



## Outreach to California Water Providers Southern Sierra Critical Zone Observatory

**What we are doing.** At the Southern Sierra Critical Zone Observatory (SSCZO), we engage with resource managers and policymakers to inform water policy and debate in the state. We focus on the need for better information to support water-resources decision making. By developing new knowledge and technology to address critical societal needs, the SSCZO provides flexible tools for regional water management.

**Why focus on water resources.** Water security in semi-arid regions is founded on adequate water storage. In California, as in many regions, that storage is provided by dams, in the mountain snowpack, in soil/regolith, and in groundwater. The debate around water security in California involves advocates for both “hard” (e.g. new storage and conveyance infrastructure) and “soft” (e.g. institutional arrangements, water conservation) solutions to water-supply challenges. These hard and soft options have a common need for a deeper knowledge base, and for better information to support decision making.

### How the SSCZO is a platform for outreach.

Scientific knowledge from the SSCZO has generated interest from stakeholders and resource managers across the state. Our sharing of scientific products with stakeholders includes frequent talks around the state, hosting of visits to our laboratories and the SSCZO site, briefings with water managers and policymakers, newspaper articles, op-ed pieces, radio interviews, television reports and web publications. A major focus has been on working with water leaders to define and develop a new water-information system for California that builds on advances in wireless-sensor networks developed at the SSCZO, plus parallel advances in cyberinfrastructure and in measurements by satellite and aircraft. A second area has been to bring climate-change research into the policy debate, which in recent years has been focused on infrastructure investments and water rights.

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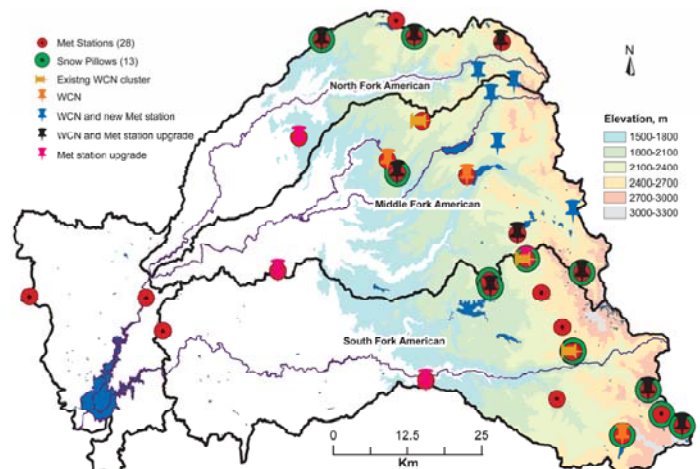


Wireless sensor node developed by the SSCZO



Stakeholder visit and briefing at the SSCZO

**Impacts.** Our research addresses fundamental knowledge gaps around management of water supplies, forests, hydropower and integrated ecosystem services. The state's water providers, forest managers and hydropower generators are planning water-information systems that build on advances at the SSCZO. Knowledge from the SSCZO is helping public agencies plan major investments in headwater-protection research and management programs. Our team has frequent dialog with resource managers, elected officials and the public on climate preparedness. Having the integrated research and multi-disciplinary team of a CZO to inform climate adaptation around water in California, over a long enough period to make an impact, is very timely, given the state's global leadership role in implementing climate solutions.



The SSCZO instrument-cluster design is being scaled up to the American River basin

**More information:** <http://criticalzone.org/sierra/>