

# ***MAUNA KEA OBSERVATORIES SUPPORT SERVICES***

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## **MEMORANDUM**

**October 14, 2010**

To: MKSS Oversight Committee  
Mauna Kea Safety Officers

From: Stewart Hunter

Subject: Preparation for 2010-2011 Winter Weather

It is time to remind everyone of the hazards associated with winter weather and the logistics involved with the response to these conditions. The MKSS staff will do all they can to keep the roads open to the observatories and the public in a safe and orderly manner. But, observatory staff must cooperate in this effort.

Please distribute the attached Winter Logistics package to your staff and let them know that the winter weather must be taken seriously. Because recent winter weather has been relatively mild, I am concerned about observatory staff complacency. Observatory staff and observers are frequently on the summit during the critical evening hours when storm conditions usually reach their peak. Most observatory staff and observers have not experienced the severe snowstorms that were encountered on Mauna Kea from 1970 to 1990, and may not have the appropriate level of respect for the potential conditions. During this period, the road was often closed to the summit for periods of over a week.

For this reason, I need to emphasize the importance for staff to evacuate the summit when conditions begin to become hazardous. This is especially true in the evening when the pavement can quickly become icy, snowdrifts form in short order, and blowing snow creates zero visibility. Please make sure observatory staff evacuates the summit before these conditions make the descent dangerous. Remember, entrapment at the summit is life threatening, as some people may develop serious altitude illness before the roads can be cleared. It is imperative that the summit is evacuated before this happens.

Staff should be reminded that the road may be closed to the general public while open to observatory vehicles. There is significant public pressure for access when they see observatory vehicles allowed up the road. During public road closures, it's important that observatory vehicles have appropriate identification logos and all passengers are official observatory staff who will be performing critical activities at the facility. Family members or friends must not be transported and snow-play equipment must not be in vehicles. Once at the summit, observatory staff must not participate in snow-play activities until the road is open to the general public.

The road-conditions email is one of our important tools used to communicate the road conditions to observatory staff. This email is broadcast from an Institute for Astronomy server to one address at each observatory office. The observatory then distributes the message to their staff. You should review the distribution list for this email address with your network administrator and make sure new staff have been added.

CC: MKSS Staff  
OMKM Staff  
Rangers

## MAUNA KEA WINTER RECOMMENDATIONS

1. Evacuate the summit before road conditions become hazardous.
2. Chains and studded tires are very useful for driving on icy surfaces. Chains should be available for each summit vehicle and staff trained on installation.
3. Drivers experienced in driving on ice are preferred.
4. **If the Rangers, MKSS, or OMKM issues an absolute evacuation or road closed order, all facilities must comply.**
5. Make sure you communicate with the other observatories or your destination once you decide to evacuate. Try to provide a reasonable estimated arrival time, so that those waiting for you do not worry unnecessarily.
6. Some conditions might make staying in the facility overnight the most attractive alternative. However, it is very important to evacuate the facility before this happens, as it is always possible that the road will not be cleared for over a week - which can be life threatening because of long term exposure to altitude.
7. Post the enclosed flyer at your facility, and make sure your staff and visiting astronomers understand the hazards and rules.
8. Although the summit road will be closed to the public during snow clearing operations, official observatory vehicles will be allowed to drive up as soon as access is available to each facility. Only official observatory staff is allowed up at this time, and they **MUST NOT** participate in snow-play activities until after the general public is allowed to drive up the road. Skis, boards, and other snow-play equipment should not be in the vehicle.
9. Observatory vehicles should not drive up during road clearing operations until they are informed that it is O.K. by MKSS staff. Premature travel on the roads interferes with the snow removal activities and clogs the roadways.
10. When observatory vehicles are allowed up the road before the snow removal operations are complete, the drivers must make sure they stay well out of the way of the equipment. Blowing snow limits the visibility of the operators who are also concentrating on the pavement directly in front of them.
11. Observatory vehicles must also be careful where they park, as the snow crew needs to clear the path to the water inlets and clear the parking lots. After the main roads are cleared, staff should try to move the vehicles away from these locations.

## ROAD CLOSURE CRITERIA

- Ice or snow on the road: Close road.
- Winds exceeding 74 mph: Close road
- Road is impassable (Ranger cannot get to the summit): Close road and send additional road conditions email to observatories stating the road is impassable and closed to **ALL TRAFFIC**.

# WARNING !

## **WINTER ROAD CONDITIONS ARE HAZARDOUS**

ICY CONDITIONS CAN OCCUR QUICKLY  
AND WITHOUT WARNING

BE PREPARED TO MOUNT CHAINS ON YOUR VEHICLES

ANTICIPATE THE NEED FOR A QUICK EVACUATION

### **DO NOT BECOME STRANDED**

DRIVE VEHICLES IN THE LOWEST GEAR POSSIBLE  
TO MINIMIZE BRAKING PRESSURE

LOOK FOR ICE EVEN WHEN IT IS NOT EXPECTED

### **DRIVE SLOWLY AT ALL TIMES**