



August 2011

## Rehabilitation of Ash Mountain Headquarters and Warehouse Heating, Ventilation, and Air-Conditioning System and Building Upgrades

### Proposed Project:

- Replace existing HVAC system with a decentralized heating and cooling system that separates the systems in the Warehouse building from the Administrative building.
- Replace the building envelope, including the walls, windows, and doors, without changing the overall appearance of the building.
- Remove hazardous materials and replace the insulation in the Foothills Visitor Center and Administrative building.

### What is an R-Value?

An R-value indicates an insulation's resistance to heat flow. The higher the R-value, the greater the insulating effectiveness.

*This project would significantly improve park operational efficiency and sustainability, by providing improved climate control and reducing excessive fuel consumption.*

*In conjunction with HVAC upgrades, replacement of the exterior envelope further improves park operations by maintaining and improving both the condition of the resource and employee health, safety and welfare.*

### Purpose and Need

The National Park Service (NPS) is proposing to replace the aging heating, ventilation, and air-conditioning (HVAC) system for the Ash Mountain Headquarters Complex, including the Administration, Visitor Center, and Supply Center / Warehouse buildings to optimize system efficiencies and allow for zone temperature control. The HVAC system for these buildings is inefficient and was designed using outdated technology. Throughout these buildings there are intolerable hot and cold spots and “dead zones” with stagnant air. The poor air distribution from the current HVAC system leads to employees opening windows and doors, which increases the system inefficiencies. A new modern high efficiency HVAC system is needed to meet current and future occupancy uses of the facilities.

The second component of this project is to upgrade the Administrative building envelope with a new exterior wall with aluminum composite paneling, new insulation, new double-glazed windows, and insulated doors. This would change the “R-value” of the building from its current rating of 1.486 to 16.32, which amounts to a savings of 8,800 kilowatt hours of electricity annually and a fuel savings of 6,850 gallons of propane per year.



Headquarters Building at Ash Mountain

## Preferred Alternative: The Building Envelope

The Administrative building and the Foothills Visitor Center at Ash Mountain would continue to look very much the same as it does now. Our goal is to maintain the historic character of the building. Proposed actions would include a number of changes that would serve to improve the energy efficiency of the building, but would include the removal of components of the historic fabric of the structure.

The existing aluminum curtain walls would be replaced with a new exterior wall made of modern construction materials. The existing aluminum curtain wall with cement asbestos infill panels would be removed and replaced with a new exterior wall with aluminum composite panel cladding. In order to preserve some of the original curtain wall system, small areas, in the public view, would be retained.

A new interior metal-stud framed wall with insulation, gypsum board, and vapor barrier would be installed. Existing windows would be replaced by new aluminum horizontal sliding windows with low-E double glazing. New larger insulated doors would replace existing doors.

This alternative would result in improved air and vapor barriers, and increase the R-value of the facility from 1.5 to 16.3.



### ENERGY REDUCTION FROM THE PREFERRED ALTERNATIVE:

- **ELECTRICAL SAVINGS -  
8,800 KILOWATT HRS**
- **FUEL SAVINGS - 6,850  
GALLONS OF PROPANE**

## Preferred Alternative: Replace Existing HVAC System with Decentralized System

The Ash Mountain centralized HVAC system, currently located in the Warehouse building mechanical room, would be demolished and replaced with a decentralized HVAC system. Subsequently, the Administration / Visitor Center and the Warehouse / Supply Center would each have a stand-alone HVAC system. The buildings contain many thermal zones with diverse conditioning requirements. In order to provide appropriate comfort for the occupants and use, zone control would be established and allow for heating and/or cooling adjustments. Replacing the HVAC system would provide a high performing, energy efficient system to better regulate the heating and cooling needs of each center.

At the Administration building / Visitor Center, a new HVAC system would be ground-mounted and located at the southwestern corner of the building adjacent to the stairwell. At the Warehouse building, the current diesel boiler would be replaced with a split unit heat pump system and ground-mounted and located to the rear (west) of the facility in the dry storage yard.

## The Mission 66 Story

"Mission 66" was a NPS modernization and expansion program intended to revitalize the national park system through a ten-year program of capital investment and land acquisition. This billion-dollar program was aimed at improving park facilities, increasing staffing, and planning the future expansion of the national park system. Conceived by Director Conrad L. Wirth in 1956, the program was intended to be complete by 1966 in time for the fiftieth anniversary of the NPS.

The built legacy of the Mission 66 program includes over one hundred visitor centers, administrative offices, hundreds of employee residences, comfort stations, campground improvements, maintenance facilities, roads, bridges, and entrance stations.

In recent years, buildings and structures of the Mission 66 period have increasingly required repair, rehabilitation, reconstruction, and even demolition and replacement. At the same time, the significance of this period in American national park history has also begun to be recognized; in particular historians have begun to consider the potential significance of some of the buildings and other structures of the Mission 66 era.

Because the visitor center and administrative offices at Ash Mountain are Mission 66 structures that have been determined eligible for listing on the National Register of Historic Places, a determination of effect was necessary for the proposed improvements. Through consultations with NPS architectural historians and the State Historic Preservation Officer (SHPO), the NPS has determined that the project would result in an adverse effect to this historic resource due primarily to the amount of materials that would be removed and replaced in the preferred alternative.

The NPS is currently working with the SHPO to mitigate these adverse effects.

## To Comment on this Project:

Write or Fax:

Superintendent

Attn: Ash Mountain HQ Rehab Project  
47050 Generals Highway  
Three Rivers, CA 93271

Phone: 559-565-3101

Fax: 559-565-4202

**National Park Service**  
**Sequoia and Kings**  
**Canyon National Parks**



*Write, fax, or hand deliver your comments to the address provided, or use our website listed below to provide comments.*

*Please provide comments by September 1, 2011.*

*Before including your address, phone number, e-mail address, or other personal identifying information in your comment, you should be aware that your entire comment - including your personal identifying information - may be made publicly available at any time.*

*While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.*

## How to Stay Involved

- Visit the park's website regularly at [www.nps.gov/seki](http://www.nps.gov/seki)
- Learn about projects and submit comments through the NPS [Planning, Environment, and Public Comment](#) website
- Get on the parks' mailing list by writing:

Superintendent  
Attn: Project Mailing List  
Sequoia and Kings Canyon National Parks  
47050 Generals Highway  
Three Rivers, CA 93271

or by emailing [seki\\_planning@nps.gov](mailto:seki_planning@nps.gov)

To learn more about this and other projects, and to comment on park projects, visit the National Park Service Planning, Environment, and Public Comment (PEPC) website at: <http://parkplanning.nps.gov/seki>