

## **UDOT Avalanche Safety**

### **Backcountry Closure Policy**

UDOT is responsible for managing the threat of avalanches onto all of Utah's state and federal highways. This is to ensure the safety of the travelling public along with the cities and communities that those highways connect. Many of those highways lead to very popular world class recreation in the Wasatch Backcountry. As this backcountry population increases, so does the risk of an encounter between a backcountry user and artificially triggered avalanche, or worse, the artillery shrapnel or blast used for the avalanche control work.

Avalanche control is conducted in mountain areas all over the world and it is standard protocol to absolutely ensure complete evacuation of control areas prior to the use of explosives. Along with this, programs that use military artillery have the extra responsibility to clear all areas that are subject to flying shrapnel from the exploding ordinance. US Army regulations state that the safe standoff distance for the 105mm artillery round is 1000 meters.

The Wasatch poses some unique challenges to this industry with its proximity to two million residents and relatively easy access to world class skiing and recreating. The avalanche safety program in Little Cottonwood Canyon has been utilizing military artillery since 1949 with great success. In the early 80's UDOT took over the role of stewarding that avalanche safety and since then the numbers of backcountry users has steadily increased. In addition to artillery, UDOT uses other types of exploding devices and techniques to trigger avalanches before they happen naturally onto open roads. It is absolutely imperative that we do everything we can to eliminate the possibility that someone is injured or killed in the process of us trying to prevent people from being injured or killed.

Under the authority of the local municipality where the specific avalanche paths are found, UDOT enacts backcountry closures prior to and during control missions. These areas can be found above to state highways in the Town of Alta, Cache, Weber, Salt Lake, Wasatch, Utah and Garfield Counties. Each municipality has ordinances that allow area closures in the interest of public safety. In general, these closures begin the night before control work but in some instances closures happen only hours before. Information about avalanche control closures can be found on the UDOT Avalanche Safety webpage as well as on twitter and Instagram @UDOTAvy, on the Utah Avalanche Center website, and locally with roadway message signs and trailhead closure signs.

This policy outlines some of the areas regularly affected by UDOT Avalanche Safety Closures. The descriptions and maps below do not however cover all possible zones therefore all local terrain closures should be respected. UDOT's closures are also solely for backcountry land and do not represent U.S. Forest Service permitted ski areas. These areas have their own closures that sometimes run in conjunction with UDOT closures but are independent based on local operations.

## Little Cottonwood Canyon SR210 Backcountry Avalanche Control Closures

In Little Cottonwood Canyon the primary method for avalanche control is military artillery. Also utilized are remote avalanche control systems (RACS), limited helicopter bombing, and hand charge routes. A typical artillery mission consists of a 10:00pm backcountry closure the night before to ensure all touring parties have left the area and none can enter early on the morning of a shoot. Control work normally begins at 6:30 or 7:00am the next day and the backcountry areas will reopen at approximately 8:00am. These restrictions may be implemented at any hour due to changing avalanche conditions. Occasionally these restrictions will be enacted in the middle of the day as the avalanche hazard peaks and also to protect against rising temperatures and wet snow avalanches. Wet snow is not just a spring time occurrence as rapid warming can happen even mid winter and we ask that ski tourers pay particular attention when returning via the south facing terrain above the highway.

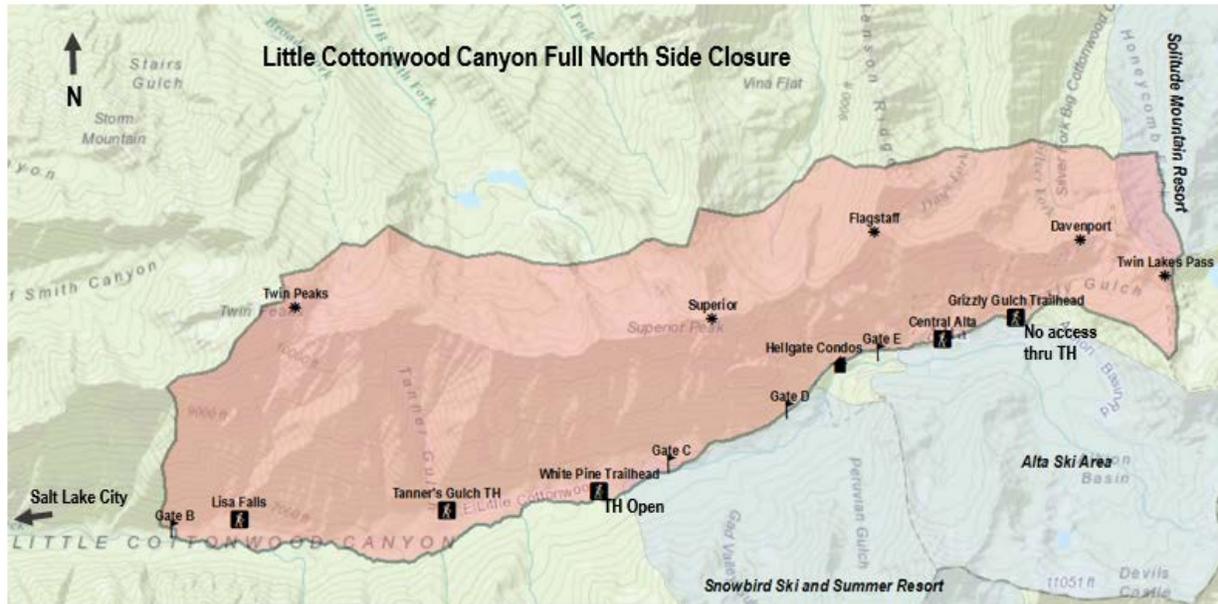
On a typical day the backcountry closure will consist of "All Little Cottonwood Canyon Backcountry north of LCC creek from Lisa Falls to Grizzly Gulch is closed". It will include a portion of Big Cottonwood Canyon that extends 1000 meters to the north of the Little Cottonwood ridge to protect the public from artillery shrapnel. The White Pine parking lot and trail will remain open allowing access to the south side of the canyon. This is basically the only backcountry open in LCC during a "Full North Side Closure". This freedom **MUST** be respected as we cannot allow parties to park at White Pine and cross to the north into closed terrain targeted for explosives. Any evidence that such an abuse is taking place will result in a reevaluation of White Pine parking restrictions.

Note to Climbers:

None of these closures affect access to the climbing in Little Cottonwood Canyon on the north side of the highway below Lisa Falls. No UDOT backcountry closures affect the south side from Perla's Ridge down to the mouth of the canyon. NO UDOT closures affect zones from the Coalpit Drainage up the entire south side of the canyon. SEE COALPIT #4 CLOSURE.

## Little Cottonwood Canyon Full North Side Closure

All terrain north of Little Cottonwood Creek from Gate B to Grizzly Gulch. Extends 100' over Twin Lakes Pass, and 1000 meters into BCC. White Pine Trailhead Open.



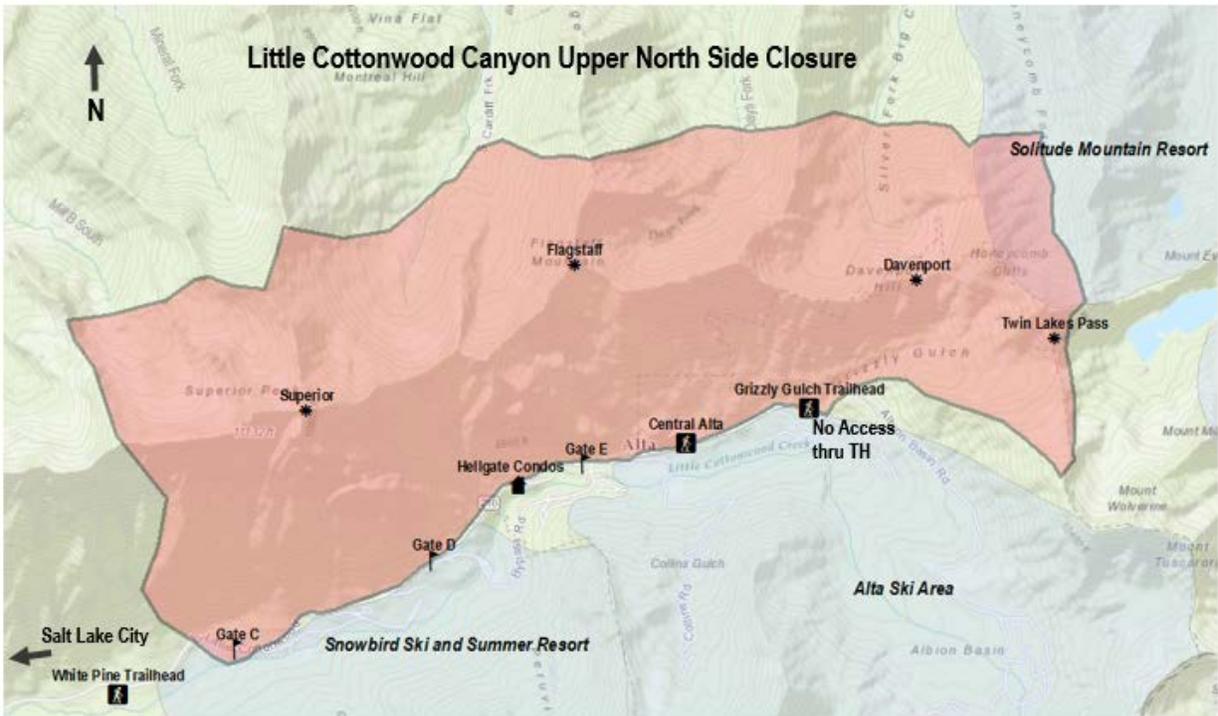
The LCC Full North Side Closure will consist of all terrain north of Little Cottonwood Creek from Lisa Falls through Grizzly Gulch to 100' over Twin Lakes Pass extending 1000 meters into Big Cottonwood Canyon along the main ridge to protect from the threat of flying artillery shrapnel. It will extend into Honeycomb Canyon at Solitude and only authorized avalanche control team members will be allowed in the Solitude portion of the closure as per the SL County and Town of Alta ordinances. The White Pine parking area and trailhead will remain open until the main highway closes.

Closed areas in BCC are Fantasy Ridge, East and West Bowl of Silver Fork, Flanagan's, Upper Days Fork, Main Days Fork, Holy Toledo, Hallway Couloir, the Eyebrow, Little Superior Buttress, Cardiac Bowl and Cardiac Ridge, Upper Mill B and Upper Broads Fork above the Blue Ice. The Guild Line, Silver Fork Meadows, Banana Days, Ivory Flakes, and Mineral Fork will remain open along with Lake Blanche, the Blue Ice, and Bonkers.

Occasionally the need will arise for avalanche control only in specific sections of the canyon and below are three more possible closure scenarios. As with the full canyon closure, these smaller closures will usually begin at 10:00pm the night before to ensure complete evacuation of the area.

## Little Cottonwood Canyon Upper North Side Closure

All terrain north of Little Cottonwood Creek from Gate C to Grizzly Gulch. Extends 30m over Twin Lakes Pass, and 1,000m into Big Cottonwood.

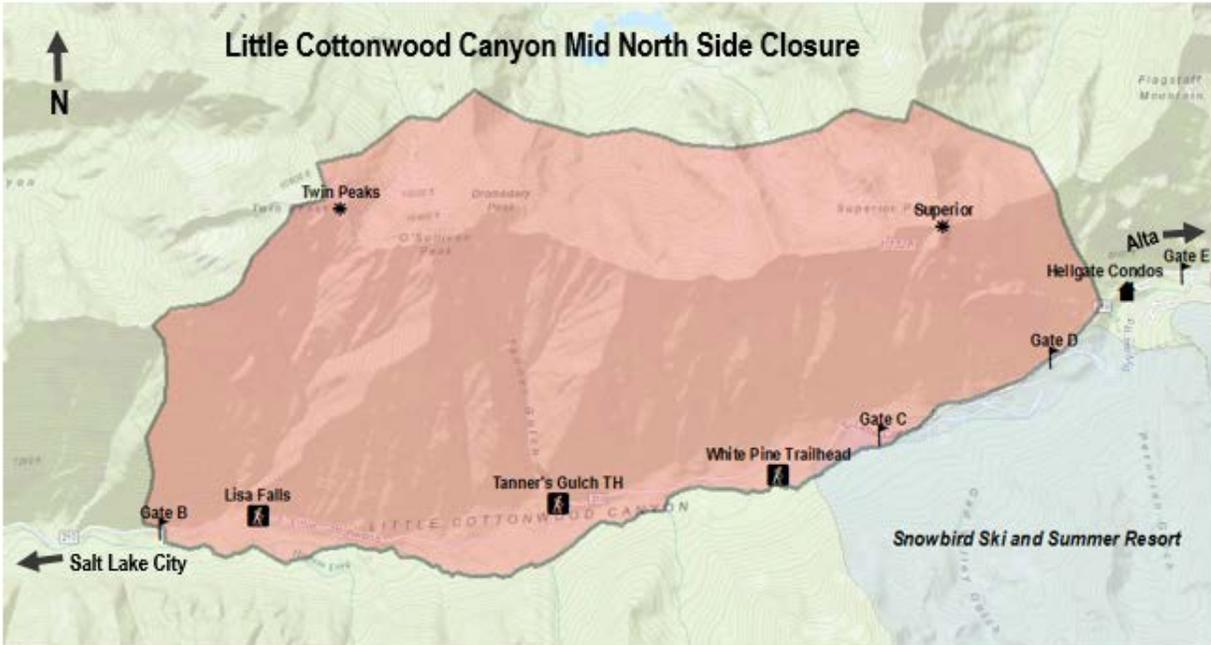


The LCC Upper North Side Closure will consist of all terrain from the main gully in Jedediah through Grizzly Gulch to 100' over Twin Lakes Pass extending 1000 meters north into Big Cottonwood Canyon along the main ridge to protect from the threat of flying artillery shrapnel. It will extend into Honeycomb Canyon at Solitude and only authorized avalanche control team members will be allowed in the Solitude portion of the closure.

Closed areas in BCC are Fantasy Ridge, East and West Bowl of Silver Fork, Flanagan's, Upper Days Fork, Main Days Fork, Holy Toledo, Hallway Couloir, the Eyebrow, Little Superior Buttress, Cardiac Bowl, Cardiac Ridge, and the east half of Upper Mill B up to the Sundial ridge and Peak 11,033. The Guild Line, Silver Fork Meadows, Banana Days, Ivory Flakes, Mineral Fork and Lake Blanche, upper west half of Mill B South and all of Broads Fork will stay open.

## Little Cottonwood Canyon Mid North Side Closure

All terrain north of Little Cottonwood Creek from Gate B to Hellgate Condos. Extends 1,000m into Big Cottonwood. White Pine Trailhead Open



The Mid North Side Little Cottonwood Canyon Closure will consist of all terrain from Lisa Falls to Two Trees including Mt. Superior and Little Superior from the Little Cottonwood Creek to the ridgeline extending 1000 meters into Big Cottonwood Canyon to protect from the threat of flying artillery shrapnel. The White Pine parking area and trailhead will remain open until the main highway closes. Terrain accessed south of the trailhead will be open.

Closed areas in BCC are Little Superior Buttress, Cardiac Bowl, Cardiac Ridge, all of Upper Mill B South, and Upper Broads Fork above the Blue Ice. Ivory Flakes, Mineral Fork, Blue Ice and Bonkers will remain open.

## Little Cottonwood Canyon Coalpit #4 Closure



The Coalpit #4 closure will consist of Coalpit #1,2,3, and 4 chutes to Perla's Ridge along with the terrain above and on the Great White Icicle from the road to the ridgeline. This closure is usually implemented at 10:00pm the night before and reopens at approximately 08:00am.

Note to Ice Climbers:

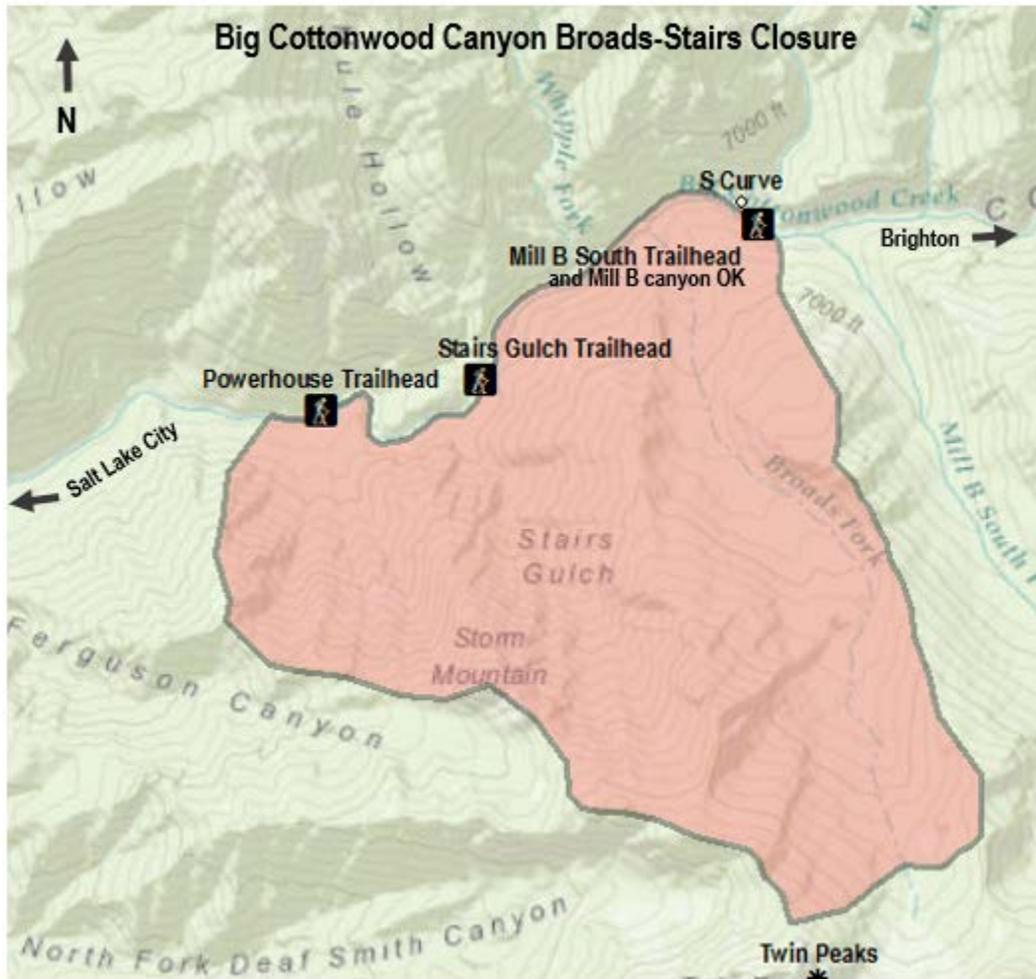
The Coalpit #4 closure is the only one that affects ice climbing areas in Little Cottonwood Canyon. This closure is very infrequent and happens on average once every five years.

## Big Cottonwood Canyon SR 190 Backcountry Avalanche Control Closures

In Big Cottonwood Canyon the main methods for avalanche control are military artillery and helicopter bombing. Hand charge routes and an avalauncher are also utilized. Normally, the backcountry closures will begin at 10:00pm the night before to ensure all touring parties have left the area and none can enter early on the morning of a shoot. Control work will begin the next morning at first light to assist forecasters assuring complete evacuation, but these restrictions may be implemented at any hour due to changing avalanche conditions. Occasionally these restrictions will be enacted in the middle of the day as the avalanche hazard peaks and also to protect against rising temperatures and wet snow avalanches.

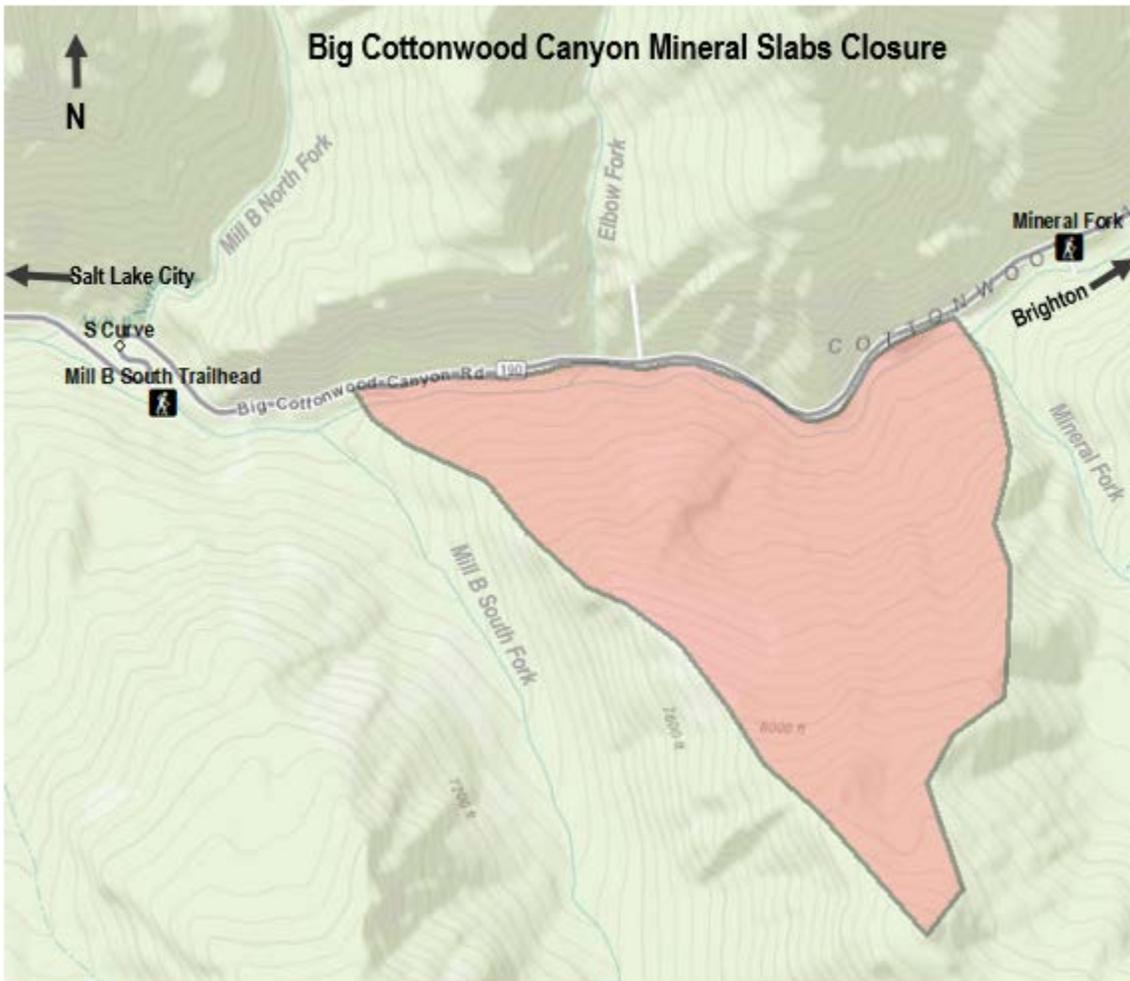
The boundaries of the closure areas include the avalanche paths that affect the highway along with adjacent terrain needed to protect from both artillery shrapnel and the potential for wide propagating avalanches that cross into neighboring drainages. Some main trailheads will be closed due to the inability for forecasters to assure areas are completely clear during times of limited visibility. The Broads Fork, Butler Fork or Cardiff Fork trail heads will be restricted prior to UDOT commencing avalanche control to aid with this process. See the specific description for each closure for more detail.

## 5 - BCC Broads-Stairs Closure



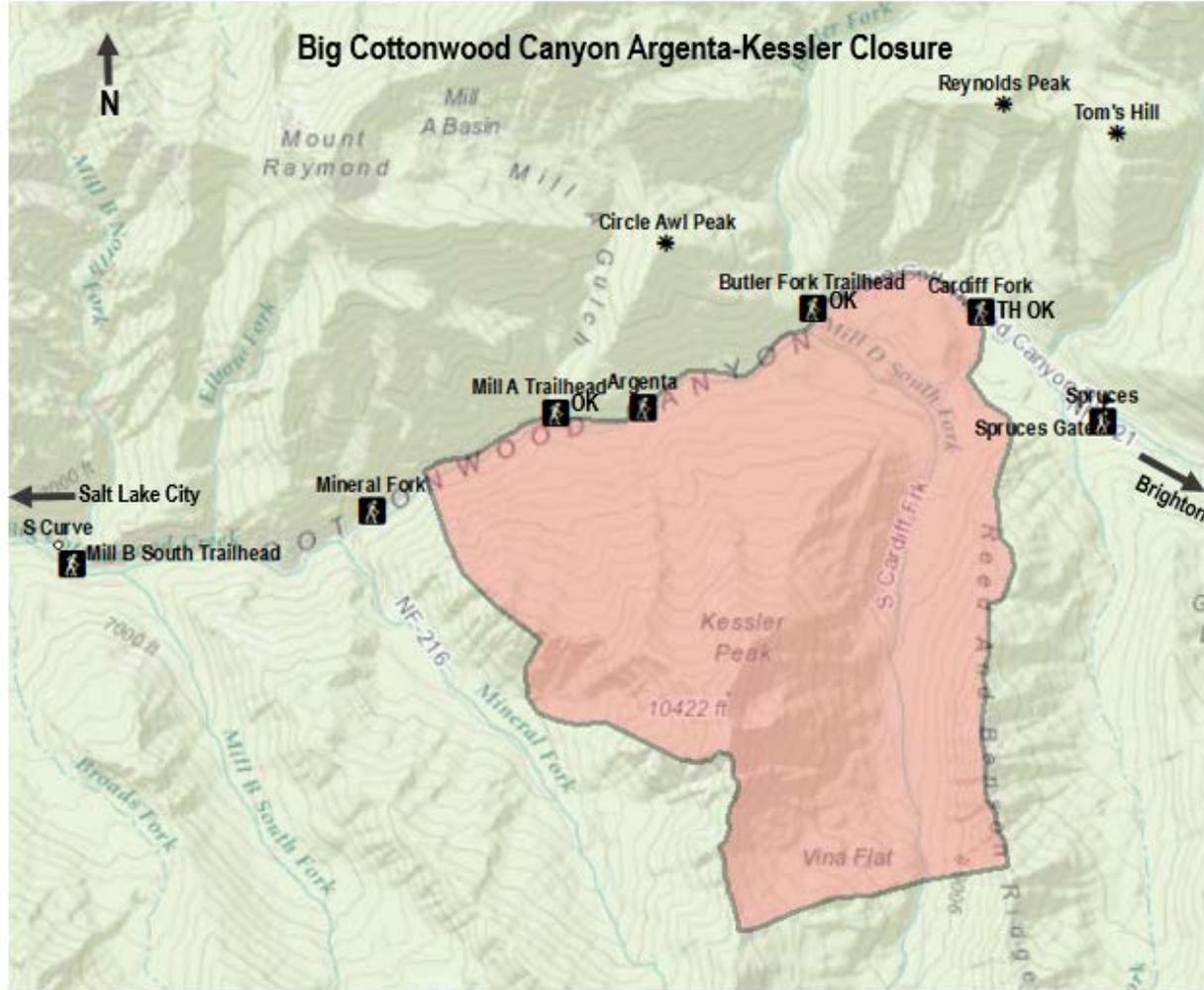
The StairsBroads-Stairs Closure is primarily for avalanche control in Stairs Gulch, either helicopter bombing or artillery. It includes the Power Plant Chutes, Stairs Gulch and the lower two-thirds of Broads Fork from the BCC creek to the Blue Ice. Access to the Broads Fork trail is restricted to help assure complete evacuation of the area including adjacent terrain.

## 6 - BCC Mineral Slabs Closure



The Mineral Slabs closure is enacted prior to avalanche control with an avalauncher. It consist only of terrain at the Mineral Slabs and that immediately adjacent, from the BCC creek to the ridge.

## 7 - BCC Argenta-Kessler Closure

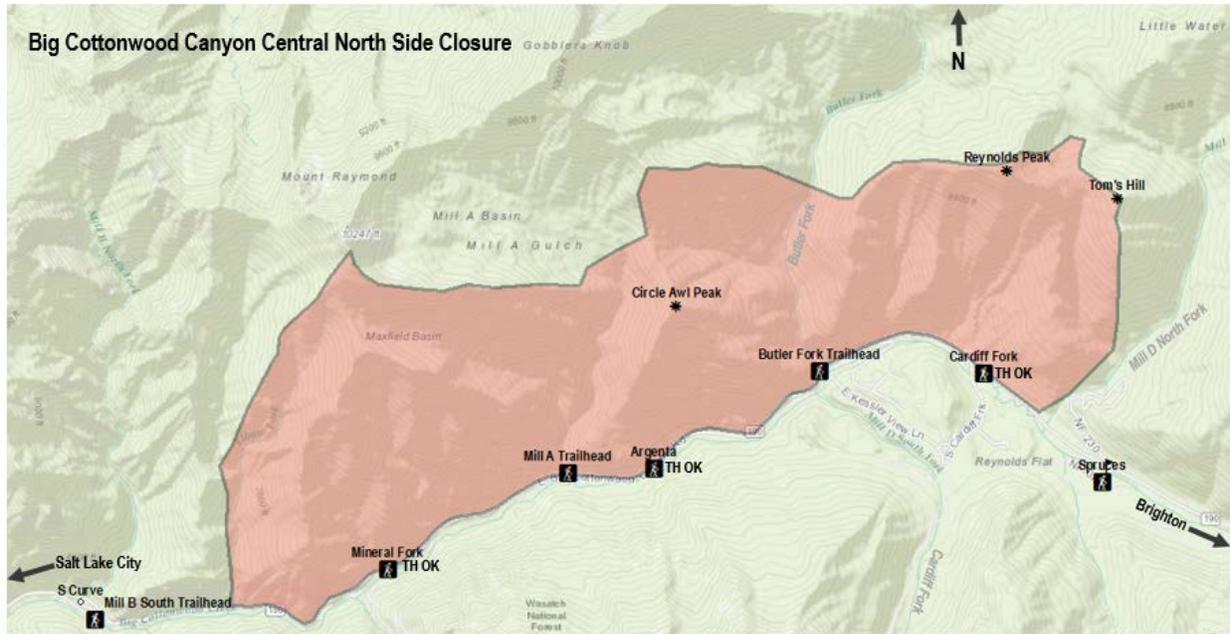


The BCC Argenta-Kessler Closure is primarily for avalanche control in Argenta and the north face of Mt. Kessler, Gods Lawnmower, but very infrequently may include work in Argenta Chutes. It may be conducted either with helicopter bombing or artillery. It consists of the Argenta Chutes, Silver Mine Meadows, Argenta, Kessler and Lower Half of Cardiff Fork. The Little Giant path in Mineral Fork is included to protect from shrapnel or connecting avalanches. In Cardiff Fork, the closure includes Doughnut Falls, Catcher's Mitt, High Pockets, Georges Bowl and the Reed and Benson Ridge. The Cardiff Fork trailhead will be closed beginning at the BCC highway.

Note to Cardiff Homeowners:

This closure does not restrict the rights of homeowners on their private property. It extends through this community due to the large amount of public land scattered in the area and the trailhead access from the main highway.

## 8 - BCC Central North Side Closure

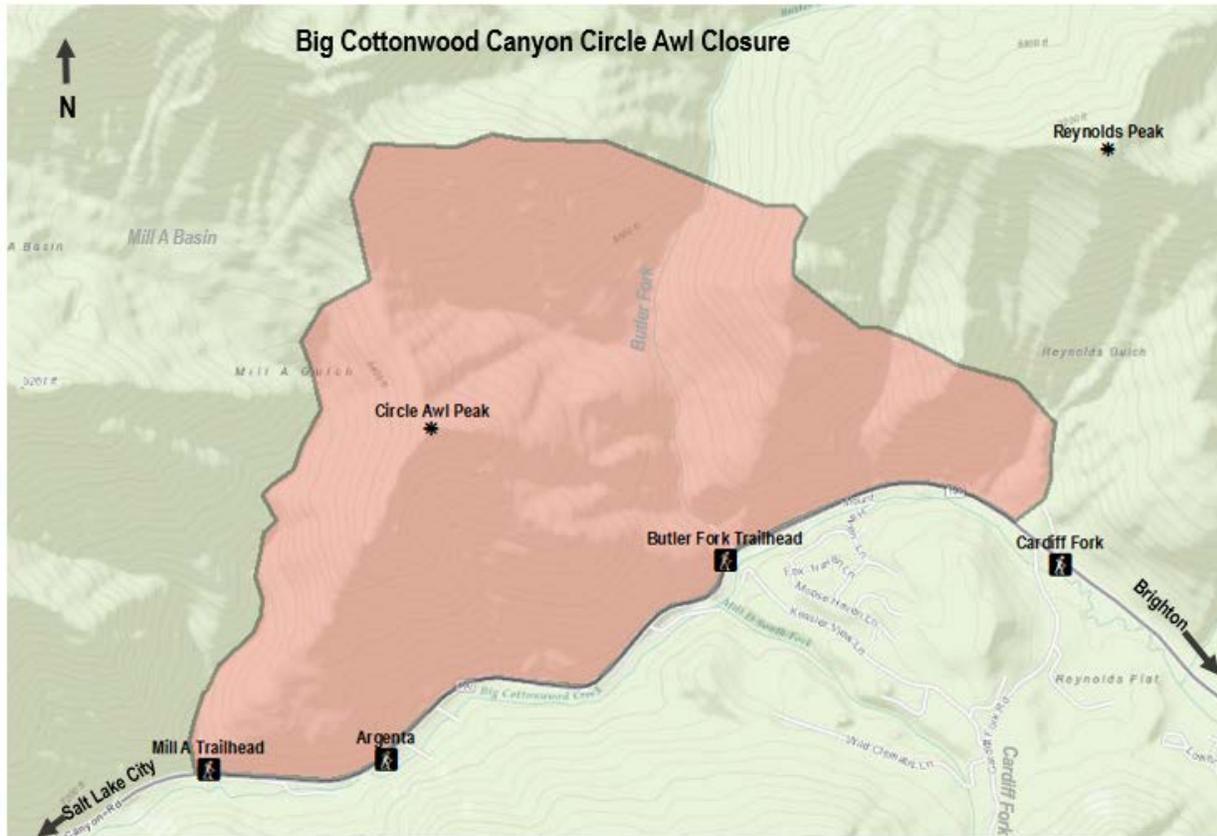


The BCC Central North Side Closure is for when avalanche control is conducted in multiple zones on the north side above the road. This scenario is very infrequent and happens only once every few years. Avalauncher and hand charge control is conducted in the Reynolds Rock, Circle Awl, West Maxfield and Rock House paths.

The Closure begins on the east end in East Reynolds Gully (west of Tom's Hill) and includes Reynolds Peak, East Face of Reynolds, Grand Central, Lower Butler Fork up to Scary Gully, West Fork of Butler up to West Butler Pass, Butler Trees, Circle Awl, Mill A Gulch, Maxfield Basin, West Maxfield, Rock House and the BCC Elbow Fork down to Moss Ledge.

The Mill D Trailhead at Reynolds Flat, Butler Fork Trailhead, Mill A Trailhead and Moss Ledge Trailhead will be closed the night before a planned morning shoot the next day.

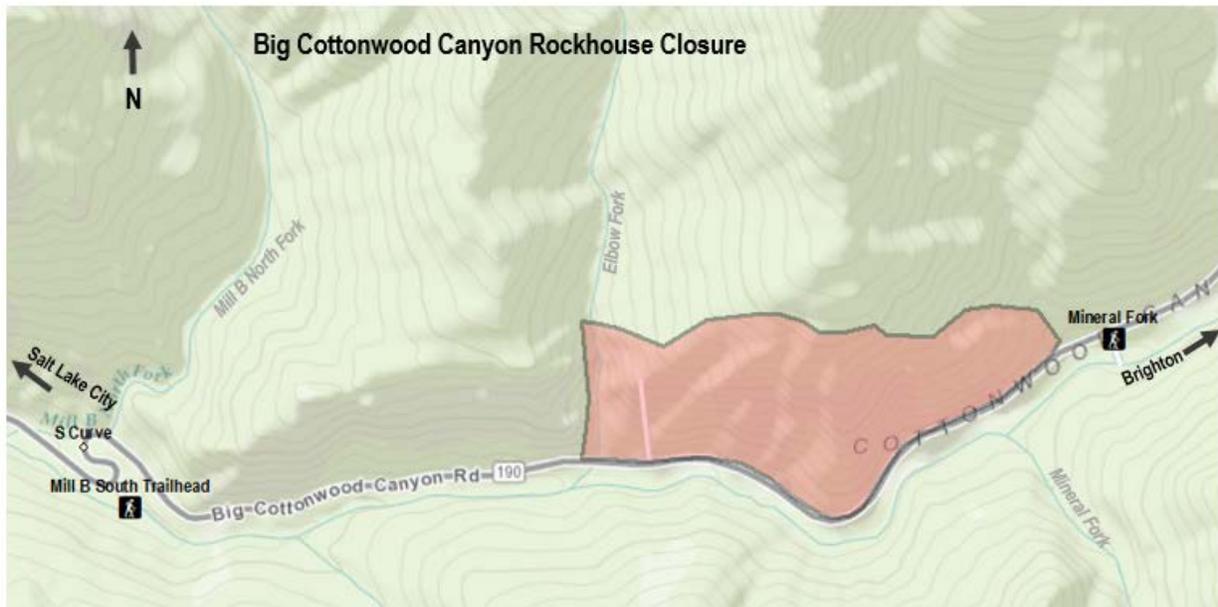
## 9 - BCC Circle Awl Closure



The BCC Circle Awl Closure is enacted prior to avalancher work on the Reynolds Rock and Circle Awl paths. It starts just west of the Mill D Trailhead at Reynolds Flats and extends west into Lower Butler Fork up to Scary Gully, West Fork of Butler up to West Butler Pass, Butler Trees, Circle Awl, and ends at the Mill A Gulch creek.

The Butler Fork and Mill A Gulch Trailheads will be closed to help forecasters with complete evacuation of the area.

## 10 - BCC Rock House Closure



The BCC Rock House Closure is enacted prior to avalauncher work at the Rock House Chute which lies directly above the highway across from the Mineral Fork Trailhead and Mineral Slabs. It extends from the lower third of the Rock House Slide Path to the Moss Ledge area.

Descriptions of American Fork and Provo Canyons will be added shortly.

For now, please refer to website maps for information about closure boundaries in these canyons.