

Modeling Tools, Scenarios & Preliminary Results

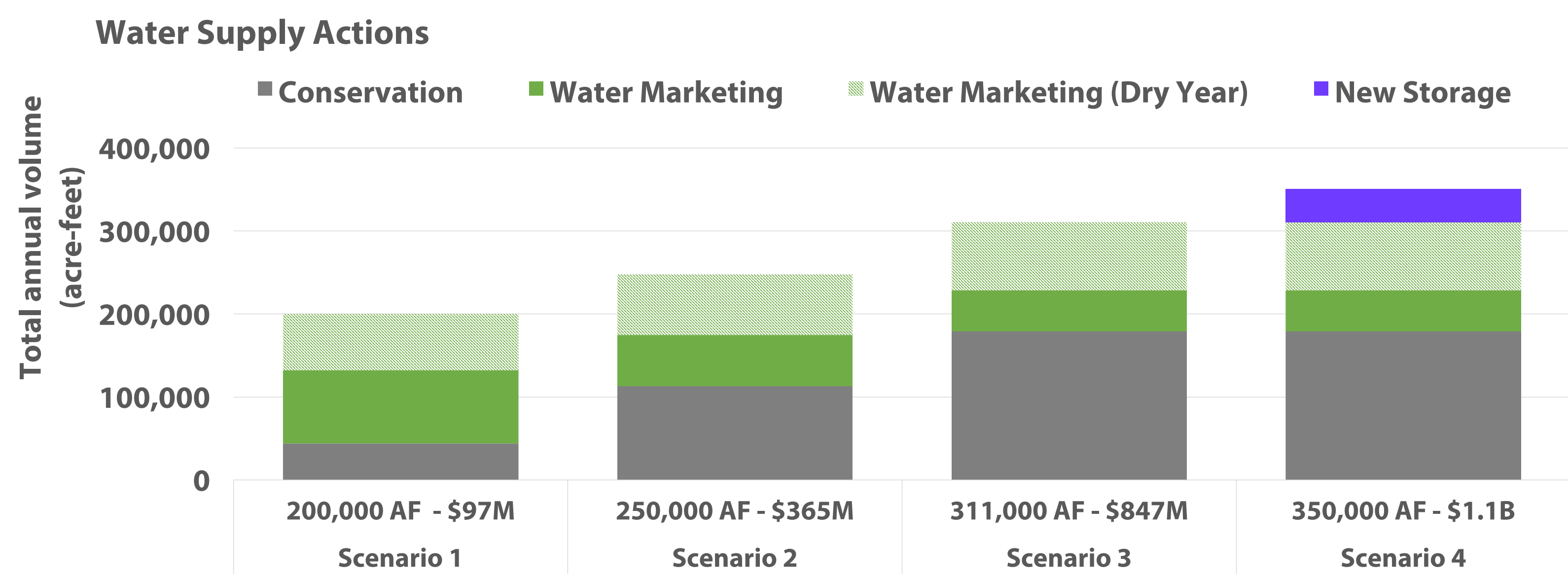
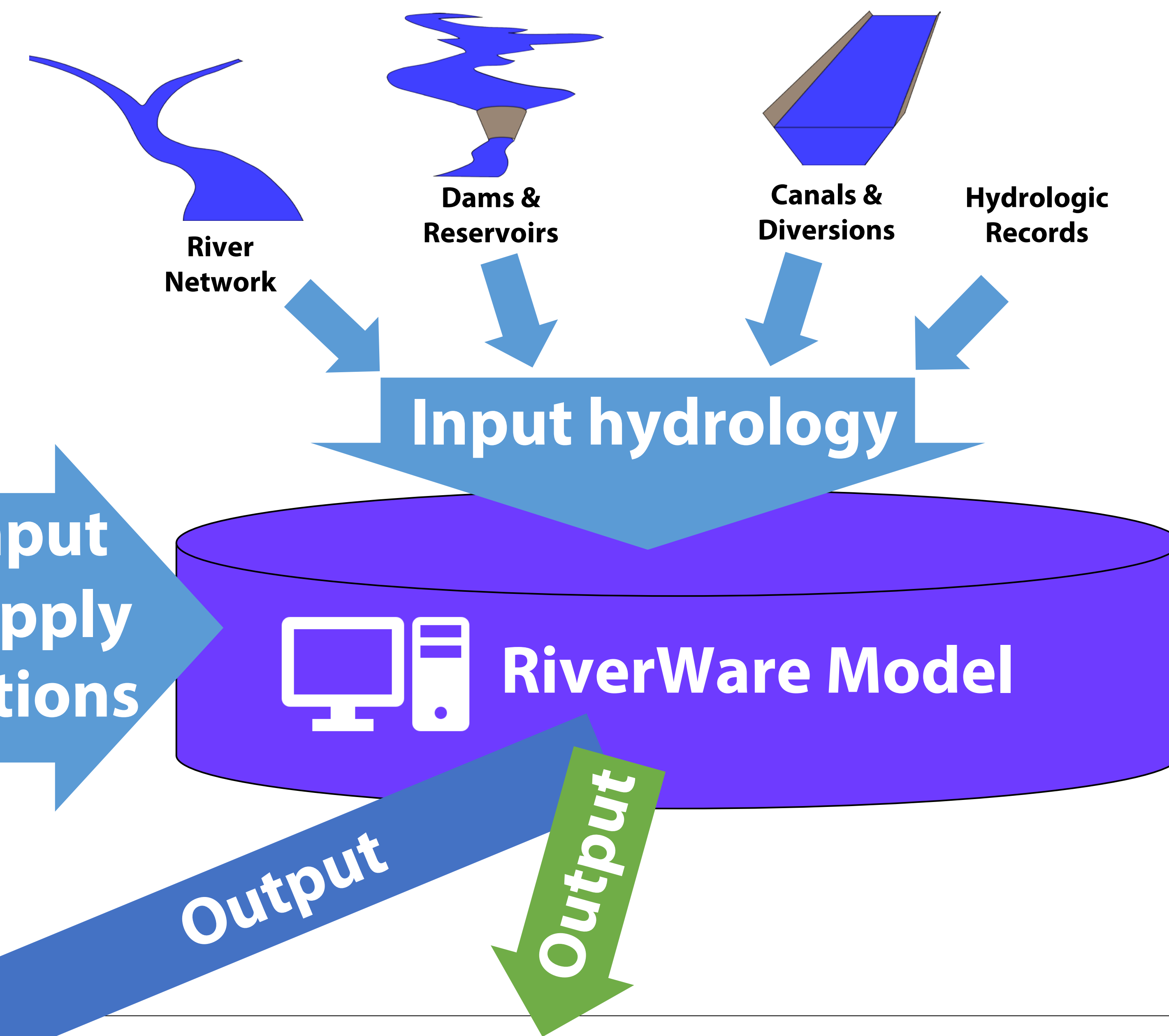
Upper Deschutes Basin Study: Modeling

What is a model?

Models combine many features of a river system such as reservoir operations, water rights, and diversions. They allow us to test different conditions in the river and explore potential impacts. These tests are called scenarios.

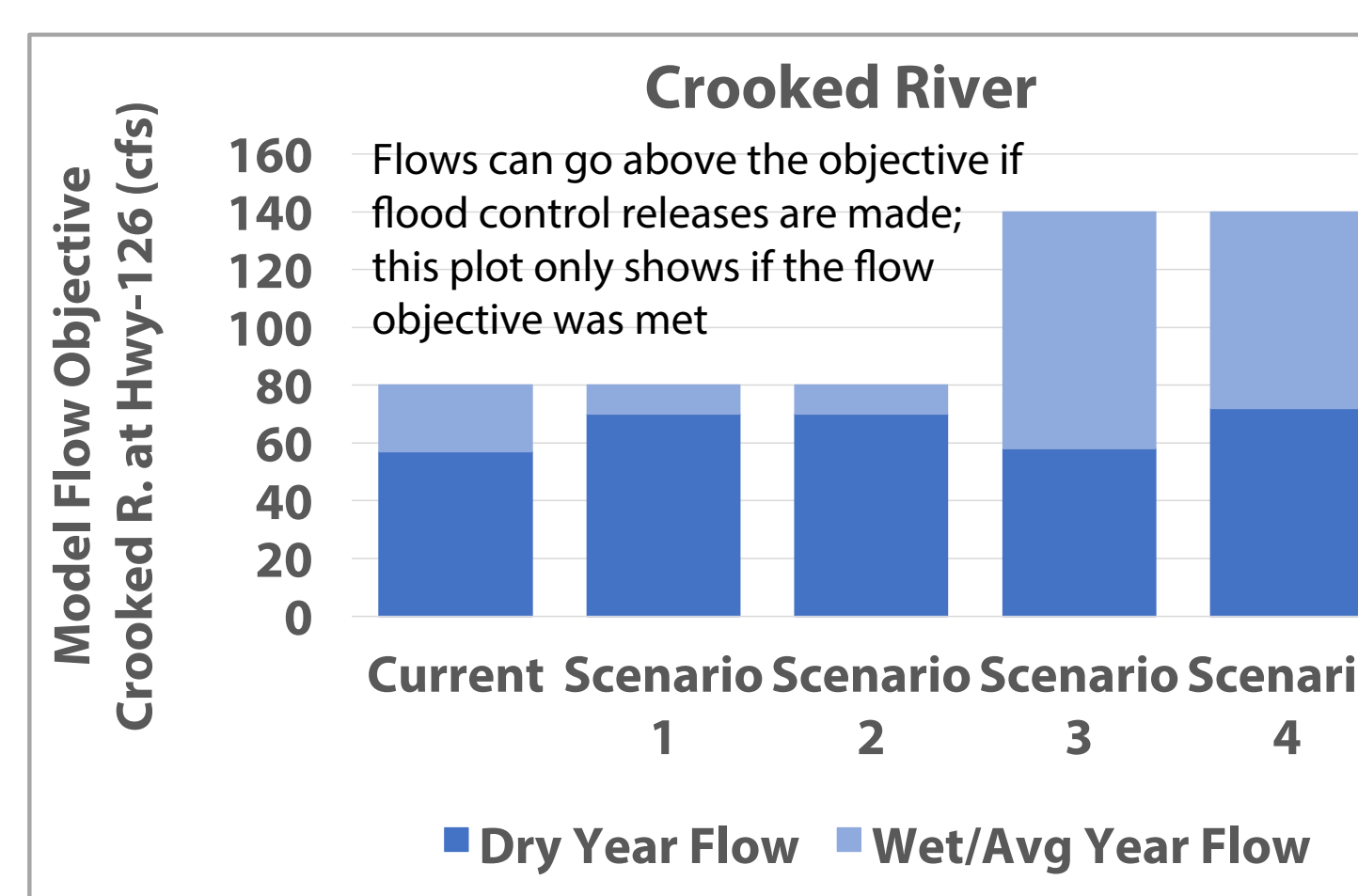
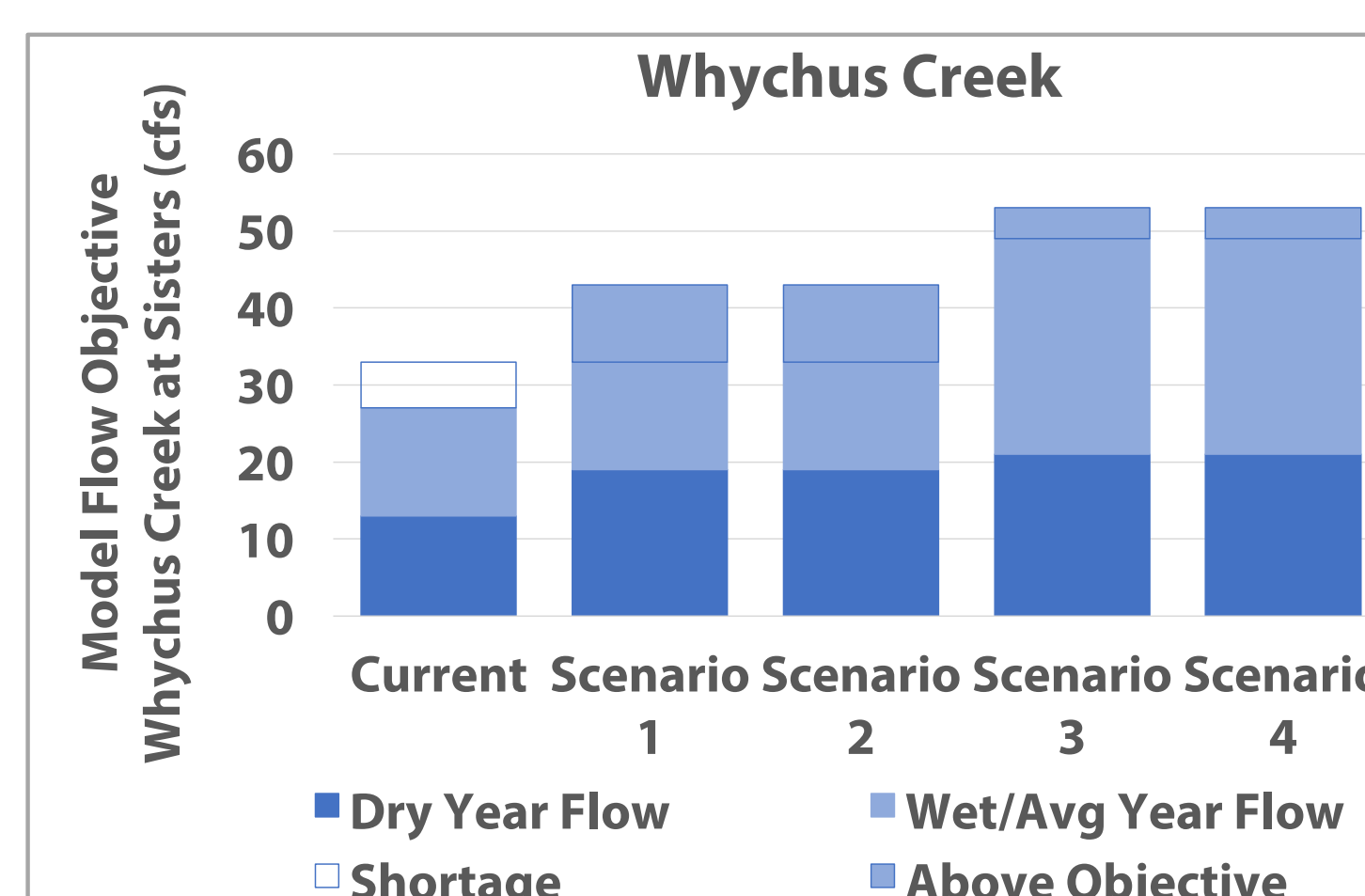
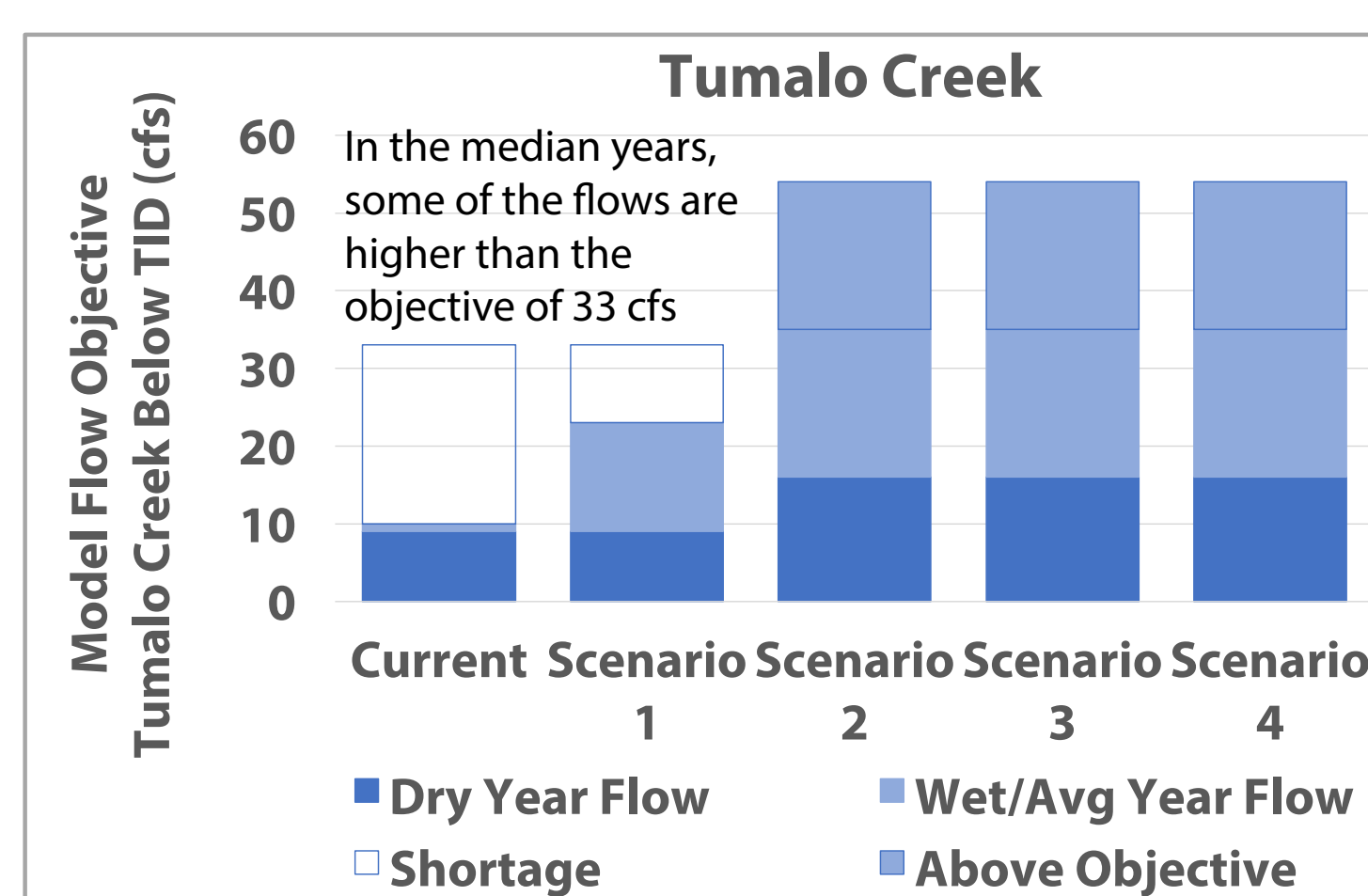
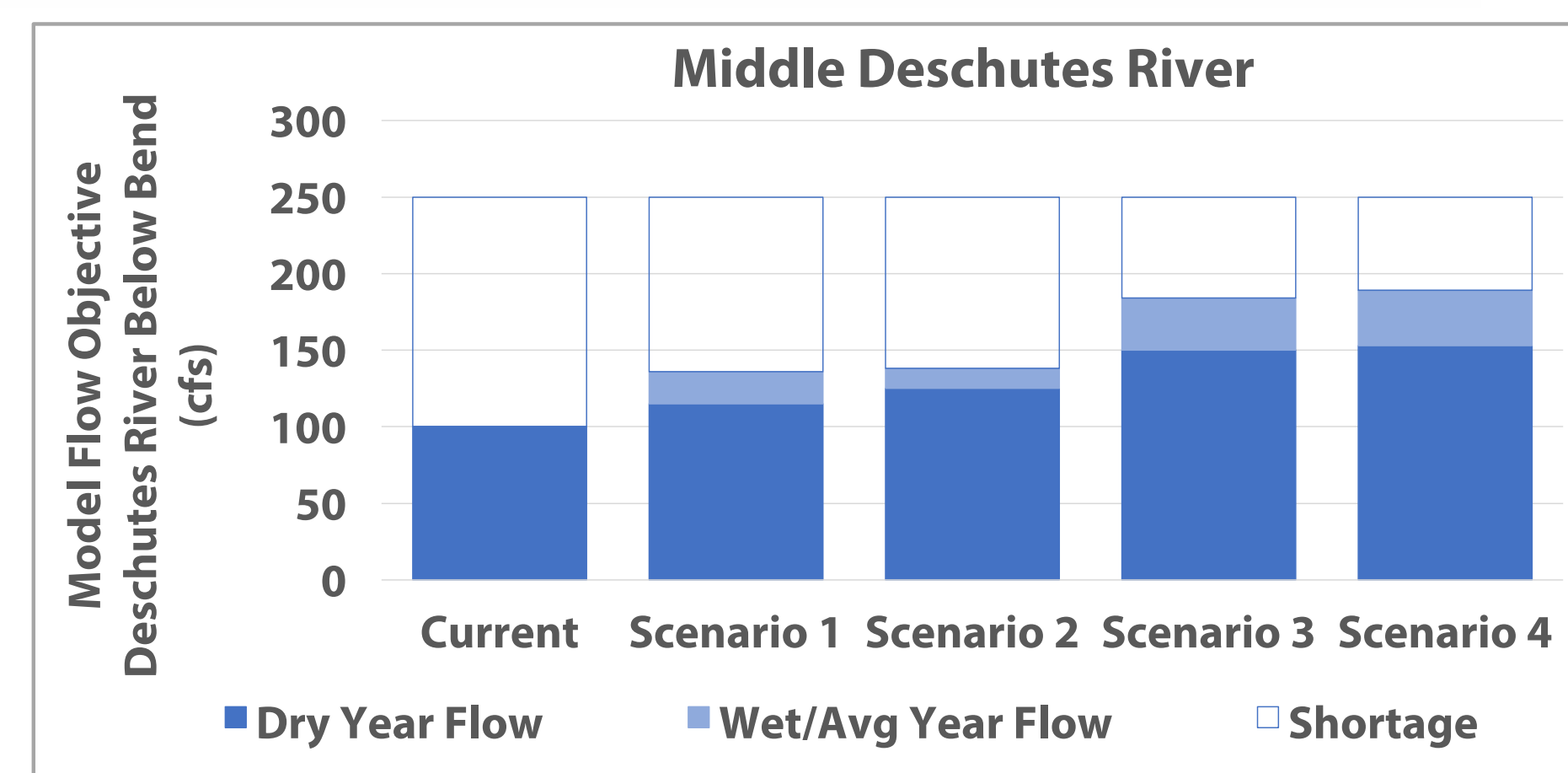
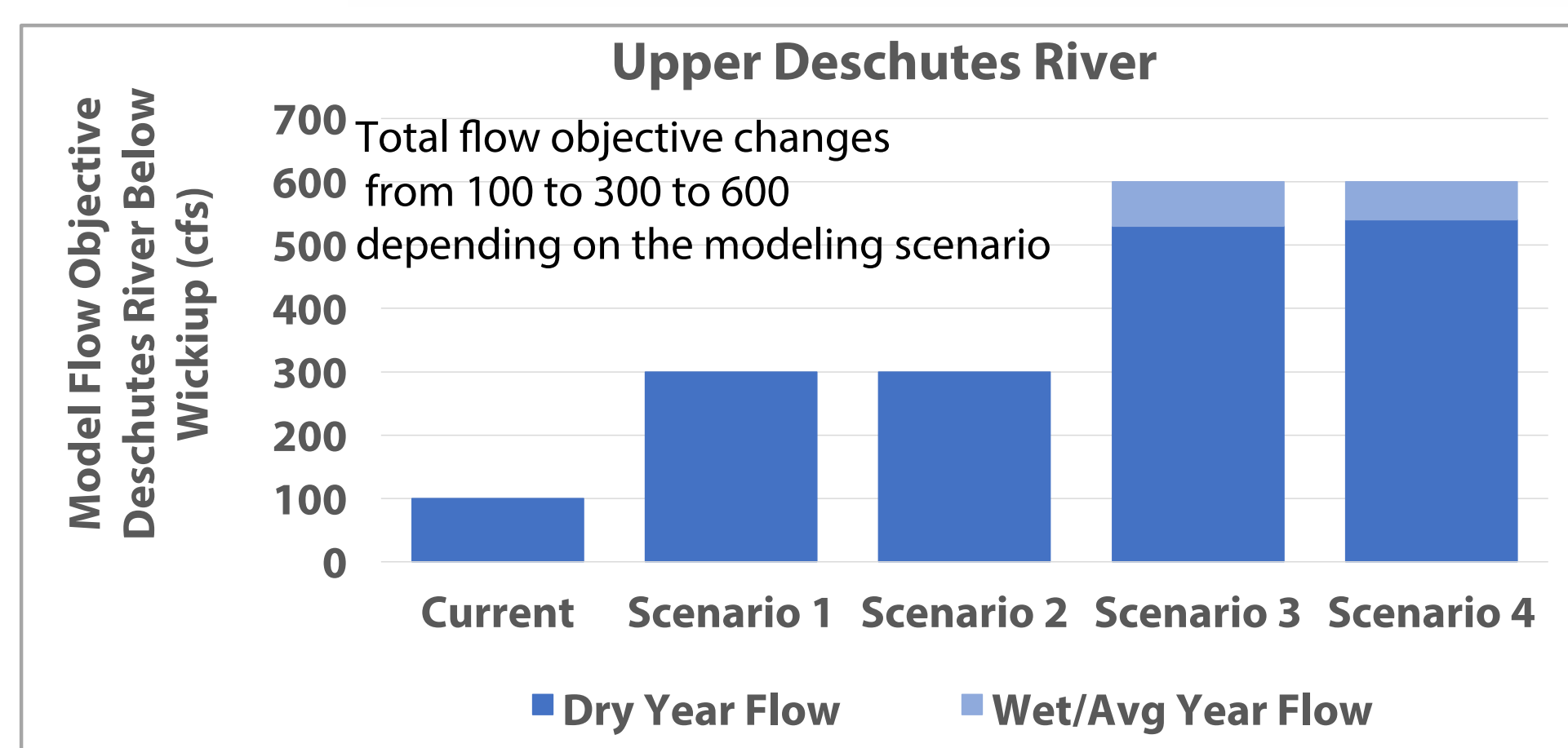
Basin Study Model Scenarios

- Modeling looked at four hypothetical water management scenarios modifying in-stream and irrigation demand
- Irrigation demands adjusted using water supply actions: **conservation**, **water marketing**, and **new storage**



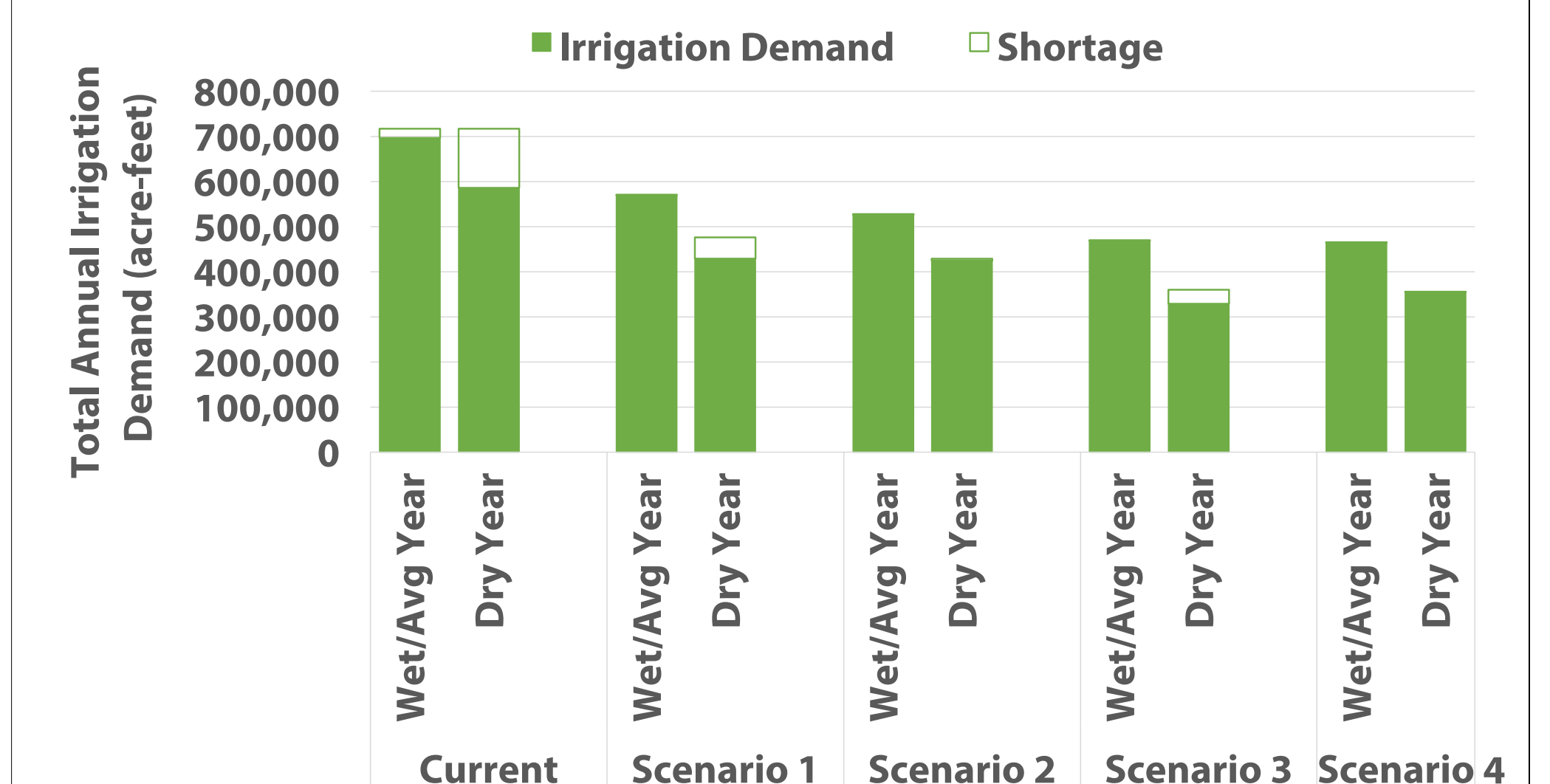
Model River Flow Objective Results

- Bar heights indicate model flows and flow objectives for critical time periods
- Hollow boxes indicate that the flows did not reach the model objective during the critical time period (shortage)
- Outlined boxes indicate flows in the river reach exceeded model objectives



Irrigation Demand Results

- Height of boxes indicates total modeled annual irrigation demand
- Modeled demand larger in wet and average years than dry years
- Hollow boxes indicate water delivery did not meet modeled demand (shortage)



Important Note: The four hypothetical water management scenarios were framed solely for modeling purposes to help evaluate various water management tools. Thus, the scenarios may not be realistic, implementable, advisable, or desired, and should not be viewed as recommendations, endorsements, or plans.