



#### Introductions:

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#### **Background:**

Valley Water and the Silicon Valley Advanced Water Purification Center and SPUR's efforts on water

#### **Discussion:**

Recycled and Purified Water as one solution to Santa Clara County's Water Supply

Silicon Valley Advanced Water Purification Center Tour







## COMPREHENSIVE WATER SUPPLY



 miles of pipelines water treatment plants water purification center acres of recharge ponds



## SANTA CLARA COUNTY'S WATER SUPPLY

### Water Supply Breakdown

#### Santa Clara County WATER SUPPLIES

#### **Imported Water 50%**

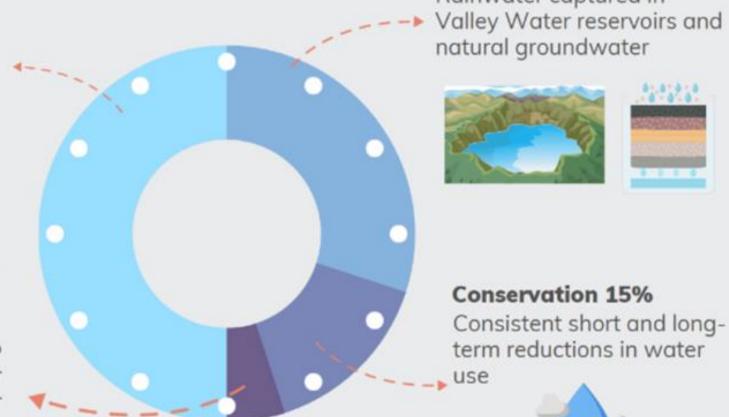
Water from the Sierra Snowpack that melts and fills state reservoirs

> 40% Delta supplies 10% Hetch Hetchy



Water Reuse 5% Treated wastewater used as recycled water







6

#### Local Water 30%

Rainwater captured in



# R NEW SOURCE OF WRIER

silicon

ADVANCED PURIFICATION OPPOP

1000

#### **ADVANCED WATER PURIFICATION PROCESS**

#### **HIGHLY TREATED** WASTEWATER

This water originally comes from the drains of homes and businesses and is treated three times at a wastewater facility.



**#1 MICROFILTRATION** 

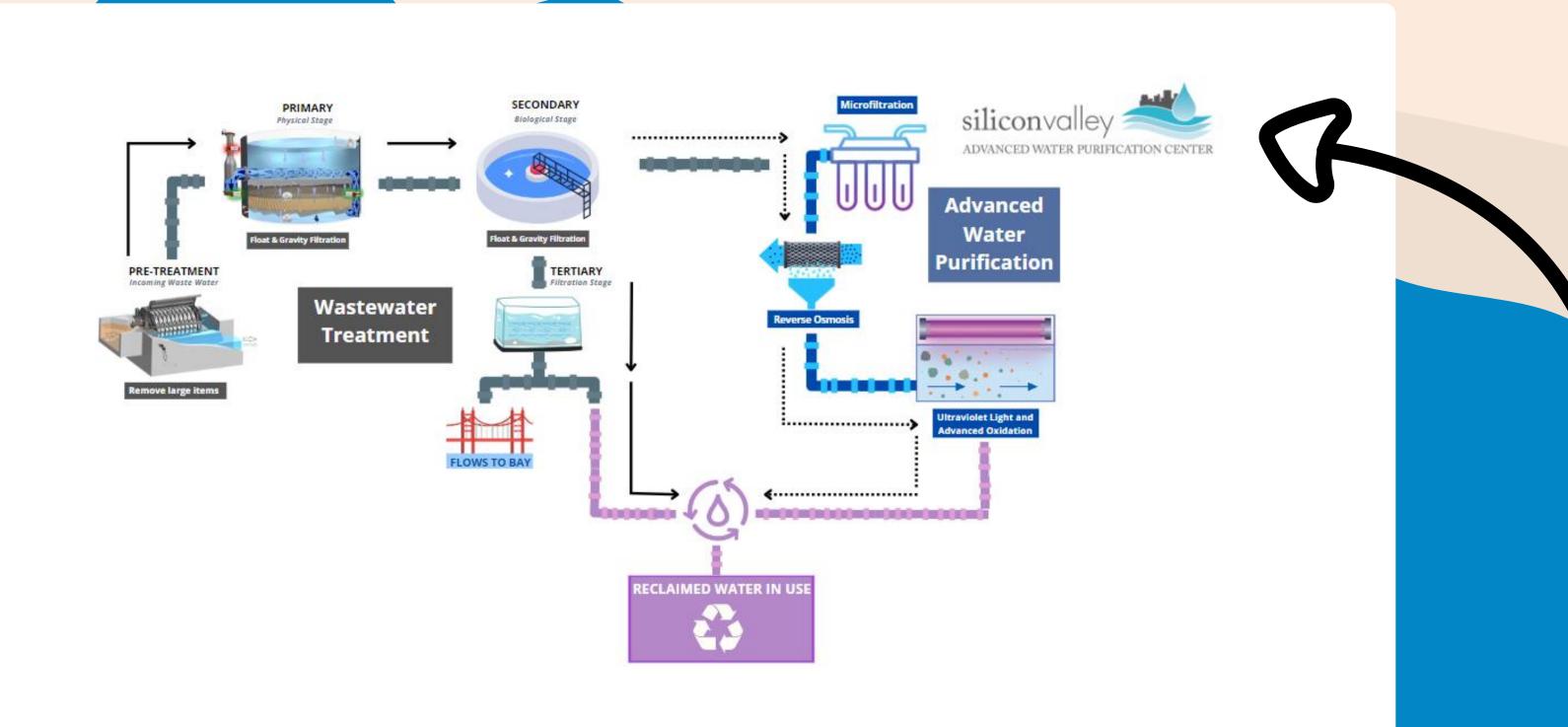


**#2 REVERSE OSMOSIS** 



#3 UV LIGHT DISINFECTION AND ADVANCED OXIDATION

# THE PURIFICATION PROCESS



## COMMUNITY OUTREACH



- Gain public acceptance of the Purified Water Project
- Provide opportunities for learning while addressing concerns



Build key stakeholder support



Obtain visible and vocal demonstrations of support from community leaders

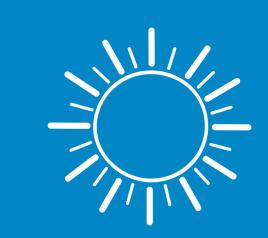




Mitigate concerns of potable reuse





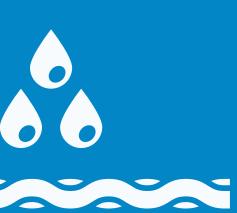


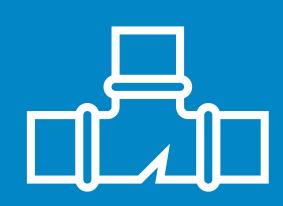
Protects groundwater supplies

Protects us from the impacts of climate change



30 Drought resilient, sustainable, and locally controlled





Reduces dependency on imported water

# UATER SUPPLY MASTER PLAN

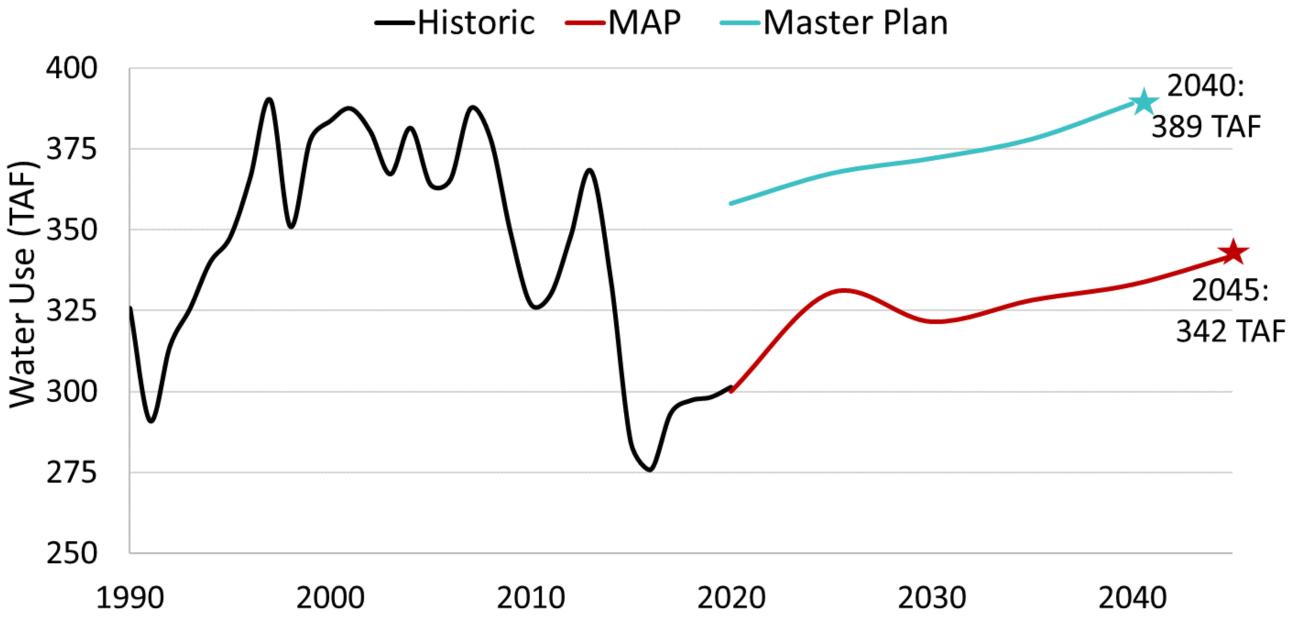




1. Secure existing supplies and infrastructure 2. Expand conservation and reuse



# 3. Optimize the system



Water use dropped 25% in the last 5 years. 2017 - 148 Gallons per person/day 2022 - 111 Gallons per

person/day

**County population** increased by 25% over the past 30 years. Water demand has decreased by 8% in that time (1990-2020)

#### ER REUSE [CORE PLAN]

### **PROGRAM OBJECTIVES**

- Identify water available for potable and non-potable reuse
- Evaluate opportunities for system integration
- Guide expansion via interagency agreements

and governance structures

- Generate support by engaging stakeholders
- Goal: 24,000 AF of Potable Reuse





## ide uigter reuse master

# Reuse

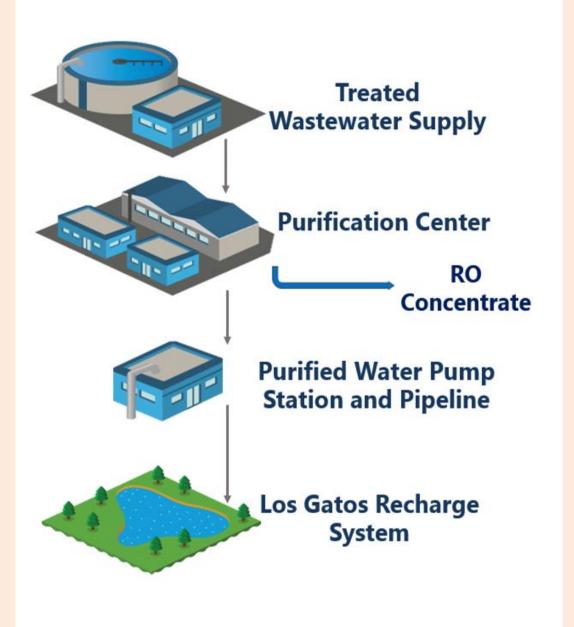
# Non-Potable Potable IPR DPR

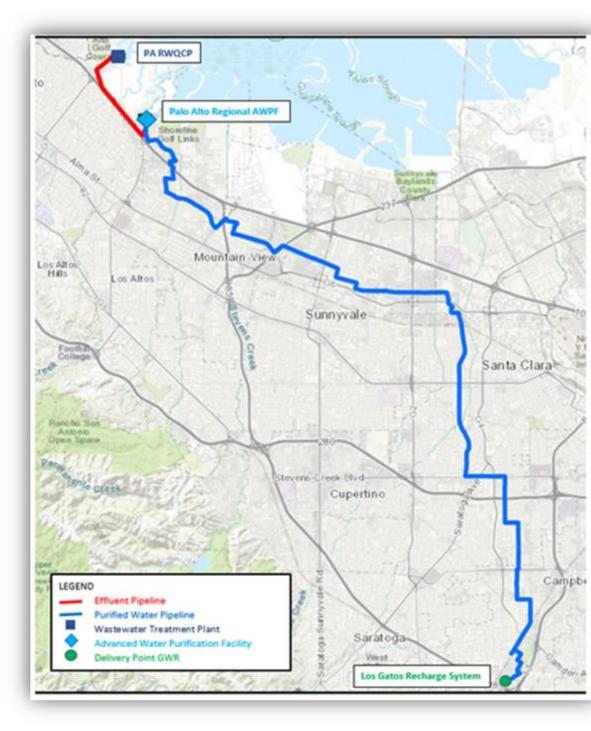




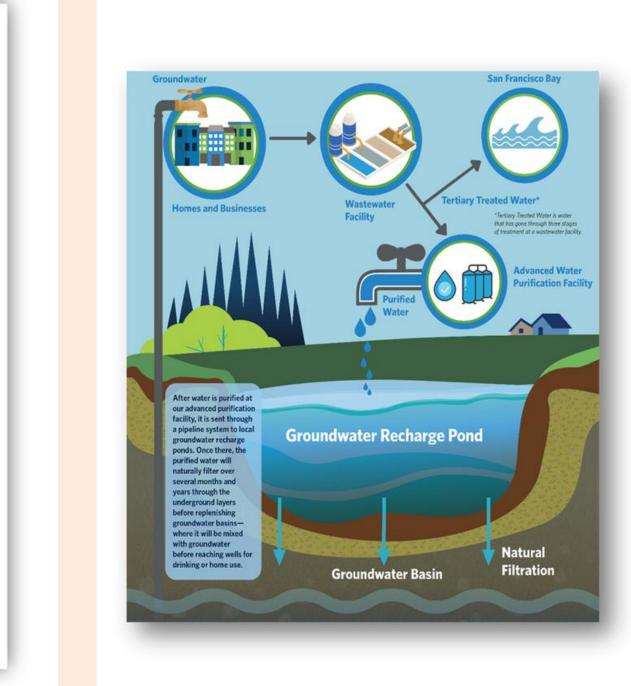
### Enhanced

## PURIFIED WATER PROJECT









## rerigte project delivery met

- Using Design-Build-Finance-Operate-Maintain Delivery Method. A private entity delivers the project, Valley Water retains ownership and partners with the private entity as part of a P3.
- Cost: about \$1.2 billion

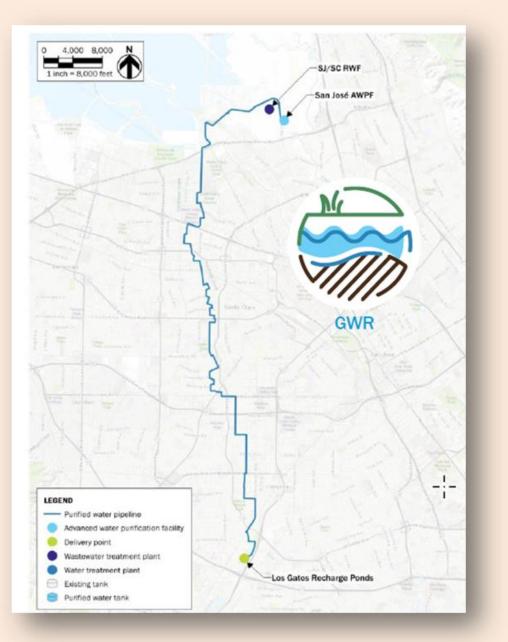
## (P3) Public Private Partnership

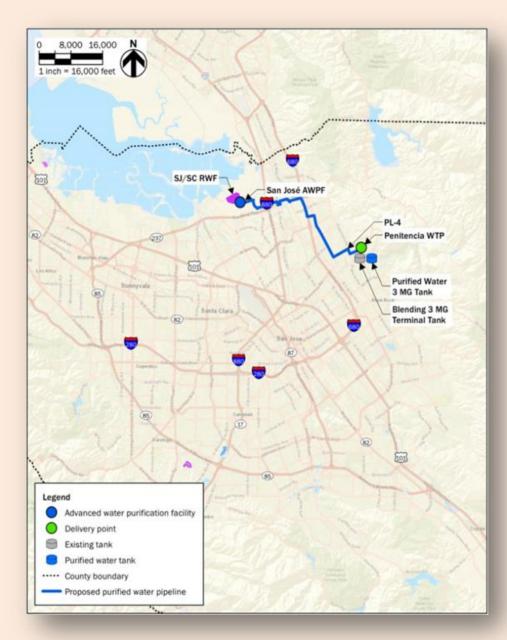




## CORE PLAN WATER REUSE PORTFOLIOS SAN JOSE

hor







#### Raw Water Augmentation



#### Treated Water Augmentation



# THANK YOU FOR LISTENING

