

## **MAJOR CONCLUSIONS and ACTION ITEMS**

Developed as a result of the Sierra Nevada – Southern Cascades Contaminants Workshop:  
April 8-9, 2009 at Sequoia and Kings Canyon National Parks

- 1. WACAP and other EPA, USGS, and State of California air contaminants research and monitoring projects have documented the presence and effects of airborne contaminants to ecosystems in the Sierra Nevada – Southern Cascades (SNSC) region.**
  - Results suggest that high elevation ecosystems in this region may have high contaminant (e.g., historic and current-use pesticides, PCBs, PBDEs, mercury) levels in fish, sediments and/or conifer needles.
  - In the two lakes studied intensively in SEKI, there were high levels of dieldrin and PCBs in sediments (particularly at Pear Lake) as compared to other high elevation ecosystems. Concentrations of mercury, dieldrin and DDT in some fish (brook trout) exceeded EPA's consumption thresholds.
  - Some amphibian population declines both in the Sierra Nevada and Southern Cascades may be linked to contaminant exposures.
  - Multiple lines of evidence link the majority of pesticides found in high elevation SNSC areas to agricultural lands of the nearby San Joaquin and Sacramento Valleys.
  
- 2. Collaboration and partnership on contaminants issues between representatives from federal, state, and local agencies and Tribes in the SNSC must continue.**
  - Coordinating and enhancing efforts will enable us to leverage resources, share information and better understand the impacts of contaminants. Developing effective actions to reduce emissions, deposition, ecological impacts, and potential human and wildlife health effects will also be furthered by collaboration.
  - **Action Item:** An interagency SNSC contaminants coordination group—with the proposed name SiNSCaT (Sierra Nevada Southern Cascades Toxics) Group—is currently forming to coordinate and facilitate science, education, outreach, and multiagency contributions related to SNSC contaminants work.
  
- 3. More research and monitoring is needed to determine which contaminants in which geographic areas pose the greatest risk to SNSC ecosystems (e.g., historic-use pesticides in fish, current-use pesticides in biota such as amphibians).**
  - While exposure of natural resources in the SNSC to contaminants has been documented, little is known about the spatial extent of risk and overall ecosystem exposure in the region.
  - **Action Item:** NPS will help fund the development of a monitoring plan to assess the extent of contaminant exposure and impact in the SNSC region. The SiNSCaT Group can use the plan to solicit funding from a variety of partners for implementation of the inventory and monitoring recommendations.
  
- 4. We need a public outreach and education plan for the current science of contaminant exposure and effects to wildlife, human health, and ecosystem processes in SNSC protected areas.**
  - A communication strategy regarding contaminants exposure and effects, and associated public outreach efforts, would foster contaminants awareness, action and well-informed policy decisions by agencies in the SNSC region.
  - **Action Item:** Organized efforts by the SiNSCaT Group will integrate contaminants awareness into fact sheets, brochures, lesson plans, and possibly podcasts. These products will raise public awareness of contaminants issues and assist in the development of personal responsibility. SiNSCaT will engage regulatory and agricultural agencies in the State of California, along with other land and resource managers, to promote information sharing and advancements in the science of contaminant exposure and effects.