



Sonoma County Water Agency Programs & Projects

Adaptation Strategies & Information Needs in Response to Extreme Events

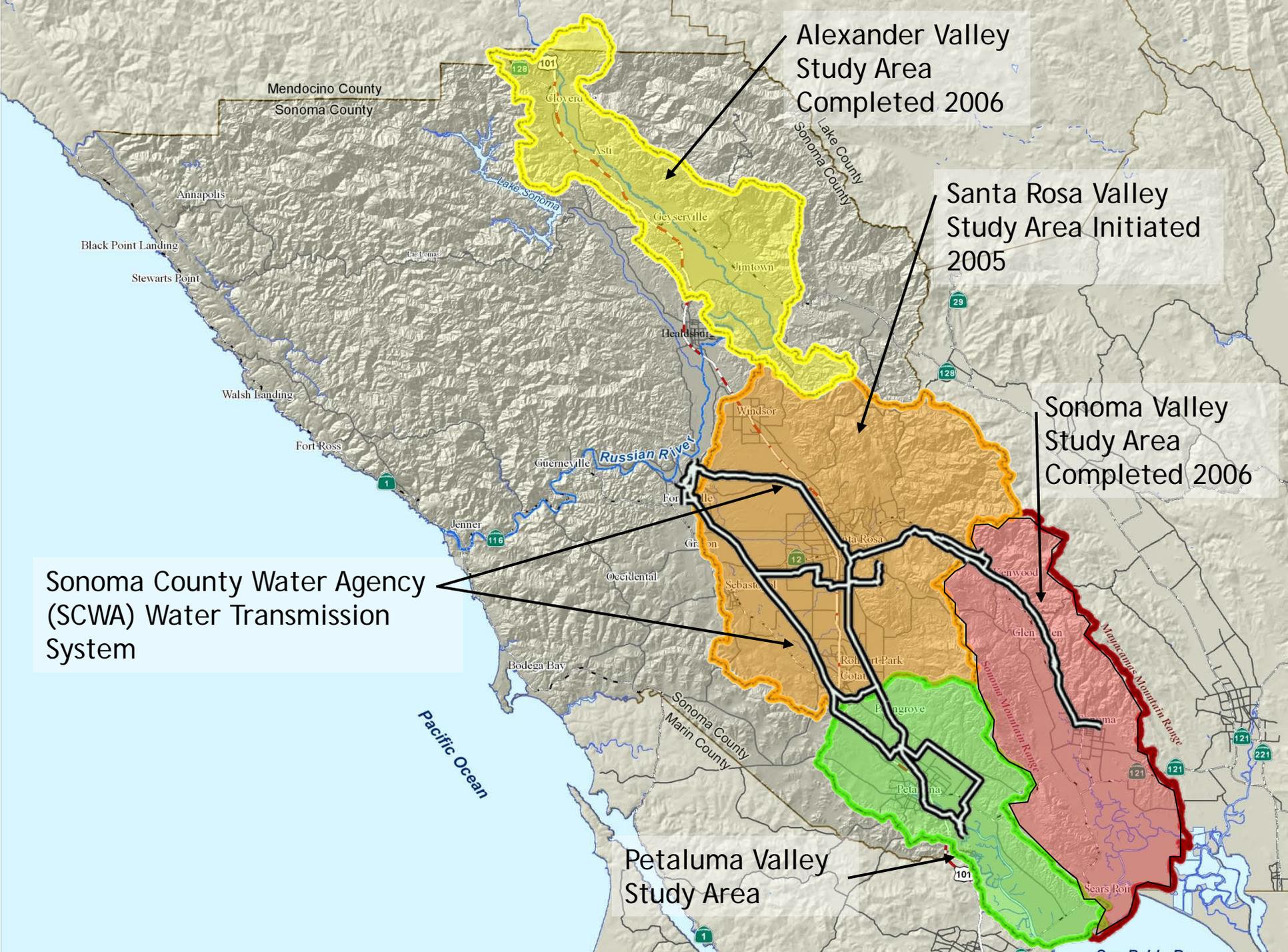
March 13, 2012

Jay Jasperse, P.E.
Chief Engineer



Example SCWA Projects/Programs

- Quantitative Precip. Information/forecast modeling - NOAA
- Climate Change - USGS modeling
- Groundwater Studies - USGS cooperative project
- Groundwater Management Planning
- Conjunctive Use of Surface & Groundwater:
 - Flood control/groundwater recharge
 - Groundwater banking
- Sonoma-Marín Saving Water Partnership



Alexander Valley
Study Area
Completed 2006

Santa Rosa Valley
Study Area Initiated
2005

Sonoma Valley
Study Area
Completed 2006

Petaluma Valley
Study Area

Sonoma County Water Agency
(SCWA) Water Transmission
System

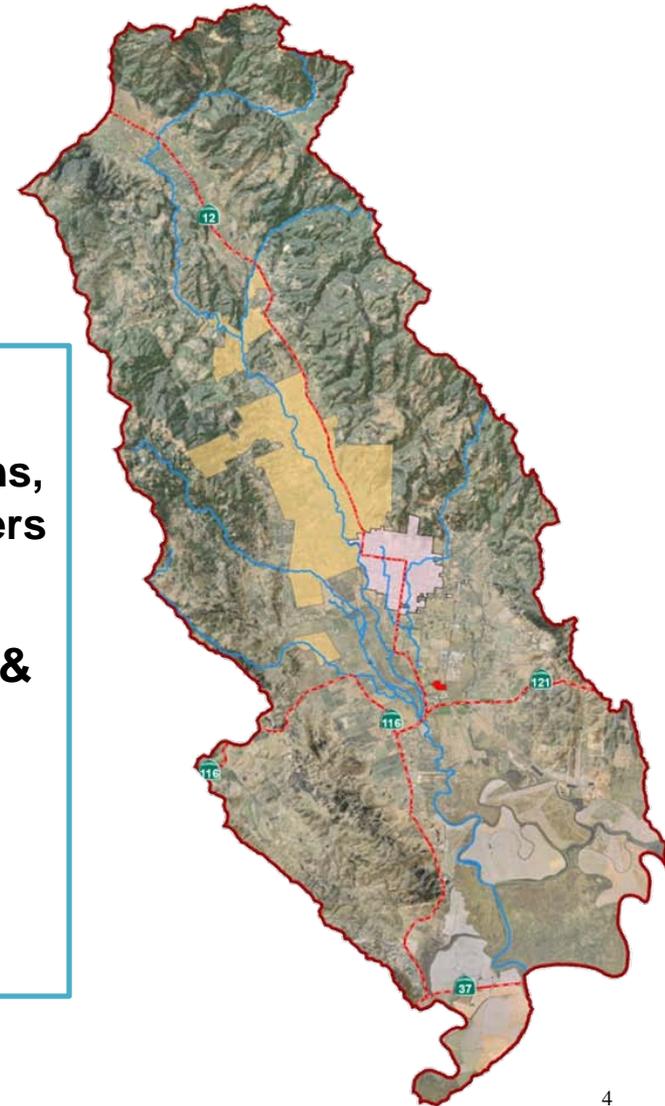


SACRAMENTO
STATE

Sonoma Valley Groundwater Management Program



- **Convened Stakeholder Group in June 2006**
 - **Agricultural alliances, environmental organizations, water purveyors, and residential groundwater users**
- **Groundwater Management Plan Adopted by Sonoma County Water Agency, City of Sonoma & Valley of the Moon Water District in Late 2007**
 - **Non-regulatory and collaborative process with emphasis on local control and management**
- **Currently in 5th Year of Implementation**





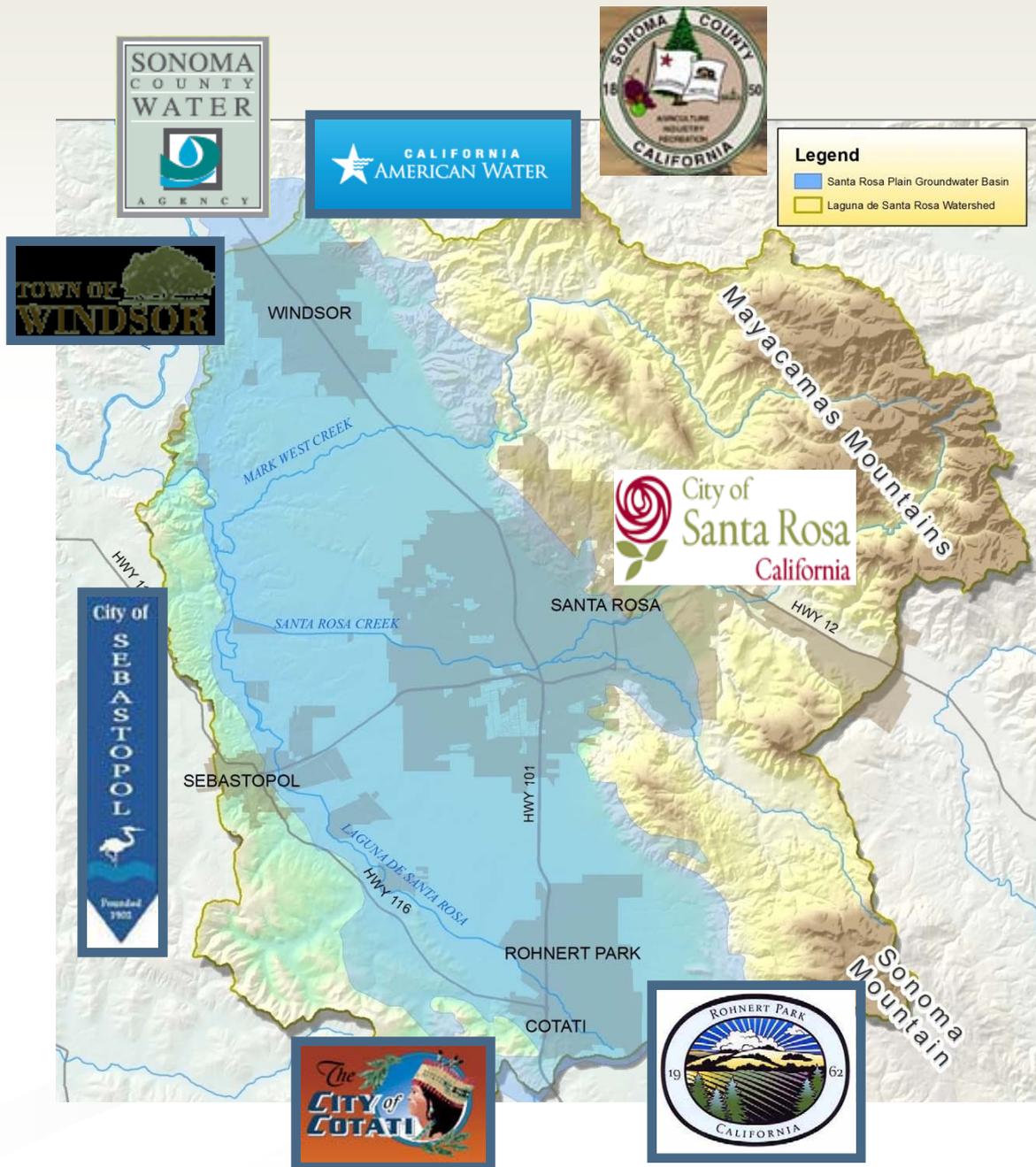
Santa Rosa Plain Groundwater Study Due 2012

\$2.2M Study (\$1.5M local funding, \$0.7M USGS)

OBJECTIVES

Hydrogeology and Groundwater Quality

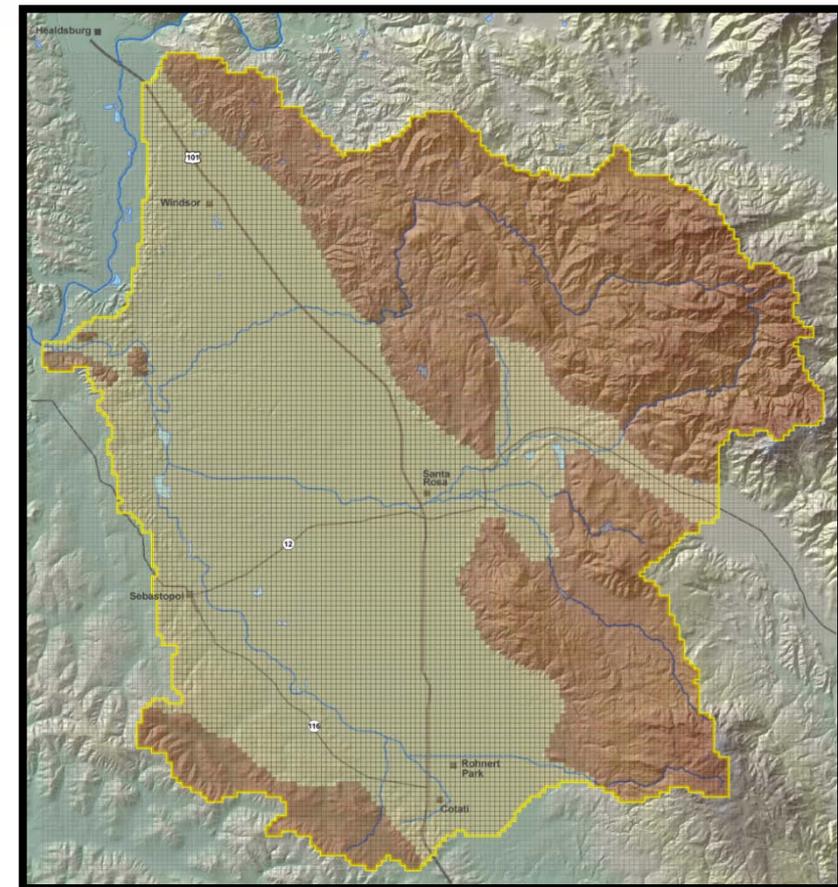
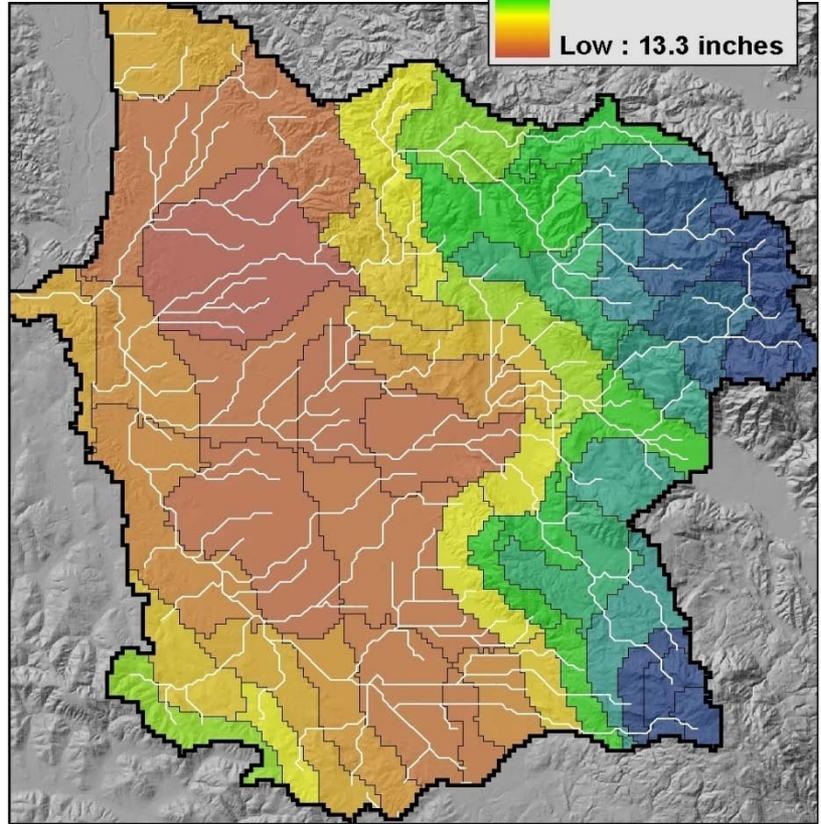
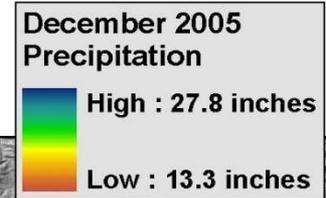
Develop Surface Water-Groundwater Model



GSFLOW

Model

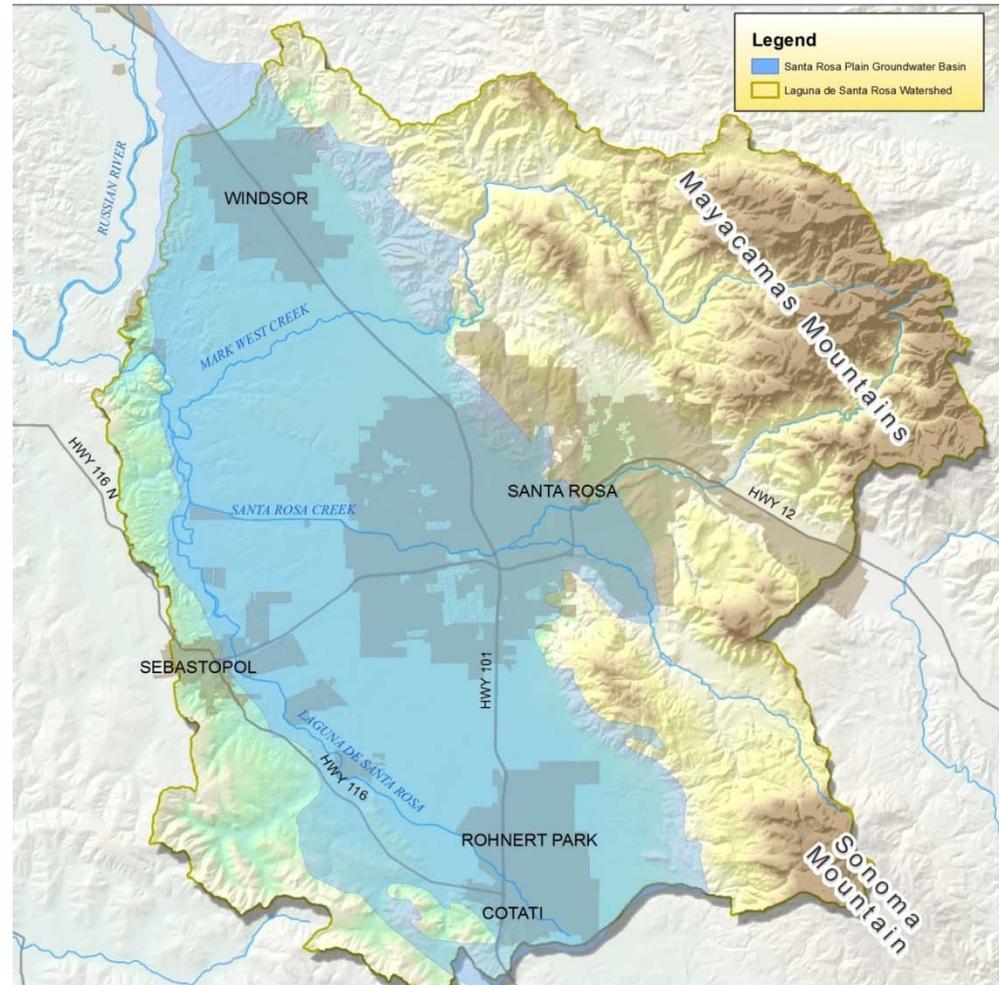
Watershed:
Surface &
Groundwater



- Estimate hydrologic budget
- Identify recharge areas
- Evaluate water-resource management strategies
- Evaluate climate-change impacts
- Evaluate effects of changes in land-use

Santa Rosa Plain Groundwater Management Planning Process Initiated

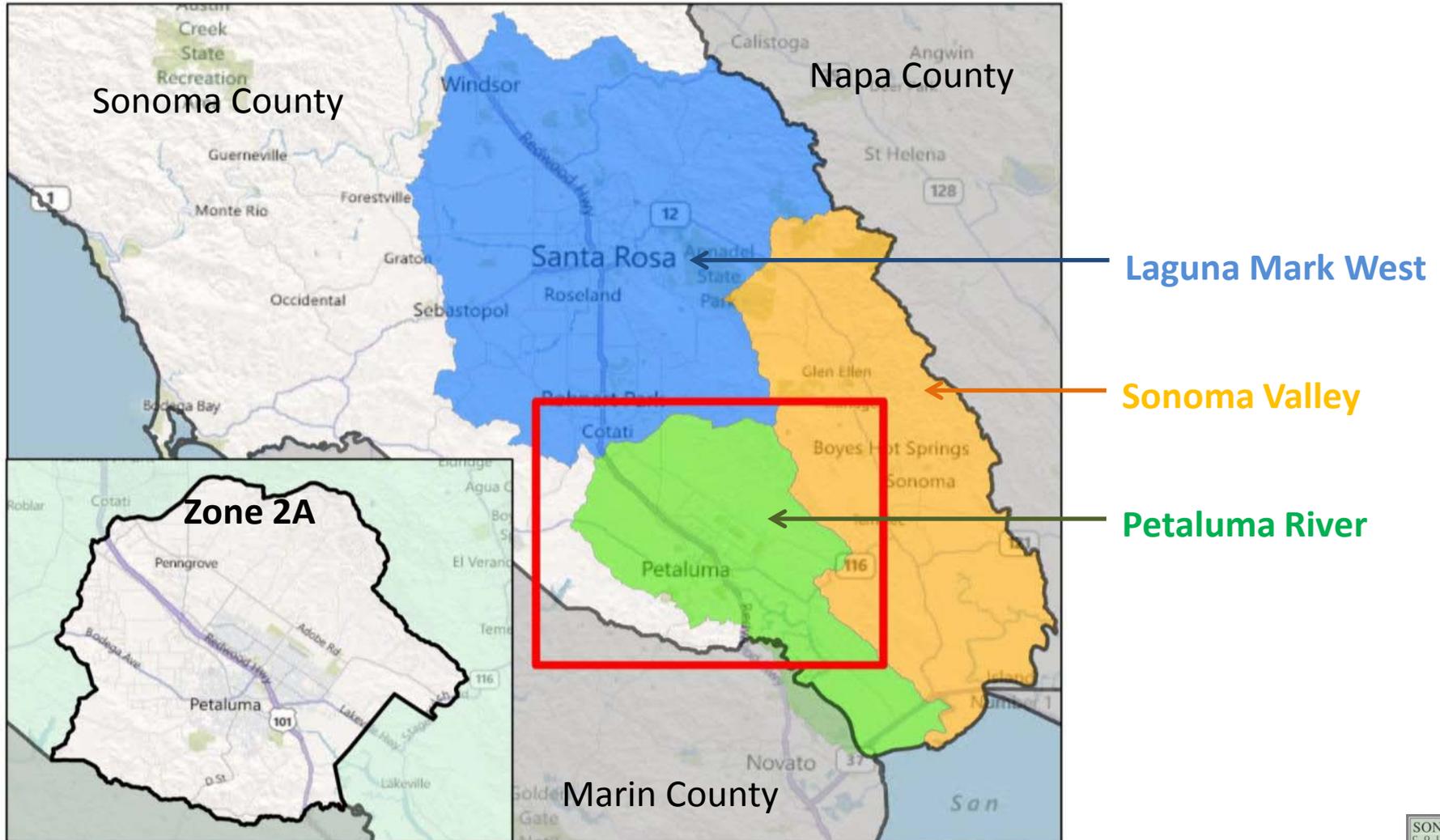
- Formed Basin Advisory Panel in 2011
 - First meeting in December 2011
 - Meeting Monthly in 2012
- Groundwater Briefings and Informational Presentations
- Exploring Groundwater Management Planning Options
- About a Two Year Process
- Funded by the Agency, Local Cooperators and IRWM Grant



Santa Rosa Plain Groundwater Management Basin Advisory Panel

- Cal-Am Water
- California Groundwater Association
- City of Cotati
- City of Rohnert Park
- City of Santa Rosa
- City of Sebastopol
- Town of Windsor
- Community Alliance with Family Farmers
- Construction Coalition
- EJ Gallo and Sonoma Winegrape Commission
- Federated Indians of Graton CRancheria
- Fircrest Mutual Water Company
- Foothills of Windsor Homeowners
- Laguna Foundation
- Sebastopol Water Information Group
- Sonoma County Agricultural Preservation and Open Space District
- Sonoma County Alliance
- Sonoma County Farm Bureau
- Sonoma County Permit and Resource Management Department
- Sonoma County Water Agency
- Sotoyome Resource Conservation District
- Sweet Lane Wholesale Nursery
- Western United Dairymen Association

Integrated Flood Control/Groundwater Recharge Studies



Project Concepts- Multi-Benefit Approach



Core & Supporting Objectives

Flood Hazard Reduction
Groundwater Recharge

Water
Quality

Water
Supply

System
Sustain-
ability

Ecosystem

Agricult-
ural Land

Open
Space

Comm-
unity
Benefits

Groundwater Banking Study Overview

Regional Aspects

- Evaluate regional opportunities and constraints, including regional hydrogeologic conditions
- Characterize source water availability and quality
- Evaluate available information and develop data gap analysis.
- Stakeholder involvement and participation at key stages.
- Develop conceptual project alternatives.
- Evaluate regulatory and permitting needs



Demonstration Pilot Studies

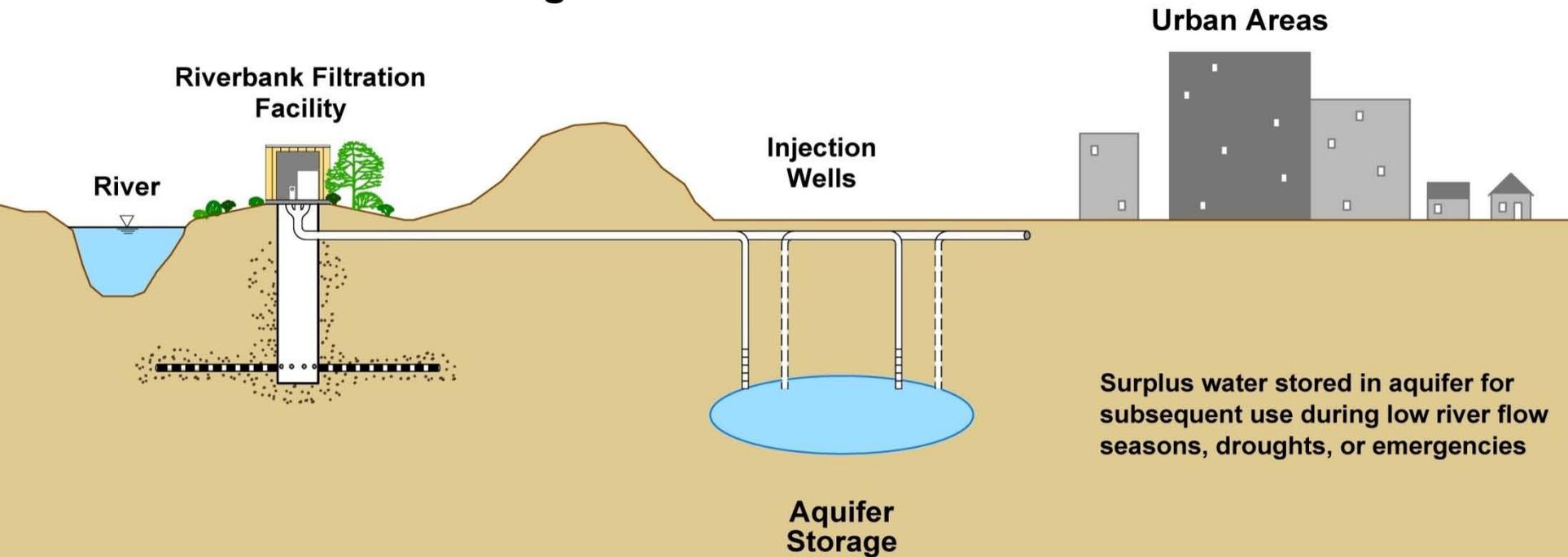
- Prepare Work Plans
- Monitoring and reporting
- Incremental scaling of projects (start small and evaluate results)
- Recommendations for next steps based on pilot-scale results

Local Aspects

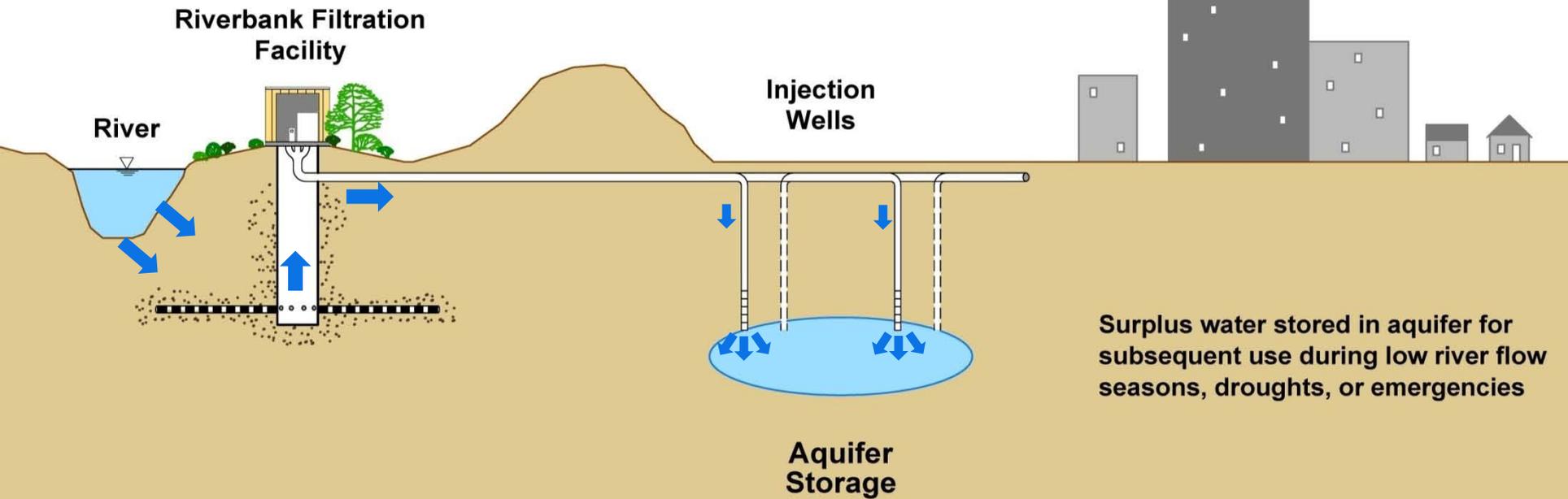
- Identify specific potential pilot-scale projects for testing
- Assess existing groundwater quality data
- Evaluate existing well conditions
- Evaluate specific potential recharge and recovery locations and methods.
- Assess potential site-specific water quality interactions and issues.
- Assess data gaps and likely monitoring and permitting needs

Groundwater Banking

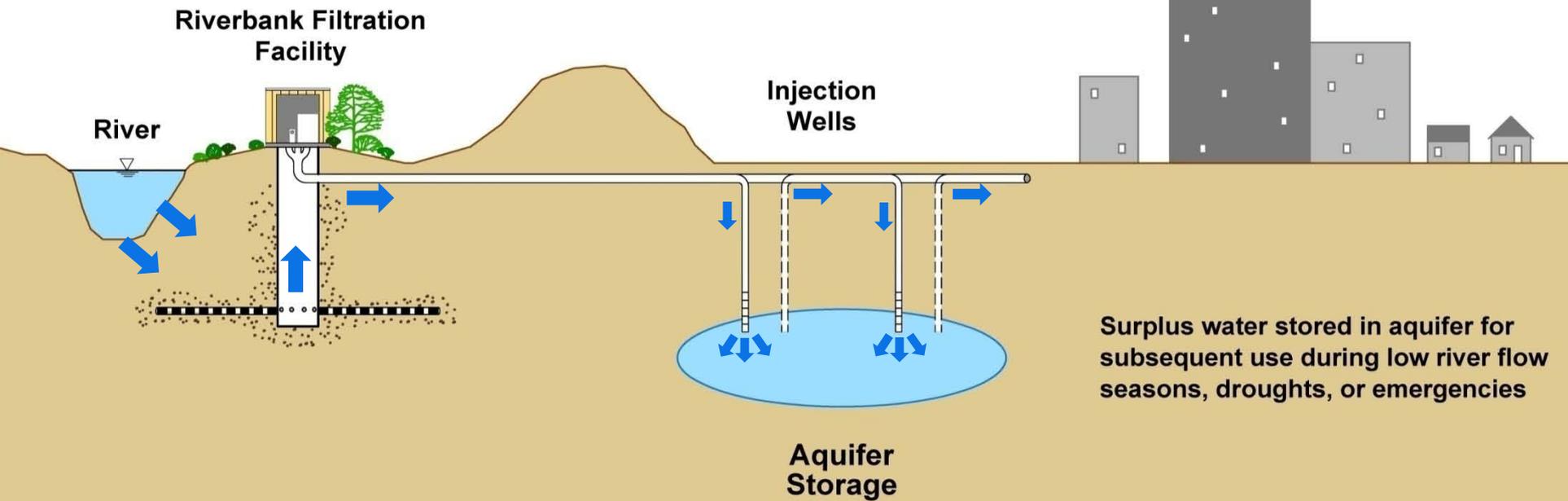
High River Flow Conditions



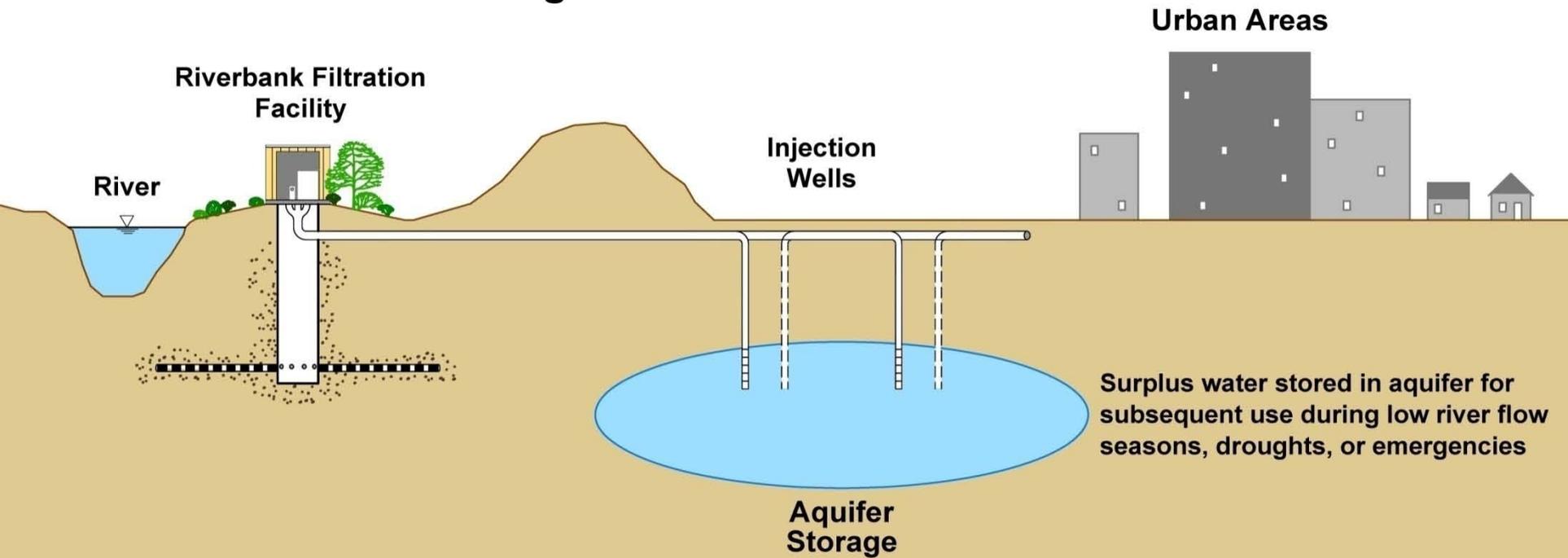
High River Flow Conditions



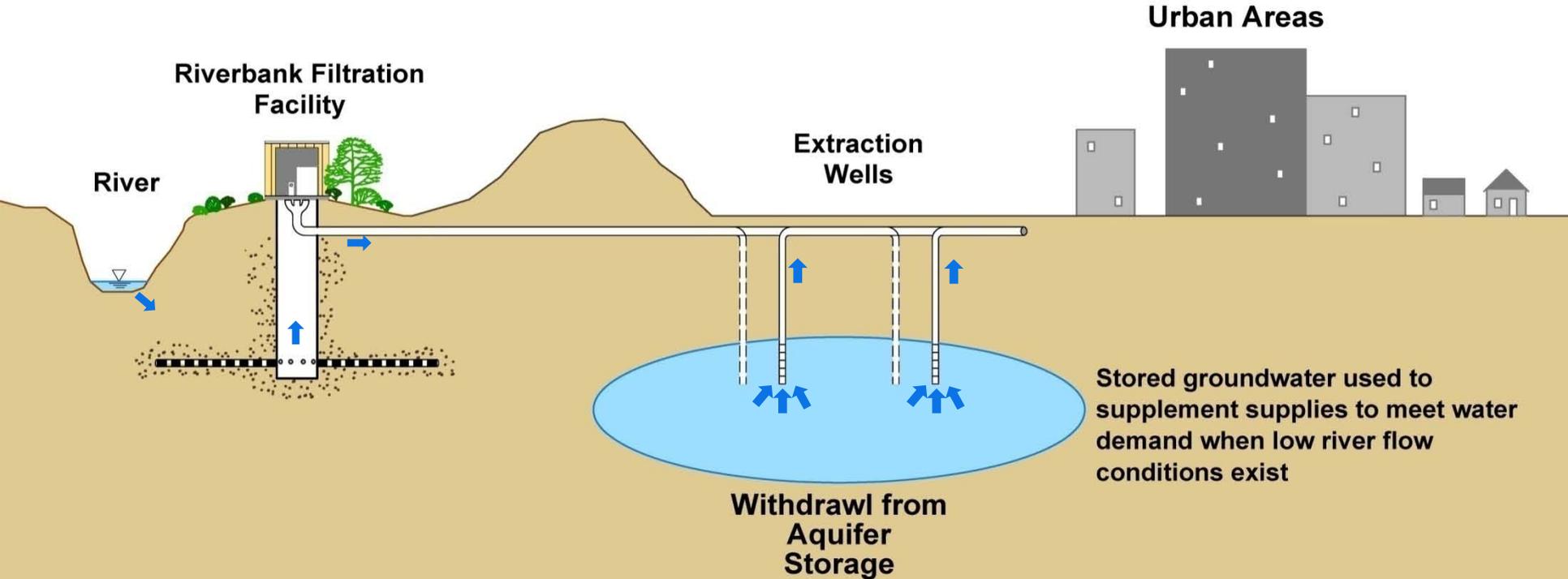
High River Flow Conditions



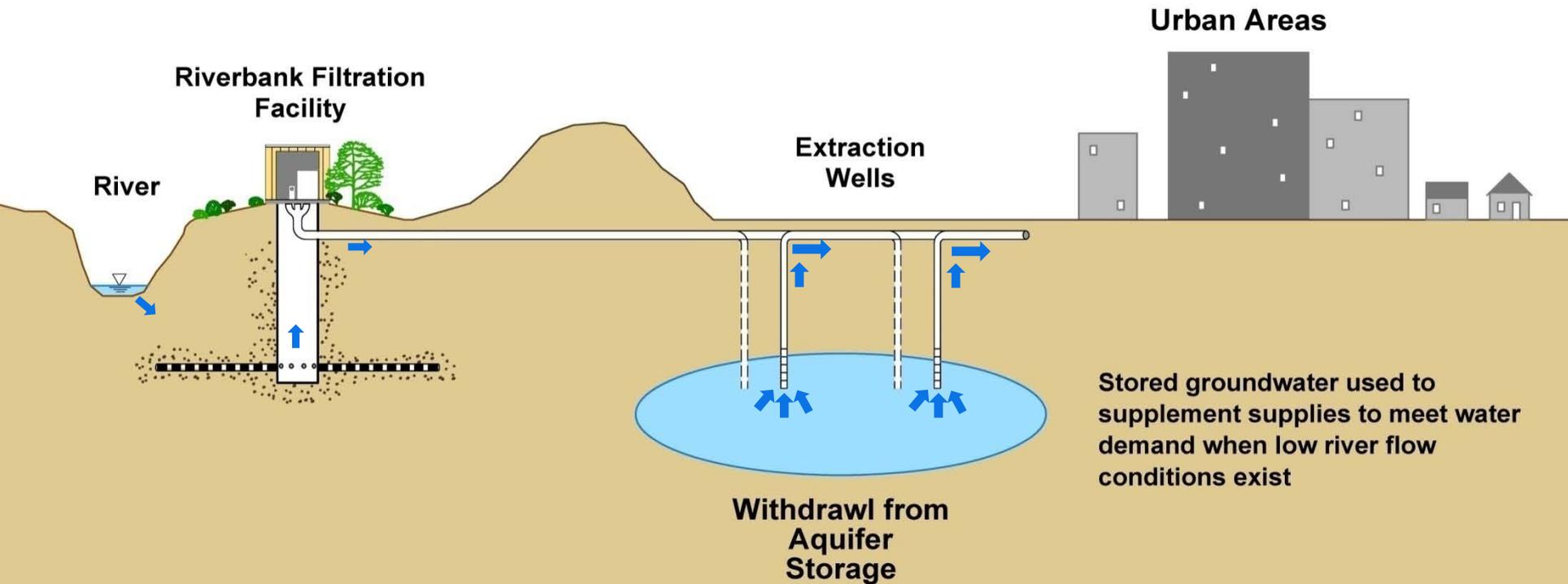
High River Flow Conditions



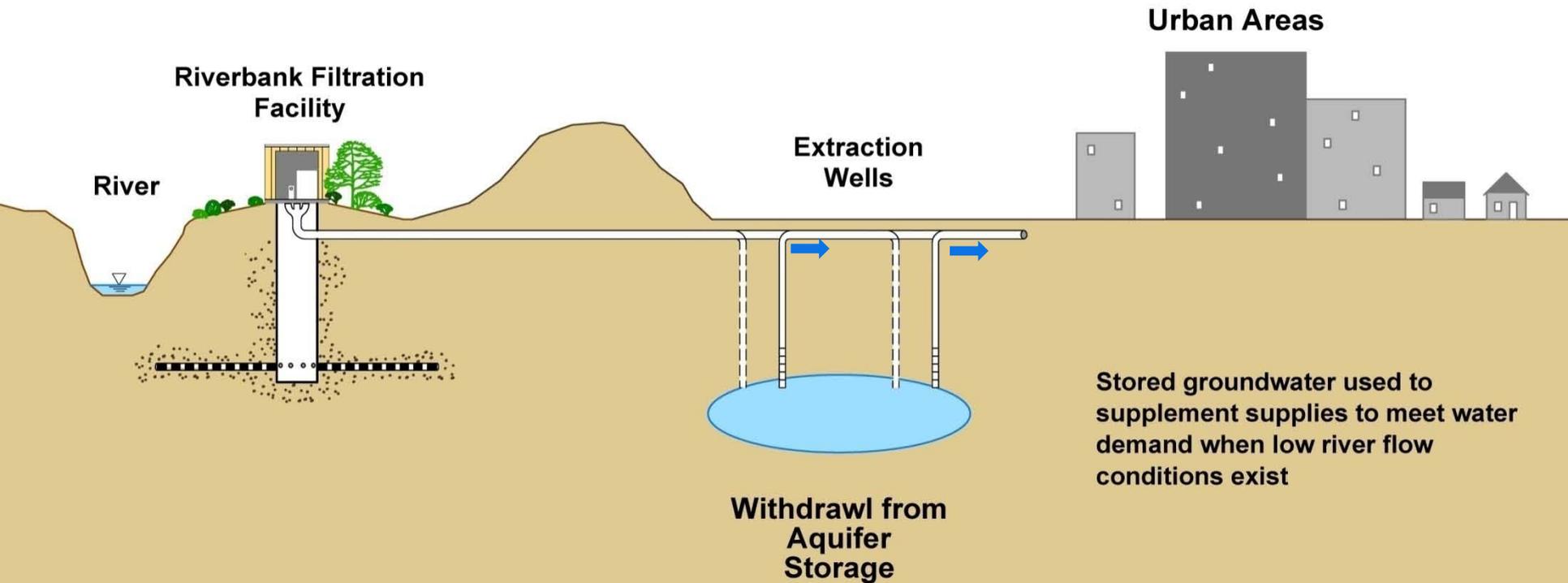
Low River Flow Conditions



Low River Flow Conditions



Low River Flow Conditions



Sonoma-Marín Saving Water Partnership

10 Water Utilities coordinating to implement water use efficiency programs

- Minimum funding obligations for each Partner
- Commitment to implement CUWCC BMP's
- Maximize the cost-effective projects for the Partnership
- Focus on programs of regional benefit
 - Qualified Water Efficient Landscaper Training
 - Water Education Program
 - Green Business Program
 - Public Information Program

