



Nevada Irrigation District
Plan for Water Update
Jennifer Hanson, General Manager

Plan For Water

- Long Term Infrastructure and Water Supply Planning
 - 50-year planning term
- Began November 2021
- Multi-Stage Process

Plan for Water Stages

- Background and Level Setting
 - System Overview
 - Water Rights
 - Watershed and Cultural Concerns
- Risk Analysis
- Strategic Planning
- Basis for the Plan for Water

Plan for Water Stages

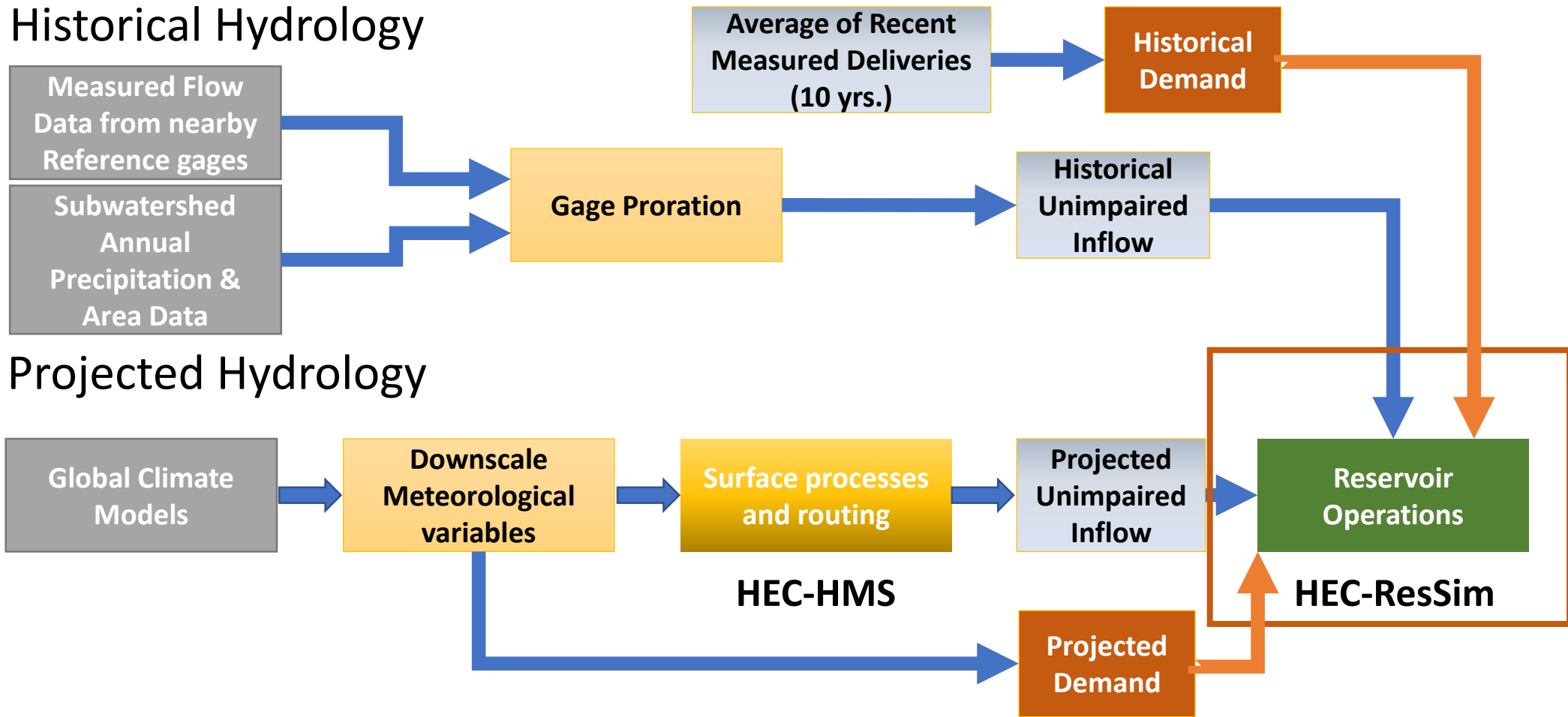
- Modelling
 - Hydrology and Hydrography
 - Demand
 - Supply
- Strategy Alternatives

NID Challenges

- Climate Change
- Size of System
 - Miles of canals
 - Dispersed infrastructure
- Smaller Reservoirs
- Smaller Powerhouses

Introduction

Historical Hydrology



Projected Hydrology

Projected Hydrology

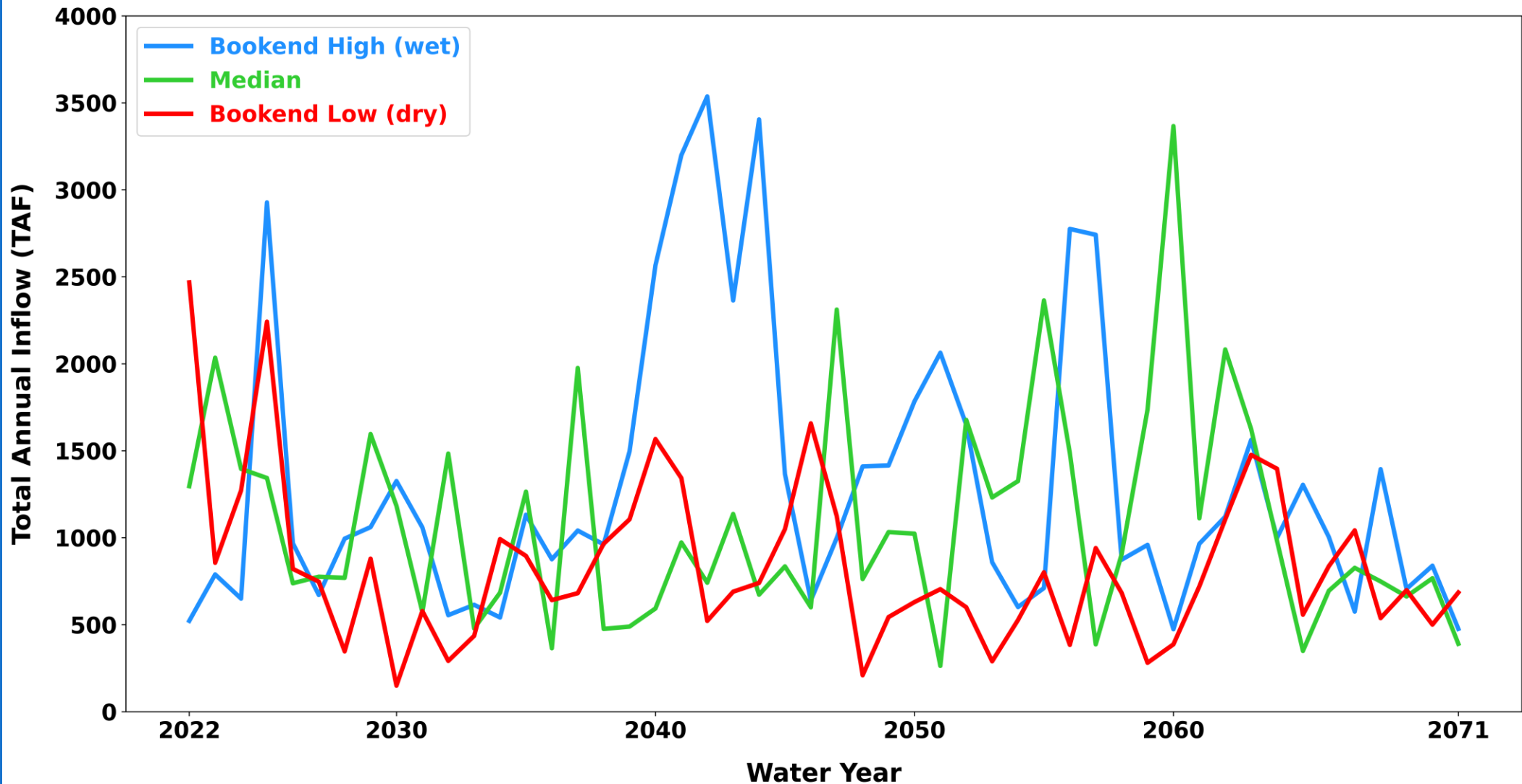
Projected: Scenarios Selection Climate Models Selected for Use

Scenarios	Models and Emissions
High Bookend (Wet)	HadGEM3-GC31-LL_ssp585
Median	CNRM-ESM2 1_ssp245
Low Bookend (Dry)	CESM2-LENS_ssp37



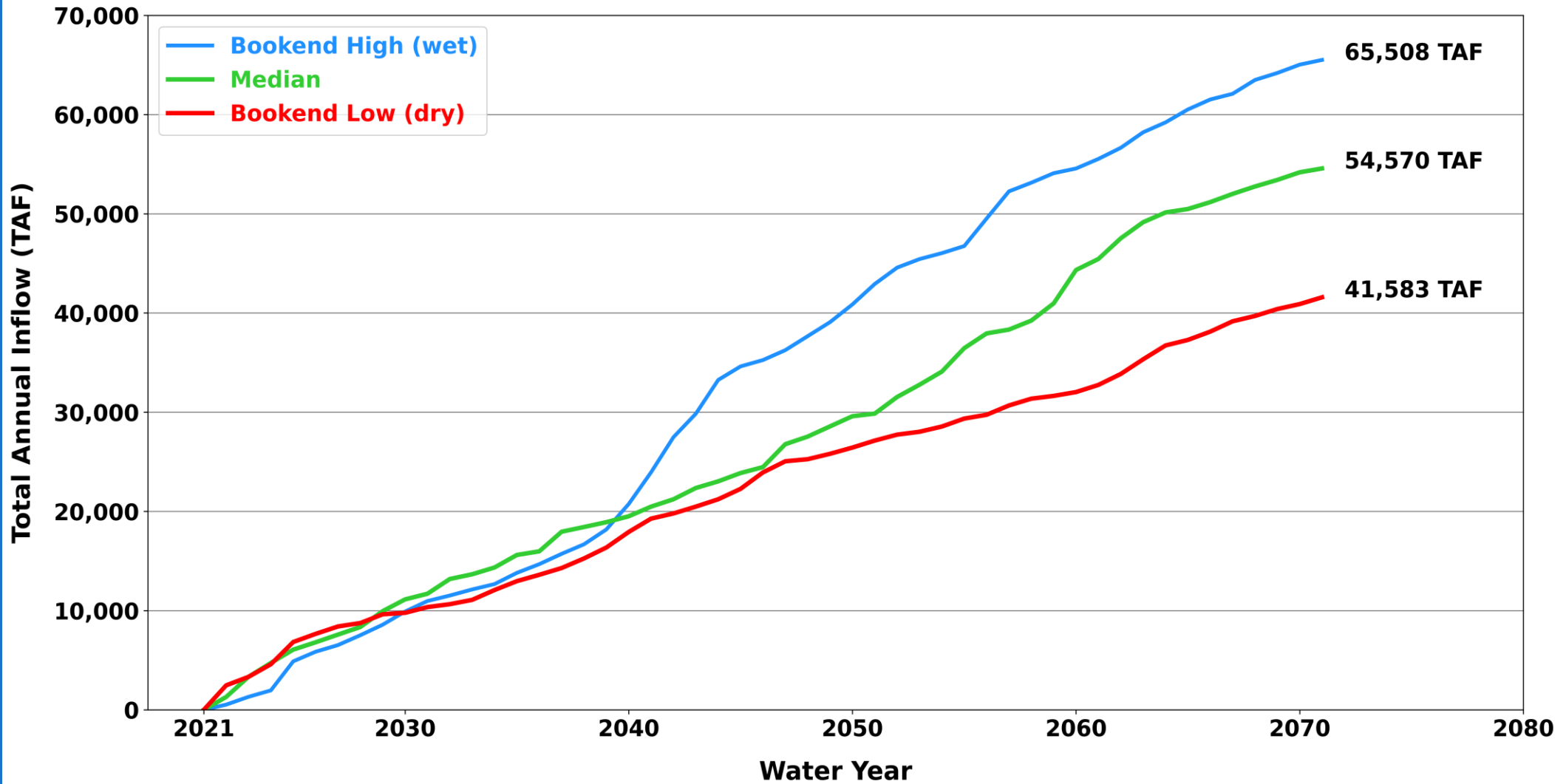
Climate Change Inflow (2022-2071)

Theoretical Timeseries of Total Annual Inflow for Modeled Watersheds
Using Selected 3 Climate Change Models

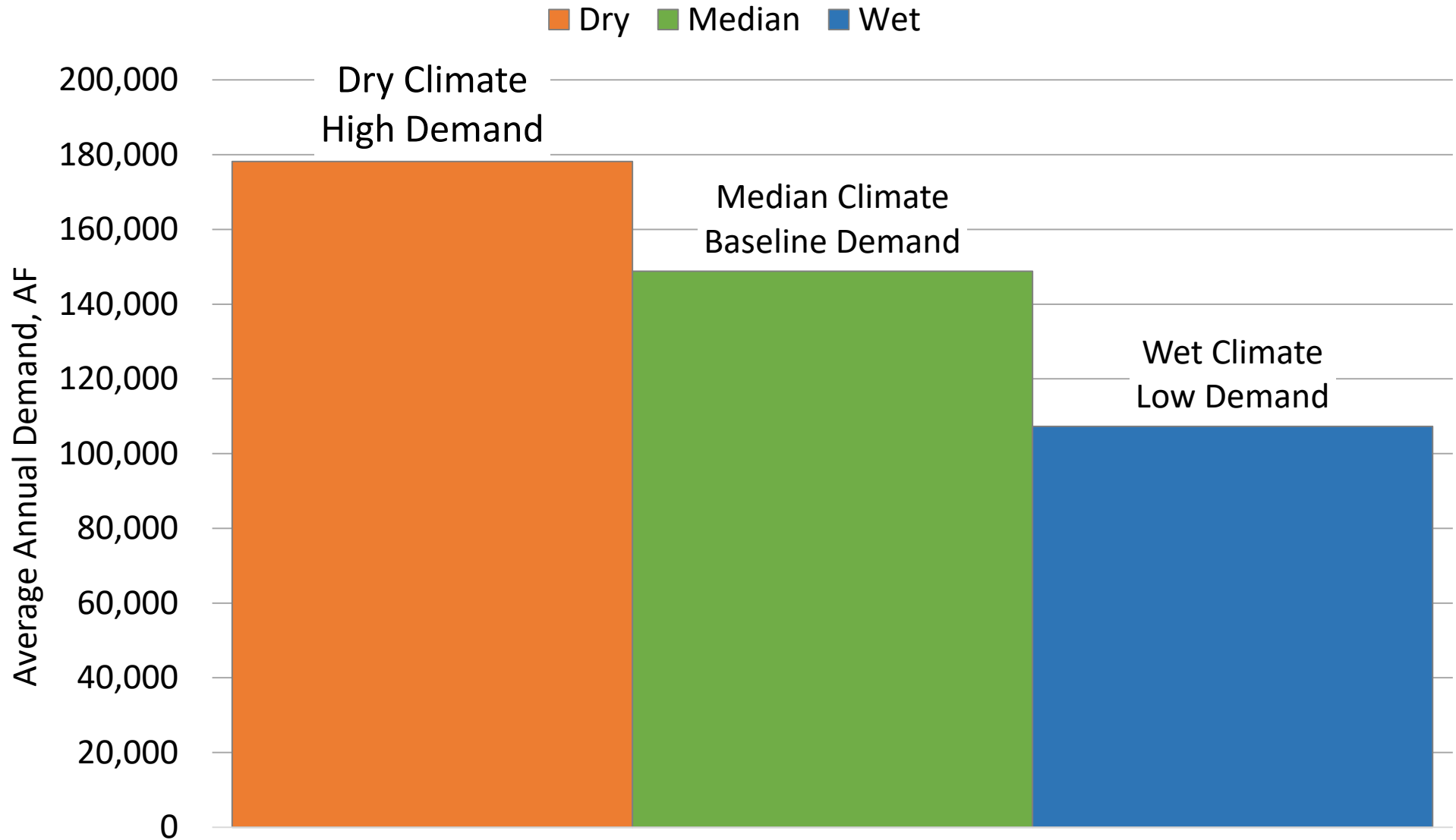


Climate Change Inflow (Based on 3 models selected)

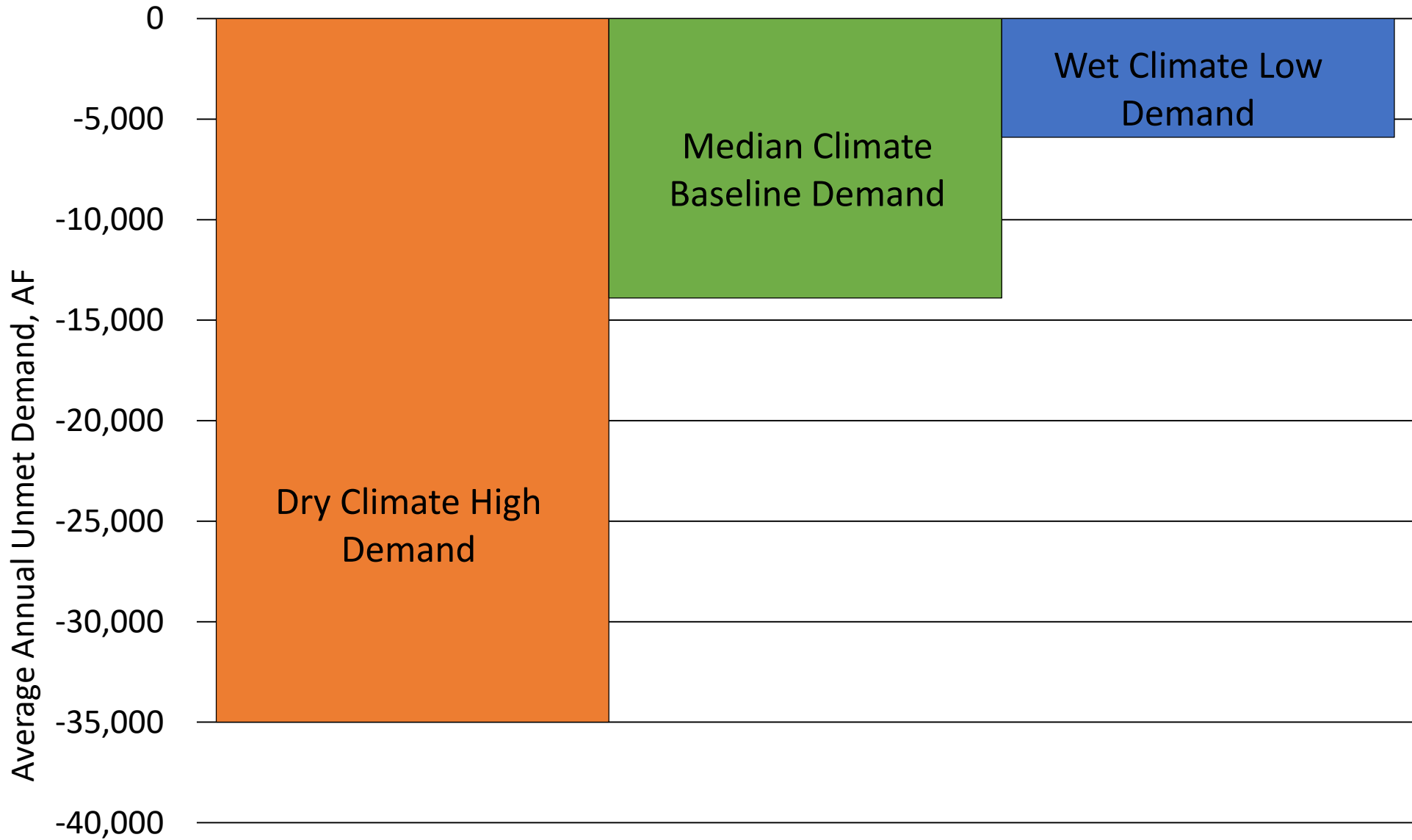
50-years Cumulative Total Annual Inflow for Modeled Watersheds (2022-2071)



Consumptive Demands (Acre-Feet)



Unmet Demands (Acre-Feet)



Alternatives Considered to Address Unmet Demand

- Demand Management
- Operations
- Watershed Management
- Canal Improvements
- Storage Augmentation

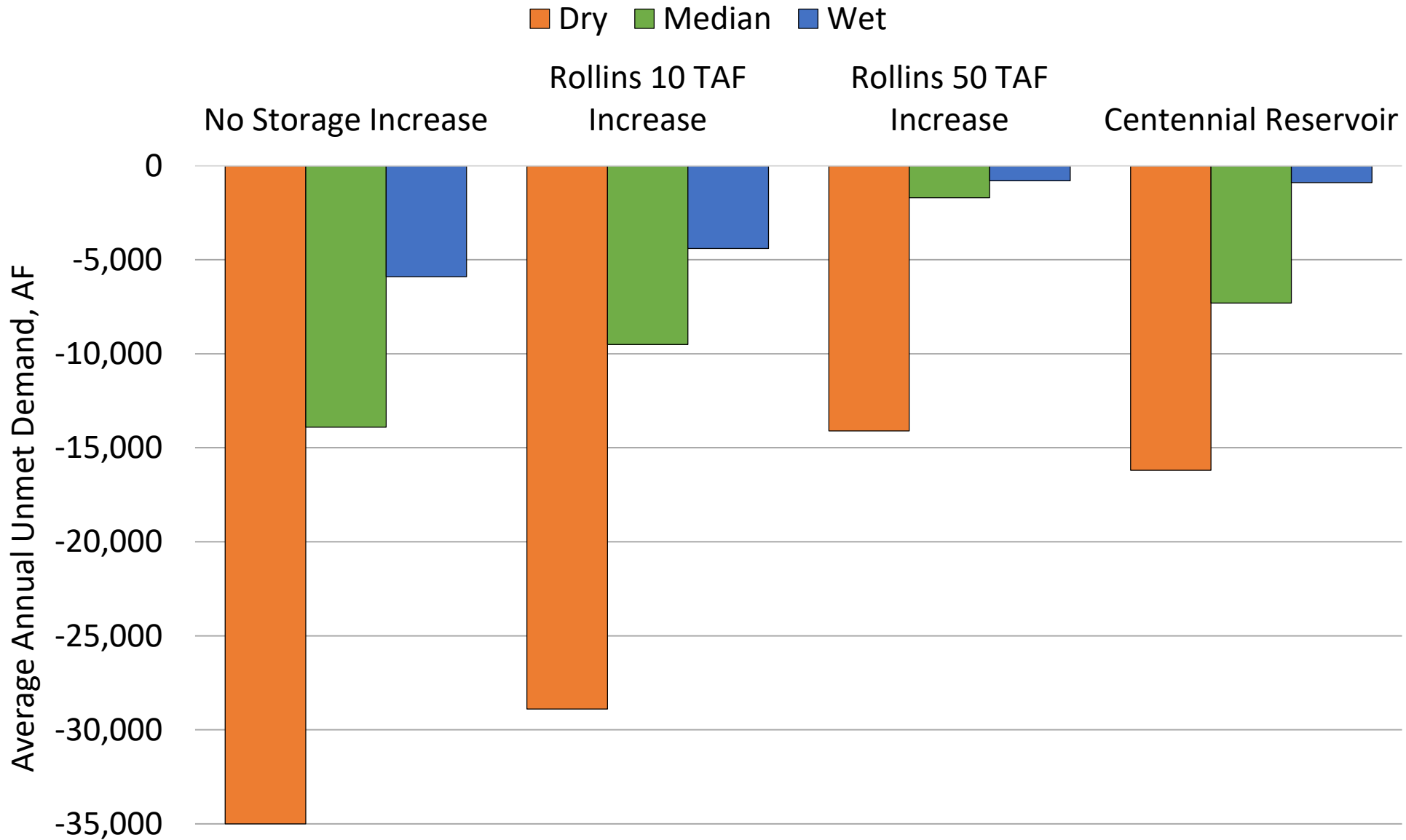
Strategic Alternatives That Required Modeling

- Increase Rollins Reservoir 10,000 Acre-Feet
- Increase Rollins Reservoir 50,000 Acre-Feet
- Build Centennial Reservoir 110,000 Acre-Feet

Separate request from Board of Directors

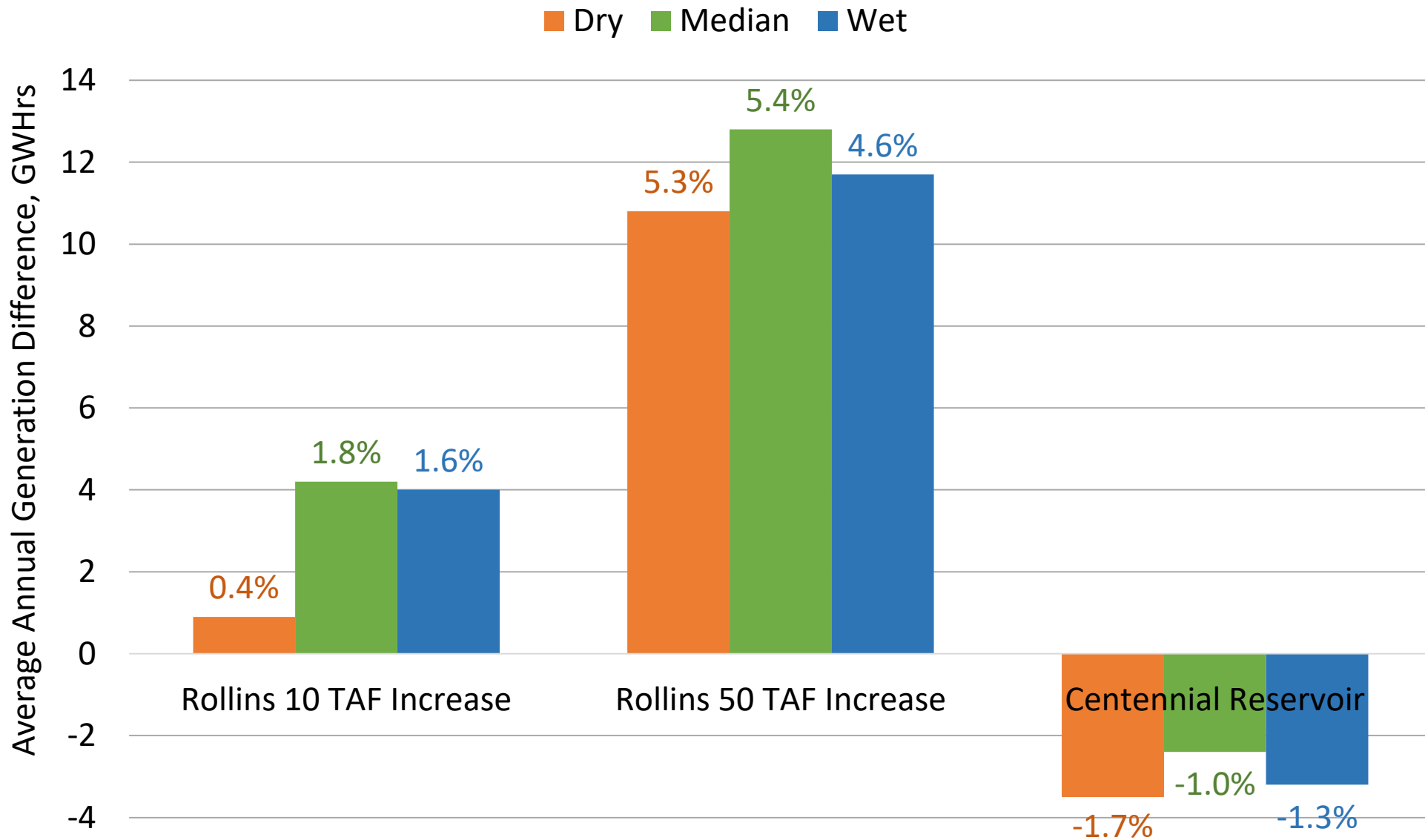
- Extend Irrigation Season through October 31

Results Summary – Unmet Demand



Results Summary - Generation

Difference from No Storage Increase Baseline



Next Steps

- Final Analysis of Storage Options
- Staff Recommends Further Analysis of Purchasing PG&E Supply
- Staff Recommends Further Analysis of Carryover Storage
- Finalize Recommendations for Options Matrix Analysis
- Considerations of Bay Delta Update

Questions / Comments?