

SNOW AND AVALANCHE SAFETY



Here are the safety items that people need to be reminded of about snow and avalanche safety during the beginning of each winter at Kensington Gold Mine.

- **Avalanche Warning Signage and Forecasts**

- There are three avalanche signs on site, which indicate the avalanche danger; all three of them are located north of upper camp.
 - Avalanche Danger sign at Wolf Road.
 - Avalanche Danger sign at the fuel station by the Powerhouse.
 - Avalanche Danger sign at the entrance of Jualin, just across the road from the shop on the right.



- Where we post the forecast.
 - Forecasts are published and emailed when the avalanche hazard warrants an update.
 - In the KDR we are sometimes able to update the slideshow with the forecast.

- We also ask supervisors to post the most up to date avalanche forecast on each department's board and update the crew with anything notable, such as closures to specific work areas.
 - The definitions of each danger level are posted at the bottom of each forecast; that includes a description, the operational impact, and the avalanche mitigation action that we are going to take that day.
 - Here are the definitions as a reminder:

Avalanche mitigation hazard level descriptions and mitigation means briefly explained:



Hazard level:

- **Description:** Insufficient snow for avalanches to reach working areas.
- **Operational impact:** Normal operations.
- **Avalanche mitigation action:** None.
- No mitigation necessary.



Hazard level:

- **Description:** Mostly stable snow. Natural avalanches are unlikely to affect working areas.
Small triggered and natural avalanches are possible.
- **Operational impact:** Normal operations.
- **Avalanche mitigation action:** Volume reduction may be necessary. Snowpack monitoring.

This is referring to avalanche hazard at the mill bench, portal or any other working areas on site. Although avalanche hazard is often LOW here, we like to keep it at LOW, the hazard may be much higher on the ridge and mitigation is required during storms.



Hazard level:

- **Description:** Areas of unstable snow. Natural and triggered avalanches possible. A moderate amount of snow in working areas is possible.
- **Operational impact:** Normal operations, continue with caution.
- **Avalanche mitigation action:** Explosives mitigation may be necessary. Snowpack monitoring.



Mitigation will always be necessary in start zones with either hand charges or Avalauncher. Avalauncher can always be used at night or when a hand charge mission is not possible.

- Avalauncher is limited to a certain range and charges still need to be placed in upper start

zones to trigger avalanches from the top down. The Avalauncher can reduce volume in lower start zones and mid-track avalanche slopes.



Hazard level:

- **Description:** Mostly unstable snow. Natural and triggered avalanches in working areas are likely. A moderate to large amount of snow in working areas is possible. Buildings may be damaged; pedestrians could get buried.
- **Operational impact:** Closure and evacuation may be necessary. No foot traffic in exposed areas.

Avalanche mitigation action: Explosives mitigation will be required.

Explosives mitigation will be absolutely necessary. Possibly all means of mitigation including avalauncher mission before or after ridge routes are performed by placing 5lb hand charges in start zones by forecaster and partner on ridge. Also, a helicopter bombing mission would be advisable if the weather permits.



Hazard level:

- **Description:** Widespread unstable snow. Natural and triggered avalanches certain. Large avalanches reaching working areas are likely. Buildings may be destroyed.
- **Operational impact:** Evacuation of exposed areas necessary until explosives mitigation has been completed.

Avalanche mitigation action: Helibombing explosives mitigation will be required.

With Extreme avalanche hazard come closures around the millbench and above, not limited to but including certain roads, comet road, TTF road, portal bench, etc... Bombing will be necessary. Or post mitigation on any hangfire (snow that has not avalanched naturally yet)

• **RECCO Belts**

○ What they are for:

- RECCO belts are part of our avalanche rescue plan. They are designed to help us locate a victim in the event that they have been buried in an avalanche.
- RECCO belts are located in the upper entrance of the Admin building where people wait to catch the mill bus. They are in a bright red wooden box.

○ Where you need to wear them at:





- You need to wear them anywhere that you may be passing by or through an avalanche zone of concern. This will be mentioned in the forecast.
 - With that said, if the avalanche danger is **MODERATE** or higher, and you are working on the mill bench or portal bench, or any highwalls or cutbanks, the avalanche forecast will indicate who needs to wear RECCO Belts.
- If you are a part of the environmental department and are traveling to any valley bottom for any reason, we have special requirements for you.
 - Check with Alan Gordon to find out if it is ok and what is required to go. (This entails wearing an avalanche transceiver)
 - Also, Pete Strow, knows what actions need to be taken before leaving out into the field.
 - Also, the Snowslide Gulch Road is closed and off limits during the winter, if you need to go up there for any reason, contact Alan Gordon.

- **In the event of an Avalanche**

- Who to report to?
 - If you witness an avalanche, report it to Alan Gordon ASAP or the first supervisor that you get in touch with.
- Safe locations to go to.
 - If there is an avalanche, there is a good chance that there is hangfire (snow that hasn't avalanched yet), so it is extremely important to get to a safe location until further directed.

If you get caught in avalanche:

- Try to protect your head and create an air pocket around your face
- Try to push an arm or a leg out of the snow (make yourself visible).
- Rescuers
 - If you are involved or asked to be involved in a rescue, here is some very basic and very important info that you need to know.
 - Rescue gear and probes are located at the bottom of the Admin building across from the gym.
 - If you are a rescuer, you should be wearing warm clothing and jackets, along with gloves.



Remember, look at the avalanche hazard signs to note the hazard before shift. Read the most recent forecast. The most recent avalanche forecast will tell you if there are any closures, areas that you must wear a RECCO Belt in and also, what kind of mitigation will be performed that day.



Be safe and aware of your working environment.