



Moving to Action

from the “Planning for Change” Summit and Workshop

September 2020

California is fortunate to be the subject of extensive and ongoing inquiries of the impacts of a changing climate on its people and resources. As climate science continues to advance, we must better connect that body of knowledge to water management decision-making. This essential endeavor is exacerbated by the decline in the quality and quantity of natural resources, aging and failing infrastructure, and the numerous institutional actors. Nonetheless, these challenges present significant opportunities for changing the future of California water management, in terms of both approach and scale.

As part of the development of the Governor’s Water Resilience Portfolio, the California Department of Water Resources (DWR) hosted “Planning for Change” in September 2019, a summit and workshop focused on the state of actionable climate science and its use across government, academia, and industry. From the robust panels, presentations, and conversations during these two events, DWR received many recommendations to better use climate change information in water management decision-making. These recommendations have informed the Water Resilience Portfolio, and can accelerate the implementation of adaptation strategies that will make California’s water systems more resilient.

As a next step, DWR is ready to lead, in partnership with others, the following attainable actions in support of the Water Resilience Portfolio:

1. Develop data, tools, and guidance for watershed-based climate vulnerability and adaptation analyses.
2. Explore the formation of a California-based network of climate scientists and water management practitioners.

These two initiatives, further described below, will help develop, share, and support innovative, watershed-scale approaches for evaluating climate vulnerability, and the implementation of adaptation strategies for California’s water systems.

Action 1: Develop data, tools, and guidance for watershed-based climate vulnerability and adaptation analyses

While a regionalized approach is needed to build water resilience, it cannot be fragmented. Rather, our actions must be coordinated and integrated. Local actions must be coordinated with neighboring entities that share common water resources - often in the same watershed. Our actions moving forward must also be integrated to capture multiple benefits and improve outcomes.

To accelerate coordination and integration at the watershed level, people need to work from a common technical foundation. It is important to invest in watershed-based science to understand climate change impacts on snowpack, surface water and groundwater storage, water supply, flood, and ecosystem processes, to better establish and encourage watershed-based solutions.

To adapt to changing conditions, local and regional water and natural resources managers can benefit from a range of scientific information and data, often most efficiently collected and provided by State government. The State can also support watershed-based water management models that bring together various agencies and stakeholders to meet environmental needs, improve the reliability of water supplies, and protect communities. Perhaps most importantly, the State has a role in building capacity among local water managers to enhance coordination from headwaters to groundwater.

For example, the “decision-scaling” framework can facilitate collaborative planning and promote watershed-based decision-making that brings together various agencies and stakeholders to achieve multiple benefits. Such benefits include water supply (surface and groundwater), water quality, flood management, and environmental protection and restoration. Analyses can be completed and reported at the watershed scale, enabling results to be compiled and presented at larger regional and statewide scales.

Under this action, DWR would perform the following activities to support watershed-based climate vulnerability and adaptation analyses:

- Collaborate to develop a roadmap and guidance for tiered levels of analysis, from screening to more detailed, as appropriate.
- Develop a standardized approach to evaluate climate vulnerability and risk, and to track progress towards climate change adaptation and resilience.
- Perform watershed-based technical evaluations in major river basins, to generate actionable climate data and forecast changes in water availability, demand and quality.

- Provide climate change services and information to improve awareness, dialogue, and understanding of watershed challenges, and to daylight opportunities for the implementation of more resilient projects.

Action 2: Explore the formation of a California-based climate change network of climate scientists and water management practitioners

Stakeholders who participated in the “Planning for Change” Summit and Workshop commented that they were pleased with these two events and desired ongoing involvement. In particular, participants requested more engagement in coordinating and communicating about climate change information between decision-makers and researchers. This endeavor could take numerous forms, including informal information sharing, a formal climate change network, or other collaborative platforms and/or venues in which people can meet, share, and learn from one another.

For instance, a climate change network could function as a collaborative that facilitates dialogue to inform and support the integration of climate research science into water resources project planning, design, and operation. Such a network could act as a resource hub for interested parties seeking information and support for developing research and projects.

In this regard, the network would complement Action 1 above by providing direction on the best scientific and engineering product(s) available for watershed-based climate vulnerability and adaptation analyses. Network membership would be inclusive of Tribes, regional water management groups, groundwater sustainability agencies, land, water and flood managers, non-profit organizations, academics and other actors across boundaries, to ensure their needs and priorities are included. This effort will leverage existing venues where scientists and decision-makers already interact.

Potential activities of this network could include:

- Compile a list of early actions that can accelerate the inclusion of climate change analysis in decision-making.
- Collaborate on pilot projects to inform and refine methods to incorporate climate change in decision-making.
- Seek funding and other resources for studies to generate better climate change information for decision-making.
- Partner with DWR to organize a workshop every two years, similar to the format of the “Planning for Change” event.

Nexus to the Water Resilience Portfolio (Executive Order N-10-19)

Executive Order N-10-19 calls for a “Water Resilience Portfolio,” a set of actions that would together meet the water-related needs of California’s communities, economy, and the environment in the next three-five years. The two actions highlighted in this “Moving to Action” proposal meet several Portfolio principles:

- Embrace innovation and new technologies;
- Encourage regional approaches among water users sharing watersheds;
- Incorporate successful approaches from other parts of the world;
- Integrate investments, policies, and programs across State government; and
- Strengthen partnerships with local, federal and tribal governments, water agencies and irrigation districts, and other stakeholders.

Please join DWR in this endeavor!

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