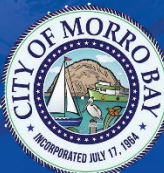




CITY OF MORRO BAY

WRFCAC Presentation – May 3, 2016



Presentation Overview

- **Community Goals**
- **Review of March 8, 2016 City Council Direction**
- **Actions Since March 8**
 - *Community Outreach*
 - *Outreach to Key Agencies, including CSD*
 - *Identify Potential New WRF Sites in Morro Valley*
 - *Review of Potential WRF Sites (both in and out of Morro Valley)*
- **Conclusions**



WRF Project Community Goals

- **Produce Tertiary Disinfected Wastewater**
- **Produce Reclaimed Wastewater Cost-Effectively**
- Allow for Onsite Composting
- Design for Energy Recovery
- **Design to Treat for Contaminants of Emerging Concern**
- Allow for other Municipal Uses
- **Ensure Compatibility with Neighboring Land Uses**
- **Operational within 5 years**



City Council Direction of March 8, 2016

- **Further Site Investigation**
 - Provide additional insights on two Morro Valley sites (Rancho Colina and Righetti)
 - Revisit Tri-W and Chevron sites, and compare them to Morro Valley sites in current context
 - Identify other potential sites in Morro Valley, if any
 - Update cost comparison for all sites
- **More Community Outreach to inform site selection**
 - Communitywide workshops
 - Reach out to CSD to explore getting back together
 - Visit other facilities with similar technologies



Community Outreach Efforts

- **WRF Project Overview Flyer**
 - Mailed to the entire community; addresses key questions
- **Communitywide Outreach**
 - Community Workshops (April 7 and 10)
 - Farmers Markets (April 9 and 14)
- **Interviews with Morro Valley Residents**
 - Explore concerns with potential Morro Valley sites
 - Gain insight on reclamation and ag water use issues



Previously Studied Sites 2011-2013

Primary Morro Valley Sites
Selected in 2014

SITES CURRENTLY CONSIDERED FOR FURTHER ANALYSIS

1 RANCHO COLINA SITE

- 8 acres near Highway 41
- Rolling topography; visually prominent from the highway
- Likely slightly more expensive than the Righetti
- 75 homes within 1,000 feet
- Close to water reclamation opportunities

2 RIGHETTI PROPERTY

- 10-15 acres of low ground near Highway 41
- 3,000 feet closer to the City's existing wastewater infrastructure than Rancho Colina
- Primary alternative to Rancho Colina since 2014
- Likely slightly less expensive than Rancho Colina
- 35 homes within 1,000 feet
- Close to water reclamation and wastewater infrastructure

3 TRI-W SITE

- Two properties totaling 556 acres; partly in City, partly in County
- Most suitable location is 10-15 acres in the County
- One of the top four sites in 2014 study
- Likely 10-15% more expensive than the sites in the Morro Valley
- No homes are located within 1,000 feet of the best part of site
- Other parts of Tri-W are near homes and/or planned commercial
- Property not previously available; portions may be constrained by a voter initiative

4 CHEVRON / TORO CREEK SITE

- In Toro Creek valley; site to be determined, about 3 miles north of Morro Bay
- One of the top seven sites in 2013 Options Report
- Likely 10-15% more expensive than the Morro Valley sites
- Far from Morro Bay homes and businesses
- Located 3+ miles from water reclamation opportunities would benefit City water supply

5 ADDITIONAL MORRO VALLEY SITES

- Investigating other sites in Morro Valley
- Close to water reclamation opportunities



Agency Outreach Efforts

- **Cayucos Sanitary District**
 - City Council reaches out to explore joint effort (April 7 letter)
 - CSD responds—no desire to get back together (April 22 letter)
- **California Coastal Commission**
 - Met with Coastal staff to discuss specific issues at each site
 - No fatal flaws at any site, but some sites have more challenges
- **LAFCo**
- **San Luis Obispo County**
- **Visited Fillmore and Santa Paula MBR facilities**



Investigating New Morro Valley Sites

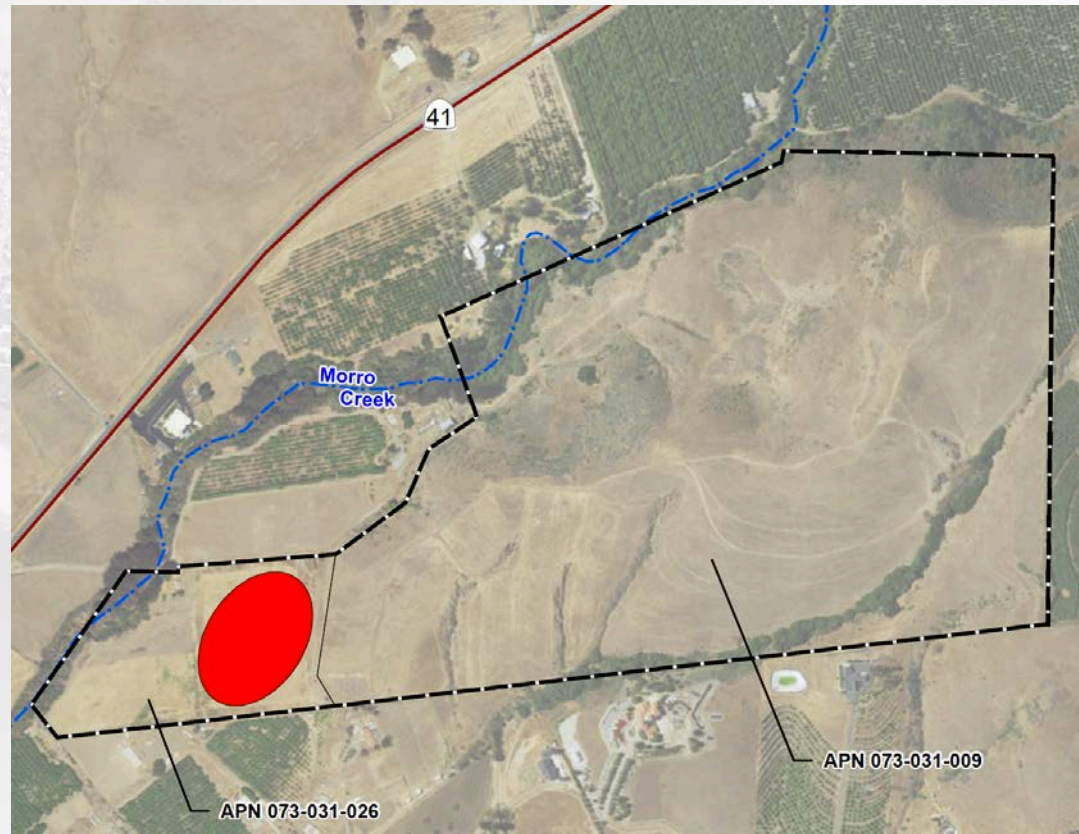
- **Explored potential sites in Morro Valley**
 - Sites needed to meet key criteria (elevation, distance, size, slopes)
 - Identified new potential WRF Site (Madonna property)
 - Met with property representatives
 - Conducted preliminary “fatal flaw” site investigations

- **Outreach and Research**
 - Met with neighboring property owners
 - Regulatory Agency Input
 - State Department of Conservation
 - LAFCo; San Luis Obispo County



Potential Morro Valley Site: Madonna

- Located across Morro Creek from Rancho Colina site
- 144 acres on two parcels; 17.1 acres are level
- Potential WRF on the flat parcel?



Site Investigation

- **Compare Five Sites (both inside and outside Morro Valley)**
 - Site 1: Rancho Colina
 - Site 2: Righetti
 - Site 3: Tri-W
 - Site 4: Chevron/Toro Creek
 - Site 5: Madonna
- **Compare relative costs**
- **Compare other issues (environmental, physical, regulatory)**
- **Consider risk and its effect on timing and cost**



Risk: How Time Delays Relate to Cost

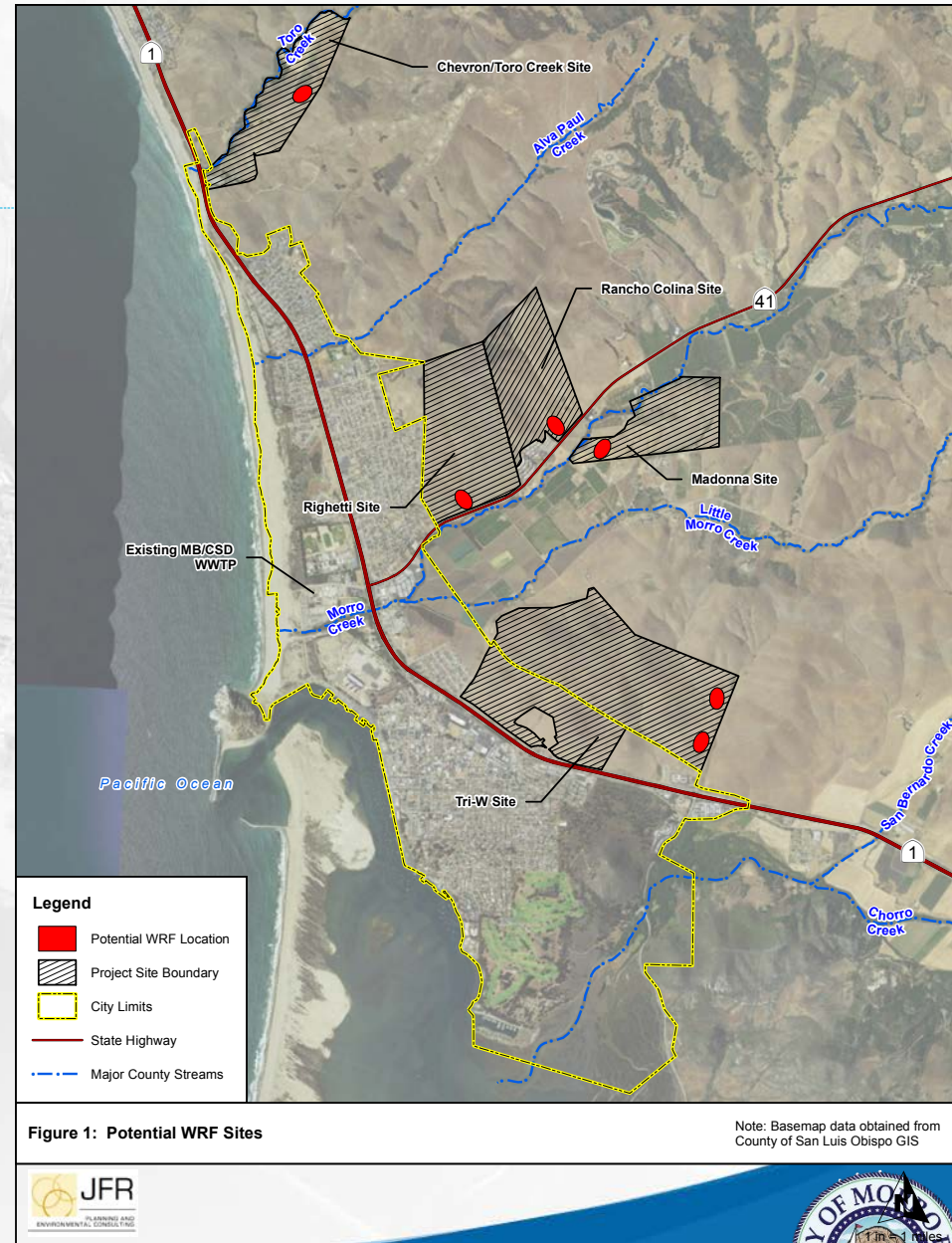
- **Time Delays lead to Cost Escalation**
 - 8% cost increase from 2013 to 2016; roughly 2% per year
 - Time Delays will result in higher costs
 - A key reason for completing project in 5 years
- **Causes of Time Delays**
 - Unforeseen issues that arise in the EIR process
 - Permitting complexity
 - Public opposition and/or legal challenges
 - Changing direction once project begins





Potential Sites

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



Construction Cost Estimates

	Site 1: Rancho Colina	Site 2: Righetti	Site 3: Tri-W	Site 4: Chevron/ Toro Creek	Site 5: Madonna
Phase 1 Construction	\$72M	\$67M	\$76M	\$81M	\$74M
Phase 1 + 2 Construction	\$98M	\$93M	\$107M	\$113M	\$100M
Annual O&M	\$1.9M	\$1.8M	\$1.9M	\$1.9M	\$1.9M
20-yr present value	\$136M	\$130M	\$146M	\$151M	\$137M

- Estimated construction costs include construction contingency (30%) and design/admin/CM (30%)
- Costs for Regional Reuse System are not included
- Annual O&M costs include WRF Phase 1 (power, labor, chemical) and raw wastewater pumping only
- Comparative cost analysis only. Project costs will be refined during Facility Master Plan and Design



Construction Cost Estimates (Phase 1 + 2 WRF)

- In general, Phase 1 + 2 WRF construction costs for **Tri-W** are **7-15% more** than the Morro Valley sites, depending on the site.
- Phase 1 + 2 WRF construction costs for the **Chevron/Toro Creek site** are **13-22% more** than the Morro Valley sites, depending on the site



Construction Cost Estimates (Phase 1 + 2 WRF)

- These cost estimates do not account for **time delays** and **cost escalation** that may result from **sources of risk**, including public opposition, challenges, and permitting complexities
- Cost estimates also do not account for **potential savings through project design**, if the WRF is built at a location with fewer constraints



Construction Cost Estimates

■ Approximate Comparative Impacts to Monthly Sewer Rates

Righetti	Rancho Colina	Madonna	Tri-W	Chevron/Toro Creek
--	+ \$3 – 5	+ \$4 – 6	+ \$8 – 13	+ \$10 – 17

- Estimated incremental increase in monthly sewer rate per average single-family home over WRF Project at Righetti
- Costs include Phase 1 and Phase 2 WRF, and do not include Regional Reuse System
- Base sewer rate increase for WRF Project will be developed/refined during Facility Master Plan and design



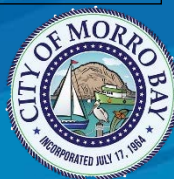
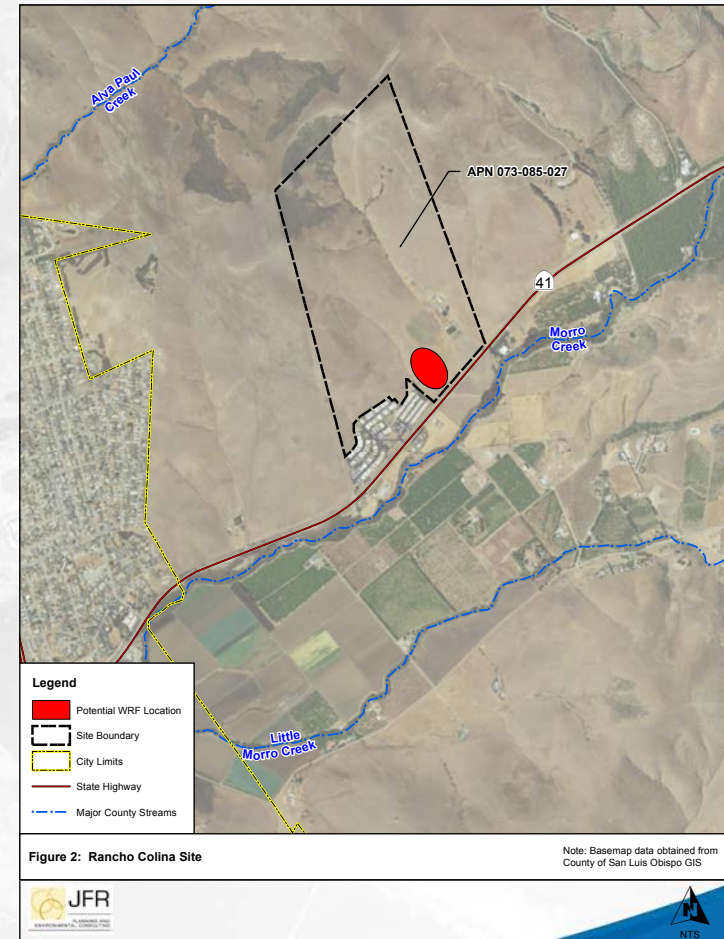
Site 1: Rancho Colina

■ Opportunities

- Proximity to reclamation opportunities
- New water wells for City?
- Remove existing outdated WWTP
- More customers and revenue?

■ Constraints

- Limited acreage available (8 acres; difficult terrain)
- Limited uses allowed
- Visually prominent from Highway 41
- Neighborhood proximity (source of risk)



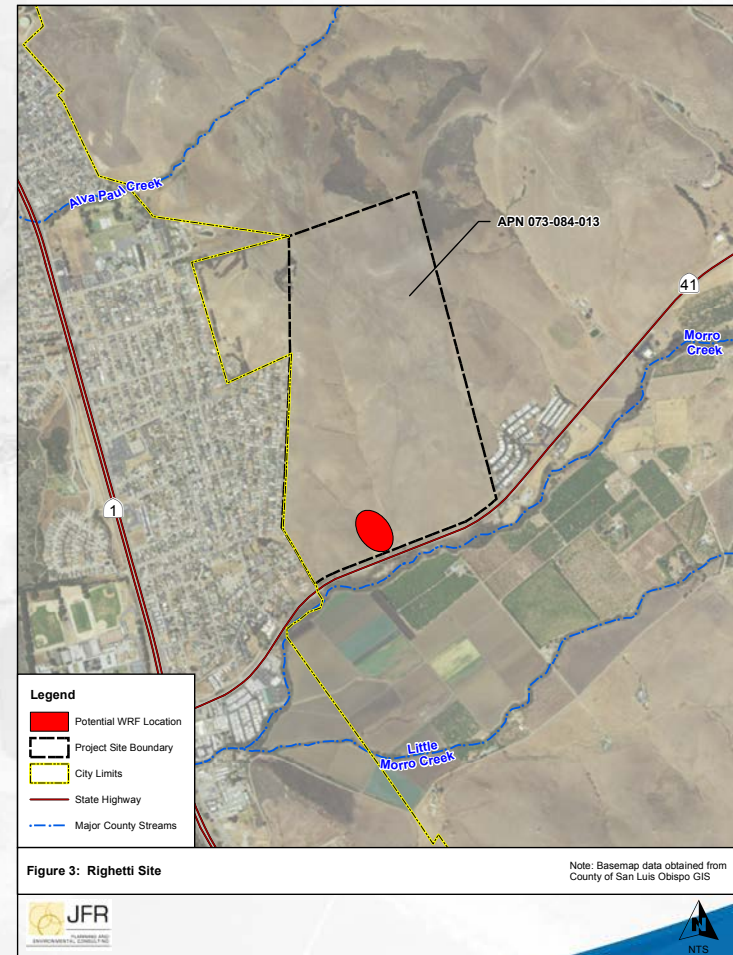
Site 2: Righetti

■ Opportunities

- Proximity to reclamation opportunities
- Property availability
- **Lowest cost option** (nearest to City collection system; lowest elevation)
- Land conservation potential?

■ Constraints

- **Strong public opposition within nearby neighborhood (source of risk)**
- Onsite coastal drainages



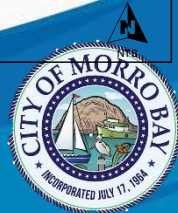
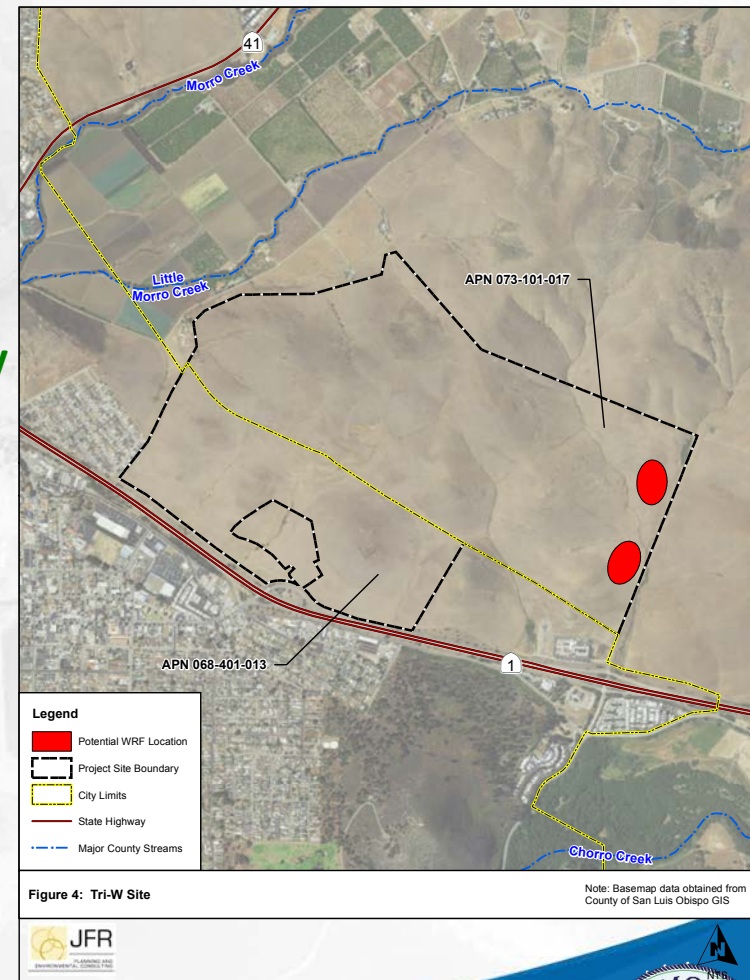
Site 3: Tri-W (County parcel; not City)

■ Opportunities

- No neighbors (low risk)
- Site not visible from any roadway
- Large, nearly flat site—design flexibility
- Multiple City goals could be achieved
- Coastal resources are avoidable
- Pipeline can avoid Caltrans ROW

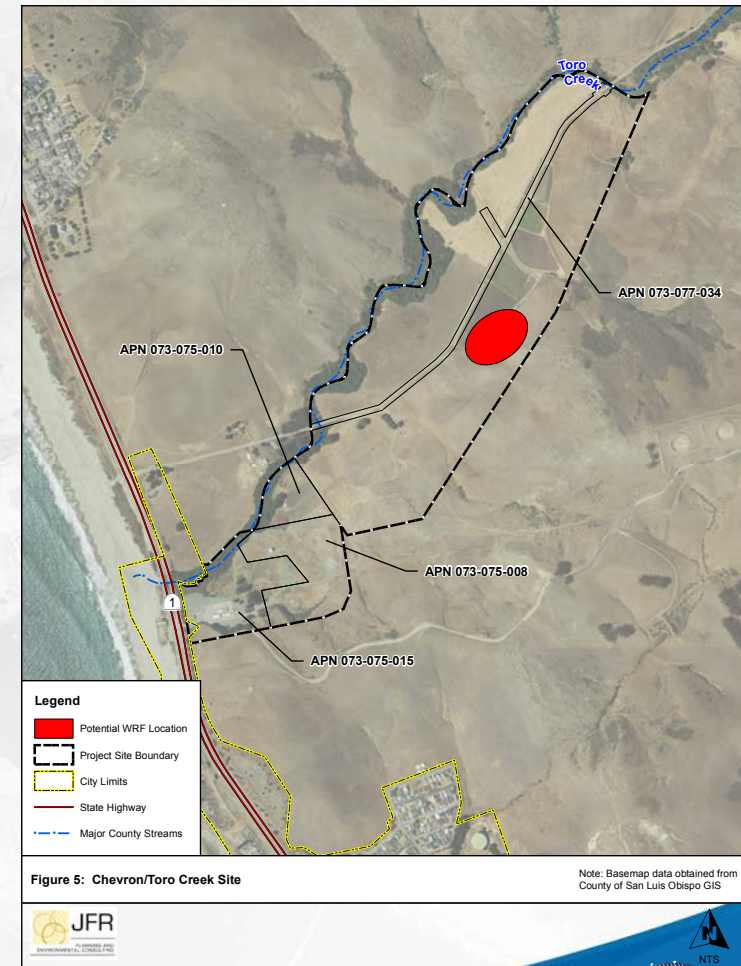
■ Constraints

- Higher cost than Morro Valley sites (farther from most reclamation and collection system)
- Onsite coastal drainages (avoidable)



Site 4: Chevron/Toro Creek

- **Opportunities**
 - Few neighbors (lower risk)
 - Large site—design flexibility
 - Multiple City goals could be achieved
- **Constraints**
 - Highest cost option (farthest from reclamation and collection point)
 - Prime Agriculture; ESHA; Cultural Resources
 - CCC will regulate, even if site is out of Coastal Zone (pipelines are in)
 - CSD complications (source of risk)



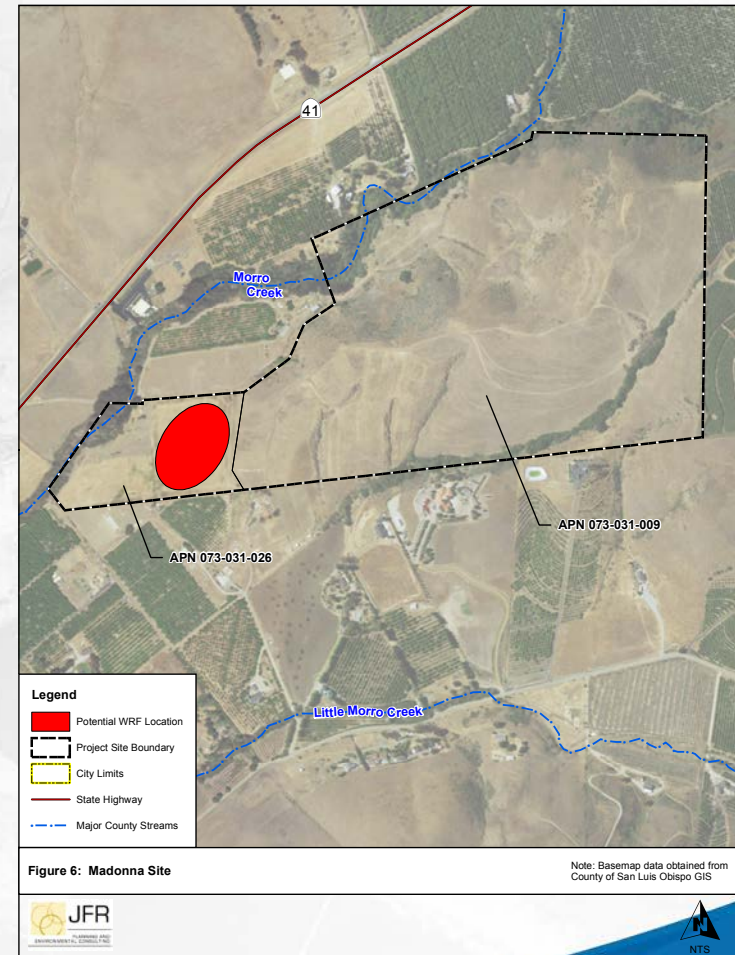
Site 5: Madonna

■ Opportunities

- Flat site—design flexibility
- Screened and setback from Highway 41
- Proximity to reclamation opportunities
- Multiple City goals could be achieved?

■ Constraints

- Strong neighborhood opposition (source of risk)
- Site access (new bridge needed)
- Williamson Act contract; prime ag
- Permitting complications (source of risk)



Comparative Analysis

- **Morro Valley Sites (Rancho Colina, Righetti, Madonna)**
 - Lower initial cost estimates, with Righetti lowest
 - High risk of opposition or challenge (all are near neighbors)
 - Righetti and Madonna sites already have strong neighbor opposition
 - Rancho Colina is limited in size and near neighbors (possible source of risk)
 - **Anticipate time delays and cost escalation at any of these sites; short-term cost advantage may disappear over time**



Comparative Analysis

- **Tri-W Site**
 - No neighbors; low risk
 - Large flexible site; multiple goals could be achieved
 - **Higher initial cost estimate; but low risk may lead to faster project and cost savings in the long run**
 - Low visibility may lead to further cost savings through design
 - Central location between Morro and Chorro Valleys, though farther from best reclamation in Morro Valley
 - Long-term reclamation opportunities in Chorro Valley?
 - Can avoid Caltrans ROW for pipelines



Comparative Analysis

- **Chevron/Toro Creek**

- Highest cost; unlikely to partner with CSD, so little chance for cost savings
- Possible time delays (risk) if there is a push to partner with CSD?
- Far from reclamation, which is a key project purpose



Conclusions

- **Righetti** is the site with **least capital & lifecycle cost** if project proceeds with **few delays**
- **Tri-W** is the **best overall site to build an achievable WRF in the context of the City's goals**, especially as they relate to long-term **cost, timing, and reclamation opportunities**, even if those opportunities are currently focused in the Morro Valley.
- **The Tri-W site is also best from the perspective of achieving other non-WRF goals**, potentially including a corporation yard and energy recovery (solar) facility.

