since point-source noise attenuates at a rate of 6 dB for every doubling of distance, this suggests that noise levels would be reduced to about 50 dB at a distance of 740 feet. Based on the distance, it is anticipated that noise levels could be about 47 to 49 dB at the nearest homes to the west and south, depending on the location of facilities within the WRF site that have the potential to produce noise. Without mitigation, this is potentially inconsistent with the City's nighttime standard of 45 dB Leq for point source noise. Noise levels at the nearest homes to the east in the Rancho Colina community may be 43-44 dB Leq, which is consistent with City standards.

*Site Suitability: Moderate*

**Summary and Conclusions.** *Both sites are within the direct line of site to nearby homes, which was not the case in the May 2014 analysis, when the Rancho Colina site was farther from off-site residences homes and blocked by intervening topography. Development on Rancho Colina would be comparatively closer to nearby homes, although there are more homes that could see the Righetti site from a farther distance. For both sites, resulting noise levels from the facility are potentially inconsistent with City nighttime standards at the location of these homes, which would require mitigation in the design of the facility.*

**Top-Rated Sites:** Rancho Colina and Righetti are similar

## H. Does the site have potential as a regional facility serving other agencies or users?

**Why This Issue is Important.** The advantage of a regional facility that could serve more than one agency is that costs and benefits could be shared. Although the Cayucos Sanitary District (CSD) is the most likely partner in such a venture, that agency has already embarked on analyzing a location for its own facility, and is not currently interested in pursuing regional goals with the City. However in the event that agency desires to once again partner with the City, a site with optimal regional potential would be advantageous.



The key factors to consider in addressing this issue are:

1. *Are there potential partner agencies that may benefit from such a venture?*
2. *Are there reclamation opportunities or partners in the region that may benefit?*
3. *Can the pursuit of such a facility address other regionally important issues?*

**Comparative Site Analysis.** Neither site currently under consideration precludes the potential regional benefits suggested by the questions posed above. The following discussion compares the sites with respect to the suitability as a regional facility.

### **Site 1: Rancho Colina**

This site has excellent potential as a regional facility. Not only is it close to the City's existing wastewater infrastructure, it is relatively close to Cayucos, the agency most likely to act as a regional partner if it chooses to do so. Existing wastewater infrastructure has already been extended from Cayucos to the downstream components of the City collection system, and connecting to a new WRF at this location would be a relatively straightforward matter. By comparison, downtown Cayucos is about 6.5 miles from the Rancho Colina site. This has obvious positive cost and timing ramifications in the short-term, and important maintenance and operation implications in the long-term.

*Site Suitability: High*

### **Site 2: Righetti**

The Righetti site has similar potential for a regional facility as the Rancho Colina site, and for similar reasons. Each is located on the Highway 41 corridor, relatively close to the existing regional wastewater infrastructure network serving both Morro Bay and Cayucos. Similar to Rancho Colina, it is also close to many of the reclamation opportunities in the Morro Valley.

The site is about 5.8 miles from downtown Cayucos, slightly closer than is Rancho Colina, and has similar proximity to regional reclamation opportunities as does Rancho Colina.

*Site Suitability: High*

**Summary and Conclusions.** *Either site could be designed to serve as a facility that serves regional treatment and reclamation goals. Both sites are close to the bulk of regional reclamation opportunities in the Morro Valley related to agriculture, as well as the Morro Creek groundwater basin, where reclaimed water could potentially be stored.*

**Top-Rated Sites: Righetti; Rancho Colina**

## **I. Are there potential cost savings compared to the other sites?**

**Why This Issue is Important.** Keeping costs low was by far the most commonly cited issue expressed at public workshops during the preparation of the *Options Report*. Key components of include capital outlay, operation and maintenance (O&M), and user costs. Unlike capital costs, O&M would be an ongoing cost through the life of the facility. But for many, the key concern is this: what would be the increased cost to ratepayers as reflected in their monthly bill?



Cost is a function of many factors, some of which are not necessarily site dependent. These include the availability of financing or grants, interest rates, and the design and construction of the WRF facility itself. These also include whether other partner agencies will be involved to share project costs and benefits.

However, many other factors are very sensitive to the location and configuration of the site, including the following:

- *Proximity to the City's existing wastewater conveyance system;*
- *Proximity to reclamation opportunities;*
- *Site elevation;*
- *Site size and configuration;*
- *Presence of environmental factors that may require special permitting;*
- *The relationship between the City and the property owner during negotiations related to site acquisition.*

**Comparative Site Analysis.** The following discussion compares the site-oriented factors that relate to cost, and focuses on the key differences between the sites that might lead to potential savings at one site or another.

### Site 1: Rancho Colina

This site's characteristics with respect to key factors related to cost are described below:

- *Proximity to the City's existing wastewater conveyance system.* The site is located about 1.7 miles from the existing treatment plant (the hub of the City's wastewater treatment infrastructure network). It is also a similar distance from, and in direct line with the existing ocean outfall, which will likely remain an important component of the reclamation system to convey peak winter flows and potentially brine. This distance is slightly farther than the Righetti site, and would likely result in higher pipeline and energy costs for the conveyance of raw wastewater to the WRF, and potentially higher pipeline costs for distributing reclaimed water for eventual use.
- *Proximity to reclamation opportunities.* The site is located in the heart of many of the most diverse reclamation opportunities in the region, including both irrigated agricultural lands, Morro Creek, and the groundwater basin underlying the Morro Valley.
- *Site elevation.* The site is about 150 to 160 feet above sea level, which is sufficiently low to avoid the need for an additional lift station to convey wastewater to the site for processing. It is also sufficiently elevated to avoid flood and coastal hazards.
- *Site size and configuration.* The entire parcel is 187 acres in size, but development would be restricted to 8 slightly sloping acres on the southwest corner of the property. This provides limited flexibility to consider different designs and configurations, and when considered along with the challenging terrain and underlying geology (thin soils with underlying bedrock), construction costs could be higher compared to development on Righetti.
- *Environmental factors that may require special permitting.* The development footprint would not likely impact areas within Waters of the United States and Waters of the State, since it is at a more upland location. No special permitting requirements are anticipated, but the visual prominence of the site from Highway 41 may be a concern to the Coastal Commission in the permitting process.



- *Property Owner Relationship with City.* The property owner has established a cooperative working relationship with the City. Depending on the outcome of the site negotiations, he may be able to bring additional appropriative water rights to the City from Morro Creek, a factor that could relate to the City's long-term cost of providing services. However, the property owner has also restricted development to a less favorable portion of the site, and limited development to facilities related to only the WRF, and not other facilities that would fulfill other citywide goals (such as development of a corporation yard).

*Site Suitability: moderate*

## **Site 2: Righetti**

This site's characteristics with respect to key factors related to cost are described below:

- *Proximity to the City's existing wastewater conveyance system.* The site is located about 1.1 miles from the existing treatment plant (the hub of the City's wastewater treatment infrastructure network). It is also a similar distance from, and in direct line with the existing ocean outfall, which will likely remain an important component of the reclamation system to convey peak winter flows and potentially brine. This distance is closer to the City's existing wastewater infrastructure than any other site, which may incrementally reduce relative potential construction and energy costs for the conveyance of raw wastewater.
- *Proximity to reclamation opportunities.* Similar to the Rancho Colina site, this property is located in the heart of many of the most diverse reclamation opportunities in the region along Highway 41, including both irrigated agricultural lands and a deeper part of the groundwater basin in the Morro Valley as compared to Rancho Colina. The site is directly adjacent to Morro Creek.
- *Site elevation.* The site is about 80 to 90 feet above sea level, which is sufficiently low to avoid the need for an additional lift station to convey wastewater to the site for processing. Many reclamation opportunities may be accessed via gravity feed. It is also sufficiently elevated to avoid flood and coastal hazards.
- *Site size and configuration.* The entire parcel is 259 acres in size, but the most developable area includes perhaps 10-15 relatively level acres on the lower portion of the site. This provides sufficient flexibility to consider several possible designs that may allow for some cost efficiency.
- *Environmental factors that may require special permitting.* The developable portion of the site is potentially partially within jurisdictional of Waters of the United States and Waters of the State. No special permitting requirements are anticipated if jurisdictional waters can be avoided through design, or mitigated to the satisfaction of key regulatory agencies. The visual prominence of the site from Highway 41 may be a concern to the Coastal Commission in the permitting process, but likely not to the same extent as Rancho Colina, which would be located closer to the highway in a more visually prominent location.
- *Property Owner Relationship with City.* In 2015, the property was put on the market for sale, and the property owner indicated a willingness to sell it to the City. The City has recently entered into an MOU with the property owner that pending the outcome of various diligence steps related to the WRF, the City can purchase the property at its option. With the MOU, the City could own the entire property, and control all future activities there. There would be no limitations on the location of the site, other than to avoid key environmental constraints, and there would be no limitations on what could be built there related to achieving the City's goals.



Overall, cost-related site factors related to construction and energy use are potentially less at Righetti than at Rancho Colina because there would be less pipeline and water pumping requirements. With an MOU in place, the City would also have control over the entire Righetti site, compared to significant restrictions on the Rancho Colina site with regard to both the amount of area and type of development that may be considered.

*Site Suitability: moderate-high*

**Summary and Conclusions.** *Each site includes similar factors that might affect cost. Righetti is closer to the City's existing wastewater infrastructure and will have relatively lower pipeline construction and energy costs. Property ownership is a key positive factor at Righetti, and a potentially negative factor at Rancho Colina because of restrictions placed on the site that could adversely affect cost.*

**Top-Rated Site: Righetti**

## **J. Are there site-related challenges to achieving the City's 5-Year timeframe?**

**Why This Issue is Important.** The City Council established a goal to have the new WRF operational within five years, in order to ensure the maximum protection of water quality and the ability to augment existing water supplies with reclaimed water as quickly as possible.

**Comparative Site Analysis.** The following discussion compares the two sites with respect to this key issue.

The major obstacles to achieving the 5-year timeframe at any location relate to several factors, only some of which are related to the sites themselves. The key site-related factors include several issues already discussed in this report, notably:

1. *Identifying a cooperative property owner;*
2. *Finding a site configured to allow for flexibility in design;*
3. *Finding a site that minimizes permitting challenges;*
4. *Finding a site that minimizes costs, in order to minimize challenges associated with funding the project.*

These factors were previously analyzed in this report. The underlying assumptions that went into that analysis have not changed, so the conclusions are carried forward here.

The following summarizes the key factors relating to achieving the 5-year timeframe at each of the sites, the analysis of which is included earlier in this report.



### Site 1: Rancho Colina

This site has the following suitability characteristics for each of the issues identified above:

1. *Cooperative property owner:* *low to moderate suitability*
2. *Site configured to allow for flexibility in design:* *low suitability*
3. *Fewer permitting requirements:* *high suitability*
4. *Relatively lower costs:* *moderate suitability*

*Overall Site Suitability:* *moderate*

### Site 2: Righetti

This site has the following suitability characteristics for each of the issues identified above:

1. *Cooperative property owner:* *very high suitability*
2. *Site configured to allow for flexibility in design:* *moderate suitability*
3. *Fewer permitting requirements:* *moderate to high suitability*
4. *Relatively lower costs:* *moderate to high suitability*

*Overall Site Suitability:* *moderate to high*

**Summary and Conclusions.** *The Righetti site faces fewer challenges to achieving the project in a 5-year timeframe, mainly because the City can gain ownership and control over the entire site, and thus has more flexibility and control over design, cost and permitting issues.*

**Top-Rated Site:** **Righetti**



## 6. Conclusions and Recommended WRF Site

Table 4 summarizes the findings of the site analysis with respect to the key questions posed above. The table is color-coded to assist the reader in interpreting the results. Green areas indicate high or very high suitability with respect to a particular issue; yellow indicates moderate to moderately high suitability; while orange suggests less than moderate suitability for that issue.

<b>Table 4. Updated Summary of Site Analysis and Findings (February 2016)</b>		
<b>Key Issue</b>	<b>Site</b>	
	<b>Rancho Colina</b>	<b>Righetti</b>
	<b>Site Suitability (high, moderate or low)</b>	
<b>Ownership and Unique Opportunities</b>		
Cooperative Property Owner?	Low-Moderate	Very High
Unique opportunities associated with the site?	Moderate-High	High
<b>Environmental and Physical Site Issues</b>		
Environmental/Coastal Issues?	Moderate-High	Moderate-High
<i>Coastal Proximity and Access</i>	High	High
<i>Visual Impacts</i>	Low-Moderate	Moderate
<i>Biological Resources/ESHA</i>	Moderate	Moderate
<i>Cultural Resources</i>	Moderate	Moderate
<i>Agriculture/Prime Soils</i>	High	High
<i>Minimize Carbon Footprint</i>	Moderate	High
Physical site constraints affecting design flexibility?	Low	Moderate
<b>Regulatory and Permitting Issues</b>		
Unique regulatory or logistical constraints?	High	Moderate-High
Complex or unusual permitting requirements?	High	High
<b>Proximity Issues</b>		
Nearby residential neighbors?	Moderate	Moderate
Suitability as a regional facility?	High	High
<b>Cost and Timing Issues</b>		
Relative cost savings compared to the other sites?	Moderate	Moderate-High
<i>Proximity to existing infrastructure</i>	Moderate	High
<i>Proximity to reclamation opportunities</i>	High	High
<i>Site Elevation</i>	High	High
<i>Site Size and Configuration</i>	Low	Moderate
<i>Permitting Requirements</i>	High	Moderate-High
Ability to achieve a 5-Year timeframe?	Moderate	Moderate-High
<i>Cooperative Property Owner</i>	Low-Moderate	Very High
<i>Site Size and Configuration</i>	Low	Moderate
<i>Permitting Requirements</i>	High	Moderate-High
<i>Relatively Lower Costs</i>	Moderate	Moderate-High
<b>OVERALL</b>	<b>Moderate</b>	<b>High</b>



As a result of investigations conducted since the City Council's previous direction in May 2014, and other conditions that have changed since that time, the **Righetti site is now recommended as the preferred site for the new WRF.**

Key considerations in this determination include:

- *City control of the Righetti site, as compared to substantial restrictions placed on the use and development location of the Rancho Colina site by that property owner;*
- *Likely lower costs at the Righetti site because less pipeline would be required, and less energy to pump wastewater to the site from the existing collection system;*
- *Proximity to the deeper portion of the Morro Valley groundwater basin, which will likely be an important reclamation opportunity;*
- *Development on the Righetti site will be less visually prominent than on the portion of the Rancho Colina site available to the City, which may be an important consideration to the Coastal Commission in their permitting process.*



## 7. References and Report Preparers

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*References for this study also include links to articles, newsletters, studies, and other documents imbedded into many of the above documents, websites, and correspondence submitted through the process.*



## **Report Preparers**

This report was prepared by **John F. Rickenbach Consulting**. Persons and involved in the preparation of this report and related supporting activities include:

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## Appendix A

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*Letter from California Coastal Commission  
to City of Morro Bay  
December 10, 2013*

**CALIFORNIA COASTAL COMMISSION**

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**December 10, 2013**

Mayor Jamie L. Irons and Honorable Councilmembers  
City of Morro Bay  
595 Harbor Street  
Morro Bay, CA 93442

**Subject: City of Morro Bay December 10<sup>th</sup> City Council Hearing, New Water Reclamation Facility Project, Second Public Draft Options Report**

Dear Mayor Irons and Honorable Councilmembers:

We received the above-referenced study regarding the proposed development of a new Water Reclamation Facility (WRF) for the City of Morro Bay. The Second Public Draft Options Report (Report) incorporates "Neighborhood Compatibility" and "Opportunity Costs" into the analysis of potential sites, revises criteria weighting (especially for cultural resources) and expands the study area included in the analysis. The updated analysis better incorporates requirements of the Coastal Act and Local Coastal Program (LCP), addresses long term planning considerations and more accurately reflects public priorities regarding the development of the WRF. The analysis ranks the Morro Valley Site highest of the potential locations for the WRF development.

As you know, the California Coastal Commission unanimously denied the use of the existing waste water treatment plant (WWTP) site for development of the new facility. The development of a new facility at the existing WWTP site was found to be inconsistent with the LCP and Coastal Act, including because it is not an allowable use under the LCP's zoning and because it is located in a tsunami run-up zone and in an area that would also be inundated in a 100 year flood event. Therefore, it is appropriate for the City to exclude the existing site from further evaluation of site alternatives, and we support the Report's direction to do so. Further, we are encouraged to see the additional analysis that has been provided in the Report and we believe the City is taking the necessary steps to fully evaluate the project alternatives and to ultimately identify a site that is consistent with the LCP and Coastal Act.

The analysis in the Report ranks the Morro Valley site first overall for potential location of the new WRF. The power plant site ranked second and the Chorro Valley site ranked third. Within the sites, each specific area proposed as the most suitable for development has benefits and weaknesses. As the City pursues the proposal, Commission staff makes the following initial comments regarding the preliminary site investigations to date.

**Morro Valley Site**

The analysis ranked the Morro Valley site first overall out of potential sites; it contains 5 parcels and 2 identified "optimal sites". The Righetti property provides one identified 'optimal site' for construction of the new WRF. The analysis deems that the identified optimal site on the Righetti

Mayor Irons and Honorable Councilmembers  
December 10, 2013

property presents minimal coastal hazards, is out of the flood plain and is not subject to tsunami considerations. Although the analysis shows that there are some ESHA areas and prime farmland on the Righetti property, the location selected is analyzed to present minimal potential impacts. The identified optimal site on the Righetti property is deemed to be located on a section of prime farmland, however this area is small and isolated from any surrounding farmland. Although all efforts should be made to avoid impacts to prime agricultural land, the County LCP does allow agricultural land to be converted for this purpose, if it is determined to be the least environmentally damaging feasible alternative.

The other identified optimal site is located on the Rancho Colina property and is similar to the site on the Righetti property. The minimization of visual impacts is something that should be strongly investigated when pursuing this development, and indeed all developments in the Coastal Zone. The analysis of the Rancho Colina site determines that the identified optimal site may have reduced visual impacts compared to the Righetti site as it is located further from Highway 41. This is something that should be considered when selecting between the two locations. Although there may be topographical concerns in selecting the Rancho Colina property all effort should be made to ensure that the development poses the minimal visual impact.

In addition to the reduced visual impacts and hazards compared to the current water treatment facility site, the proximity of both sites in the Morro Valley to potential reclamation opportunities is of considerable benefit. Commission staff supports the development of a facility that will enable the beneficial use of reclaimed water to the greatest extent possible and that will minimize the need for outfall alternatives.

### **Chorro Valley Site**

The Chorro Valley site ranked third in the Report, and is of interest as it includes a new property in the analysis. Specifically it now includes the Tri-W property (APN 068-401-013) in the assessment. The Chorro Valley site was assessed as very similar to the Morro Valley site but was ranked third due largely to the increased costs of development. The newly included Tri-W property is located on Highway 1; however the identified optimal site is located away from the road and the analysis suggests it would present minimal visual impacts. Minimizing the visual impact of the new WRT is an important consideration when assessing the appropriateness of each site.

### **Power Plant Site**

The Power Plant Site ranked third overall in the Options Report, however this was largely due to the projected cost savings of developing on this site. As noted in the report, the site would rank fifth overall if cost was not a factor. Although there is existing development on site (the power plant), the facility is expected to close in the near to medium term. Development of this site for the new WRF thus presents significant lost opportunity costs as the area could potentially be comprehensively planned to meet Coastal Act and LCP priorities and objectives, including related to public recreational access and visitor-serving opportunities.

In summary, we recommend that the existing WWTP site be eliminated from further consideration. In addition, we support the City's efforts in evaluating alternative sites for the

Mayor Irons and Honorable Councilmembers  
December 10, 2013

WRF, and believe these efforts will go far to ensure that the project can be proposed and developed consistent with the Coastal Act and LCP. We look forward to continuing to coordinate with the City on this process. If you have any questions, or would like to discuss this matter further, please don't hesitate to contact me at (831) 427-4863.

Sincerely,

Aiden Campbell  
Coastal Planner  
Central Coast District Office



## Appendix B

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*Biological Resources Assessment  
for the Righetti and Rancho Colina Sites*  
Kevin Merk Associates  
January 2016

**CITY OF MORRO BAY**  
**WATER RECLAMATION FACILITY PROJECT**  
**BIOLOGICAL RESOURCES ASSESSMENT**  
**FOR RIGHETTI AND RANCHO COLINA SITES**



*Prepared for:*

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595 Harbor Street  
Morro Bay, California 93442

*Prepared by:*



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*January 2016*

**TABLE OF CONTENTS**

	Page
1.0 INTRODUCTION.....	1
2.0 METHODS.....	4
3.0 RESULTS.....	6
3.1 Habitat Types.....	7
3.2 Natural and Man-made Drainage Features.....	15
3.3 Soils.....	15
3.4 Special Status Biological Resources.....	17
3.5 ESHA Delineation.....	22
4.0 IMPACT ANALYSIS AND RECOMMENDED MITIGATION MEASURES.....	23
5.0 CONCLUSION.....	32
6.0 REFERENCES.....	32

**LIST OF FIGURES**

Figure 1 – Site Location Map.....	2
Figure 2 – Aerial Overview Map.....	3
Figure 3 - Habitat Map Overview.....	8
Figure 3 A – Habitat Map West.....	9
Figure 3B – Habitat Map.....	10
Figure 3C – Habitat Map.....	11
Figure 4 – Soils Map.....	16
Figure 5 - CNDDDB Plants Map.....	18
Figure 6 – CNDDDB Animals Map.....	20

**LIST OF TABLES**

Table 1 – Survey Locations, Dates and Personnel.....	4
Table 2 – Native Grassland Erosion Control Seed Mix.....	26

**APPENDICES**

- Appendix A – Photo Plate
- Appendix B – List of Plants Observed Onsite
- Appendix C – CNDDDB Table of Special Status Biological Resources in the Vicinity

## **1.0 INTRODUCTION**

Kevin Merk Associates, LLC (KMA) conducted a biological resources assessment on portions of the Righetti and Rancho Colina properties and a proposed pipeline route along Highway 41 to support future development of the proposed Morro Bay Water Reclamation Facility (WRF). The project site is located in the City of Morro Bay and extends beyond the existing city limits into San Luis Obispo County, California (refer to Figures 1 and 2). The Righetti and Rancho Colina properties were identified as potential development sites in past studies conducted for the WRF project (Dudek, 2011; John F. Rickenbach Consulting, 2014). For additional background information on the two sites, please refer to these studies.

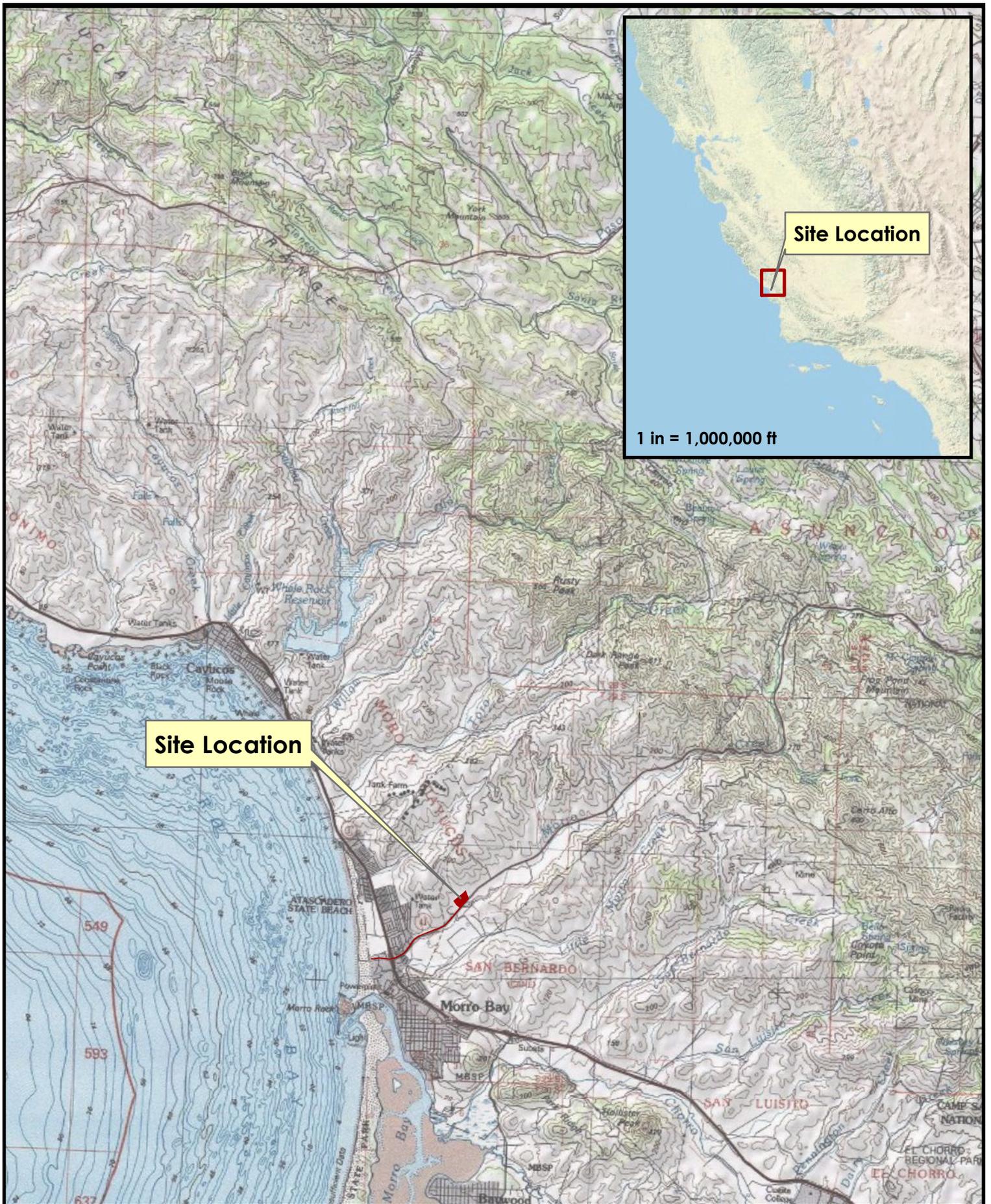
The purpose of this biological resources assessment was to determine whether or not special status biological resources, such as wetlands, rare plants or animals, are present on these sites, and would be adversely affected during construction or operation of the WRF. Further, the investigation assessed the extent of the study area that qualifies as environmentally sensitive habitat area (ESHA) pursuant to the California Coastal Act and the City of Morro Bay LCP. Included in this report are an existing conditions characterization of the study area and an evaluation of potential impacts to biological resources associated with the WRF project. For potentially significant impacts, recommended mitigation measures are provided to help guide the improvement project, and avoid or minimize potential impacts to biological resources.

Natural and man-made drainage features are present in the study area, and a Delineation of Waters of the United States and State of California was conducted to determine the extent of Clean Water Act and California Fish and Game Code jurisdiction. For further detail regarding drainage features that meet the definition as waters of the United States and State of California, please refer to the delineation report prepared by KMA (January 2016). The results of the delineation are summarized herein.

A study area was developed to include all potential development areas associated with the proposed WRF project. A buffer around the potential development sites was also included to provide a sufficient study area to allow modifications to the development plan should special status biological resources be identified onsite. Approximately 55 acres of the 251-acre Righetti property (APN 073-084-013), 17.8 acres of the 187-acre Rancho Colina property (APN 073-085-027), and a 1.7-mile long pipeline corridor were included in the study. The pipeline corridor extends along Highway 41 from the existing Morro Bay/Cayucos Sanitary District Wastewater Treatment Facility (MB/CSD WTF) on Atascadero Road to the eastern edge of the Rancho Colina property (refer to Figure 2). The Righetti property (identified as Site 16 in the 2011 Dudek report) is located adjacent to and east of the Morro Bay city limits, and west of the Rancho Colina Mobile Home Park, along the north side of Highway 41 in the Morro Valley. The Rancho Colina study area is located roughly one mile east of the Morro Bay city limit, on the north side of Highway 41, and east of the Rancho Colina Mobile Home Park. Of the 1.7-mile pipeline corridor, approximately 0.7 mile of the western portion is located within the Morro Bay city limits. The remainder of the route, and the Righetti and Rancho Colina sites, are currently located outside the city limits within the County of San Luis Obispo. All proposed project areas are located within the Coastal Zone.

As we understand, the WRF would produce tertiary, disinfected wastewater for potential users, which could include public and private landscape areas, agriculture, or groundwater recharge. The WRF site may also eventually house other possible municipal functions, including a City Corporation Yard. The project would require modifications to the existing collection system, and a new force main and pumping station to convey raw wastewater to the WRF site.

The following provides the methods and results of the investigation.



Site Location

Site Location

1 in = 1,000,000 ft



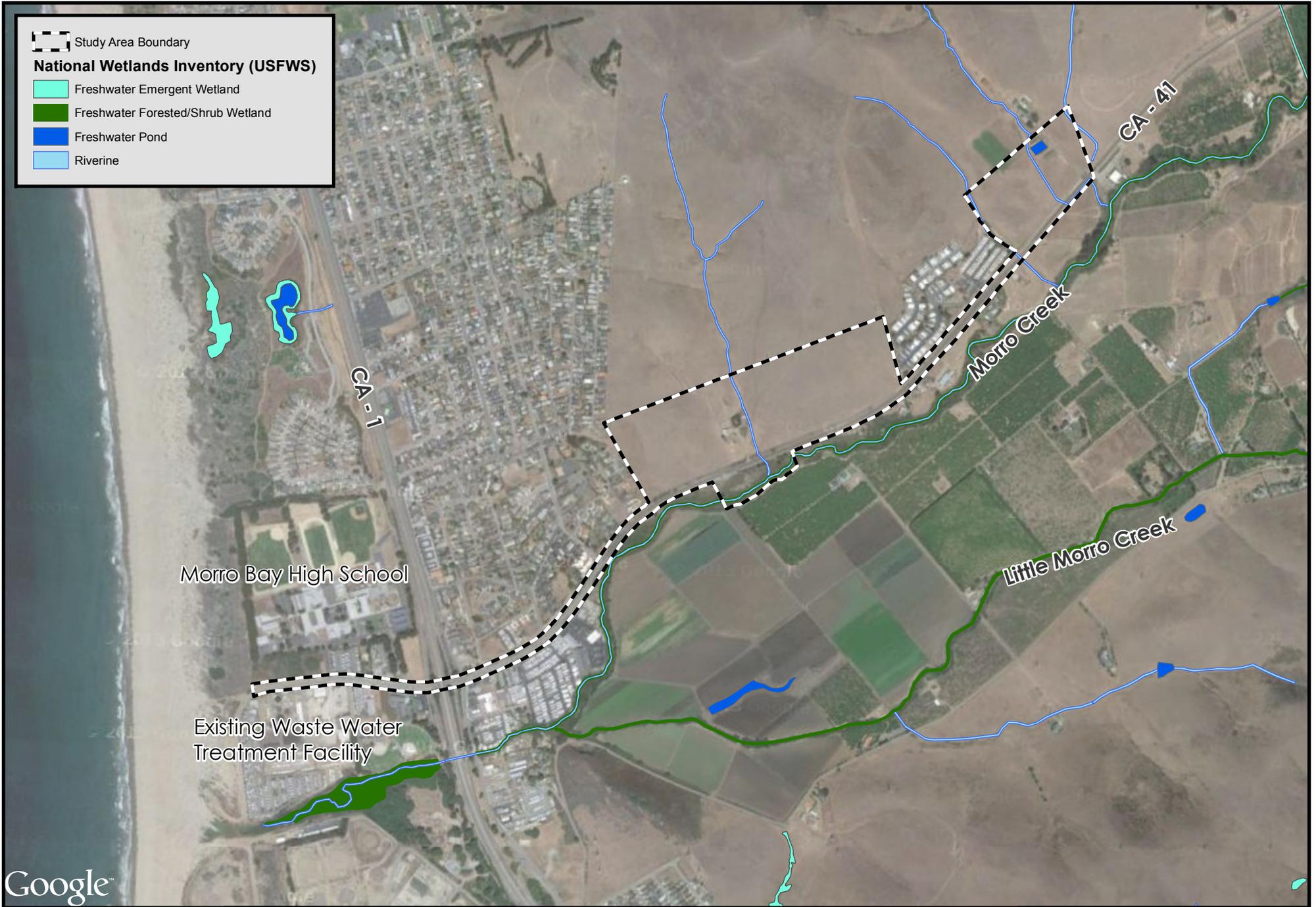
Morro Bay Water Reclamation Facility  
City of Morro Bay

Figure 1  
Site Location

Study Area Boundary

**National Wetlands Inventory (USFWS)**

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine



Google



1 in = 1,200 ft

**Morro Bay Water Reclamation Facility**

City of Morro Bay

**Figure 2**

Aerial Overview Map

## 2.0 METHODS

KMA conducted a review of available background information including studies conducted for the WRF project, U.S. Department of Agriculture’s (USDA) Web Soil Survey, historic aerial photographs obtained using Google Earth (2015), and previous biological and environmental studies conducted in the region.

The California Natural Diversity Database (CNDDDB, queried in March, April and November 2015) was reviewed for documented special status resources within a five-mile radius around the limits of the study area to identify special status species and natural communities or habitat types that could occur on the site. Given the project’s proximity to the Pacific Ocean and geographic setting adjacent to the Santa Lucia Mountains and the Estero and Morro Bays, the focus of the data base query was the coastal areas including the U.S. Geological Survey (USGS) Cayucos, Morro Bay North and Morro Bay South 7.5-minute topographic quadrangles. This search distance was deemed sufficient to identify those special status species and plant communities that had potential to occur in the immediate area, and excluded numerous species found at higher elevations or inland areas compared to those present at the site. The CNDDDB was used to evaluate nearby documented occurrences of special-status plant and wildlife, and compare the recorded habitat attributes with those present onsite to make a determination if a particular species was expected to occur onsite. Focused surveys of the study area helped refine that determination.

KMA’s Principal Biologist Kevin Merk led the survey effort, with assistance from KMA Senior Biologist Bob Sloan, and GIS Specialist/Environmental Scientist Jaryd Block. The dates and personnel for each field visit during the investigation are provided in the following table:

**Table 1. Survey Locations, Dates and Personnel**

Location	Survey Date	Survey Personnel
Righetti property	September 2, 2015	Merk
	November 10, 2015	Sloan, Block
	January 20, 2016	Sloan
Rancho Colina	March 24, 2015	Merk
	April 15, 2015	Merk, Sloan
	May 13, 2015	Sloan, Block
	June 11, 2015	Merk, Sloan
	July 10, 2015	Merk
	August 12, 2015	Sloan
Highway 41 ROW	March 24, 2015	Merk
	April 15, 2015	Merk
	May 13, 2015	Sloan, Block
	September 2, 2015	Merk

The study area was surveyed on foot during the site visits, with special attention given to drainage features, topographic depressions, changes or transitions in vegetative cover, rock outcrops, annual grassland, and other natural habitat features. Existing plant communities were mapped on an aerial photograph obtained from Google Earth and it’s data providers, dated 2015. A Trimble GeoExplorer 6000 GPS unit capable of decimeter accuracy was used during the surveys to assist with mapping vegetation types, various features and onsite drainages. Vegetation classification generally followed Holland’s *Preliminary Descriptions of the Terrestrial Natural Communities of California* (1986) and was cross-referenced with *A Manual of California Vegetation, Second Edition*

(Sawyer et al., 2009) for consistency. Plant species observed during the site visits were recorded, and are included as an appendix to this report. Plant taxonomy followed the *Jepson Manual, Second Edition* (Baldwin et al., 2012). Photos of notable features were taken, and a photo plate is included as an appendix to this report.

As stated above, the Web Soil Survey was reviewed to determine the soil mapping units present within the study area (U.S. Department of Agriculture 2015). The U. S. Fish and Wildlife Service's (USFWS) online National Wetland Inventory and Critical Habitat Mapper (<http://www.fws.gov/wetlands/Data/Mapper.html>; <http://criticalhabitat.fws.gov/crithab/>) were also reviewed to evaluate the extent of potential wetlands and designated critical habitat identified in the region.

For the purpose of this report, special status species are those plants and animals listed, proposed for listing, or candidates for listing as Threatened or Endangered by the USFWS under the federal Endangered Species Act (ESA); those listed or proposed for listing as Rare, Threatened, or Endangered by the California Department of Fish and Wildlife (CDFW) under the California Endangered Species Act (CESA); animals designated as "Species of Special Concern", "Fully Protected", or "Watch List" by the CDFW; and plants occurring on California Rare Plant Rank lists 1, 2, 3 and 4 developed by the CDFW working in concert with the California Native Plant Society. The specific code definitions are as follows:

- *List 1A = Plants presumed extinct in California;*
- *List 1B.1 = Rare or endangered in California and elsewhere; seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat);*
- *List 1B.2 = Rare or endangered in California and elsewhere; fairly endangered in California (20-80% occurrences threatened);*
- *List 1B.3 = Rare or endangered in California and elsewhere, not very endangered in California (<20% of occurrences threatened or no current threats known);*
- *List 2 = Rare, threatened or endangered in California, but more common elsewhere;*
- *List 3 = Plants needing more information (most are species that are taxonomically unresolved; some species on this list meet the definitions of rarity under CNPS and CESA);*
- *List 4.2 = Plants of limited distribution (watch list), fairly endangered in California (20-80% occurrences threatened);*
- *List 4.3 = Plants of limited distribution (watch list), not very endangered in California.*

In addition, sensitive natural communities are those plant communities listed in the CNDDDB (California Department of Fish and Wildlife 2003 queried in April 2015). While List 3 and 4 species were included in the target list, seldom do these species meet the rarity thresholds for inclusion in California Environmental Quality Act (CEQA) compliance documents.

A variety of plant communities within the Coastal Zone meet the definition of ESHA (Coastal Act Section 30107.5), including riparian areas, wetlands, maritime chaparral and special status species habitat. The California Coastal Commission (CCC), with technical assistance from the CDFW, is responsible for protecting ESHA within the Coastal Zone, and have required local agencies such as the City of Morro Bay to develop policies aimed at protecting and preserving these areas. For wetland habitats, the CCC and CDFW rely on the USFWS wetland definition and classification system developed by Cowardin et al. (1979) titled, *Classification of Wetlands and Deep Water Habitats of the United States*, as the methodology for wetland determinations. The CCC requires the presence of only one wetland parameter (e.g., wetland hydrology, hydric soils, or predominance of hydrophytic vegetation) for an area to qualify as a coastal wetland. Section 30121 of the California Coastal Act, the statute governing the CCC, broadly defines wetlands as:

*"Lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, or fens."*

The 1981 CCC Statewide Interpretive Guidelines define riparian habitats as areas of riparian vegetation. Riparian habitats may encompass wetland areas, but may also extend beyond those areas. Riparian vegetation is defined as

*"an association of plant species which grows adjacent to freshwater watercourses, including perennial and intermittent streams, lakes, and other bodies of fresh water."*

The City of Morro Bay CLUP Chapter XII provides definitions of ESHA within the City limits, and identifies coastal streams and riparian areas as follows:

*"A Stream or a River is a natural watercourse as designated by a solid line or dash and three dots symbol as shown on the USGS Survey map most recently published, or any well-defined channel with distinguishable bed and bank that shows evidence of having contained flowing water as indicated by scour or deposit of rock, sand, gravel, soil, or debris."*

The evaluation of special status species and identification of habitat conditions that could support these species was based on our field observations, knowledge of the particular species biology, and review of documented records included in the CNDDDB, resulting in the development of a habitat suitability analysis. Focused surveys for the presence or absence of wildlife species were not conducted for this study. Wildlife observations were made during each survey and were included on the species observed list included as an appendix. Seasonally timed botanical surveys were conducted to determine the presence or absence of rare plants within the study area, and the results are included herein. The analysis also draws from other KMA biological investigations conducted in the Los Osos/Morro Bay area, along the Toro Creek corridor and neighboring Chevron Estero Marine Terminal property to the north.

### **3.0 RESULTS**

The study area consists of portions of the Righetti and Rancho Colina properties located on the west side of Highway 41, and the Highway 41 Right of Way (ROW), extending from the eastern edge of the Rancho Colina site to the MB/CSD WWTF to the west. The steep rocky portions of the Righetti and Rancho Colina properties were not included in the study area since future development in these areas is unlikely. A portion of Morro Creek was also included in the study area should an outfall feature be required to discharge treated water into the creek. In addition, portions of seven small drainage features that are unnamed tributaries to Morro Creek bisect the study area, and were evaluated in the study.

The approximately 55-acre developable portion of the Righetti WRF site straddles Highway 41, and includes a section of the bed and bank of Morro Creek. Upland areas on the north side of Highway 41 were dominated by grazed annual grassland on gentle, moderate and steep slopes. An area of bunchgrass grassland was also present on steep slopes in the eastern portion of the Righetti site. Existing developed area consisting of several houses, barns, and other structures were present in the center of the site. The section south of Highway 41 along Morro Creek consisted of a disturbed upland area, a small drainage channel, and the incised Morro Creek channel dominated by native riparian vegetation as well as invasive species. Three small ephemeral drainage features traverse the property, and cross the Highway 41 ROW through culverts. Elevations for the Righetti site range from approximately 65 feet above mean sea level along the bank of Morro Creek, to approximately 240 feet at the northeastern portion of the site.

The approximately 17.8-acre portion of the Rancho Colina site that was surveyed was dominated by gently sloping grazed annual grassland areas formerly dry farmed with oat hay. The site contained a paved entrance driveway, leading to an existing residence and associated structures and the Rancho Colina Mobile Home Park wastewater treatment facility. Assorted tanks, a settling pond, and other equipment associated with the Rancho Colina Mobile Home Park wastewater treatment facility were also present. Three small ephemeral drainage features traverse the site that are hydrologically connected to Morro Creek. Elevations for the Rancho Colina site range from approximately 150 to 160 feet above mean sea level.

The proposed pipeline route within the Highway 41 ROW extends 1.7 miles from Rancho Colina to the MB/CSD WWTF, and parallels Morro Creek for approximately half of the route. Elevations for the Highway 41 ROW range from 140 feet MSL in the east to 17 feet MSL near the existing facility. The majority of the ROW habitat consists of disturbed or ruderal areas regularly maintained by grading and mowing along with random occurrences of ornamental plantings. Small areas of degraded coastal scrub and riparian scrub habitats were present. The south side of the Highway 41 ROW adjacent to Morro Creek included areas of riparian scrub on steep banks above the channel with more established riparian forest on the bottomlands. The outer canopy of this habitat extended into the study area in select locations. The pipeline route contained culvert inlet and outlet structures directing surface runoff and flows within the drainage features under Highway 41 to Morro Creek. Many of the culvert openings and associated channels or collection basins were dominated by annual upland plants, but several areas contained small patches of riparian scrub, and several others were dominated by invasive species.

The MB/CSD WWTF is located at the western end of Atascadero Road, and is separated from adjacent beach, dune, and dune scrub habitats by Embarcadero Road and the Morro Dunes RV Park. Areas within and adjacent to the WWTF consisted primarily of pavement, bare road fill, and infrastructure associated with the facility. No native biological resources were present in this portion of the study area. The adjacent RV park and RV storage to the west and south is mostly paved, as is the hotel property located to the east of the WTF.

A site location map is provided as Figure 1, an aerial overview map as Figure 2, and a soils map as Figure 3. A habitat overview map is provided as Figure 4, and Figures 4a-4c illustrate the habitat conditions and drainage features observed in the study area. Figures 5 and 6 are CNDDDB Maps showing the recorded occurrences of special status plant communities, plants and animals within a five-mile radius of the study area. Appendix A includes a photo plate with a series of photographs taken during the field visits. A list of plants and animals observed during the surveys is included as Appendix B. Appendix C includes a list of all special status species and plant communities identified in the CNDDDB and an analysis of whether or not they are expected to occur in the study area.

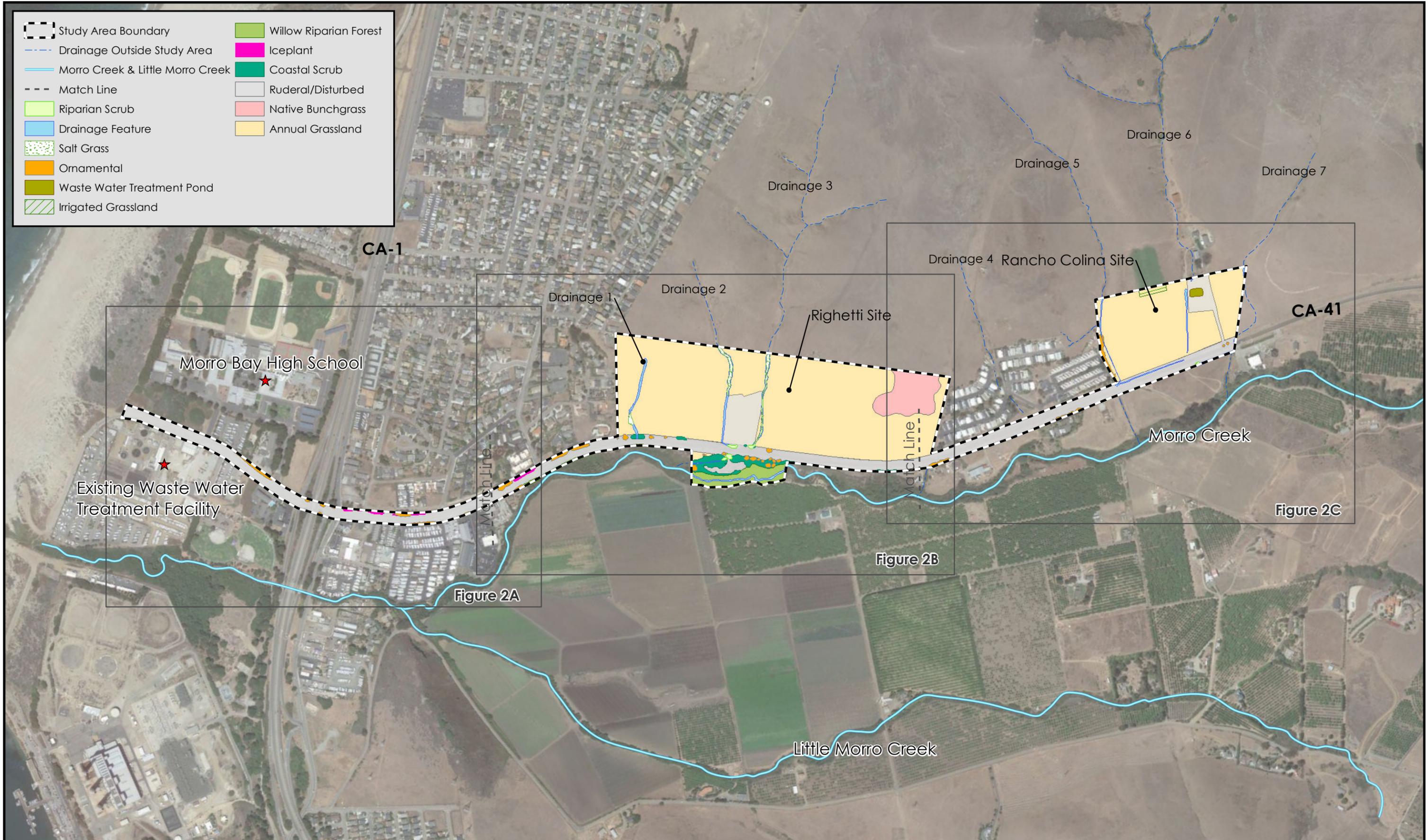
### 3.1 Habitat Types

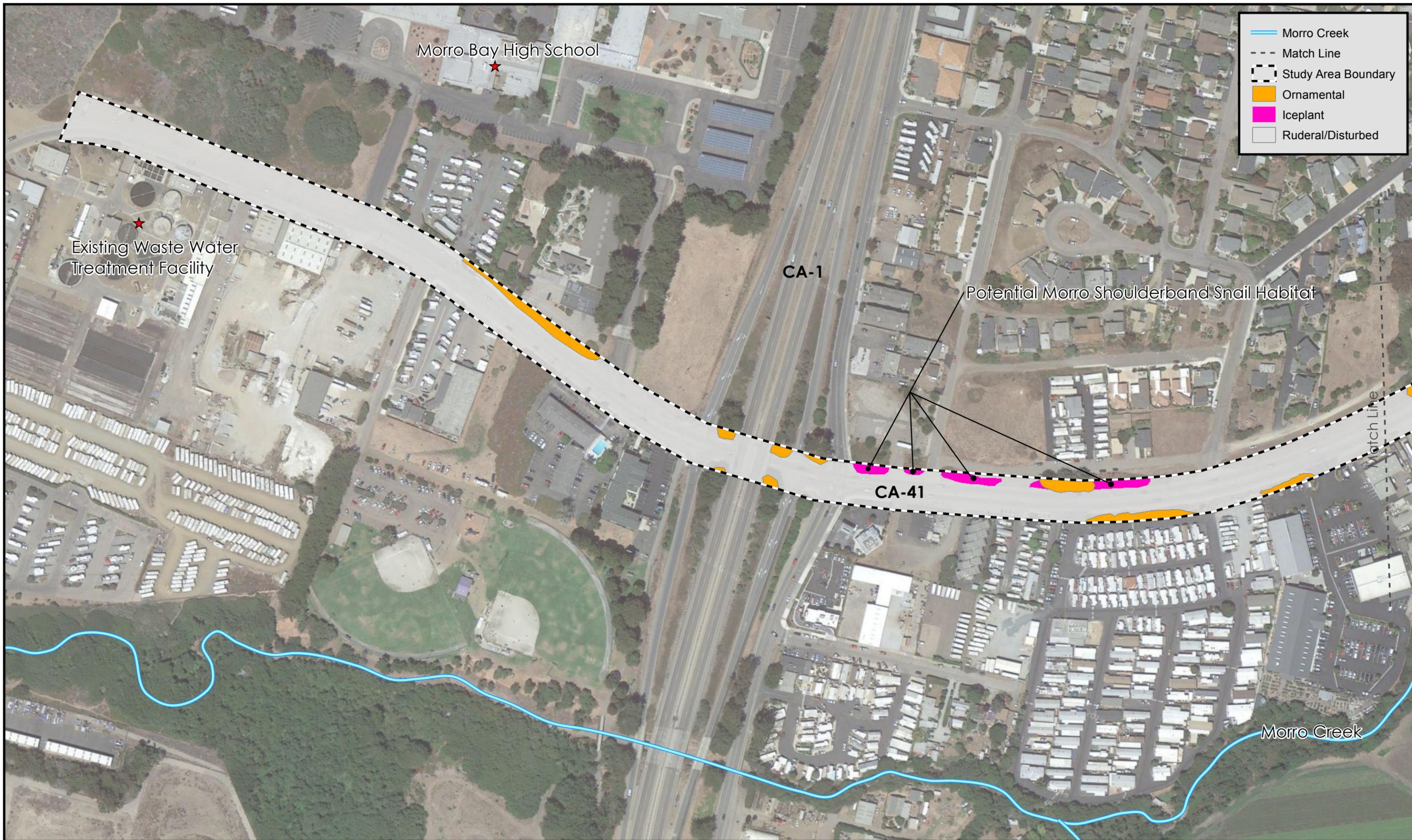
Habitat conditions observed in the study area during surveys conducted in 2015 and 2016 are presented in Figures 3, 3a, 3b, and 3c, and are discussed below.

#### 3.1.1 *Ruderal/Disturbed*

Ruderal/disturbed conditions are common in abandoned fields, along roadsides, in un-maintained areas near development, and areas that have been significantly altered by construction, agriculture, landscaping, or other types of regular activity that limit plant growth. If vegetated, these areas are typically dominated by non-native annual grasses and herbaceous plants adapted to the regular cycle of disturbance from traffic, grading and weed reduction practices such as mowing and

-  Study Area Boundary
-  Drainage Outside Study Area
-  Morro Creek & Little Morro Creek
-  Match Line
-  Riparian Scrub
-  Drainage Feature
-  Salt Grass
-  Ornamental
-  Waste Water Treatment Pond
-  Irrigated Grassland
-  Willow Riparian Forest
-  Iceplant
-  Coastal Scrub
-  Ruderal/Disturbed
-  Native Bunchgrass
-  Annual Grassland

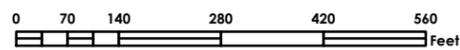




- Morro Creek
- - - Match Line
- ⬜ Study Area Boundary
- Ornamental
- Iceplant
- Ruderal/Disturbed



1 in = 250 ft



### Morro Bay Water Reclamation Facility

City of Morro Bay

### Figure 3A

Habitat Map West



- Drainage Outside Study Area
- Morro Creek
- - - Match Line
- Study Area Boundary
- Riparian Scrub
- Drainage Feature
- Salt Grass
- Ornamental
- Willow Riparian Forest
- Coastal Scrub
- Ruderal/Disturbed
- Native Bunchgrass
- Annual Grassland

Match Line

Match Line

CA-41

Drainage 1

Drainage 2

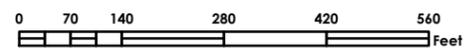
Drainage 3

Righetti Site

Morro Creek



1 in = 250 ft

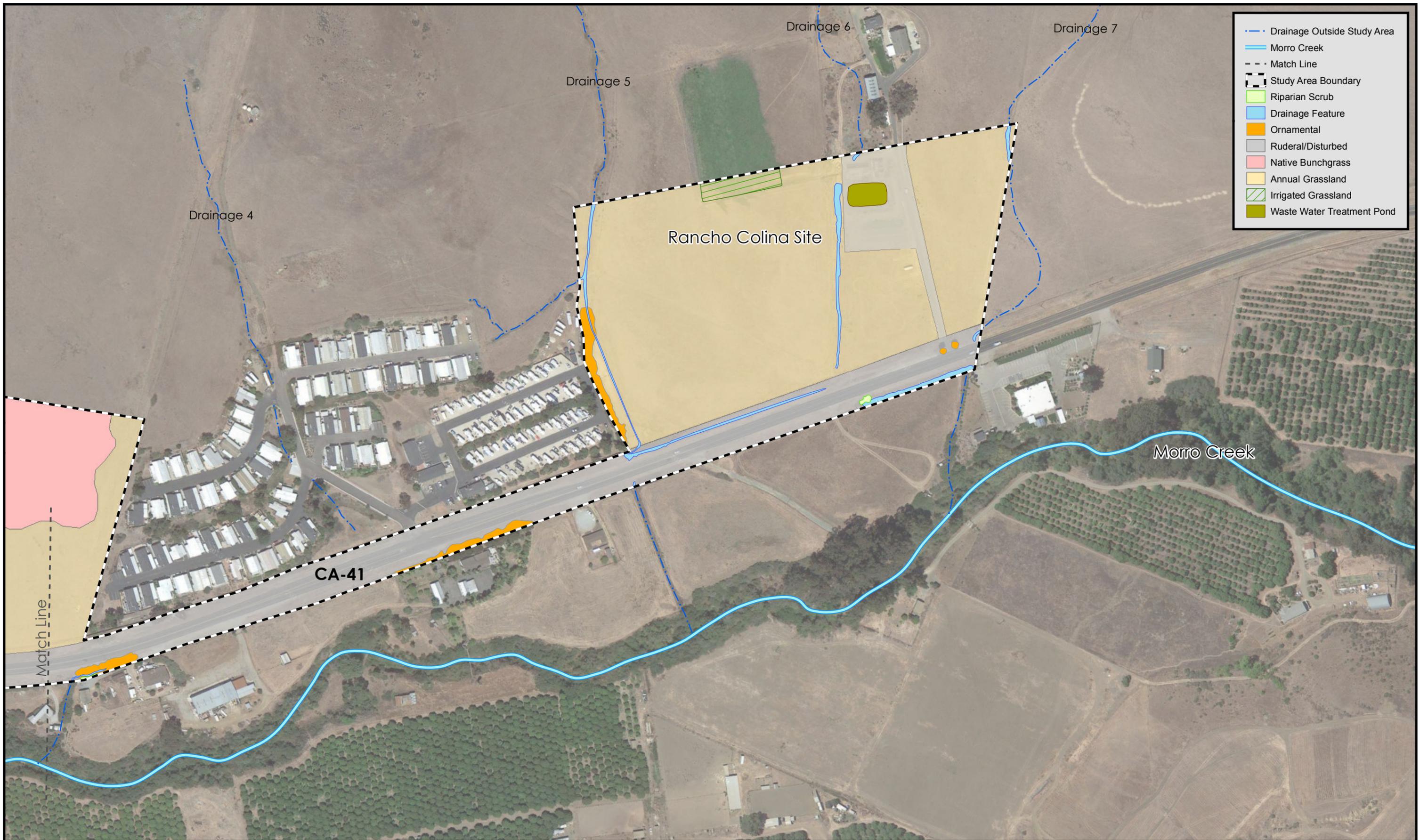


**Morro Bay Water Reclamation Facility**

City of Morro Bay

**Figure 3B**

Habitat Map Center



- - - Drainage Outside Study Area
- Morro Creek
- Match Line
- Study Area Boundary
- Riparian Scrub
- Drainage Feature
- Ornamental
- Ruderal/Disturbed
- Native Bunchgrass
- Annual Grassland
- Irrigated Grassland
- Waste Water Treatment Pond

herbicide application. Typical plants consist primarily of introduced species that exhibit clinging seeds, adhesive stems, and rough leaves that assist their invasion and colonization of disturbed lands. This is not a native plant community, and is not described in the Manual of California Vegetation (2009) or in Holland's (1986) vegetation classification.

Ruderal areas within the study area were composed mostly of bare soils with patchy occurrences of non-native plants. Plant species observed within ruderal areas of the study area included ripgut brome (*Bromus diandrus*), slender oats (*Avena barbata*), bur-clover (*Medicago polymorpha*), sweet fennel (*Foeniculum vulgare*), Italian thistle (*Carduus pycnocephalus*), kikuyu grass (*Pennisetum clandestinum*), sour clover (*Melilotus indica*), bristly ox-tongue (*Helminthotheca echioides*), and summer mustard (*Hirschfeldia incana*). Several roadside ditches within the Highway 41 ROW contained areas dominated by poison hemlock (*Conium maculatum*), an invasive non-native species that is known to occur in wetland habitat. The ruderal/disturbed areas within the study area would typically attract common wildlife species adapted to human disturbance, and are not expected to provide high quality habitat values for native species.

### 3.1.2 Grasslands

The study area, which includes both Righetti and Rancho Colina sites, was dominated by annual grassland corresponding to the wild oats grassland described in the Manual of California Vegetation (2009, second edition) and the non-native grassland described by Holland (1986). The annual grasslands in the project area have been grazed for many years, and were dominated by wild oat, with ripgut brome, soft chess (*Bromus hordeaceus*), Italian rye grass (*Festuca perennis*), red-stemmed filaree (*Erodium cicutarium*), cat's ear (*Hypochaeris glabra*), mallow (*Malva nicaeensis*), common plantain (*Plantago lanceolata*), bindweed (*Convolvulus arvensis*), summer mustard, and prickly sow thistle (*Sonchus asper*) also present. In addition, an area of irrigated grassland or pasture was also present where treated effluent from the Rancho Colina Waste Water Facility is applied to the ground.

An area containing a predominance of purple needlegrass (*Stipa pulchra*) was present on steeper rocky slopes on the eastern portion of the Righetti site. This relatively consistent cover of purple needlegrass was observed growing on heavy clay soils with what appeared to be more influence from the serpentine parent material exposed further upslope outside the study area compared to other areas of grasslands onsite. The native bunchgrass grassland corresponds to the Valley Needlegrass and Serpentine Bunchgrass Grasslands described by Holland (1986) and the *Nassella* (or *Stipa*) *pulchra* Herbaceous Alliance (purple needlegrass grassland) described by Sawyer, Keeler-Wolf and Evens (2009). Remnant plant material of native species observed included morning glory (*Calystegia macrostegia*), blue-eyed grass (*Sisyrinchium bellum*), and western vervain (*Verbena lasiostachys*).

On the Righetti property, saltgrass (*Distichlis spicata*), a native rhizomatous warm season grass, was present in beds of the three drainages where seasonal moisture persists longer than the surrounding areas dominated by annual non-native grasses. Saltgrass formed the dominant cover in the areas shown on the habitat maps along with annual grasses listed above under the annual grassland characterization. Although small in area, the saltgrass grassland type would correspond more closely to the alkali meadow described by Holland (1986) and the saltgrass flats described by Sawyer et al. (2009).

Even with intensive grazing regimes, California coastal grasslands can provide foraging, breeding habitat and movement opportunities for many wildlife species. Several small mammals, such as the California ground squirrel (*Spermophilus beecheyi*), Botta's pocket gopher (*Thomomys bottae*), and deer mice (*Peromyscus* spp.) are known to occur within this habitat type, and serve as a prey base

for larger predator animals, including snakes, raptors, and coyotes (*Canis latrans*). Numerous invertebrate species (such as insects), many of which provide a food source for larger animals such as lizards, birds and some small mammals can also be found within grassland communities. A variety of birds rely on open expanses of grasslands for foraging habitat. Grasslands that are bordered by habitats containing trees are particularly important for raptors because the birds can use the large trees as nesting, roosting, and as observation points to locate potential prey within nearby grassland habitats.

### 3.1.3 Ornamental

Ornamental areas include planted trees and horticultural specimens, such as blue gum eucalyptus (*Eucalyptus globulus*), Monterey cypress (*Hesperocyparis macrocarpa*), Myoporum (*Myoporum laetum*) Canary Island palm (*Phoenix canariensis*) and Monterey pine (*Pinus radiata*). While iceplant (*Carpobrotus* spp.) is also included in the Ornamental category, patches of iceplant were observed growing on sandy soils in the western part of the site and were mapped separately since they could potentially provide habitat for the Morro shoulderband snail (*Helminthoglypta walkeriana*), which is a special status species.

### 3.1.4 Coastal Scrub

The coastal scrub habitat present within the study area was observed on the Righetti site and along the Highway 41 ROW. It was generally disturbed by ongoing agricultural activities and road construction and maintenance, and did not represent a pure native stand of this habitat. Still, it is generally consistent with Holland's classification of Central (Lucian) Coastal Scrub. Black sage (*Salvia mellifera*), California buckwheat (*Eriogonum fasciculatum*), California sagebrush (*Artemisia californica*), monkeyflower (*Mimulus aurantiacus*), coyote brush (*Baccharis pilularis*), and poison oak were the dominant native species observed within this plant community along the banks of Morro Creek. Coastal scrub present on road cuts along the Highway 41 ROW was dominated by coyote brush intermixed with annual grasses, poison oak, and areas of poison hemlock, indicative of the ongoing disturbance regime with highway maintenance.

Mammals expected to occur in or frequent the areas of coastal scrub habitat present, based on either direct observations or the presence of "sign", included brush rabbit (*Sylvilagus bachmani*), California mouse (*Peromyscus californicus*), and California ground squirrel. Bird species expected to occur include American crow (*Corvus brachyrhynchos*), mourning dove (*Zenaida macroura*), California thrasher (*Toxostoma redivivum*), and scrub jay (*Aphelocoma coerulescens*). Common lizards such as western fence lizard were also observed within coastal scrub habitats in the study area.

### 3.1.5 Central Coast Arroyo Willow Riparian Forest

The section of Morro Creek included in the Righetti portion of the study area, and additional sections along the Highway 41 ROW contained a relatively closed canopy of arroyo willow (*Salix lasiolepis*) trees and shrubs, consistent with the Central Coast Arroyo Willow Riparian Forest and Riparian Scrub plant communities described by Holland (1986). This corresponds to the red and arroyo willow thickets described by Sawyer et al. (2009). The riparian habitat along Morro Creek was dominated by arroyo willow with scattered occurrences of western sycamore (*Platanus racemosa*) also present. Understory areas contained a high percentage of poison oak (*Toxicodendron diversilobum*), along with California blackberry (*Rubus ursinus*), and dense areas of the invasive weedy species Cape ivy (*Delairia odorata*). Riparian areas mapped within the Highway 41 ROW consisted of willow canopy cover overhanging the road shoulder.

Riparian plant communities are important for many wildlife species due to the abundance of moisture and associated vegetation providing structure, materials, and food sources for nesting and roosting activities. Many species forage within the understory and use riparian habitat as cover and as a corridor for movement along the edges of open areas. Common inhabitants of riparian woodland habitats include amphibians and reptiles such as the Pacific chorus frog (*Pseudacris regilla*), and western fence lizard (*Sceloporus occidentalis*), and mammals such as raccoon (*Procyon lotor*), opossum (*Didelphis virginiana*), striped skunk (*Mephitis mephitis*), and shrews (*Sorex* spp.). Riparian woodland habitat also supports a diverse number of resident and migratory bird species including, house wren (*Troglodytes aedon*), ruby-crowned kinglet (*Regulus calendula*), warbling vireo (*Vireo gilvus*), Wilson's warbler (*Wilsonia pusilla*), common yellowthroat (*Geothlypis trichas*), song sparrow (*Melospiza melodia*), black phoebe (*Sayornis nigricans*), goldfinches (*Carduelis* spp.) and can provide roosting and foraging habitat for several raptor and bat species.

### 3.1.6 Central Coast Arroyo Willow Riparian Scrub

Several roadside drainage channel culvert inlets and outlets contained individual to several young arroyo willow shrubs creating low canopy. While not a forest community, the small patches of arroyo willow are more consistent with the Central Coast Arroyo Willow Riparian Scrub plant community described by Holland (1986). This habitat type still falls generally under the red and arroyo willow thickets described by Sawyer et al. (2009). The gaps in the willow canopy were dominated by coyote brush, and the non-native poison hemlock. Mostly non-native understory plants were present in these areas, and included ripgut brome, perennial mustard, and Kikuyu grass.

Since the riparian scrub in the study area did not appear to contain areas of ponded water during the winter or moist soils during the majority of the year, as well as the fact that the areas are regularly disturbed by roadside maintenance activities, areas mapped as riparian scrub are not expected to support any significant diversity of resident and migratory birds. Still, a number of birds, especially smaller songbirds, could utilize the shrubs for perching and foraging, and to a lesser degree, nesting.

### 3.1.7 Riverine

Riverine habitat conditions were observed within Morro Creek at the Righetti site, which consisted of an active channel bounded by steep earthen banks. The channel was dry during the November 2015 field work, and a gravel and cobble bottom with a defined low flow channel was exposed. The banks of the channel were densely covered with the invasive cape ivy, and exhibited low vegetative diversity. Riparian habitat described above formed the dominant canopy cover over the stream channel.

Great blue heron (*Ardea herodias*) and snowy egret (*Egretta thula*) are common predators within local riverine habitats when water is present, and numerous bird species are expected to use the creek and associated riparian forest for foraging and nesting. Several species of fish are likely to occur within riverine habitat of Morro Creek when water is present, including the federally threatened south-central California coast steelhead (*Oncorhynchus mykiss*), speckled dace (*Rhinichthys osculus*), three-spined stickleback (*Gasterosteus aculeatus*), and Pacific lamprey (*Lampetra tridentata*).

Riverine habitat is seasonally variable, and often includes open water components (active, flowing channel), unvegetated sandbars (riverwash, active floodplain), and seasonally emergent wetlands (Holland 1986). The stream gradient of this habitat type is low, water velocities are slow, and

floodplains are typically well developed. Substrate within this habitat type is variable and consists of a mixture of fine silt and sand, with occasional small to medium-sized cobbles.

### **3.2 Natural and Man-made Drainage Features**

Seven small ephemeral drainages in addition to Morro Creek traverse the study area. The National Wetland Inventory (NWI) identifies Morro Creek and one un-named and sparsely vegetated ephemeral drainage feature within the Righetti site, and three ephemeral drainages within the Rancho Colina property, two of which join together and flow along the Highway 41 ROW before exiting the study area. Our study identified two additional ephemeral drainages on the Righetti property that are tributaries to Morro Creek. The drainage features within the study area have very small watersheds originating on the ridgeline to the north, and drain in a generally southerly direction to culverts crossing under Highway 41. When present, surface water in the drainages flows to Morro Creek, which drains to the Pacific Ocean further to the west. Based on the presence of defined beds and banks and hydrologic connectivity to Morro Creek and the Pacific Ocean, the drainage features in the study area were identified as non-wetland waters of the United States.

Several additional culvert inlet and outlet structures were present within the Highway 41 ROW, and are associated with a concrete v-ditch and several roadside ditches constructed to collect road runoff and direct it into the storm drain system. These features consisted of concrete v or brow ditches or earthen swales dominated by ornamental vegetation along disturbed areas of the Highway 41 ROW. These features do not receive flows from any natural drainage features, lacked hydric vegetation, and did not exhibit evidence of bed and bank structure or other signs of a regular flow regime.

The Morro Creek channel has direct connectivity to the Pacific Ocean west of the study area, and is therefore expected to fall within the jurisdiction of the U.S. Army Corps of Engineers (USACE) pursuant to Section 404 of the Clean Water Act. The Regional Water Quality Control Board (RWQCB) would also have regulatory jurisdiction under Section 401 of the Clean Water Act over the extent of open water habitat, bed and bank structure and the adjacent riparian corridor. Morro Creek and associated riparian habitat would also fall under the jurisdiction of the CDFW under California Fish and Game Code Section 1600 et seq.

Based on the presence of defined bed and bank and/or ordinary high water mark, and connectivity with Morro Creek, it is expected that all natural drainage features and associated culverts crossing the study area would fall under the jurisdiction of the USACE as waters of the United States pursuant to the Clean Water Act. It is also likely that the RWQCB and CDFW would take jurisdiction over these features as waters of the state. Similarly, the drainage features and Morro Creek are coastal streams per the CCC definitions in Section 2, and are therefore considered ESHA under LCP and CCC jurisdiction.

Culvert inlet/outlet areas associated with natural channels within the Highway 41 ROW were not considered to meet the definition of coastal wetlands even if small areas of willows or other wetland indicator species such as the non-native poison hemlock were present, due to their location within the roadway, the regular maintenance regime that disturbs plants and soils, presence of rock slope protection or concrete aprons in many areas, and the corresponding lack of natural habitat value presented by these locations.

### **3.3 Soils**

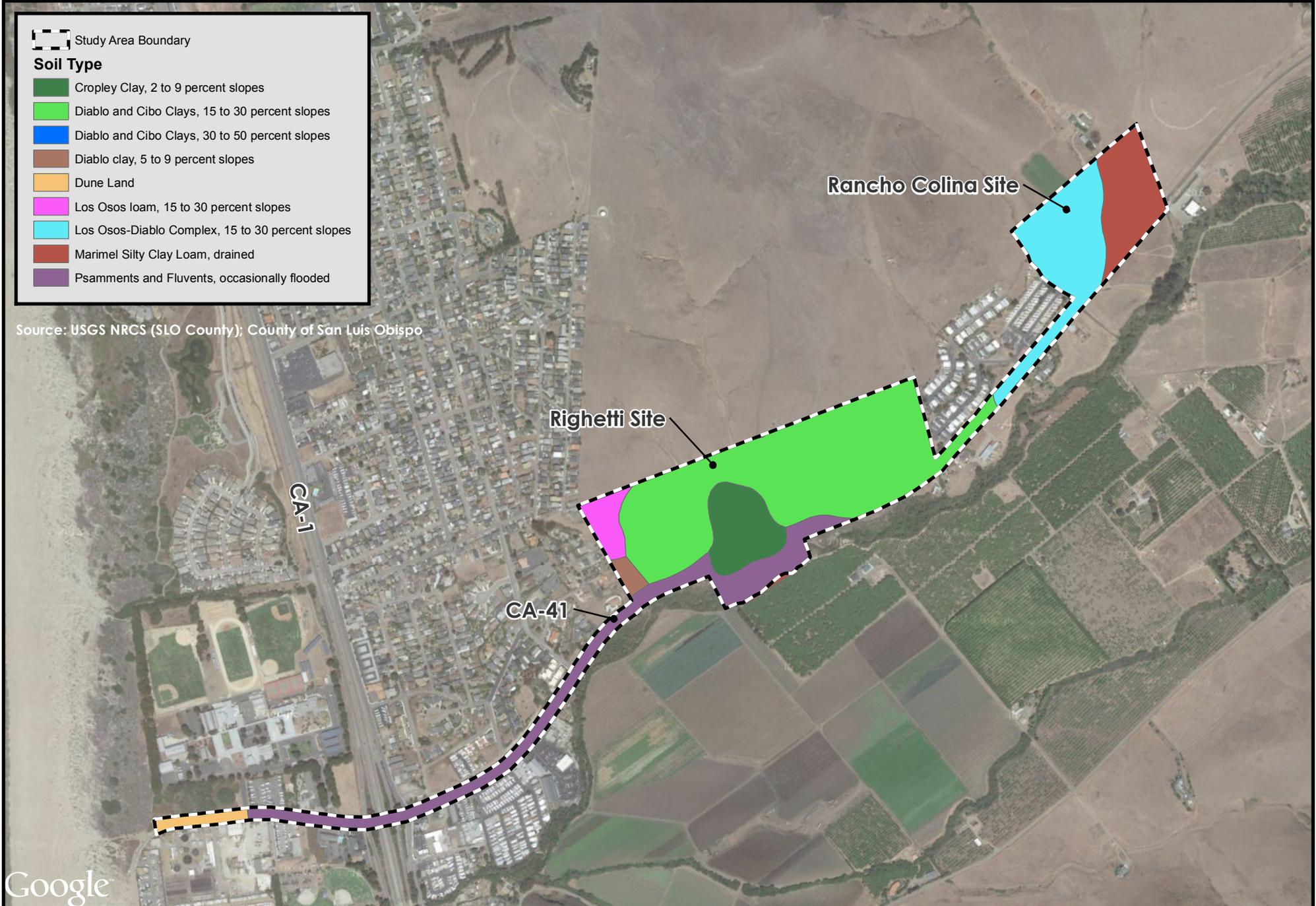
The Web Soil Survey (National Resources Conservation Service 2015) identified eight soil types as present within the study area. The Righetti site contained areas of Diablo clay, Los Osos loam,

Study Area Boundary

**Soil Type**

- Cropley Clay, 2 to 9 percent slopes
- Diablo and Cibo Clays, 15 to 30 percent slopes
- Diablo and Cibo Clays, 30 to 50 percent slopes
- Diablo clay, 5 to 9 percent slopes
- Dune Land
- Los Osos loam, 15 to 30 percent slopes
- Los Osos-Diablo Complex, 15 to 30 percent slopes
- Marimel Silty Clay Loam, drained
- Psamments and Fluvents, occasionally flooded

Source: USGS NRCS (SLO County); County of San Luis Obispo



Google



1 in = 1,000 ft

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City of Morro Bay

**Figure 4**

Soil Map

Cropley clay, Diablo and Cibo clay, on the north side of the Highway 41 ROW, and sandy Psamments and Fluvents soils south of the ROW along Morro Creek. Please refer to Figure 4, the soils map. The Rancho Colina site and the eastern portion of the Highway 41 ROW consisted of Cropley clay, Diablo and Cibo clay, and Marimel silty clay loam. The remainder of the Highway 41 ROW was mapped as sandy Psamments and Fluvents soils, except for a small section at the western end that consisted of dune sands. Examination of areas mapped as Psamments and Fluvents near Highway 1 found sandy soils present that were more consistent with old, stabilized dune sands rather than the Psamments and Fluvents, occasionally flooded.

### 3.4 Special Status Biological Resources

The Estero Bay region supports numerous special status, or rare, plant communities and species of plants and animals. Morro Bay and lands adjacent to the study area have been well studied for biological resources, and special status species have been identified in close proximity to the project area. Focused botanical surveys were conducted during the spring bloom period to determine that rare plants are not present on the Highway 41 and Rancho Colina portions of the study area. Spring botanical surveys have not been conducted on the Righetti property. As stated in the methodology section, the evaluation of special status plant occurrence on the Righetti site was based on a habitat suitability analysis using a five-mile search radius to identify special status resources that could potentially occur onsite. The study did not include definitive surveys to determine presence or absence of special status wildlife such as the California red-legged frog (*Rana draytonii*) that may be present in Morro Creek since drought conditions precluded the presence of aquatic habitat within the study area. By reviewing background documents and studies from the region, as well as the CNDDDB records, a conclusion was made as to whether a particular species could be expected to occur within the study area, and ultimately be affected by the proposed project. Appendix C provides a list of all special status species and plant communities documented within the search area, and a determination as to their potential to occur onsite.

#### 3.4.1 *Special Status Natural Communities*

The CNDDDB search identified occurrences of four (4) special status plant communities within the project vicinity, which included Central Maritime Chaparral, Coastal Brackish Marsh, Northern Coastal Salt Marsh, and Central Dune Scrub. Although not listed, elements of Central Foredune habitat are present in association with coastal sand dunes along the Pacific Ocean coast, and elements of Serpentine Bunchgrass Grasslands are present in the hills north of the study area, as well as in a specific location of the Righetti site. In addition, Central Coast Arroyo Willow Riparian Forest habitat is present in the Morro Creek corridor within the Righetti site and adjacent to portions of the Highway 41 ROW. Riparian scrub and saltgrass dominated areas are also present in drainages on the Righetti site, and a small willow is present in a roadside ditch.

#### 3.4.2 *Special Status Plants*

The CNDDDB identified 30 special status plant species, and three lichen species known to occur within a five-mile radius of the study area (please refer to Figure 5). No special status plant species were observed during surveys of the Highway 41 ROW and Rancho Colina site conducted in 2015. Although the surveys were conducted during a drought year, sufficient rain fell during the late winter and early spring to initiate germination and growth of annual plants in the project area. Based on the negative survey results and lack of suitable habitat conditions, the potential for special status plants to be present in the proposed development areas within the study area is not expected. However, because full floristic surveys were not conducted on the Righetti site, and native bunchgrass habitat was observed on this part of the study area, absence of special status plants cannot be determined for the Righetti site without further study.

Source(s): CDFW, CNDDDB, September 2015;

Study Area Boundary

**Plant Communities**

- Central Dune Scrub
- Central Maritime Chaparral
- Coastal Brackish Marsh
- Northern Coastal Salt Marsh

**Lichens**

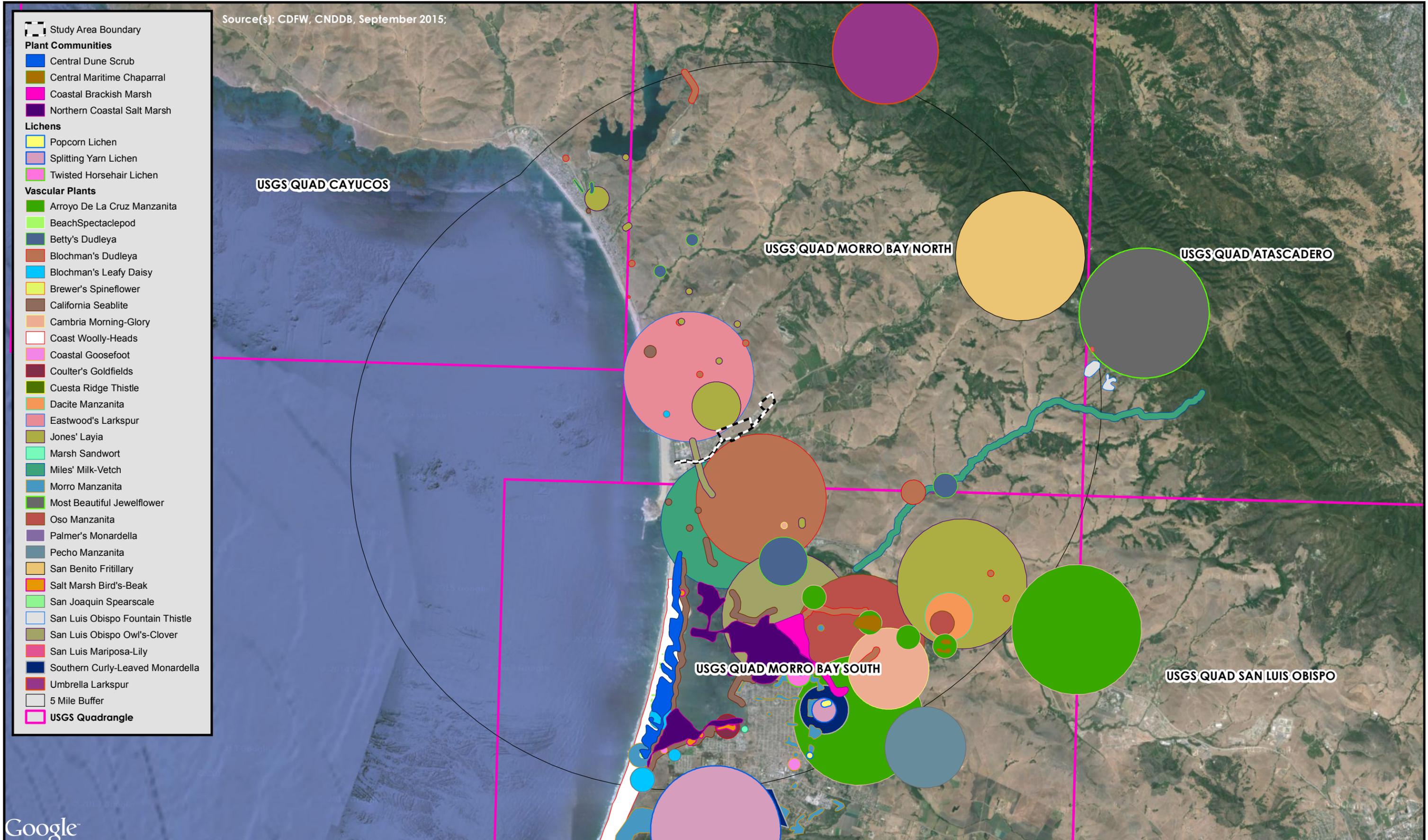
- Popcorn Lichen
- Splitting Yarn Lichen
- Twisted Horsehair Lichen

**Vascular Plants**

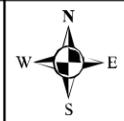
- Arroyo De La Cruz Manzanita
- BeachSpectaclepod
- Betty's Dudleya
- Blochman's Dudleya
- Blochman's Leafy Daisy
- Brewer's Spineflower
- California Seablite
- Cambria Morning-Glory
- Coast Woolly-Heads
- Coastal Goosefoot
- Coulter's Goldfields
- Cuesta Ridge Thistle
- Dacite Manzanita
- Eastwood's Larkspur
- Jones' Layia
- Marsh Sandwort
- Miles' Milk-Vetch
- Morro Manzanita
- Most Beautiful Jewelflower
- Oso Manzanita
- Palmer's Monardella
- Pecho Manzanita
- San Benito Fritillary
- Salt Marsh Bird's-Beak
- San Joaquin Spearscale
- San Luis Obispo Fountain Thistle
- San Luis Obispo Owl's-Clover
- San Luis Mariposa-Lily
- Southern Curly-Leaved Monardella
- Umbrella Larkspur

5 Mile Buffer

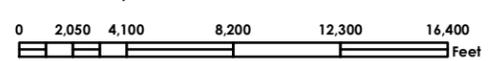
USGS Quadrangle



Google



1 in = 7,000 ft



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City of Morro Bay

### Figure 5

CNDDDB Rare Plant Occurrence

The majority of the 30 special status plant species identified in the database have highly specialized habitat requirements (i.e., they occur on serpentine rock outcrops and serpentine derived soils, active and stabilized coastal dunes, or in maritime chaparral, brackish marsh habitats, etc.) that do not occur within the study area. Species identified in the area by the CNDDDB that are known to occur on serpentine based soils such as La Panza mariposa lily (*Calochortus obispoensis*), Jones layia (*Layia jonesii*), Betty's Dudleya (*Dudleya abramsii* ssp. *bettinae*), Chorro Creek bog thistle (*Cirsium fontinale* ssp. *obispoense*), and most beautiful jewel flower (*Streptanthus albidus* ssp. *peramoenus*) are not expected to occur on the property due to the lack of suitable habitat. Although serpentine based soils and rock outcrops are present further to the north of the study area on steep slopes, the gentle slopes with clay soils dominated by weedy non-native species do not provide suitable edaphic for these species. The patch of bunchgrass grassland identified on the Righetti site does have the potential to support special status plants and further study is needed on this site before it is concluded that special status plants do not occur on this portion of the study area.

Special status plants known to occur in coastal salt marsh habitat such as salt marsh bird's beak (*Chloropyron maritimum* ssp. *maritimum*), and California seablite (*Suaeda californica*), are not expected to be present. In addition, a number of species were identified in the database search from higher elevations in the Santa Lucia Mountains, and species such as San Benito fritillary (*Fritillaria viridea*), and Cuesta Ridge thistle (*Cirsium occidentale* var. *lucianum*) are not expected to occur onsite due to the lack of suitable habitat. Perennial shrubs and herbaceous species such as Arroyo de la Cruz manzanita (*Arctostaphylos cruzensis*), Morro manzanita (*Arctostaphylos morroensis*), dacite manzanita (*Arctostaphylos tomentosa* ssp. *daciticola*), black-flowered figwort (*Scrophularia atrata*), and Indian Knob mountainbalm (*Eriodictyon altissimum*) were not observed during surveys, and would have been identifiable at the times that field surveys were conducted. Therefore, these species are also not expected to occur onsite.

Although not observed during the surveys, species such as beach spectaclepod (*Dithyrea maritima*), Blochman's leafy daisy (*Erigeron blochmaniae*), coast woolly-heads (*Nemacaulis denudata*), and coastal goosefoot (*Chenopodium littoreum*) have potential to be present in the sand dune habitat near the western end of the Highway 41 ROW outside the study area. No impacts to suitable habitat for these species would occur since the site is separated from the immediate coastline and associated dune habitat.

Special status species known to occur in grassland habitats that were identified as having potential to occur in the grassland habitats included: Blochman's dudleya (*Dudleya blochmaniae* ssp. *blochmaniae*), San Luis Obispo owl's clover (*Castilleja densiflora* ssp. *obsipoensis*) and Cambria (or San Luis Obispo County) morning glory (*Calystegia subacaulis* ssp. *episcopalis*). The Rancho Colina site and the Highway 41 ROW were thoroughly inspected for evidence of these native plants. These grassland species would have been identifiable if encountered, and are therefore not expected to occur in this part of the study area. Because floristic surveys were not conducted on the Righetti site, and due to the presence of native bunchgrass grassland, seasonally timed floristic surveys are needed to accurately determine presence or absence of special status plants from this part of the study area.

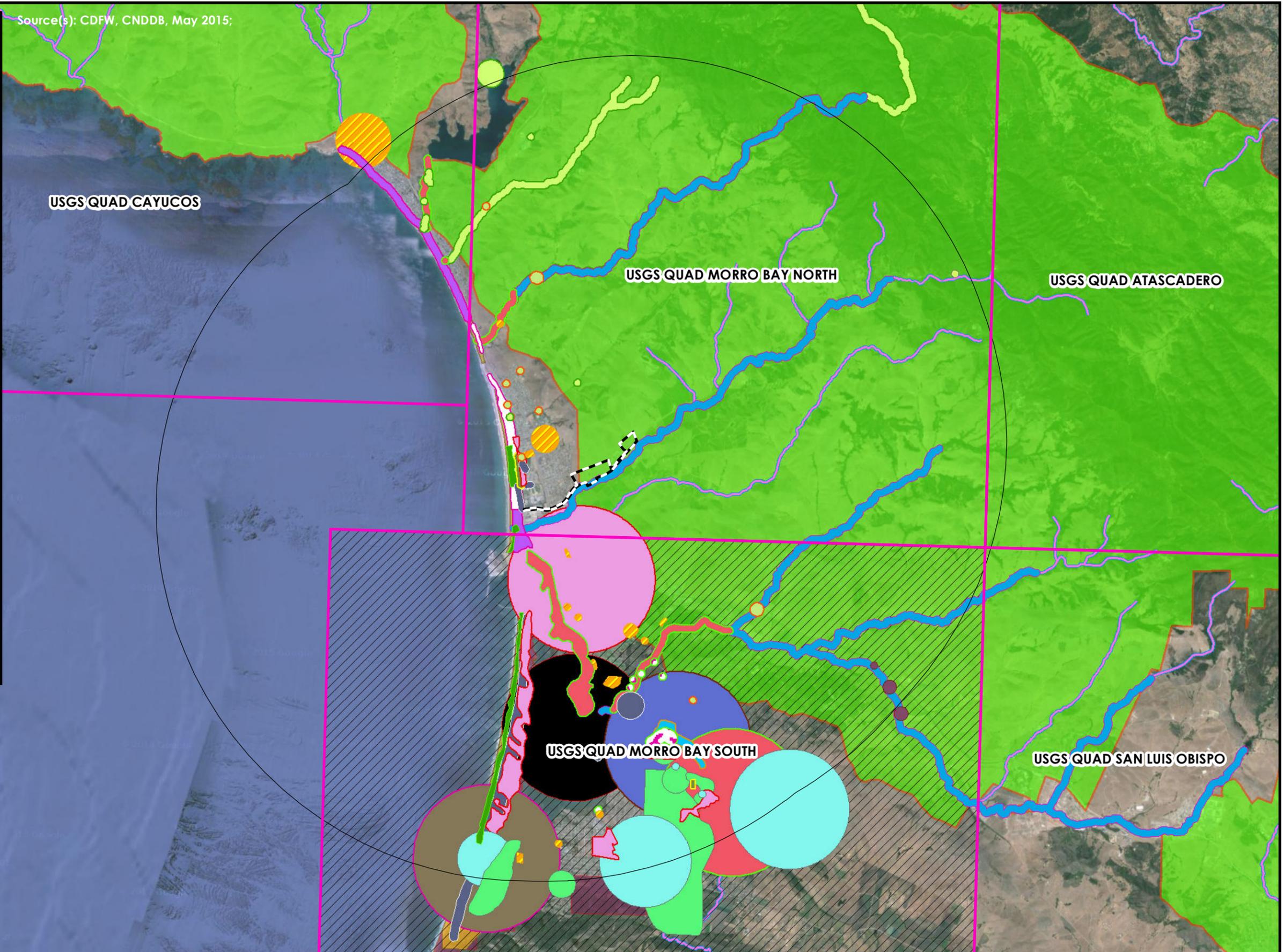
Please refer to Appendix C for specific discussions and a determination of the potential presence or absence of these species on the study area.

### 3.4.3 Special Status Animals

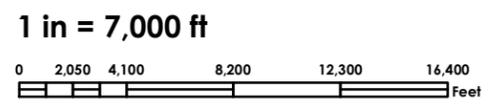
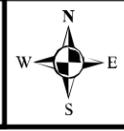
The CNDDDB contained occurrence data for 22 special status animal species known to occur within the general project area (refer to Figure 6, and Appendix C).

Source(s): CDFW, CNDDDB, May 2015;

-  Study Area Boundary
-  USGS Quadrangle
-  5 Mile Buffer
- Common Name**
-  Black Legless Lizard
-  Big Free-Tailed Bat
-  California Black Rail
-  California Brackishwater Snail
-  California Clapper Rail
-  California Red-Legged Frog
-  Coast Horned Lizard
-  Cooper's Hawk
-  Globose Dune Beetle
-  Morro Bay Blue Butterfly
-  Monarch Butterfly
-  Morro Bay Kangaroo Rat
-  Morro Shoulderband Snail
-  Pallid Bat
-  San Luis Obispo Pyrg
-  Sandy Beach Tiger Beetle
-  Silvery Legless Lizard
-  Steelhead - South/Central California Coast DPS
-  Tidewater Goby
-  Townsend's Big-Eared Bat
-  Western Pond Turtle
-  Western Snowy Plover
-  Steelhead Critical Habitat (USFWS 2005)
-  California Red-legged Frog Critical Habitat
-  Morro Bay Kangaroo Rat Critical Habitat
-  Morro Shoulderband Snail Critical Habitat
-  Western Snowy Plover Critical Habitat



Google



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**Figure 6**  
 CNDDDB Animal Occurrence Map

Similar to the special status plant discussion above, the majority of the special status animals identified in the CNDDDB search are not expected to occur in the study area due to the lack of suitable habitat and generally disturbed conditions of the sites investigated. Overall the majority of the study area is highly disturbed from development, agriculture, traffic, and human presence, and is not expected to provide suitable habitat conditions for special status animals.

Dune species, for example, specifically the sandy beach tiger beetle (*Cicindela hirticollis gravida*) and globose dune beetle (*Coelus globosus*) may be present west of the project area in the coastal dunes on the ocean side of Atascadero Road, but are not expected to occur within the study area developed for this project. Similarly, no habitat for shorebirds such as western snowy plover (*Charadrius alexandrinus nivosus*) and California black rail (*Rallus longirostris obsoletus*) is present since the site is separated from the immediate coastline and foredune habitat. Species such as the coast horned lizard (*Phrynosoma blainvillii*), Monarch butterfly (*Danaus plexippus*), and Morro Bay blue butterfly (*Plebejus icarioides morroensis*) also have specific habitat attributes or host plant requirements that are not present, and therefore, these species are not expected to occur.

The Morro shoulderband snail is a federally endangered mollusk found in coastal dune scrub habitats on Baywood fine sand soil in the Los Osos area. Recorded occurrences extend north to the Morro Strand State Beach south of the campground (CNDDDB; personal communication with M. Walgren). The species has been observed in non-native habitats such as iceplant mats and veldt grass stands growing on sandy soils, but does not occur on clay soils. Suitable sandy soil conditions were observed on the northern side of the Highway 41 ROW, beginning at Hill Street and extending west. Although no native habitat was observed, non-native ice plant (*Carpobrotus* spp.) present along portions of Highway 41 near Highway 1 could provide habitat for the species (please refer to the Habitat Map West included as Figure 4a for detail).

The ephemeral drainage features within and adjacent to the study area do not provide the necessary aquatic habitat to support the California red-legged frog (*Rana draytonii*; CRLF), tidewater goby (*Eucyclogobius newberryi*), southern steelhead (*Oncorhynchus mykiss irideus*), western pond turtle (*Emys marmorata*), two-striped garter snake (*Thamnophis hammondi*), or the Coast Range newt (*Taricha torosa torosa*). Because no suitable habitat is present for the aquatic species listed above, they are not expected to occur within these ephemeral features.

These aquatic species could be present in portions of Morro Creek within the Righetti site, and adjacent to the Highway 41 ROW. The USFWS has identified critical habitat for steelhead and CRLF in the region, including on the study area (refer to Figure 6). Only the Morro Creek corridor contained suitable habitat attributes consistent with critical habitat defined for these two species. The onsite ephemeral drainages do not provide suitable habitat for these species, and given the separation from the potential development areas the sites, more mobile species such as CRLF, two striped garter snake and western pond turtle would be unlikely to move onto the sites in search of suitable habitat. As stated above, the evaluation of potential for aquatic special status species did not include definitive surveys for the presence or absence of these species in Morro Creek, but did include direct observation of onsite conditions, searches of the waste water treatment pond on Rancho Colina, and review of biological reports and the CNDDDB records documenting their presence in Morro Creek.

A number of avian species are known from the general area and could potentially utilize annual grasslands of the study area as foraging habitat, but such uses are not considered significant from a CEQA or regulatory perspective due to the size of the study area, and ongoing uses, in comparison to the large expanses of open grasslands and agricultural lands in the vicinity. Ground nesting birds are not expected to utilize the site due to intensive grazing regime, proximity to ongoing disturbance and lack of cover. Other special status avian species known from the region such as

Cooper's hawk (*Accipiter cooperii*), burrowing owl (*Athene cunicularia*), ferruginous hawk (*Buteo regalis*), peregrine falcon (*Falco peregrinus anatum*), golden eagle (*Aquila chrysaetos*), and white-tailed kite (*Elanus leucurus*) could potentially occur in the vicinity of the study area at some point during the year, but would not be expected to nest onsite due to the lack of suitable nesting habitat. These species are more likely to occur along the Morro Creek corridor and undeveloped areas in the hills to the north and east of the study area. American kestrels (*Falco sparverius*) were regularly observed foraging in the study area in 2015, perching on fence posts and hovering over grassland areas.

Bat species such as the pallid bat (*Antrozous pallidus*) and big free-tailed bat (*Nyctinomops macrotis*) usually roost on high cliffs or rocky outcrops. While they may forage over and around the study area, there is no suitable roosting habitat onsite (man-made or natural) to protect them from human disturbance and environmental conditions.

As stated above, the evaluation of special status wildlife species occurrence within the study area was based on a habitat suitability analysis coupled with direct field observations. It did not include definitive surveys to determine their presence or absence following specific protocols. The conclusions and information contained herein and detailed in Appendix C was based on the review of biological studies from the region and the CNDDDB records coupled with our knowledge of the particular species' biology and ecological requirements. Based on this analysis, it was determined to be unlikely that any special status wildlife species are present within the Righetti or Rancho Colina portions of the study area, with the exception of seasonal bird nesting activity that may occur in shrubs and trees present onsite. Based on the presence of suitable habitat in Morro Creek, aquatic species such as CRLF, southern steelhead, western pond turtle, two striped garter snake and potentially Coast Range newt, could be present. In addition, the Morro shoulderband snail could potentially be present in sandy soils with iceplant patches in the western part of the Highway 41 ROW. Focused surveys would be required to fully determine presence or absence of the snail and aquatic species from the site.

### 3.5 ESHA Delineation

The City of Morro Bay's Coastal Land Use Plan (Chapter XII. Environmentally Sensitive Habitat Areas) and associated Coastal Act policies define ESHA as "areas in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments". Sensitive habitat areas are identified using specific criteria developed under the Coastal Act. Those resources that meet one or more of the following criteria are typically designated as ESHA:

- 1) Unique, rare or fragile communities which should be preserved to ensure their survival in the future;
- 2) Rare and endangered species habitats that are also protected by state and federal laws;
- 3) Specialized wildlife habitats which are vital to species survival;
- 4) Outstanding representative natural communities which have an unusual variety or diversity of plant and animal species; and
- 5) Areas with outstanding educational values that should be protected for scientific research and education uses now and in the future.

The City's LCP is focused primarily on streams, wetlands (including riparian), the Morro Bay estuary and open coastal waters. As such, the onsite ephemeral drainages and Morro Creek and its riparian corridor would be considered ESHA. While the LCP does identify "rare or unusual native plant communities" as ESHA, it does not specifically state native perennial grasslands shall be

protected. Saltgrass was present in drainages on the Righetti property, and therefore meets the coastal wetland definition based on the presence of two wetland criteria (i.e.: dominance of wetland vegetation and positive indicators of wetland hydrology). In addition, one saltgrass patch in Drainage 1 was identified as a federal wetland since it contained all three wetland criteria (wetland vegetation, wetland hydrology, and hydric soils). While native grasslands dominated by purple needlegrass are relatively common in the general study area (KMA personal observations), the occurrence of native bunchgrass grassland on the Righetti site was dominated by native vegetation that could support special status plants, and therefore should be considered ESHA. Should special status plants be observed on the Righetti site or Morro shoulderband snail be located in the patches of iceplant growing in sandy soils along Highway 41, those areas could also be deemed ESHA since they provide habitat for a special status species.

Section 30240 (a) of the Coastal Act states: “Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas. (b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade such areas, and shall be compatible with the continuance of such habitat areas.” Therefore, to be consistent with City policies relating to the protection of ESHA, any future development footprint should avoid and setback or buffer the natural drainage features, native bunchgrass grassland, and riparian habitats. While City policy requires a 100-foot setback from the limits of stream ESHA in non-urban areas, the proposed project could not be accommodated on the two sites without some modifications to onsite drainages.

City policy also provides the potential for a project to have a reduced setback from stream ESHA, but in no circumstances is the setback to be reduced greater than 50%, which would equate to 50 feet from the streams in the study area. From an ecological perspective, the ephemeral drainages on the Righetti and Rancho Colina sites could be moved to accommodate future WRF development and still provide as good or better habitat functions and values from what currently exists. With the incorporation of appropriate mitigation measures, development with the reduced setback or impacts to onsite drainages would not be expected to jeopardize the overall ecological health and functions of the drainage features onsite or downstream in Morro Creek.

#### **4.0 IMPACT ANALYSIS AND RECOMMENDED MITIGATION MEASURES**

The following impact analysis and recommended mitigation measures are intended to support the California Environmental Quality Act (CEQA) review process conducted by the City of Morro Bay acting as the lead agency for the project. The proposed WRF project would involve facility construction on and adjacent to annual grassland and ephemeral drainage habitats, potentially an outfall to Morro Creek, and pipeline installation from the existing facility west to the selected WRF site that would cross ephemeral drainages. It is likely that the pipeline would be sited within the disturbed and paved areas of Highway 41.

While a conceptual design was prepared for the Righetti site (Alternative Site 6 in the Dudek 2011 report), no detailed plans have been developed for the project. Given the location of ephemeral drainages on each site, it is possible that impacts to drainage features could occur in order to construct the project at either the Righetti or Rancho Colina sites. The City has developed policies in the General Plan and LCP that protect drainage features, wetlands and associated riparian habitat, and the future project will be reviewed for consistency.

Based on field work and data analysis conducted during preparation of this report, the most significant biological resources issues present are the potential to directly or indirectly impact

onsite drainage features including Morro Creek. Morro Creek is known to support southern steelhead and tidewater goby, and has potential to support other aquatic species such as CRLF, two-striped garter snake, and western pond turtle. Impacts to special status plants and native bunchgrass grasslands are unlikely, but could occur during facility construction on the Righetti portion of the study area if it were selected. Impacts to nesting birds could result during vegetation removal as well as from noise and vibration during project activities. In addition, western portions of the Highway 41 ROW contain sandy soil conditions and plant cover (iceplant) that could potentially support the federally endangered Morro shoulderband snail. Focused surveys and regulatory compliance for this species may be necessary prior to any grading or disturbance of identified suitable habitat areas.

The following impact statements and recommended mitigation measures are provided for the proposed project, based on the assumption that possible project design could impact identified resources. It may, however, be possible to avoid certain impacts through project design, but this is not yet known. Prescriptive mitigation is therefore included, in the event that identified resources are impacted.

**Impact Bio-1. Development of the future project could impact ruderal areas, ornamental plantings, annual grassland, and coastal scrub habitat. *This is anticipated to be a less-than-significant impact pursuant to CEQA, and no mitigation is required.***

Development of the proposed project would result in grading and disturbance to ruderal/disturbed areas and annual grasslands on the future site. Depending on the location of the pipeline, it could temporarily and permanently impact ruderal areas, coastal scrub and ornamental trees and shrubs planted along the Highway 41 ROW. Ruderal areas, ornamental plantings, and annual grasslands dominated by non-native species, and coastal scrub habitat are not considered sensitive plant communities by the CDFW or as ESHA under the Coastal Act or City's LCP, and are common throughout the region. Special status plants are not likely to be present in the ruderal/disturbed areas or annual grasslands that could be developed on the Rancho Colina site, but rare plants could potentially occur in annual grasslands on the Righetti property and are addressed further below. Any loss of ruderal, ornamental plantings, annual grassland or coastal scrub habitats that do not support special status species would be considered a less than significant impact pursuant to CEQA, and mitigation would not be required.

**Impact Bio-2. Future development could impact individual trees planted along the Highway 41 Right of Way. *This is anticipated to be a significant but mitigable impact pursuant to CEQA.***

As discussed, above, ornamental trees such as blue gum eucalyptus and Monterey cypress are present along Highway 41. Depending on the location of the pipeline to the new WRF, trees may or may not be impacted. Should a tree be located within the disturbance footprint for construction activities, and qualified arborist should inspect the specimen to determine if it can be saved.

*Prescriptive Mitigation.* It is anticipated at this time that all trees could be avoided by the project, and those within 25 feet of the limits of disturbance will have protective measures put in place to ensure they remain uninjured during the course of construction. An attempt will be made to protect the minimum distance of 1.5 times the dripline (i.e., the distance from the trunk to the outermost limits of leaves and branches). During development, orange construction fencing or sufficient staking to identify the protection area will surround each tree or clusters of trees. Protection fencing and staking areas will also be shown on all construction plans.

If grading or trenching must encroach within the dripline of protected trees, the activity will

attempt to avoid soil compaction and damage to the critical root zone as much as possible. Tree protection and compensatory mitigation for impacted trees will follow current City policies that will be outlined in the arborist report.

Incorporation of the above mitigation measures in concert with those developed by the project arborist would reduce potential impacts to onsite oak trees and oak woodland habitat to a less than significant level.

**Impact Bio-3. Project development in grassland areas on the Righetti site could impact unknown occurrences of special status plant species identified as California Rare Plant Rank 1B. This is anticipated to be a significant but mitigable impact pursuant to CEQA. If additional surveys are conducted that determine special status plants are not present onsite, no additional mitigation would be required for impacts to annual grassland.**

Construction of the WRF on either the Righetti or the Rancho Colina sites would impact areas of annual grassland habitat. If development were to occur on the Righetti site, it could possibly impact a patch of native bunchgrass. Since seasonally timed botanical surveys have not occurred on the Righetti site, it is possible that the grassland habitats contain special status plant species. The plant species identified as potentially present in Appendix C are California Rare Plant Rank species and do not have any formal state or federal listing status. Some of the species are on a watch list (CRPR 4 species) or are taxonomically problematic (CRPR 3 species), which typically do not meet the CEQA thresholds used to define rarity (please refer to Section 15380 of CEQA). Native grasslands are also identified by the CDFW as a sensitive natural community, and given this habitat's potential to support special status plants was identified as ESHA.

Botanical surveys were conducted on the Rancho Colina site and the Highway 41 ROW during the appropriate time of year to determine whether or not a particular special status plant is present onsite, and none were located in the study area. Although drought conditions prevailed, sufficient rain fell during the late winter and early spring to initiate germination and growth of vegetation in the study area. Floristic surveys were not conducted on the Righetti site, and no definitive conclusions regarding the potential for special status plants can be made based on the Righetti surveys conducted in November 2015 and January 2016. As a result, additional floristic surveys would be required on all grassland areas proposed for disturbance within the Righetti site to determine if rare plants are present.

*Prescriptive Mitigation.* Should special status plants be found within the Righetti site and be impacted by the project, a Rare Plant Habitat Mitigation Program should be developed and implemented. To fully mitigate impacts to special status plants that may occur from future development on the Righetti property, the following mitigation is required:

**Rare Plant Compensatory Mitigation Plan.** A rare plant mitigation plan should be developed to ensure a no-net-loss of special status plant species and their habitat from the proposed project. The rare plant mitigation plan should be developed by a qualified botanist/restoration ecologist in consultation with the City and CDFW and USFWS, as appropriate. The special-status plant species mitigation program will at a minimum include the following:

- The overall goal and measurable objectives of a no-net loss of special status species in the mitigation and monitoring plan;
- Specific areas for re-vegetation and their size. Potential sites for mitigation would be any suitable site in close proximity to the impact area;

- Specific habitat management concepts to be used during the establishment period (i.e., annual population census surveys and habitat assessments for the period immediately following construction; establishment of monitoring reference sites; a seasonally-timed weed abatement program; and seasonally-timed seed collection, propagation, and reintroduction of special-status plant species into specified receiver sites);
- Success criteria based on the goals and measurable objectives to ensure that a viable population(s) is established on the project site; and
- Reporting requirements to ensure consistent data collection and reporting methods used by monitoring personnel.

Prior to construction, all rare plant occurrences within the disturbance footprint will be flagged for avoidance. If development cannot avoid the rare plants, rare plant salvage from the disturbance area and relocation to appropriate habitat outside the development footprint will occur. Salvage and relocation activities will include the collection of seed and/or propagules prior to grading activities. Seed will be hand broadcasted into areas of suitable habitat outside the development area, or incorporated into the native grassland erosion control seed mix identified in Table 2.

Monitoring will occur annually for five years to ensure successful establishment of all re-introduced or salvaged plants and no-net-loss of the species. In the case of annual plants it is difficult to determine if there has been a net loss or gain of a viable population in a five-year period. Therefore, reference sites will be used to the extent possible to extrapolate trends in a species' population dynamics. An adaptive management program will also be included to address both foreseen and unforeseen circumstances relating to the preservation and mitigation programs. The program will also include remedial measures to address negative impacts to the special- status plant species and their habitats (i.e., removal of weeds, additional seeding/planting efforts) if the species or its habitat is suffering a net loss at the time of the follow up surveys.

All bare soils areas and temporarily impacted areas from grading that are outside the project development area will have the following seed mix applied through either direct hand seeding or hydroseeding methods:

**Table 2. Native Grassland Erosion Control Seed Mix**

Species	Application Rate (lbs./acre)
<i>Bromus carinatus</i> (California brome)	5
<i>Hordeum brachyantherum</i> (meadow barley)	5
<i>Vulpia microstachys</i> (six weeks fescue)	3
<i>Stipa pulchra</i> (purple needlegrass)	10
<i>Trifolium wildenovii</i> (tomcat clover)	5
<b>Total</b>	<b>28</b>

**Impact BIO-4. Project activities could impact onsite drainages and associated riparian/wetland vegetation, water quality and aquatic species occurring within Morro Creek from outfall construction, bank stabilization, or materials spills during construction. *This is anticipated to be a significant but mitigable impact pursuant to CEQA.***

The proposed project may cause direct impacts to the small ephemeral drainage features and culverts within the future WRF site and along the Highway 41 ROW. Impacts would be dependent on the size, depth, and location of structures and pipelines to be installed, and the type of

construction methods used. If boring the new pipeline under existing culverts in Highway 41 ROW is feasible, impacts would be reduced. If new outlet construction or improvements to the existing outlet structure, or removal and replacement of culverts is proposed, impact totals would increase. Additionally, if discharge of treated water is proposed in Morro Creek, additional studies to evaluate water quality and effects on federal and state listed species such as steelhead, tidewater goby and CRLF may be needed. For construction, such impacts would be considered temporary, and would result in re-establishment of the impacted feature. However, should direct discharge of treated water occur in Morro Creek, long term impacts to the aquatic species may result.

Project construction activities could potentially affect Morro Creek and its associated riparian and aquatic habitats and the species that use them through vegetation removal and erosion and sedimentation. Because of the sensitivity of riparian and wetland habitats present within the Morro Creek corridor, the introduction of sediments and other pollutants directly into the watercourse or to a tributary channel, could be a potentially significant impact, especially considering the presence of steelhead, tidewater goby, CRLF, pond turtle, two-striped garter snake and Coast Range newt. Coordination with applicable regulatory agencies (USACE, RWQCB, CDFW, USFWS, NOAA Marine Fisheries Service) will be necessary prior to project activities that would impact these areas to determine the extent of permitting and compensatory mitigation for all impacts and loss of habitat within their respective jurisdictional areas.

Project construction on the WRF site would require the disturbance of large areas of soil during grading, the creation of temporary soil and construction materials stockpiles, modification of drainages, and potentially replacement of culverts leading to Morro Creek. The project also could potentially include an outlet for treated water to flow into Morro Creek, and may require outlet construction and bank stabilization activities within the banks of the creek. Construction would also involve the use, fueling, and storage of heavy equipment. These activities could expose soils and other materials to erosion or transport by rainfall and runoff that could affect water quality if allowed to enter drainages or directly into Morro Creek. Soil, fuels, hydraulic fluids, and associated building materials including concrete, asphalt, paints, solvents, and other chemicals entering the creek corridor could cause an increase in suspended sediments, sedimentation of aquatic habitat, and introduce compounds that could potentially be toxic to aquatic organisms. Ensuring sediment-laden runoff does not leave the site during construction, and that post construction runoff is consistent with preconstruction conditions will be important to avoid potential impacts to water quality.

*Prescriptive Mitigation.* The following mitigation measures should be implemented prior to and during construction:

1. During project planning phases, the City should initiate consultation with regulatory agencies to introduce them to the project prior to submitting applications to obtain a Section 404 Permit from USACE, a Section 401 Water Quality Certification from RWQCB, a Section 1602 Streambed Alteration Agreement from CDFW.
2. Once the project site and development footprint and construction methods have been finalized, the drainage impact areas can be calculated and effects to federal and state listed species can be determined. As part of the permit application process, water quality analysis of treated effluent would be required prior to direct discharge into onsite drainages including Morro Creek. To compensate for impacts to riparian and wetland habitat and non-wetland drainage features, a Habitat Mitigation and Monitoring Plan (HMMP) should be prepared. The HMMP should be consistent with federal and state regulatory requirements and local City policies. It is anticipated that the HMMP would be submitted with permit applications for agency approval. The City would then be required to implement the HMMP

during construction and immediately following project completion for an estimated period of five years.

3. Prior to start of construction activities, the applicant should retain a qualified biological monitor to ensure compliance with all permit requirements and avoidance and minimization measures (i.e.: preconstruction surveys, worker environmental training, and construction monitoring) during work within and adjacent to drainage features.
4. Prior to start of construction, the project boundaries adjacent to drainages and culvert locations should be clearly flagged or fenced so that the contractor is aware of the limits of allowable site access and disturbance. Areas within the designated project site to be preserved should be clearly flagged as off-limits to avoid unnecessary damage and potential erosion.
5. Prior to start of construction, a Diversion and Dewatering Plan should be prepared in case flowing or ponded water is present in a work area. The Plan would be submitted to regulatory agencies to be approved under the project permits from the USACE, RWQCB, CDFW and City/Coastal Commission. The most up-to-date technology should be employed to avoid and minimize impacts to open water and riparian habitats. If pumps are incorporated to assist in temporarily dewater/divert stream flow from work areas, intakes should be completely screened with no larger than 0.2-inch (five-millimeter) wire mesh to prevent aquatic vertebrate species from entering the pump system. Any vertebrate species stranded in dewatered areas would be captured by the project biologist and relocated to appropriate habitat as soon as possible. Pumps will release the additional water to a settling basin allowing the suspended sediment to settle out prior to re-entering the channel outside of the isolated area. Additional regulatory agency requirements included in the project permits will be followed as directed. Additional measures developed in consultation with CDFW, USFWS and NOAA Marine Fisheries Service to protect special status species would also be followed.
6. Prior to issuance of construction permits, an Erosion Control Plan incorporating up to date Best Management Practices should be prepared by the project engineer to minimize impacts to aquatic habitats. The plan should address installation and maintenance of both temporary and permanent measures to control erosion and dust, contain spills, protect stockpiles, and generally maintain good housekeeping practices within the worksite. All project plans should show that erosion, sediment, and dust control measures must be installed prior to start of any ground disturbing work.
7. All applicable plans should clearly show project stockpile and materials staging areas. These areas should be at least 50 feet from drainage features, active storm drain inlets, and must conform to BMPs applicable for storm drain protection.
8. Prior to the start of work, the contractor should prepare and implement a Spill Prevention Plan to ensure prompt and effective response to any accidental spills. All workers shall be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur. All project-related hazardous materials spills within the project site should be cleaned up immediately. Spill prevention and cleanup materials should be on-site at all times during the course of the project.
9. All refueling, maintenance, and washing of equipment and vehicles should occur on paved areas in a location where a spill would not travel onto bare ground or to a storm drain inlet. This fueling/staging area will conform to BMPs applicable to attaining zero discharge of

stormwater runoff. At a minimum, all equipment and vehicles will be checked and maintained on a daily basis to ensure proper operation and avoid potential leaks or spills. Washing of equipment should occur only in a location where polluted water and materials can be contained for subsequent removal from the site.

10. A designated concrete washout location should be established onsite, in an area at least 50 feet from any drainage or storm drain inlet. The washout should be maintained and inspected weekly, and will be covered prior to and during any rain event. Concrete debris should be removed when the washout is 1/2 full.
11. BMP's for dust abatement should be a component of the project's construction documents. Dust control requirements should be carefully implemented to prevent water used for dust abatement from transporting pollutants to storm drains leading to the creek channel.
12. During project activities, all trash that may attract predators shall be properly contained, removed from the work site, and disposed of regularly. Following construction, all trash and construction debris shall be removed from work areas.

Implementation of the above mitigation measures in concert with other prescribed measures herein and as a result of regulatory agency permitting would reduce construction related impacts to jurisdictional habitats, water quality and special status aquatic species to a less than significant level.

**Impact BIO-5. Construction activities including vegetation removal, noise and vibration could disturb nesting and roosting bats. *This is anticipated to be a significant but mitigable impact pursuant to CEQA.***

Project activities, including equipment use during demolition and construction activities, and associated noise, vibration, and dust, could impact nesting migratory birds and/or special-status bird or bat species in riparian forest habitat within the Righetti site or adjacent to Highway 41, and in urban landscape trees along the ROW. No active nests or bat roosts were noted during the 2015 surveys, but impacts are still possible because of the migratory nature of birds and mobility of bats.

*Prescriptive Mitigation.* The following mitigation measures are recommended to avoid or minimize impacts to nesting bird species, including special status species and species protected by the Migratory Bird Treaty Act, as well as bat species identified as species of concern in or near the project area.

1. Any removal of trees should be limited to the time period between September 1 and February 14 if feasible. If tree removal cannot be conducted during this time period, a qualified biologist should conduct pre-construction surveys for active bird nests and bat roosts within the limits of the project. Visual surveys for bats should be conducted in the vicinity of all trees that have cavities, broken limbs resulting in hanging woody debris, and large patches of loose bark.
2. If active nest sites of bird species protected under the Migratory Bird Treaty Act and/or California Fish and Game Code Section 3503 are observed within the WWTF property, then the project should be modified and/or delayed as necessary to avoid direct take of the identified nests, eggs, and/or young. Potential project modifications may include establishing appropriate "no activity" buffers around the nest site. Construction activities should not occur in the buffer until the project biologist has determined that the nesting activity has ceased.

3. If active nest sites of raptors and/or bird species of special concern are observed within the vicinity of noise or vibration producing project activities, an appropriate buffer around the nest site (250 to 500 feet for raptors depending on location) should be implemented. Construction activities in the buffer zone should be prohibited until the young have fledged the nest and achieved independence.
4. Active nests should be documented and monitored by the project biologist, and a letter report should be submitted to the USFWS and CDFW, documenting project compliance with the MBTA and applicable project mitigation measures.

Implementation of the above recommended mitigation measures would be sufficient to reduce project related impacts to bird and bat species to a less than significant level.

**Impact Bio-6. Project construction in suitable habitat areas along the Highway 41 corridor could impact Morro shoulderband snail. *This is anticipated to be a significant but mitigable impact pursuant to CEQA.***

The western portion of the Highway 41 ROW contains sandy soils, and several areas of iceplant that could provide habitat for the federally protected Morro shoulderband snail (MSS). These areas are located on the north side of the study area, immediately east of the Highway 1 overpass. MSS have been identified in an undeveloped parcel at the western end of the ROW, between Atascadero Road and the Morro Bay High School. This property is adjacent to but outside the study area, however, it is possible that adjacent parking areas are likely to be used during project construction. No live MSS or empty shells were observed during general surveys conducted for this biological assessment, but numerous shells of the common Big Sur shoulderband snail (*Helminthoglypta umbilicata*), were observed between Highway 1 and Hill Street along the north side of the Highway 41 ROW. Because marginally suitable habitat and sandy soils are present west of Hill Street, take of MSS could potentially occur as a result of project related disturbances in these areas. Additionally, use of the dirt parking area opposite the existing treatment plant during wet weather could impact MSS if individuals enter the site.

*Prescriptive Mitigation.* The following measures are recommended to minimize the potential for take of MSS during project construction.

1. As part of early planning efforts, protocol level surveys for MSS should be conducted to determine presence/absence or distribution of MSS. Surveys should be conducted by a USFWS-approved biologist in possession of a valid recovery permit for the species. If the survey results are negative, the City could request a federal no take concurrence/determination for the project based on absence of the species, or could proceed without further USFWS involvement based on the documented absence of the species.
2. If survey results are negative and a concurrence authorization is granted, the iceplant should be removed, and the site(s) should be graded/grubbed down to bare mineral soil to preclude MSS from subsequently entering the area(s).
3. If live Morro shoulderband snails are found within areas proposed for impact, issuance of a Biological Opinion (B.O.) as part of future federal permitting from the USACE, or an Incidental Take Permit associated with a Habitat Conservation Plan (HCP), may be required to allow individuals to be moved out of project areas prior to construction. A USFWS-approved biologist should be retained to move MSS per the B.O. or HCP requirements, and to monitor vegetation clearing activities occurring within the MSS habitat area(s).

4. If equipment use, or materials stockpiling, or other project-related activities are proposed on the north side of the Highway 41 ROW west of Highway 1, all such areas should be delineated by installation of silt fencing to create a barrier between potential MSS habitat and project activities. If fenced areas are utilized during or immediately following rain events or dense fog conditions, a permitted biologist should survey and clear the work areas each morning prior to start of work.
5. Work crews should undergo an environmental training session conducted by a USFWS-approved biologist prior to start of construction activities in or adjacent to MSS habitat areas. Environmental training would inform project personnel of the constraints associated with working within and adjacent to MSS habitat, and the appropriate protocol should MSS be encountered during construction activities. In addition, the environmental training would cover all other special conditions associated with work in ESHA and jurisdictional areas.

Implementation of the above recommended mitigation measures would be sufficient to reduce project related impacts to MSS to a less than significant level.

**Impact Bio-7: Project development could affect the American badger. This is anticipated to be significant but mitigable pursuant to CEQA.**

The American badger was determined to potentially occur on-site, particularly in the grassland habitats. Based on the lack of a suitable prey base such as California ground squirrels, the likelihood that badgers would den onsite was determined to be low. Because of the size of the sites included in this investigation, degree of habitat diversity in the region, and open space to remain post project development, potential impacts to American badger resulting from the project would only be anticipated to occur during initial construction activities, and are not expected to be significant with the incorporation of the below mitigation measures.

*Prescriptive Mitigation.* A pre-construction survey for active badger dens should be conducted within the construction impact footprint and surrounding accessible areas of the site two weeks prior to any ground disturbing activities. The survey should be conducted by a qualified biologist. In order to avoid potential direct impacts to adults and nursing young, no grading should occur within 50 feet of an active badger den as determined by the project biologist. Construction activities between July 1 and February 28 should comply with the following measures to avoid direct take of adult and weaned juvenile badgers through the forced abandonment of dens:

- A qualified biologist should conduct a biological survey two (2) weeks prior to the start of construction;
- The survey should cover the entire area proposed for development;
- If dens are located that are too long to see the end, a fiber optic scope (or other acceptable method such as using tracking medium for three nights) should be used to assess the presence of badgers;
- Inactive dens should be excavated by hand with a shovel to prevent badgers from re-using them during construction.
- Badgers should be discouraged from using currently active dens prior to the grading of the site by partially blocking the entrance of the den with sticks, debris and soil for 3 to 5 days. Access to the den should be incrementally blocked to a greater degree over this period. This should cause the badger to abandon the den and move elsewhere. After badgers have stopped using any den(s) within the project boundary,

the den(s) should be hand-excavated with a shovel or carefully with the use of an excavator to prevent re-use.

- The biologist should be present during the initial clearing and grading activity. If additional badger dens are found, all work should cease until the biologist can complete measures described above for inactive and active dens. Once the badger dens have been excavated, work on the site may resume.

Implementation of the above recommended mitigation measures would be sufficient to reduce project related impacts to American badger to a less than significant level.

## **5.0 CONCLUSION**

The study area is comprised primarily of grazed annual grasslands dominated by a mix of non-native and native species typical of the project region. Areas of native grassland, including purple needlegrass and saltgrass dominated areas, were observed on the Righetti site. Ruderal/disturbed areas, ornamental plantings, coastal scrub and riparian habitats were also identified within the study area. Ephemeral drainage features that are tributary to Morro Creek were also identified on both Righetti and Rancho Colina sites. All mapped drainage features were determined to fall under the jurisdiction of the USACE (as waters of the U.S.), RWQCB (as waters of the state), CDFW (as beneficial wildlife habitat), and LCP/Coastal Act as ESHA, due to connectivity with Morro Creek and the Pacific Ocean further west. A Delineation of Waters of the United States and State of California (KMA 2016) was prepared for the project that characterizes the nature and maps the extent of these features within the study area.

Field work conducted for this study did not locate any special status plant or wildlife species on the Highway 41 ROW or Rancho Colina Site. Seasonally timed floristic surveys were not conducted on the Righetti site due to site access restrictions in the spring. Therefore, additional study is required at the Righetti site to determine presence or absence of special status plants. Special status plants are not expected to occur within the Highway 41 corridor outside the limits of Morro Creek due to lack of suitable habitat, and regular disturbance by grazing, mowing, and road maintenance. Suitable habitat for special status aquatic animals (i.e: steelhead, tidewater goby, CRLF, western pond turtle, two-striped garter snake and Coast Range Newt) was identified in Morro Creek. Iceplant patches growing on sandy soils were also identified as potentially suitable habitat for the Morro shoulderband snail. Should development be proposed in these areas, additional surveys would be required to determine presence of these species and consultation with applicable agencies in compliance with the state and federal Endangered Species Acts.

Although it is unclear if impacts to onsite drainage features and other special status biological resources can be avoided to construct the WRF on either the Righetti or Rancho Colina sites, prescriptive mitigation measures were included herein to ensure project related impacts to biological resources are minimized and mitigated to a less than significant level pursuant to CEQA. Given the presence of drainage features regulated by the USACE, RWQCB and CDFW, and potential presence of special status species such as steelhead, tidewater goby and CRLF in Morro Creek, early consultation with regulatory agencies, including the USFWS and NOAA Marine Fisheries Service, is recommended to involve them in project planning activities, and develop the overall regulatory compliance program as it pertains to biological resources.

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# **APPENDIX A**

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**Photo Plate**

**KMA**

**Photo Plate**

**Photo 1.** Southerly overview of the central portion of the Righetti site looking toward Highway 41.



**Photo 2.** View of Morro Creek within the Righetti site showing riverine and riparian habitats with invasive Cape ivy dominating the banks.



**Photo 3.** View of the Rancho Colina site, looking southwest over grazed annual grasslands and the existing wastewater treatment facility for the mobile home park.



**Photo 4.** View southeast toward Highway 41 over the eastern portion of the Rancho Colina site. White fence marks existing entrance driveway to the site.



**Photo 5.** View of the Highway 41 ROW looking east. Note vegetative cover of annual grasses with ornamental trees. Morro Creek is located on the right side of the picture.



**Photo 6.** View of a portion of the Highway 41 ROW near the Morro Bay City limit looking east. Trees on right side of picture are associated with the Morro Creek riparian corridor.



**Photo 7.** View of a portion of the Highway 41 ROW near the Highway 1 overpass looking west at iceplant groundcover on sandy soil that could potentially support the Morro shoulderband snail.



**Photo 8.** View of western portion of study area at Atascadero Road opposite the existing WWTF looking east. Bare soil graded for parking was mapped as ruderal habitat. Iceplant and coastal scrub to the north of the dirt parking area were outside the study area.



**Photo 9.** Easterly view of Highway 41 ROW with coastal scrub habitat on the steeply cut bank of Morro Creek pictured to the right.



**Photo 10.** View of riparian scrub at culvert near Righetti driveway connecting drainages to Morro Creek.

# **APPENDIX B**

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## **List of Plants Observed**



**Appendix B- List of Plants Observed During Field Surveys.**

Scientific Name*	Common Name
<i>Acmispon glaber (=Lotus scoparius)</i>	Deerweed
<i>Ambrosia psilostachys</i>	Ragweed
<i>Artemisia californica</i>	California sagebrush
<i>Artemisia douglasiana</i>	Mugwort
<i>Asphodelus fistulosus*</i>	Onion weed
<i>Astragalus curtipes</i>	South coast milkvetch
<i>Avena barbata*</i>	Slender wild oats
<i>Baccharis douglasii</i>	Marsh baccharis
<i>Baccharis pilularis</i>	Coyote brush
<i>Brassica nigra*</i>	Black mustard
<i>Bromus diandrus*</i>	Ripgut brome
<i>Bromus hordeaceus*</i>	Soft chess
<i>Bromus madritensis ssp. rubens*</i>	Red brome
<i>Calystegia macrostegia ssp. cyclostegia</i>	Coast morning glory
<i>Carduus pycnocephalus*</i>	Italian thistle
<i>Carpobrotus spp.*</i>	Ice plant
<i>Carthamus creticus*</i>	Smooth distaff thistle
<i>Centaurea calcitrapa*</i>	Purple star thistle
<i>Centaurea solstitialis*</i>	Yellow star thistle
<i>Cirsium vulgare*</i>	Bull thistle
<i>Conium maculatum*</i>	Poison hemlock
<i>Conyza canadensis</i>	Horseweed
<i>Cynodon dactylon*</i>	Bermuda grass
<i>Deinandra fasciculata</i>	Yellow tarweed
<i>Delairea odorata*</i>	Cape ivy
<i>Dipsacus fullonum*</i>	Fuller's teasel
<i>Distichlis spicata</i>	Saltgrass
<i>Erodium botrys*</i>	Filaree
<i>Erodium cicutarium*</i>	Red-stemmed filaree
<i>Eriogonum fasciculatum</i>	California buckwheat
<i>Eschscholzia californica</i>	California poppy
<i>Eucalyptus globulus*</i>	Blue gum eucalyptus
<i>Euphorbia spathulata</i>	Spurge
<i>Festuca perennis* (=Lolium multiflorum)</i>	Italian rye grass
<i>Foeniculum vulgare*</i>	Fennel
<i>Geranium dissectum*</i>	Cut-leaf geranium
<i>Glebionis coronaria*</i>	Crown daisy
<i>Gnaphalium californica</i>	California everlasting
<i>Hazardia squarrosa</i>	Saw-tooth golden bush
<i>Hemizonia congesta ssp. luzulifolia</i>	Hayfield tarweed
<i>Hesperocyparis (=Cupressus) macrocarpa</i>	Monterey cypress
<i>Hirschfeldia incana*</i>	Summer mustard
<i>Hordeum marinum ssp. gussoneanum*</i>	Mediterranean barley
<i>Hordeum murinum ssp. leporinum*</i>	Foxtail
<i>Lactuca serriola*</i>	Wild lettuce
<i>Lasthenia californica</i>	Common goldfields
<i>Leymus condensatus</i>	Giant wild rye

Scientific Name*	Common Name
<i>Leymus triticoides</i>	Creeping wild rye
<i>Lotus corniculatus</i>	Birdsfoot trefoil
<i>Lupinus nanus</i>	Sky lupine
<i>Lupinus succulentus</i>	Succulent lupine
<i>Malva nicaeensis</i> *	Bull mallow
<i>Matricaria matricarioides</i> *	Pineapple weed
<i>Medicago polymorpha</i> *	Bur clover
<i>Melilotus sativa</i> *	Sweet cicily
<i>Microseris douglasii</i>	Douglas' microseris
<i>Muhlenbergia stricta</i>	Deer grass
<i>Myoporum laetum</i>	Myoporum
<i>Oxalis pes-caprae</i>	Bermuda buttercup
<i>Pennisetum clandestinum</i> *	Kikuyu grass
<i>Pennisetum setaceum</i> *	Fountain grass
<i>Phalaris aquatica</i> *	Harding grass
<i>Phoenix canariensis</i>	Canary Island palm
<i>Pinus radiata</i>	Monterey pine
<i>Plantago lanceolata</i> *	English plantain
<i>Platanus racemosa</i>	Sycamore
<i>Quercus agrifolia</i>	Coast live oak
<i>Raphanus sativa</i> *	Wild radish
<i>Rubus ursinus</i>	California blackberry
<i>Rumex acetosella</i> *	Sheep sorrel
<i>Rumex crispus</i> *	Curly dock
<i>Salix lasiolepis</i>	Arroyo willow
<i>Salvia mellifera</i>	Black sage
<i>Silybum marianum</i> *	Milk thistle
<i>Sonchus asper</i> *	Prickly sow thistle
<i>Stipa (=Nassella) pulchra</i>	Purple needlegrass
<i>Toxicodendron diversilobum</i>	Poison oak
<i>Trifolium willdenovii</i>	Tomcat clover
<i>Vicia sativa</i> *	Spring vetch
<i>Vicia villosa</i> *	Hairy vetch
<i>Vulpia microstachys</i>	Small fescue
<i>Vulpia myuros</i> *	Rattail fescue
<i>Xanthium spinosum</i>	Spiny cocklebur
<i>Xanthium strumarium</i>	Cocklebur

\*Asterisk identifies non-native species. Landscape plants present in urban areas were not recorded.

## **APPENDIX C**

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### **CNDDDB List of Special Status Species in the Vicinity**



**Appendix C. CNDBB Table of Special Status Biological Resources in the Vicinity**

Species	Status* Fed/CA/CNPS	Habitat Requirements	Project Site Suitability/Observations
<b>LICHENS/BRYOPHYTES</b>			
Firm cup lichen <i>Cladonia firma</i>	--/--/2B	Lichen known from maritime habitats in Europe and North America on stabilized sand dunes on the coast. Documented in the Morro Bay/Los Osos area on sands of marine origin.	No suitable habitat present onsite. Not expected to occur.
Splitting yarn lichen <i>Sulcaria isidiifera</i>	--/--/1B.1	Known from the Los Osos area growing on branches of coast live oak and maritime chaparral plants in sandy areas.	No suitable habitat present onsite. All reported collections are from the Baywood fine sands of Los Osos. Not expected to occur based on the lack of suitable habitat.
Twisted horsehair lichen <i>Bryoria spiralis</i>	--/--/1B.1	Largest known population is on the Samoa Peninsula in Humboldt Co. Possibly threatened by coastal development, air pollution, and climate change. Usually on <i>Picea sitchensis</i> , <i>Pinus contorta</i> var. <i>contorta</i> , <i>Pseudotsuga menziesii</i> , <i>Abies grandis</i> , and <i>Tsuga heterophylla</i> .	No suitable habitat present onsite. Not expected to occur.
<b>PLANTS</b>			
Arroyo de la Cruz manzanita <i>Arctostaphylos cruzensis</i>	--/--/1B.2	Perennial shrub; blooms from December to March; occurs between 60 and 310 meters in sandy soils; found in broadleaved upland forest, coastal bluff scrub, closed-cone coniferous forest, chaparral, coastal scrub and valley and foothill grassland. It is only known to occur in Monterey and San Luis Obispo Counties.	Perennial shrub would have been identifiable if present. Not observed during surveys. Not present in the study area.
Beach spectaclepod <i>Dithyrea maritima</i>	--/T/1B.1	Rhizomatous, perennial herb; blooms March through May; found in sandy soils, usually near shore, in coastal dunes and coastal scrub habitats; ranges from 3 to 50 meters in elevation.	Species only known to occur on sand dunes along the coast. Could be present in beach habitat west of the MB/CSD WTF. Not observed during surveys. Not present in the study area.
Betty's dudleya <i>Dudleya abramsii</i> ssp. <i>bettinae</i>	--/--/1B.2	Perennial succulent; blooms May through July and is endemic to coastal San Luis Obispo County west of Cerro Romualdo; found in chaparral, coastal scrub, and valley and foothill grasslands, usually on serpentine outcrops or shallow rocky soils; ranges in elevation from 20 to 180 meters.	No suitable habitat present due to lack of serpentine rock outcrops. Not observed during surveys, not expected to occur within study area or be affected by the project.
Blochman's dudleya <i>Dudleya blochmaniae</i> ssp. <i>blochmaniae</i>	--/--/1B.1	Perennial herb; blooms April through June; found on rocky, often clay or serpentine soils in coastal bluff scrub, chaparral, coastal scrub, and valley and foothill grassland; ranges from 5 to 450 meters in elevation.	Marginal suitable habitat present in bunchgrass grassland on clay soils on Righetti site. Not observed during surveys of Rancho Colina or HWY 41 ROW, and not expected to occur within that portion of study area.
Blochman's leafy daisy <i>Erigeron blochmaniae</i>	--/--/1B.2	Rhizomatous perennial herb; blooms July through August; ranges from 3 to 45 meters in elevation and occurs in coastal dunes and coastal scrub.	This species is restricted to coastal dunes typically along the immediate coastline. Could be present in beach habitat west of the MB/CSD WTF. Not observed during surveys, not expected to occur within study area or be affected by the project.

**Appendix C. CNDBB Table of Special Status Biological Resources in the Vicinity**

Species	Status* Fed/CA/CNPS	Habitat Requirements	Project Site Suitability/Observations
Brewer's spineflower <i>Chorizanthe breweri</i>	--/--/1B.3	Occurs in closed-cone coniferous forest, chaparral, cismontane woodland, and coastal scrub habitats on serpentine derived soils and rock outcrops, mostly in rocky and gravelly areas; ranges in elevation from 45 to 800 meters; annual herb; blooms May through August.	No suitable habitat present due to lack of serpentine rock outcrops and thin rocky soils. Not observed during surveys, not expected to occur within study area or be affected by the project.
California seablite <i>Suaeda californica</i>	E/--/1B.1	Perennial succulent shrub that grows along the margins of coastal salt marshes in a narrow elevational range from 0 to 5 meters; known to occur in the Morro Bay area	No coastal salt marsh habitat present. Not observed during surveys, not expected to occur within study area or be affected by the project.
Cambria (San Luis Obispo County) morning-glory <i>Calystegia subacaulis</i> ssp. <i>episcopalis</i>	--/--/4.2	Rhizomatous, perennial herb; blooms from April to May; occurs in chaparral, cismontane woodland, and sparse to dense grassland covering sloped or flat areas in clay-rich soils; ranges from 60-500 meters; restricted to outer South Coast ranges in SLO and Santa Barbara Counties.	Potentially suitable habitat present within grassland areas of the Righetti site. Not observed during surveys of Rancho Colina or HWY 41 ROW. Could potentially occur on Righetti site.
Coast woolly threads <i>Nemacaulis denudata</i> var. <i>denudata</i>	--/--/1B.2	Annual herb that grows in coastal sand dunes in open spaces of the coastal strand; known to occur in the Montana de Oro area in sandy soils.	No suitable habitat present. Not observed during surveys, and not expected to occur onsite.
Coastal goosefoot <i>Chenopodium littoreum</i>	--/--/1B.2	Annual herb that grows on sandy flats in coastal dunes along wetland and salt marsh habitat. Typically found between 30 and 100 meters, and is known from the Morro Bay estuary.	No coastal dune or salt marsh habitat present. Saltgrass flats in drainages did not contain any Chenopodium species. Not observed during surveys, not expected to occur within study area or be affected by the project.
Coulter's goldfields <i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	--/--/1B.1	Annual herb that grows in coastal salt marshes, playas, valley and foothill grassland, and vernal pools usually on alkaline soils from 1-1,400 meters.	No suitable habitat present. Not observed during surveys, not expected to occur within study area or be affected by the project
Cuesta Ridge thistle <i>Cirsium occidentale</i> var. <i>lucianum</i>	--/--/1B.2	Perennial herb known to occur along the Cuesta Ridge in openings on steep rocky serpentinite slopes from 500 to 750 meters.	Study area is outside the known range for this species. No suitable habitat present due to lack of rocky serpentine soils. Not observed during surveys, not expected to occur within study area or be affected by the project.
Dacite manzanita <i>Arctostaphylos tomentosa</i> ssp. <i>daciticola</i>	--/--/1B.1	Perennial shrub known to occur in chaparral and cismontane woodland. Only one known occurrence of this species in SLO County on the porphyry buttes (Hollister Peak) east of Morro Bay	No suitable habitat for this species present onsite. Perennial shrub would have been identifiable if encountered onsite during the surveys. Not observed during surveys. Not present in the study area.
Eastwood's larkspur <i>Delphinium parryi</i> ssp. <i>eastwoodiae</i>	--/--/1B.2	Perennial herb known to occur on serpentine based soils (clays) and outcrops in the general San Luis Obispo area with collections made on Camp San Luis Obispo. Blooms March to May.	No suitable habitat present due to lack of rocky serpentine soils. Not observed during surveys, not expected to occur within study area or be affected by the project.

**Appendix C. CNDBB Table of Special Status Biological Resources in the Vicinity**

Species	Status* Fed/CA/CNPS	Habitat Requirements	Project Site Suitability/Observations
Jones' layia <i>Layia jonesii</i>	--/--/1B.2	Annual herb; blooms March through May; occurs on clay soils in close association to serpentine outcrops in chaparral and valley and foothill grassland; ranges in elevation from 5 to 400 meters.	No suitable habitat present due to lack of rocky serpentine soils. Not observed during surveys, not expected to occur within study area or be affected by the project.
Marsh sandwort <i>Arenaria paludicola</i>	E/E/1B.1	Stoloniferous, perennial herb; blooms May to August; occurs in freshwater marshes and swamps, bogs and fens, and some coastal scrub, ranging from 3 to 170 meters in elevation; common associates include <i>Typha</i> , <i>Juncus</i> , and <i>Scirpus</i> .	No freshwater marsh or swamp habitat present. Not observed during surveys, not expected to occur within study area or be affected by the project.
Miles' milk-vetch <i>Astragalus didymocarpus</i> var. <i>milesianus</i>	--/--/1B.2	Annual herb; blooms March to June; found in coastal scrub habitats, typically occurring on clay soils; ranges in elevation 20 to 90 meters.	Marginal suitable habitat present in patches of coastal scrub along Morro Creek. Not observed during surveys, not expected to occur within study area or be affected by the project.
Morro manzanita <i>Arctostaphylos morroensis</i>	T/--/1B.1	Evergreen shrub; blooms December through March; ranges in elevation from 5 to 205 meters; typically found on sandy-loam or Baywood sands in chaparral, woodlands, coastal dunes and coastal scrub.	Project site is outside the known range of this species. Not observed during surveys. Not present onsite.
Most beautiful jewel-flower <i>Streptanthus albidus</i> ssp. <i>peramoenus</i>	--/--/1B.2	Annual herb; blooms April through June; occurs on serpentine soils in chaparral, valley and foothill grassland, and cismontane woodland, ranging from 120 to 1000 meters in elevation.	No suitable habitat present due to lack of rocky serpentine soils. Not observed during surveys, not expected to occur within study area or be affected by the project.
Oso manzanita <i>Arctostaphylos osoensis</i>	--/--/1B.2	Perennial shrub known to occur in chaparral and cismontane woodland on the porphyry buttes east of Morro Bay.	No suitable habitat present. Shrub would have been identifiable if encountered during surveys. Not observed during surveys. Not present in the study area.
Palmer's monardella <i>Monardella palmeri</i>	--/--/1B.2	Rhizomatous, perennial herb; blooms June through August; occurs on serpentine soils in chaparral and cismontane woodland habitats at elevations ranging from 200 to 800 meters.	No suitable habitat present due to lack of rocky serpentine soils. Not observed during surveys, not expected to occur within study area or be affected by the project.
Pecho manzanita <i>Arctostaphylos pechoensis</i>	--/--/1B.2	Perennial shrub; blooms November to March; occurs on siliceous shale in closed-cone coniferous forest, chaparral, and coastal scrub habitats, ranging from 170 to 1100 meters in elevation.	No suitable habitat present. Not observed during surveys. Not present in the study area.
Salt marsh bird's-beak <i>Chloropyron maritimum</i> ssp. <i>maritimum</i>	E/E/1B.2	Annual herb known to occur along margins of salt marsh habitat and coastal dunes. Limited to the higher zones of the Morro Bay estuary.	No salt marsh habitat present. Not observed during surveys, not expected to occur within study area or be affected by the project.
San Benito fritillary <i>Fritillaria viridea</i>	--/--/1B.2	Bulbiferous, perennial herb; blooms March to May; ranges from 200 to 1525 meters in elevation and occurs in chaparral on serpentine soils.	No suitable habitat present due to lack of rocky serpentine soils. Not observed during surveys, not expected to occur within study area or be affected by the project.

**Appendix C. CNDDDB Table of Special Status Biological Resources in the Vicinity**

Species	Status* Fed/CA/CNPS	Habitat Requirements	Project Site Suitability/Observations
San Joaquin spearscale <i>Atriplex joaquinana</i>	--/--/1B.2	Annual herb that grows in seasonal alkali wetlands and alkali sink scrub typically found in the San Joaquin Valley. One recorded occurrence of this species from 1899 in CNDDDB was from the vicinity of Morro Bay.	Marginal habitat identified in the saltgrass occurrences on Righetti site. No other alkali wetland indicator species such as <i>Frankenia salina</i> observed. Not observed during surveys, and unlikely to occur onsite.
San Luis mariposa-lily <i>Calochortus obispoensis</i>	--/--/1B.2	Bulbiferous, perennial herb; blooms May to July; ranges from 75 to 730 meters on sandstone, serpentine and/or sandy soils in chaparral, coastal scrub and valley and foothill grassland; endemic to San Luis Obispo County.	No suitable habitat present due to lack of rocky serpentine soils. Not observed during surveys, not expected to occur within study area or be affected by the project.
San Luis Obispo fountain thistle (Chorro Creek bog thistle) <i>Cirsium fontinale</i> var. <i>obispoense</i>	E/E/1B.2	Perennial herb; blooms February to July; ranges from 35 to 365 meters in elevation; occurs in chaparral and cismontane woodland habitats, often in serpentine seeps.	No suitable habitat present due to lack of serpentine seeps. Perennial plant was not observed during surveys, not expected to occur within study area or be affected by the project.
San Luis Obispo owl's clover <i>Castilleja densiflora</i> ssp. <i>obispoensis</i>	--/--/1B.2	Annual herb; blooms in April; ranges from 10 to 400 meters in elevation and occurs in meadows, seeps, and valley and foothill grassland.	Potentially suitable habitat present within grassland areas of the WRF sites. Not observed during surveys of Rancho Colina or HWY 41, but could potentially be present in grassland areas on the Righetti site.
Southern curly-leaved monardella <i>Monardella undulata</i>	--/--/4.2	Annual herb; blooms May through September; occurs on dunes and sandy soils in coastal strand, chaparral, northern coastal scrub, coastal sage scrub, at elevations below 300 meters.	Marginal habitat identified in coastal scrub habitat along Morro Creek. Not observed during surveys. Not expected to occur within study area or be affected by the project.
Umbrella larkspur <i>Delphinium umbraculorum</i>	--/--/1B.3	Perennial herb; found in granite of cismontane woodlands, chaparral, and coastal scrub; 85-1,035 meters in elevation; blooms May to July.	No suitable habitat present due to lack of granite soils. Not observed during surveys, not expected to occur within study area or be affected by the project.
<b>INVERTEBRATES</b>			
Globose dune beetle <i>Coelus globosus</i>	--/SA/--	Inhabits coastal sand dune habitat in foredunes and sand hummocks most common beneath dune vegetation.	No suitable habitat present. Not expected to occur.
Mimic tryonia (=California brackishwater snail) <i>Tryonia imitator</i>	--/SA/--	Found only in permanently submerged areas in coastal lagoons.	No suitable habitat present. Not expected to occur.
Monarch butterfly <i>Danaus plexippus</i>	--/SA/--	Wind-protected tree groves of eucalyptus, Monterey pine and cypress with nectar and water sources nearby.	No suitable overwintering habitat present. Species expected to forage in study area, but is not expected to use the study area for overwintering.
Morro Bay blue butterfly <i>Plebejus icarioides moroensis</i>	--/SA/--	Inhabits stabilized dunes and adjacent areas of coastal San Luis Obispo and NW Santa Barbara counties.	No suitable habitat present. Not expected to occur.
Morro shoulderband snail <i>Helminthoglypta walkeriana</i>	E/--/--	Known to occur in coastal sage scrub and dune scrub habitats on Baywood fine sands near Morro Bay.	Potentially suitable sandy soils present along western portion of Highway 41 ROW, and along Atascadero Road near Morro Bay High School. Potentially present in iceplant on sandy soils.

**Appendix C. CNDDDB Table of Special Status Biological Resources in the Vicinity**

Species	Status* Fed/CA/CNPS	Habitat Requirements	Project Site Suitability/Observations
San Luis Obispo pyrg <i>Pyrgulopsis taylori</i>	--/SA/--	Freshwater habitats in San Luis Obispo County.	Suitable habitat present in Morro Creek on Righetti site and adjacent to the study area. Not expected to occur in the small ephemeral drainages within the WRF development sites.
Sandy beach tiger beetle <i>Cicindela hirticollis gravida</i>	--/SA/--	Inhabits area adjacent to non-brackish water along the coast of California from San Francisco Bay to Northern Mexico.	No suitable habitat present. Not expected to occur.
<b>FISH</b>			
Steelhead – South/Central California ESU <i>Oncorhynchus mykiss irideus</i>	T/SSC/--	Fresh water, fast flowing, highly oxygenated, clear, cool stream where riffles tend to predominate pools.	Seasonal habitat present in Morro Creek on the Righetti site and adjacent to the study area. Morro Creek is identified by USFWS as critical habitat for the species. Not expected to occur in the small ephemeral drainages on the study area.
Tidewater goby <i>Eucyclogobius newberryi</i>	E/SSC/--	Brackish water habitats along the California coast from San Diego county to Del Norte county.	CNDDDB shows this species occurring in the study area, but is near the upstream limits of where this species would be expected to occur. Assumed to potentially be present during periods of high water availability.
<b>AMPHIBIANS/REPTILES</b>			
California red-legged frog <i>Rana draytonii</i>	T/SSC/--	Lowland and foothills in or near permanent or semi-permanent sources of deep water (at least 0.5 meter) bordered by emergent wetland and/or riparian vegetation. May use a variety of aquatic and upland habitats during the year for refugia and dispersal.	Suitable habitat present in Morro Creek on the Righetti site and adjacent to the study area. Morro Creek is identified by USFWS as critical habitat for the species. Not expected to occur in the small ephemeral drainages in the WRF development areas.
Coast horned lizard <i>Phrynosoma blainvillii</i>	--/SSC/--	Frequents a wide variety of habitat including sandy washes with scattered shrubs and open areas for sunning. Loose soils for burial.	Western portions of the study area that contain loose sandy soils have been disturbed by development. No suitable habitat in clay soils of the Righetti or Rancho Colina sites or along HWY 41.
Silvery/Black legless lizard <i>Anniella pulchra</i>	--/SSC/--	Sandy or loamy soils in valley and foothill woodlands, chaparral, coastal scrub and coastal dunes.	Western portions of the study area that contain loose sandy soils have been disturbed by development. No suitable habitat in clay soils of the Righetti or Rancho Colina sites or along HWY 41.
Southern Pacific (western) pond turtle <i>Emys marmorata</i>	--/SSC/--	Basking sites such as partially submerged logs, vegetation mats, or open mud banks.	Seasonal habitat present in Morro Creek on Righetti site and adjacent to the study area. Small ephemeral drainages within the study area do not provide suitable habitat.
<b>BIRDS</b>			
California black rail <i>Laterallus jamaicensis coturniculus</i>	--/T/--	Freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that does not fluctuate and dense vegetation for nesting.	No suitable habitat present. Not expected to occur.
California clapper rail <i>Rallus longirostris obsoletus</i>	E/E/--	Occurs in salt-water and brackish marshes traversed by tidal sloughs with abundant growths of pickleweed.	No suitable habitat present. Not expected to occur.
Cooper's hawk <i>Accipiter cooperii</i>	--/WL/-- (nesting)	Wooded areas. Nests in tall trees and often hunts around human structures.	No suitable roosting or nesting habitat on-site. Ornamental trees were searched during field work and no stick nests observed. Still, could forage in grasslands as a transient.

**Appendix C. CNDDDB Table of Special Status Biological Resources in the Vicinity**

Species	Status* Fed/CA/CNPS	Habitat Requirements	Project Site Suitability/Observations
Western snowy plover <i>Charadrius alexandrinus nivosus</i>	T/SSC/-- (nesting)	Sandy beaches, salt pond levees or shores of large alkali lakes. Sandy, gravelly or friable soils required for nesting. Federal listing refers only to the Pacific coastal population.	No suitable habitat present. Not expected to occur.
<b>MAMMALS</b>			
American badger <i>Taxidea taxus</i>	--/SSC/--	Friable soils and open, uncultivated ground for denning. Preys on burrowing rodents such as ground squirrels.	Suitable habitat is present in grasslands at Righetti and Rancho Colina, but no prey base or dens were observed within the study area. Could potentially occur as a transient across the sites.
Big free-tailed bat <i>Nyctinomops macrotis</i>	--/SSC/--	Occurs in low lying arid areas of Southern California. Needs high cliffs or rocky outcrops for roosting sites. Feeds primarily on large moths.	No suitable habitat present. Not expected to occur.
Morro Bay kangaroo rat <i>Dipodomys heermanni morroensis</i>	E/E/--	Coastal sage scrub on the south side of Morro Bay. Needs sandy soil on stabilized dunes with vegetation.	No suitable habitat present. Not expected to occur.
Pallid bat <i>Antrozous pallidus</i>	--/SSC/--	Occurs in deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts under bridges and in some areas in old structures such as barns.	Potentially suitable roosting habitat present in riparian habitats of Morro Creek. Suitable foraging habitat in on-site grasslands. Could occur.
Townsend's western big-eared bat <i>Corynorhinus townsendii townsendii</i>	--/SSC/--	Requires caves, tunnels, mines, or similar man-made structures for roosting. This bat feeds primarily on moths, but will eat a variety of soft-bodied insects.	Suitable foraging habitat present throughout the sites. Could occur, but unlikely to be affected by proposed project.
<b>Plant/Natural Communities</b>			
	Central Dune Scrub		Not present
	Central Maritime Chaparral		Not present
	Coastal Brackish Marsh		Not present
	Northern Coastal Salt Marsh		Not present
	Bunchgrass Grassland (purple needlegrass)		Present on Righetti site
	Central Coast Arroyo Willow Riparian Forest		Present along Morro Creek

\*E = Endangered; T = Threatened; R = Rare CE = Candidate for Endangered Status; SSC = California Species of Special Concern; FP = Fully Protected; WL = Watch List; SA – Special Animal; ‘—’ = no status; List 1B – Rare, threatened, or endangered in California and elsewhere; List 2 – Rare, threatened or endangered in California, but more common elsewhere; List 4 – Limited distribution (Watch List). Source: California Natural Diversity Database (California Department of Fish and Game 2015); California Native Plant Society Online Inventory of Rare Plants, accessed May 2015 (online at [www.cnps.org](http://www.cnps.org)); Special Animals List (California Department of Fish and Game 2015); Special Vascular Plants, Bryophytes, and Lichens List (California Department of Fish and Game 2015).