

Climate Change Adaptation

Santa Clara Valley Water District's response to the potential effects of climate change



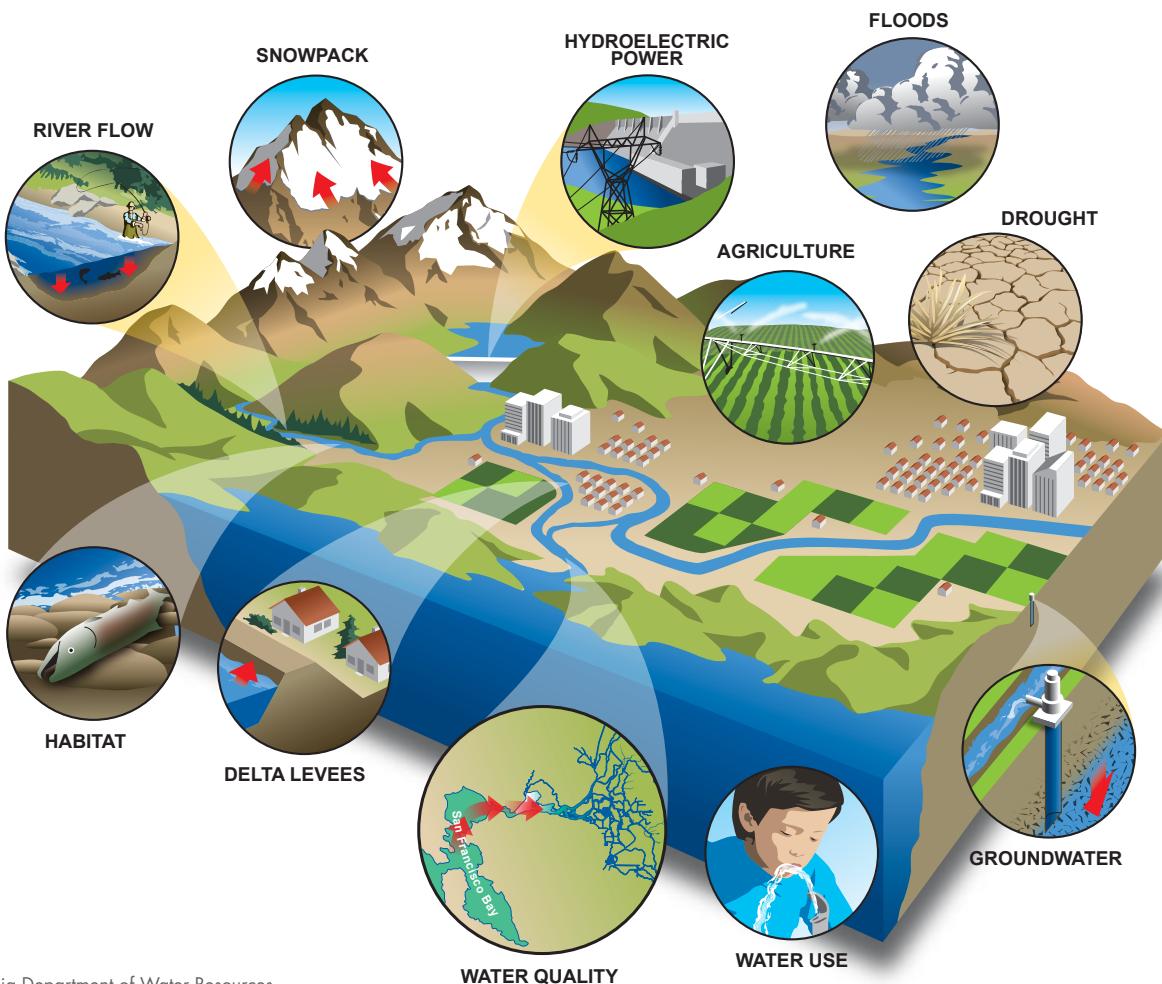
Why the water district is concerned

The Santa Clara Valley Water District's ability to provide clean, reliable water supply, natural flood protection, and water resources stewardship may be challenged in the future by the potential of warmer temperatures, changing precipitation and runoff patterns, reduced snow pack and rising sea levels. Managing climate change related uncertainties, vulnerabilities, or risks to local water resource management, is critical to fulfill the district's mission.

Evidence of climate change is already being observed in California. In the last century, the California coast has seen a sea level rise of almost

8 inches; the average April 1 snow-pack in the Sierra Nevada region has decreased in the last half century, and wildfires are occurring more frequently, burn longer, and are more widespread.

Future projections for the Southwestern U.S. and California generally indicate increasing temperatures, increasing drying tendency, increasing storm severity, and a shift in the seasonal and annual precipitation patterns. Annual average precipitation may increase, possibly as result of increased extreme storms; however, increased drought severity is also likely. Likelihood of reduced Sierra Nevada snow pack also increases drought risk to the district.



What the water district is doing

The district has a wide array of strategies to adapt to climate change and to reduce our impact through greenhouse gas reduction efforts. To ensure effective and coordinated management of these strategies, the water district is preparing a climate change action plan (2019) and has dedicated resources to monitor the state of the science and evolving regulations, and to ensure they are considered in project and program planning across the district. Specific adaptation strategies are intended to:

- Manage water use demands and provide drought-proof supplies, such as more non-potable recycled water and water conservation, including setting the stage for developing potable water reuse in the future.
- Increase system flexibility and optimize the use of existing supplies and infrastructure, which leverages the investments the district has already made in water supply reliability.
- Consider sea level rise and tidal influence in the district's flood protection projects, consistent with Army Corps of Engineers standards, and incorporate understanding of new hydrology and sea level rise into project management and planning.
- Create environments that enhance and benefit streams and tidal settings, such as additional riparian planting and preservation of open space. Maintain or enhance ecosystem function in the face of climate change where appropriate and feasible.
- Conduct riparian and tidal restoration or enhancements that provide benefits to wetlands, habitat, and species. Conduct activities to address invasive species issues, such as removing invasive plants to allow native plants to survive, and maintaining freshwater and tidal wetlands and riparian habitat.



Reverse osmosis vessels at Silicon Valley Advanced Water Purification Center

Conclusion

The district's ability to provide clean, reliable water supply, natural flood protection, and water resources stewardship may be challenged in the future by the potential of warmer temperatures, changing precipitation and runoff patterns, reduced snow pack, and rising sea levels. Therefore, managing climate change-related uncertainties, vulnerabilities, or risks to local water resource management, is critical to fulfill the district's mission.



South Bay Salt Pond Restoration Project

For more information on the water district's climate change activities, please go to
www.valleywater.org/Services/climatechange.aspx