

Hilcorp Alaska, LLC
Den-Disturbance Mitigation Measures for Snow Management on the Endicott Road
December 22, 2016

For disturbance mitigation during snow management along the Endicott Road, the road has been divided into two zones. From 1 mile to ¼ mile (~1400 feet) on either side of the den is being treated as the quiet zone. The area ¼ mile on either side of the den is being treated as the super-quiet zone. When managing snow removal along the road after an extreme blow and drifting or phase conditions, the following mitigation measures will be followed in each of these zones.

Note that emergency services (human life and safety) always take precedence. In an emergency situation speed and activity restrictions will not apply.

Quiet zone (1 mi to ¼ mile from den):

- 5 miles per hour
- No unnecessary stopping or backing up of vehicles or honking of horns
- Operators will use equipment with rubber tires to limit the noise of the tracks on the steel bridges
- Equipment operators will clear the snow to open the road with the Snow Blade followed by the Snow Blower and manage their methods of snow removal to limit the number of passes
- If required, operators will only plow the bridges with the Snow Push Loader – typically the bridges do not require plowing as they have an open grate surface.
- A log of road maintenance activities will be kept

Super-quiet zone (¼ mile from den):

- 5 miles per hour
- No unnecessary stopping or backing up of vehicles or honking of horns
- Operators will use equipment with rubber tires to limit the noise of the tracks on the steel bridges
- When visibility allows (i.e., when not in phase conditions), the den will be surveyed prior to and during snow removal activities to ensure the bear has not emerged from the den. Access to the den prior to snow removal will be via snow machine.
- Equipment operators will use only the Snow Push Loader to clear snow. Note that the Snow Push Loader creates berms on the edge of the road, which have the potential to create more snow drifting in the roadway due to a snow fence effect. As the wind-blown snow drops out on the roadway, more snow removal will be required with the Snow Push Loader.
- To cut down on the volume of the snow removal required near the den, only one lane will be kept open on the side of the bridge opposite from the den and in the approximately 100 foot approach to the bridge in front of the den (see map). This will also move bridge traffic noise farther away from the den, and put more steel and eventually more snow between the bridge noise and the polar bear den.
- The backup alarm in the equipment will be turned off or the loader will not back-up.
- When the Snow Blade and Snow Blower have to travel through the super quiet zone the blade will be lifted and the blower will be turned off and the equipment will convoy until ¼ mile past the den.
- A log of road maintenance activities and associated monitoring (noting when monitoring was not possible due to weather and the associated observations) will be maintained.