Quantifying Resource Management Strategy Benefits and Robustness

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California Water Plan
State’s Blueprint for Integrated Water Management & Sustainability

**VISION**
- Public Health, Safety, Quality of Life
- Vitality, Productivity, Economic Growth
- Healthy Ecosystem, Cultural Heritage

**Foundational Actions for SUSTAINABLE WATER USES**
- Use Water Efficiently
- Protect Water Quality
- Expand Environmental Stewardship

**Initiatives for RELIABLE WATER SUPPLIES**
- Implement Integrated Regional Water Management
- Improve Statewide Water and Flood Management Systems
Managing an Uncertain Future

Risk, Uncertainty, and Sustainability

FLOODS

DECLINING ECOSYSTEMS

DROUGHT

ENERGY CRISIS
What We’ve Heard

- Evaluate how factors like climate, future dedication of water to the environment, land use decisions and population affect future water management.

- Evaluate how resource management strategies perform under alternative plausible futures:
  - Quantify costs, benefits, tradeoffs, and vulnerabilities.
Improvements to analytical tools allow for more comprehensive evaluation.
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- Testing comprehensive analysis for three regions in Central Valley
  - Phased approach
- Will quantify a subset of strategies & strategy benefits
- Representation of regional groundwater and surface water systems
- Use monthly rainfall-runoff, water use, and water system operations data
Areas Outside of Sacramento River, San Joaquin River and Tulare Lake Regions

- Apply simpler Hydrologic Region model developed for Update 2009
- Quantify regional water demand
  - 3-9 growth scenarios
  - 12-18 climate scenarios
- Ability to include some demand management strategies
Plan of Study Components

Scenario Factors

Resource Management Strategies

Analytical Tools

Performance Metrics
Next Steps

- **Today**
  - Share preliminary results for currently planned management under future uncertainties

- **Fall 2012 – SWAN Workshop**
  - Provide more details on results presented today

- **Winter 2013**
  - Share results of statewide water demand under alternative growth and climate scenarios
  - Share results showing performance of resource management strategies within Central Valley regions
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