

Russian River Watershed Resilience Pilot – Building Resilience through Networks, Assessments, and Action



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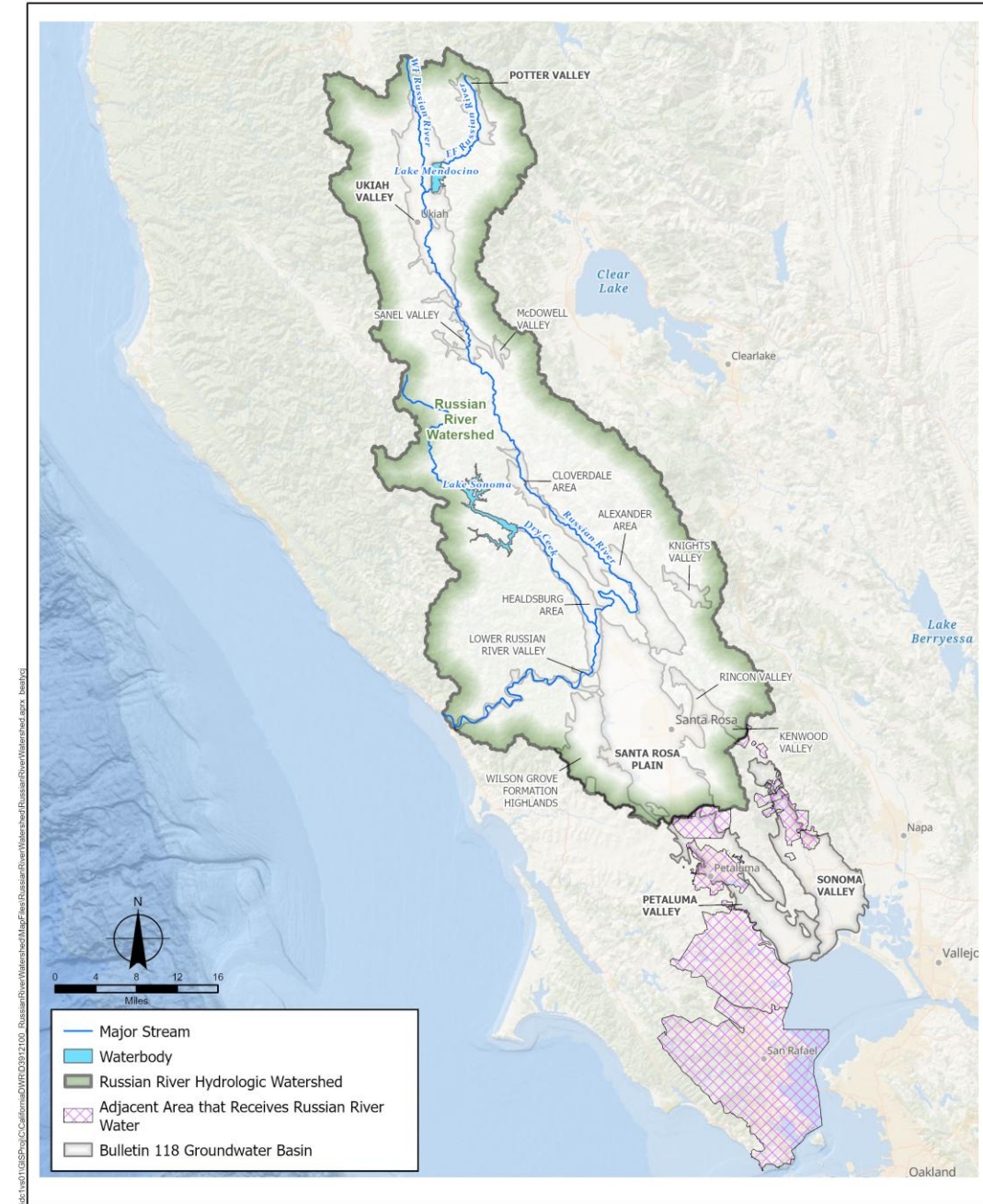
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Study Area Description

- Boundary
 - Russian River Hydrologic Watershed (HUC 8)
 - Adjacent Areas that Receive Russian River water
- Hydrological Features
 - Lake Mendocino and Lake Sonoma
 - Groundwater basins in RR Watershed, Sonoma Valley groundwater basin, Petaluma Valley groundwater basin
 - Russian River Estuary
- “Plus” Areas
 - Adjacent areas that receive Russian River water
 - Limited evaluation of water supply (surface water and groundwater) only



Project Timeline and Milestones

- **Watershed Network Meetings:**

- 6 Network Meetings
- 2 Technical Sessions
- 20+ Focused Outreach Meetings

- **Draft Watershed Resilience Plan:**

- March 2026
- Current Network Review

- **Final Watershed Resilience Plan:**

- April 2026

Meeting	WRP Stage	Goals	Preparatory Work/Meeting Material
#1 FEB 26 2025	1. Setting the Stage	Introduce plan; review goals and vision; review/confirm watershed boundary; initiate goals and vision	Project fact sheet GIS mapping of boundary Draft Vision
#2 MAY 6 2025	2. Explore Hazards 3. Assess Vulnerabilities and Risks	Review hazards; identify and describe historical events and impacts; describe future hazards; gap analysis Framing of vulnerability and risk assessment	Historical hazard summary Projections of change Gap analysis Draft vulnerability metrics
#3 SEPT 16 2025	3. Assess Vulnerabilities and risks	Review of vulnerability and risk assessment Integrate Network Members observations of vulnerabilities across water resource sectors	Draft vulnerability and risks assessment results
#4 DEC 10 2025	3. Assess Vulnerabilities and risks 4. Develop Adaptation strategies	Review refined vulnerability assessment Identify adaptation strategies for consideration	Vulnerability and risk assessment results Initial framing and identification of adaptation strategies
#5 FEB 24 2026	4. Adaptation Strategies	Review evaluation of adaptation strategies	Draft adaptation strategy list and evaluation
#6 MAR 24 2026	5. Implement & Monitor	Identify possible implementation paths; recommendations for plan	Draft implementation paths for strategies Draft recommendations for plan

Major Steps in Watershed Resilience Pilot



1. Set the Stage



2. Explore Hazards



3. Assess Vulnerabilities & Risks



4. Develop Adaptation Strategies



5. Implement & Monitor

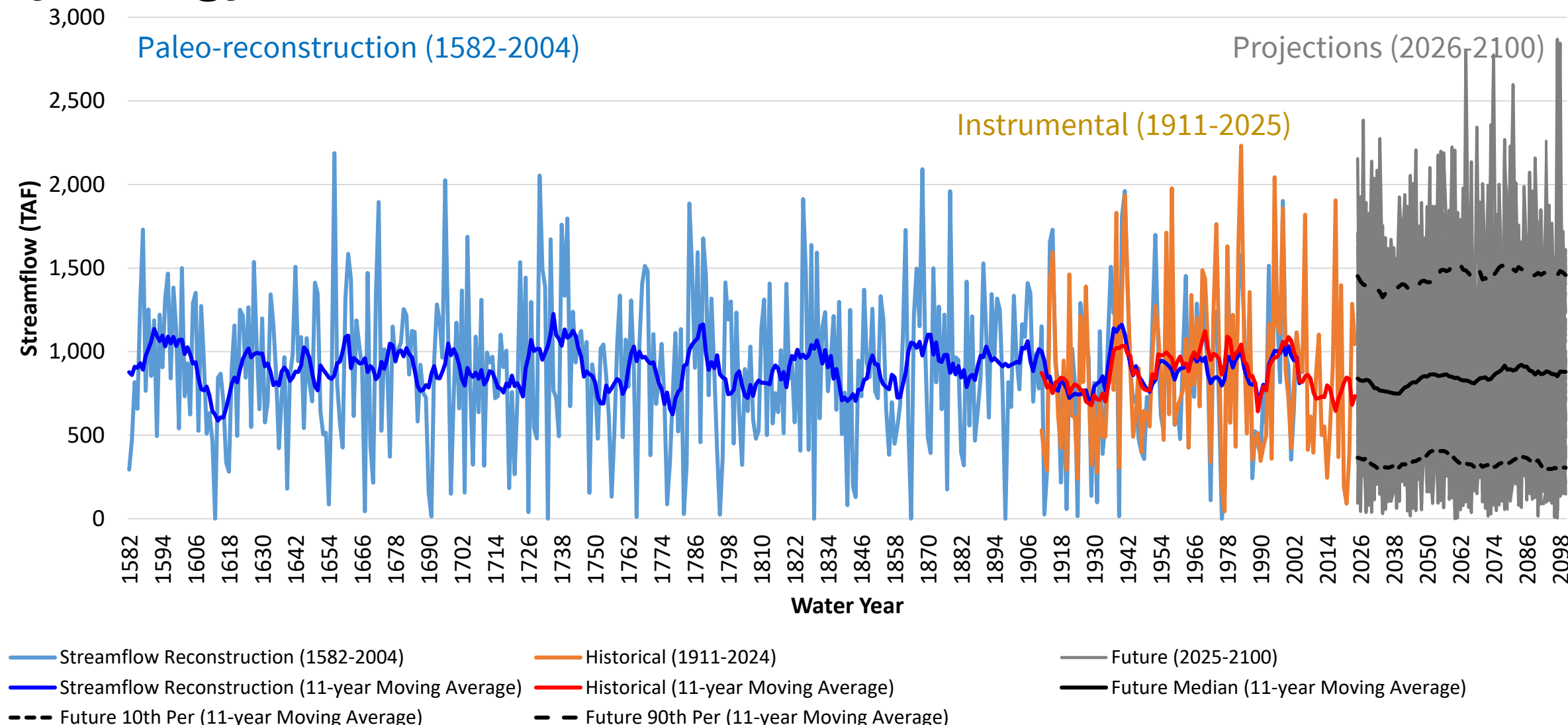


Vulnerability Assessment – Enhancing with Quantitative Information

Tool	Surface Water Supply	Groundwater Supply	Flood Management	Ecosystem	Water Quality	Recreation	Hydropower
Basin Characterization Model (BCM)	X			X		X	
Russian River System Model HEC-ResSim	X					X	X
Sonoma Water Decision Support Model	X					X	X
Russian River Groundwater Surface Water Flow (GSFLOW) Model		X					
Potter Valley Integrated Groundwater-Surface Water Model		X					
Groundwater Sustainability Plan Integrated Surface and Groundwater Computer Models		X					
Russian River HEC-HMS			X				
Santa Rosa Creek HEC-HMS			X				
Russian River Flood HEC-ResSim			X				
Russian River and Santa Rosa Creek HEC-RAS			X				
HEC-ResSim Water Quality Model				X	X		
Quantified Conceptual Model (QCM)				X	X		
Suitable Habitat Acre-day Model				X	X		
Power Tools for Hydropower							X

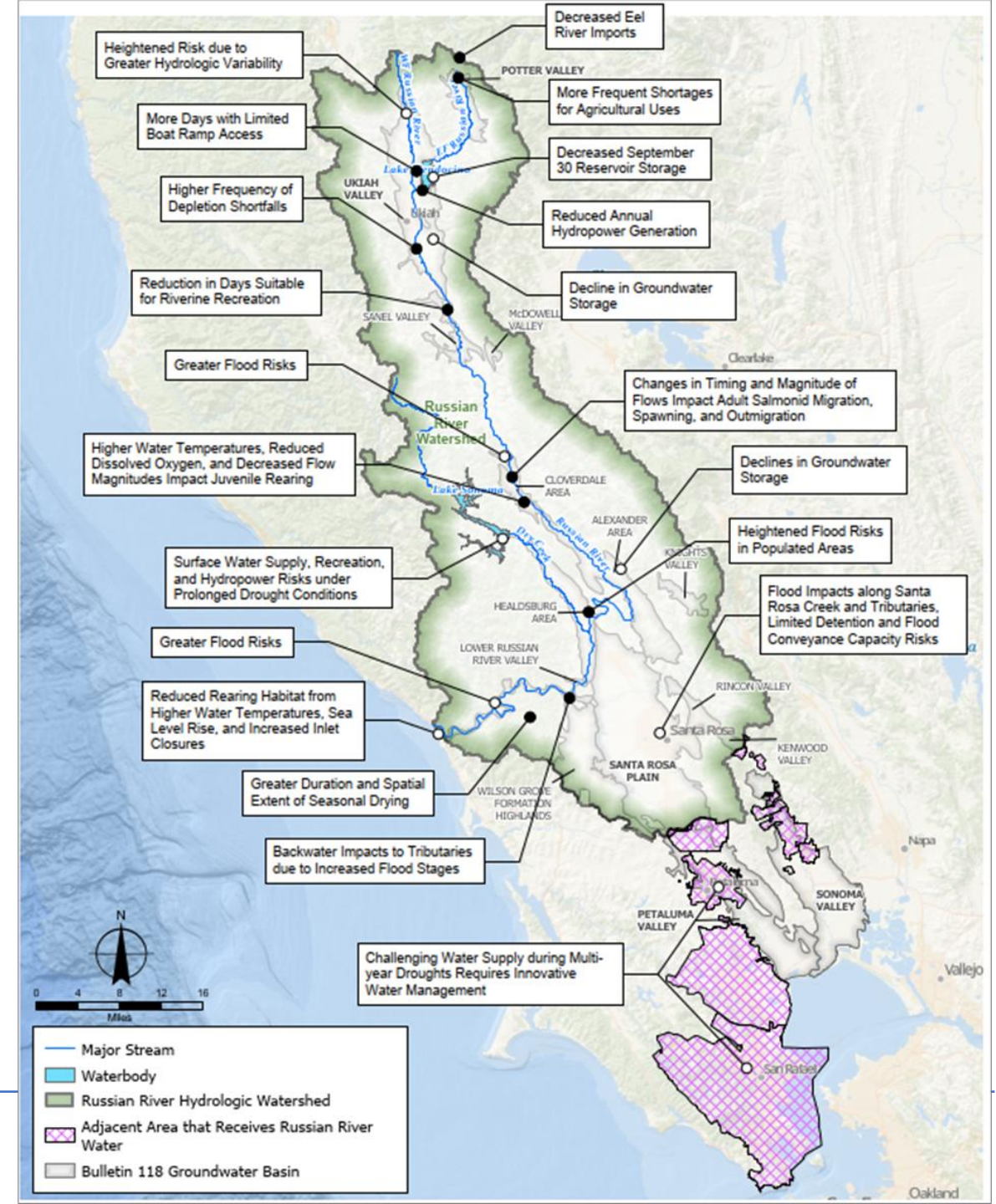


Understanding Russian River Past, Present, and Future Hydrology



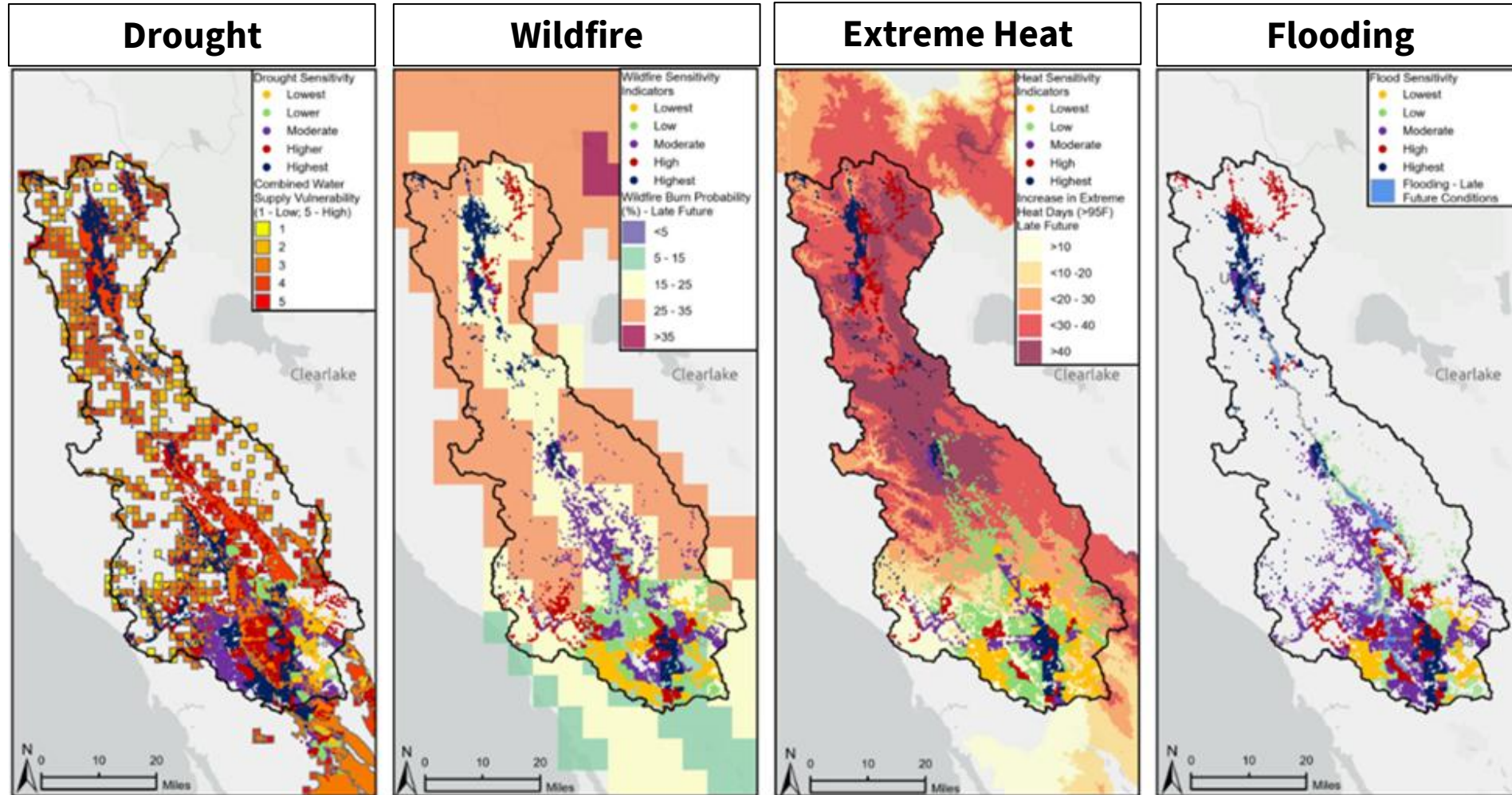
Characterizing Climate Vulnerabilities

- 7 water resource sectors
- 4 planning areas
- ~20 key vulnerabilities
- Strong interdependencies
 - Surface water-groundwater supply-recreation-hydropower
 - Flood management-ecosystems-water quality
 - Flood management-surface water-groundwater
 - Geography and systems matter



Climate Impacts Mapping

Population sensitivity to climate hazards is unevenly distributed across the Russian River watershed



Climate Adaptation Strategies

- Received over 250 adaptation concepts from Network members
- Across all water sectors and throughout the entire study area
- Organized into 13 resilience strategies

Climate Adaptation Strategy	Water Resource Sectors
1. Increase Resilience to Changes in Upper River and Eel River Transfers	
2. Increase Water Supply Resilience to Drought	
3. Increase Water Conservation and Water Use Efficiency	
4. Expand Conjunctive Use of Surface Water and Groundwater	
5. Improve Forecasts and Forecast-Based Operations	
6. Reduce Flood Risk to Communities and Infrastructure	
7. Manage Sustainable Headwaters and Support Wildfire Resilience	
8. Promote Land Stewardship Measures to Restore Watershed Function	
9. Restore Floodplains and Connectivity	
10. Restore Hydrological Function, Habitat, and Thermal Refugia in Tributaries	
11. Adapt Russian River Estuary to Future Conditions	
12. Support Flexible and Adaptive Policy for Resilient Watershed Management	
13. Enhance Tools, Monitoring, and Water Accounting Methods	

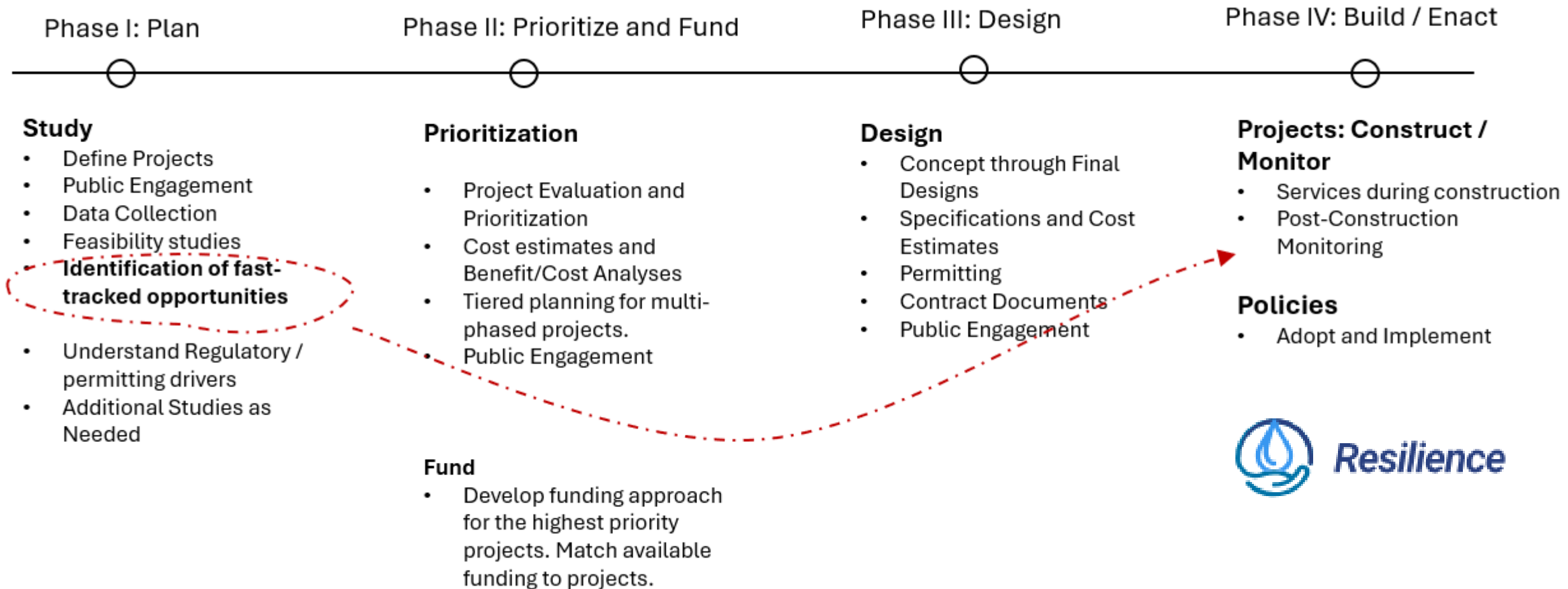
Moving Forward with the Russian River WRP

Three Foundational Elements for Effective Program Implementation

- 1. Outcomes Focused Implementation Plan**
- 2. Partnerships and Organizational Capacity**
- 3. Multi-Year Funding Strategy**



Outcomes Focused Implementation Plan



Watershed Network Next Steps



Resilience

Russian River Watershed

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Building Resilience Together: The Future of the Russian River Watershed

Welcome to the Russian River Watershed Resilience site — your hub for collaboration, innovation, and action. Here, we're working together to address climate challenges, protect vital water resources, and create a sustainable future for our communities and ecosystems.



Resilience

Russian River Watershed

Closing – Thank You



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