



Morro Bay Water Reclamation Facility Review and Direction



Purpose and Recommendation

Purpose

- Overview of where we are and how we got here with respect to Morro Bay's new WRF
- Receive Council direction on next steps for WRF planning, permitting and construction

Recommendation

- Staff recommends Council consider directing staff to conduct further outreach and analysis of specific proposed WRF locations, then report back to Council in 60 days (no later than May 10)



Agenda

- 1. Summary of Recent Events**
- 2. Project Background**
- 3. Comparison: WWTP/WRF Technologies**
- 4. Site Selection Process: January 2013 – October 2015**
- 5. The Situation at the end of September 2015**
- 6. Site Selection Process: October 2015 – March 2016**
- 7. Brief Technical Comparison of Various Sites: Morro Valley, Chevron, Tri-W and Giannini**



Summary of Recent Events

- **Planning for Rancho Colina / Righetti for ~2 years**
- **Recent concern with RC, MOU for Righetti**
- **Joint WRFCAC /Council meeting Feb 9th**
- **Neighborhood Workshop Feb 25th**
- **WRFCAC Meeting Mar 1st**
 - **Recommended 60-day pause**
 - **Recommended review of Rancho Colina and Righetti**
 - **And re-analysis of Toro Creek and “Tri-W”**



Project Background

- **1954:** Existing WWTP is built
- **2006:** Process to replace existing WWTP begins
- **2010:** Focus is to replacing the existing WWTP on the current site
- **2011-12:** Studies consider alternative sites; EIR prepared for upgrade at current site
- **January 2013:** Coastal Commission denies permit to rebuild at current site; facility must be moved



Project Background

- **2013:** Substantial communitywide outreach resulted in project goals
 - Community workshops
 - Stakeholder interviews
- **Water Reclamation** is a key General Plan goal
 - Affects technology and location for new facility
 - Reclamation options: irrigation, injection into aquifer (indirect potable reuse); direct potable reuse is a future option
- **December 2013:** City Council affirms community goals to build a Water Reclamation Facility



Project Background

Key WRF Goals

- Produce **tertiary disinfected wastewater**
- Design for **cost-effective reuse** (reclamation)
- Design to treat for **contaminants of emerging concern**
- Ensure **compatibility with neighboring land uses**
- The facility to be **operational within 5 years** of permit expiration (goal set for Feb 2021)



Project Background

■ WRF Technology Decisions

- Membrane Bio-Reactor (MBR) or Sequencing Batch Reactor (SBR) with Microfiltration and UV disinfection
- These technologies discussed in Nov-Dec 2015 WRFCAC and Council meetings

■ WRF Location

- December 2013 Options Report distills 17 sites to 7
- Morro Valley best meets cost and reclamation goals
- Specific site still to be determined, EIR key part of process



Comparison WWTP/WRF Technologies



Comparison WWTP/WRF Technologies

- City has a **62-year old wastewater treatment plant**
- Current plant **unable to meet federal and state discharge requirements**
- Regional Water Quality Control Board **requires replacement by 2021**
- The current plant is in the **floodplain, tsunami inundation zone and on 26 oceanfront acres**
- Current WWTP discharges **1 million gallons of treated water to ocean** every day



Comparison WWTP/WRF Technologies

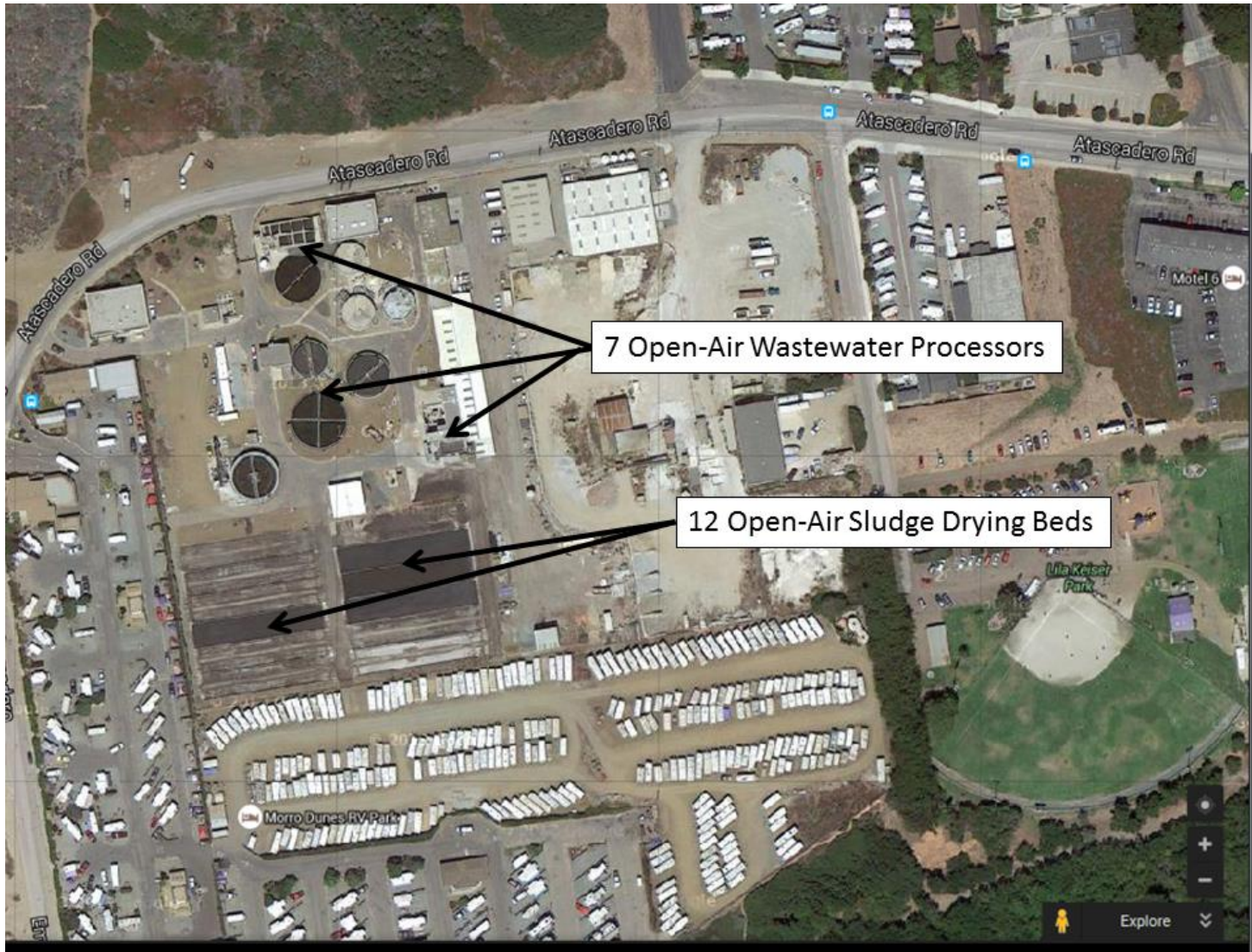
Existing WWTP Facts

- Current WWTP has 12 open air sludge drying beds
- Current WWTP has 7 uncovered wastewater treatment processes; no odor controls are in place
- WWTP is on 26 acres of oceanfront property across from Morro Bay High School
- WWTP is within 2,000 feet of
 - 560 homes and RV sites
 - Morro Bay High School
 - Lila Kaiser Park
 - “Morro Rock Beach”



Comparison WWTP/WRF Technologies

Existing WWTP Facts

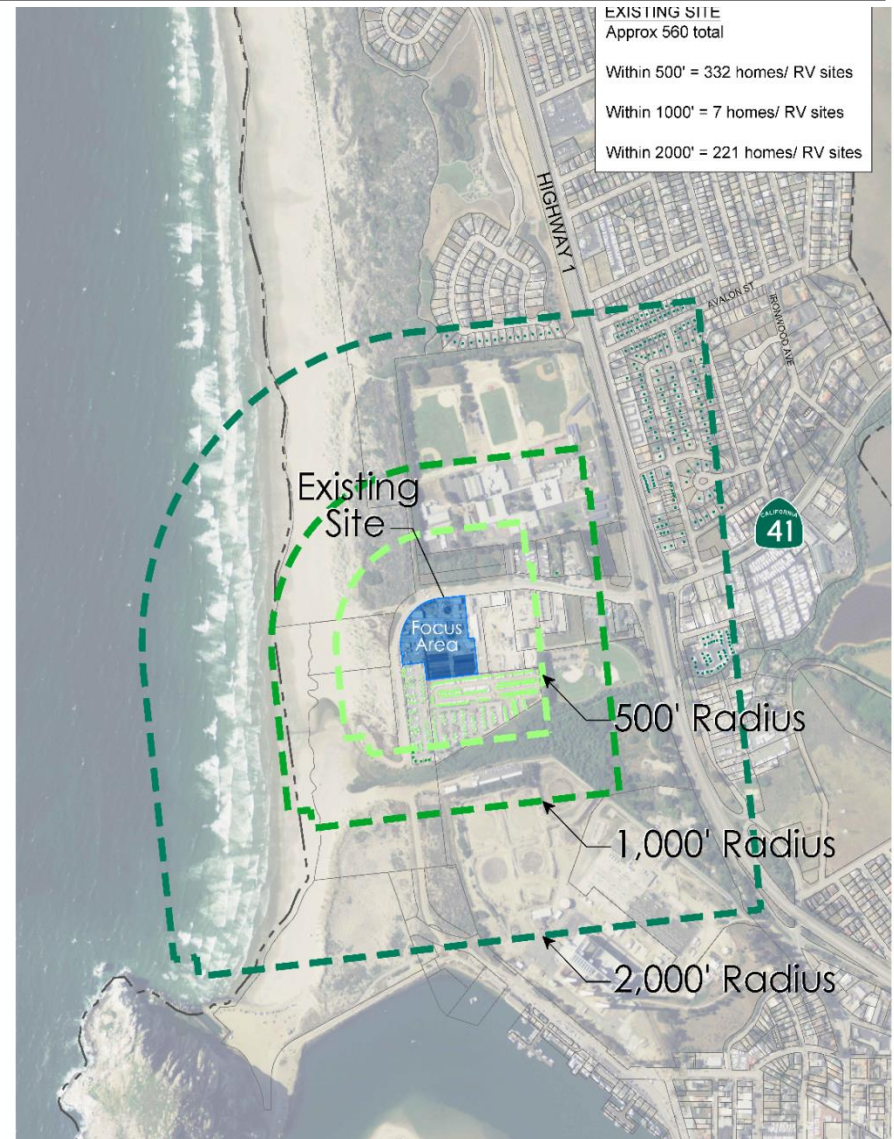




Comparison WWTP/WRF Technologies

Existing WWTP Location / Proximity

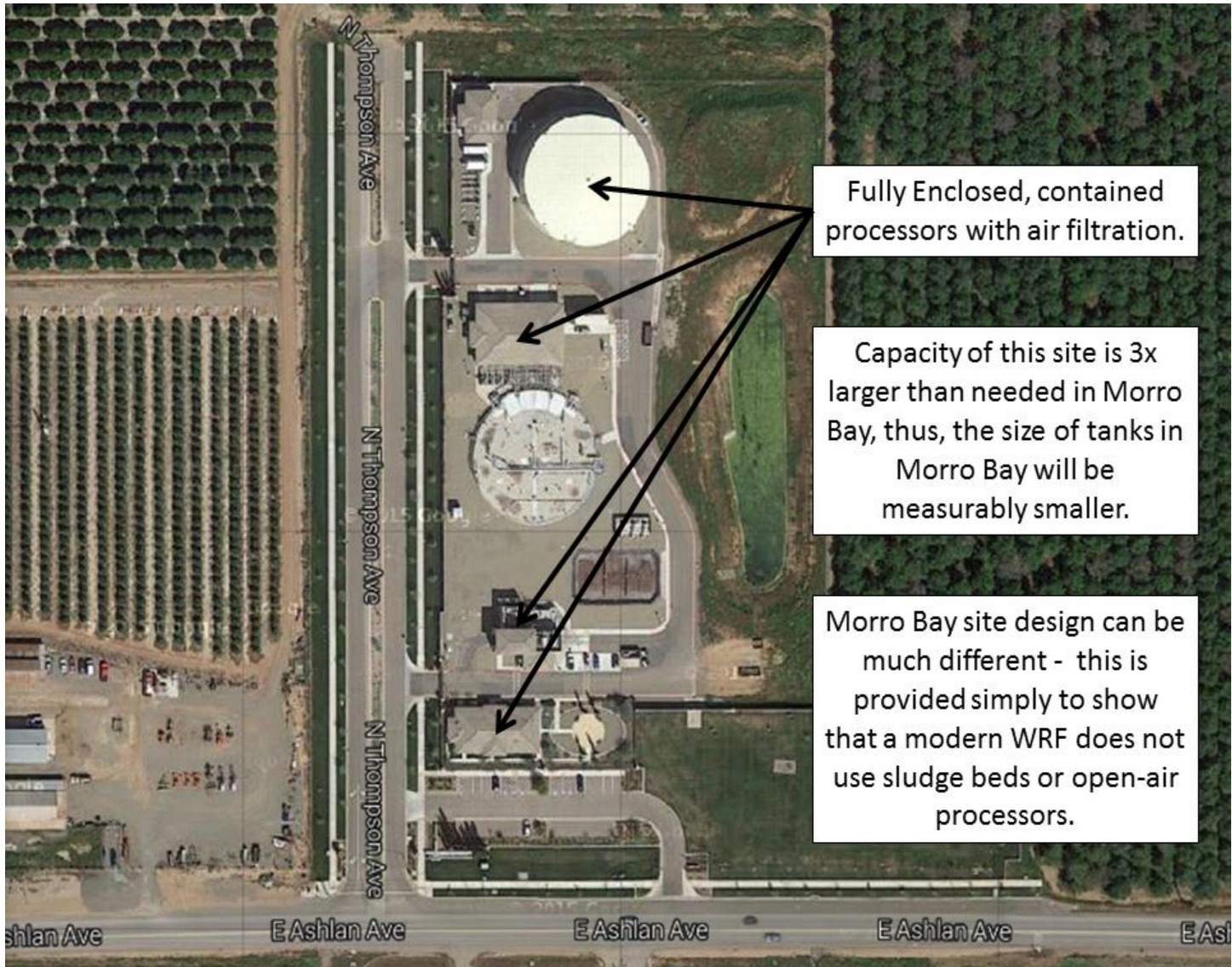
- 332 homes/RV sites within 500 feet
- High School within 500 feet
- 560 home/RV sites within 2,000 feet
- 2,000-foot radius includes homes in south Cloisters and west of Ironwood





Comparison WWTP/WRF Technologies

Example of New Technology WRF





Comparison WWTP/WRF Technologies

Example Street View of New Technology WRF





Site Selection Process

Jan 2013 – Oct 2015



Site Selection Process

Jan 2013 – Oct 2015

- **Community Workshops and Interviews** (July – Nov 2013)
 - Established siting criteria
 - Established facility goals and priorities
 - Cost and water reclamation were primary concerns
- **Options Report** examined 17 possible sites
 - First Draft (Oct 2013) refined through community workshop
 - Final Report (Dec 2013) ranked 7 sites



Site Selection Process

Jan 2013 – Oct 2015

- City Council affirmed project goals (Dec 2013; Feb 2014)
- Council chose three preferred sites for further study and refinement (Dec 2013)
 - Morro Valley (Rancho Colina and Righetti included)
 - Chorro Valley (Tri-W sites)
 - Giannini Property
- Selected Morro Valley (Rancho Colina and Righetti) as future WRF site (May 2014)
 - Identified Rancho Colina as preferred location for further analysis with Righetti as comparative alternative



Site Selection Process

Jan 2013 – Oct 2015

- WRFCAC established; meets monthly to guide process
- City studies regional facility at CMC;
Morro Valley still preferred site (Dec 2014)
- Cayucos opts out of joint process (April 2015)
- Program Management, Facility Master Plan team, and
Environmental Review team in place (summer 2015)
- Property negotiation at Morro Valley sites (late 2015)
- Technical studies (“fatal flaws”) at Morro Valley sites
(late 2015)



Situation at End of September 2015

- City moving firmly toward construction in the Morro Valley
 - Technical studies (fatal flaw analysis) essentially complete
 - All key planning and permitting consultants on board
 - Property acquisition in negotiation
- Site: Rancho Colina preferred site with Righetti as primary comparative alternative
- Both sites determined potentially suitable for WRF, Further study needed in EIR
- Rancho Colina concerns emerge in negotiation



Site Selection Process October 2015 – March 2016



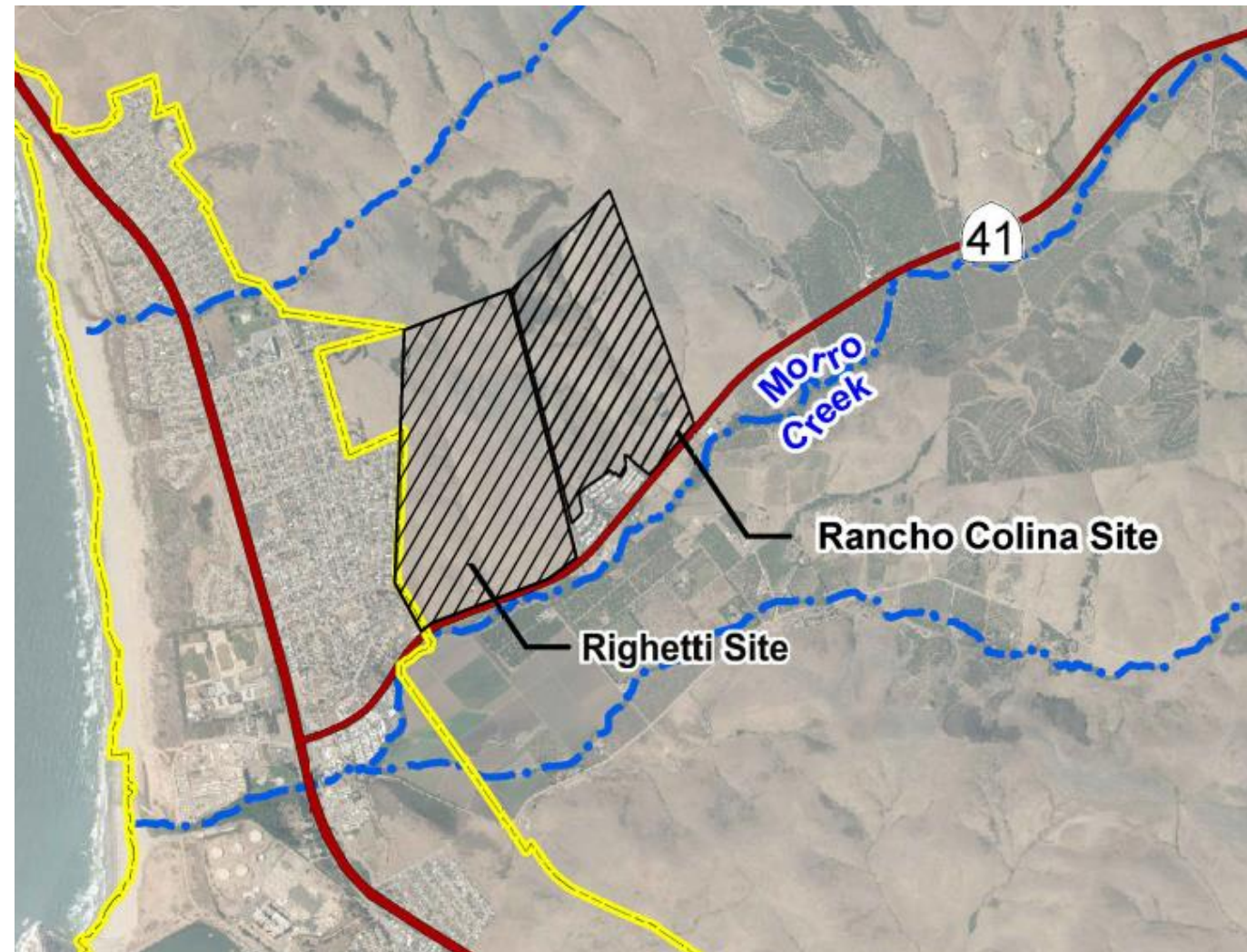
Site Selection Process

October 2015 – March 2016

- Early Oct – property owner placed new limitations on Rancho Colina site
 - Primary concern - now limited to 8-acre portion
 - New portion of property higher, steeper, and not fully studied in fatal flaws analysis
 - Increased constructions costs and measurably worse in terms of visibility (neighborhood compatibility) from Highway 41
 - Lesser concern - limited to WRF or water-related facilities
- Righetti
 - Property for sale and became available to the City
 - City secured option to purchase, if this site is chosen



Rancho Colina and Righetti in Context



Legend

-  Property Boundary
-  City Limits
-  State Highway
-  Major County Streams



Site Selection Process

Oct 2015 – Mar 2016

- Ongoing WRFCAC and Council updates (Oct 2015-Feb 2016)
- City continues property acquisition negotiation at Morro Valley sites
 - Ongoing discussions at Rancho Colina; new limits on site location and facilities
 - MOU and option secured at Righetti (January 26, 2016)
- City completes technical studies at Morro Valley sites
- Updated report suggests Righetti may be preferable to new Rancho Colina site (Feb 2016)



Site Selection Process

Oct 2015 – Mar 2016

- Both sites in Morro Valley are suitable for a new WRF
- Righetti ranks higher than new site at Rancho Colina
- Key factors include:
 - Saves money on pipeline construction costs
 - Proximity to deeper portion of groundwater basin
 - Less visually prominent from Highway 41
 - City successfully negotiated option to purchase, Rancho Colina negotiations ongoing



Site Selection Process

Oct 2015 – Mar 2016

- **February 9:** Joint WRFCAC/City Council Workshop
 - Considers with technical information in the new report
 - Indicates concurrence with report / Righetti recommendation
 - Directs staff to conduct neighborhood outreach before making site decision
 - Workshop to be held prior to next WRFCAC meeting
- **February 25:** Neighborhood workshop with Righetti neighbors
- **March 1:** WRFCAC Meeting
 - Recommends taking 60 days for more technical analysis and city-wide outreach



Site Selection Process

Oct 2015 – Mar 2016

Key Issues from Feb 25th Neighborhood Workshop

- Effect on Property Values
- Odors
- Visual Compatibility
- Noise
- Traffic and Access
- Future of land not required for WRF
- Cost



Technical Comparison

Morro Valley Sites



Technical Comparison

Morro Valley Sites

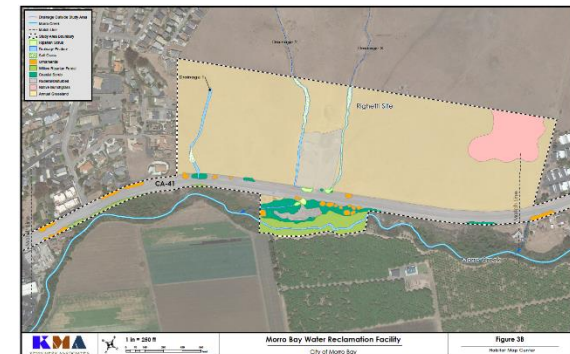
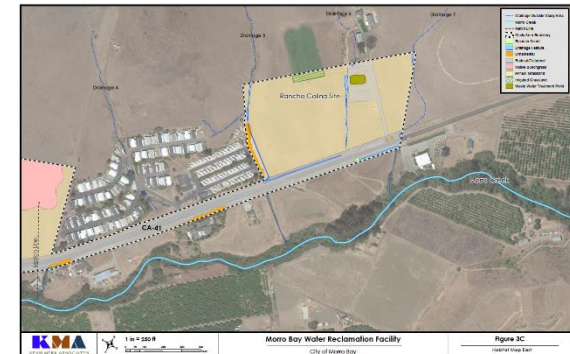
Fatal Flaws Studies (2015-16)

Studies

- Biological Resource Assessment
- Cultural Resource Investigation
- Hydrogeologic Study
- Geotechnical Investigation

Findings

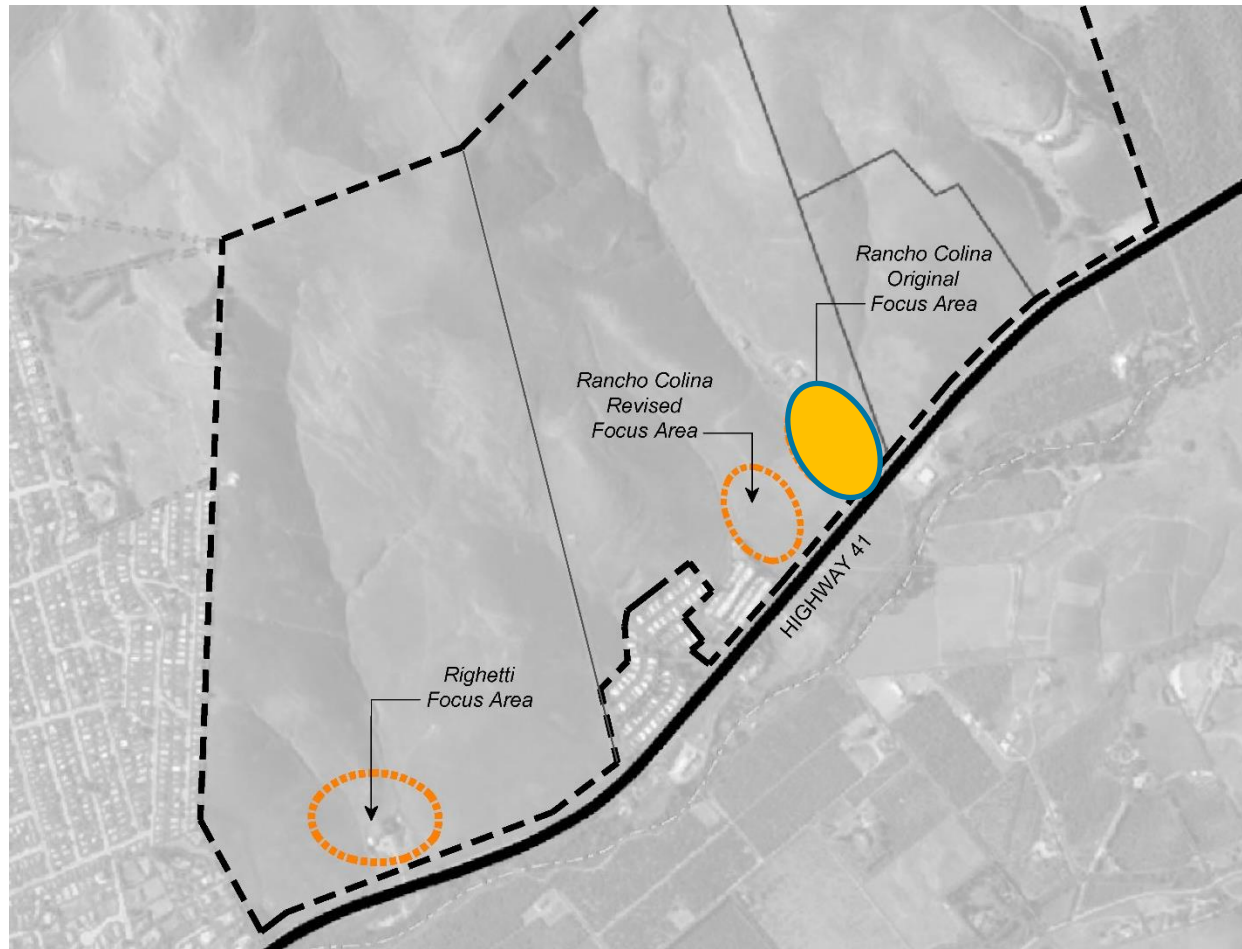
- No fatal flaws at either site
- Potential challenges at each, which will affect design





Technical Comparison

Morro Valley Sites



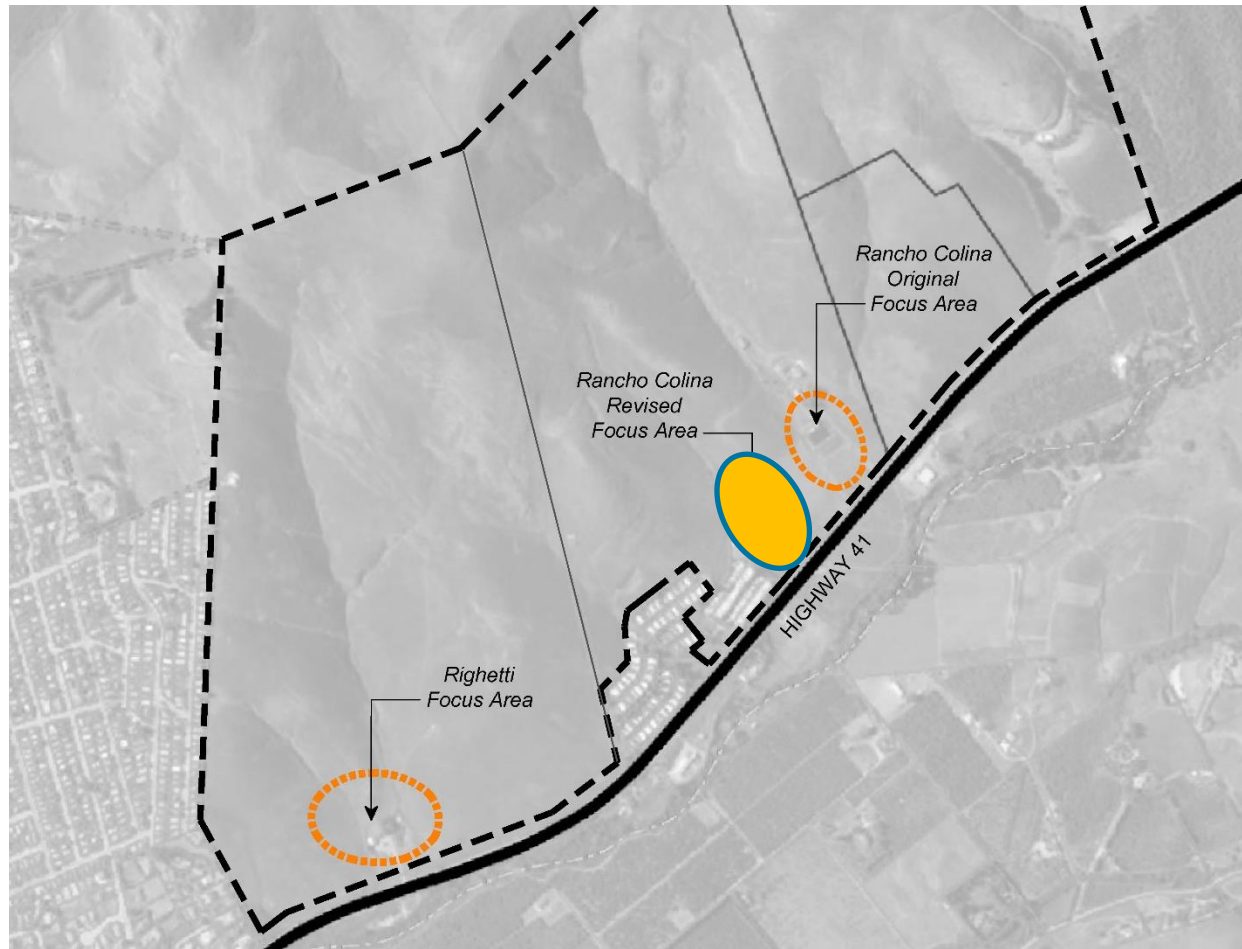
Legend

- ■ Morro Valley Site Boundary
- City Limit
- Parcel Boundaries
- Focus Areas



Technical Comparison

Morro Valley Sites



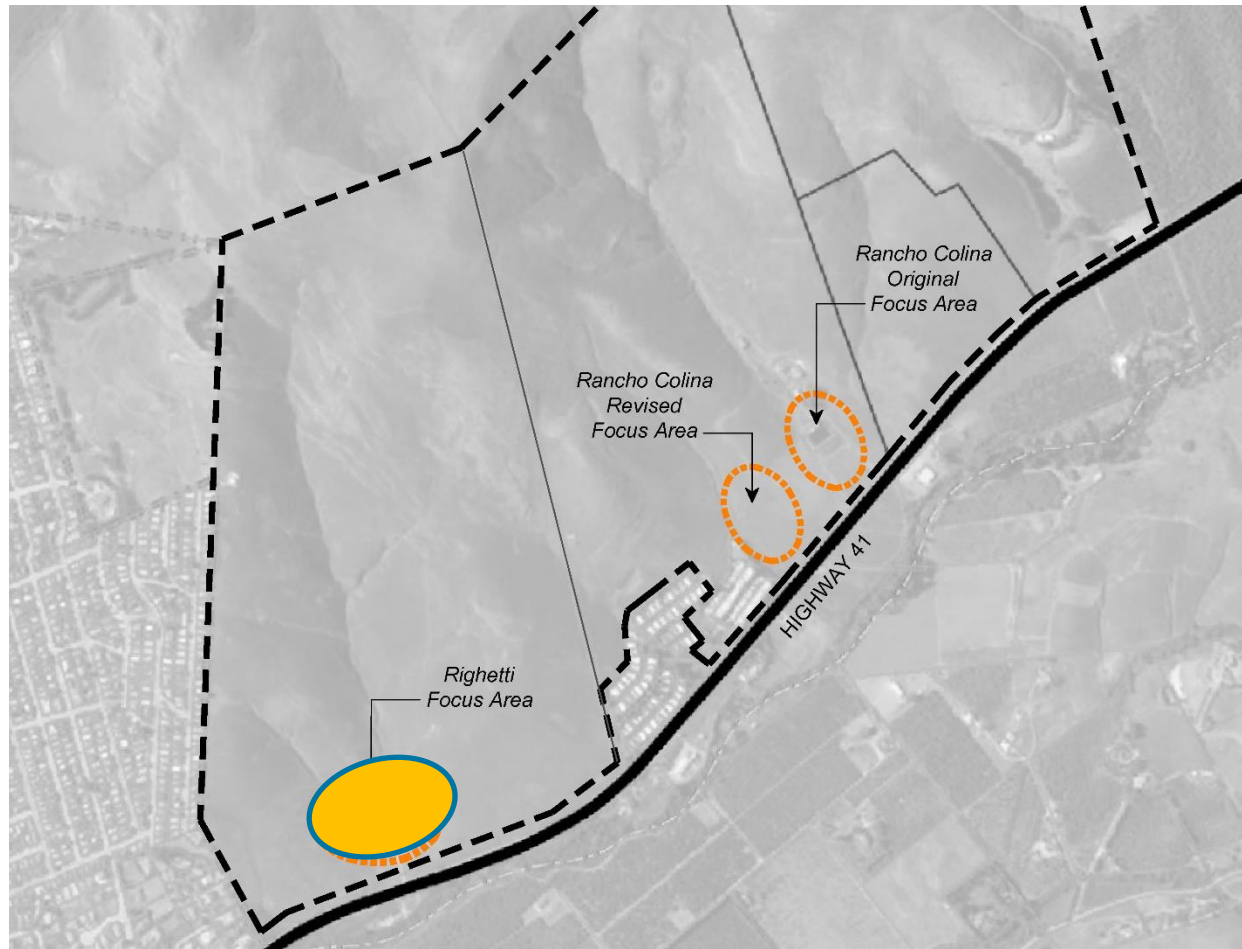
Legend

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Technical Comparison

Morro Valley Sites



Legend

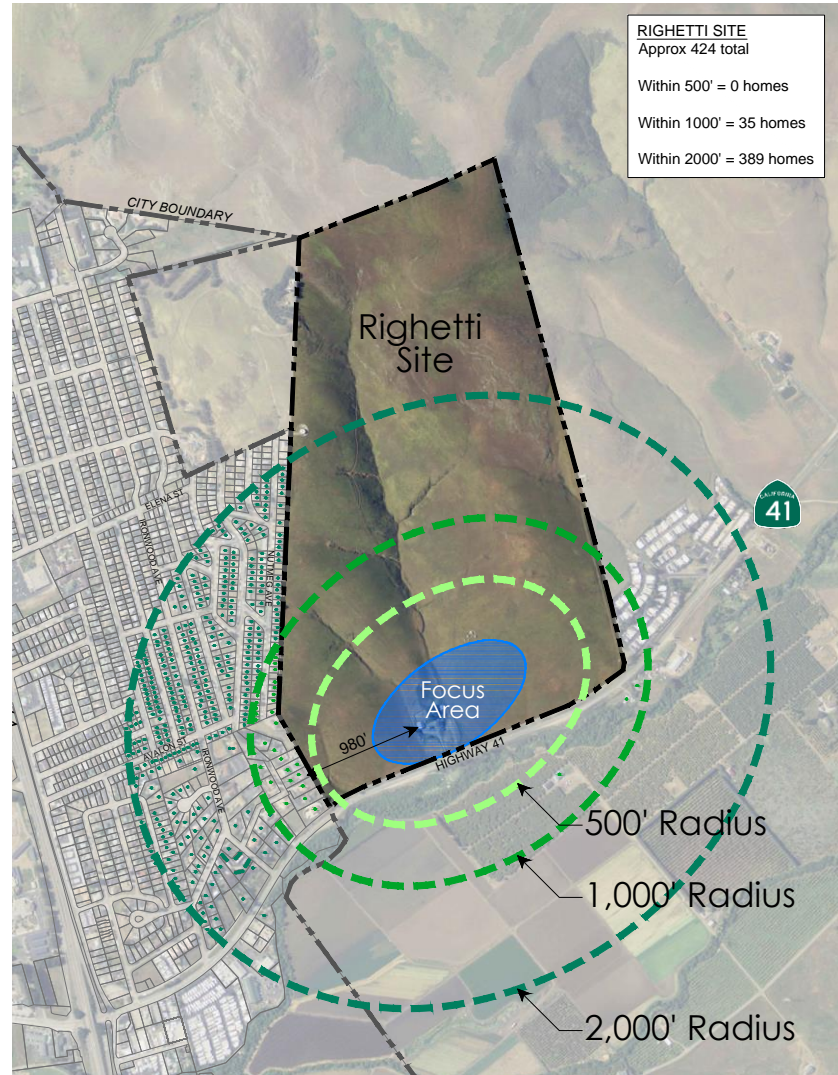
- ■ Morro Valley Site Boundary
- City Limit
- Parcel Boundaries
- Focus Areas



Technical Comparison

Righetti Proximity Comparison

- 424 homes within 2,000 feet of the site (35 within 1,000 feet)
- Compares to 560 homes and High School within 2,000 feet of existing WWTP

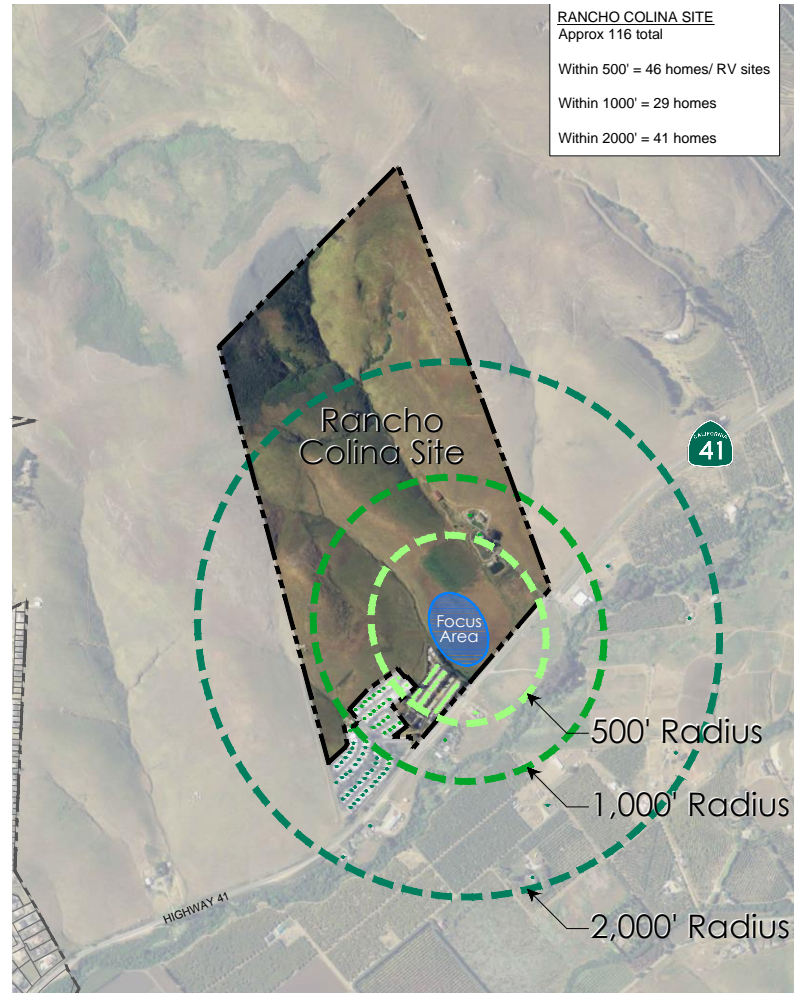




Technical Comparison

Rancho Colina Proximity

- 116 homes/RV sites within 2,000 feet
- 46 homes/RV sites within 500 feet
- Compares to 560 homes and High School within 2,000 feet of existing WWTP





Technical Comparison

Morro Valley Sites

■ **Water Reclamation Potential**

- Morro Valley ranked highest in December 2013 Options Report and May 2014 Site Report in large part because it has the best water reclamation potential.
- This was determined by published study of water reclamation opportunities in broader Chorro, Morro, Toro area.
- This has not changed
- Water Reclamation Master Plan (ongoing) will determine highest and best cost-effective reuse: ag, to recharge to DPR.



Technical Comparison

Morro Valley Sites

- **Why Does the Morro Valley Rank Highest in Water Reclamation?**
 - Morro Valley aquifer is closest to the city's existing water infrastructure – significant effect on cost.
 - Primary city wells all situated in Morro Valley
 - City's Chorro Valley wells are not connected to water treatment system – would require new pipelines or new water treatment plant.
 - Chorro wells not available when creek not flowing without new WQCB approvals
 - Morro Valley exhibits best aquifer recharge opportunities
 - Highest density of ag in-lieu opportunities
 - Cost of sewage force main to Chorro / Toro also a construction and operational concern.



Technical Comparison

Other Sites

- **Chevron (Toro Creek)**
 - Studied in Options Report (ranked 5 of 7)
 - More expensive than Morro Valley sites
 - Far from Reclamation opportunities
 - Council did not recommend further investigation in December 2013



Technical Comparison

Other Sites

■ **Tri-W**

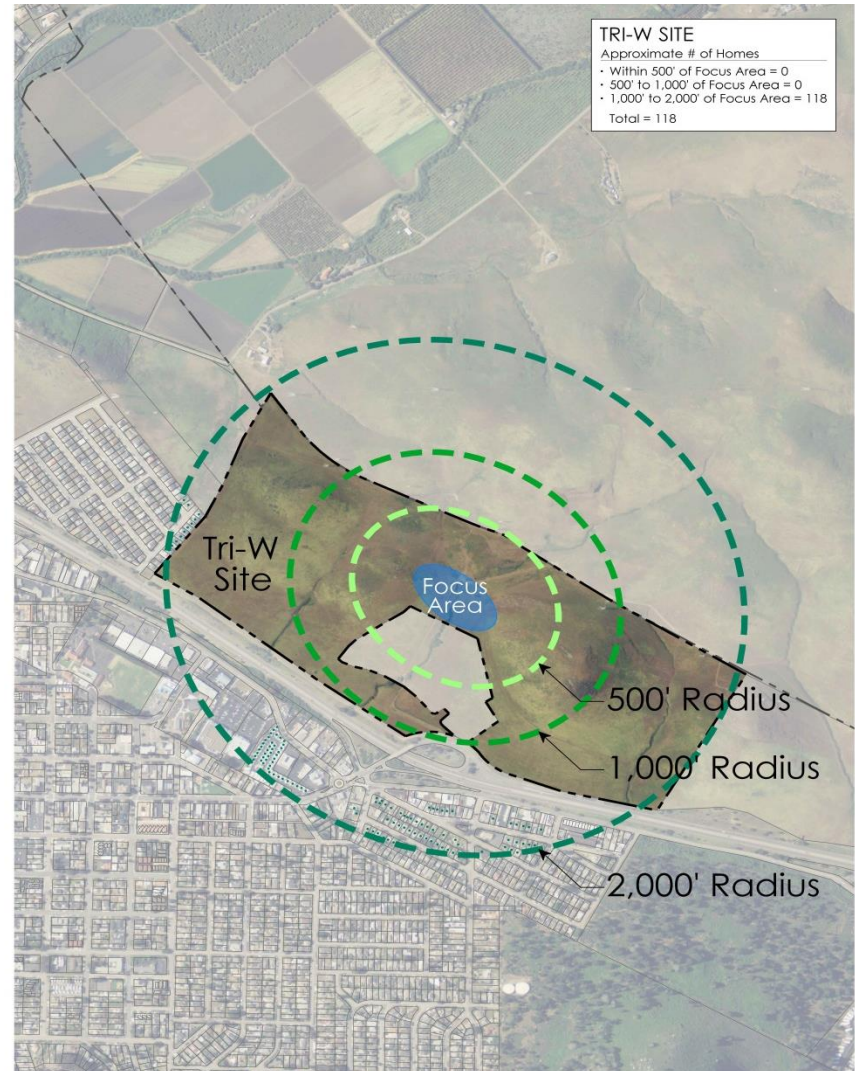
- Studied in Options Report (ranked 3 of 7)
- Tri-W included 556 acres (2 parcels) in both City and County
 - 396 acres in County; 160 acres in City
 - Most promising location was in County
- More expensive than Morro Valley sites
- City parcel is visually prominent from Highway 1 and neighbors
- County parcel is farther from Morro Valley reclamation
- Steep slopes limit potential locations on site
- Investigated in May 2014 report – determined to be less suitable than Morro Valley sites



Technical Comparison

Other Sites

- On City parcel: 118 homes within 2,000 feet of the site
- Also adjacent to commercially zoned parcel
- Compares to 560 homes and High School within 2,000 feet of existing WWTP





Technical Comparison

Other Sites

■ **Giannini**

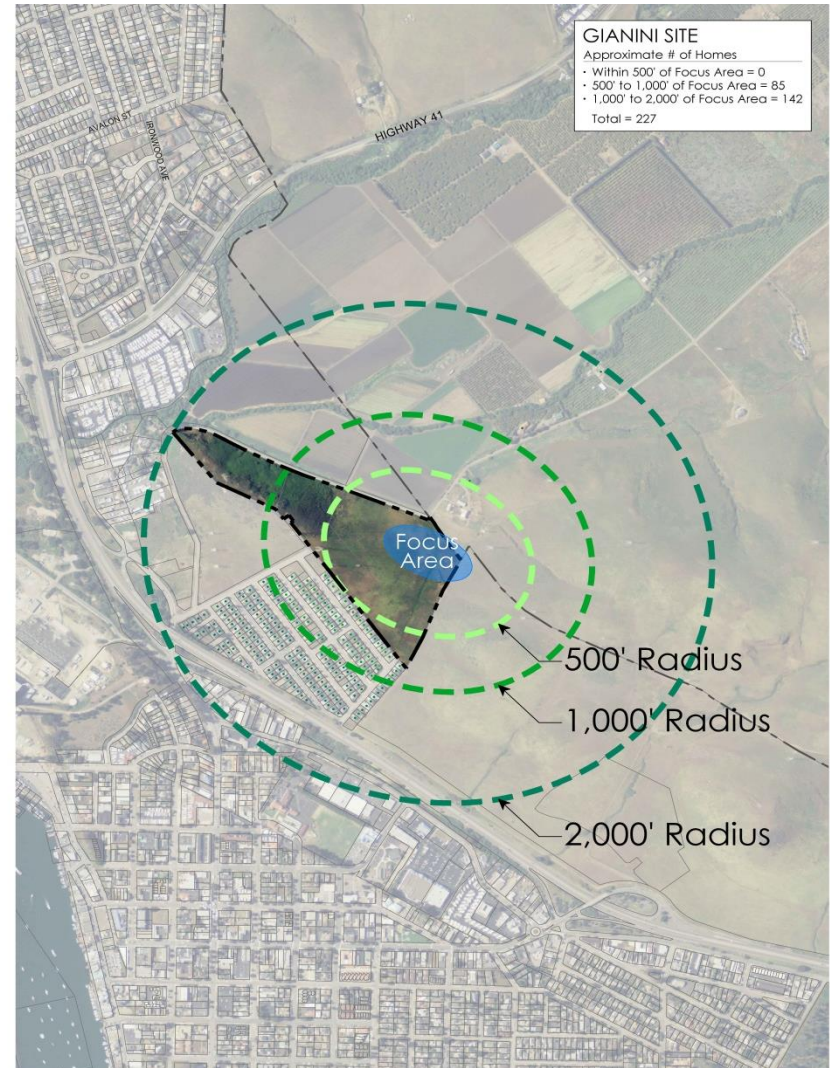
- Studied in Options Report (ranked 4 of 7)
- Steep slopes limit potential locations on site
- Potential cultural and biological resource constraints
- Investigated in May 2014 report – determined to be less suitable than Morro Valley sites



Technical Comparison

Other Sites

- 227 homes within 2,000 feet of the site (85 within 1,000 feet)
- Compares to 560 homes and High School within 2,000 feet of existing WWTP





Conclusion

- **City working to replace failing WWTP for 10 years**
- **3-year process with substantial community and expert input has brought us to this point**
- **Morro Valley (Rancho Colina / Righetti) determined best sites.**
- **Chevron, Giannini, Tri-W and 12 other sites previously researched.**
- **Cost and Water Reuse were and remain primary drivers - based project goals**



Recommendation

- Consider directing staff to conduct further community outreach and analysis, then report back to Council within 60 days (no later than May 10)
- Consider directing staff to conduct additional visits to new-technology WRF sites
- Considerations for deliberation:
 - Time = money
 - Righetti MOU clock expires August 30, 17 – need to begin EIR soon
 - RWQCB direction to complete project by 2021
 - Focus of outreach and analysis? Non – Morro Valley Sites?
 - Focus on RC and Righetti, but explore new MV sites if any available



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