

**Presentations from the  
November 19, 2018  
City Council Meeting**

# Study Session Regarding Recycled Water Expansion & Other Water Reuse Opportunities

City Council Study Session  
November 19, 2018

# Agenda

- Purpose of Discussion
- Water Supply Overview
- Recycled Water 101
- Water Reuse Opportunities
  - Regional Transfer
- Discussion

# Purpose of Discussion

- Inform and gather feedback on
  - High-level local water reuse opportunities
  - Local versus regional reuse
  - Potential regional water transfer agreement with Santa Clara Valley Water District (District)

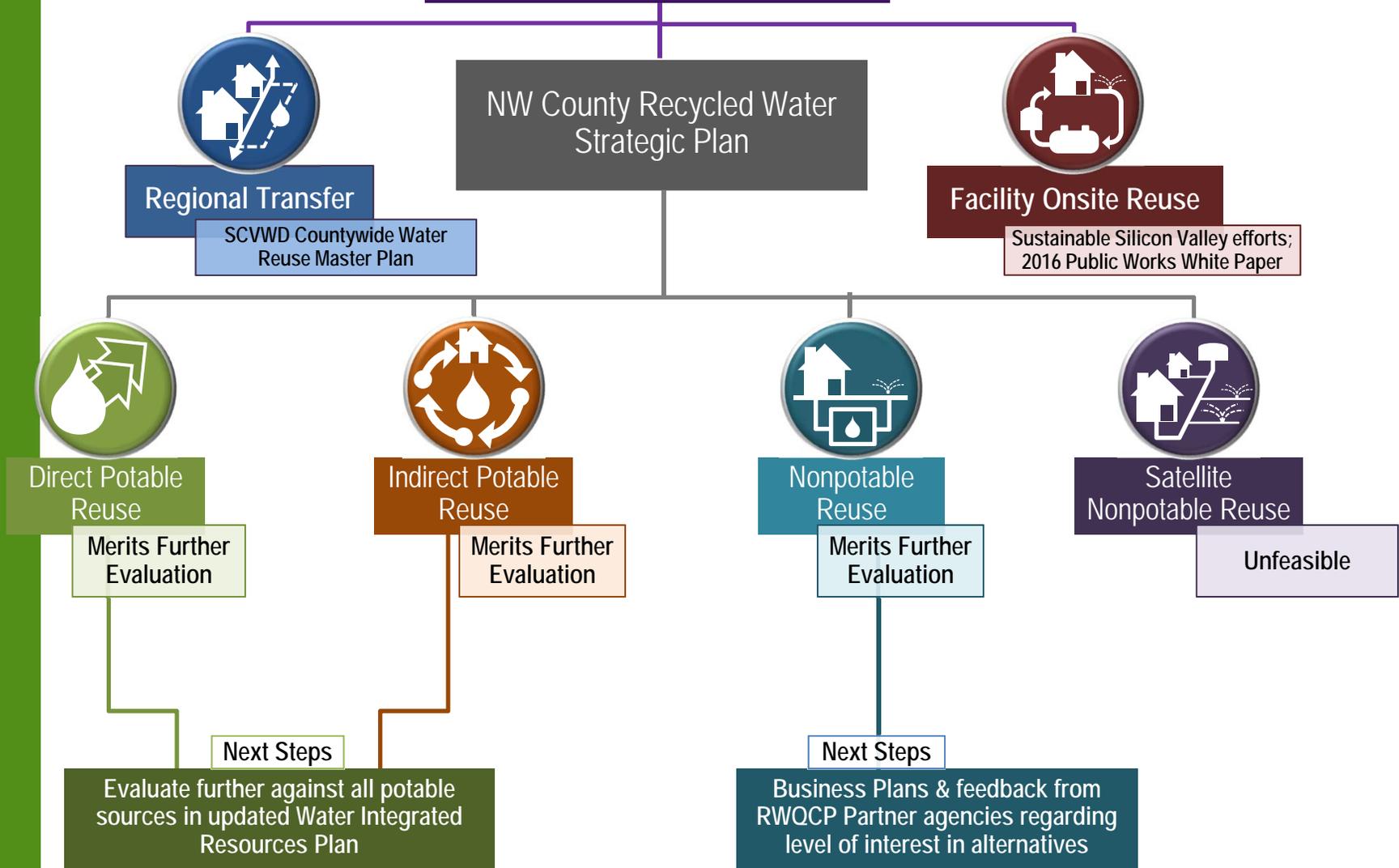
# Palo Alto's Water Supply

- 100% potable water supplies from San Francisco Public Utilities Commission (SFPUC) Regional Water System (RWS)
  - 85% Tuolumne River, 15% local reservoirs
- Recycled water used at some City facilities including Greer Park and Municipal Golf Course
- 8 emergency water wells

# Recycled Water Consistent with City Sustainability Goals

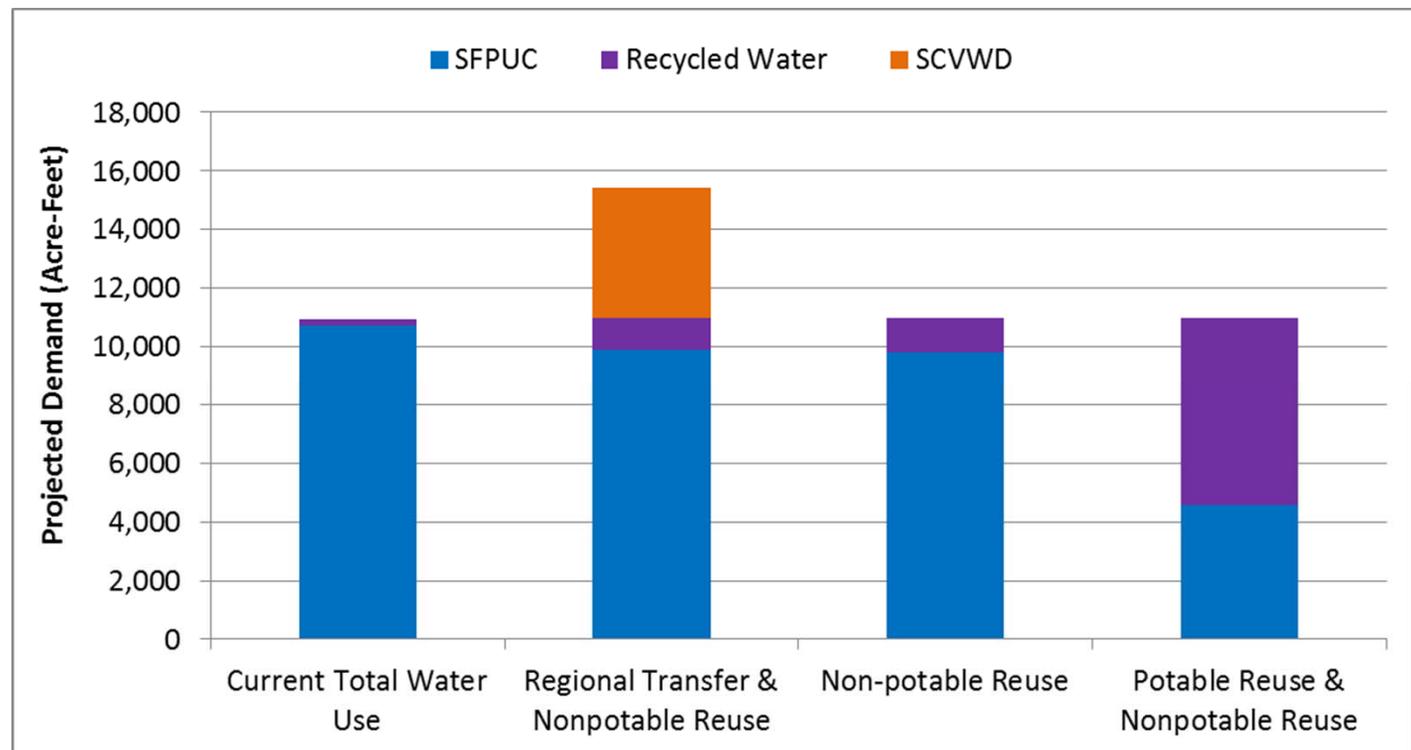
- S/CAP Framework
  - Right water supply for the right use;
  - Ensure sufficient water quantity and quality;
  - Protect the Bay, other surface waters, and groundwater; and
  - Lead in sustainable water management
- Strategies
  - Verify Ability to Meet City's long term water needs; and
  - Investigate all potential uses of Recycled Water

# Water Reuse Opportunities



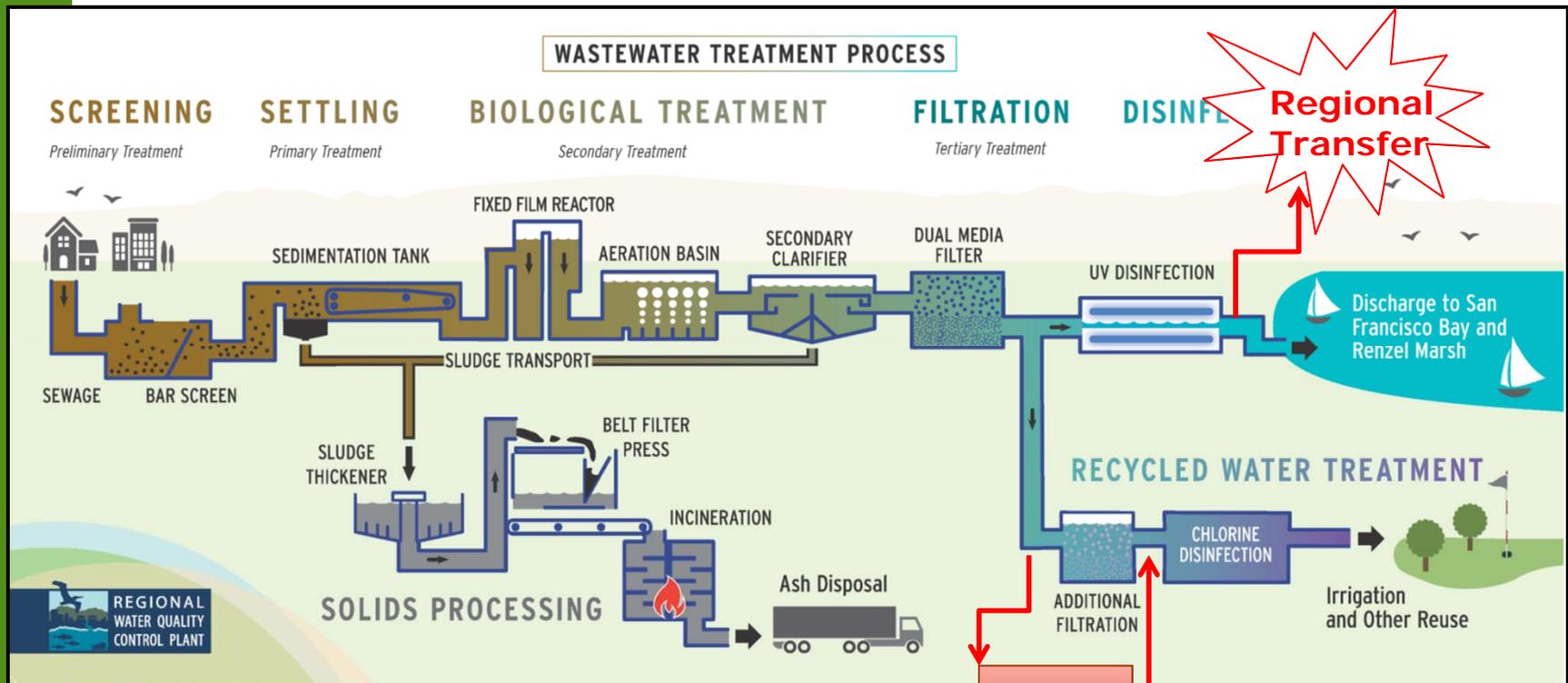
# Imported Water Dependence Impact

- Large impact on Palo Alto's imported water dependence achieved via local potable reuse

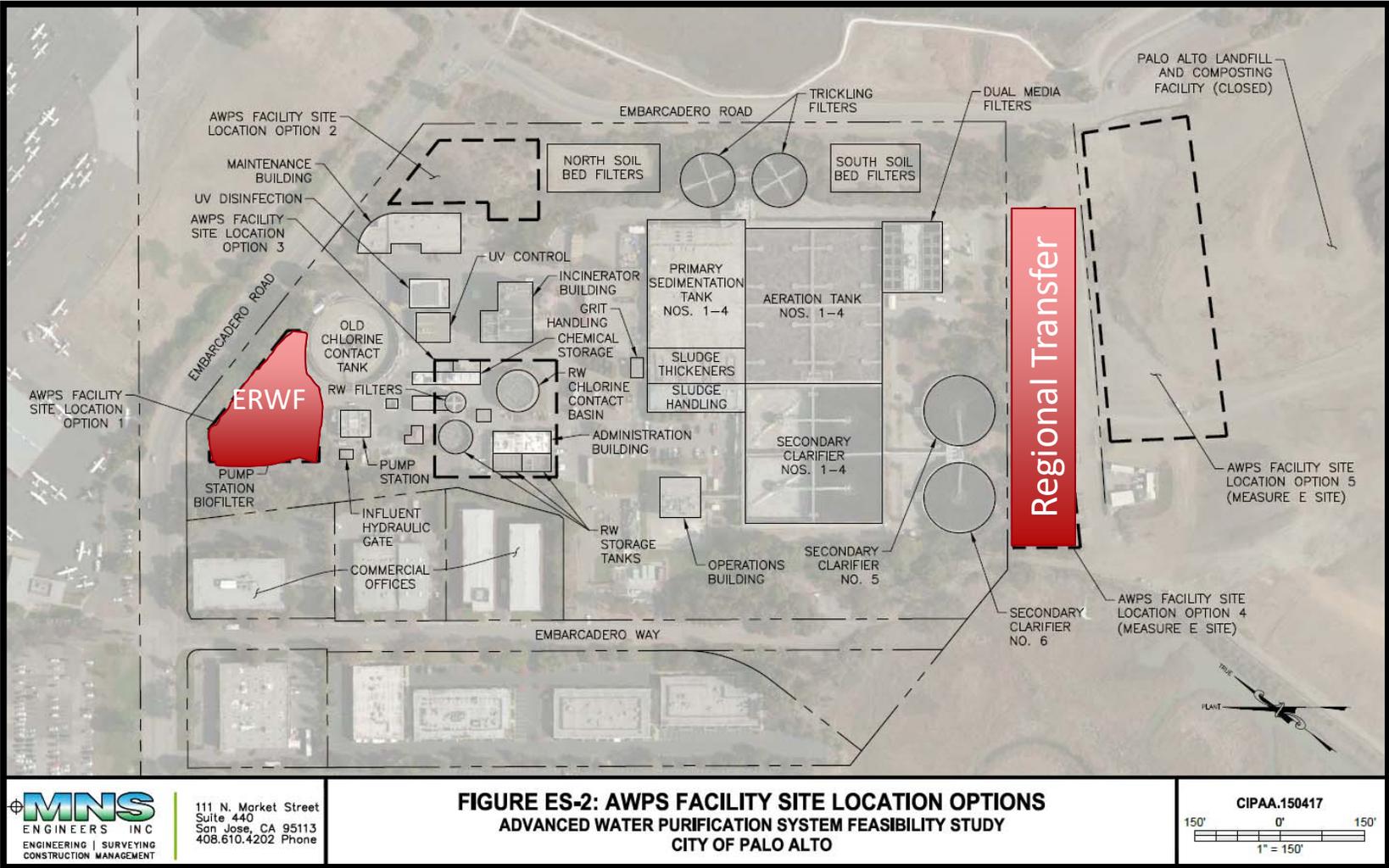


# Potential Agreement with SCVWD

1. Palo Alto Enhanced Recycled Water Facility (ERWF)
  - Referred to as Salt Removal Plant in staff report
2. Regional Transfer of Effluent



# Potential New RWQCP Facilities





# Regional Transfer

PROS	CONS
<ul style="list-style-type: none"><li>• Potential compensation for effluent</li><li>• Reduces RWQCP discharge to the Bay &amp; future regulatory compliance risks</li><li>• Assists in meeting county-wide water supply needs</li></ul>	<ul style="list-style-type: none"><li>• Significant amount of water would no longer be available for City use for contract term (40 years?)</li><li>• ERWF funding tied to regional transfer</li></ul>

# Potential District Agreement for a Regional Effluent Transfer

1. In light of imported water supply availability uncertainty, is a long-term effluent transfer acceptable?
  - Is 40 years an acceptable timeframe (9 MGD total RWQCP and 3 MGD Palo Alto)?
  - Is a guarantee of replacement water needed?
2. Is \$1 million /year (~\$100/AF) acceptable for compensation for the water transfer?
  - SFPUC ~\$2,000/AF, SCVWD groundwater fee ~\$1,300/AF
3. Is Palo Alto amenable to siting a Regional Purification Facility on the Measure E site adjacent to the RWQCP?

# Local Water Reuse

1. Should Palo Alto pursue non-potable projects, such as the Phase III Pipeline, or pursue potable projects to meet more demand?
2. Is Palo Alto community likely to accept purified water in a direct potable reuse project in the future?
3. Will Palo Alto community accept groundwater as a future potable supply via indirect potable reuse?

# Next Steps

- Incorporate UAC & Council feedback
- Return to UAC & Council early next year
  - Detailed reuse alternatives evaluation
  - Water transfer agreement recommendation

# Collaboration on Water Reuse

City of Palo Alto Council Meeting  
November 19, 2018



Santa Clara Valley  
Water District



# History of Collaboration in Several Areas

## Water Conservation and Environmental Efforts

- Rebates on lawn conversion
- Toilet replacements, gray water, waterwise house calls
- Watershed/bayland environmental projects and trails

## Flood Prevention

- Matadero Creek
- Adobe Creek
- Upper San Francisquito Creek
- Palo Alto Flood Basin Tide Gates
- Lower San Francisquito Creek

## Recycled Water Studies

- Improve water quality in existing recycled water [done]

## Update to the City's 1992 Recycled Water Master Plan

- Planned expansion of recycled water
- Groundwater – assessment
- Potential for groundwater recharge with purified water
- Strategic plan including studies from Palo Alto & others
- Funding strategy including grants

# Current Negotiations on Water Reuse

## Some Key Aspects

- District supports the smaller purified water project in combination with the City agreeing to commit to the District a larger volume of treated wastewater
- District is attentive to City staff concerns that the benefits of the treated wastewater supply should be available to Palo Alto in the long term
- Negotiations between City and District staffs have progressed reasonably well but are not yet complete – a few terms and conditions must still be worked out as part of the entire agreement

# **Utilities Smart Grid Assessment and Utilities Technology Implementation Plan**

- **Results of Smart Grid Assessment & Utility Technology Roadmap**
- **Investments of \$19M in AMI based Smart Grid System**

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## Summary of Finance Committee Discussion on 10/16

- ✓ Examined and accepted the assumptions about AMI economics
  - Energy efficiency and conservation related savings projections
  - Reduction of existing staff and potential new roles
  - Potential to outsource new staffing needs
- ✓ Emphasized the importance of a good outreach plan to minimize complaints, including a customer opt-out provision. The UAC has also emphasized this.
- ✓ Discussed that City's fiber network could be used as a 'back haul' service channel for about '50 to 100 gatekeeper equipment nodes' on utility poles
- ✓ Discussed the Utility Advisory Commission's perspective (Commissioner Schwartz represented the UAC) – UAC voted 6-0 to support recommendation
- ✓ Finance Committee recommended approval with a 4-0 vote

## Request Today

Finance Committee Recommends that Council **Accept the Utilities Smart Grid Assessment and Utilities Technology Implementation Plan**, Including Advanced Metering Infrastructure-based Smart Grid Systems to Serve Electricity, Water, and Natural Gas Utility Customers

