

# Water Supply Resiliency Planning Board Workshop May 17, 2018



SCOTTS VALLEY  
WATER DISTRICT

# Water Budget Planning Components

- Demand Projection
  - Current consumption patterns
  - New service connections
- Supply Status
  - Groundwater availability
  - Climate variability impacts
- Funding Implications
  - Fixed operating costs
  - Continued need for infrastructure replacement and improvement
  - Supplemental (diversified) supply project

# Demand Projection

## SVWD Urban Water Management Plan 2015 Update

- Current service area population 10,774
- 2040 projected service area population 12,470
- 2015-2020 demand projection
  - Based on the Development Projects with existing Service Applications with District
  - Based on 75GPCD for SFR, 45GPCD for MFR
- 2020-2040 demand projection
  - Based on potential projects in the pipeline

# Supply Status

## SMB Groundwater Modeling Technical Study 2015

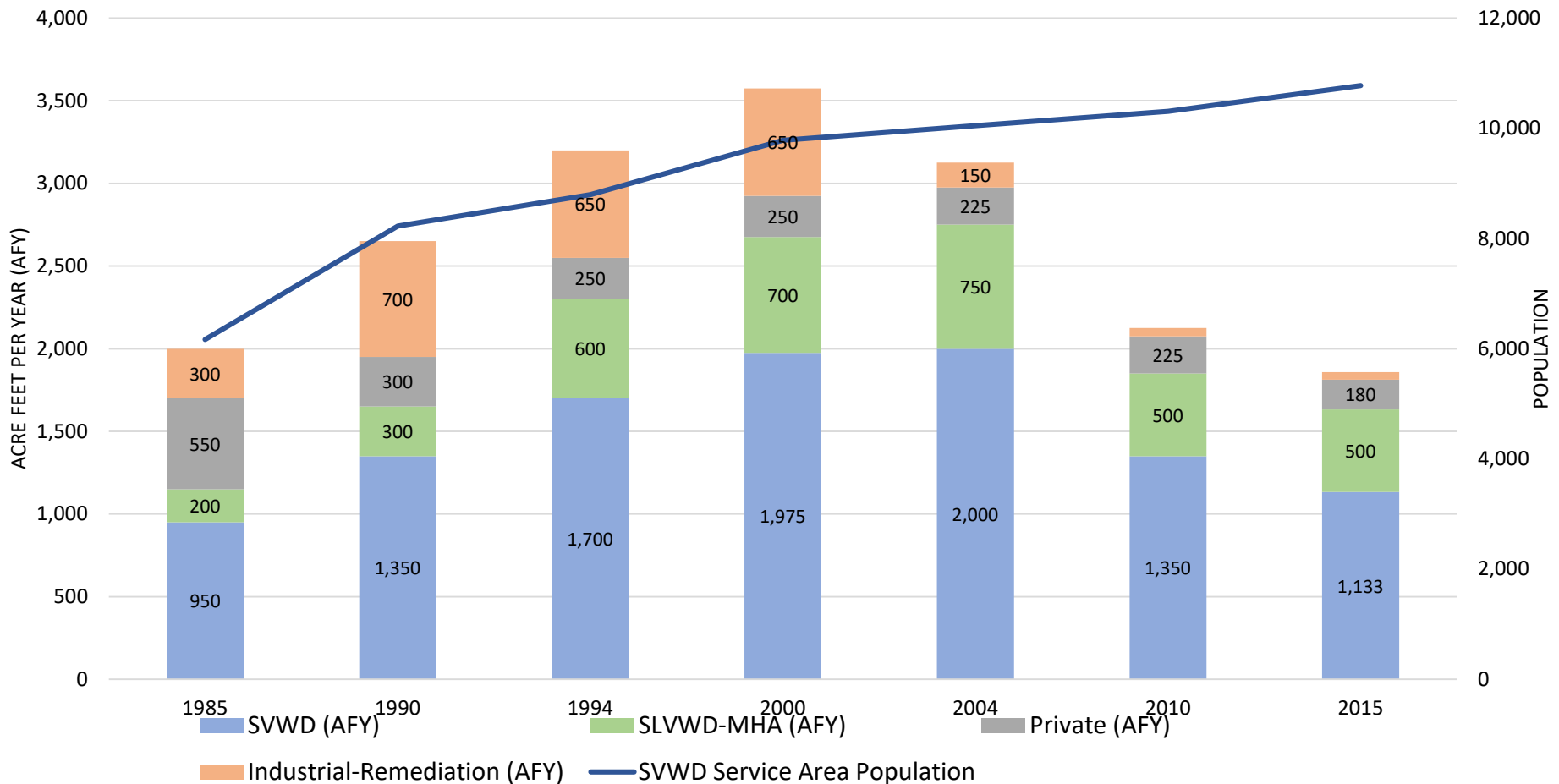
- Sustainable yield of SMB in the range of 3,050 to 3,400 AFY
  - Santa Margarita Aquifer 30%
  - Monterey Aquifer 5%
  - Lompico Aquifer 55%
  - Butano Aquifer 10%
- Cumulative SMB storage change -27,850 AFY
- Sustainable yield of SMB Scotts Valley/ Pasatiempo Management Area estimated at 2,600 AFY
  - Affected by climatic variations
  - 10% of additional recharge is attributed to increase in aquifer storage, 50% to increased stream baseflows
- Since early 2000's groundwater levels in all aquifers have stabilized with no considerable storage change occurring in Scotts Valley/ Pasatiempo Area

# Funding Implications

- Operating costs are largely fixed
  - No correlation with water consumption
- Water system needs
  - Sufficient capacity to meet current and future demand
  - Aging infrastructure (\$50 million current value) has significant replacement/ improvement cost
- Supplemental supply project to increase water supply resiliency
  - Drought proof source (recycled water)
  - Additional recharge capability

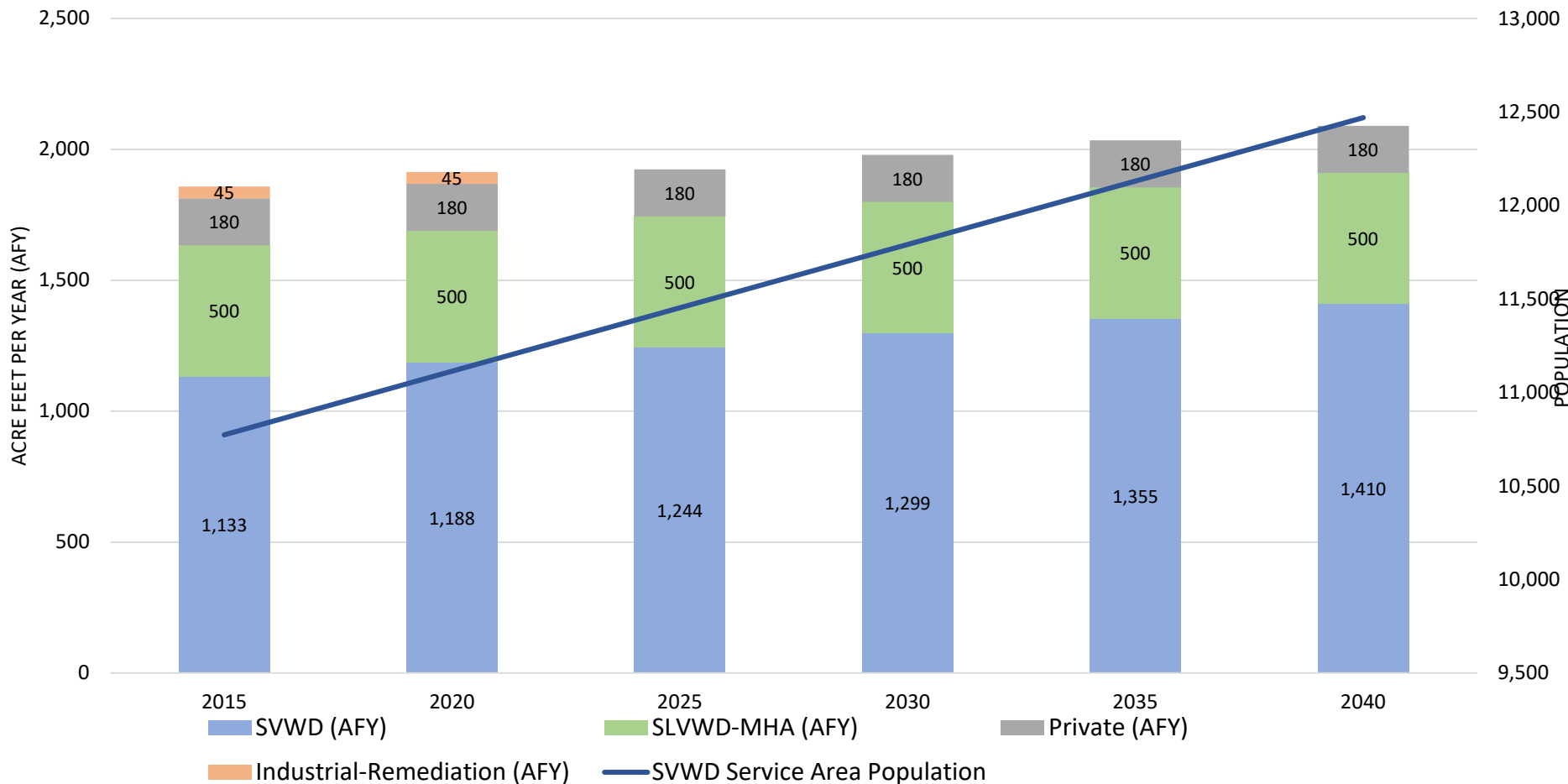
# Historical Production and Population

Santa Margarita Basin, Scotts Valley and Pasatiempo Subareas



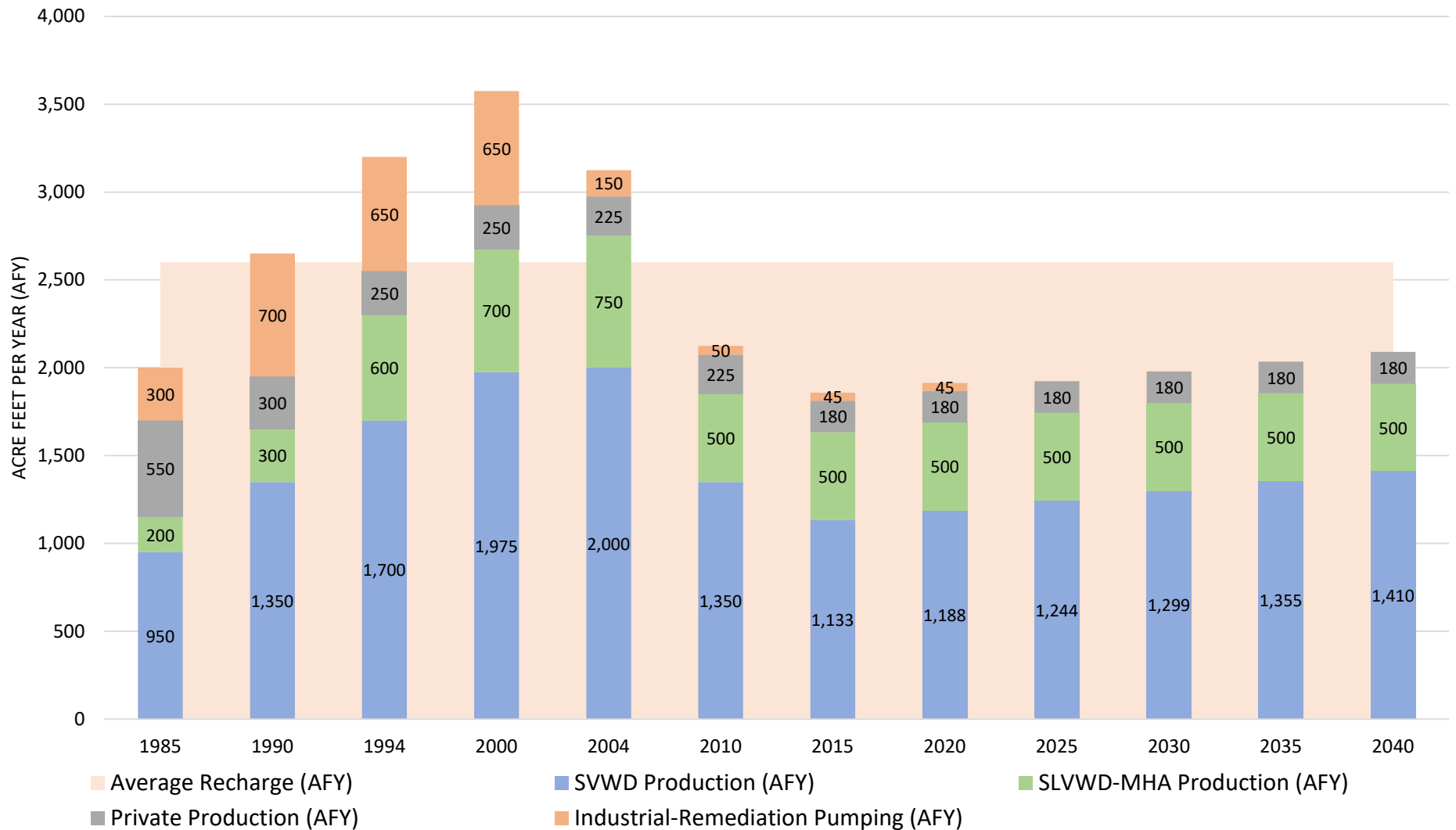
# Future Projected Production and Population

## Santa Margarita Basin, Scotts Valley and Pasatiempo Subareas



# Production and Average Recharge

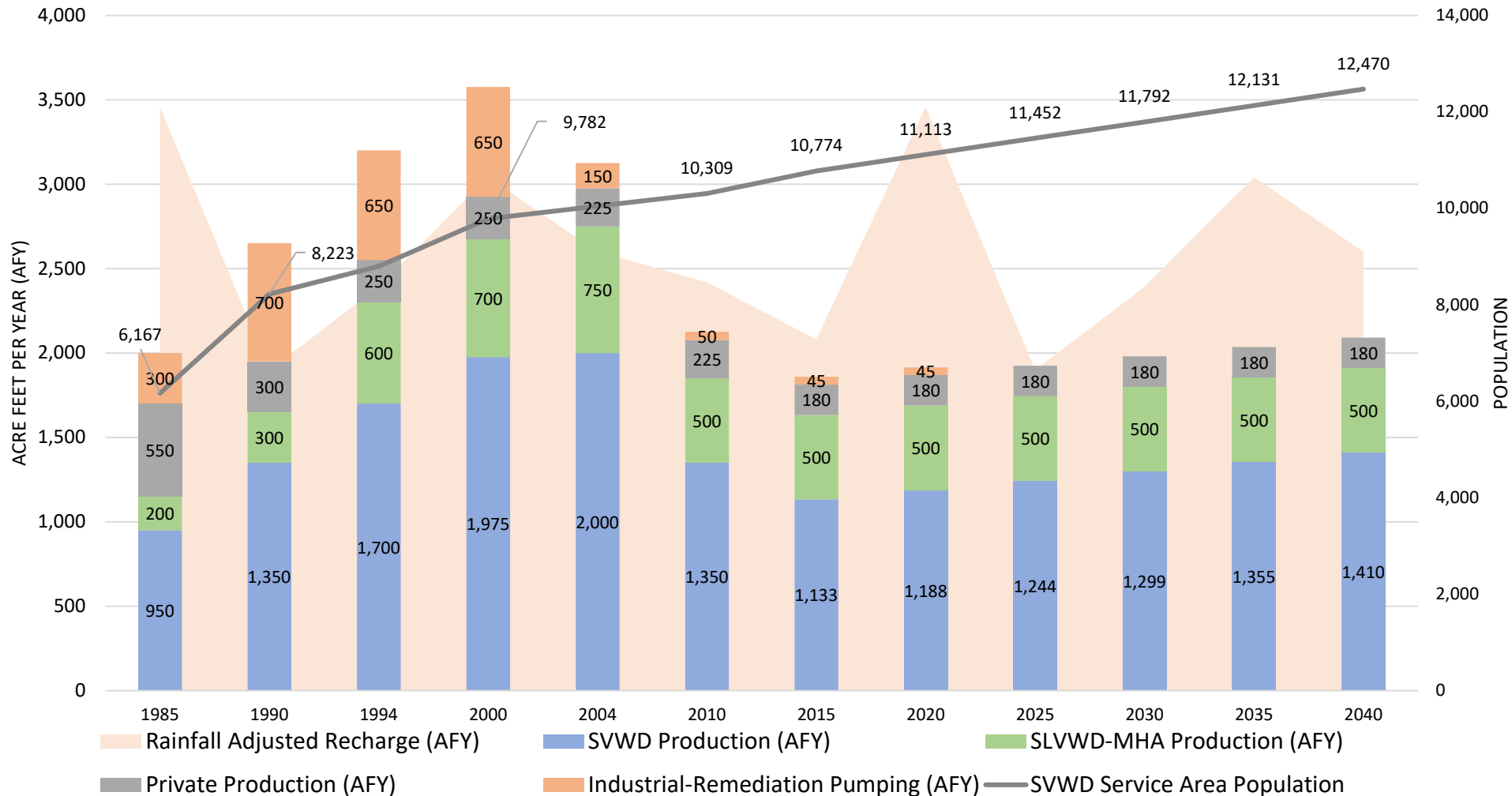
Santa Margarita Basin, Scotts Valley and Pasatiempo Subareas





# Production and Adjusted Recharge

Santa Margarita Basin, Scotts Valley and Pasatiempo Subareas

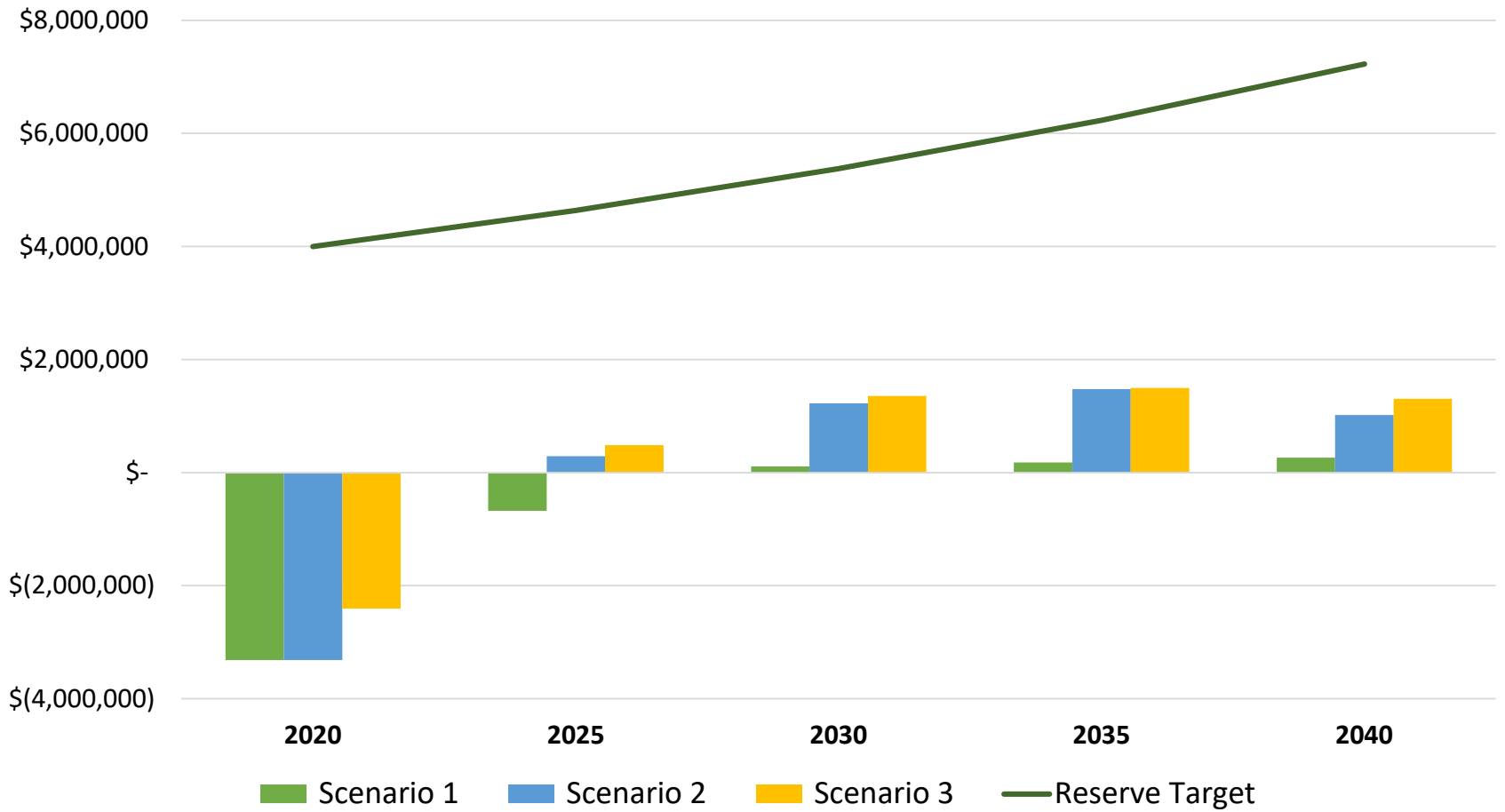


# Funding Implications - Scenarios

- Scenario 1
  - No new connections (no development revenue, no added water revenue)
  - After last 10% increase approved for 2020, yearly inflation matched rate increases through 2040
  - Reserve balance significantly below target
- Scenario 2
  - No new connections (no development revenue, no added water revenue)
  - After last 10% increase approved for 2020, yearly rate increases through 2040 calculated to meet the reserve balance target
- Scenario 3
  - New connections according to UWMP (development revenue and added water revenue projected evenly from 2020 to 2040)
  - After last 10% increase approved for 2020, yearly rate increases through 2040 calculated to meet the reserve balance target

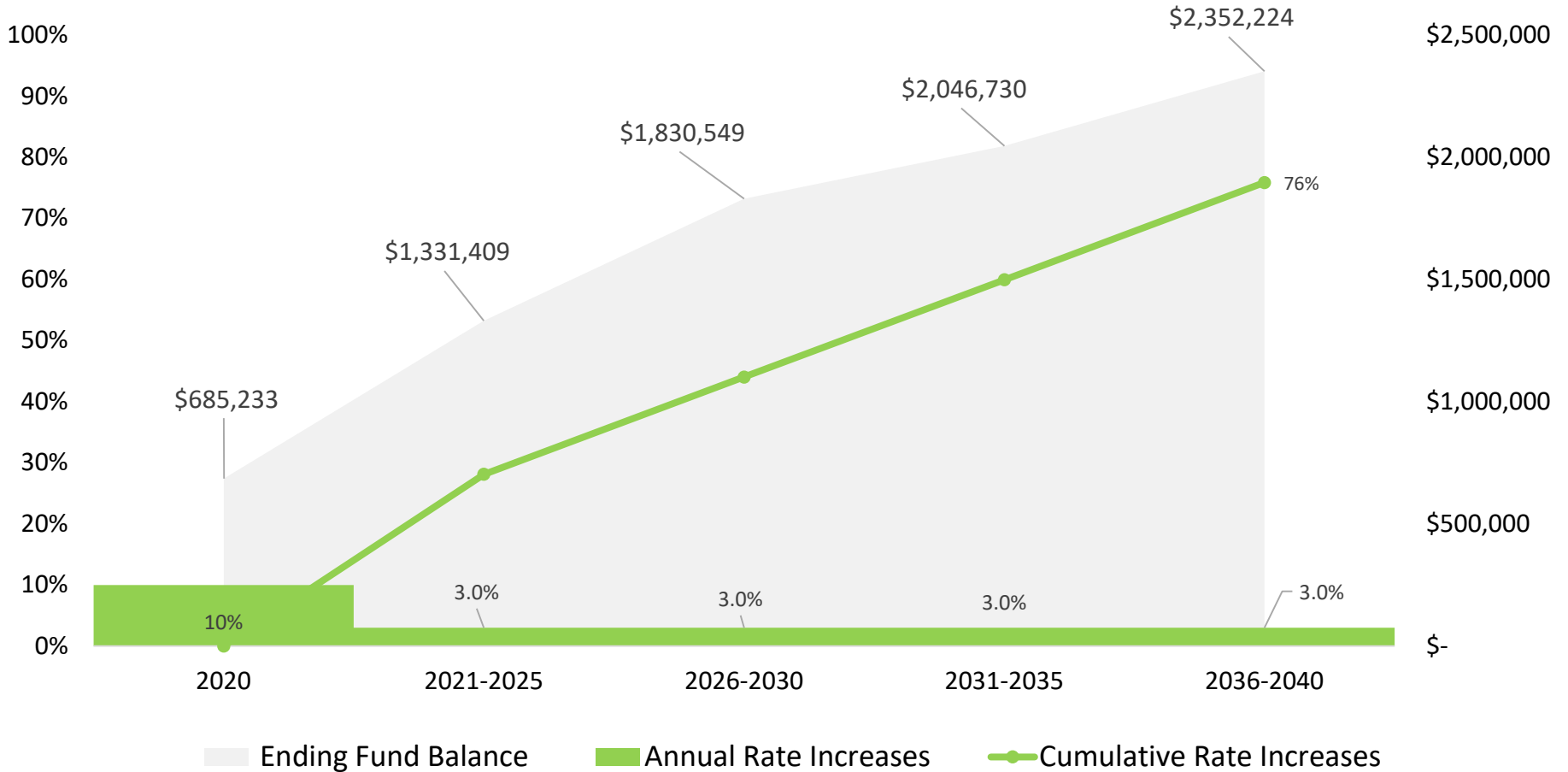
# Estimated Net Revenue and Reserve Target

5- year increments



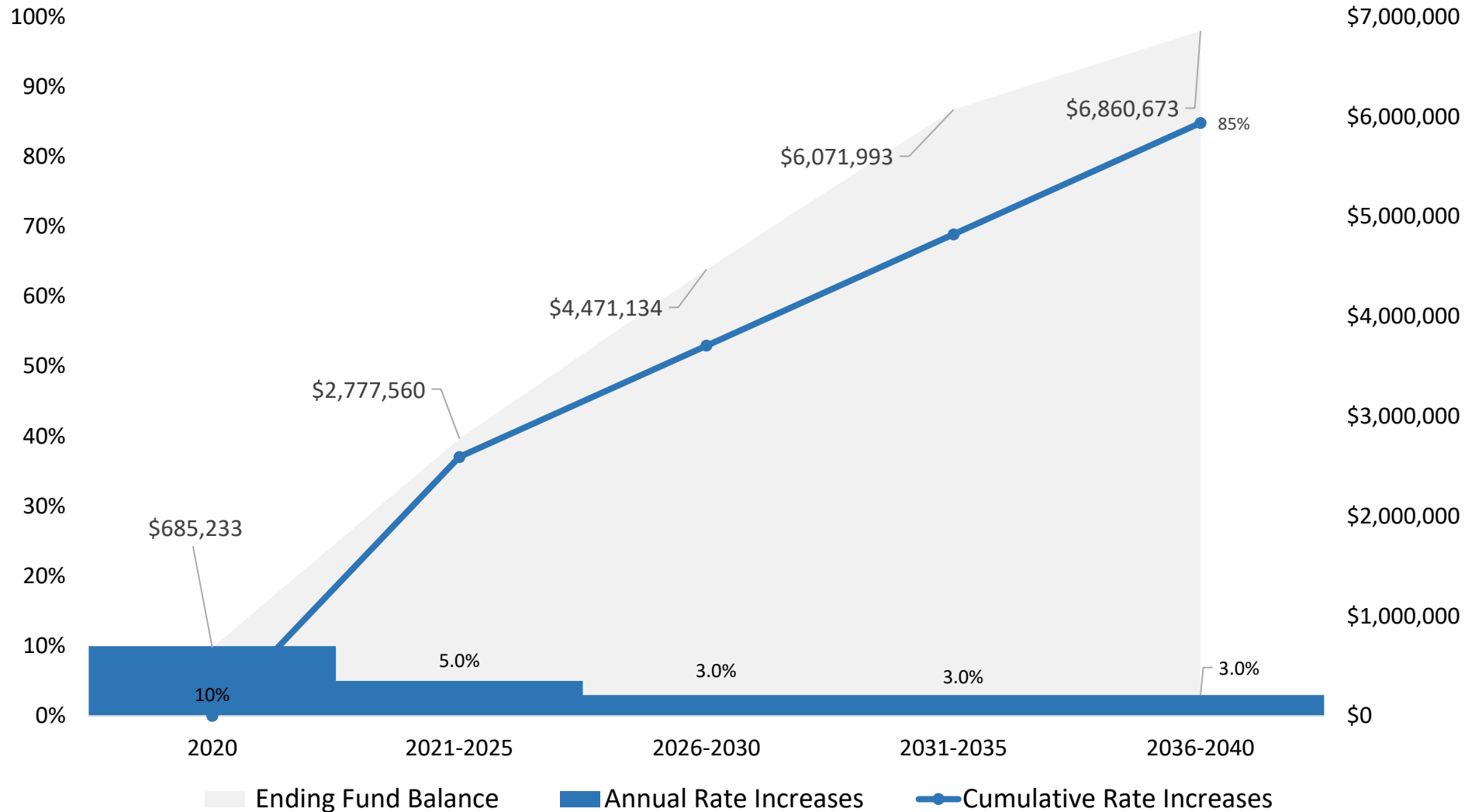
# Projected Rate Increases

Scenario 1 - No new connections, inflation matching increases, reserve balance not meeting target



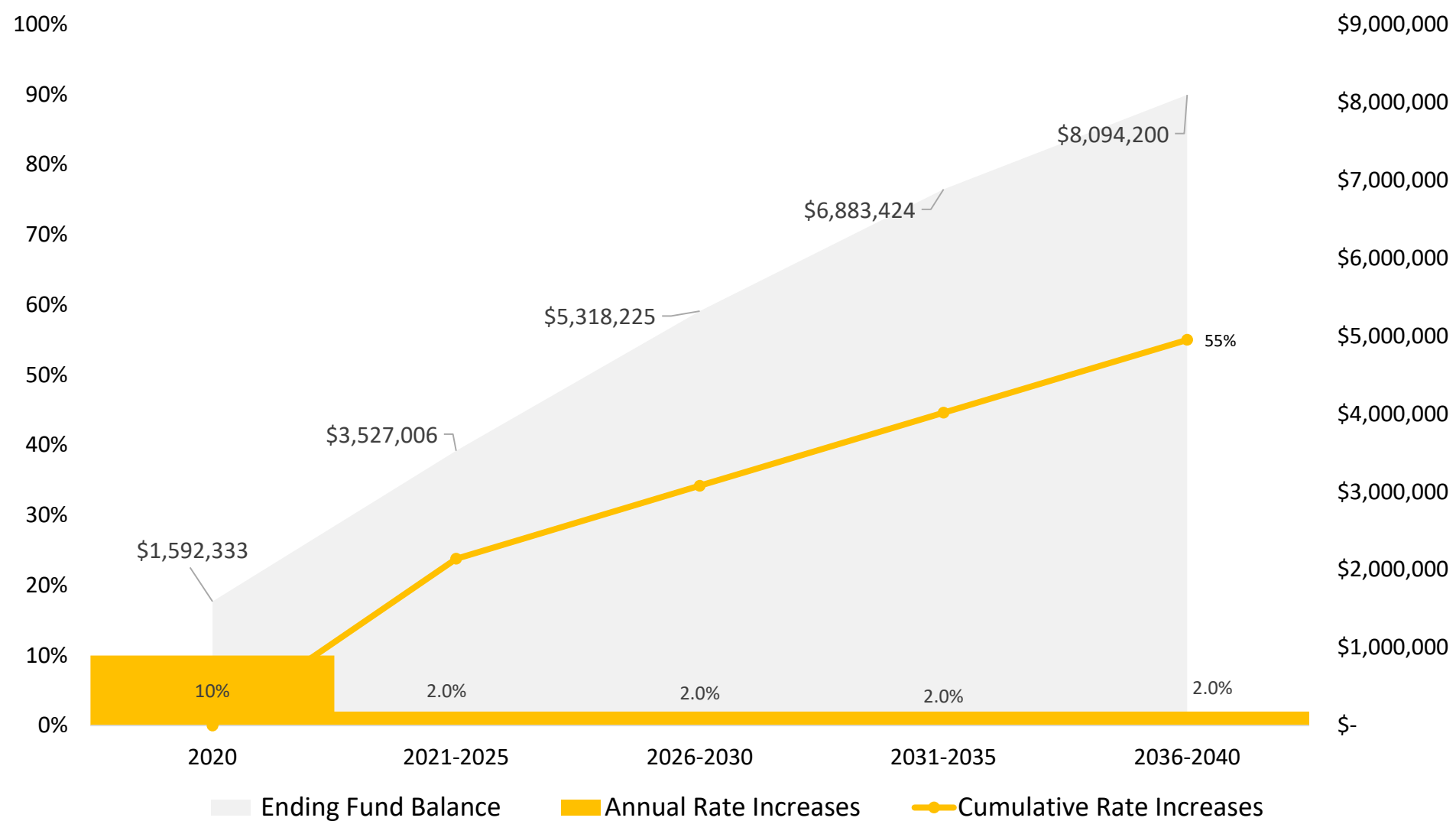
# Projected Rate Increases

## Scenario 2 - No new connections, rate increases to meet reserve balance target



# Projected Rate Increases

## Scenario 3 - New connections, rate increases to meet reserve balance target



# Change in Hypothetical Monthly Bill

## Scenarios 1-3 Period 2018-2040

