

American River Basin Study

Progress Update

November 14, 2018



FOLSOM
DISTINCTIVE BY NATURE



City of
SACRAMENTO



WaterSMART Basin Studies

Focus

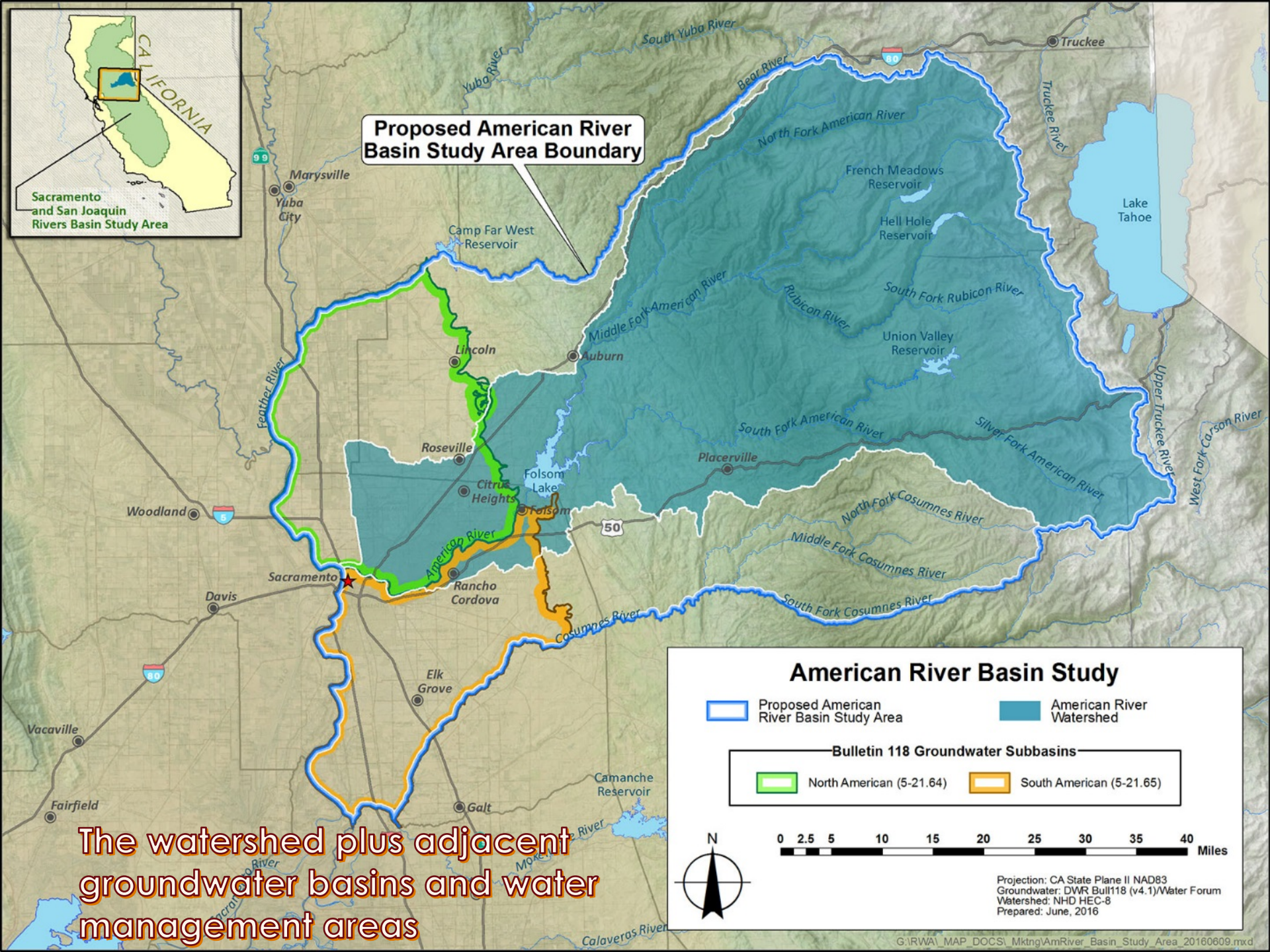
- Evaluate the impacts of **climate change** and help ensure sustainable water supplies by identifying strategies to address **imbalances** in water supply and demand.
- Basins and subbasins in the 17 western states.

Benefits

- The resulting **recommendations** DO NOT constitute Federal decisions or authorization; however, further feasibility studies for such purposes are possible under the authorizing legislation.

Cost-Share Partners

- Federal – Reclamation
- Non-Federal –
 - City of Folsom
 - City of Roseville
 - City of Sacramento
 - El Dorado County Water Agency
 - Placer County Water Agency
 - Regional Water Authority



Proposed American River Basin Study Area Boundary

Sacramento and San Joaquin Rivers Basin Study Area

American River Basin Study

Proposed American River Basin Study Area American River Watershed

Bulletin 118 Groundwater Subbasins

North American (5-21.64) South American (5-21.65)



0 2.5 5 10 15 20 25 30 35 40 Miles

The watershed plus adjacent groundwater basins and water management areas

Projection: CA State Plane II NAD83
Groundwater: DWR Bull118 (v4.1)/Water Forum
Watershed: NHD HEC-8
Prepared: June, 2016

Study Objectives

- Further refine the assessment of water supplies and demands for the American River Basin
- Address regional **demand-supply imbalance** and infrastructure deficiencies under the existing and **future climate change conditions**.
- Improve **coordination of local and Federal water management**.
- Align water management tools, strategies, and planning efforts of Reclamation and water agencies in the basin.
- Identify water management strategies and actions which remain functional across multiple future potential climate and socioeconomic conditions to 2100 AD.

ARBS Anticipated Outcomes

- Consistent modeling data, and assumptions for Federal and Regional planning in the American River Basin (climate change hydrology, upper watershed operations, and temperature).
- Assessment of imbalance at build-out under climate change conditions
- Assessment of how a range of selected adaptations can reduce these imbalances (includes long-term projects listed in RWRP such as RiverArc, regional groundwater bank)

The Big Picture

Water Reliability Plan (2 yrs)

- High level look at opportunities created by near and long-term improvements with initial look at potential partners

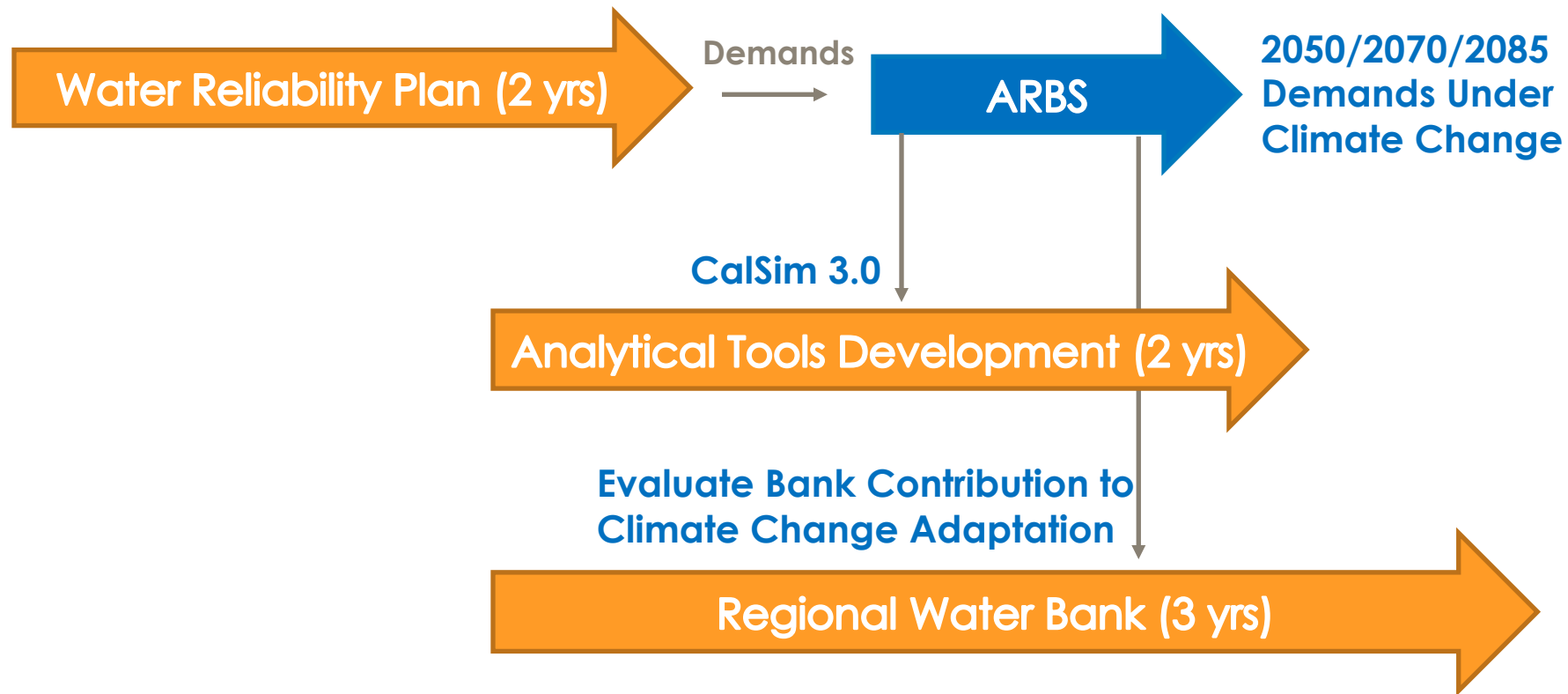
Analytical Tools Development (2 yrs)

- Update regional modeling tool to conduct technical analysis to further define opportunities and evaluate impacts

Regional Water Bank (3 yrs)

- Complete environmental analysis, establish governance, develop legal agreements, and engage with partners

Relation to Ongoing Regional Efforts



Current Study Progress

- Developing Climate Change Hydrology
- Developing detailed representation of upstream operations in CalSim 3.0 Model
- Reclamation Review of Temperature Models
- Updating M&I & Agricultural Demands Projections (2050, 2070, 2085)
- Formulating Adaptation Portfolios

ARBS Schedule

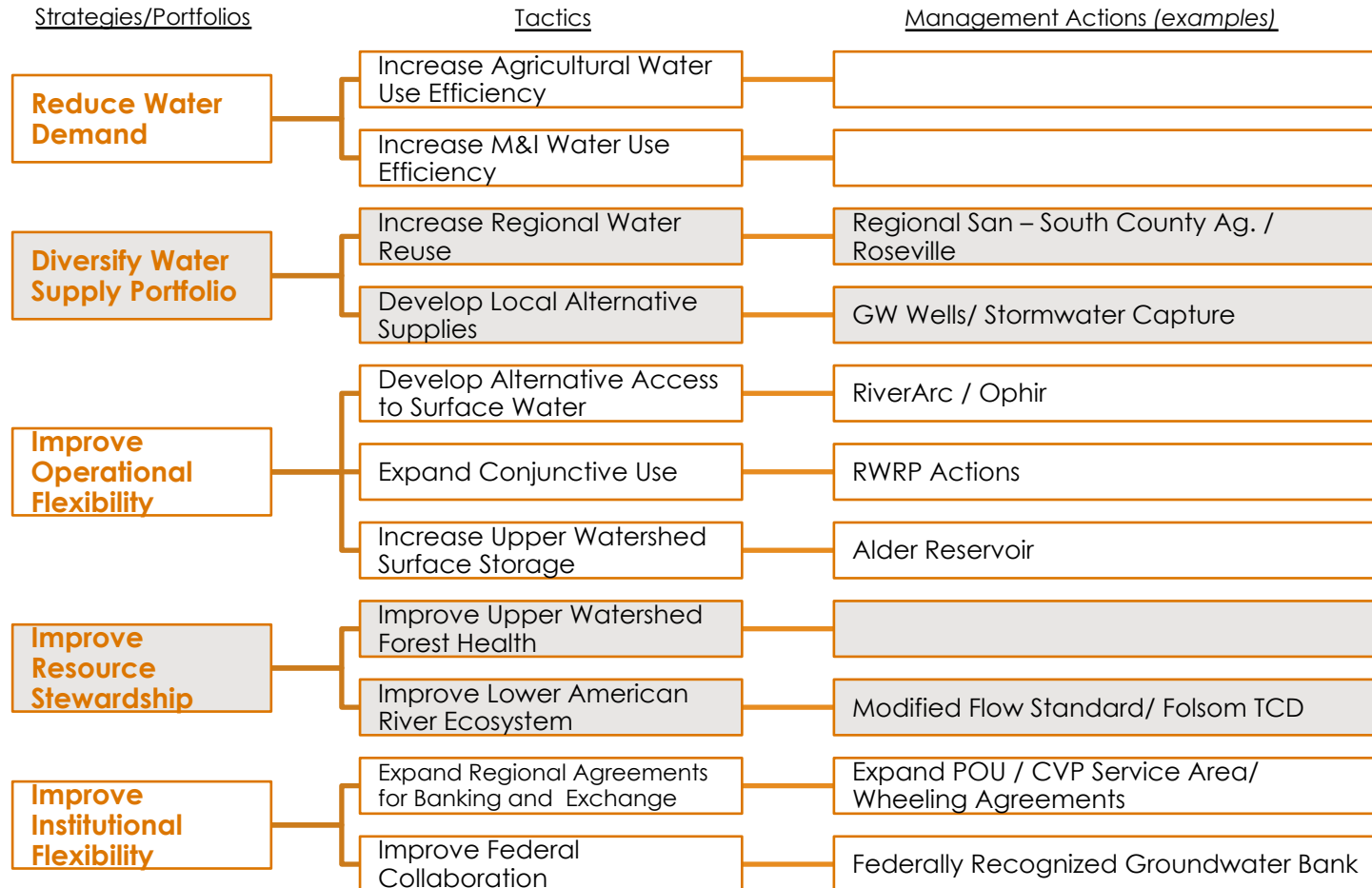
Task	2017	2018	2019	2020
MOA Signed	★			
Climate Change Data & Model Development				
Water Supply & Demand Assessment				
Adaptation Strategy Development				
Findings & Final Report				
Public Stakeholder Meetings				

Process for Formulating Adaptations



- **Strategy/Portfolio:** Broad concepts or approaches to address identified challenges and problems
- **Tactics:** Different ways to achieve the strategy.
- **Management Actions:** Specific actions that implement a tactic (when, where, who, what)
- **Retained Actions:** Screened management actions to be carried forward for further evaluation.

Formulation of Adaptations



Next Steps

- **RWRP Dec Meeting**
 - Discuss Approach for Demand Analysis
 - Overview of Formulations of Adaptations
- **January**
 - Demand TM released for agency review
- **April – May**
 - Future Demand-Supply Imbalance Under Climate Change (2050, 2070, 2085).