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# Scenario 1

## Brief

In this scenario you are the park manager for Rocky Mountain National Park (ROMO). You know that most of the cultural resources in your unit are made of wood. However, you are really concerned with systems that have the following characteristics:

* **Predominant System Material: Wood**
* Structure Type = Frame
* Construction Complexity = Complex
* Weatherability = Poor
* Preservation Treatments = Not Present
* Protective Systems = Not Present

## Objectives

You would like to accomplish the following:

* What is the relative vulnerability of these cultural resource systems within ROMO?
* Which environmental exposure is the major contributor to the vulnerability of these cultural resource systems in ROMO ?
* How does the vulnerability of these cultural resource systems in ROMO compare to the same type of systems in nearby units?
* How does the vulnerability of these cultural resource systems in ROMO compare to the same type of systems throughout the entire Intermountain Region?

## Steps and Answers

1. **Access the “Select a System Tool” from the main page of the CREVAT website.**
2. **Check the following boxes from top to bottom starting on the left: “Wood”, “Frame”, “Complex”, “Poor”, “Not Present” and “Not Present”. This will indicate that you want to look at the Wood14 system.**
3. **Access the “Vulnerability of Park Units Tool” from the main page of the CREVAT website.**
4. **In the Choose a Unit Dropdown select “Rocky Mountain National Park”.**
5. **In the Choose a System Dropdown select the “Wood 14” system.**
6. What is the vulnerability of these cultural resource systems within Rocky Mountain National Park?
	1. **The vulnerability score of Wood 14 systems in Rocky Mountain National Park is 73.6. The minimum for Wood 14 systems is 41 and the maximum for Wood 14 systems is 115 in the mountain west. This information can be found in the top right chart.**
7. Which environmental exposure is the major contributor to the vulnerability of these cultural resource systems in Rocky Mountain National Park?
	1. **Change in Annual Maximum Temperature is playing the largest role with a score of 27. This can be found in the pie chart at the bottom of the screen.**
8. How does the vulnerability of these cultural resource systems in Rocky Mountain National Park compare to the same type of systems in nearby Units?
	1. **Click the Rocky Mountain National Park button on the left hand of the screen. This will zoom the map into Rocky Mountain National Park. Now click the zoom out button, bottom right side of the map, twice to see other parks near Rocky Mountain National Park. The chart in the bottom right will update to show the vulnerability scores for Wood 14 systems for all units visible on the map. Florissant Fossil Beds National Monument has the highest vulnerability score, 88.8, for Wood 14 systems near Rocky Mountain National Park.**
9. How does the vulnerability of these cultural resource systems in Rocky Mountain National Park compare to the same type of systems throughout the entire western United States?
	1. **This information comes from the middle chart on the right side of the screen. Rocky Mountain National Parks ranks 31 out of 88 units for vulnerability of Wood 14 systems in the western United States.**

# Scenario 2

## Brief

In this scenario you are concerned with one specific resource located at -109.913 Latitude, 37.475 Longitude. Let us call the resource the Big Coyote Den for the sake of the exercise. The Big Coyote Den has the following characteristics:

* **Predominant System Material: Stone**
* Structure Type = Masonry Bearing Wall
* Construction Complexity = Simple
* Weatherability = Good
* Preservation Treatments = Present
* Protective Systems = Not Present

## Objectives

You would like to know the following about the Big Coyote Den:

* What is the overall system vulnerability score?
* Which exposure plays the largest role in its overall vulnerability?
* What is the rating for the exposure that plays the largest role in the vulnerability?
* What percentage does “change in extreme precipitation events” contribute to its overall vulnerability? (Hint: Use the charting tool for the system of interest).

## Steps and Answers

1. **Access the “Select a System Tool” from the main page of the CREVAT website.**
2. **Check the following boxes from top to bottom starting on the left: “Stone”, “Masonry Bearing Wall”, “Simple”, “Good”, “Present” and “Not Present”. This will indicate that you want to look at the Stone1 system.**
3. **Access the “Vulnerability of Systems Tool” from the main page of the CREVAT website. Click OK on the splash page.**
4. **Navigate to the location of the Big Coyote Den by typing “-109.913,37.475” in the search bar at the top left of the tool.**
5. What is the overall system vulnerability score for the Big Coyote Den?
	1. **Click the Layers button, the one that looks like a folder with three holes in it, select the Vulnerability of Stone Systems option and then check the Vulnerability of Stone 1 Systems option. The layer will display on the map. Click just outside of the location of the Big Coyote Den on the map. A popup will display with the vulnerability scores associated with Stone 1 Systems. The Overall System Vulnerability Score of the Big Coyote Den is 43.**
6. Which exposure plays the largest role in the vulnerability of the Big Coyote Den?
	1. **This can also be determined from the popup. The answer is Soil Erosion with a score of 27.**
7. What is the exposure rating for the exposure that plays the largest role in the vulnerability of the Big Coyote Den?
	1. **Now that we know Soil Erosion plays the largest role, we can bring up the Soil Erosion layer. Turn off the Vulnerability of Stone 1 Systems by unchecking the layer. Click the Layers button, the one that looks like a folder with three holes in it, select the Exposure Variables – Scored Layers option and then check the Soil Erosion option. The layer will display on the map. Click just outside of the location of the Big Coyote Den on the map. A popup will display with the scores associated with Soil Erosion. The Exposure Rating is Moderate.**
8. What percentage does the change in extreme precipitation events play in the overall vulnerability of the Big Coyote Den? (Hint: Use the charting tool for the system of interest).
	1. **Click the button that looks like a grey rock. Select the Vulnerability of Stone 1 Systems option, check the Use spatial filter to limit features option, fill in the Only features intersecting a user-defined area bubble, select the point button (first button on the top left) and click on the map near the Big Coyote Den. Click Apply in the top right. Maximize the graph by clicking the magnifying glass with a plus sign inside it. Hover over the orange slice representing Extreme Precipitation. It accounts for 9.3% of the vulnerability.**