



AGENDA NO: C-2

MEETING DATE: May 10, 2016

Staff Report

TO: Honorable Mayor and City Council **DATE:** May 5, 2016

FROM: Mike Nunley, PE – Water Reclamation Facility (WRF) Program Manager

SUBJECT: Update on Potential Water Reclamation Facility Sites and Public Outreach Efforts

RECOMMENDATION

Staff recommends Council receive this report and provide staff guidance for next steps. A number of recommendations for consideration are included in the discussion section.

ALTERNATIVES

No alternatives are recommended.

FISCAL IMPACT

All current outreach efforts and studies are being performed under existing contracts and authorizations. No additional expenditures are proposed as part of this report.

DISCUSSION

John Rickenbach, Deputy Program Manager, will provide a summary of the attached report to City Council on Potential Water Reclamation Facility (WRF) Sites. The report responds to the City Council's direction with respect to providing additional information on potential sites for the WRF, as set forth on March 8, 2016. At that time, the City Council directed staff as follows with respect to analyzing potential WRF sites:

- *Provide additional insight or information with respect to the two identified sites in the Morro Valley (Righetti and Rancho Colina);*
- *Revisit the Tri-W and Chevron/Toro Creek sites, and compare their potential suitability to the sites in the Morro Valley; and*
- *Explore other potential sites in the Morro Valley, and provide information on any sites that are potentially suitable for a WRF*

The City Council also directed the following supporting actions to help better inform site selection:

- *Conduct additional communitywide public outreach as appropriate;*

Prepared By: MN

Dept Review: _____

City Manager Review: DWB

City Attorney Review: _____

- *Reach out to the Cayucos Sanitary District (CSD) to explore the possibility of the two agencies working together on a single facility; and*
- *Visit other facilities in the state that use technologies similar to those proposed for the WRF.*

Since that time, staff has performed the following to address the City Council's direction:

- Developed Spring 2016 WRF Newsletter to provide project information, address common questions from the community, and advertise community outreach efforts. The newsletter was posted on the WRF Project website, emailed to the community interest email list, mailed to every mailbox recipient in the City, mailed to each out-of-town property owner, provided at the community outreach events, and provided at City offices and Chamber of Commerce
- Researched additional potential properties in the Morro Valley and identified the Madonna site as a viable option
- Performed fatal flaw analyses on a new Morro Valley site (Madonna), including geotechnical analysis, legal research (Williamson Act, shared access easement), and biological survey
- Held meetings with adjacent property owners to the Madonna site
- Organized and attended two Community Farmer's Markets to talk with community members about the project (April 9th and 14th)
- Held two Open House events (same event offered at two times, on April 7 and April 10) to discuss the project with community members, collect community input, and respond to questions and concerns from community members
- Updated cost opinions that were previously developed for WRF Project at sites under consideration and developed cost opinion for Madonna site.
- Reviewed the Tri-W site (focusing on the portion within the County) and discussed availability with the property owner's representative
- Prepared report summarizing analyses for five potential WRF sites

On May 3, the Water Reclamation Facility Citizen's Advisory Committee (WRFCAC) received an update and draft report from the Program Management team and recommended the following to Council:

- Proceed with Tri-W as the preferred site, including consideration of both Tri-W parcels (inside and outside City limits)
- Remove the Righetti site from further consideration

Staff updated the attached report from the version presented to WRFCAC. Revisions include a comparison of possible sewer rate impacts among the various sites; clarification of the construction cost tables to distinguish between Phase 1 and Phase 2 costs; modification of the cost escalation chart to distinguish between contingency and construction cost; and refinement of the potential Tri-W wastewater facility sites and property limits.

Based on the recommendations from WRFCAC, and the information and public input obtained over the past 60 days, staff recommends proceeding as follows:

- Continue evaluating the Tri-W site, including outreach to adjacent and neighboring property owners, and other parties that may have direct interest in siting the WRF at that location;
- Prepare and mail a simple community-wide informational flyer that provides a very brief

overview of the primary sites currently under consideration, and pros and cons including potential impacts to long-term sewer rates

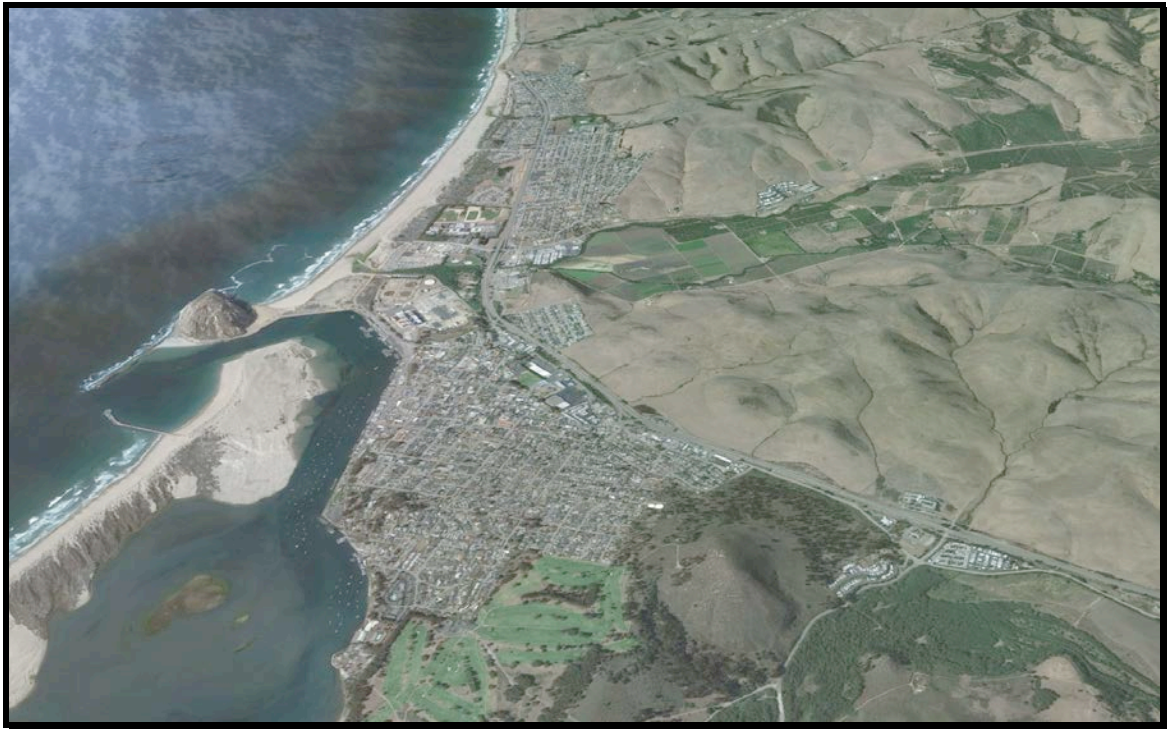
- Bring back additional information on the Tri-W site, including results from outreach, to the June 14 City Council meeting for consideration of a preferred site for planning and environmental review
- While the WRFCAC recommended removing the Righetti property from further consideration, staff recommends that Council not remove any potential WRF sites from consideration at this time. This is due in part to the requirement for examining project alternatives (including alternative sites) under the California Environmental Quality Act (CEQA), and also because of potentially unknown conditions at the Tri-W site. Potential EIR alternatives, including both alternative project designs and locations, are appropriately determined during the EIR scoping process, which will occur once a preferred site is selected for study as the “proposed project” under CEQA.

ATTACHMENT

1. Revised Site Report – JFR Consulting, May 2016

New Water Reclamation Facility Project

**Report to City Council on
Potential WRF Sites**



Submitted to:

City of Morro Bay

Department of Public Services

May 5, 2016

(updated from April 29, 2016 report)



John F. Rickenbach Consulting

7675 Bella Vista Road

Atascadero, California 93422

Report to City Council on Potential 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:
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May 5, 2016
(updated from April 29, 2016 report)

City of Morro Bay

New Water Reclamation Facility Project

Report to City Council on Potential WRF Sites

1. Background and Purpose of this Report

This report responds to the City Council's direction with respect to providing additional information on potential sites for the Water Reclamation Facility (WRF), as set forth on March 8, 2016. At that time, the City Council directed staff as follows with respect to analyzing potential WRF sites:

- *Provide any addition insight or information with respect to the two identified sites in the Morro Valley (Righetti and Rancho Colina);*
- *Revisit the Tri-W and Chevron/Toro Creek sites, and compare their potentially suitability to the sites in the Morro Valley; and*
- *Explore other potential sites in the Morro Valley, and provide information on any sites that are potentially suitable for a WRF*

The City Council also directed the following supporting actions to help better inform site selection:

- *Conduct additional communitywide public outreach as appropriate;*
- *Reach out to the Cayucos Sanitary District (CSD) to explore the possibility of the two agencies working together on a single facility; and*
- *Visit other facilities in the state that use technologies similar to those proposed for the WRF.*

Staff has since conducted significant outreach, both within and outside the community, as described above. Some of the analysis that follows is based in part at input gathered through two community workshops conducted in April 2016, as well as additional input gained through outreach at two farmers markets during that time. Staff also conducted interviews with various neighbors near a new site in the Morro Valley, the input from which is reflected in the analysis.



2. Sites Under Consideration

This report addresses five possible sites for the WRF. Four of the five have been previously considered at length in various reports previously brought forth to the City Council, two of which are in the Morro Valley, which in May 2014 the Council had previously identified as the preferred location for a WRF. The fifth site (Madonna) is an additional site in the Morro Valley identified by staff as a result of direction provided on March 8, 2016 to investigate other potential sites in the Morro Valley. The five sites are as follows:

- **Site 1 – Rancho Colina**
- **Site 2 – Righetti**
- **Site 3 – Tri-W**
- **Site 4 – Chevron/Toro Creek**
- **Site 5 – Madonna**

These sites are described in more detail below in **Table 1**.

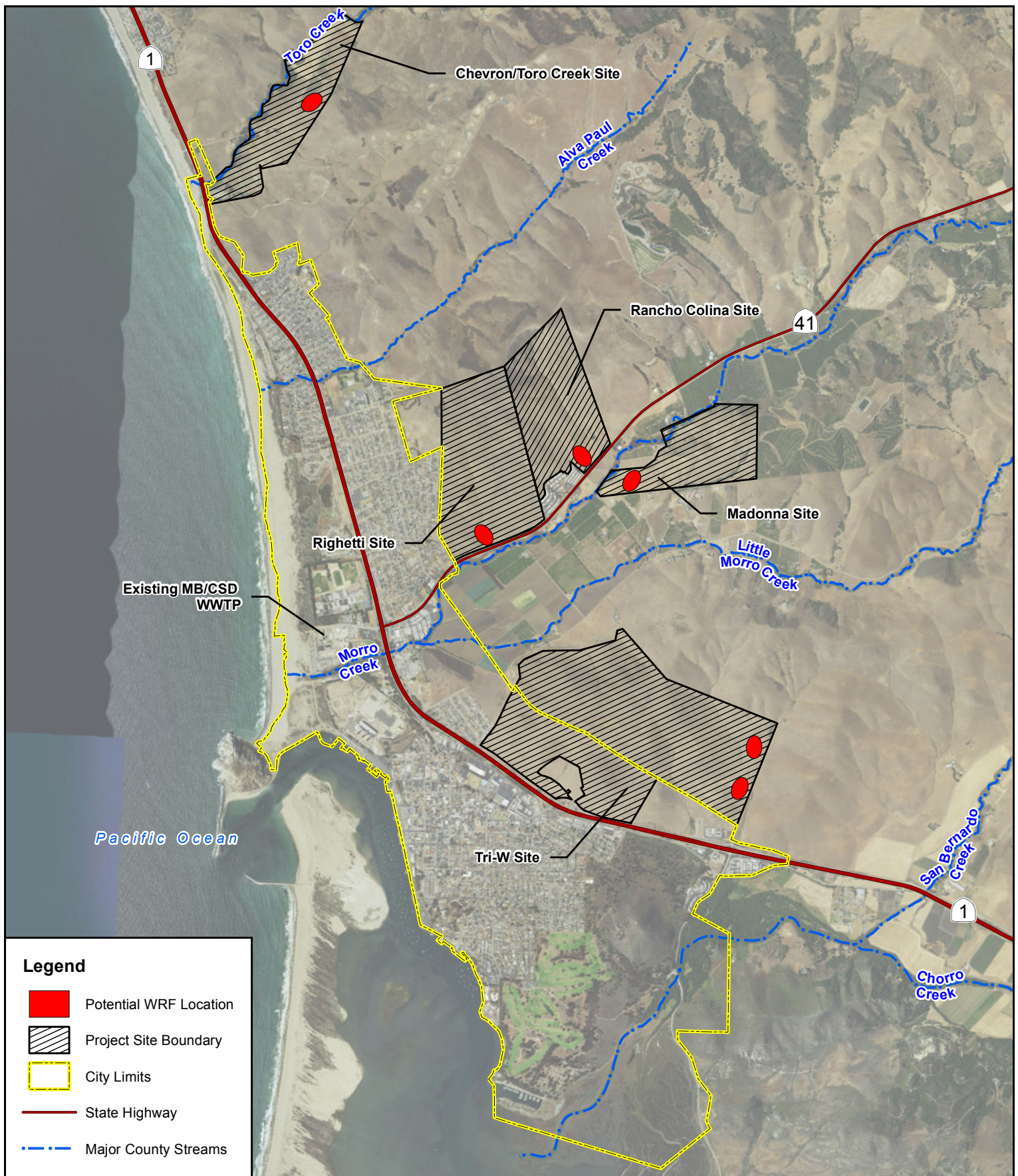
Table 1. Sites Examined in this Report				
Site	Site Name in this Report	General Location	Parcel Information	Discussion of the Study Site
1	Rancho Colina	Morro Valley (part of Options Report Site B)	APN 073-085-027 (187.4 ac) <u>Ownership:</u> W. Macelvaine <u>Jurisdiction:</u> SLO County	The May 2014 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 (251.2 ac) <u>Ownership:</u> P. Madonna <u>Jurisdiction:</u> SLO County	The focus area 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 focus area is about 80 to 100 feet above sea level. For this report, this site has not changed from what was previously investigated.
3	Tri-W	Chorro Valley (part of Options Report Site C)	APN 068-401-013 (157.5 ac) <i>(this parcel is in the City)</i> APN 073-101-017 (396.3 ac) <i>(this parcel is in the County)</i>	The Tri-W site includes two parcels totaling 554 acres. The smaller of the two parcels is in the City, while the larger parcel is in the County. The Options Report identified the most promising location for a WRF to be on

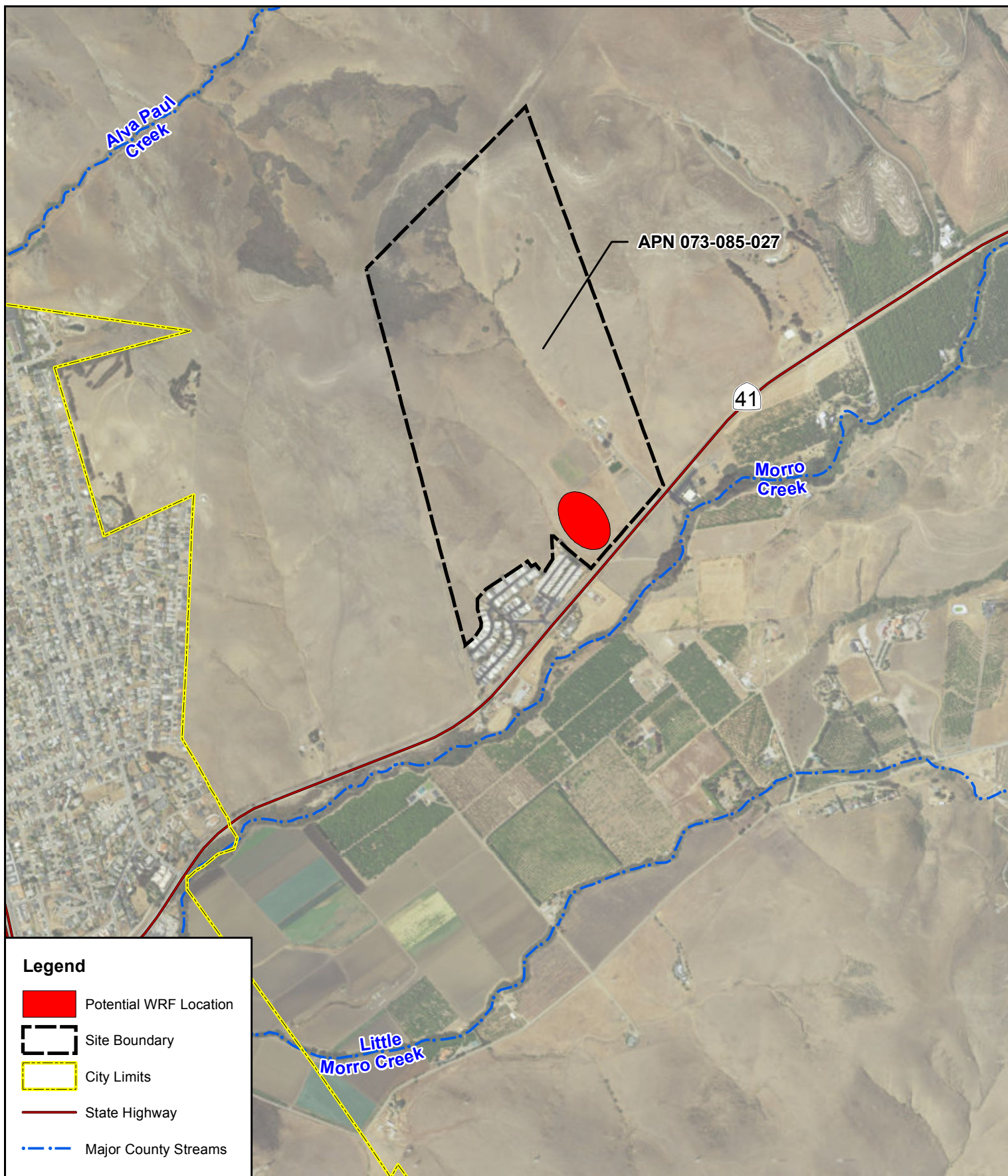


Table 1. Sites Examined in this Report				
Site	Site Name in this Report	General Location	Parcel Information	Discussion of the Study Site
			<u>Ownership:</u> Tri-W Enterprises	a roughly 15-acre area within the County parcel, toward the eastern end of the property. There is currently no development at this location. The study site is about 100 to 120 feet above sea level.
4	Chevron	3 miles north of the City of Morro Bay (Options Report Site A)	APN 073-075-004 (13.3 ac) <u>Ownership:</u> Standard Pipeline APN 073-075-008 (14.2 ac) APN 073-075-010 (5.6 ac) APN 073-077-034 (126.8 ac) <u>Ownership:</u> Chevron USA	Originally studied in the 2012 Dudek Fine Screening Report, and carried forward in the December 2013 Options Report. Under consideration because of proximity between Morro Bay and Cayucos.
5	Madonna	Morro Valley (not included as one of the 7 study sites in the Options Report)	APN 073-031-026 (17.1 ac) APN 073-031-009 (126.7 ac) <u>Ownership:</u> P. Madonna	Site includes two parcels within the County under common ownership. The smaller area is the more promising location for a WRF because it is flat and has better access. This site had been previously considered in the Dudek Rough Screening Analysis (2011).

Figure 1 shows these relative to one another. **Figures 2 through 6** show the individual sites.







Legend

- Potential WRF Location
- Site Boundary
- City Limits
- State Highway
- Major County Streams

Figure 2: Rancho Colina Site

Note: Basemap data obtained from County of San Luis Obispo GIS

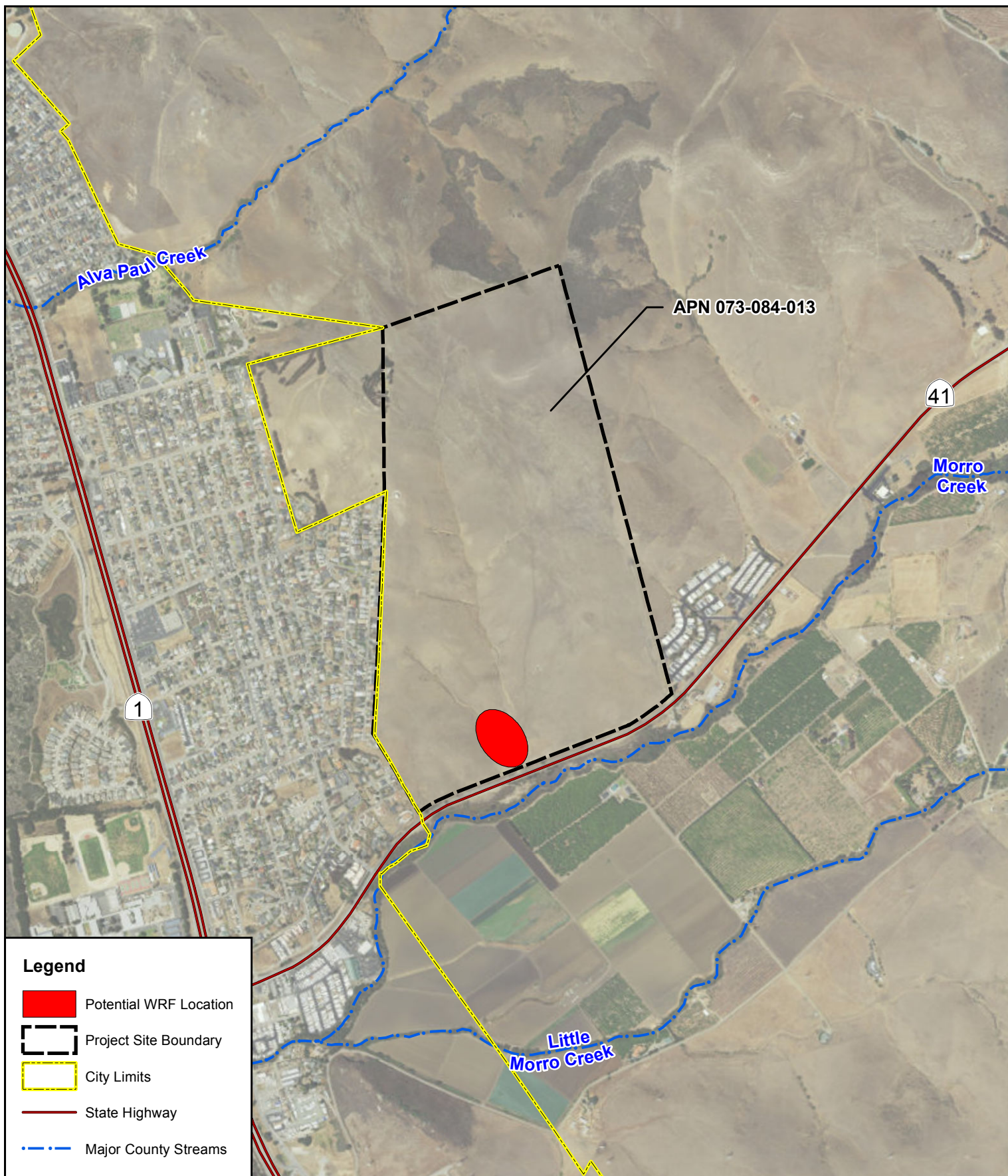


Figure 3: Righetti Site

Note: Basemap data obtained from County of San Luis Obispo GIS

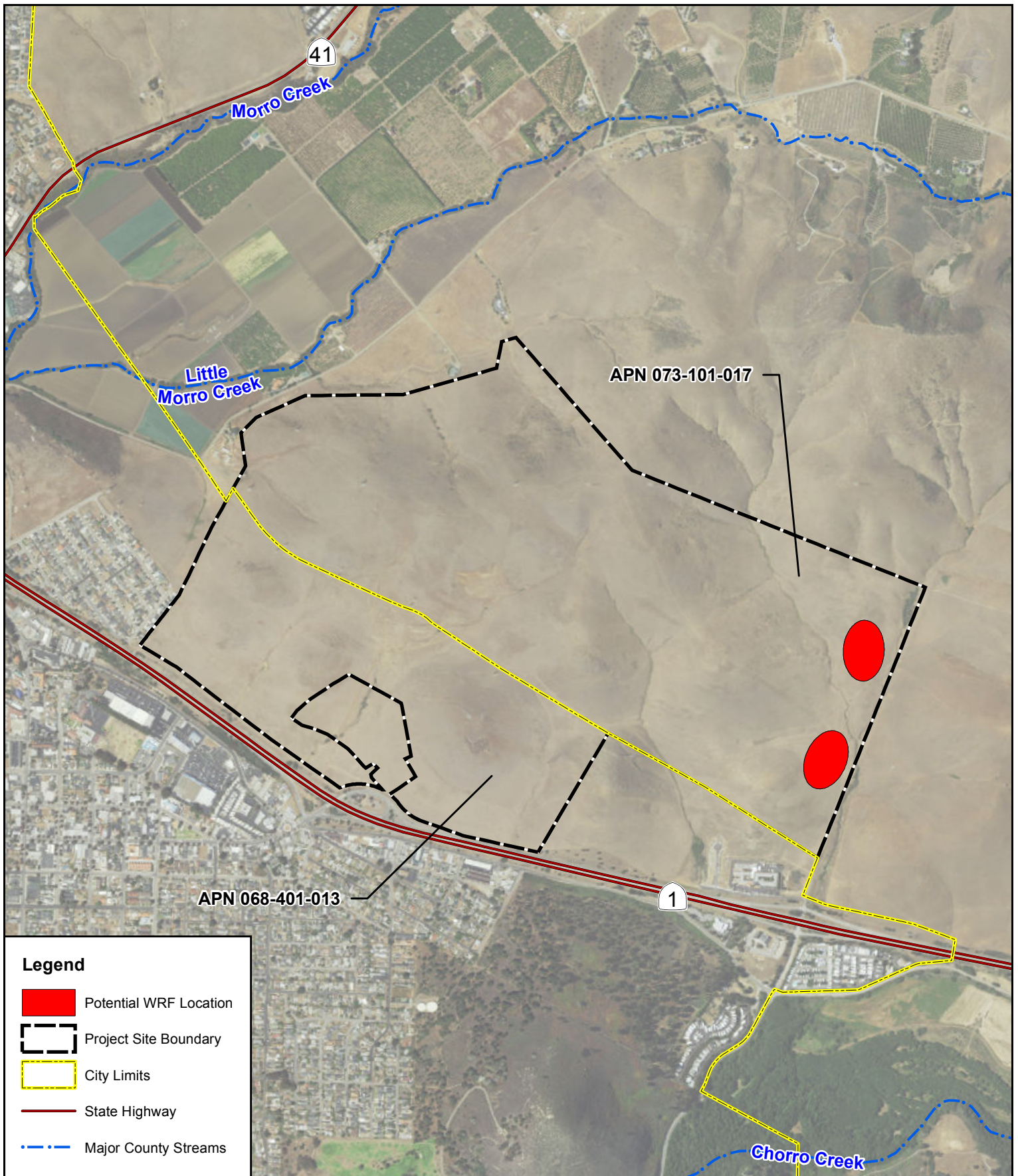


Figure 4: Tri-W Site

Note: Basemap data obtained from County of San Luis Obispo GIS

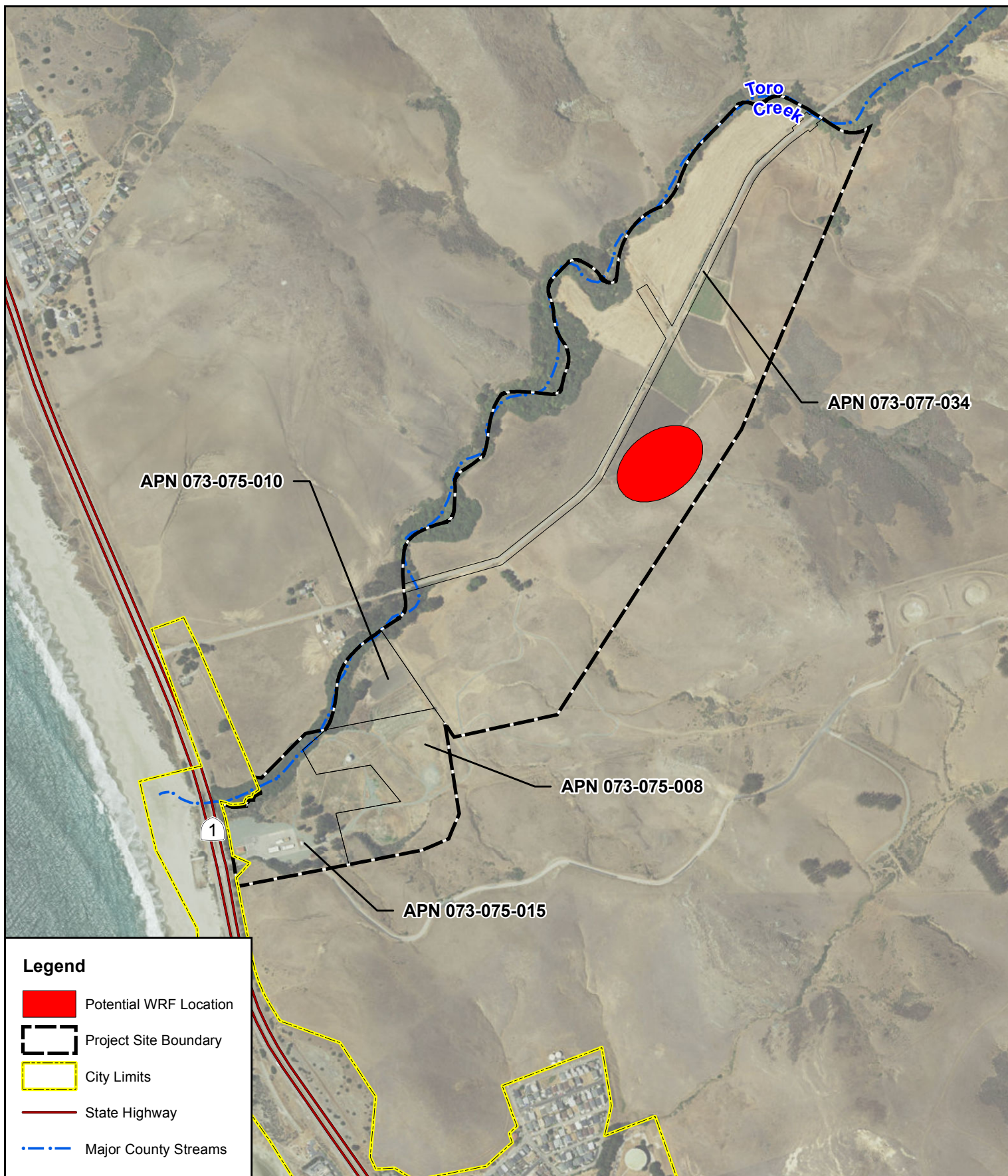


Figure 5: Chevron/Toro Creek Site

Note: Basemap data obtained from County of San Luis Obispo GIS

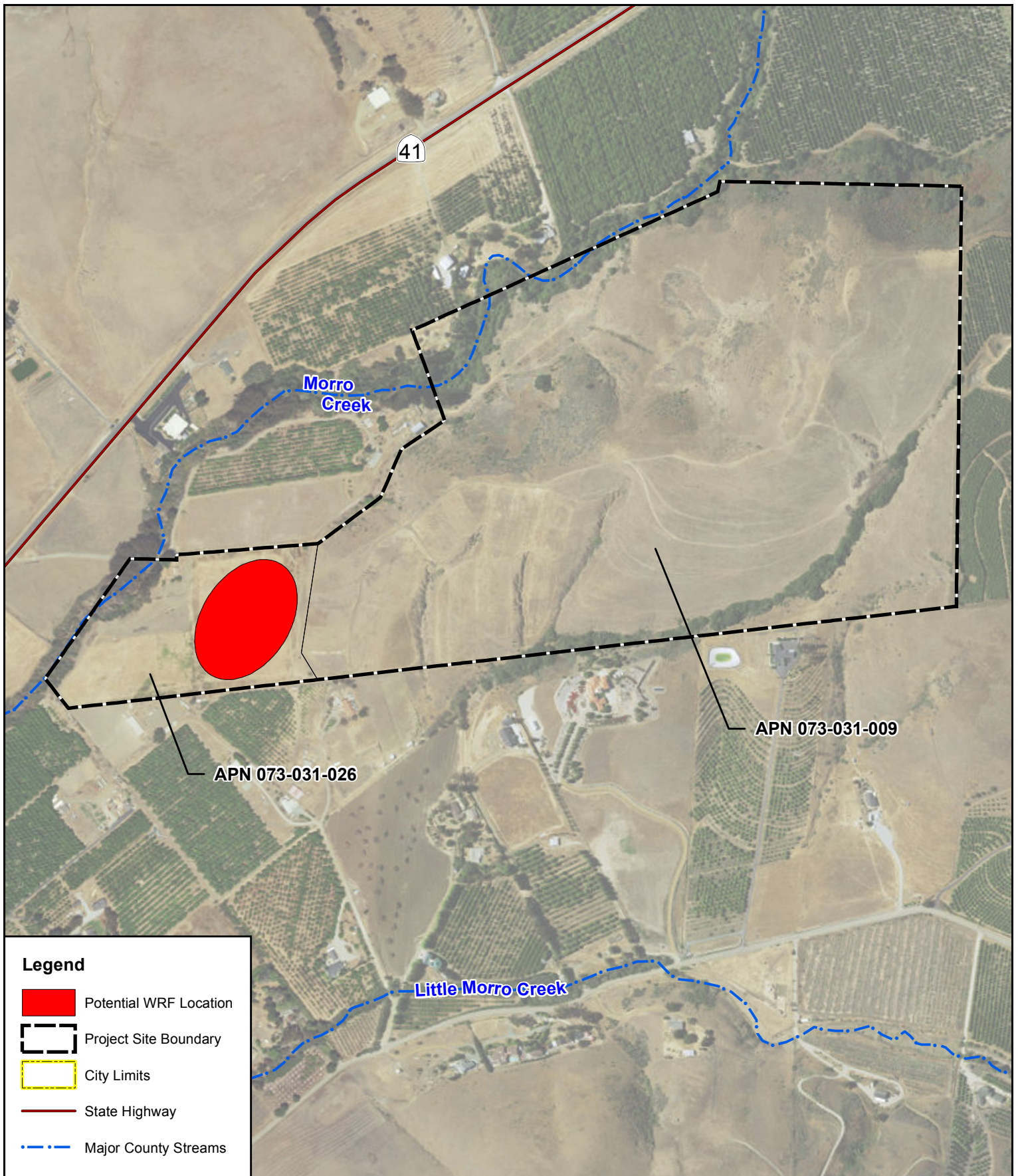


Figure 6: Madonna Site

Note: Basemap data obtained from County of San Luis Obispo GIS

3. Site Analysis

The site comparison is based on two tiers of analysis. First, the analysis presents the relative costs of developing a WRF at each location. The sites will be evaluated in the context of their ability to achieve the community's fundamental Council-adopted goal of providing cost-effective reclamation opportunities.

The sites will then be compared based on the following criteria:

- Key Opportunities
- Key Constraints
- Environmental and Physical Site Issues
- Regulatory and Permitting Issues

These include the same criteria applied in the May 2014 and February 2016 site reports, only in more focused and simplified form. Two summary tables will be presented at the conclusion of the report, comparing the sites relative to potential opportunities and constraints.

It should be noted that this report does not address political issues that could factor into the Council's site selection decision, but instead focuses on factual information intended to address one or more of the adopted community goals for the project.

A. Cost Comparison

The following compares the relative costs of the five sites under consideration. These should be considered planning level estimates, primarily useful for comparison purposes. Cost estimates are based on the likely components of the new facility at each site. A more refined estimate for the selected site will be possible once the Facility Master Plan is developed for that site.

Table 2 summarizes the estimated relative capital construction costs for the Phase 1 "reclamation ready" facility for the potential WRF sites. Relative construction costs include the raw wastewater conveyance (pump station and pipeline), the treatment plant to produce disinfected tertiary recycled water and brine and/or "wet weather" disposal pump station and pipeline from the WRF site to the existing outfall at the Morro Bay - Cayucos WWTP for the five sites under consideration.

Table 3 summarizes the estimated relative capital construction costs for Phase 2, including advanced treatment at the WRF (reverse osmosis and advanced oxidation), a recycled water tank and pump station, and a recycled water pipeline from the WRF to either Highway 41 or the intersection of Highway 41 and Highway 1, depending on the site. The costs for a regional recycled water reuse system are not included in these costs.

It is possible that construction of Phase 2, or portions of Phase 2, will occur simultaneously with construction of Phase 1. The total estimated relative construction costs for Phases 1 and 2 are summarized in **Table 4**. **Table 4** also provides estimated annual operation and maintenance (O&M) costs and the projected 20-year present value. Estimated O&M costs include operations and



maintenance at the WRF (labor, power, chemical), and power for pumping raw wastewater from the existing wastewater treatment plant, approximately where the new lift station will be sited, to the site.

Appendix A provides the assumptions used to develop the costs shown in **Tables 2 through 4**. Based on the unit cost ranges summarized in **Appendix A**, the construction costs could vary by +/-25% from the estimated costs shown herein.

Table 2. Estimated Relative Phase 1 Construction Capital Costs					
	Rancho Colina	Righetti	Tri-W	Chevron	Madonna
Raw Wastewater Pump Station and Pipeline	\$6,075,000	\$4,297,000	\$7,951,500	\$10,025,000	\$5,985,000
WRF Phase 1	\$35,610,000	\$35,610,000	\$34,988,000	\$34,366,000	\$36,616,000
Brine/Wet Weather Disposal Pump Station and Pipeline	\$3,325,000	\$2,205,000	\$4,585,000	\$6,125,000	\$3,325,000
Construction Cost Subtotal	\$45,010,000	\$42,112,000	\$47,524,500	\$50,516,000	\$45,926,000
Construction Contingency (30%)	\$13,503,000	\$12,633,600	\$14,257,350	\$15,154,800	\$13,777,800
Admin, Design, and Management (30%)	\$13,503,000	\$12,633,600	\$14,257,350	\$15,154,800	\$13,777,800
Total Estimated Construction Cost (Rounded)	\$72,000,000	\$67,400,000	\$76,000,000	\$80,800,000	\$73,500,000

Table 3. Estimated Relative Phase 2 Construction Capital Costs					
	Rancho Colina	Righetti	Tri-W	Chevron	Madonna
Advanced Treatment	\$14,450,000	\$14,450,000	\$14,450,000	\$14,450,000	\$14,450,000
Recycled Water Pump Station and Pipeline	\$1,575,000	\$1,575,000	\$4,935,000	\$5,495,000	\$1,715,000
Construction Cost Subtotal	\$16,025,000	\$16,025,000	\$19,385,000	\$19,945,000	\$16,165,000
Construction Contingency (30%)	\$4,807,500	\$4,807,500	\$5,815,500	\$5,983,500	\$4,849,500
Admin, Design, and Management (30%)	\$4,807,500	\$4,807,500	\$5,815,500	\$5,983,500	\$4,849,500
Total Estimated Construction Cost (Rounded)	\$26,000,000	\$26,000,000	\$31,000,000	\$32,000,000	\$26,000,000

Table 4. Estimated Relative Total (Phase 1 and Phase 2) Construction Capital Costs, Annual O&M Costs, and 20-yr Present Value					
	Rancho Colina	Righetti	Tri-W	Chevron	Madonna
Total Estimated Construction Cost Phase 1 + Phase 2	\$98,000,000	\$93,400,000	\$107,000,000	\$112,800,000	\$99,500,000
Total Estimated Annual O&M Cost (rounded)	\$1,910,000	\$1,830,000	\$1,930,000	\$1,890,000	\$1,870,000
Estimated 20-year Present Value	\$136,200,000	\$129,600,000	\$145,600,000	\$150,800,000	\$137,400,000

The City's rate consultant, Bartle Wells, provided a rate model to estimate the potential impacts of varying WRF Project costs to the average rate payer. Since this is a comparative analysis, the WRF cost at the Righetti site (lowest estimated cost) was used as a baseline. The potential incremental increase in



financial impact to the average single-family home for a WRF project at each of the other four sites was estimated using the range of capital costs (+/-25%). The model includes Phase 1, Phase 2, and annual O&M costs as described above and in Appendix A. Costs do not include a regional recycled water reuse system.

Table 5. Estimated Comparative Impacts to Average Monthly Sewer Rate				
Righetti	Rancho Colina	Tri-W	Chevron	Madonna
---	+\$3 to \$5	+ \$8 to \$13	+\$10 to \$17	+\$4 to \$6
<i>Note: Righetti site assumed to be the baseline benchmark for estimating relative rate impacts, based on the fact that construction costs would be lowest at this location.</i>				

There are many risks to project development that can affect the predictability of costs, as well as the costs themselves. During the recent public outreach process, significant negative feedback has been provided by many neighbors of the proposed Righetti and Madonna sites relative to potential use of those sites. The public will have many opportunities to weigh into major decisions on the development of the project, including the EIR process, City Council meetings, WRFCAC meetings, Facility Master Plan workshops, and annexation proceedings (if required). Each of these is necessary for development of public works projects, but strong opposition could result in time delays, especially if legal challenges arise from project opponents.

Time delays increase construction costs because of cost escalation (including inflation or appreciation of material costs, labor, and equipment). Engineering News Record (ENR) is a publication that calculates and publishes a construction cost index (CCI) that is commonly used to estimate the impact of time on construction costs. Since September 2013, when the Options Report cost opinions were initially developed, through April 2016, the ENR CCI has increased by approximately 8%. This represents an increase of 8% in construction costs for projects in less than 3 years.

Figure 7 depicts the increase in capital cost for a project at the Rancho Colina site over the next 10 years, based on the ENR CCI increase over the past 3 years. For a \$98M project, the increase is approximately \$2M per year.



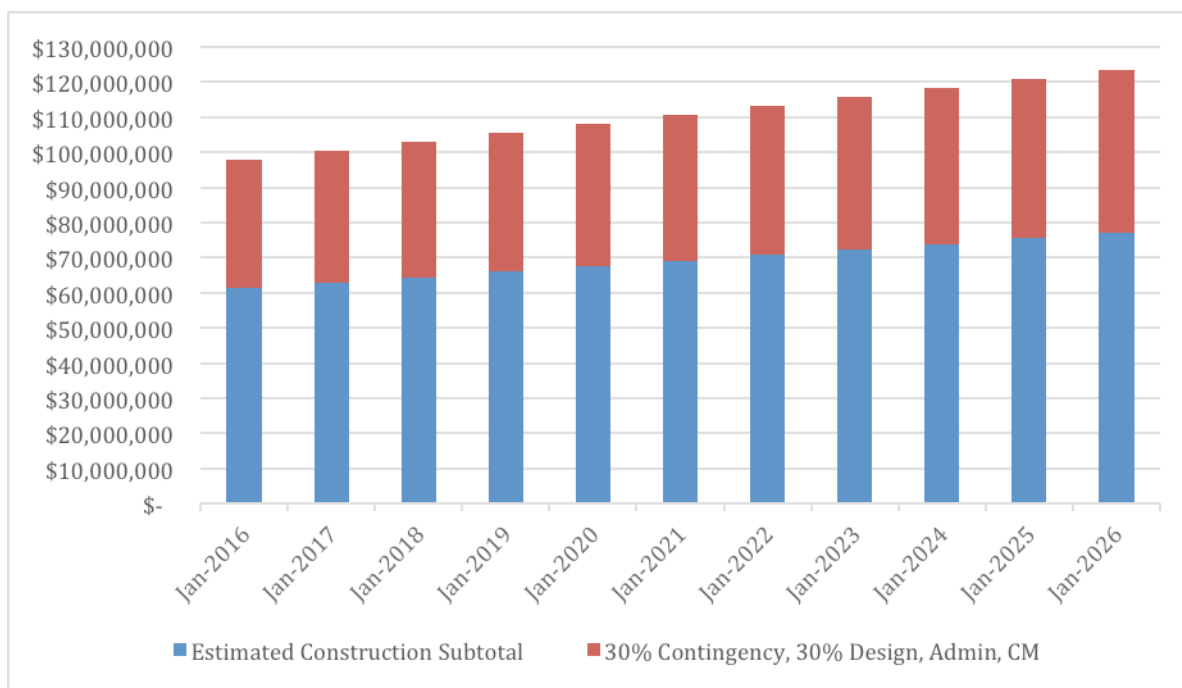


Figure 7. Projected Cost Escalation over Ten Years

Project costs are likely to increase as a result of potential public opposition, either through time delays or possibly through the threat of legal action. Therefore, it is recommended that Council consider this in site selection in the context of cost and project schedule. Proceeding with Master Planning and the CEQA process on a site that has few neighbors, is less visible, and has less opposition will improve the project team’s ability to predict and control construction costs even if overall construction costs may initially seem higher.

B. Site Comparison

Based on the cost comparison, development of a WRF at the Chevron and Tri-W sites was found to result in significantly higher costs than the Morro Valley sites. However, in order to provide the City Council a full picture of the potential tradeoffs associated with pursuing these sites, they are carried forward in the site analysis that follows.

Site 1: Rancho Colina

Overview

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, specifically 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 now 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.

Key Opportunities

Potential development at the Rancho Colina site presents the following key opportunities:

- **Potentially New Water Rights for City.** The property owner has established appropriate rights to water in Morro Creek that are second only to the City through existing private wells. He has indicated a willingness to transfer these 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 customers within the City.



- **Proximity to Reclamation Opportunities.** Because of its Morro Valley location, the site is relatively close to potential reclamation opportunities. Note, however, that compared to the Righetti site, it is not as close to the City's wells and the lowest part of the valley, where the most promising groundwater injection opportunities are likely to be.
- **Property Availability.** The property owner has been a willing partner to work with the City. However, the City has still not been able to enter into an MOU for use of the site, because of limitations placed on the location and uses that may be allowed on the site (see Key Constraints).

Key Constraints

The key constraints facing development at this location include:

- **Limited Acreage Available.** 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.
- **Limited Uses Allowed.** The property owner has stated that only WRF and WRF-related uses could be developed on this property. Other non-WRF City goals, such as a corporation yard, could not be constructed on this property.
- **Visually Prominent Location.** This portion of the site is slightly sloping on a knoll and located about 150 to 160 feet above sea level. The site would require substantial grading to accommodate the new facility, a factor that would contribute to a relatively higher cost than at a flatter location. The site is also more visually prominent from Highway 41 than a lower elevation location farther from the highway.

The likely WRF location is visible for about 3,800 feet along Highway 41 (about 3,000 feet to westbound travelers and for about 800 feet to eastbound travelers). The eastbound view is partially blocked by topography and the existing Rancho Colina community.

- **Property Owner Would Live Onsite.** If the WRF were built on the site, the current property owner intends to remain on the property, living in his existing home, which is about 700 feet from the nearest portion of the site where the new WRF could be built. While the property owner has expressed support for constructing a new WRF at this location, his family has also expressed concern related to odors and visual impacts, and could potentially object in the future to potential nuisance issues based on proximity.
- **Neighborhood 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. There are 116 homes and RV sites within 2,000 feet of the site, 46 of which are within 500 feet of the site. Although relatively few people in this neighborhood have expressed concerns regarding proximity of the WRF, typical concerns could be related to visual impacts, odors, noise and effects on property values.

Two homes at the eastern end of Santa Barbara Avenue would have an unobstructed view of



the WRF site at a distance of less than 500 feet. Several other homes on Santa Barbara Avenue and San Fernando Avenue would have a partially obstructed view of the site, blocked to some extent by other homes on those streets or within the trailer park. A portion of the Rancho Colina trailer park would have a direct view of the WRF site at a distance of 100 to 500 feet, partially blocked by intervening trees at the property line.

Environmental and Physical Site Issues

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.

There are 116 homes and RV sites within 2,000 feet of the site, 46 of which are within 500 feet of the site. Of these, less than 10 have a direct line of sight to the likely WRF location.

In a December 10, 2013 letter to the City, the California Coastal Commission 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 from Highway 41 than one located at either Righetti or Madonna. For that reason, it may be surmised that because Rancho Colina would have a greater visual impact, and Coastal Commission staff confirmed this perspective in a meeting of April 27, 2016.

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). 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). The potential for encountering unknown resources on this site is considered low, except for the southeastern most 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 or Madonna site, so energy use and resulting GHG emissions would be expected to be slightly higher.

100-Year Flood Plain. 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.

Geotechnical Issues. 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.

Regulatory and Permitting Issues

The site is not encumbered with any unusual regulatory challenges, 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.

Site 2: Righetti

Overview

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.

Key Opportunities

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

- **Property Availability.** The City has entered into an MOU with the existing property owner to purchase and control the site. The City purchased an option to hold the property for 6 months for \$25,000 on January 26, 2016. The City may extend that option for an additional 400 days (through August 28, 2017) for an additional \$100,000. The payments are non-refundable, but may be applied to the purchase price if the City buys the property. The importance of securing an option is to allow for the necessary time to develop a Facility Master Plan and CEQA documentation, both of which are due diligence steps necessary before the City would consider buying the property in anticipation of a building a WRF.
- **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.
- **Proximity to Reclamation Opportunities.** Because of its Morro Valley location, the site is relatively close to potential reclamation opportunities, and closer than any other Morro Valley site to the City’s wells and the lowest part of the valley, where the most promising groundwater injection opportunities are likely to be.



- ***The Site is at Lower Elevation than any other Location.*** 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 lower than any other potential location considered in this report, and 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.
- ***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 could also integrate other non-WRF facilities onto the site that address other City goals, including the development of a corporation yard. Note, however, that the development of other non-WRF facilities could be constrained by land use compatibility issues raised by residents in the neighborhood to the west.
- ***Potential for Land Conservation.*** Only a small portion of the 250-acre site would be needed for the WRF. The City is exploring the potential to work with land trusts to preserve the remainder of the site in open space, agriculture or some other similar passive use in perpetuity, including all areas in direct proximity to neighbors in the Nutmeg neighborhood.

Key Constraints

The key constraints facing development at this location include:

- ***Neighborhood Proximity.*** The site of potential development is about 600 feet east of the nearest homes along Nutmeg Avenue and Ponderosa Street, a distance that expands to 2,200 feet or more for homes farther north along Nutmeg Avenue or farther west within that neighborhood. The backyards or some rear-facing windows of fewer than 10 of these homes along those streets have a direct line of sight to the potential WRF location, and are somewhat elevated relative to the site under consideration (from 50 to 250 feet higher, from south to north). In all, 424 homes within this neighborhood are within 2,000 feet of the potential WRF site, with 35 homes within 1,000 feet, although nearly all of these homes are on the opposite side of a ridgeline that separates them from the WRF site.

At a February 25, 2016 community workshop, many residents in this neighborhood voiced strong opposition to locating the WRF on the Righetti site, citing visual, odor, noise, and traffic concerns. Although the City is committed to designing the facility to address these issues, many in this neighborhood remain unconvinced, since they believe the presence of a WRF, no matter how well-designed, could adversely impact their property values.

Many of the same residents expressed similar concerns at several subsequent public workshops and meetings, including at the Citizen Advisory Committee meeting (March 1), City Council (March 8), two community workshops (April 7 and 10), and outreach at local farmers' markets (April 9 and 14).

The site is also about 1,300 feet west of the nearest homes within the Rancho Colina community. These homes, however, are blocked from a direct line of sight by intervening topography. 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. These residents have not expressed similar concerns regarding the site as those in the Nutmeg/Ponderosa neighborhood.



- **Onsite Drainage Features.** 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. Coastal Commission staff were consulted regarding these drainages, and agreed they will need to be addressed through the permitting process (Dan Carl, CCC staff, April 27, 2016).

Environmental and Physical Site Issues

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 600 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 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 from Highway 41 than one located at Rancho Colina, but more visually prominent than one at the Madonna location (Site 5 in this report).

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). However, the potential need to modify one or another onsite drainage would likely be a concern for the Coastal Commission, based on input from Coastal staff (Dan Carl, CCC staff, April 27, 2016), although staff concurs that it may be possible to mitigate this issue.

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. 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 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.

About 5 acres of the most developable portion of the site (generally from where a ranch complex is located toward the highway) 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. One reason for this is that the limited area of high quality soils has discouraged potential irrigated agriculture. 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 remainder of the site (about 245 acres) consists 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.

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 either the Rancho Colina or Madonna sites, so energy use and resulting GHG emissions might be expected to be slightly lower.

100-Year Flood Plain. The site is not within a 100-year floodplain.

Geotechnical Issues. 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.

Regulatory and Permitting Issues

Except as noted below, the site is not encumbered with any unusual regulatory challenges, 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, and it may be possible to avoid these areas in the design, but if not this will be subject to permitting conditions from the Coastal Commission, CDFW, RWQCB, and the U.S. Army Corps of Engineers. 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 would also likely 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.

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.

Site 3: Tri-W

Overview

The Tri-W site actually consists of two separate parcels under a single ownership, Tri-W Enterprises. Collectively, the two parcels comprise 554 acres. The smaller of the two parcels is within the City limits, while the larger parcel is within the County. Both parcels are within the Coastal Zone. Each parcel is described in more detail below:



- **Tri-W Site #1 (APN 068-401-013; in the City).** This 157.5-acre parcel is within the City limits. It is immediately east of existing residential development, north of Highway 1, and south of existing power lines that parallel the highway. This site is designated as Agriculture, but envelops a central portion of the area near the Highway 1/Morro Bay Boulevard interchange that has been designated Commercial and slated for future development consistent with that designation. This site is the remainder of what was once a single parcel, which resulted from the City's 1993 approval of the adjacent 17-acre commercial use consistent with Measure H, which was a voter-approved initiative that passed in 1991. After a series of appeals to the Coastal Commission through 1999, it remains potentially unclear whether or not this 157.5-acre remainder parcel may be subdivided in any way, or whether it must remain in agricultural use until another voter initiative might change its current land use status. In addition, much of this property is visually prominent from Highway 1, which would be a concern to the Coastal Commission. Because of these constraints, the City parcel is not considered to be an optimal location for a WRF, and is not considered further in this analysis. (The proximity of the westernmost portion of the parcel within the City to residences along Downing Street would potentially also face challenges similar to those facing the Righetti and Madonna sites.)
- **Tri-W Site #2 (APN 073-101-017; in the County).** This 396.3-acre parcel is immediately north of the previously described Tri-W parcel, and is located in unincorporated San Luis Obispo County. Most of this site is generally over 250 feet in elevation, and ranging to nearly 500 feet, which is too high in elevation to be a suitable WRF site. However, there is a significant portion of the site at lower elevation (100 to 160 feet above sea level) that has potential for development a new WRF, primarily near the eastern edge of the site, about 1,500 to 2,000 feet north of the South Bay Boulevard/SR 1 interchange. Two separate and roughly 15-acre portions of this area are considered the most viable location for a WRF within the Tri-W site.

Key Opportunities

Potential development within the County portion of the Tri-W site presents several key opportunities, which include:

- **Not Near Existing Residential Uses.** Development at this location would neither be near nor visible to any offsite residents, and there are no homes on the site itself. The nearest residents live within Casa de Flores, a senior residential complex roughly 1,200 to 1,600 feet to the south, which is visually blocked by intervening topography. The lack of neighbors could reduce the potential for controversy or opposition as the project moves forward through the design and CEQA process. It could also reduce cost for architectural features and screening since it will be less visible.
- **A Large Site Providing Design Flexibility.** The site is located on a 396-acre undeveloped parcel. The most developable area includes two nearly level or gently sloping 15-acre sites relatively free of constraints, except for the possibility of encroaching within Waters of the State or Waters of the United States, which would require appropriate state or federal permits under the Clean Water Act and the Porter-Cologne Act. One of the two most promising sites may be able to avoid this drainage feature altogether.
- **Proximity to Chorro Creek and Morro Bay Estuary.** Although the site is not as close to the bulk



of reclamation opportunities in Morro Valley as the Morro Valley sites, it is closer to Chorro Creek than the other locations, which offers the possibility of streamflow augmentation to supplement City water supplies, enhancement of the Morro Bay estuary, if determined to be an appropriate use of reclaimed water, and delivery of water to the Morro Bay State Park Golf Course. Over the course of the life of the project, additional reclamation opportunities could potentially present themselves in the Chorro Valley.

- **Relatively Free of Coastal Resource Concerns.** The best locations on the site are relatively free of issues that would be of potential concern to the Coastal Commission. These locations are not visually prominent from Highway 1, nor do they include prime soils. It may also be possible to avoid onsite drainage features at one of the two best locations.
- **Potential for Land Conservation.** Only a small portion of the 396-acre site would be needed for the WRF. The City could explore the potential to work with land trusts to preserve some or all of the remainder of the site in open space, agriculture or some other similar passive use in perpetuity.
- **Potential to Achieve Multiple City Goals.** The usable portion of the site appears to be large enough to allow for other non-WRF facilities onto the site that address other City goals, including the development of a corporation yard, and possibly energy recovery facilities. This could result in a cost savings overall for the City if these facilities and the WRF can be constructed on a shared site.
- **Longer Pipeline Route but Fewer Complexities.** The pipelines are longer than those to Morro Valley sites, but can be constructed within City rights-of-way with the exception of the Highway 1 freeway crossing. This requires significantly less coordination with Caltrans than constructing a pipeline along the Highway 41 corridor. It also will avoid the cultural resource sites identified along Highway 41 associated with the Morro valley sites. In addition, pipeline construction could be phased with planned repaving of streets or other capital improvements to reduce cost.

Key Constraints

The key constraints facing development at this location include:

- **Relatively Higher Cost.** Development of a WRF at this site would be relatively more expensive than any site in the Morro Valley. For planning purposes, it is estimated that construction costs (with contingencies) would be 10% higher, or about \$8-9 million higher than either the Rancho Colina or Madonna sites, and about \$14 million higher than the Righetti site. This cost, however, may potentially be offset to some extent by time delays that lead to cost escalation, which may be encountered at the Morro Valley sites, particularly Righetti and Madonna.
- **Far from Most Reclamation Opportunities.** There are substantially fewer reclamation opportunities near the Tri-W site than any site in the Morro Valley, since most of the best reclamation potential is in the Morro Valley. The most important possible nearby opportunity is streamflow augmentation in Chorro Creek, which may have the ancillary benefit of allowing the City to be able to use two of its wells along this drainage wells if stream volumes are high enough. There are limited nearby reclamation opportunities related to agriculture, the largest of which is a 303-acre parcel just east of San Bernardo Creek owned by Morro Bay Ranch, about



85% of which currently supports row crops. A second nearby possibility is the Chorro Flats Enhancement Project, a 45-acre site that currently has no current water source.

- ***Far from the City's Existing Wastewater Collection System.*** The site is located about 2.4 miles from the existing treatment plant (the hub of the City's wastewater treatment infrastructure network) and the ocean outfall. This distance is farther from the City's existing wastewater infrastructure than any other site except Chevron, which will increase relative potential construction and energy costs for the conveyance of raw wastewater.
- ***Onsite Drainage Features.*** The site is large, but the most buildable portion is located directly in the path of the confluences of two drainages traversing the property, which may be within Waters of the United States and 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 similar to the Righetti site. However, it may be possible to avoid these drainage features at one of the two best WRF locations on the property.

Environmental and Physical Site Issues

Coastal Proximity and Access. The site is about 1.7 miles from the Morro Bay estuary and 2.3 miles from the ocean, separated from each 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 property is not visible from any existing neighborhood. It is within 1,500 to 2,000 feet of Highway 1, but can only briefly be seen from the highway at the relatively long distance.

The nearest residences to the site are within the Casa de Flores senior complex, about 1,200 to 1,600 feet to the south, separated by a topographic rise of about 30 to 40 feet. The site is not directly visible from the residential complex.

Biological Resources/ESHA. The site does not contain any designated Environmentally Sensitive Habitat Area (ESHA) per the County's LCP. The nearest ESHA is along the riparian margins of Chorro Creek on the south side of Highway 1, but that is outside of the potential WRF development area. The Tri-W site has not been surveyed for biological resources in detail, so if this site were selected, surveys to determine the presence or absence of the potentially occurring special status species would be required.

Cultural Resources. No cultural resources have been previously identified on the most developable portions of the site. In general, properties in the Chorro Valley have a moderate to high potential for encountering cultural resources because of its proximity to Chorro Creek, and the fact that the area has a long history of human habitation. Several sites are recorded near San Bernardo Creek on the eastern edge of this option area (Applied Earthworks, informal evaluation, March 2014). At the same time, the Tri-W site is not included in the County's "Archaeological Sensitive Area" Combining Designation, which suggests that the area does not have the highest level of sensitivity. That said, the property has not been surveyed to determine the potential presence or absence of such resources.



Until such time, the possibility of encountering sensitive cultural resources on these properties cannot be discounted.

Agriculture. Much of the land in Chorro Valley features gently rolling hillsides trending to steeper topography to the north, particularly north of Highway 41. The Tri-W site is currently in rangeland. 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 is not considered to 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 potential development of a new WRF would not preclude continued agricultural use of the remainder of the property, which consists of grazing.

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 2.4 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 100 to 160 feet.

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

100-Year Flood Plain. The site is not within a 100-year floodplain.

Geotechnical Issues. The relatively level developable portion of the site is considered to have low landslide potential, but the potential increases on steeper slopes. Liquefaction potential is considered low on the steeper portions of the site. The more level portions of the site below the confluence of the two drainage features not subject to high landslide potential are considered to have high liquefaction potential. The area is subject to seismic hazards, but no known active faults directly traverse the area.

Regulatory and Permitting Issues

The site is not encumbered with any unusual regulatory challenges, including Land Conservation Act contracts, Habitat Conservation Plan restrictions, conservation easements, or Alquist-Priolo Fault Zones. While there would need to be investigations of the site 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.



A portion of the site is crossed by PG&E powerline easements, but not at the location indicated as having the most promising development potential as described above. This will not present a regulatory constraint to development on the site.

The site is adjacent to Caltrans right-of-way (Highway 1), but development of the new WRF would not affect nor encroach upon Caltrans property. Other than to laterally cross beneath Highway 1 at South Bay Boulevard, it would not be necessary build pipelines within Caltrans rights-of-way either to bring wastewater to the site, or to distribute reclaimed water to potential users. The majority of the pipelines can be constructed within City rights-of-way.

Permit requirements at the Tri-W site are similar to those as discussed for Righetti. The site is large, but the most buildable portion is near the confluence of two drainages traversing the property, which may be within Waters of the United States and Waters of the State of California, and thus potentially subject to regulatory requirements under the Clean Water Act and Porter-Cologne Act. However, one of the two best locations on this site may be able to avoid these drainage features.

Site 4: Chevron/Toro Creek

Overview

The 160-acre Chevron Site (identified as Site A in the December 2013 Options Report) is located southeast of Toro Creek, spanning both sides of Toro Creek Road. It is located in unincorporated San Luis Obispo County, east of and adjacent to Highway 1 between the City of Morro Bay and the community of Cayucos.

The “shore plant” portion of the site closest to Highway 1 is on a coastal terrace, which formerly housed a Chevron oil facility. It consists of three parcels, which collective encompass 33.1 acres. The more inland portion of the site farther from the highway is on a single parcel that includes 126.8 acres, and follows the Toro Creek drainage. This was also part of the former Chevron oil facility, and is known as the Chevron Hillside property.

The southernmost portion of the site is located at the lowest elevation and supports the former Chevron oil facility; the inland portion of the property consists primarily of rolling hills that range from gentle near the road to steep slopes on the hillsides interspersed with secondary drainages to Toro Creek, which parallels its northern boundary. The site supports is surrounded primarily open space, agricultural, and rural residential land uses. The easternmost 100-acre portion of the larger inland parcel is outside the Coastal Zone. This is the general area where the Cayucos Sanitary District (CSD) is currently considering locating its new wastewater facility.

Key Opportunities

Potential development at the Chevron/Toro Creek site presents several key opportunities, which include:

- ***Not Near Existing Residential Uses.*** Development could be located in such a way to be would



neither near nor visible to any offsite residents, and there are no homes on the site itself. The nearest residents live along Toro Creek Road on large rural parcels. Depending on the ultimate location of a WRF in this area, homes could range anywhere from 500 feet to over 2,000 feet away. The lack of neighbors could reduce the potential for controversy or opposition as the project moves forward through the design and CEQA process. However, it should be noted that at the Cayucos Sanitary District's (CSD's) EIR scoping meeting of April 28, 2016, one resident who lives on Toro Creek Road expressed concern about the proximity of CSD's proposed facility in relation to his home. This type of feedback could be anticipated if the City of Morro Bay located its facility near the CSD 's proposed site on Toro Creek Road.

- ***A Large Site, Providing Design Flexibility.*** The inland portion of the site is located on a 127-acre parcel with at least two locations that could accommodate a WRF, including a site currently being considered by the CSD for its own similar facility. There appears to be sufficient area on these sites to accommodate different design concepts.
- ***Potential to Achieve Multiple City Goals.*** The usable portions of the site appear to be large enough to allow for other non-WRF facilities onto the site that address other City goals, including the development of a corporation yard.

Key Constraints

The key constraints facing development at this location include:

- ***Relatively High Cost.*** Development of a WRF at this site would be relatively more expensive than any site in the Morro Valley. For planning purposes, it is estimated that construction costs (with contingencies) would be 15% higher, or about \$14-\$15 million higher than Rancho Colina or Madonna sites, and about \$20 million higher than the Righetti site. Because the CSD has recently and formally stated it does not wish to work with the City on a common facility, there is no realistic potential for cost savings that might otherwise be possible if the two agencies shared a single facility (see **Appendix B** for CSD's letter of April 22, 2016).
- ***Far from Most Reclamation Opportunities.*** There are substantially fewer reclamation opportunities near the Chevron site than any site in the Morro Valley. The site is more than 4 miles to reclamation opportunities in the Morro Valley.
- ***Far from the City's Existing Wastewater Collection System.*** The site is located about 3 miles from the existing treatment plant (the hub of the City's wastewater treatment infrastructure network) and the ocean outfall. This distance is farther from the City's existing wastewater infrastructure than any other site, which will increase relative potential construction and energy costs for the conveyance of raw wastewater.
- ***ESHA.*** The potential WRF locations on the site are near designated ESHA associated with Toro Creek, although depending on the design and location, ESHA could potentially be avoided.
- ***Prime Agricultural Land.*** The best (most level) potential WRF sites include prime soils on productive agricultural land.



- **Cultural Resources.** Based on past surveys conducted on the Chevron property, the site is highly sensitive and there is a high potential to encounter cultural resources on the site. The number and size of archaeological sites recorded on the site represent constraints to potential development of a new facility on portions of the property. Over half of the upper portion of the property, particularly the easterly portion, has not been systematically surveyed for the presence of archaeological resources. Therefore, the overall archaeological constraints to development cannot be precisely defined. However, it is very likely, given the prehistoric occupation of portions of the site, that other archaeological resources may exist on the property. Therefore, potential archaeological constraints on the Chevron property are considered substantial.
- **Complications with CSD.** Because the CSD is already planning a wastewater treatment facility in this general area, it may appear logical to plan and build a single facility together at this location. However, this would require the two agencies to work together toward this goal. Although the two agencies worked together toward this goal at one time, the CSD unilaterally suspended its participation in working with the City of Morro Bay on a common facility in April 2015. The City has consistently stated that it would welcome working with CSD again, most recently in an April 7, 2016, letter from the mayor and City Council to the CSD Board. The CSD formally responded in an April 22, 2016, letter that it is pursuing its own project, and is not interested in working together toward this common goal. (See **Appendix B** for both letters.) If the two facilities go forward on separate paths, but both within the Toro Creek valley, it will likely encourage further public interest in bringing the two agencies back together on a single plant. There is the potential that this interest could ultimately slow development and completion of either facility, in order to explore an outcome that CSD in particular has shown little interest in pursuing.

Environmental and Physical Site Issues

Coastal Proximity and Access. The inland portion of the site is about 0.5 to 1.5 miles from the ocean, and a portion of the property is outside the Coastal Zone. This inland area 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, nor would development on the site block views of these features. The property is not visible from any existing neighborhood. The westernmost portion of the site is within 2,000 feet of Highway 1, but cannot but can only briefly be seen from the highway at that relatively long distance.

Biological Resources/ESHA. Several potential biological constraints are associated with this site. Toro Creek is an intermittent stream with adjacent riparian vegetation and therefore constitutes an Environmentally Sensitive Habitat Area (ESHA). The creek is designated Critical Habitat for the federally listed south central California coast DPS steelhead and California red-legged frog. The creek also includes habitat for federally listed tidewater goby (on the lower portion of the creek). These biological resources are protected under the County's Local Coastal Plan (LCP) under Policies 1-2, 4, 7-8, 10, 13, and 16-21, 25-30, and 35-39, which limits development in ESHA and establishes associated buffer setback areas. A 100-foot stream buffer setback is recommended for stream and associated riparian habitat in rural areas. Wetland habitat also receives a 100-foot buffer setback. Development within ESHAs, specifically streams and wetlands, including sewer mains are regulated under Policies 21, 25, 26, and 27. It is recommended that wetland and riparian mapping be performed to delineate jurisdictional boundaries for which the



CCC, the U.S. Army Corps of Engineers (USACE), California Department of Fish and Wildlife (CDFW), and the RWQCB. Additionally, the National Marine Fisheries Services (NMFS) and U.S. Fish and Wildlife Service (USFWS) should be consulted for steelhead and the California red-legged frog and tidewater goby, respectively, since these species have been documented in Toro Creek and the creek is designated Critical Habitat. Due to the topography of the site, indirect impacts from storm water runoff through sedimentation during construction activities could negatively affect steelhead and tidewater gobies.

California red-legged frogs have the potential to occur within Toro Creek. There have been no CNDDDB recorded observations; however, suitable riverine and riparian habitats are present for breeding and dispersal. Nearby documented observations for the California red-legged frog has been recorded. Direct impacts to the California red-legged frog can be avoided by applying the 100-foot no-impact buffer from Toro Creek riparian and wetland habitats and performing construction outside the winter and spring seasons.

Cultural Resources. A records search of all recorded archaeological sites and investigations located within this site and a 0.5-mile radius was conducted at the Central Coast Information Center, University of California, Santa Barbara, on August 19, 2011. Two archaeological sites are located on the property (CA-SLO-181 and -879), while a third, CA-SLO-1378, is located to the south. Nine investigations have occurred within the Chevron site boundaries.

The identified resources onsite include permanent encampments containing food remains and artifacts, with other evidence of past settlement. CA-SLO-1889 on the eastern portion of the site is recorded south of Toro Creek Road. This site consists of two historic period structures and debris associated with the Perry Dairy Barn, a three-story structure that dates from the late 1800s or early 1900s.

The number and size of archaeological sites recorded on the site represent constraints to potential development of a new facility on portions of the property.

Over half of the upper portion of the property, particularly the easterly portion, has not been systematically surveyed for the presence of archaeological resources. Therefore, the overall archaeological constraints to development cannot be precisely defined. However, it is very likely, given the prehistoric occupation of portions of the site, that other archaeological resources may exist on the property. Therefore, potential archaeological constraints on the Chevron property are considered substantial.

Agriculture. The 127-acre inland site has gently sloping lands on either side of Toro Creek Road that support cultivated row crop and hay fields, with more sloping areas dedicated to sheep grazing. The majority of the area currently used for row crops and hay field is located on prime soils (68 acres, or 53% of the site is underlain by Class I soils). Approximately 23 acres (or 18% of the site) at the south end of the site is currently used for cattle grazing, and is underlain by subprime soils (Class III).

County LCP Policies 1, 2, and 3 require that agricultural lands be maintained unless there are circumstances in and around existing urban are that make agriculture infeasible or that would make conversion of the land to a non-agricultural use a logical land use change to better protect agricultural lands and strengthen the urban-rural boundary; that agricultural lands should not be subdivided unless such division would maintain or enhance agriculture; and, that non-agricultural uses should not be allowed except under limited circumstances, including in terms of supplemental non-agricultural uses where supplemental income is required for the continuation of agricultural use and 98% of the land is



restricted for and maintained in agriculture. However, CZLUO Section 23.08.288, and Coastal Table “O”, of the Land Use Element provide for the development of Public Facilities such as contemplated with the new WRF.

The County LCP allows for the siting of public utilities on agriculturally zoned property, partly from the recognition that agriculture uses are not an incompatible land use adjacent to a wastewater treatment or water reclamation facility. These uses can co-exist, without pressure from either one for limitations or restrictions on activities.

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 3 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 120 feet.

From a comparative perspective, this is a similar elevation to the Righetti site, but much farther from the existing infrastructure network, so energy use and resulting GHG emissions might be expected to be somewhat higher.

100-Year Flood Plain. Portions of the site along Toro Creek are within the 100-year floodplain, but may be largely avoidable depending on the facility location and design.

Geotechnical Issues. The inland area ranges from 80 to 120 feet in elevation as it follows the Toro Creek watershed. Most of the site is generally level or has gentle slopes. About 97 acres (60% of the site) has slopes of less than 10%, so steep slopes can be avoided. Overall, the site is highly suitable from a slope and elevation standpoint.

The relatively level developable portion of the site is considered to have low landslide potential, but the potential increases on steeper slopes. Liquefaction potential is considered low to moderate on the more level portions of the site. The area is subject to seismic hazards, but no known active faults directly traverse the area.

Regulatory and Permitting Issues

The site is not encumbered with any unusual regulatory challenges, including Land Conservation Act contracts, Habitat Conservation Plan restrictions, conservation easements, or Alquist-Priolo Fault Zones. While there would need to be investigations of the site 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 inland 127-acre portion of the site is not adjacent to Caltrans right-of-way (Highway 1), and development of the new WRF would not affect nor encroach upon Caltrans property. That said, it would be necessary build pipelines within or across Caltrans rights-of-way either to bring wastewater to the site, or to distribute reclaimed water to potential users.



The eastern 100 acres of this parcel are outside the Coastal Zone. However, a Coastal Development Permit would still be required for the project in this area because pipelines and other needed offsite infrastructure that support the WRF are within the Coastal Zone. For this reason, Coastal staff indicates it is likely that the entirety of the project, including the portion of the facility outside the Coastal Zone, would need to undergo Coastal Commission review (Dan Carl, CCC staff, April 27, 2016).

Site 5: Madonna

Overview

Based on City Council direction, the City's Program Management Team took a fresh look at sites in the Morro Valley, including some that had been previously rejected in past studies. The City spoke with several property owners in the Valley to gauge their interest in locating a WRF on their property, and also considered other key siting criteria, such as elevation, topography, distance from the City and its existing wastewater infrastructure, and proximity to neighbors. The team also considered various environmental criteria, including issues related to biological and cultural resources, flooding, and agriculture.

From this search, the 145-acre Madonna site was identified as having the potential to meet City goals for a WRF, and was investigated further. The site consists of two parcels, a larger 126.7-acre steeply-sloping parcel, and a smaller but level 17.1-acre parcel. It is the 17.1-acre parcel that would be most suitable for a WRF. Although the City's interest is in the smaller parcel, the entire 145-acre site is for sale as a unit at this time. The property owner appears receptive to discussing the possible location of a WRF on the site. Preliminary site analysis of the smaller parcel related to cultural resources, biological resources, and geotechnical issues were conducted to determine whether or not there were any technical fatal flaws related to these issues. None were identified. Because the site is under Williamson Act contract, the team reached out to the State Department of Conservation as well as to San Luis Obispo County to investigate the degree to which this could pose a constraint to potential WRF development. Most importantly, the team reached out to neighbors with property within 500 feet of the smaller parcel individually to gauge their interest or concerns related to building a WRF at this location.

Previous Analysis. This site had been previously considered as one of 17 potential sites for a new facility in the Rough Screening Analysis (Dudek, 2011), in which it was identified as Site 4 ("Highway 41/Madonna"). The 2011 report rejected the site as fatally flawed based on the presence of prime agriculture. This analysis was carried forward in the December 2013 Options Report, which stated the reasons it had been previously rejected, without conducting any new investigation at that time:

"The entire site is designated as prime agriculture when irrigated, based on the criteria set forth by the Natural Resources Conservation Service (NRCS), and is designated as prime farmland by the California Department of Conservation through its FMMP Important Farmland mapping program.

The site is also in agricultural production, and lies within the fertile valley floor along the Morro Creek corridor, adjacent to Highway 41. Since it is in productive irrigated agricultural production, and development of the site would necessitate removal of not only the existing production, but preclude the future use of the prime soils, this is considered a fatal flaw relative to the location of a new water reclamation facility."

As of May 2016, the site is no longer in agricultural production, and has been fallow in recent years.



Nevertheless, the soils are considered prime when irrigated. The site is also under Williamson Act contract. The updated analysis that follows is based on new investigation into these key issues.

Key Opportunities

Potential development at the Madonna site presents several key opportunities or comparative advantages, which include:

- ***Flat Site Suitable for Development.*** The 17.1-acre site is nearly level, and nearly all of it is outside the 100-year flood zone and designated ESHA. Outside the ESHA and flood zone areas, it is estimated that 15.5 acres of the site are developable. Compared to either of the other sites in the Morro Valley, the Madonna site has by far the most level developable area.
- ***Screened from Highway 41.*** This site is set back roughly 500 feet and more from Highway 41, which is considerably farther than either of the other two Morro Valley sites. It is also screened by a tall stand of eucalyptus trees and riparian vegetation along Morro Creek. Overall, these factors make the site considerably less visible from the highway than either of the other Morro Valley sites, which is a key consideration to the California Coastal Commission.
- ***Proximity to Reclamation Opportunities.*** Its location in the Morro Valley provides access to potential reclamation opportunities, similar to what would be the case for Rancho Colina. However, it does not have the same relative advantage as the Righetti site, which is located about 3,000 feet closer to the deepest part of the groundwater aquifer in the valley, and important consideration in the Master Reclamation Plan.
- ***The Site is at Relative Low Elevation.*** The site is located between 105 and 130 feet above sea level, which is lower than Rancho Colina, but slightly higher than the lowest part of the Righetti site. This is an important factor in reducing pumping costs to convey untreated wastewater.
- ***Ability to Achieve Multiple City goals.*** Because the site is flat and mostly free of physical constraints, there is considerable flexibility to build not only the WRF, but potentially other public facilities in support of community goals, including a corporation yard, if the City decides to pursue these non-WRF related facilities. Note, however, that the development of other non-WRF facilities could be constrained by land use compatibility issues that may be raised by residents in the vicinity of the site (see Key Constraints discussion).
- ***Property Availability.*** The property is currently for sale, although the City has not entered into an MOU with the owner at this time. However, in order to address Williamson Act constraints, the City may need to acquire the property by eminent domain or the threat of eminent domain (see Key Constraints related to the Williamson Act).

Key Constraints

The key constraints facing development at this location include:

- ***Site Access.*** The site is not adjacent to any public roadway, and so must be accessed across



other properties via existing or new easements. The site is currently accessed via a legal easement over an unimproved roadway within an adjacent 0.37-acre parcel (APN 073-085-025) that includes both the roadway and a bridge across Morro Creek. According to the County Assessor, this existing access property is owned by the same landowner of the adjacent parcel to the north, who also uses this parcel for access from Highway 41. This landowner has expressed opposition to a WRF on the Madonna site (interview, April 14, 2016). In order to accommodate a WRF, both the road and the bridge would need to be improved, if this easement were used for this purpose.

As an access alternative, the WRF could take access via a possible easement across the adjacent property to the south of the existing roadway (part of APN 073-085-023), if an agreement can be reached with that landowner. As is the case with the existing easement, a new roadway and bridge would be needed. If this approach is used, the City would need to work with this landowner as soon as possible to reach an access agreement, because the project would depend on this to move forward. Spanning Morro Creek would also likely require permits from various resource regulatory agencies, including the Regional Water Quality Control Board, U.S. Army Corps of Engineers, and the State of California Department of Fish and Wildlife.

- ***Williamson Act (Land Conservation Act).*** The project site is under Williamson Act contract (actually, two contracts—one for each parcel), which is a State Department of Conservation program intended to encourage agricultural preservation. In exchange for reduced property taxes, properties that participate under the Williamson Act (also known as the Land Conservation Act) may not be converted to non-agricultural use, except under certain conditions. This restriction remains in place until a property owner files a “notice of non-renewal”, at which point a clock begins running; all contract conditions are lifted nine years after filing the notice.

Public facilities may be built on parcels under Williamson Act contract, subject to meeting certain conditions that result in the cancellation of that contract. There are several ways to remove property from a Williamson Act Contract. These include (a) acquiring property by eminent domain (or the threat of eminent domain); (b) filing for non-renewal of the contract (which, as noted above, takes 9 years); (c) petitioning for cancellation of the contract, and (d) in certain circumstances, annexation of the property to the City.

Practically speaking, the use of eminent domain or the threat of eminent domain is the only viable approach the City could follow in the case of this property. State Department of Conservation staff concurs with this assessment. If the City uses eminent domain or the threat of eminent domain to acquire property under Williamson Act Contract, and that acquisition is for a water reclamation facility and certain findings can be made, then that contract would become null and void upon the complete of that acquisition. Those findings are (a) the location is not based primarily on a consideration of the lower cost of acquiring land in an agricultural preserve and (b) there is no other land within or outside the preserve on which it is reasonably feasible to locate the public improvement. If the land acquired by the City is more than necessary for the WRF, then the Williamson Act Contract for that “extra” land may not be null and void. There is also a noticing requirement that must be followed to use that approach.

Following the required procedure, acquisition of the property by eminent domain could take several months.



The other possible approach to voiding the Williamson Act contract is to petition for cancellation of the contract. However, certain findings must be made, and there are some discretionary decisions that must be made by governmental entities other than the City to have that cancellation become effective. These agencies would include San Luis Obispo County (who holds the contract), and the cancellation must be approved by the Board of Supervisors. Because of the complexity of this approach, and the fact it would rely on actions out of the City's control, this option is not practical for the WRF.

Under certain circumstances, annexation of a property to a City could result in the cancellation of the contract. These circumstances must apply: (a) that land is within 1 mile of the City's boundaries, (b) the City protested the original contract with LAFCO, and (c) LAFCO made certain findings at the time of the protest. Because the parcel in question includes land more than 1 mile from the existing City limits, this approach may not be used.

San Luis Obispo County staff were consulted for perspective on Williamson Act-related issues, since the contract actually resides with the County. In general, they agreed with the information described above, noting that whatever approach is used, it will require coordination with the State Department of Conservation, and the County tends to defer to the State in order to maintain their strong working relationship on a number of unrelated issues.

- **Neighborhood/Land Use Compatibility.** Although there are relatively few homes on the within 1,000 feet of the 17.1-acre site of potential interest (perhaps a dozen homes south of Highway 41, plus a portion of the Rancho Colina neighborhood), a few have unobstructed or partially-obstructed views of the site, and are relatively close. One house to the east on an adjacent property has an unobstructed view of the site, free of topographic barriers, trees, or manmade barriers. The house is with 450 feet of the northeastern corner of the 17.1-acre site, and is about 1,100 feet from the center point of the site. That house shares a driveway that is used to access both properties.

Several other nearby homes to the south are also in visual range. The nearest of these is within 120 feet of the southeastern corner of the site, and about 775 feet from the center of the site. Another is 325 feet of the site, and about 750 feet from the center point of the site. Several other homes that are accessed from Little Morro Creek Road range from 1,200 to 1,500 feet from the edge of the site, although these homes are visually blocked either by topography or intervening vegetation (mostly agriculture).

Although there are fewer homes close to this site as compared to Righetti or Rancho Colina, the ones that are there are generally closer and less visually obstructed. The change from the existing condition that would result from a WRF may also be greater, in that these homes are located in a rural area with few neighbors. This compares to either the neighborhoods near Rancho Colina or Righetti, which include homes in close proximity to one another, and in the case of Righetti, in a relatively densely urbanized neighborhood, where most of the homes are visually obstructed by a ridgeline.

Anticipating potential concerns, the WRF program management team reached out to several of these nearby property owners, conducting interviews with several of them in April 2016. The feedback varied considerably. Most neighbors expressed varying levels of concern regarding a



variety of issues related to land use compatibility, including visual impacts, noise, odors and property values, and were opposed to the WRF concept, no matter the potential benefits. A minority felt these issues could be mitigated, and did not share the same level of concern, or conceptually liked the idea of placing the larger parcel not needed for the WRF in some sort of conservation or open space easement. Another minority expressed support for the idea that reclaimed water could directly benefit growers in the Morro Valley, and did not appear concerned about adverse effects related to location.

- **Conversion of Prime Agricultural Land.** The protection of agricultural resources is a key component of LCP and Coastal Act policy. The City's LCP contains policies concerning coastal agriculture that are protective of existing agricultural lands and restrictive in their potential allowable uses or development. A WRF (or public facility) is not an allowable, or conditionally allowable use on agricultural lands pursuant to the City's existing LCP. A further consideration is that the site contains soils that are considered prime if irrigated, which has historically been the case, even though the site is currently fallow. It should be noted that the LCP is currently being updated, and policies related to the potential development of a WRF could be revisited. However, this change would require coordination with and concurrence from the California Coastal Commission.

City LCP policies 6.01 to 6.08 provide the existing regulatory framework for the use of agricultural lands in the Coastal Zone. Note that these support the use of reclaimed water for agricultural purposes, when deemed cost effective.

Environmental and Physical Site Issues

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 property is also adjacent or near several homes within the area, and is visible to a few of these. Please refer to the section on "Key Constraints" for further discussion of this issue.

The site is about 500 feet from Highway 41 and screened by intervening vegetation, including eucalyptus trees. This is an important consideration to the Coastal Commission, which noted the importance of avoiding visual impacts from public roadways in the coastal zone, such as Highway 41.

Biological Resources/ESHA. A preliminary biological resources assessment was conducted at the site in March 2016. The study did not identify onsite constraints that could not be addressed through project design. 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, notably along Morro Creek, which forms the northern site boundary. The ESHA area comprises less than an acre, leaving about 15.5 acres of the site free of this constraint. The remainder of the level site is fallow agricultural land, most returning to non-native grasslands. Other than Morro Creek, there are no significant onsite drainage features that could support habitat. Morro Creek is considered a coastal stream per CCC definition. Morro Creek is out of the likely development footprint of the WRF, although



a new bridge that would be needed to access the site will need to span this creek. If the bridge footprint or abutments are within jurisdictional areas, permits would be needed from key resource regulatory agencies, including the U.S. Army Corps of Engineers, Regional Water Quality Control Board, and the State of California Department of Fish and Wildlife (Kevin Merk Associates, March 2016).

Overall, the site is highly disturbed from past agricultural activities and human presence.

Cultural Resources. A preliminary cultural resources assessment was conducted at the site in March 2016. The study did not identify onsite constraints that could not be addressed through project design. No cultural resources have been previously identified on the site where development could occur (Far Western, March 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 potential for encountering unknown resources on this site is considered moderate (Far Western, March 2016).

The cultural resource evaluation did not identify any new sites on the property. The nearest identified site is a dense shell midden and lithic scatter (CA-SLO-1304) on the other side of the creek between the site and Highway 41, north of the access road and bridge that provide access to the site.

Agriculture. The site is generally flat, and although currently fallow, has been in irrigated agricultural production in the past.

The majority of the site (16.4 acres) is underlain by Marimel silty clay loam, which consists of silty clay loam stratified loam and/or clay loam. This soil is considered prime farmland if irrigated, and it has been irrigated in the past. 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.

The potential development of a new WRF would likely preclude future agricultural use of the 17.1-acre property.

The site is currently under Williamson Act contract. Please refer to the section on “Key Constraints” for further discussion of this issue.

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 105 to 130 feet.

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



100-Year Flood Plain. About 1.6 acres of the site adjacent to and including Morro Creek are within the 100-year floodplain. However, about 15.5 acres of the site are outside the 100-year flood plan, and thus appropriate for potential WRF development. In the April 2016 interviews, many neighbors anecdotally noted that in the early 1980s, the entire 17.1-acre lower property flooded when Morro Creek overflowed in a storm event that exceeded the 100-year flood.

Geotechnical Issues. Preliminary geotechnical investigations conducted in April 2016 indicated that the site is suitable for development of a WRF, based on the foundation ground characteristics found at the site per a conversation with staff from Yeh & Associates, Inc., who performed the field work. The draft report has not been completed as of the date of this report. .

The site is considered to have low landslide potential and moderate liquefaction potential (San Luis Obispo County PermitView website, 2016).

The area is subject to seismic hazards, although no known faults traverse the site. For this reason, the potential for ground rupture due to seismic activity is considered to be low.

Regulatory and Permitting Issues

Except as noted below, the site is not encumbered with any unusual regulatory challenges, Habitat Conservation Plan restrictions, conservation easements, or Alquist-Priolo Fault Zones. Morro Creek and its margins would qualify as Waters of the United States or Waters of the State, but it would be possible to avoid these areas in the design of the WRF. However, a new bridge across the creek to provide site access would potentially fall within the jurisdiction of key regulatory resource agencies, including the U.S. Army Corps of Engineers, Regional Water Quality Control Board, and the State of California Department of Fish and Wildlife, from whom permits would be required if jurisdictional areas are impacted.

Based on investigations conducted for this site in 2016 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 under Williamson Act (Land Conservation Act) contract, which would likely require cancellation prior to WRF development on the site. Please refer to “Key Constraints” for further discussion of this issue.

The site is not adjacent to Caltrans right-of-way (Highway 41), and 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. Development on the 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.



4. Conclusions

Tables 6 and 7 summarize the key opportunities and constraints described in the site analysis above. The table is color-coded to assist the reader in interpreting the results. On **Table 6**, green areas indicate clear opportunities associated with that site, while blue indicates potential opportunities. On **Table 7**, orange indicates clear or challenging constraints, while yellow indicates potential or less significant constraints.

Table 6. Comparative Opportunities at Potential WRF Sites					
Key Opportunity	Site				
	<i>Rancho Colina</i>	<i>Righetti</i>	<i>Tri-W</i>	<i>Chevron</i>	<i>Madonna</i>
	Applicability to the Site				
Property Ownership					
Property Availability	Yes; no MOU in place	Yes; MOU in place through July 2016; can be extended to August 2017	Potentially available; property owner is cooperative	Potentially, since CSD is currently pursuing a similar facility there	Yes; for sale, but may require eminent domain
Cost and Logistics-Related Issues					
Relatively Lower Cost	Yes	Yes; lowest cost	No; higher cost but less cost uncertainty since not visible and no neighbors	No; higher cost but less cost uncertainty since not visible and no neighbors	Yes
Proximity to Reclamation Opportunities	Yes; near growers, but about 3,000 feet farther than Righetti for recharge	Yes; optimal for recharge location at Narrows	No; far from Morro Valley opportunities but between Morro and Chorro Valleys for future opportunities	No; far from Morro Valley opportunities	Yes; near growers, but about 3,000 feet farther than Righetti for recharge
Proximity to Existing Wastewater Infrastructure	Yes; about 1.3 miles from current collection point (SR1/SR41)	Yes; about 0.7 miles from current collection point (SR1/SR41)	No; about 2.4 miles to center of collection system	No; about 3 miles to center of collection system	Yes; about 1.4 miles from current collection point (SR1/SR41)
Level Site that Provides Design Flexibility	No; topographically challenging	Yes, to some extent; level area is limited	Yes, to some extent	Yes	Yes; entire site is level
Low Elevation Site	Yes; low elevation site (120-160 feet above sea level)	Yes; lowest elevation site (80-90 feet above sea level)	Yes; low elevation site (100-120 feet above sea level)	Yes; low elevation site (80-120 feet above sea level)	Yes; low elevation site (105-130 feet above sea level)
Ability to Achieve Multiple City Goals	No; property owner has placed limitations	Potentially; some neighbors opposed	Potentially; no neighbors	Potentially; no neighbors	Potentially; some neighbors could be opposed
More Customers and Revenue	Yes; Rancho Colina community could provide new customer base	No	No	No	No
New Water Rights For City	Potentially; owner has suggested providing two wells to the City	No	No	No	No
Environmental Issues					
Visually Screened from Public Roadways	No; visually prominent from Highway 41	Yes, to some extent; limited visibility from Highway 41	Yes; 2,000 feet from Highway 1	Yes; to some extent; 2,000 feet from Highway 1, but adjacent to Toro Creek Road	Yes; set back 500 feet from Highway 41 and screened by trees



Table 6. Comparative Opportunities at Potential WRF Sites					
Key Opportunity	Site				
	Rancho Colina	Righetti	Tri-W	Chevron	Madonna
Removal of Outdated Wastewater Infrastructure	Yes; removal of existing WWTP package plant would appeal to RWQCB	No	No	No	No
Potential for Land Conservation	No	Potentially; City exploring potential to conserve non-WRF remainder of the site in perpetual open space	Potentially, but only if the City acquired the entire site	Potentially, but only if the City acquired the entire site	Potentially; the adjacent 127-acre parcel could be explored for this purpose
<i>Green shading indicates a clear opportunity; blue shading indicates a potential opportunity</i>					

Table 7. Comparative Constraints at Potential WRF Sites					
Key Constraint	Site				
	Rancho Colina	Righetti	Tri-W	Chevron	Madonna
Applicability to the Site					
Site and Cost Limitations					
Limited Acreage Available	Yes; property owner limits site to 8 acres	No; site is 250+ acres; about 10-15 are needed	No; site is 396 acres; about 10-15 are needed	No; site is 127 acres; about 10-15 are needed	No; site is 17.1 acres, and about 15.5 are usable
Limited Public Uses Allowed	Yes; owner will not allow non-WRF facilities	Potentially; may be constrained by neighborhood concerns	No	No	Potentially; may be constrained by neighborhood concerns
Site Access Limitations	No; direct access from Highway 41 is possible	No; direct access from Highway 41 is possible	No; direct access to Highway 1 via frontage road	No; direct access via Toro Creek Road	Yes; access to Highway 41 limited by easement or would need to work with adjacent property owner. Would also need new bridge over Morro Creek
Relatively Higher Cost	No; relatively lower cost option	No; this is the lowest cost option	Yes; relatively higher cost option	Yes; this is the highest cost option	No; relatively lower cost option
Environmental Issues					
Visually Prominent Location from Public Roadways	Yes; highly visible from Highway 41	Yes, to some extent; limited visibility from Highway 41	No	Not from Highway 1, but adjacent to Toro Creek Road	No; site is set back 500 feet from Highway 41 and screened by trees
Onsite Drainage Features	No	Yes; two onsite drainages would need to be worked into the design, and could limit design flexibility	Yes; two onsite drainages would need to be worked into the design, and could limit design flexibility; one site could avoid this feature	No; although Toro Creek is near the potential sites, and contains ESHA that could be affected	Yes; Morro Creek is at northern site boundary, and would need to be crossed. However, creek does not present constraints to the WRF



Table 7. Comparative Constraints at Potential WRF Sites					
Key Constraint	Site				
	<i>Rancho Colina</i>	<i>Righetti</i>	<i>Tri-W</i>	<i>Chevron</i>	<i>Madonna</i>
					location on the site itself
Neighbor-Related Issues					
Property Owner Would Live Onsite	Yes; will likely be ongoing consideration	No	No	No	No
Neighborhood Proximity	Potentially; near Rancho Colina neighborhood; some trailer sites within 200 feet; nearest homes are within 500 feet; but residents have not expressed concerns	Potentially; 600-2,200 feet from Nutmeg neighbors; a few homes have direct line of sight; neighbors have expressed strong opposition based on visual, odor, and noise concerns, as well as impacts to property values. Issues can be addressed, but neighbors will likely continue opposition	Not near any residents or neighborhood	Not near any residents or neighborhood	Potentially; relatively few homes nearby in rural area, but one is within 120 feet of the site, and another is within 325 feet. Most interviewed neighbors are opposed to a WRF based on similar issues as Righetti neighbors. A minority are not concerned.
Regulatory/Permitting					
Williamson Act Limitations	No	No	No	No	Yes; site is in Williamson Act, which may require eminent domain to acquire site and cancel contract to allow WRF
Conversion of Irrigated Prime Agricultural Land	No; soils are low quality	Potentially; a small area at the lower end of site is prime soil if irrigated, but it has not historically been irrigated and is limited in size	Potentially; a small area is prime soil if irrigated, but it has not historically been irrigated	Yes; most of the site contains prime soils	Yes; the site is mostly considered prime soil if irrigated, which it has been in the past, although currently fallow. May require LCP amendment to allow WRF.
<i>Orange shading indicates a clear constraint; yellow shading indicates a potential constraint</i>					

Each site is potentially suitable for a WRF. **Tables 6 and 7** show that each site has relative opportunities and constraints, some of which are shared at more than one site.

Cost Considerations. In general, each site in the Morro Valley has significant opportunities because of its location, which puts them all in relatively good proximity to reclamation opportunities. Each Morro Valley site is considered a substantially lower cost option than any site outside the Morro Valley, because of the following factors:

- *Proximity to the City's existing wastewater collection network;*



- *Proximity to reclamation opportunities, particularly the City's wells; and*
- *Less pipeline extension would be required to connect to a new WRF in the Morro valley*

While the sites outside the Morro Valley (Chevron and Tri-W) are also potentially suitable for a WRF, they are more costly options. The pursuit of higher cost alternatives is potentially inconsistent with established City goals. Between the two, Tri-W is somewhat lower cost than Chevron.

Non-Cost Considerations. None of the identified constraints associated with the Morro Valley sites are considered fatal flaws, but many will present substantial challenges that could affect the cost and timing of the project. This is true at each of the three Morro Valley sites.

For example, neighborhood concerns with regard to visual impacts, noise, and odors relative to the Righetti site can and would be addressed in the Facility Master Plan. In addition, the potential for putting the remainder of that site in an open space or agricultural conservation easement would likely have a positive impact on property values in that neighborhood. Nevertheless, some neighbors will likely remain concerned about the project's potential effect on their property values. It is unclear how this ongoing concern could affect the project timing and implementation at this location.

The Madonna site presents an ideal site from a WRF design and development perspective, in that it is nearly level, screened from Highway 41, and has relatively few neighbors. At the same time, a majority of those neighbors are not supportive of a WRF at this site, which could result in the same type of challenges as at the Righetti site, only among fewer residents who reside in the County, not the City. The Madonna site also has important constraints related to the Williamson Act that present timing and logistical challenges. Site access must be worked out with neighboring property owners.

The Rancho Colina site has key limitations and constraints both from a siting perspective and the types of uses that could be built there. It is also visually prominent from Highway 41 and potentially costly from an earthwork perspective. Although a WRF could be built there, it is not as attractive as either the Righetti or Madonna sites from a functional or visual standpoint.

Overall Conclusions. In order to meet the City's 5-year goal (and Regional Water Quality Control Board's direction to complete the plant construction by December 2021), it is recommended that the City select a site for development of the Facility Master Plan and Environmental Impact Report as soon as possible. The construction cost differences among the sites are less of a concern if one site presents less risk of schedule delays or pauses and can move forward more quickly.

There is no ideal Morro Valley site, and all options present difficult tradeoffs, but among the available options, Righetti and Madonna are on balance the best choices within the Morro Valley. Righetti is the lowest cost option that is closest to the City's water and wastewater infrastructure, but relatively near many concerned neighbors. Madonna is on a more level site that can be more easily screened visually, but it also has challenges related to the Williamson Act, site access, and neighbor concerns. How the sites rank relative to one another is a question of how the City Council chooses to balance the identified constraints and opportunities.

If the lowest cost alternative that carries a higher risk factor relative to timing and long-term cost uncertainties is considered preferable, Righetti is the choice that best meets these criteria.

The Madonna site would be a slightly higher cost site than Righetti, and carry slightly different but



overall similar level of risks related to timing and cost uncertainty. But it also could better address Coastal Commission concerns related to visual and coastal stream avoidance, and is a more level and flexible site for WRF design. On balance, it is therefore considered overall similar to Righetti for sites within the Morro Valley.

With respect to the sites outside the Morro Valley, both are more costly from a construction and operations/maintenance perspective than any site in the Morro Valley. However, there are no neighbors near either site, so there would be a greater design flexibility at either site, and likely less potential opposition that could adversely affect the timing of project implementation. There are also unknown cost implications related to addressing potentially ongoing neighborhood issues throughout the life of the project.

Between the two sites outside the Morro Valley, Tri-W would be a lower cost option than Chevron, and has the added relative advantage of being near the Chorro Valley, which presents secondary though limited opportunities for water reclamation to augment those in the Morro Valley. Tri-W is the better of the two options outside the Morro Valley.

Based on the above evaluation, the following summarizes this report's overall conclusions:

Righetti is the site with lowest capital and lifecycle cost if the project proceeds with few delays that could otherwise lead to cost escalation.

However, if cost and timing certainty are considered more important than choosing the overall lowest cost alternative in the context of risk that could lead to delays and cost escalation, the portion of the Tri-W site identified in this report is considered the best overall location for a new WRF among the five sites studied in this report. This includes either of two roughly 15-acre pieces of land within the Tri-W parcel currently within the County, not the City.

This location has no immediate neighbors, is generally not visible from public roadways, and is large enough to potentially accomplish other City goals (including a corporation yard and possibly a solar power facility). Pipelines to and from the site could largely be built within City streets and parks, rather than in Caltrans right-of-way. These advantages are likely to reduce the differences in costs between the Tri-W and any of the Morro Valley sites.

It should be noted that a site selection is necessary in order to prepare a Facility Master Plan and Environmental Impact Report (EIR) to study that plan. The EIR must also consider various project alternatives, which could include alternate designs and site locations. Once an Environmental Impact Report (EIR) is completed, the City Council can determine the most appropriate design and location for building the facility, based on the information presented through the CEQA process.



5. 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.



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This report was jointly prepared by **JFR Consulting** and **MKN & Associates**. Persons involved in the preparation of this report and related supporting activities include:

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Appendix A

Cost Estimate Assumptions

The WRF Site Report includes both relative construction cost opinions and operation & maintenance cost ranges for developing a new Water Reclamation Facility the different sites, including a conceptual 20-year present value analysis. This Appendix discusses the approach for developing the conceptual cost opinions presented in the Report.

Major project components were previously identified in the New Water Reclamation Facility Project Final Options Report (JFR, January 10, 2014) to evaluate relative construction costs for the alternative project sites. These cost components and assumptions were reviewed and updated for this study. An additional cost component (an access bridge over Morro Creek) was added for the Madonna site, a site that was not previously evaluated in the Options Report.

This evaluation does not identify the total costs for each alternative, but attempts to establish a comparative framework for analysis of each site under consideration. The following table summarizes the project components and estimated unit cost ranges developed for the evaluation. Descriptions of the criteria used to develop these costs are included in the paragraphs below.

Project Component	Unit	Estimated Unit Cost Range	
		Low	High
Sewer force main	mile	\$1,350,000	\$2,420,000
Raw Wastewater Lift Station	each	\$1,830,000	\$2,690,000
Earthwork allowance	each	\$1,866,000	\$3,110,000
Secondary treatment system	each	\$6,460,000	\$16,140,000
Supporting treatment plant facilities (Paving, buildings, roads, etc.)	each	\$5,600,000	\$10,440,000
Bridge (Madonna site only)	each	\$1,800,000	\$2,700,000
Disinfection system	each	\$1,610,000	\$3,230,000
Tertiary filtration	each	\$2,150,000	\$3,230,000
Solids handling facilities	each	\$5,380,000	\$10,760,000
Advanced treatment (RO & oxidation)	each	\$14,450,000	
Recycled water storage	each	\$810,000	\$1,010,000
Recycled water pump station	each	\$350,000	\$700,000
Recycled water pipeline	mile	\$1,080,000	\$1,720,000
Treated effluent disposal pump station	each	\$350,000	\$700,000
Treated effluent disposal pipeline	mile	\$1,080,000	\$1,720,000
Notes:			
1. Estimated unit cost range includes capital construction costs as defined in the paragraphs below.			

Cost Index – The Engineering News Record (ENR) Construction Cost Index (CCI) is the industry standard measure of changes in the construction sector. It is commonly used to bring historical costs (bids and estimates) to current estimates. The ENR CCI 20-city average for April 2016 of 10280 was used for this report. For reference, the ENR CCI 20-city average used for the Options Report was 9552 for September 2013.



Unit cost ranges – Construction costs are estimated based on the order-of-magnitude unit cost ranges established herein. Unit cost estimates include materials, labor, equipment, contractor overhead and profit, and mobilization costs, and represent the median price expected from a responsible bid. These costs represent conceptual level estimates for probable construction costs with ranges reflecting the anticipated accuracy of the estimate based on limited information such as basic design criteria, limited process flow diagram, and list of major project components.

Sewer force main – The sewer force main must be sized to transport the pumped flow, assumed to be the peak hour flow of six million gallons per day (MGD). Based on a design velocity of 5 fps, it is estimated that the sewer force main will be 18-inches in diameter. For the purposes of this report, it is assumed the pipeline will be AWWA C900 polyvinyl chloride (PVC) pressure pipe, installed at depths ranging from 3 to 5 feet of cover. A per mile unit cost estimate was established and estimated lengths were rounded to the nearest mile. The unit cost estimate assumes trenching in paved roadways, traffic control, and asphalt paving. The unit costs from the Options Report were normalized using the ENR CCI.

Lift stations – Lift stations must be designed to meet the peak hour flow rate of 6 MGD (approximately 4,200 gpm). The pump size will be chosen based on the pumping head requirements for each site. Pumping head requirements were estimated by projecting a pipeline route for the raw wastewater force main between the existing wastewater treatment plant and the new WRF site, and summing the resultant elevation head loss, friction head loss and minor losses. Required elevation head was estimated using the maximum elevation along the potential force main route. Friction head loss and minor losses assume an 18-inch diameter force main. The approximate lift station pump horse power was estimated using the peak hour flow rate, estimated pumping head (total dynamic head) and a pump efficiency of 70%. It is assumed three pumps will be required to effectively meet the range of flows and provide redundancy. Construction cost estimates were derived from cost curve data presented in Figure 29-3 of Pumping Station Design by Robert Sanks. Considered to be industry standard, these cost curves were derived from historical construction costs. Cost estimates for this study were normalized using the ENR CCI. The estimated cost within this range was chosen for each site based on the pumping head requirement.

Earthwork allowance – The earthwork allowance is based on the estimated costs for earthwork at the Righetti site (Site 16) and the Chevron/Toro Creek site (Site 5/15) in the Draft Alternative Sites Evaluation Phase 2 - Fine Screening Analysis (Dudek, November 2011). The report estimated the project at Righetti would require a significant amount of soils exported (90,000 CY) to create a lower site elevation and allow for better visual screening from Highway 41. Earthwork at the Chevron/Toro Creek site was estimated to be approximately balanced between cut and fill. An earthwork factor was assigned to each site based on estimated relative earthwork amounts compared to the Righetti and Chevron sites. Costs were normalized using the ENR CCI.

Secondary treatment system – The construction costs for the secondary treatment system assumes the range of cost for an extended aeration activated sludge system as established in the draft Technical Memorandum Analysis of Wastewater Alternatives. Estimated construction costs include primary and secondary treatment systems only. These costs were normalized using the ENR CCI.

Supporting treatment plant facilities (paving, buildings, roads, etc.) – Additional facilities outside the treatment systems will be required to for a full and functioning wastewater treatment plant. These



supporting treatment plant facilities include buildings to house mechanical and electrical equipment and instrumentation and controls facilities, labs, offices, etc., roadways and paving, equalization basins, and other common facilities. A construction cost estimate range was determined based on the support facilities listed in the Draft Alternative Sites Evaluation Phase 1 - Rough Screenings Analysis (Dudek, November 2011) for the two “alternative” sites (Site 5/15, Chevron, and Site 16, Righetti) included in the analysis. Costs were normalized to April 2016 using the ENR CCI.

Bridge – This cost component only applies to the Madonna site, which requires a new bridge over Morro Creek for site access. The existing bridge is located in an access easement shared with a neighboring property and is subject to flooding during wet weather. It is assumed a new, dedicated bridge will be required for the WRF. The construction cost range for the bridge was derived using State of California Department of Transportation (CalTrans) Comparative Bridge Costs (January 2012), assuming a span of 150 feet and width of 32 feet. These costs were normalized using the ENR CCI. Cost factors for additional project elements, including overhead, mobilization, approach slabs, slope stabilization, environmental mitigation, and site work, were estimated using recent bid results for San Luis Obispo County bridges.

Tertiary Filtration – It is assumed that the WRF will produce tertiary disinfected recycled water, appropriate for unrestricted reuse applications, as defined by California Code of Regulations (CCR) Title 22. The construction cost range for tertiary filtration system assumes the range of cost for tertiary cloth disk or sand depth filters as established in the draft Technical Memorandum Analysis of Wastewater Alternatives. These costs were normalized using the ENR CCI.

Solids handling facilities – The construction cost range for the solids handling facilities are based on an assumed treatment train for thickening, digestion, and dewatering as established in the draft Technical Memorandum Analysis of Wastewater Alternatives. Estimated construction costs exclude sitework, recurring, or disposal/reuse costs. These costs were normalized using the ENR CCI.

Advanced treatment (Microfiltration/Reverse Osmosis & advanced oxidation) system – The construction cost estimate for the advanced treatment system is based on a unit cost estimate of \$7.00 per gallon per day of effluent treated from the Draft Water Recycling Feasibility Study (Dudek, March 2012). A mass balance was performed to determine the size for the advanced treatment system assuming an influent maximum month flow rate of 2.18 MGD and influent TDS concentration of 1106 mg/L (95th percentile TDS measured between August 2011 and December 2011). A treatment goal effluent TDS concentration of 300 mg/L was set based on the sensitivity of avocado trees to chloride concentrations (reported as approximately 117 mg/L). The Draft Water Recycling Feasibility Study estimated the proportion of chloride to TDS is about 36 percent. It is assumed that chloride is removed proportionally to TDS in the RO process. Percent recoveries and TDS removal efficiencies area were assumed as in the Draft Water Recycling Feasibility Study. This results in an influent flow to the advanced treatment system of 1332 gpm (1.92 MGD) and a waste brine stream of 368 gpm at 3,318 mg/L TDS, or 14,664 pounds per day. The cost for brine disposal is not included in this cost estimate.

Recycled water facilities – It is assumed that the Water Recycling Facility will produce tertiary disinfected recycled water from the full influent flow, appropriate for unrestricted reuse applications, as defined by CCR Title 22. A more extensive market study may be required to assess the potential for full use of all the water produced at the plant. A Draft Recycled Water Feasibility Study was produced in March 2012



(Dudek) which analyzed the feasibility of a recycled water project for the combined Morro Bay and Cayucos Sanitation District plant. Costs established in the study were based on the recycling facility being installed at the existing WWTP location. The market assessment determined that the greatest opportunity for a large-scale reuse program is for agricultural irrigation along Highway 41, with an estimated average annual demand of 500 AFY (approximately 310 gpm on average). The project could potentially reduce pumping of the Morro Valley Groundwater Basin. The study indicates the following main challenges of such a project:

- Jurisdictional restrictions – most of the agricultural areas are outside the City’s service area, as well as sphere of influence necessitating annexation of unincorporated County of San Luis Obispo through LAFCO
- Sensitivity to salts, and in particular chloride concentrations would need to be addressed to ensure avocado tree yield and tree health is not jeopardized
- Fail safe disposal would still necessitate ocean outfall during low demand periods
- Pricing recycled water to be competitive with readily available groundwater would require substantial subsidies to be borne by the City and District.

Recycled water storage – This report assumes a steel day tank will be used as a buffer for the recycled water pump station. A volume of 750,000 gallons (12 hours of storage on average) is estimated for the purposes of this report, at a unit cost range of \$1.10 to \$1.35 per gallon.

Recycled water pump station – It is assumed that the recycled water pump station will be sized to deliver a flow equivalent to the maximum month flow of 2.18 MGD (approximately 1,500 gpm). Construction cost estimates were derived from cost curve data presented in Figure 29-7 of Pumping Station Design by Robert Sanks. Considered to be industry standard, these cost curves were derived from historical construction costs. Cost estimates for this study were normalized using the ENR CCI.

Recycled water pipeline - It is assumed that the recycled water pipeline will be sized to transport the maximum month flow of 2.18 million gallons per day (MGD). Based on a design velocity of 5 fps, it is estimated that the sewer force main will be 12-inches in diameter. For the purposes of this report, it is assumed the pipeline will be AWWA C900 polyvinyl chloride (PVC) pressure pipe, installed at depths ranging from 3 to 5 feet of cover. A per mile unit cost estimate was established and estimated lengths were rounded to the nearest mile. The unit cost estimate assumes trenching in paved roadways, traffic control, and asphalt paving. For the purposes of this study, the recycled water pipeline length was estimated from the site under consideration to the assumed main recycled water pipeline: Highway 41 for the Morro Valley sites, or to the intersection of Highway 1 and Highway 41 for Tri-W and Chevron. The unit costs that were developed for the Options Report using these assumptions were updated using ENR CCI.

Treated effluent disposal facilities – A “fail-safe” effluent disposal location is required to handle wet weather flows during parts of the year when irrigation is not feasible. Due to the uncertainty of percolation capacity at each site, this study assumed a pump station and pipeline will be required to transport treated effluent to the existing ocean outfall.

Treated effluent pump station – It is assumed that the treated effluent pump station will be sized to routinely deliver a flow equivalent to the maximum month flow of 2.18 MGD (approximately 1,500 gpm)



and will have additional pumps to convey the full peak hour flow for short periods of wet weather. Construction cost estimates were derived from cost curve data presented in Figure 29-7 of Pumping Station Design by Robert Sanks. Considered to be industry standard, these cost curves were derived from historical construction costs. Cost estimates for this study were normalized using the ENR CCI.

Treated effluent disposal pipeline – It is assumed that the treated effluent disposal pipeline will be sized to routinely transport the maximum month flow of 2.18 million gallons per day (MGD) and will have additional pumps to convey the full peak hour flow for short periods of wet weather. Based on a design velocity of 5 fps, it is estimated that the sewer force main will be 12-inches in diameter. For the purposes of this report, it is assumed the pipeline will be AWWA C900 polyvinyl chloride (PVC) pressure pipe, installed at depths ranging from 3 to 5 feet of cover. A per mile unit cost estimate was established and estimated lengths were rounded to the nearest mile. It assumes trenching in paved roadways, traffic control, and asphalt paving.

Construction Contingency – A construction cost contingency is often added to a construction cost estimate to account for unforeseen construction costs when budgeting for a project. For conceptual level planning a construction contingency of 20 to 30% is typical. A construction contingency of 30% is used in this report. The City may wish to exclude presentation of this line item from the overall project budget – however, it is included in this siting study to acknowledge the extent of unknown conditions that could arise during the subsequent master planning, final design, and construction phases of the project.

Administration, Design, and Construction Management – Project administration, engineering design, and construction management costs represent the “soft costs” directly related to implementation of a project from planning to construction. An allowance of 30% is used in this report.

The construction costs described herein are meant to support a relative construction cost comparison of the potential project sites under consideration. They do not include costs for the following additional items which will be required for the full wastewater project:

- Interim upgrades to the existing WWTP (estimated at \$3,910,000 in Draft Fine Screenings Report)
- Decommissioning and demolition of the existing WWTP (estimated at approximately \$3,000,000 to \$5,000,000 in WRF Facility Master Plan Technical Memorandum 3: Morro Bay – Cayucos WWTP Decommissioning, Black & Veatch)
- Brine disposal, which will be required for advanced treatment utilized for salts removal
- Recycled water distribution system beyond major transmission main from WRF site
- Recycled water customer retrofit and connections (Costs can vary significantly depending on flowrate and complexity of the system. Average connection and retrofit cost was estimated at \$15,000 per connection in Draft Recycled Water Feasibility Study, Dudek, March 2012)
- Property acquisition
- Environmental mitigation and permitting costs
- Legal costs

Cost Summaries Presented in WRF Site Report - The costs presented in the report were grouped into the following major cost categories for presentation and comparison among the sites:



Major Cost Category	Project Cost Component
Raw Wastewater Pump Station and Pipeline	Sewer force main Raw wastewater lift station
WRF Phase 1 (Tertiary Treatment Plant with Disinfection and Solids Handling Facilities)	Earthwork allowance Secondary treatment system Supporting treatment plant facilities (Paving, buildings, roads, etc.) Bridge (for Madonna site only) Disinfection system Tertiary filtration Solids handling facilities
Advanced Treatment	Advanced treatment (RO & oxidation)
Recycled Water Pump Station and Pipeline	Recycled water storage Recycled water pump station Recycled water pipeline
Brine/"Wet Weather" Disposal Pump Station and Pipeline	Treated effluent disposal pump station Treated effluent disposal pipeline

In the tables, the contingency and administrative costs (described above) were included beneath the construction cost subtotals. The tables displayed the midpoint of the cost ranges for each of the major categories. The cost ranges varied by approximately 25% above and below the midpoint. The total construction cost opinions were rounded to two significant figures at the bottom of each table.

20-Year Present Value Analysis – For the conceptual present value analysis described in the tables, the total construction cost was added to 20 years of projected, annual onsite treatment operation & maintenance (O&M) cost in addition to the annual power costs to convey raw wastewater to the site. This calculation is intended to be a conceptual lifecycle cost that will allow comparison of the various sites, although the lifecycle of the plant cycle itself can be over 50 years. Most of the major mechanical equipment (other than pipelines and concrete basins) requires replacement on intervals up to 20 years – therefore, 20 years was used as a common basis for the “lifecycle” evaluation. Based on previous work in the Facility Master Plan and the Fine Screening Evaluation, it is estimated that the onsite O&M costs (chemical, power, labor and maintenance at the WRF) will range from approximately \$1,400,000 to \$1,900,000 per year and will be similar among the different sites. The midpoint of the range of annual onsite treatment O&M costs was used in the present value analysis. The main difference between the sites would be the ongoing energy costs associated with pumping, which is largely a function of distance to the City’s main collection system. It was assumed the cost escalation rate and the discount rate would be roughly equivalent for this preliminary, conceptual planning-level cost analysis. A more detailed assessment should be performed after a site is selected and the master planning process begins – this analysis is intended only to allow a relative comparison of the cost impacts of different sites.



Appendix B

Outreach to Cayucos Sanitary District

Letter from City of Morro Bay to CSD (April 7, 2016)

Response from CSD (April 22, 2016)



CITY OF MORRO BAY

CITY HALL

595 Harbor Street
Morro Bay, CA 93442

April 7, 2016

President and Board Members
Cayucos Sanitary District
200 Ash Avenue
Cayucos, CA 93430

Honorable President and Board Members,

As you know, over the past several months the City of Morro Bay has been focused on selecting a Water Reclamation Facility (WRF) site in the Morro Valley, relatively near the City's most promising water reuse opportunities. Recent technical studies and property acquisition issues have shifted the City's focus within the Morro Valley from the Rancho Colina site to the adjacent Righetti property.

At our March 8, 2016, City Council meeting, neighbors closest to the Righetti property expressed concerns over that site location and requested the City Council reach out to the Cayucos Sanitary District (CSD) to reconcile and reconsider the pros and cons of building a joint facility. On behalf of the Morro Bay City Council, I was asked to commence that outreach. Since reconciliation and teamwork will be essential as we determine the future of the existing wastewater treatment plant land, facilities and supporting infrastructure (WWTP), it seems appropriate and wise to begin that process now, even if a joint future facility is not of interest. To that end, we believe it would be helpful to engage the services of professional "mediator" to assist both governing bodies to resolve any existing roadblocks that prevent us from providing the best possible representation of, and service to, our communities.

I believe CSD made its position clear in April 2015 when it adopted a resolution to withdraw from a future joint partnership with the City of Morro Bay to construct a new WRF. However, the resolution appeared to leave a door open if conditions between the two agencies changed, since it included the phrase "at this time." The City of Morro Bay has consistently made it clear—both before and since the CSD's adoption of that resolution—its path forward would still preferably include CSD as a potential partner in the pursuit of a joint facility. Our continued efforts regarding a WRF consistently considers and the Facility Master Plan will account for the possibility of including a regional facility as a project alternative, in order to accommodate the potential the two agencies once again work together to pursue a joint facility. That being said, the time will come when one of those paths must be chosen so the City can timely meet its obligations to construct a replacement facility.

April 7, 2016

Because that time is not yet upon us and to uphold the request of community members, this letter asks the CSD Board to consider a mediated discussion with the Morro Bay City Council with the goal of returning to an effective working relationship, even if only with regard to our existing shared WWTP, but perhaps also an open discussion of a joint project. We are aware it may be decentralized, separate, smaller facilities, sited closest to our respective water reuse opportunities, actually represent the smartest approach for both communities. A joint examination of that question would certainly be worthwhile.

The City Council intends to take the City's next step forward on a WRF project on May 10, when it will consider selecting a site for the new facility. Ideally, that decision would have the benefit of feedback from the CSD Board regarding whether or not it desires to rekindle a working relationship with the City Council to pursue a single joint facility. Many in our City believe that approach could result in cost savings for residents and businesses and property owners in both communities.

The City Council has followed CSD's Sustainable Water Project with great interest. We respect the CSD's desire to independently pursue its own facility, and support your efforts in that regard. The City Council does not wish to interfere in those efforts, and believes you and your consultants have done a fine job. Nevertheless, the City Council also respects the desires of those in our community who believe our two agencies can develop better and more cost-effective solutions constructively working together. We too believe that is a useful effort and owe it to our community to find out if that is indeed a possibility.

Regardless of whether the CSD is once again open to pursuing a new facility with the City, we will still need to work together on the common cause of decommissioning the jointly-owned and operated WWTP. We recognize there is some level of mistrust between the two agencies, which presents a challenge to moving forward on a common framework for that necessary and important effort. We want you to know the City Council is open to any reasonable approach for creating a mutually beneficial path to completing that vital work. We know we both remain committed to our communities realizing the water quality and reclamation benefits of our new separate facilities or a joint one, as well as repurposing the existing WWTP site.

We look forward to your response, and wish you the best.

Sincerely,



Mayor Jamie Irons

c: Honorable Mayor Pro Tem and Council Members

APR 22 2016

Administration

CAYUCOS SANITARY DISTRICT

200 Ash Avenue
PO Box 333, Cayucos, CA 93430-0333
805-995-3290

GOVERNING BOARD

R. B. Enns, President
D. Chivens, Vice-President
S. Lyon, Director
C. Maffioli, Director
D. Lloyd, Director

April 22, 2016

City of Morro Bay
Attn: Mayor Jamie Irons
595 Harbor Street
Morro Bay, California 93442

RE: MORRO BAY/CAYUCOS SANITARY DISTRICT

Dear Mayor Irons,

The Cayucos Sanitary District (CSD) Board of Directors is in receipt of your letter dated April 7, 2016 regarding our respective water reclamation facilities projects and the existing wastewater treatment plant (WWTP). As you are aware, on April 30, 2015 the CSD unanimously approved Resolution 2015-1 to independently pursue alternatives for wastewater treatment and water reclamation. These alternatives were examined within the scope of our Cayucos Sustainable Water Project (CSWP) and the CSD is now entering into the development and construction of a water resource recovery facility.

Therefore, with regard to the development of a new water reclamation facility, the CSD respectfully declines to pursue a joint project with the City of Morro Bay (CMB). While we agree that some residents within the CMB have expressed an interest in keeping the CSD as a partner, the CMB Council and the CSD have a fundamental divergence as to what constitutes a partnership. Specifically, both CMB's proposed Memorandum of Understanding dated March 12, 2015 and Resolution 25-15, copies enclosed, continually insist that, "The CSD have no approval authority," "The ultimate operation and ownership of facilities shall be the responsibility of CMB," "The CSD shall be a wholesale customer," and that "The cost (not ownership) of the Morro Bay Water Reclamation Facility be shared 70% Morro Bay, 30% Cayucos." This partial list of CMB requirements outlines the participation in the new CMB facility and does not reflect a true partnership as that term is commonly understood. Furthermore, as stated in your letter, any new CMB facility would focus on the most promising water reuse opportunities for the CMB. Therefore, and most importantly, the Cayucos community

RECEIVED
Cayucos Sanitary District

would have no entitlement to beneficial reuse of our own reclaimed water as a sustainable long term resource.

The CSD does not believe that the services of a mediator would provide any tangible benefit to either community. Instead, the CSD feels that a simple showing of mutual respect for the foundational policy decisions, boundaries, and goals of our respective agencies would go a long way toward restoring a healthy working relationship in the governance of our jointly owned WWTP.

The CSD would like to take this opportunity to reaffirm our commitment to working together with the CMB in closely coordinating the decommissioning of the WWTP and the future use of the outfall. The CSD recognizes that these are important issues for both of our communities and we are dedicated to following through with mutually beneficial solutions.

It is critical that neither community lose sight of the need to replace the existing WWTP with all due speed. We lost over five years of time methodically planning, and wasted over \$2,000,000 in our initial mutual efforts to that end. The Regional Water Quality Control Board (RWQCB) has been very accommodating in extending the time frame given to us to comply with the Clean Water Act. Most recently, former RWQCB Executive Director Ken Harris stated in his February 19, 2015 letter to our respective Managers, "Therefore, the communities face [Mandatory Maximum Penalties] if the new plant is not operational by 2021." We are aware of some of the problems you face in choosing an appropriate site for your WRF, and the resultant delays. Inasmuch as the CSD has made significant progress on our CSWP, we do not feel that it would be in the best interests of the Cayucos community to deviate from our current path. We wish you the best of luck in the development of your own water reclamation facility.

In closing, thank you for your letter. The CSD views it as a positive step toward working together more effectively in the governance and coordinated decommissioning of the WWTP and in repurposing the WWTP site to maximize the value and future potential of this precious jointly owned asset, and we look forward to building on that.

On behalf of the Cayucos Sanitary District Board of Directors,



Robert B. Enns
Board President

Cc: Rick Koon, District Manager
Timothy Carmel, District Counsel
Encl. CMB MOU March 12, 2015
CMB Resolution 25-15

**MEMORANDUM OF UNDERSTANDING
BETWEEN THE CITY OF MORRO BAY AND
THE CAYUCOS SANITARY DISTRICT
FOR THE PRELIMINARY DEVELOPMENT OF A NEW WATER RECLAMATION
FACILITY ON THE PROPOSED RANCHO COLINA SITE**

This **MEMORANDUM OF UNDERSTANDING** (this **MOU**) is hereby made and entered into this ___ day of March, 2015 (the “Effective Date”) by and between the City of Morro Bay, a municipal corporation, (CMB) and the Cayucos Sanitary District (CSD) [formed and operating under the authority set forth in _____] (sometimes referred to individually as the Party and collectively as the Parties).

WHEREAS, CMB has completed and approved a New (Regional) Water Reclamation Facility (WRF) Preliminary Planning and Siting Study for the replacement of the existing wastewater treatment plant located in the City of Morro Bay with a New WRF initially proposed to be located at the site known as Rancho Colina (sometimes referred to as the Project); and

WHEREAS, the State of California Water Board desires entities to cooperate regionally where feasible for the beneficial treatment of wastewater to effect economies of scale and reduce discharge of waste materials into the waters of the State; and

WHEREAS, on February 25, 2014, the CMB City Council resolved to have a WRF operational prior to the expiration of the discharge permit for the existing Waste Water Treatment Plant (WWTP), being five years more or less;

WHEREAS, the Parties currently share the capacity of the WWTP with CMB using 72% and CSD using 28% (the Current Capacities); and

WHEREAS, the Morro Bay community has provided input on the New WRF project through goal setting designating project goals, including, but not limited to:

- Produce tertiary, disinfected wastewater in accordance with Title 22 requirements for unrestricted urban irrigation in a cost effective manner for all ratepayers.
- Design to be able to produce reclaimed wastewater for potential users, which could include public and private landscape areas, agriculture, or groundwater recharge. A master reclamation plan should include a construction schedule and for bringing on customers in a cost effective manner.
- Allow for onsite composting
- Design for energy recovery
- Design to treat contaminants of emerging concern in the future
- Design to allow for other possible municipal functions
- Ensure compatibility with neighboring land uses; and

WHEREAS, CMB and CSD have been operating under a Joint Powers Agreement (JPA) for the operation of the existing WWTP located in the City of Morro Bay on Atascadero Road

since June 16, 1953, as amended by letters on May 9, 1969, and June 26, 1973; and cancelled and replaced with the current agreement on October 25, 1982; and

WHEREAS, the existing JPA agreement does not consider, outline, or guide, CMB and CSD in their relationship, obligations, or responsibilities to develop a plan for the proposed construction of a New WRF at the proposed Rancho Colina site to the benefit of both communities; and

WHEREAS, CMB and CSD have come together to collaborate and to make and develop a plan for the proposed construction of a New WRF at the Rancho Colina site to the benefit of both communities; and

WHEREAS, CMB and CSD believe wastewater generated in both communities will be more advantageously treated at the New WRF proposed to be located at the Rancho Colina site that ultimately will be owned and operated by CMB; and,

WHEREAS, prior to making a final decision to proceed with the New WRF, including making a final determination as to the location of the New WRF, CMB, the lead agency for purposes of California Environmental Quality Act (CEQA) must first complete and approve or certify all legally required environmental analysis under CEQA; and,

WHEREAS, CMB and CSD anticipate at least some of the funding for this project will be provided through federal grants or other federal financing programs and one or more federal permits may be required for this project, which shall constitute federal undertakings requiring environmental review in compliance with the National Environmental Policy Act prior to release of federal funding and/or issuance of federal permits.

NOW THEREFORE, in consideration of the mutual covenants herein contained, the Parties agree as follows:

- 1) **Description of the Project.** The Project is proposed to include the New WRF and related infrastructure to convey (i) municipal sewage to the new WRF from the terminus of CMB's and CSD's existing facilities, including a new raw wastewater pumping station and (ii) treated wastewater to points of discharge into the waters of the State or for beneficial reuse within legally authorized areas. Conveyance infrastructure and facilities may be located within existing or future rights-of-way.
- 2) **Components of the New WRF Project subject to this MOU.** Immediately following execution of this MOU the project team shall commence with the following tasks:
 - Preparation of an RFP and selection of consultant(s) to act as Project Manager
 - Selection of consultants to perform fatal flaws analysis for the following areas: Biological Resources, Cultural Resources, Geotechnical and Groundwater
 - Application for a State Revolving Fund Planning Loan
 - Preparation of an RFP for the Facility Master Plan (FMP)
 - Preparation of an RFP for Environmental Review (ER) (CEQA/NEPA)

- Selection of FMP and ER consultants
- Preparation of the FMP
- Preparation and circulation of the Initial Study for the project based on the results of the FMP

3) **Development of Initial Stage (Reclamation Ready).** The Project shall be developed in stages and the initial stage (Reclamation Ready) shall be developed on a timeline necessary to meet the goal of CMB. The design capacity of the New WRF and necessary conveyance infrastructure and facilities shall accommodate the peak wet weather build-out wastewater flows from both communities with CMB owning 100% of the capacity and CSD having rights to a capacity equal of its share of the Current Capacity.

4) **Roles and Responsibilities**

- a) CSD and CMB shall reimburse each other for all expenses incurred for the development of the New WRF facilities incurred since January 8, 2013, proportional to their respective anticipated capacity (72%CMB share/28% CSD share basis) in the new WRF.
- b) The CSD agrees to support and not oppose grant or loan applications, permit amendments or applications, including land use entitlements or annexation requests, in conjunction with the Project.
- c) The CMB Public Works Director/City Engineer with the assistance of CMB planning, engineering and operations staff will oversee the FMP, ER and preliminary property acquisition process. The CMB Public Works Director/City Engineer shall consult with CSD General Manager for review and to provide opportunity for CSD's input into the process. CMB and CSD staff will hold monthly meetings to review the progress of the Project.
- d) CMB City Council and CSD Board of Directors shall provide policy direction for the Project and shall meet at least quarterly to review the status of the Project, , as well as needed to ensure CSD's concerns have been heard and considered prior to CMB making any final decisions as to all matters related to the development and construction of the New WRF. Council/Board of Directors meetings related to this MOU shall be separate and distinct meetings from the existing joint (aka JPA) meetings Nothing in this section prevents the new meeting from occurring on the same day and directly following the adjournment of the existing joint meetings.
- e) The ultimate operation and ownership of facilities shall be the responsibility of CMB. CSD shall be a wholesale wastewater customer. The details and terms of that relationship is beyond the scope of this MOU and shall be negotiated, in good faith, by the Parties to this MOU with the goal of achieving an agreement executed on behalf of both Parties prior to the execution of a construction or Design/Build contract by CMB for the new WRF and ancillary infrastructure and facilities.
- f) CSD shall share the cost with CMB for the items listed in paragraph 2 for the Project. That cost sharing shall be based on the Current Capacities. At a minimum, the Facilities Master Plan report shall address project phasing, treatment methodology and anticipated project costs.
- g) Consultant Selection process shall follow all policies of CMB. CSD shall have the express right to participate and provide input in selection process of consultant firm(s) required to fulfill the items in paragraph 2 and possible final design phases of the Project.

- h) CMB and CSD agree to disseminate information to the public regarding this MOU and the Project jointly, whenever feasible, and will support and assist each other in developing and implementing their respective public information programs.
 - i) For purposes of environmental review under the CEQA, CMB shall be the lead agency and CSD shall be a responsible agency. Furthermore, for purposes of any environmental review required for federal funding or permits, CMB shall be the primary contact with any federal agencies conducting any environmental review under the National Environmental Policy Act or any other federal laws or regulations.
- 5) **Termination of this MOU.** This MOU shall expire at the earliest of (i) when the Parties enter into the agreement as discussed in subparagraph 4e, or (ii) June 30, 2016. Notwithstanding the above, this MOU may be extended by written agreement of CMB and CSD. If the time needed for the study of the Project extends beyond the expected timeline set forth herein, then the Parties agree to reasonably negotiate an amendment to this MOU.
- 6) **Modifications.** Modifications within the scope of this MOU shall be made by mutual consent of the Parties, by the issuance of a written modification, signed and dated by both Parties, prior to any changes being performed.

IN WITNESS WHEREOF, the Parties hereto have executed this Memorandum of Understanding to be effective as of the Effective Date.

CITY OF MORRO BAY

ATTEST:

JAMIE L. IRONS, Mayor

DANA SWANSON, Deputy City Clerk

CAYUCOS SANITARY DISTRICT

ATTEST:

ROBERT ENNS, President of the Board
of Directors

RICK KOON, District General Manager

APPROVED AS TO FORM:

JOSEPH W. PANNONE, CMB City Attorney

TIMOTHY CARMEL, CSD General Counsel

c: Agencies and Interested Parties

RESOLUTION NO. 25-15

A RESOLUTION OF THE CITY COUNCIL
OF THE CITY OF MORRO BAY, CALIFORNIA,
DIRECTING STAFF REGARDING THE DEVELOPMENT OF A NEW WATER
RECLAMATION FACILITY AT THE PREFERRED RANCHO COLINA SITE

THE CITY COUNCIL
City of Morro Bay, California

WHEREAS, the City of Morro Bay and the Cayucos Sanitary District (CSD) jointly own (60-percent/40-percent respectively) an existing 62 year old Wastewater Treatment Plant that requires replacement; and

WHEREAS, it has been determined to be in the best interest of Morro Bay to construct a new Water Reclamation Facility that complies with the California Coastal Commissions actions on January 10, 2013; and

WHEREAS, it is in the best financial interest of the community to minimize the major maintenance and repair costs at the existing wastewater treatment plant; and

WHEREAS, On February 25, 2014 the City Council resolved to have a new Water Reclamation Facility operational prior to the expiration of the discharge permit for the existing wastewater treatment plant, being five years more or less, and

WHEREAS, On December 9, 2014 the City Council reviewed the final report from John F. Rickenbach Consulting regarding recommended Water Reclamation Facility (WRF) sites and reclamation and selected the Rancho Colina site as its preferred alternative subject to the completion of the necessary environmental analysis of the preferred alternative, and

WHEREAS, On December 11, 2014 and again at the January 8, 2015 Joint meetings, both Morro Bay and CSD expressed a site preference for the Rancho Colina site subject to the completion of the necessary environmental analysis of this preferred site, and

WHEREAS, On February 11, 2015 the Regional Water Quality Control Board issued a letter to both Morro Bay and the CSD stating that the *anticipated* permit for the existing site will expire in 2021, and

WHEREAS, On March 12, 2015 at the Joint meeting, both Morro Bay and CSD directed their Staffs to issue a joint Request for Proposal for a Facilities Master Plan for a WRF at the preferred site, and

WHEREAS, On April 30, 2015 at the Joint meeting between the Morro Bay City Council and the Cayucos Sanitary District Board of Directors, the CSD Board presented the Morro Bay City Council with CSD Resolution 2015-1, stating in part: "*Cayucos hereby declares its intention to suspend consideration of participation in the Morro Bay WRF Project and independently pursue alternatives for wastewater treatment and reclamation of water that will maximize its resources and provide the greatest benefit to the Cayucos community.*", and

WHEREAS, On April 30, 2015 at the Joint meeting between the Morro Bay City Council and the Cayucos Sanitary District Board of Directors, the City Council moved and approved the following: *"The Cayucos Sanitary District and Morro Bay City Council agree to work cooperatively to construct a regional Wastewater Treatment Plant at the "preferred site" (Rancho Colina) by 2021. The parties agree to work together in good faith to share costs (beginning in Jan 2015) on a 70% (Morro Bay), 30% Cayucos basis, to establish common goals, release RFPs for Project Management and Environmental Review by the end of May 2015, and select the most appropriate facility master planning proposal by the end of June 2015."*, and

WHEREAS, On April 30, 2015 at the Joint meeting between the Morro Bay City Council and the Cayucos Sanitary District Board of Directors, the CSD Board did not make a reciprocal motion to that of the Morro Bay City Council, and

WHEREAS, On May 7, 2015 at the Water Reclamation Facility Citizens Advisory Committee (WRFCAC) meeting, the WRFCAC recommended a number of items that the City Council consider in moving forward with the WRF project, the items are reflected in items A-M below.

NOW, THEREFORE, BE IT RESOLVED, by the City Council of the City of Morro Bay, California, provides the following Direction to City staff:

- A. Plan for a WRF with regional capacity to be owned and operated by the City of Morro Bay.
- B. Master plan for a scalable facility, between 1.0 and 1.5 MDG, that will allow potential regional partners to join the project in the months ahead. Determine final sizing to be established in cooperation with the selected FMP consultant. Emphasize that scalability and phasing of the WRF is important not only for possible external customers (i.e. CSD) but also for possible increased flows due to revitalization of some Morro Bay areas such as downtown, MBPP and looking toward possible development of undeveloped/unincorporated areas within the context of the current effort to update both the General Plan and the Local Coastal Plan.
- C. Determine and establish rates for the CSD, should that agency wish to become a customer in the future. Tie the rates and buy in costs to project milestones, i.e. Prior to Completion of the FMP, Prior to completion of the Environmental Document, etc. The rate should include a fixed portion for capital costs and a variable portion for O&M costs.
- D. In the rate and buy in cost determination, costs shall include all Morro Bay WRF development expenses incurred since the January 2013 CCC denial of the Coastal Development Permit to reconstruct a facility on the beach.
- E. Release RFPs for Environmental Review and Project Management by the end of May 2015.
- F. Move forward with having the ad hoc consultant review subcommittee already established by the WRFCAC make recommendations to the WRFCAC regarding selection of the FMP, Project Management and environmental consultants that would be reviewed and forwarded to City Council for contract award.
- G. Commit to a thorough review and consideration of all appropriate treatment technologies in the FMP with the final decision to be resolved during the design-build procurement process to allow flexibility in the design.
- H. Commit to completing an MOU by July 1, 2015 outlining the procedures for the potential purchase of the Rancho Colina site.
- I. Commit to processing an annexation request for the Rancho Colina site with LAFCO as soon as possible with the understanding LAFCO will not be able to act upon this

application until the environmental review of the project is completed and approved/certified.

- J. Commit to the decommissioning of the existing WWTP as soon as practicable
- K. Commit to maximizing costs savings by minimizing spending on the existing WWTP to the level needed to meet permit compliance.
- L. Proactively work with all Regulatory Agencies
- M. Prepare a Local Coastal Program amendment in coordination with the California Coastal Commission, which requires the cessation of all WWTP activities at the current site once the new Morro Bay WRF is approved by the Regional Water Quality Control Board and fully operational, while still allowing the use of the outfall for disposal purposes

PASSED, APPROVED, AND ADOPTED, by the City of Morro Bay City Council, at a regular meeting held on this 12th day of May, 2015 by the following vote:

AYES:

NOES:

ABSENT:

JAMIE L. IRONS, Mayor

ATTEST:

DANA SWANSON, City Clerk