

**File Code:** 1950

**Date:** October 13, 2017

**Subject:** Snow Monitoring Site Repair and Maintenance

**To:** Kevin B. Elliott, Forest Supervisor

**From:** Eric G. La Price, Western Divide District Ranger 

The purpose of this project is to allow the US Army Corps of Engineers (USACE) to replace an existing snow monitoring site located in Wet Meadow within the Golden Trout Wilderness of the Sequoia National Forest.

This project is needed because the monitoring site provides critical data to USACE on snowpack and potential runoff that will affect their dams.

The site consists of several snow pillows and a tower mounted on a concrete pad. This site has been in operation since 1957.

The harsh winter of 2016-2017 knocked the tower over and damaged the concrete foundation. The foundation needs to be rebuilt and the tower needs to be replaced.

To replace the concrete pad, the existing pad will need to be removed and some additional excavation will occur. The amount of excavation will be negligible. Additionally, the snow pillows themselves have sunk into the meadow over the last 60 years and need to be raised.



Photograph 1: Broken tower in Wet Meadow.



Photograph 2: Sunken snow pillows in Wet Meadow.

I have decided to allow USACE to conduct the repairs to the concrete pad and to replace the tower as depicted in the attached drawing and explained below.

Repairs to the tower pad would consist of installing a 5x5x1' top cap to elevate the tower above ground surface to avoid contact with standing water. From ground surface down, the dimension would be 4x4x4' with two sets of rebar cages to ensure strength and stability. The new tower will be a Rohn 45, extending approximately 25 feet above the concrete pad to ensure equipment/sensors remain above the snow line.

This decision also approves periodic maintenance of the snow pillow themselves. Over several decades, the pillows either sink into the meadow or the meadow expands around the pillows. This in effect makes the pillows a catch basin for standing water and can lead to erroneous data.

Maintenance is necessary to keep the pillows above the meadow ground surface to eliminate pooling of water. The material that will be excavated to replace the concrete pad for the tower will be utilized to raise the pillows approximately 6-8".

I have determined this action is in compliance with land management plan direction and falls within a category of actions listed at 7 CFR 1b.3 (a)(3):

*Inventories, research activities, and studies, such as resource inventories and routine data collection when such actions are clearly limited in context and intensity.*

In my judgment, the activities necessary to repair the concrete pad, replace the tower and raise the snow pillows are clearly limited in context and intensity and will not contribute towards an extraordinary circumstance. No further studies or evaluations are needed.

This project may be implemented immediately.

