



## Climate Change and the Grand Canyon Ecoregion

Scientists say the Western U.S. will experience the effects of climate change sooner and more intensely than most other regions of the country. The region's national parks are among the places where the changes in the natural environment will be most evident. As a result, climate change is the single greatest threat to face western national parks, including the Grand Canyon.

### **Some impacts we are likely to see in the Grand Canyon region:**

- There is likely to be a significant loss of plant and animal species. Desert bighorn sheep are just one of many species in the region at risk of extinction due to hotter temperatures and less precipitation resulting in reduced available forage.
- The southwest is likely to become even drier over the coming years and that means less river runoff and water availability. This is on top of a Colorado River that is already seriously overallocated. Not only will the river ecosystem be impacted, but the fragile seeps and springs are also risk.
- There are a additional ecological implications to these drier conditions including ecosystem modification, declining riparian areas, possible extinction of endemic fish species and increased dispersal of exotic plant species.
- There will be increases in wildfires due to the hotter drier climate. We see that occurring already. A recent study found that, since 1987, higher spring and summer temperatures and earlier snowmelt have already contributed to a four-fold increase in western wildfires.
- Native American communities are likely to feel the effects of climate change sooner and more severely than others as springs dry up and marginal farmland becomes even drier.

### **What can be done?**

Climate change gives us new reasons to protect wild places. Conservation biologists have told us for decades that we need to preserve large wild core areas and link them together to protect wildlife from the impacts of human development.

- To survive global warming, wildlife and native plants need resilient habitats. We must help them adapt by protecting critical habitat and creating corridors that will allow for migration as temperatures rise.
- At a time when people are imposing ever greater demands on the Colorado River watershed, it is our goal to ensure that there is sufficient water to maintain healthy ecosystems.
- Everyone can help! Reduce your carbon emissions, conserve water, help to protect and restore remaining big spaces and wildlife corridors, support renewable energy and oppose new coal power plants, engage in new partnerships with communities and sectors of society not yet engaged in these issues.



The Sierra Club's Grand Canyon Chapter is working with the Center for Biological Diversity, the Grand Canyon Trust as well as local, state and federal policy makers and tribal governments to ensure that the Grand Canyon, its watershed, and the health of area residents is protected from the harmful impacts of uranium mining.

## Background

- Spikes in the price of uranium have caused thousands new uranium claims, dozens of exploratory drilling projects, and movement to open several uranium mines on public lands immediately north and south of Grand Canyon.
- In October 2008, the Forest Service initiated an Environmental Impact Statement (EIS) for a Vane Minerals / Uranium One proposal to explore for uranium on up to twenty-five sites on the Tusayan Ranger District. The Draft EIS for the VANE Minerals Uranium Exploratory Drilling Project is expected to be available for public review in March 2009.
- The Canyon Mine's Environmental Impact Statement (EIS) was developed back in the 1980s during the last uranium rush. Its owners are now proposing to reopen the mine as a full mining operation – without doing a new EIS. The Canyon Mine is located close to Red Butte, a site sacred to the Havasupai tribe and only 13 miles south of Grand Canyon. Conservationists and the Havasupai tribe have previously objected to this mine.
- The cumulative impacts of numerous exploration proposals and mining activities can result in significant negative impacts to environmental and cultural resources.
- Concerns about surface- and ground-water contamination of Grand Canyon National Park and the Colorado River have been expressed by former Arizona Gov. Janet Napolitano; the Los Angeles Water District; the Southern Nevada Water Authority; the Arizona Game and Fish Department; the Navajo, Hopi, Havasupai, Hualapai and Kaibab Paiute nations; and Coconino County.
- The negative impacts of large scale mining development, with the attendant noise pollution, air pollution, and traffic generated by mining activities, could seriously degrade the visitor experiences at Grand Canyon National Park.
- In January 2009, Representative Raúl Grijalva (D-AZ) re-introduced **H.R.644 Grand Canyon Watersheds Protection Act of 2009**, legislation that bans the establishment of new mining claims on approximately one million acres of public lands (national forests and Bureau of Land Management Lands) bordering Grand Canyon National Park.
- Previously established, or “proven” claims, will still be allowed to operate under the 1872 Mining Law. Therefore, it is critical that this legislative withdrawal also act as a big step towards much needed reform of this arcane law.
- Due to the need for immediate action to protect the Grand Canyon from uranium mining, in June 2008 the U.S. House Natural Resources Committee issued an **emergency resolution** to block uranium mining on one million acres of public land near the Grand Canyon. Previous Secretary of Interior Dirk Kempthorne never signed this resolution even. We are still waiting to hear from the new Interior Secretary.

To learn more about these issues please contact [Stacey.Hamburg@Sierraclub.org](mailto:Stacey.Hamburg@Sierraclub.org) or 928-774-6514.