Sonoma Water

Clean. Reliable. Essential. Every Day.

Sonoma Water Energy & Climate Resiliency Policy

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Outline

- Energy Policy and Climate Adaptation Plan history
- Energy & Climate Resiliency Policy
- Implementing the Climate Adaptation Plan
  - CAP project tracker
  - Anchor project updates
- Climate equity
- Recommended action: approve updated policy

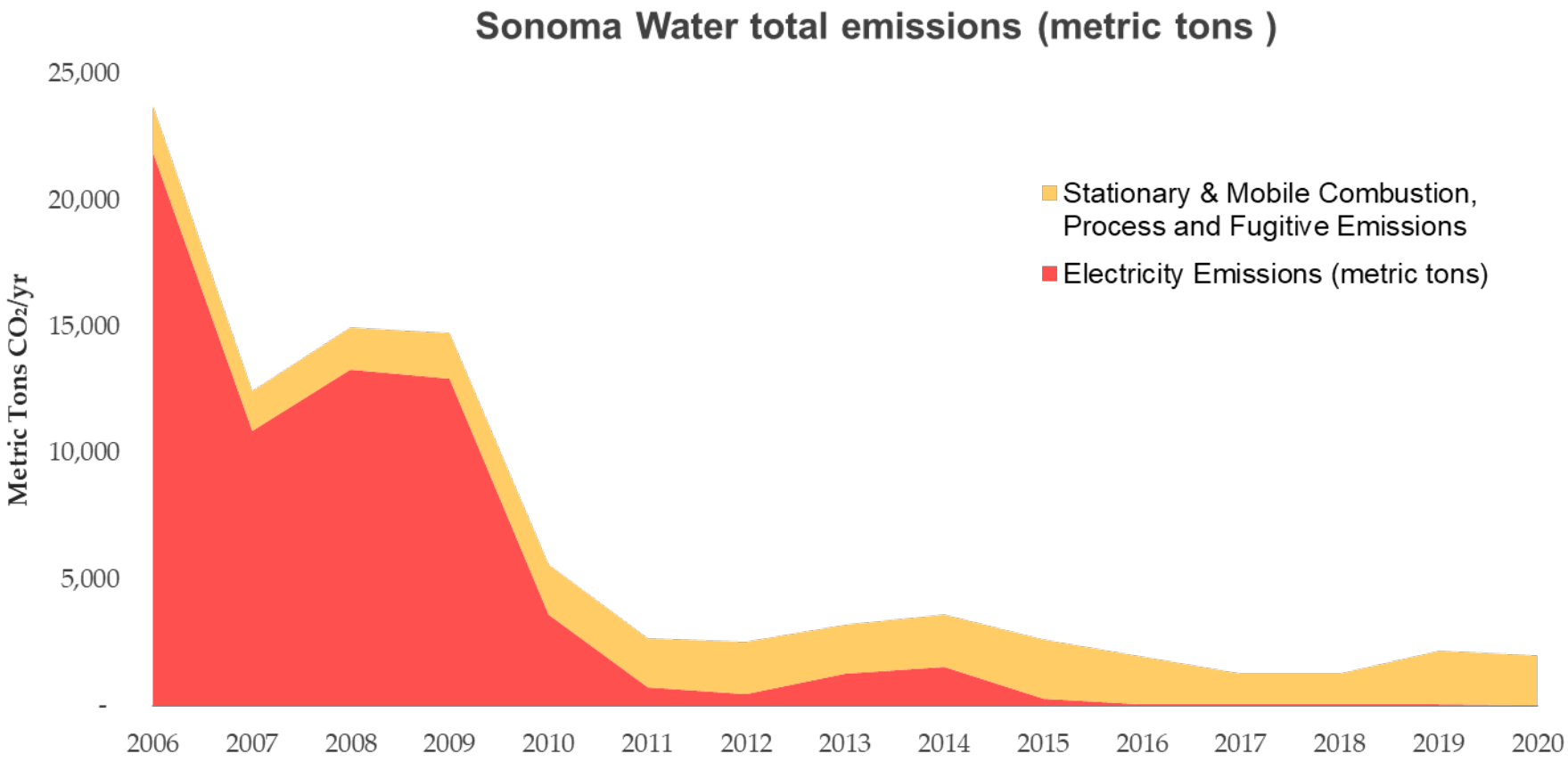
Energy Policy

- Reliant on healthy watershed
- Climate impacts our business
- Energy generator
- Reliant on energy
- Energy Policy
  - Carbon Free Water, cost-effectively
  - Regional collaboration
- Develop Climate Adaptation Plan





Carbon Free Water



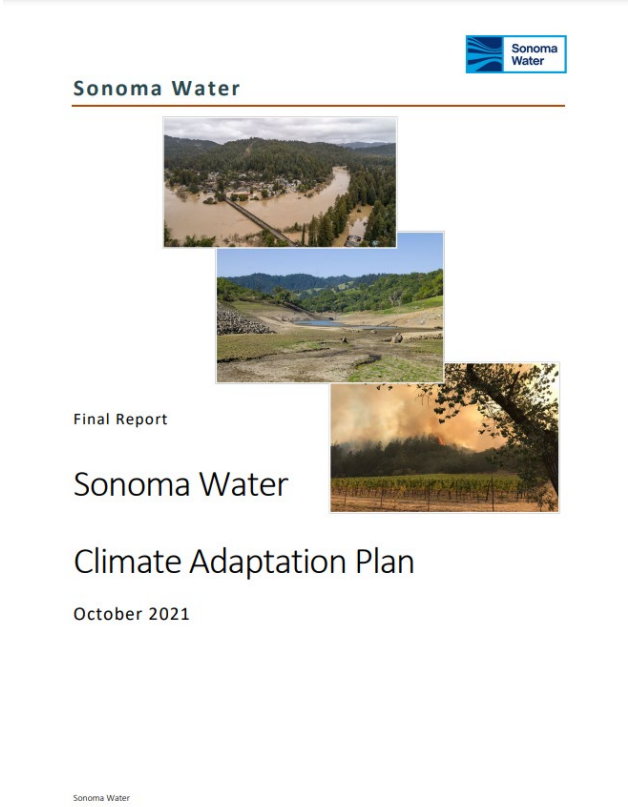
You can't manage what you don't measure

- Peter Drucker

Climate Adaptation Plan, 2021

- Science-based
- Partner-driven
- 77 actions
- 23 anchor projects
- Update every 5-10 years

Strategically positions Sonoma Water for state and federal funding



Sonoma Water Strategic Plan, 2023

5.1.1 **Ensure alignment with the Board-approved Climate Adaptation Plan** (CAP) by establishing inter-disciplinary climate resilience team(s) made up of Sonoma Water resiliency champions to ensure climate considerations are integrated into Sonoma Water efforts.

5.1.4 **Develop inclusive practices for** Sonoma Water's climate mitigation and adaptation efforts considering the needs of **under-resourced and under-represented communities.**

Sonoma County Strategic Plan, 2021

Climate Action and Resiliency Pillar

Provide focus on climate action and resiliency to **mobilize efforts towards mitigating** climate change.

Resilient Infrastructure

Enhance services to the community **by investing in County facilities and infrastructure**; including roads, buildings, communications, and flood protection.

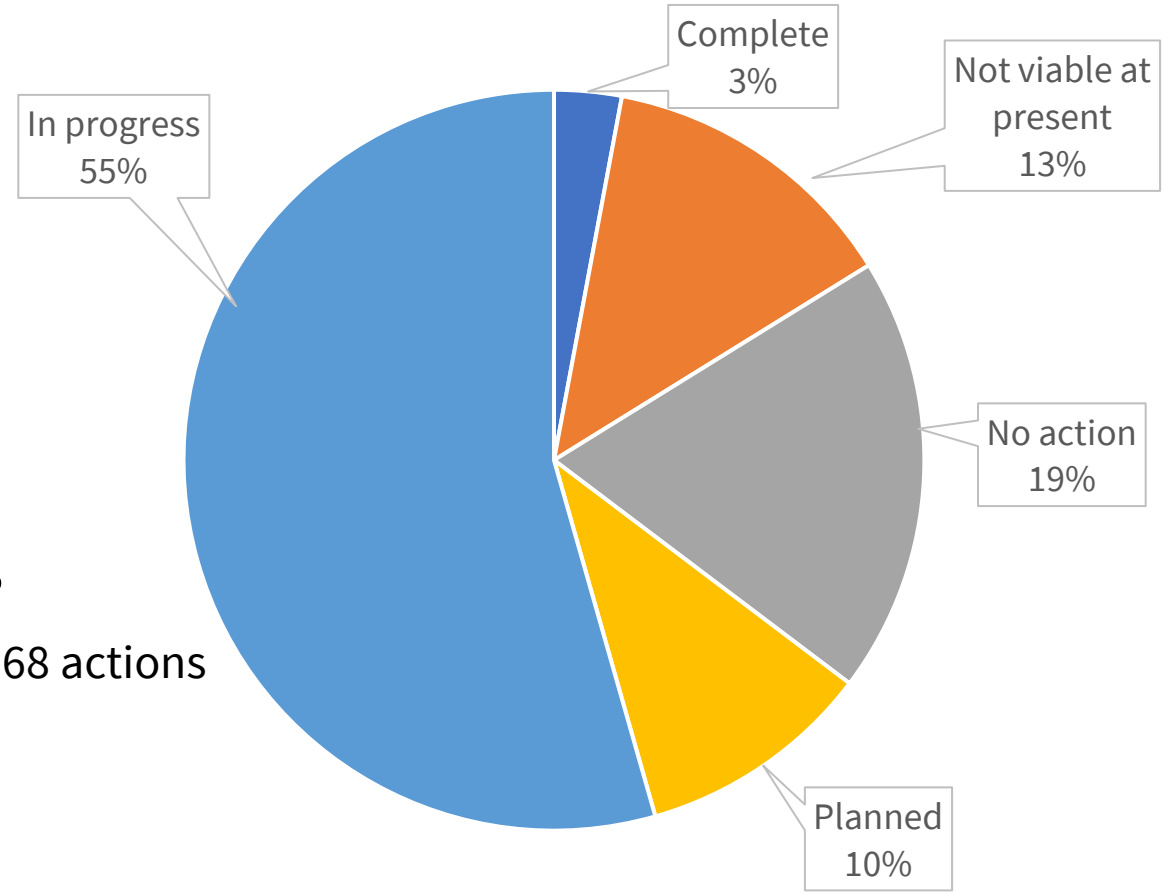
Energy & Climate Resiliency Policy

Proposed Energy & Climate Resiliency Policy, 2023

1) Continue to pursue **Carbon Free Water** by developing and procuring renewable energy sources and promoting cost-effective water use efficiency measures;
2) **Invest in climate science and innovation**;
3) **Develop and implement climate resiliency strategies**, including those identified in the Climate Adaptation Plan such as winter-water use strategies like Forecast-Informed Reservoir Operations and on-farm recharge, repairing aging water transmission and wastewater infrastructure, and restoring ecological function in critical areas of the watershed to stabilize carbon stocks and protect water quality;
4) **Collaborate with low-income and communities of color** to develop infrastructure planning processes that result in better outcomes for all members of our community; and
5) Pursue **energy and climate resiliency projects of regional benefit** like the Advanced Quantitative Precipitation Index (AQPI), which will greatly improve flood forecasting for emergency response in the Bay Area region, and regional drought resiliency.

CAP Project Tracker

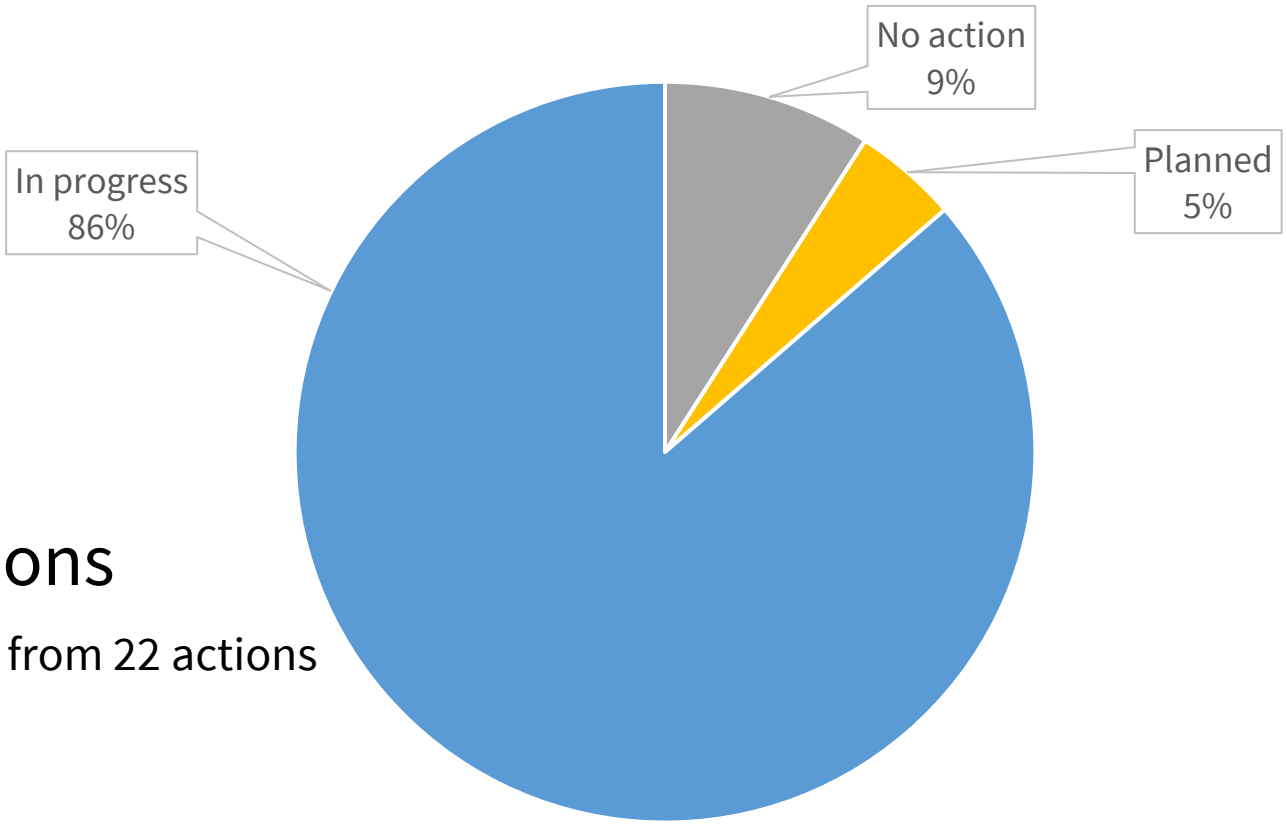
CAP Implementation



77 actions

Reporting from 68 actions

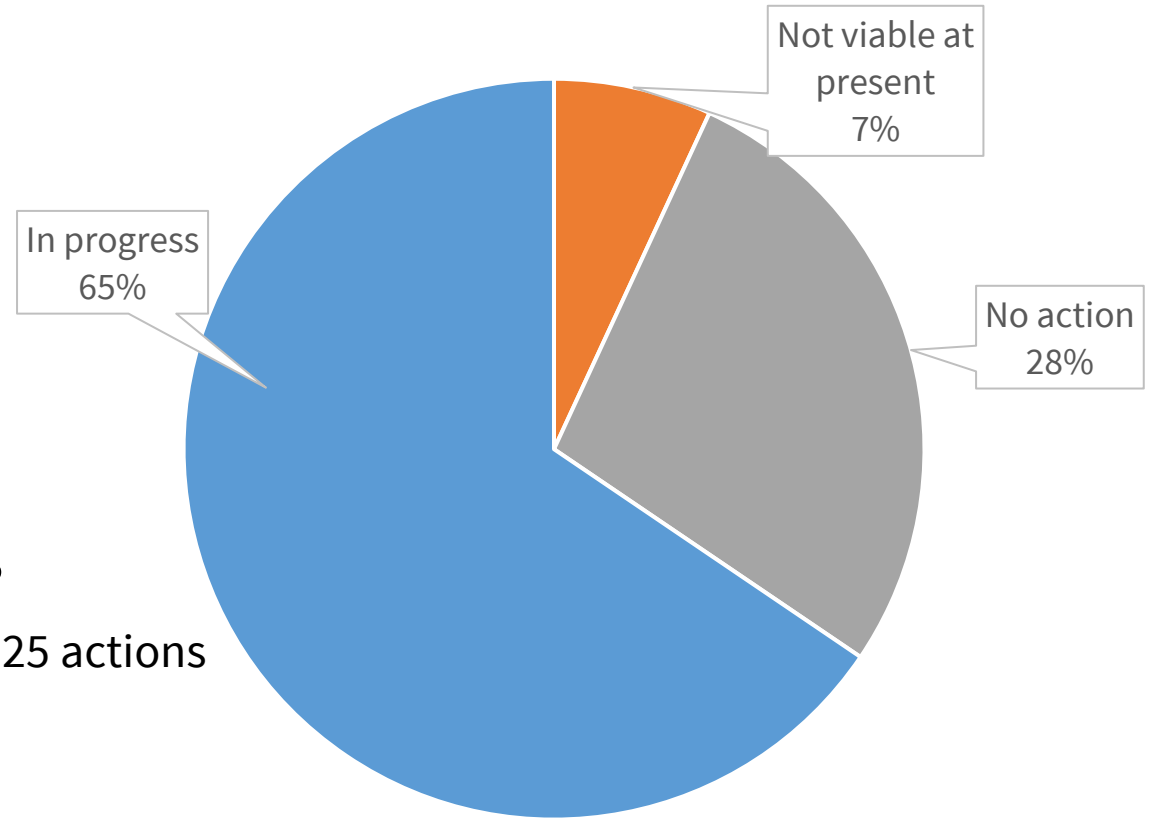
CAP Implementation: Anchor projects



23 actions

Reporting from 22 actions

CAP Implementation: Flood



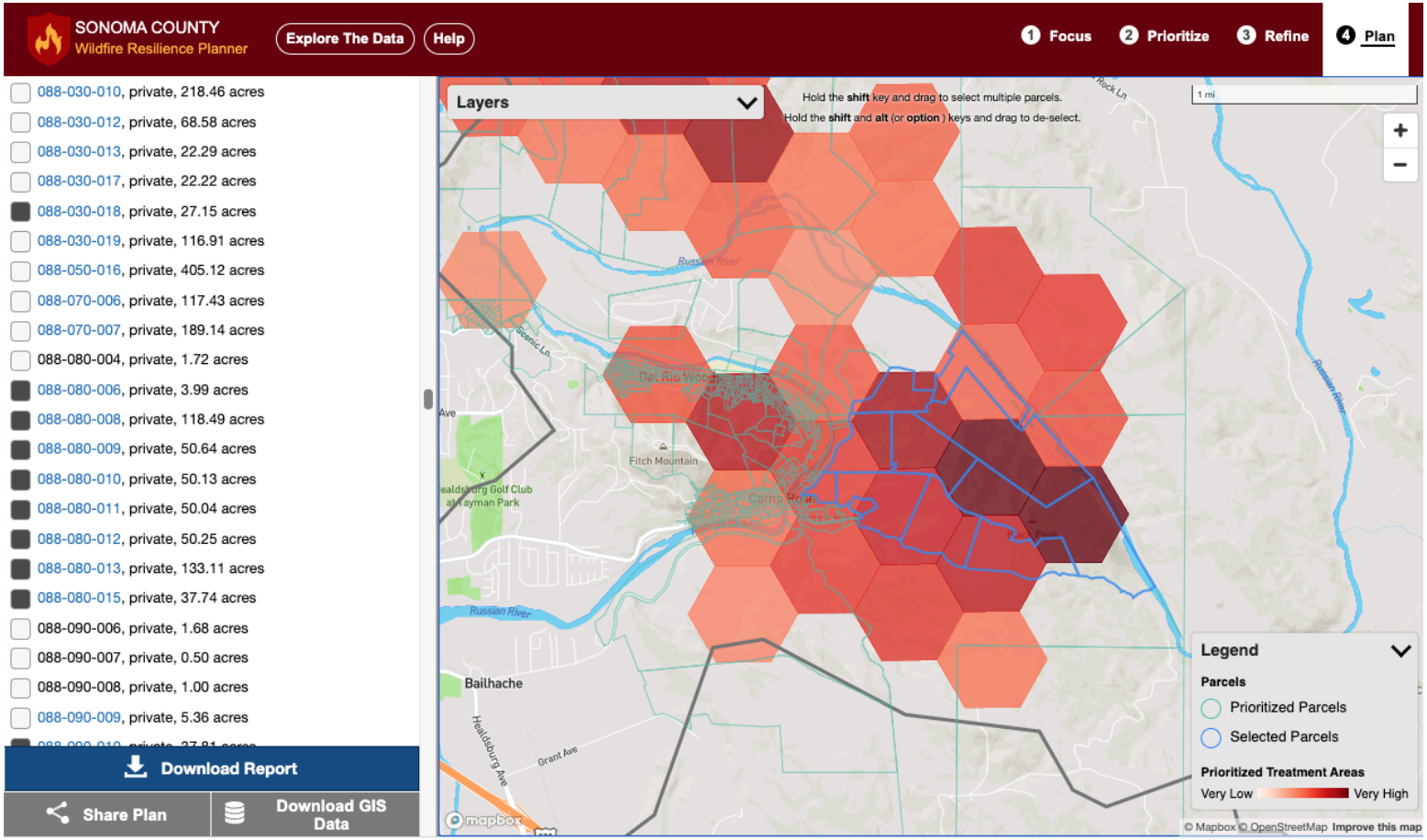
25 actions

Reporting from 25 actions

Anchor Project Update: Watershed Resilience Program

- **COMPLETED**: Laguna de Santa Rosa Restoration High Priority Project
- **IN PROGRESS**: Sediment Solutions in Petaluma and Sonoma Valley
- **COMPLETED**: Wildfire Resilience Planner

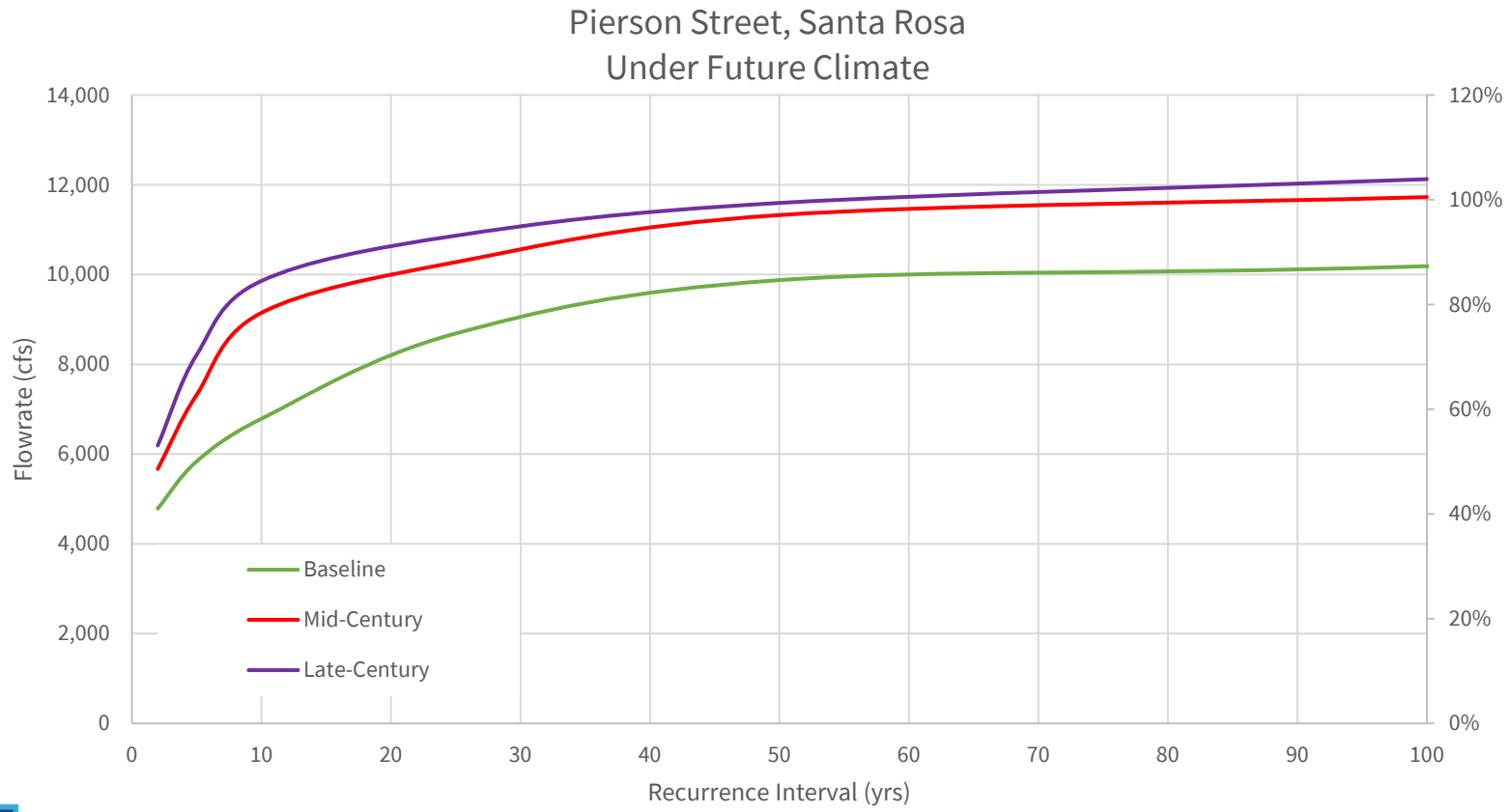
Wildfire Resilience Planner



Anchor Project Update: Hydroclimate Program

- **ONGOING:** Seasonal-to-Subseasonal (S2S) forecasting
- **PENDING:** Advanced Quantitative Precipitation Information (AQPI) pilot in Santa Rosa
- **IN PROGRESS**: Downscale climate data for infrastructure planning

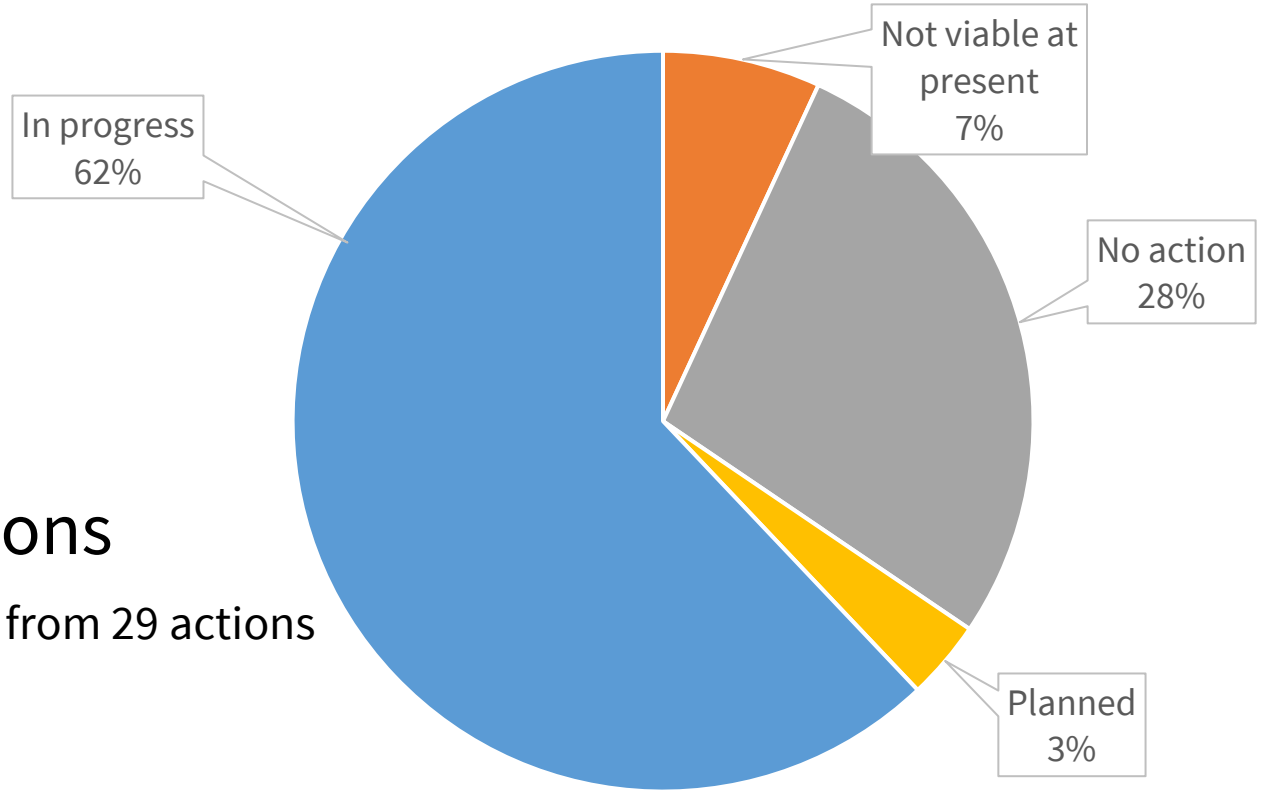
Downscaled climate data



Anchor Project Update: Countywide Flood Resiliency

- **IN PROGRESS:** Assessment of Flood Risk Management Services
- **IN PROGRESS:** Central Sonoma Watershed Project
- **IN PROGRESS:** Matanzas Dam Rehabilitation

CAP Implementation: Water Supply



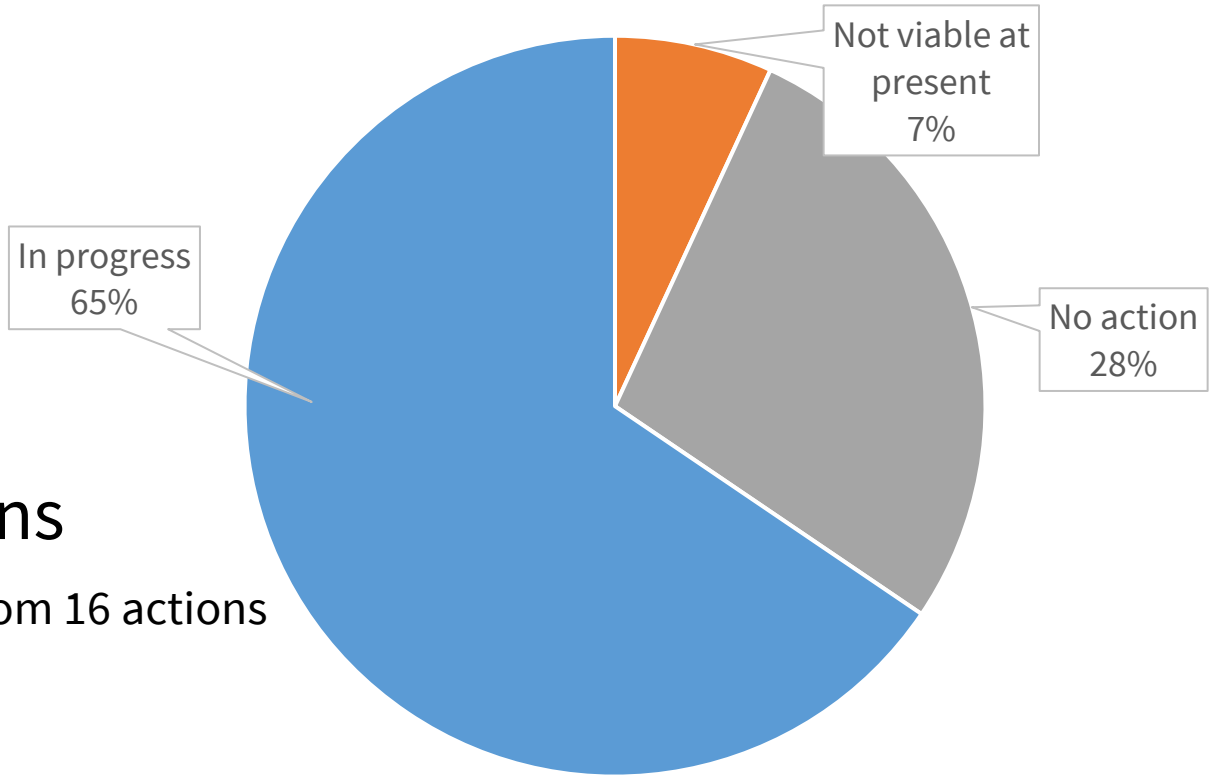
32 actions

Reporting from 29 actions

Anchor Project Update: Regional Water Supply Strategies

- **IN PROGRESS:** Countywide Drought Resiliency Study
- **IN PROGRESS:** Winter water use:
  - On-farm recharge in Alexander Valley
  - Injection wells in Santa Rosa Plain
- **PLANNED:** Water Diversion Facilities protection program

Sanitation: CAP Implementation



20 actions

Reporting from 16 actions

Anchor Project Update: Sea level rise at Sonoma Valley

- **IN PROGRESS:** Sonoma Valley Baylands project to explore transitional habitat at SVCSD
- **PLANNED:** SCADA system upgrades

Climate Equity

- Upcoming spatial analyses
  - Who is impacted by system vulnerabilities?
- Ongoing community engagement
- New commitment to equity in project planning and evaluation

Recommended action

Approve the updated Energy and Climate Resiliency Policy to replace Sonoma Water's previous Energy Policy and authorize and direct the General Manager to implement the Energy and Climate Resiliency Policy.

Sonoma Water

sonomawater.org

Sonoma County Water Agency (Sonoma Water)
Energy and Climate Resiliency Policy

Sonoma Water has a special interest in energy and climate resiliency matters, arising from a unique set of circumstances:

Sonoma Water relies on a healthy environment to perform its core functions. The climate in which Sonoma Water operates is characterized by dynamic conditions that lead to floods, droughts, and wildfires. These events have grown more extreme under climate change, challenging Sonoma Water's core functions of water supply, wastewater services, and flood management. Sonoma Water has embraced a proactive response to secure our core functions through creative and cost-effective solutions. These actions build our resiliency to climate change and help to protect the public's health and safety for generations to come.

Sonoma Water is a large energy consumer. Sonoma Water is among the region's largest users of electricity. The pumping and distribution of potable water to more than 600,000 Sonoma and Marin County residents requires significant electrical power, as do water treatment processes related to Sonoma Water's wastewater facilities.

Sonoma Water is also an electricity producer. Sonoma Water's enabling statute includes the production of electrical power. Sonoma Water owns hydroelectric and solar facilities which support Sonoma Water's core functions with renewable, carbon-free electricity.

Sonoma Water is a leader in climate mitigation. Sonoma Water is a leader in developing and procuring power from projects and programs that minimize the emissions of greenhouse gases (GHG). Sonoma Water has explored alternative renewable power sources and deployed cost-effective energy-conserving measures such as load shifting, plug-in hybrid vehicles, and LED lighting.

Sonoma Water is a leader in climate science and adaptation planning. Sonoma Water's 2021 Climate Adaptation Plan sets forth a vision for securing climate resiliency across Sonoma Water's core functions. Sonoma Water is a regional and national leader in supporting advances in climate science and adaptation planning, partnering with premier research agencies to characterize and prepare for regional climate threats. Sonoma Water also works closely with local, regional, national, and international entities to advance collaborative climate solutions for broad and lasting impact.

Sonoma Water recognizes that climate resilient communities are the result of equitable practices and processes. Climate change disproportionately impacts low-income and communities of color globally and within Sonoma Water's service area. Sonoma Water is committed to collaborating with low-income and communities of color to develop infrastructure planning processes that result in better outcomes for all members of our community.

Sonoma Water must further reduce GHG emissions and embrace climate adaptation strategies. Given these circumstances, Sonoma Water must continue to develop and procure renewable energy sources while simultaneously pursuing climate adaptation strategies in collaboration with our partners. Taken together, Sonoma Water's energy and climate goals will improve the resilience of Sonoma Water's infrastructure and operations under climate change.

Renewable Energy Development and Greenhouse Gas Emission Mitigation

While Sonoma Water will always be a major consumer of energy due to its operational demands, Sonoma Water is committed to developing and procuring power sources that serve its customers while protecting the environment. It is Sonoma Water's policy to meet this commitment through:

Carbon Free Water - Recognizing the threat to economic security and public safety posed by fossil fuel combustion, Sonoma Water will continue to pursue a net carbon neutral energy supply for all operations. Sonoma Water will pursue this goal through the following actions:

> **Develop and Procure Renewable Energy Sources** - Sonoma Water will continue to develop and procure cost-effective projects that reduce the carbon intensity of its power supply or sequester carbon. Projects could include solar, wind, wave, biomass utilization, geothermal, hydroelectric, anaerobic digestion, or gasification energy systems.

> **Water Use Efficiency** - Decreased water demand decreases overall power consumption. Sonoma Water will continue to promote cost-effective water use efficiency measures.
>
> **System Energy Efficiency** - Energy efficiency measures reduce ratepayers' costs and decrease overall power consumption. Sonoma Water will continue to implement cost-effective energy conservation measures wherever possible.

Continue to Invest in Climate Science and Innovation

Climate science and the associated risks to human society comprise a complex and evolving field of scientific inquiry. Sonoma Water will continue to invest in partnerships with leading research entities to advance understanding of climate science and related impacts to the provision of Sonoma Water's core services. Considered in tandem with community consultation and indices of social vulnerability, these insights will provide the basis for Sonoma Water's operational and planning decisions. Further, Sonoma Water will strategically seek opportunities to utilize new technologies and tools to advance innovative projects and programs that could potentially benefit the resiliency of its assets and operations.

Develop and Implement Climate Resiliency Strategies

Recognizing the threat of climate change to the provision of Sonoma Water's core functions, Sonoma Water is committed to pursuing a proactive, science-based, and equitable climate resiliency program. Sonoma Water will meet this commitment by implementing its:

Climate Adaptation Plan - To ensure a comprehensive review of climate hazards and potential solutions, Sonoma Water produced a Climate Adaptation Plan to guide its resiliency investments. The Plan:

> (1) Reviews climate-driven vulnerabilities to Sonoma Water's core functions;
>
> (2) Identifies projects and management actions to mitigate Sonoma Water's vulnerabilities while incorporating community priorities;
>
> (3) Emphasizes continued collaboration and investments in climate science to support science-based decision making; and
>
> (4) Introduces a vision for continued updates as new information becomes available.

Sonoma Water will continue to generate and pursue climate resiliency strategies through ongoing research, partnerships, and evaluation of climate-driven hazards with a particular focus on designing solutions with community members facing the greatest climate burdens. The Climate Adaptation Plan will be updated every 5-10 years, as needed.

Pursue Energy and Climate Resiliency Projects of Regional Benefit

Sonoma Water recognizes that our resiliency is interconnected with the resiliency of our regional community. As such, Sonoma Water will continue to develop reliable sources of electricity for the region, including decentralized projects that reduce dependency on outside energy sources and buffer the effects of market fluctuations, natural disasters, and transmission system failures. In addition, Sonoma Water will continue to advance innovative climate adaptation strategies to promote healthy watersheds and build the resilience of our water supply, flood control, and wastewater functions efficiently and cost effectively. To accomplish these goals, Sonoma Water will continue to partner with the County of Sonoma and other local, regional, state, federal, and international jurisdictions as well as non-governmental organizations, Tribes, industry, and community-based organizations. Sonoma Water is particularly committed to partnering with organizations that can help Sonoma Water better understand and ultimately meet the needs of vulnerable communities in our service area.

Building resilience to climate change requires bold action and creative thinking to swiftly reduce fossil fuel reliance and prepare for the impacts of extreme weather.