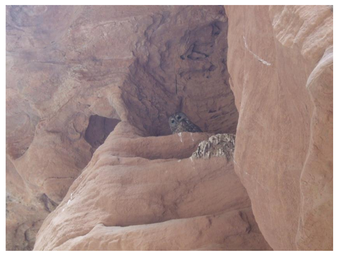
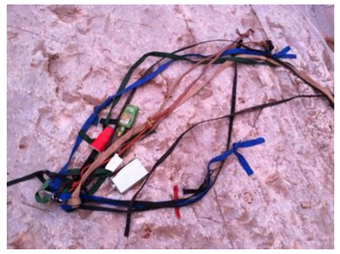
# Canyoneering Management

## Step 1: Assess Problem

Canyoneering is one of several emerging recreational uses at Grand Canyon with the potential for impacts on areas with little previous visitation. Specific areas of concern include disturbance and displacement of wildlife, damage and mortality to vegetation, and impacts on water quality and caves.



Mexican spotted owls nest and roost near canyoneering routes



Gear left in Garden Creek Route

Using plants as anchors can damage or kill trees and shrubs

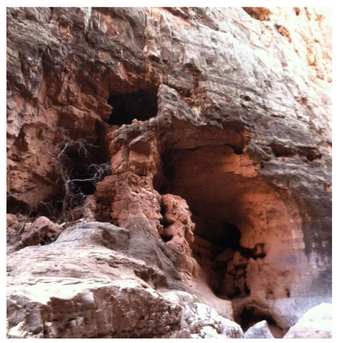
## Step 2: Design

Adaptive management requires that use levels and locations are known and that resource impacts are measured. Data collection includes permit information and resource monitoring in areas with high or increasing use.

## Step 3: Implement

Collecting location information about canyoneering activity on overnight permits would inform management. Information on best practices to reduce resource impacts and proper disposal of human waste would be distributed with permits.

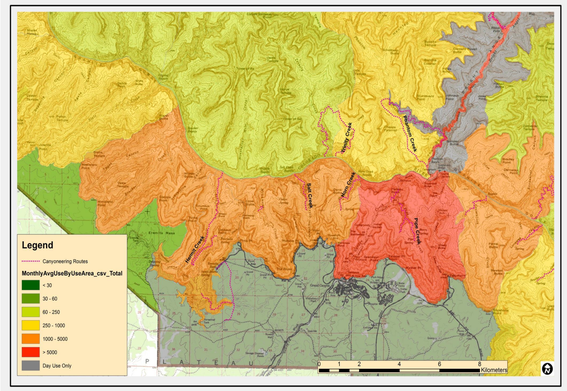
California condors nest in steep cliffs near some routes



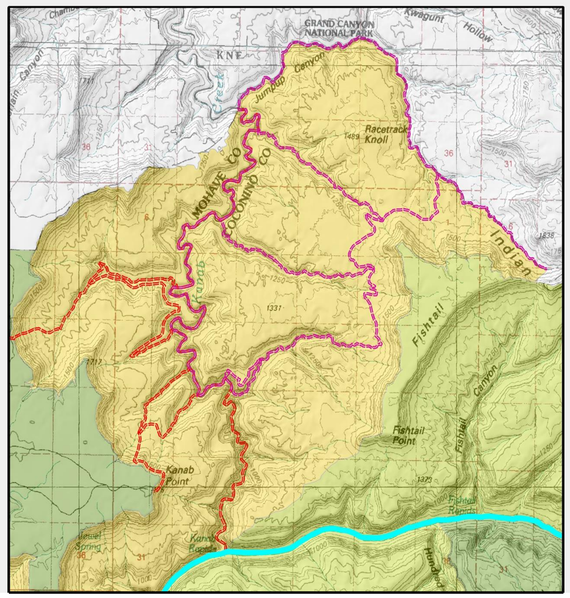
Cave resources are exposed in narrow canyons, and can be accessed using the same equipment as canyoneering

## Step 4: Monitor

Monitoring would include: 1) use levels as measured by the number of permits issued; 2) information on litter, vegetation damage, and other impacts, and 3) data from annual surveys of spotted owls and condors and other natural resources.




Canyoneering routes in backcountry areas with high levels of use (above) will be monitored more frequently than low use routes in more remote areas (below)




## Step 5: Evaluate

Use level data and information on trends in the condition of natural resources will help park managers determine if issues have been addressed.

## Step 6: Adjust

Additional adjustments if needed include limits to numbers and sizes of groups, seasonal closures during breeding and rearing seasons, and longer-term closures where greater impacts are anticipated. As adjustments are made, this process would begin again.