

CITY OF MORRO BAY  
**WATER RECLAMATION  
FACILITY PROJECT**



# CITY OF MORRO BAY

Community Open House – April 7 and 10, 2016



# Introductions

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- Mike Nunley, Program Manager
- John Rickenbach, Deputy Program Manager
- Debbie Rudd, Outreach Coordinator
- Brad Hemken, Facility Master Plan – Process Engineer
- Dave Buckingham, City Manager
- Rob Livick, Public Works Director



# Open House Overview

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- Community Goals
- Review of the WRF Project and Process
- Key Facts about the WRF Project Design
- Overview of Potential Project Sites
- Structure of the Workshop
  - *Location Options*
  - *Environmental Issues*
  - *Treatment and Water Reuse*
  - *Architecture and Visual Issues*
- We Need Your Input!



# WRF Project Community Goals

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- 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



# WRF Project Review and Process

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- Are we “starting over” with this Workshop?
  - No. We are listening to community input, and following City Council direction to address community concerns
  - We are building on extensive technical work already conducted for various sites and technologies
  - This information will assist the Council in selecting a site for the WRF



# WRF Project Review and Process

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- **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



# WRF Project Review and Process

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- **Phase 1 – WRF Facility**
  - WRF Planning (2013-17)
  - WRF Permitting/Design (2017-19)
  - WRF Construction (2019-21)
  
- **Phase 2 – Recycled Water System**
  - Planning, Design and Construction (2016-25)



# WRF Project Review and Process

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## ■ Phase 1 – Tasks Accomplished

- Siting Studies; started with 17 locations, narrowed to 7
- Regional WRF at CMC Evaluation
- Initial Groundwater Evaluation of Morro and Chorro Valleys
- Further Analysis of Rancho Colina and Righetti sites
- Council selection of Morro Valley site location
- Facility Master Plan & Program Management Teams hired
- CEQA team hired





# WRF Project Review and Process

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## ■ Phase 1 – Tasks Accomplished

- Treatment processes selected
- Recycled water planning grant awarded
- 25 WRFCAC meetings
- 6 community workshops; stakeholder interviews
- MOU signed with Righetti property owner
- Wastewater collection system salinity study
- Flow monitoring and water quality analysis
- California SRF Revolving Loan application submitted



# Key Facts About WRF Project Design

- **WRF Technology options**
  - 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



# Potential WRF Sites

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- **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
  - March 8, 2016: Council directed study of the following sites
    - Rancho Colina
    - Righetti
    - Tri-W
    - Chevron/Toro Creek
    - Other Morro Valley sites?



- 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**

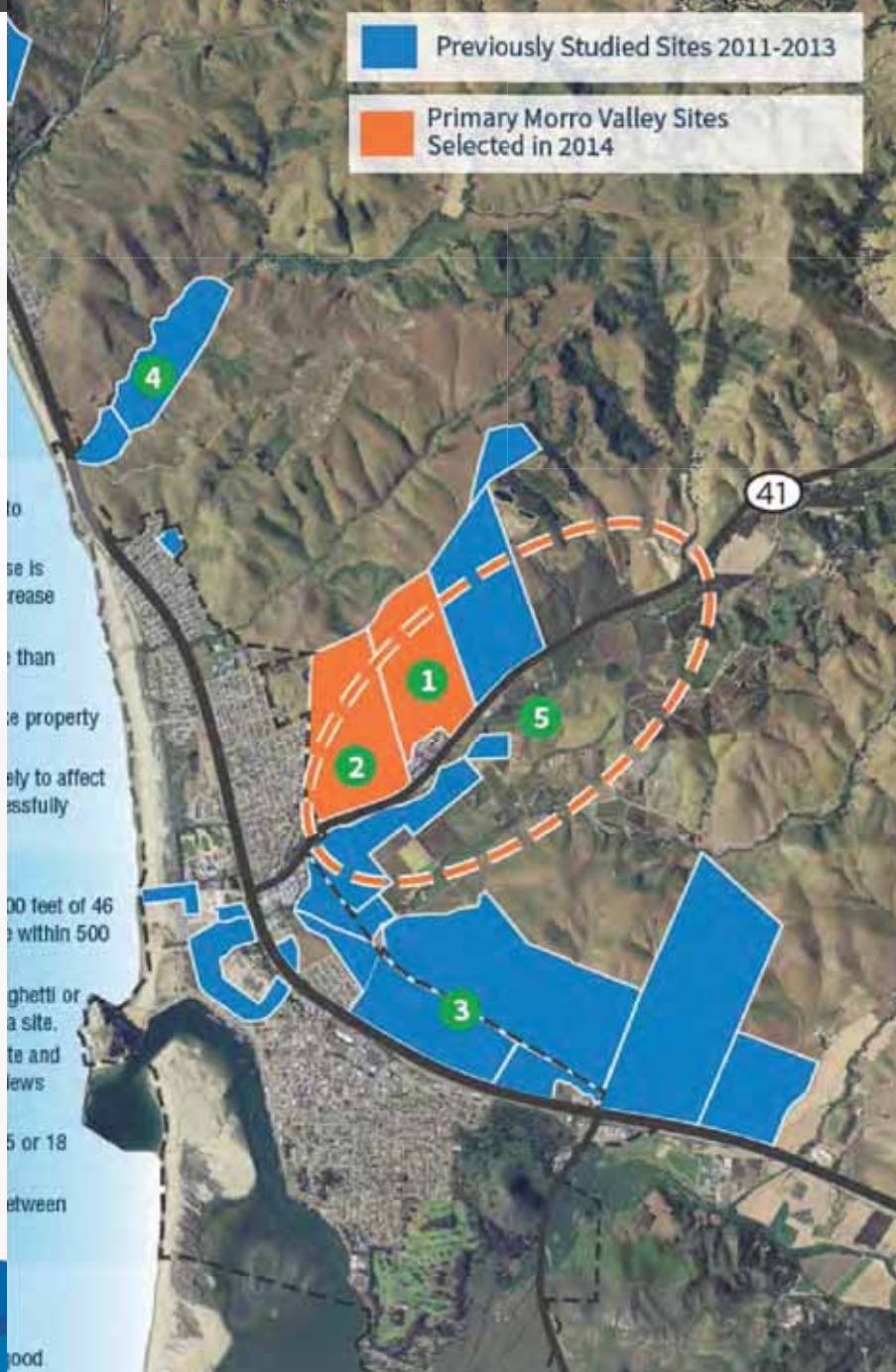
- Two properties totaling 556 acres; partly in City, partly in County
- Most suitable location is 10-15 acres in the County
- One of the top four sites in 2014 study
- Likely 10-15% more expensive than the sites in the Morro Valley
- No homes are located within 1,000 feet of the best part of site
- Other 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



# Potential WRF Sites

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- 8 acres near Highway 41
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# Potential WRF Sites

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# Potential WRF Sites

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- 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 that would benefit City water supply
- Cayucos considering a site in this area





# Potential WRF Sites

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- **Additional Morro Valley Sites?**
  - Investigating other sites in Morro Valley
  - Close to reclamation opportunities
  - Potential challenges will be
    - Site Access
    - Property availability
    - Agricultural constraints (Williamson Act; prime farmland)



# Q and A Session



## Key Community Issues

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- Site Development Considerations
- Costs and Property Values
- Visual Compatibility
- Odors
- Traffic and Access
- Noise

# Key Community Issue: Site Development

- **Why are we focusing on Morro Valley and not other sites?**
  - The Morro Valley is least costly since it presents the best opportunities for water reuse and is close to the City wastewater system.
- **Where on any site would a WRF be located?**
  - On a flat, low area that minimizes offsite visibility.
- **How much land would a WRF require?**
  - A new WRF would likely require 8 to 10 acres.



# Key Community Issue: Site Development

- **How much grading is required? Would required grading create slope stability issues?**
  - A flat, less visible site would require very little earthwork, and any grading will be performed to eliminate slope stability issues
- **What would happen to the remainder of any site not developed for a WRF?**
  - Any development other than a WRF and related landscaping/screening would require a separate public review process.
- **Is a new corporation yard a project requirement? What are the impacts of a corporation yard, if it were built?**
  - A corporation yard is not part of the WRF project, but is a City need identified since 2008 and must be constructed somewhere. A corp yard is the base for ~ 15 City employees working around the city from 7:30 AM to 4:30 PM and has minimal impacts related to traffic or noise.



# Key Community Issue: Cost and Property Values

- **How important are project costs to the community? How does that relate to developing a WRF in the Morro Valley?**
  - Project cost has consistently been identified in workshops since 2013 as a critical communitywide concern. Morro Valley is the least expensive area for a WRF due to proximity to water reuse opportunities and the wastewater system.
- **How much will the WRF cost? How will this affect the rates I pay?**
  - WRF cost is being determined through the Facility Master Plan. Cost for water reuse is being determined through the Master Reclamation Plan. The City passed a rate increase last year for the first phase of the WRF.
- **How much will it cost to acquire the property?**
  - Property cost will be determined by an appraiser. Public agencies cannot pay more than the appraised cost for the property.



# Key Community Issue: Cost and Property Values

- **Why has the City already put money down on a site in advance of a purchase?**
  - Purchasing an option to buy a property is a common way for public agencies to take property off the market while they study it.
- **How will the project affect my property values?**
  - If the WRF does not cause visual, odor, or traffic impacts to residences, it is not likely to affect property values. Project design that addresses these issues will be crucial to successfully address this key concern for those who live closest to any given site.



## Key Community Issue: Visual

- **How close are the nearest homes to where the WRF would be built?**
  - This varies, depending on the site.
- **How many homes can see the likely location of the new facility?**
  - This varies. Fewer than 10 homes can see the developable portion of either the Righetti or Rancho Colina site. Parts of Tri-W are adjacent to homes; other parts are not. Chevron is not near homes.
- **How visible is the WRF site from public roadways?**
  - This varies, depending on the site.





## Key Community Issue: Visual

- **How tall will the buildings on the WRF site be? How will they be screened?**
  - The building heights will be similar to barns or ranch facilities (single story up to 15 or 18 feet).
- **Will the WRF be lighted at night?**
  - WRF lighting at night will be minimal and will directed downward for safe access between buildings. All plant operation will take place inside buildings.



# Key Community Issue: Odors

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- **How will odors be controlled on the site?**
  - All facilities will be contained. Gases will be collected and treated to remove odors.
- **Will odor control measures be eliminated if they are too costly?**
  - Odor control is a City goal, is a minor cost to the project, and is necessary to be a good neighbor at any site.



# Key Community Issue: Traffic

- **How much traffic will the WRF generate? How does this compare to current traffic levels?**
  - The WRF will generate approximately 50 to 60 vehicle trips. This is less than 1% of the average daily traffic on Highway 41 (7,000 to 8,000 trips/day).
- **How will the WRF site be accessed?**
  - A Morro Valley WRF site will be accessed from Highway 41, not from adjacent neighborhoods. Access to Tri-W or Chevron sites is yet to be determined.



# Key Community Issue: Noise

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- **How noisy is a WRF?**
  - A WRF will include soundproof enclosures around equipment and will generate less noise at property lines than a residence.
- **How does this compare to existing noise sources in the area?**
  - Noise generated from the WRF will not be noticeable to any nearby residences, especially in the context of existing highway noise.



# Workshop Stations – Learn More

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- **Station #1: Location Options** – *Land use and siting...*
- **Station #2: Environmental Issues** – *Environmental impacts & site constraints...*
- **Station #3: Treatment and Water Reuse** – *Recycled water, costs and treatment...*
- **Station #4: Architecture and Visual Issues** – *Views, landscaping...*



# Stay Informed

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[WWW.Morrobayca.gov/WRF](http://WWW.Morrobayca.gov/WRF)

Staff reports - [www.Morrobayca.gov/WRF](http://www.Morrobayca.gov/WRF)

- WRF/CAC meetings
- Council meetings

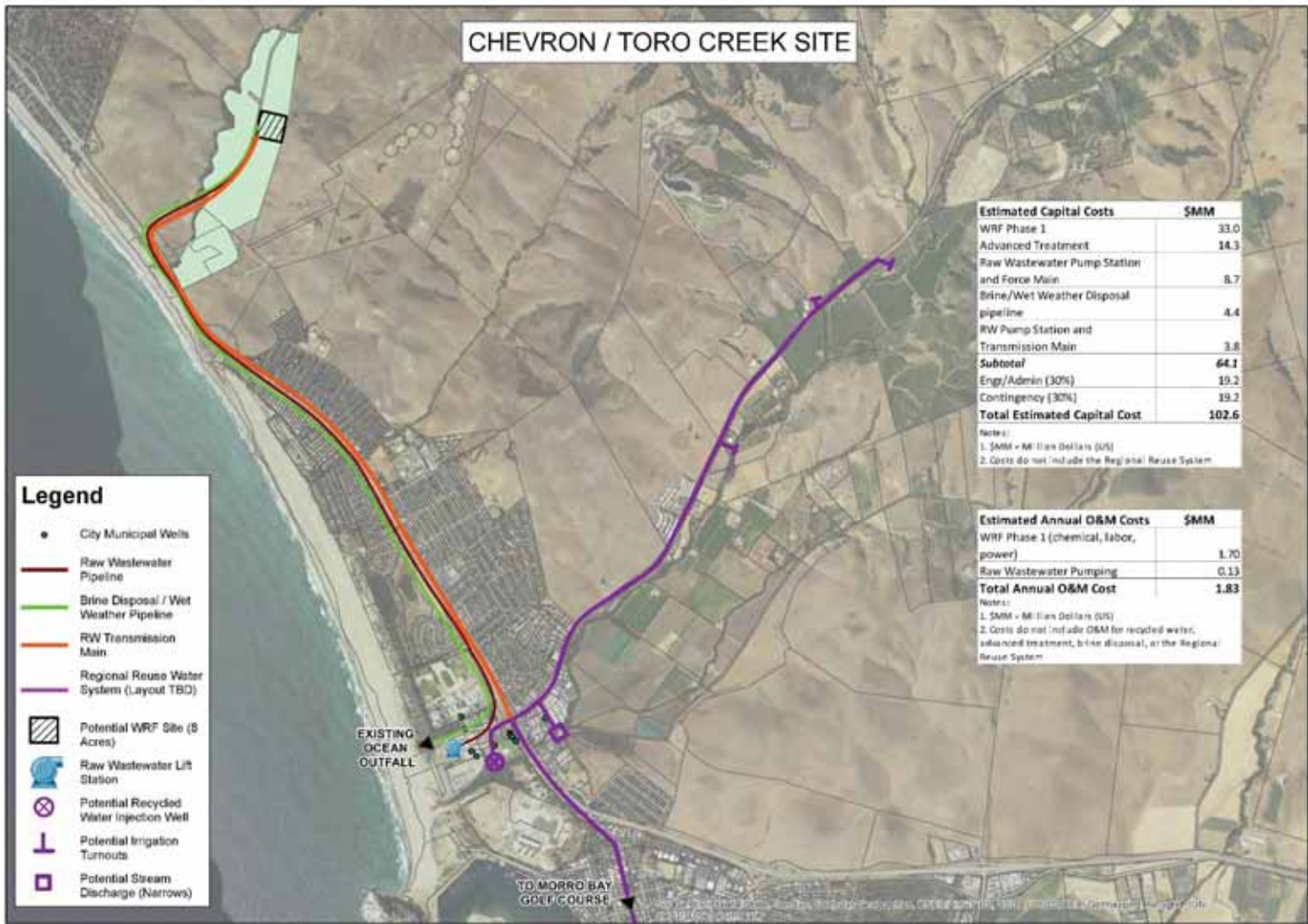
Technical data and reports - [www.morrobayca.gov/WRF](http://www.morrobayca.gov/WRF)

Upcoming Meetings and Hot Topics

Workshop Videos - Search "Morro Bay WRF" on YouTube



# CHEVRON / TORO CREEK SITE



## Legend

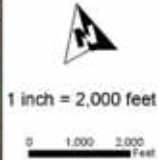
- City Municipal Wells
- Raw Wastewater Pipeline
- Brine Disposal / Wet Weather Pipeline
- RW Transmission Main
- Regional Reuse Water System (Layout TBD)
- ▨ Potential WRF Site (8 Acres)
- ⊕ Raw Wastewater Lift Station
- ⊗ Potential Recycled Water Injection Well
- ⊥ Potential Irrigation Turnouts
- Potential Stream Discharge (Narrows)

Estimated Capital Costs	\$MM
WRF Phase 1	33.0
Advanced Treatment	14.3
Raw Wastewater Pump Station and Force Main	8.7
Brine/Wet Weather Disposal pipeline	4.4
RW Pump Station and Transmission Main	3.8
<b>Subtotal</b>	<b>64.1</b>
Eng/Admin (30%)	19.2
Contingency (30%)	19.2
<b>Total Estimated Capital Cost</b>	<b>102.6</b>

Notes:  
 1. \$MM = Million Dollars (US)  
 2. Costs do not include the Regional Reuse System

Estimated Annual O&M Costs	\$MM
WRF Phase 1 (chemical, labor, power)	1.70
Raw Wastewater Pumping	0.13
<b>Total Annual O&amp;M Cost</b>	<b>1.83</b>

Notes:  
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 2. Costs do not include O&M for recycled water, advanced treatment, brine disposal, or the Regional Reuse System



MAP NOTES:  
 PER A/R/W/16-010  
 PRODUCED BY LRS  
 JRS/STP  
 MAP 16-010-01  
 MARCH 2016



# Estimated Costs for Chevron / Toro Creek Site

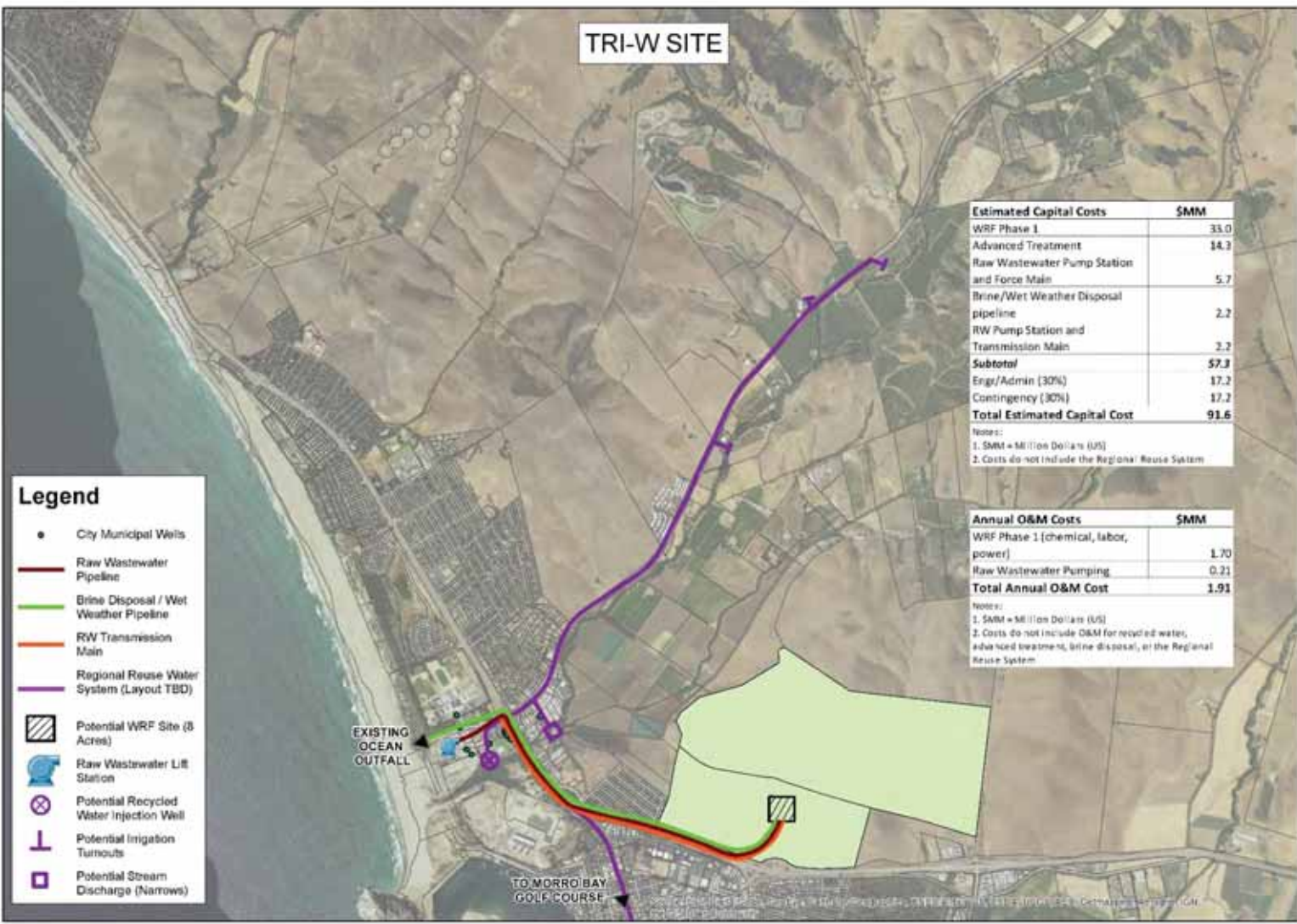
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# TRI-W SITE



- ### Legend
- City Municipal Wells
  - Raw Wastewater Pipeline
  - Brine Disposal / Wet Weather Pipeline
  - RW Transmission Main
  - Regional Reuse Water System (Layout TBD)
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  - ⊥ Potential Irrigation Turnouts
  - Potential Stream Discharge (Narrows)

Estimated Capital Costs	\$MM
WRF Phase 1	33.0
Advanced Treatment	14.3
Raw Wastewater Pump Station and Force Main	5.7
Brine/Wet Weather Disposal pipeline	2.2
RW Pump Station and Transmission Main	3.2
<b>Subtotal</b>	<b>57.3</b>
Eng/Admin (30%)	17.2
Contingency (30%)	17.2
<b>Total Estimated Capital Cost</b>	<b>91.6</b>

Notes:  
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Annual O&M Costs	\$MM
WRF Phase 1 (chemical, labor, power)	1.70
Raw Wastewater Pumping	0.21
<b>Total Annual O&amp;M Cost</b>	<b>1.91</b>

Notes:  
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1 inch = 2,000 feet



MAP NOTES:  
 2015 REVIEW IN CDD PROVIDED BY USDB  
 US TPOD  
 MAP PUBLISHED MARCH 2016



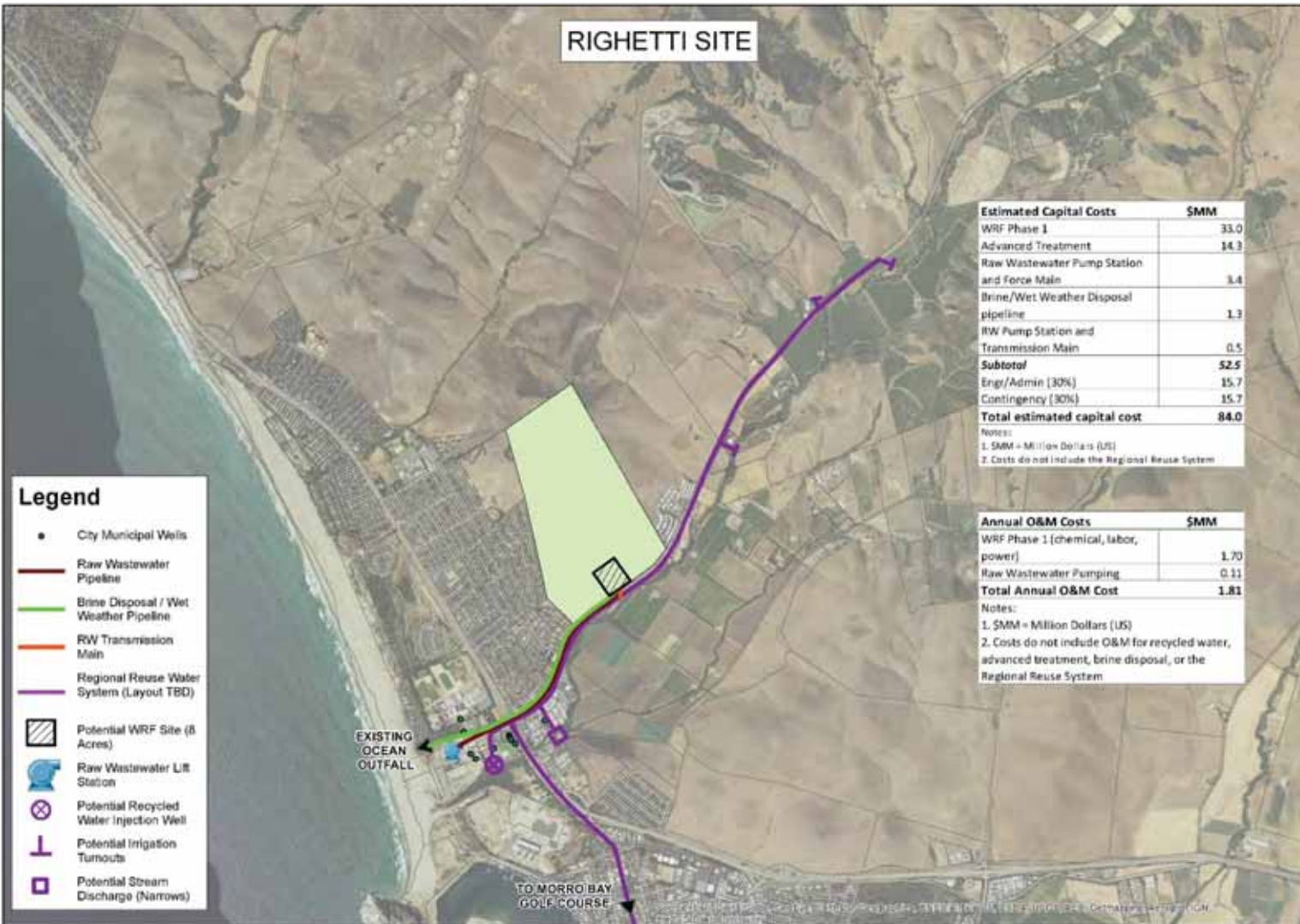
# Estimated Costs for Tri-W Site

Estimated Capital Costs	\$MM
WRF Phase 1	33.0
Advanced Treatment	14.3
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# RIGHETTI SITE



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- Potential Stream Discharge (Narrows)

Estimated Capital Costs	\$MM
WRF Phase 1	33.0
Advanced Treatment	14.3
Raw Wastewater Pump Station and Force Main	3.4
Brine/Wet Weather Disposal pipeline	1.3
RW Pump Station and Transmission Main	0.5
<b>Subtotal</b>	<b>52.5</b>
Eng/Admin (30%)	15.7
Contingency (30%)	15.7
<b>Total estimated capital cost</b>	<b>84.0</b>

Notes:  
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Annual O&M Costs	\$MM
WRF Phase 1 (chemical, labor, power)	1.70
Raw Wastewater Pumping	0.11
<b>Total Annual O&amp;M Cost</b>	<b>1.81</b>

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MAP NOTES:  
 THIS MAP IS NOT PROVIDED BY USBC. USBC MAPS PUBLISHED MARCH 2016.



# Estimated Costs for Righetti Site

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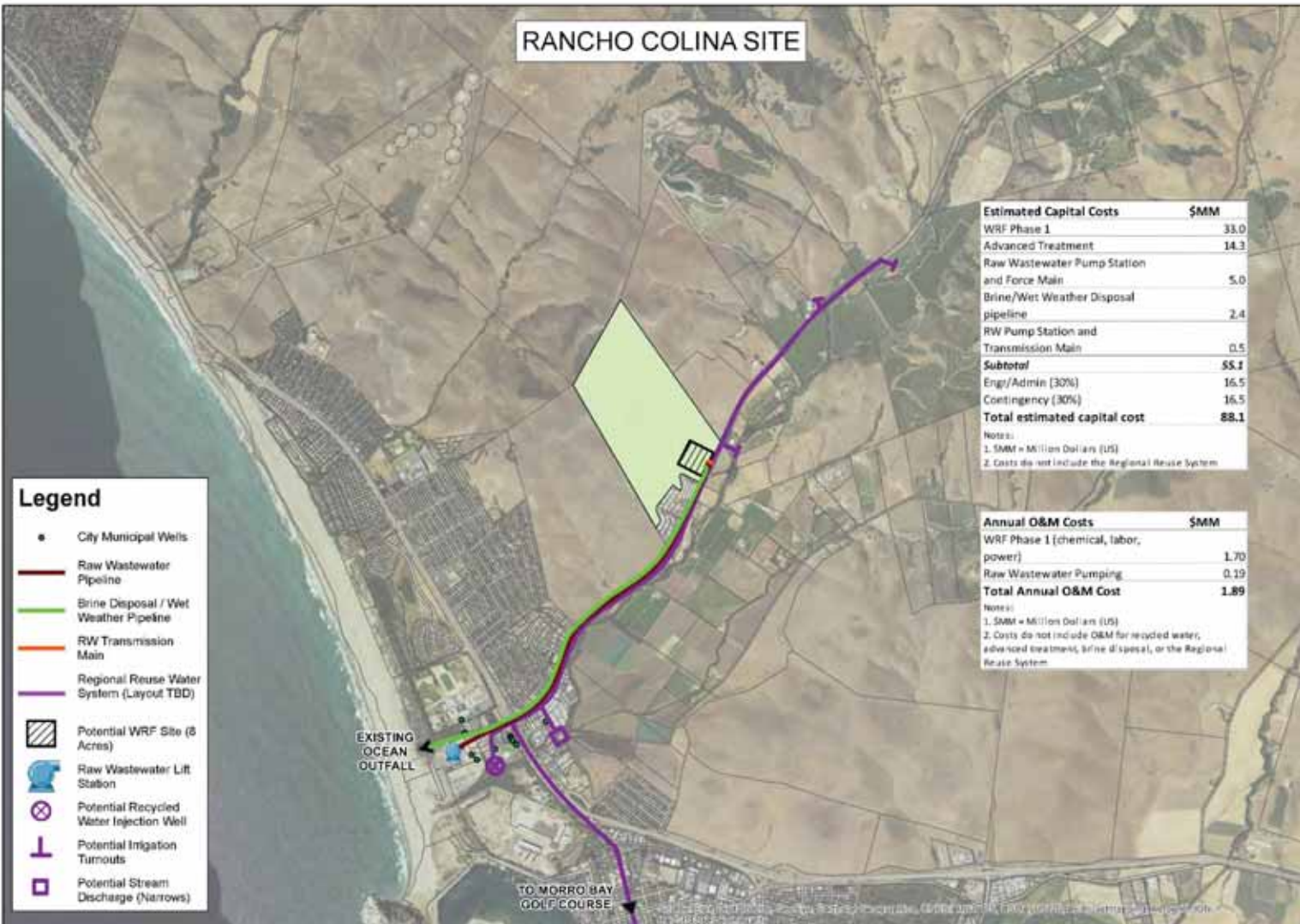
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MAP DATE: 2015  
 2015 AERIAL PHOTO PROVIDED BY JAMES SUB FORD  
 MAP PREPARED: MARCH 2015



# Estimated Costs for Rancho Colina Site

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