



# Water Resources 2023 Priorities



# Overview: Water Resources 2023 Priorities

- Water Supply Resiliency
  - Water Supply Roadmap Implementation
- Water Efficiency
  - SWSA Water Conservation Program
  - Conservation Master Plan
  - Water Loss Study

# Water Supply Roadmap Implementation

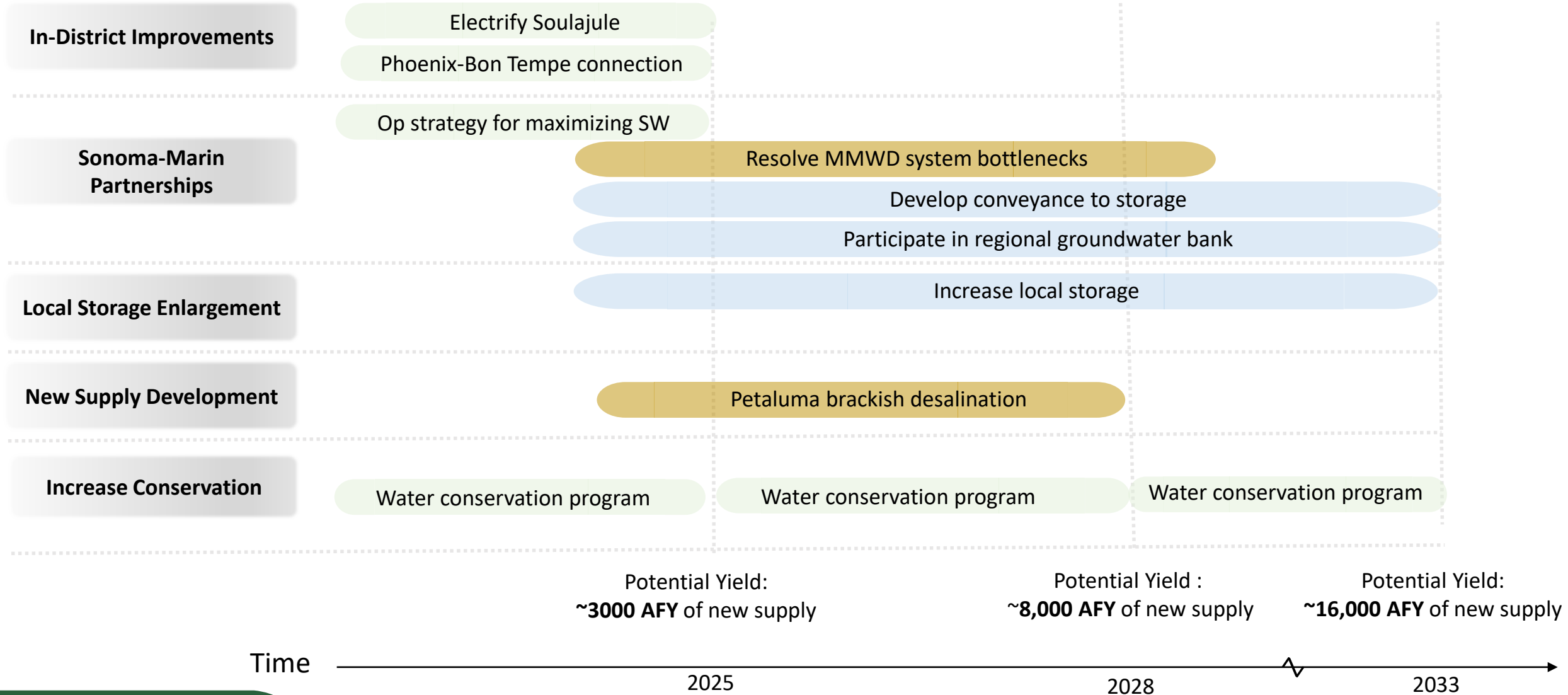
- Range of Water Supply Options will likely be included in final roadmap
- Planning for implementation of supply options
- All supply options generally require similar level of pre-design work





# Example Integrated Roadmap and Potential Yield:

## Combining actions from various portfolios



## Estimated Budget Needed To Support Roadmap Options – 4 year

	4-yr. Operational Cost [Million]	4-yr. Capital Cost [Million]
Conservation	\$6.8	\$0
Phoenix to Bon Tempe	\$0.2	\$5
Soulajule Electrification	\$1	\$6
Maximize Supplemental Water using existing facilities	\$11.5	\$0
Predesign	--	\$12.5
4-Yr Total	\$19.5	\$23.5

# Examples of Pre-design work on possible Projects: Marin-Sonoma Options

- Develop operational plans to optimize supplemental water via existing facilities
- Select preferred approach to conveyance
- Determine optimum capacity /sizing of selected conveyance option
- Pre-design report - confirms water availability, alignment, ROW needs, jurisdiction, permits, cost estimate
- Design to support CEQA/NEPA
- Approximate cost  $\cong$  \$4.5 Million

# Examples of Pre-design work on possible Projects: Local Storage Enlargement

- Review hydrology, preliminary design, geotech and selection of reservoir (KENT/NICASIO/SOULAJULE) and scale of enlargement
- Model and analyze stream flows and impacts/benefits to creek/fishery of various options
- Discussion with State Water Resources Control Board, National Marin Fishery Service, CDFW and other resource agencies/stakeholders
- Design to support CEQA/NEPA
- Approximate cost  $\cong$  \$5.5 Million

# Examples of Pre-design work on possible Projects: Petaluma Desalination

- Establish regional collaboration group
- Study to confirm aquifer pumping capacity, water quality, establish project approach, budget and schedule
- Studies to support brine disposal options, understand potential impacts to area of discharge and compliance with likely NPDES permit
- Engineering design to support CEQA
- Approximate cost  $\cong$  \$2.5 Million



# Resourcing For Implementation of Roadmap

- Combined resources of Water Resources and Engineering for different aspects of the work
- Consultants to augment staff with technical work and program management

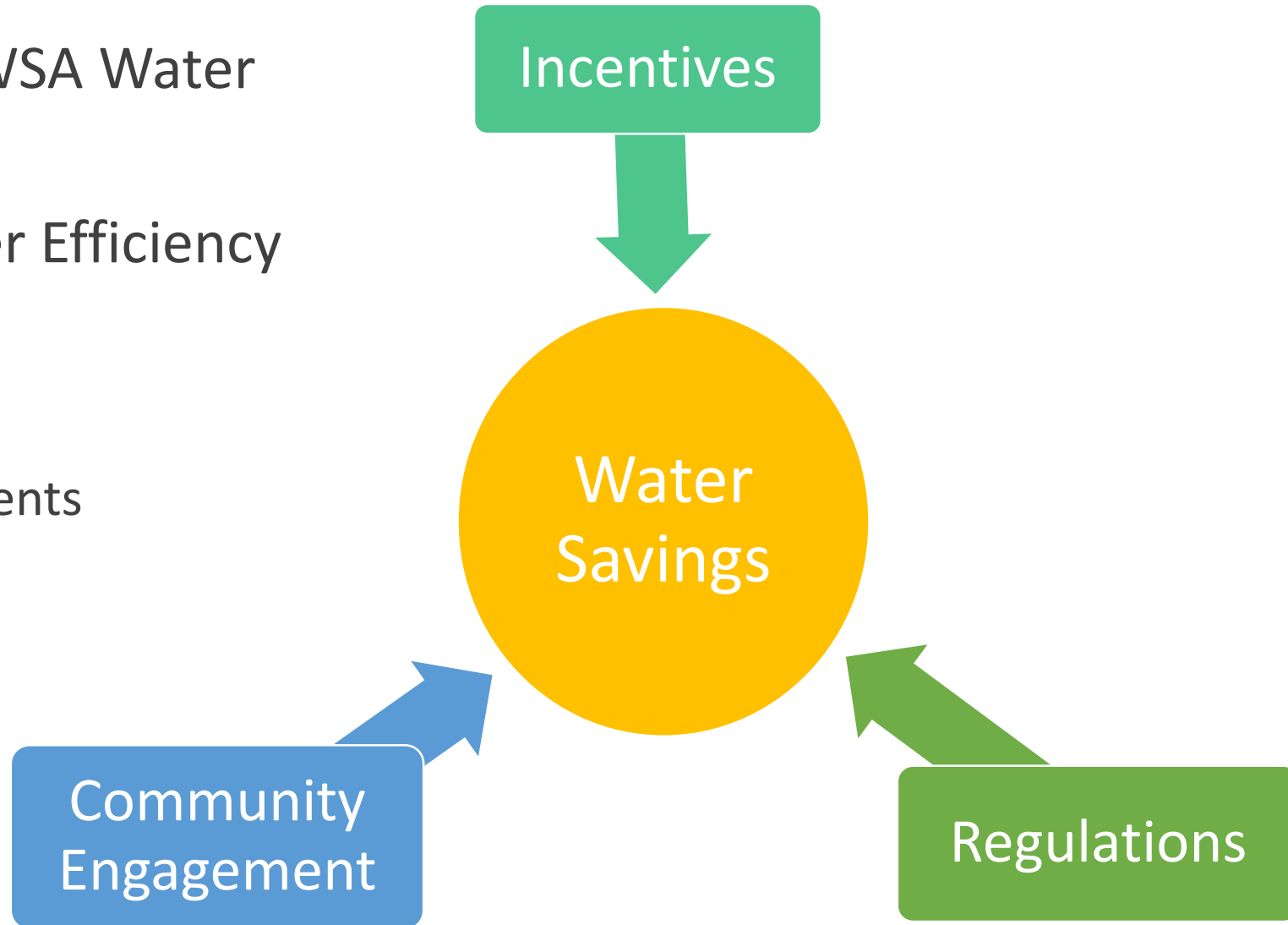


# Water Supply Roadmap: Goals & Milestones

- Roadmap selection - **February 2023**
- Begin forming consulting teams to work on project selected from the roadmap - **March 2023**
- Begin “no-regrets” projects implementation - **March 2023:**
  - Conservation actions
  - Soulajule Electrification
  - Phoenix to Bon Tempe
- Develop detailed approach and schedule for individual projects and overall roadmap - **August 2023**

# Overview: Water Efficiency 2023 Priorities

- Implementation of the SWSA Water Conservation Program
- Development of the Water Efficiency Master Plan
- System Water Loss Study
  - State regulatory requirements
  - New technologies
  - Maximize opportunities



# Pursuing Demand Reduction through Water Efficiency

## WATER EFFICIENCY PROGRAM

### SWSA's WATER CONSERVATION ELEMENT

*Demand Reduction Goal: ~200 AFY*

### WATER EFFICIENCY MASTER PLAN

*Goal: TBD*

### DROUGHT RESPONSE ACTIONS

*Goal: Aligns with Shortage Level*

- Incentivized, voluntary program
- Quantifiable programs with calculated water savings
- Participation levels limited to be achievable based on historic data

- Short, medium, long term demand reduction goals maximizing the potential water savings
- Leading edge initiatives
- Incentivized, voluntary program
- May include adaptation of ordinances
- Includes non-quantifiable programs

- Short term, low frequency
- Initially voluntary, progress to mandatory
- Defined short term savings objectives per adopted Shortage Level (WSCP)
- Provides some long-term benefit

# SWSA Conservation Program Details & Cost

Activity Name (program offer)	Annual Participation	Unit Cost (\$/AF)	Cumulative Water Savings in 2045 (AF)
<i>Drought Response Program Savings</i>			
High Efficiency Toilets (\$150 rebate)	30	\$2,435	6
High Efficiency Clothes Washers (\$100 rebate)	390	\$732	116
Flume Home Water Monitor (\$115 rebate)	2,000	\$442	904
Drought Program Turf Conversion (\$3/sqft)	380,000	\$2,024	780
Drought Program Mulch Madness (\$4.26/sqft)	47,600	\$3,116	97
Hot Water Recirculating System (\$50 rebate)	150	\$1,677	17
<i>Ongoing SWSA Water Conservation Program</i>			
AMI Leak Notifications (letters)	1,250	\$287	9,990
Non-Functional Turf Conversion (\$1.50-\$3/sqft)	70,000	\$2,132	4,505
Turf Conversion – Post Drought Programs (\$1.50-\$3/sqft)	100,000	\$1,985	4,282
Pool Cover Rebates (\$100 rebate)	90	\$877	642
Residential Irrigation Controller (\$100 rebate)	100	\$1,035	586
Residential CAP's (site visits)	500	\$13,763	378
Laundry-to-Landscape System (\$125 rebate)	40	\$4,988	154
Rain Barrel Rebate Program (\$0.50/gal of storage)	15,000	\$8,820	58
Program Overhead		\$414	
<b>Total</b>		<b>\$1,792</b>	<b>22,515</b>

# Additional Water Efficiency Programs & Activities

- Incentive programs target savings for both indoor & outdoor
- Landscape Plan Review
- Education Program
  - Youth Education in Schools
  - Contractors (builders, landscapers, plumbers)
  - Homeowners
- Outreach Events
  - Local community events
- Local, State, and National Partnerships
  - ie: Master Gardeners, Alliance for Water Efficiency
- Water Waste Prohibitions
  - Follow-up on reported water waste
- Customer Resources
  - ie: Weekly watering schedule

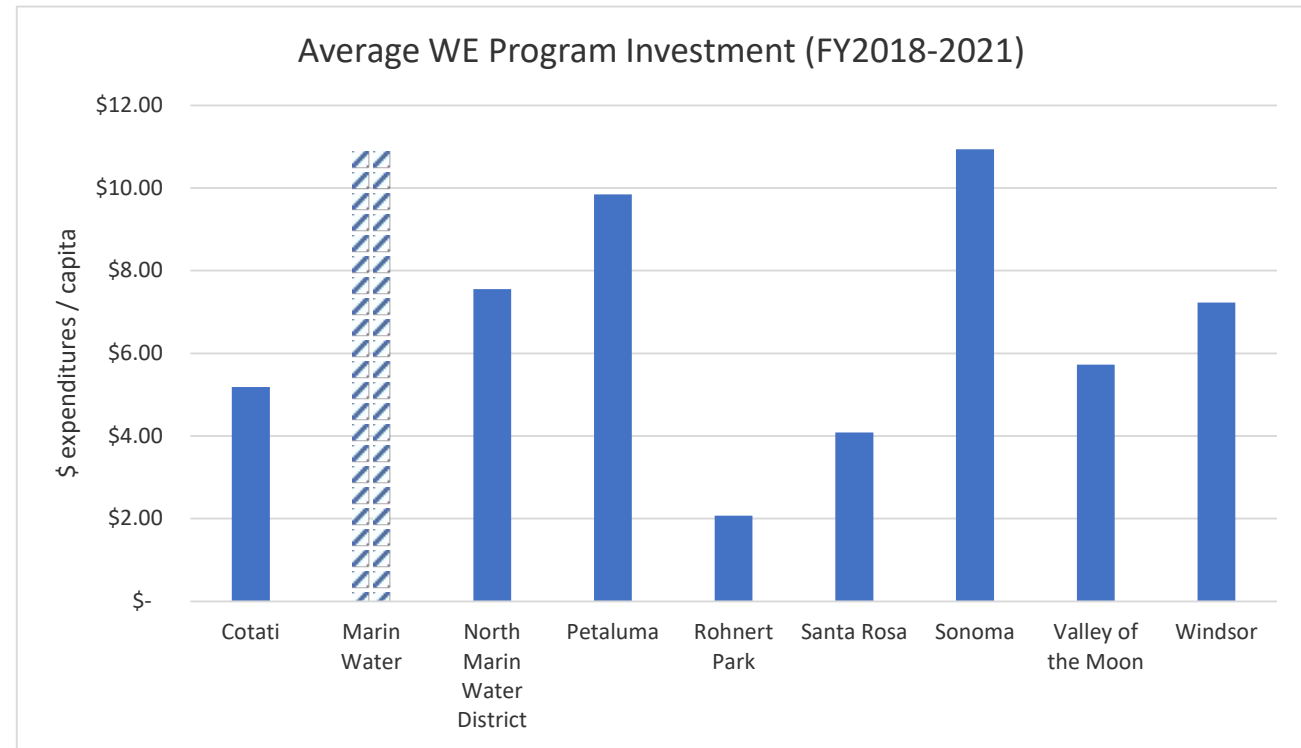
## Current Incentive Offers

- High Efficiency Clothes Washers (\$100)
- High Efficiency Toilets (\$150)
- Flume devices (\$75) *Grant funded*
- Hot water recirculating systems (\$50)
- Showerheads, faucet aerators (free)
- Dye tablets for toilet leak detection (free)
- Lawn replacement (\$1.50 or \$3.00/ sqft, up to \$3K residential and \$15K commercial)
- Rain barrels (\$0.50/gallon of storage, up to \$1,000)
- WaterSense irrigation controllers (\$100)
- Laundry-to-landscape graywater kits (\$125)
- Pool and spa covers (\$100)
- Hose nozzles (free)



# Water Efficiency Program Budget

- Future Annual Program Budget
  - SWSA: \$1.7M
  - All other activities: \$1.1M
  - WE Master Plan: TBD
- Historic Annual Program Budget
  - Non-drought: \$2.4M



# Water Efficiency: Goals & Milestones

- Begin implementation of SWSA Conservation Program - **Feb 2023**
- Water Efficiency Master Plan framework initial briefing - **March 2023**
- Engage consultant for water loss study - **March 2023**
- Water Efficiency Master Plan elements and funding - **July 2023**
- Draft Water Loss Study - **August 2023**
- Draft Water Efficiency Master Plan - **September 2023**
- Final Water Loss Study - **October 2023**
- Final Water Efficiency Master Plan - **October 2023**

