

# Water Supply Master Plan Update

January 8, 2019

# Presentation Topics



Water Supply Master Plan Update 2040  
Status



Recommended Water Supply Strategy



Water Supply Reliability Level of Service  
Goal

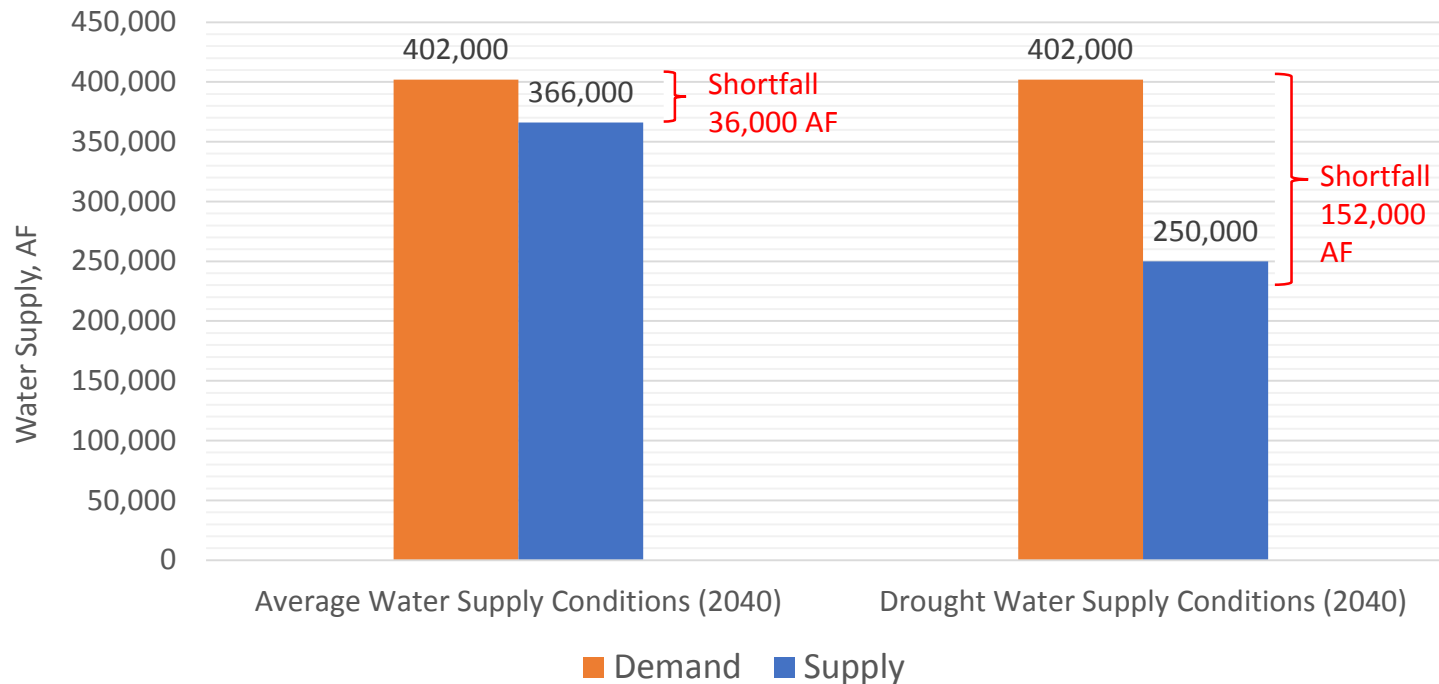


RoadMAP (Monitoring and Assessment Plan)



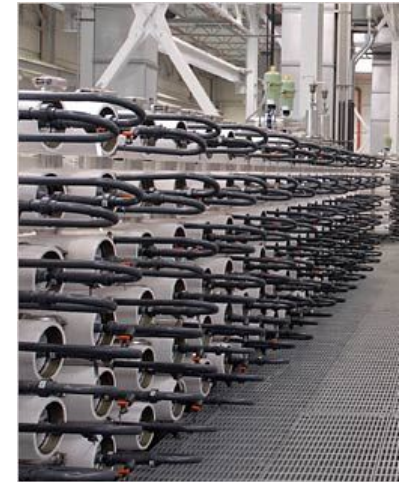
Next Steps

# Droughts are, and will be, our greatest challenge to reliability





# Many projects have been evaluated for filling the gap



# Many strategies for water supply reliability have been evaluated



Sustainability



Regional Flexibility



Local Flexibility



Local Storage



Regional Storage



Statewide Storage



Low Cost



Low Risk



Integrated



And more...



# Stakeholder Input Summary

Input	Phone Survey – Likely Voters	Workshop #1 - Environmental, Civic Non- Profits, Individuals	Workshop #2 - Retailers
Water supply reliability important	X	X	X
Expand conservation, recycling, and reuse	X	X	X
Minimize rate increases	X	X	X



## Additional takeaways:

- Voters like additional local and regional storage
- Environmental groups and others request reduced reliance on Delta
- Retailers would like better alignment between plans and actions

# Updated Risk Analysis

Project	Risk Ranking
California WaterFix – Federal Side	Extreme
California WaterFix – State Side Only	High
No Regrets – Complete Package	Medium
No Regrets - Advanced Metering Infrastructure	Low
No Regrets – Graywater Rebate Program Expansion	Low
No Regrets - Leak Repair Incentives	Low
No Regrets - Model Water Efficient New Development Ordinance	Medium
No Regrets – Stormwater/Ag Land Recharge, San Jose, Saratoga	Low
No Regrets – Stormwater/Rain Barrels, Cisterns, Rain Gardens	Low
Pacheco Reservoir	Medium
Potable Reuse and/or Additional Non-Potable Reuse	Medium
South County Recharge	Low
Transfer-Bethany Pipeline	Medium





# Technical Analyses Summary



Imported supplies generally less expensive, but less resilient to climate change and risks



Potable reuse generally more expensive, but more resilient to climate change and risks



Local surface water likely to become more variable in the future



Increasing variability and uncertainty associated with climate change



Projects with the greatest influence on reliability are generally imported water, reuse, and conservation





# Based on stakeholder input and technical analyses, staff recommends:

- Reaffirming the 2012 “Ensure Sustainability” Strategy
- Updating the level of service goal
- Continuing regular review of the Water Supply Master Plan through a monitoring and assessment plan (MAP)



# 2012 Board-Adopted “Ensure Sustainability” Strategy



Secure  
existing  
supplies and  
infrastructure

Expand  
conservation  
and reuse

Optimize the  
system



# Element 1: Secure Existing Supplies and Infrastructure



## Secure existing infrastructure

- Dam retrofits, pipeline maintenance, treatment plants, other rehab projects



## Secure existing local supplies

- FAHCE, recharge capacity, natural groundwater recharge



## Secure existing imported supplies

- California WaterFix (CWF)



# Element 2: Expand Conservation and Reuse



## Expand Reuse

- P3 procurement for up to 24,000 AFY of potable reuse approved in December 2017



## Expand Conservation

- “No Regrets” package of water conservation and stormwater projects approved for planning in September 2017



# “No Regrets” Package

Program	Status
Advanced Metering Infrastructure (AMI)	Working with retailers on program definition
Graywater Rebate Program Expansion	Working with Ecology Action on direct installations
Leak Repair Incentives	Will be implemented based on AMI results
Model Water Efficient New Development Ordinance	Consultant in process of finalizing model ordinance
Stormwater-Ag Land Recharge	Pilot project being scoped
Stormwater- Rain Barrels and Cisterns	Implementing
Stormwater – Rain Gardens	Implementing
Stormwater – San Jose	Future project
Stormwater - Saratoga	Future project





# Element 3: Optimize the system



## South County Recharge

- Provides additional recharge capacity to meet future demands



## Pacheco Reservoir Expansion

- Increases capacity to store surplus flows
- Consistent with Board priorities



## Transfer-Bethany Pipeline (part of Los Vaqueros Project)

- Included in FY 18/19 rate forecast
- Connects multiple regional systems



# “Ensure Sustainability” Strategy

- Protects existing assets
- Leverages past investments
- Meets new demands with drought-resilient supplies
- Supports “One Water” approach
- Develops local and regional supplies to reduce reliance on the Delta
- Increases flexibility
- Increases resiliency to climate change



# Level of Service Goal Revisions Presented to Water Conservation and Demand Management Committee on June 25, 2018

Develop water supplies designed to meet 100 percent of demands identified in the Urban Water Management Plan-Water Supply Master Plan in non-drought years and at least ~~90~~ 80 percent of average annual water demand in drought years.

## Rationale

- 2017 Telephone Survey
- Stakeholder Input
- Incremental Costs
- Frequency of Shortage
- Planning for Uncertainty
- Benchmarking



# Level of Service Goal Benchmarking

Agency	District Equivalent
Alameda County Water District	Meet at least 90% of demands during droughts
Zone 7 Water Agency	Meet at least 85% of demands during droughts
East Bay Municipal Utility District	Meet at least 85% of demands during droughts
Contra Costa Water District	Meet at least 85% of demands during droughts
San Francisco Public Utilities Commission	Meet at least 80% of demands during droughts
Marin Municipal Water District	Meet at least 75% of demands during droughts



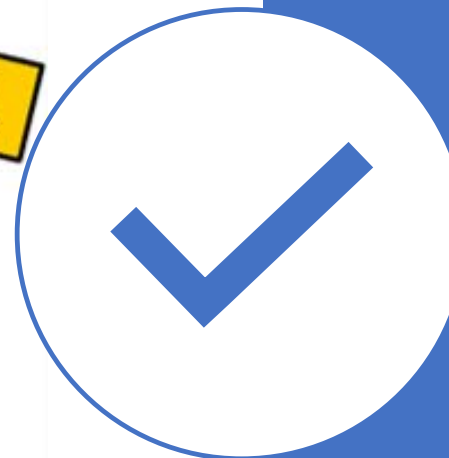
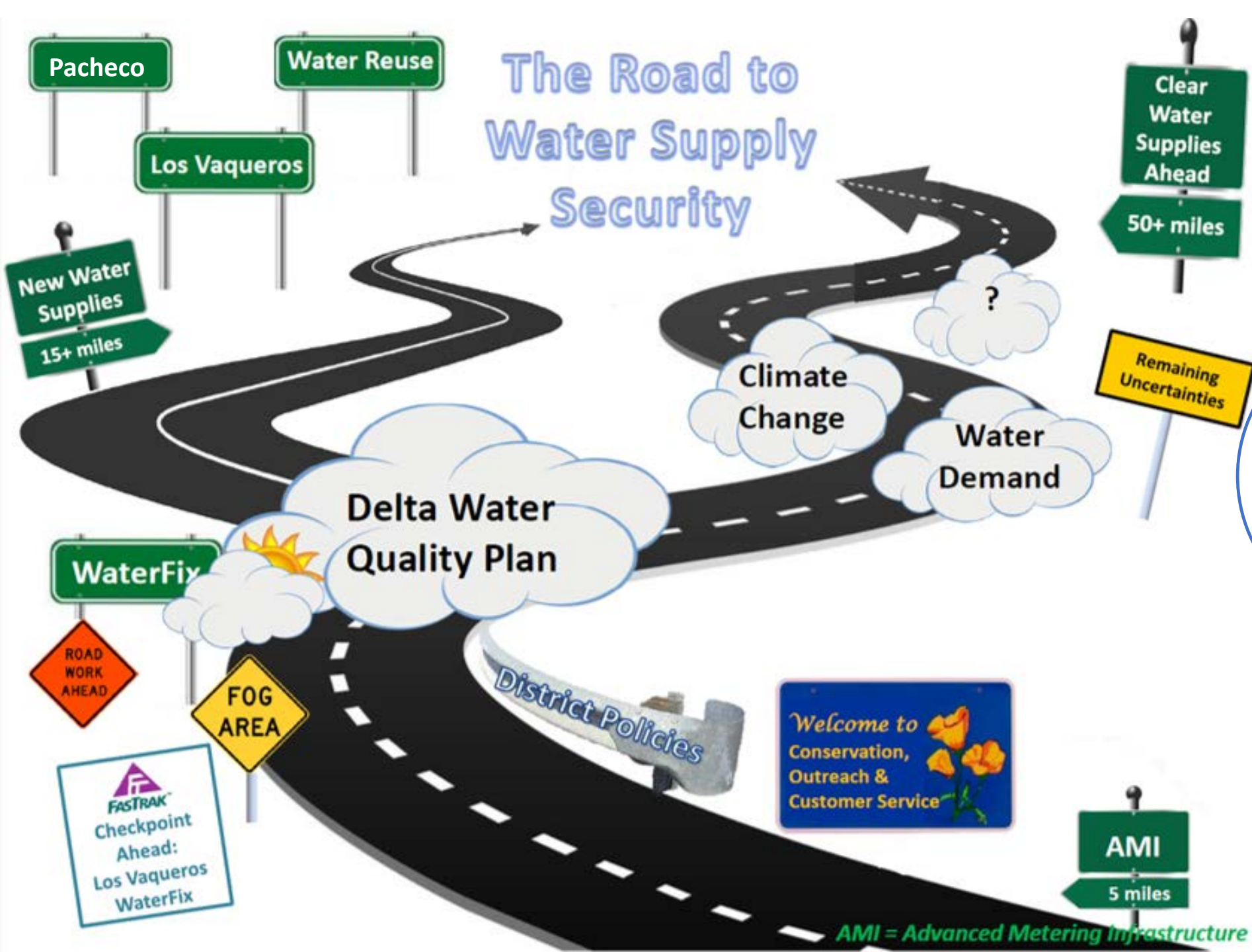
# Incremental Benefits of Increasing Level of Service

Scenario	Without Projects (Basecase)	With Some Projects Approved for Planning	With All Projects Approved for Planning
<b>Minimum Drought Reliability</b>	Meets 50% of demands	Meets 80% of demands	Meets 90% of demands
<b>Present Value Benefits (2017\$)</b>	Not applicable	\$2,480,000,000	\$2,700,000,000
<b>Present Value Cost to District (2017\$)</b>	Not applicable	\$1,600,000,000	\$2,450,000,000
<b>Benefit:Cost Ratio</b>	Not applicable	1.6	1.1



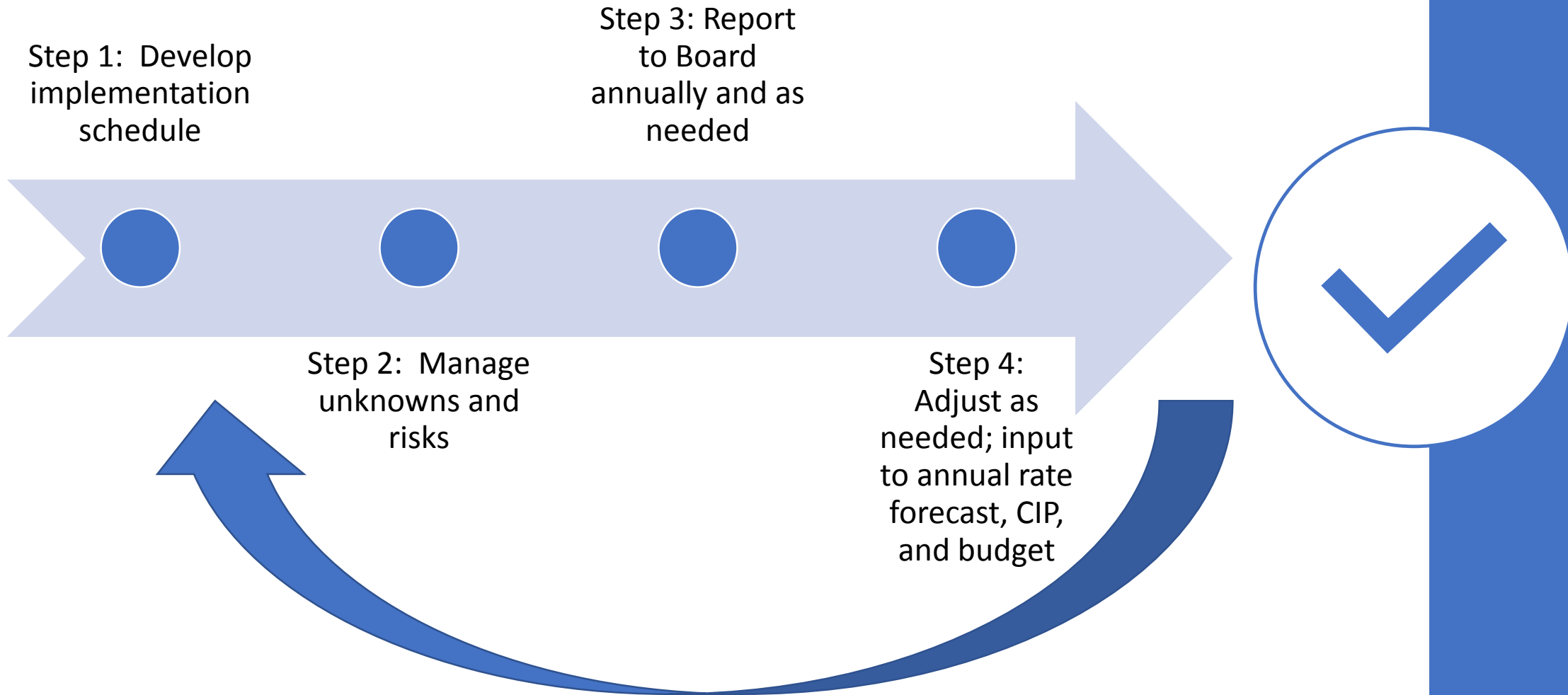
- Baseline Projects
- No Regrets Package
- Potable Reuse
- South County Recharge
- WaterFix (State Side)
- Baseline Projects
- No Regrets Package
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- South County Recharge
- WaterFix (State Side)
- WaterFix (Federal Side)
- Pacheco Reservoir
- Transfer-Bethany Pipeline



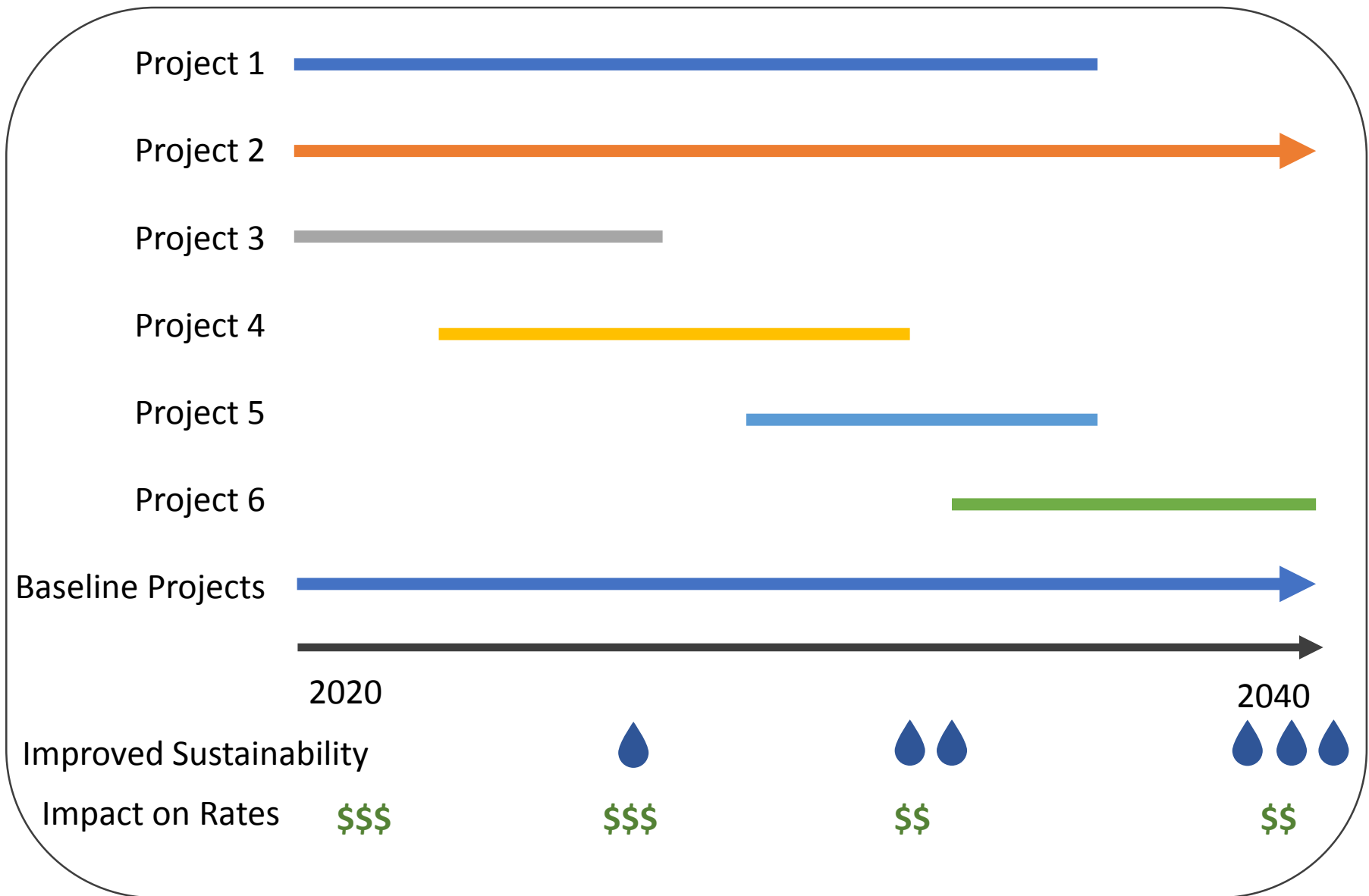


# RoadMAP

(Monitoring and Assessment Plan)



# Step 1: Develop Implementation Schedule



# Step 2: Manage Unknowns and Risks

Monitoring Category	Example Metrics
Demands	<ul style="list-style-type: none"><li>• Water use</li><li>• Conservation savings</li><li>• Risks and opportunities</li></ul>
Existing Supplies	<ul style="list-style-type: none"><li>• Local surface water availability</li><li>• Imported water availability</li><li>• Recycled water use</li><li>• Risks and opportunities</li></ul>
Ongoing Projects	<ul style="list-style-type: none"><li>• Scope</li><li>• Schedule</li><li>• Budget</li><li>• Risks and opportunities</li></ul>
Alternative Projects	<ul style="list-style-type: none"><li>• Status</li><li>• Risks and opportunities</li></ul>
Policies and Regulations	<ul style="list-style-type: none"><li>• Impact to water supply reliability/level of service</li><li>• Risks and opportunities</li></ul>



# Step 3: Report to the Board

Suggested Master Plan Projects	Alternative or Additive Projects (Partial List)
<ul style="list-style-type: none"><li>• No Regrets Conservation and Stormwater</li><li>• Potable Reuse</li><li>• South County Recharge***</li><li>• WaterFix (State Side)</li><li>• WaterFix (Federal Side)</li><li>• Pacheco Reservoir</li><li>• Transfer-Bethany Pipeline</li></ul>	<ul style="list-style-type: none"><li>• Sites Reservoir</li><li>• Refinery Recycled Water Exchange</li><li>• Los Vaqueros Reservoir</li><li>• Countywide Water Reuse Master Plan</li><li>• California WaterFix Long-Term Transfers</li><li>• Bay Area Brackish Water Treatment</li><li>• Lexington Pipeline</li><li>• North County Recharge</li><li>• Groundwater Banking</li><li>• South County Water Treatment Plant</li><li>• Morgan Hill Recycled Water</li></ul>



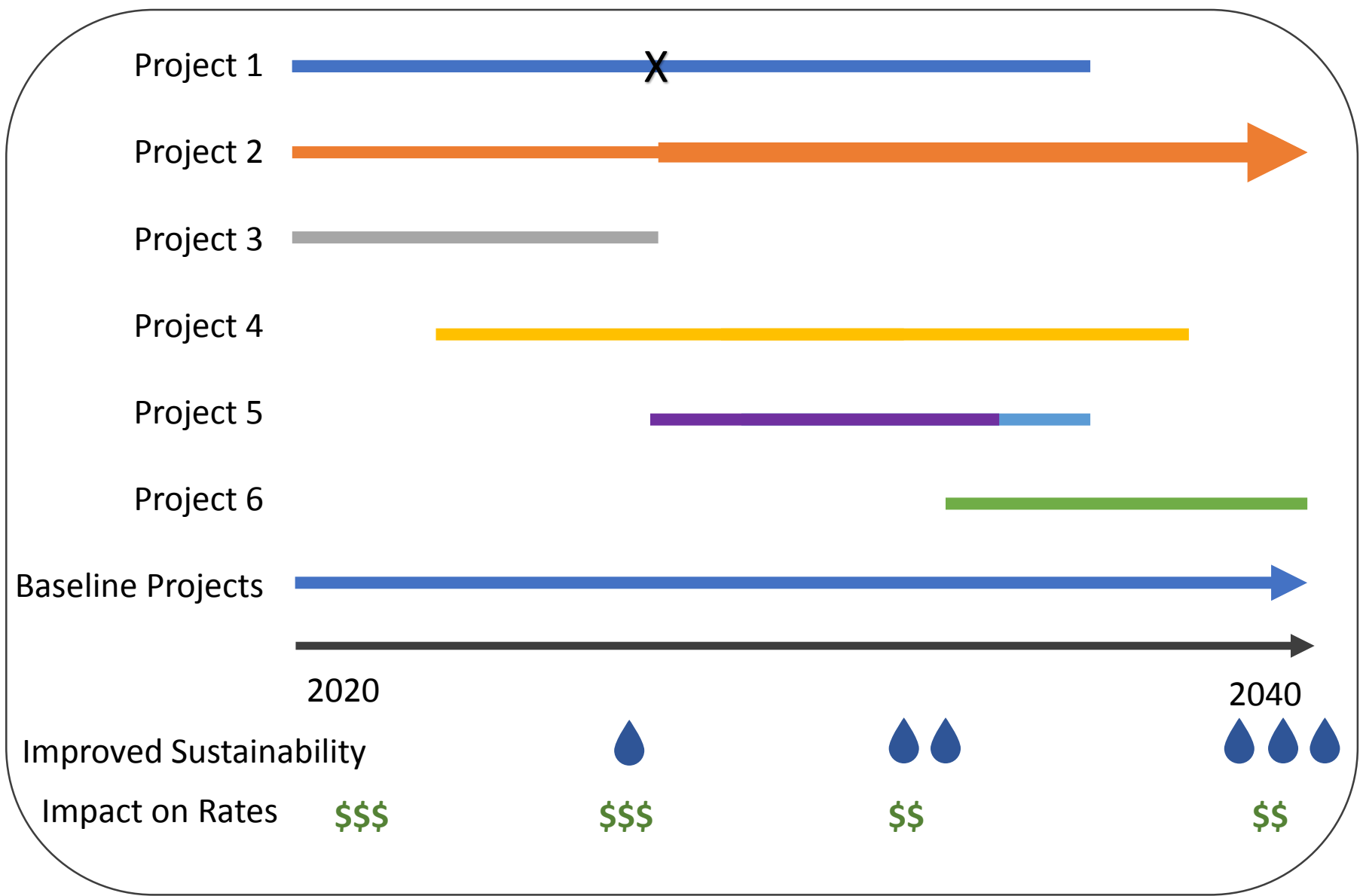
## Considerations for Moving Projects

- Change in level of service
- Cost and rate impacts
- Change in risk level
- Relationships between projects
- Needs and opportunities
- Stakeholder input

\*\*\*Not in 10-year rate forecast

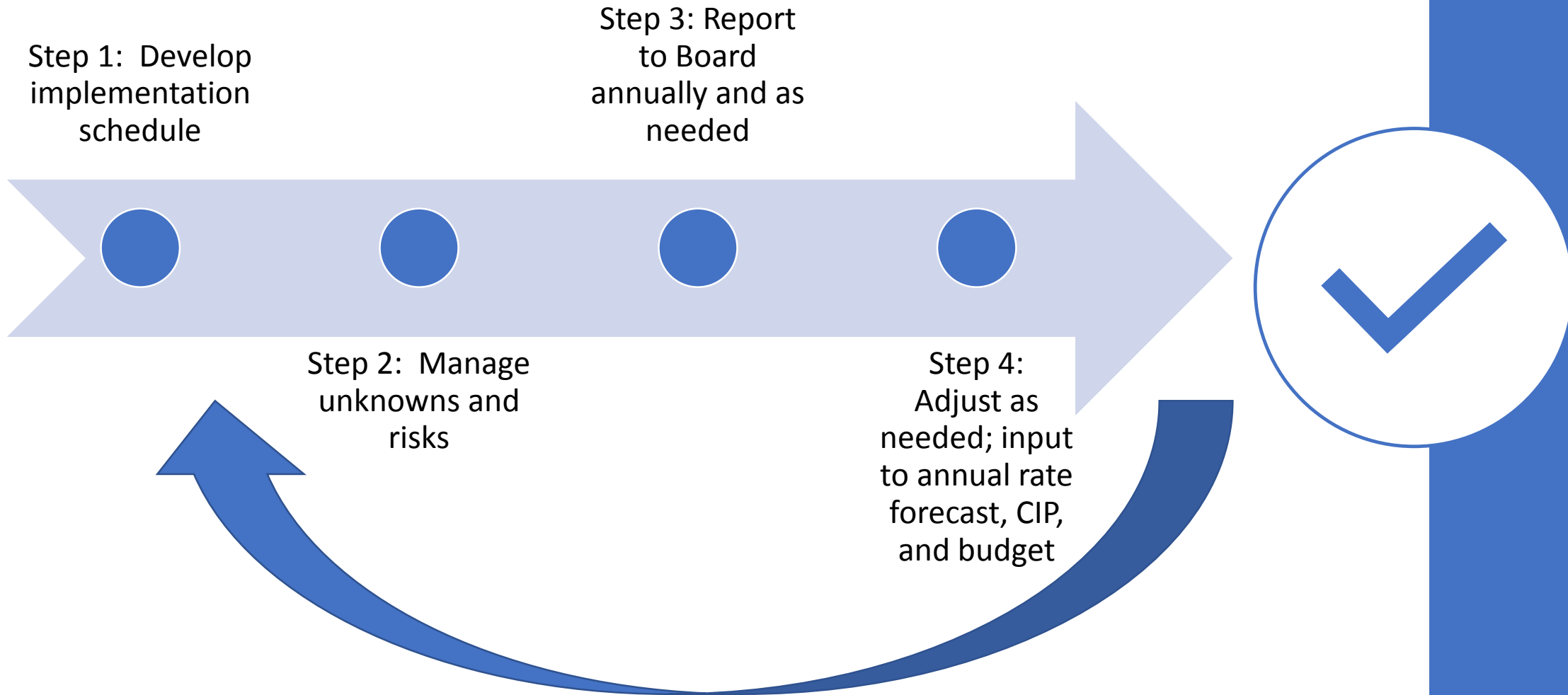


# Step 4: Adjust as Needed



# RoadMAP

(Monitoring and Assessment Plan)



# Next Steps

- Prepare Draft Water Supply Master Plan 2040 – March 2019
- Solicit input on draft Water Supply Master Plan – March – April 2019
- Present Final Water Supply Master Plan – June 2019



# Recommendations

- Reaffirm the 2012 “Ensure Sustainability” Strategy
- Approve changing the water supply reliability level of service goal from meeting 90 percent of normal year demands in drought years to meeting 80 percent of demands in drought years
- Provide direction on the monitoring and assessment plan (MAP)
- Direct staff to return with updates on projects with near-term decisions points

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