

## Surprise Bowl - Near Miss

Date: 14 April 2013

Place: Surprise Bowl, Girdwood Valley, Chugach Mountains

State: Alaska

Fatalities: 0

Summary: 3 people caught, 2 partially buried (all uninjured, lost gear)

Avalanche: SS-ASu-D2-R2-O

**Extended summary:** Third skier down slope triggered a wind slab avalanche that caught and carried the skier before they were able to self-arrest on the bed surface. Two people, from a separate party, ascending from below were caught in the debris and partially buried.

### Avalanche details:

Type: Soft slab (this was a wind slab avalanche that triggered a soft slab pocket lower on slope)

Aspect: W

Angle: 37-43 degrees

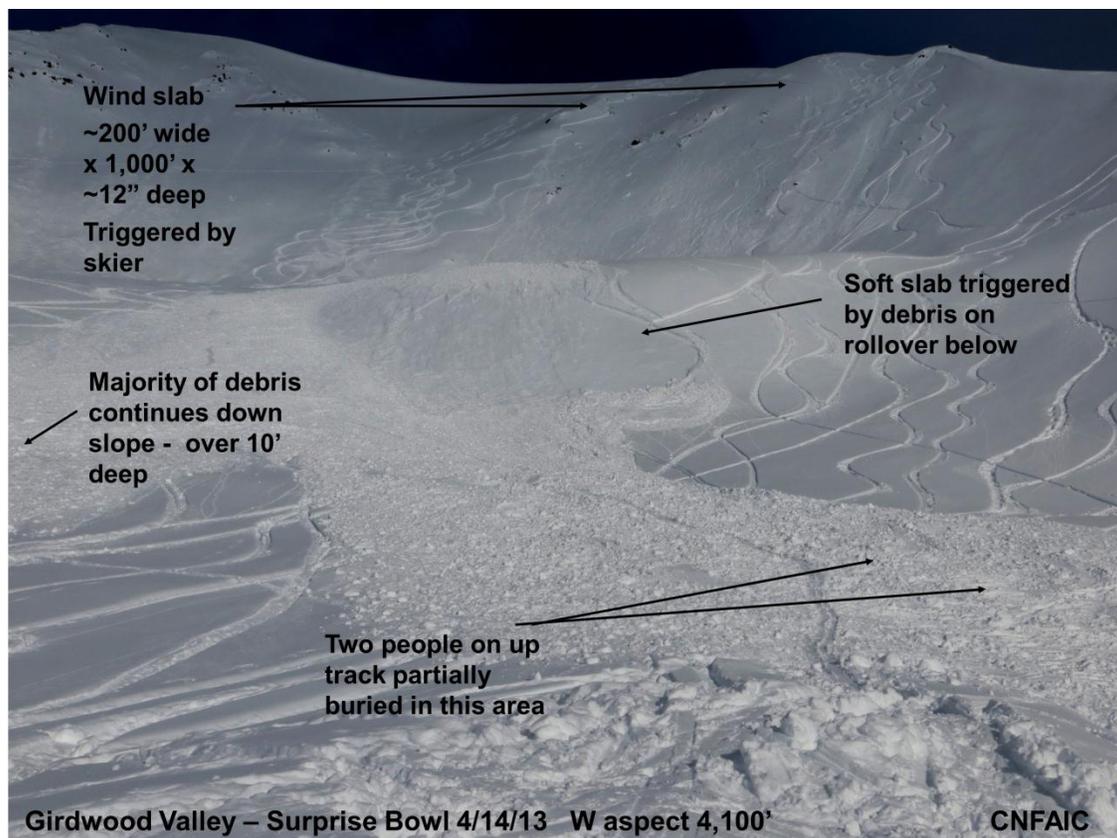
Elevation: 4,100'

Size estimate: 200' wide, running 1,100' x 8-14" deep

Trigger: Skier unintentional (many tracks on slope)

Weak Layer: Near surface facets and decomposing particles over a crust

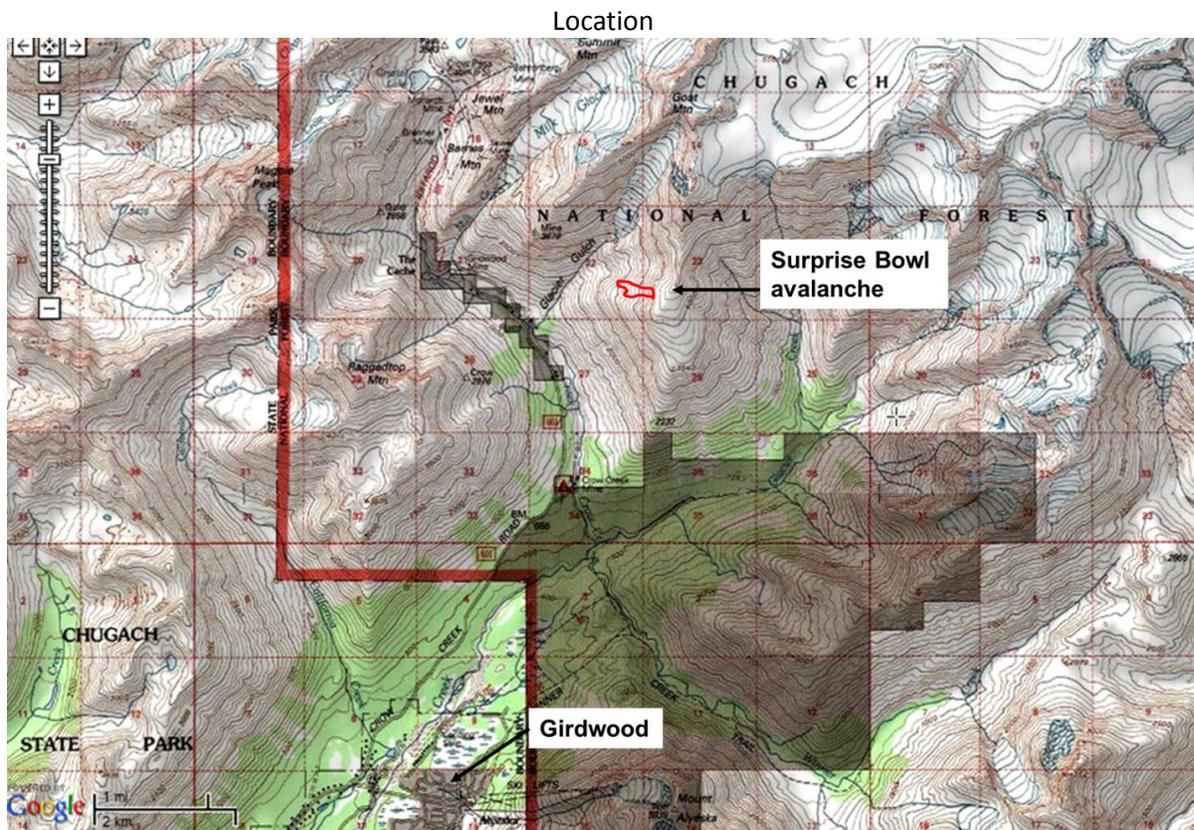
Debris: ~5-12' deep



### Events:

On April 14<sup>th</sup>, there were at least 3 backcountry touring parties recreating in the Surprise Bowl area and others in adjacent zones. One party of three (Party A) ascended to the top of the ridge on the southerly side of the bowl above a west facing slope they were planning to ski (and subsequently trigger). Their up-track switched back in the lower runnout zone before crossing over to the southwest ridge for the remainder of the ascent. After reaching the ridge they switched over to downhill mode. The terrain is such that it rolls over and parts of the lower portion of the slope were not visible. This included the portion where the up-track was located before it gained the ridge and where an ascending party of 3 (Party B) was hiking up. Party A proceeded to ski one at a time over the rollover unaware of a party below them. The third skier, after waiting for a couple minutes, and not seeing anyone far below or to the side, felt it necessary to descend since they were unsure if everyone was ok. Once the third skier crested the roll they saw the other two people in Party A on the slope waiting in relative safe zones. At that time the slope fractured and the skier was caught and carried around 200' until able to self-arrest on the bed surface. The other members of Party A were not caught.

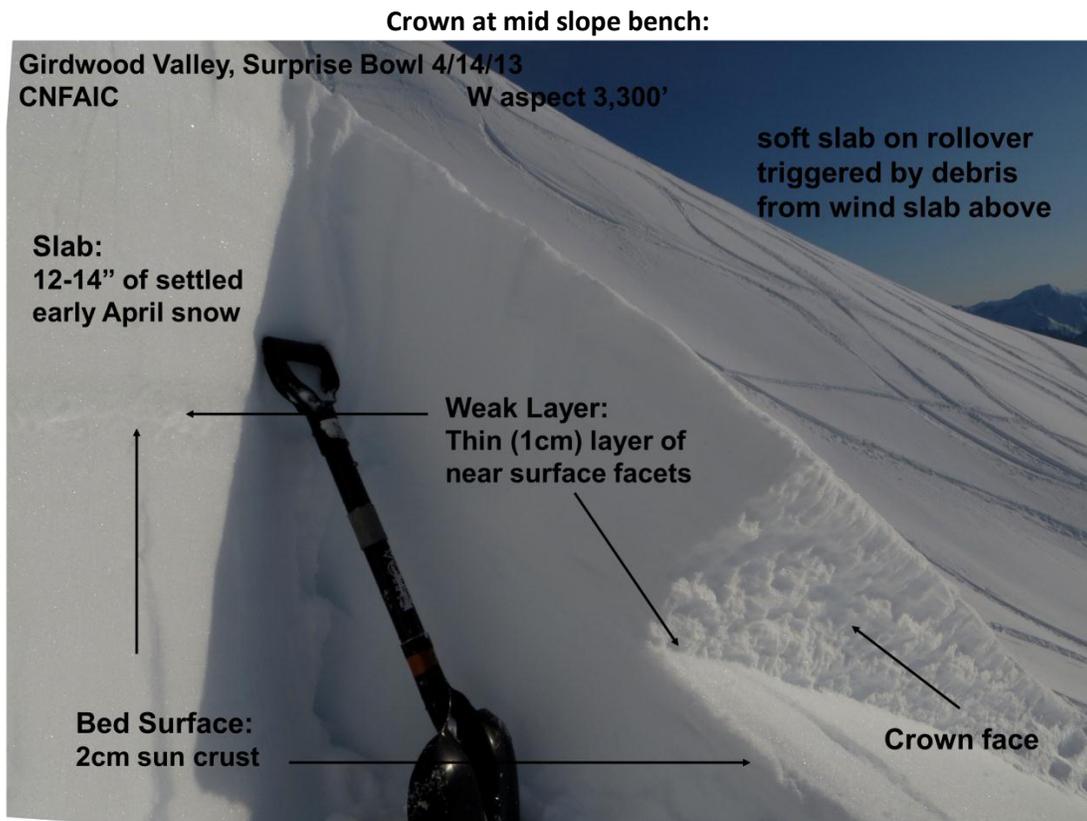
Meanwhile, Party B was ascending the switchbacks ~1,000' below. They were on the portion of the up-track that was in the runnout zone. One of the first two skiers from Party A (knowing people were below now that they could see the whole slope) yelled "avalanche". Party B heard this and moved as quickly to the side as they could. Two members of Party B were swept up by the debris and carried a short distance. One person was thrown over, pushed under and ended up buried to the waist. The other was thrown onto their stomach, carried and ended with debris up to the neck. With the help of the remaining Party B member and assistance of Party A they were able to dig themselves out quickly. No injuries were reported and a pair of poles was lost.



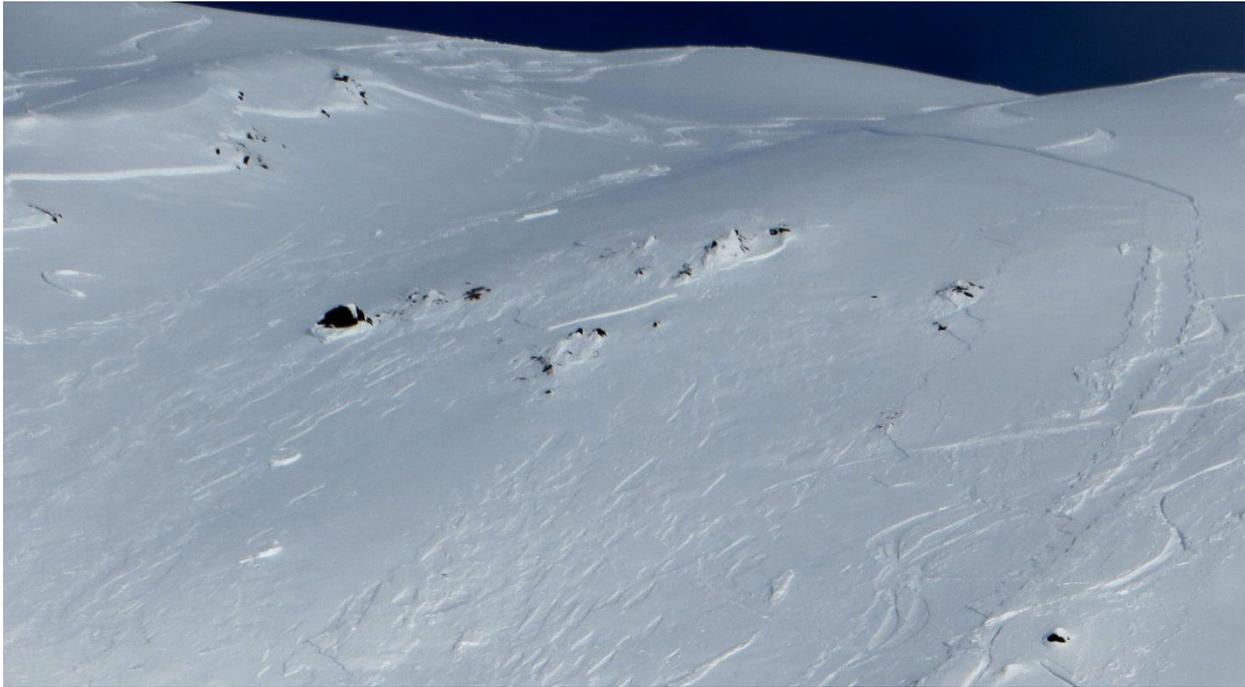
Google earth image

**Weather and snowpack:** On April 14, skies were clear, winds were light from the NW and temperatures were in the upper teens F. The last measureable snowfall was 16-20" between April 6-9<sup>th</sup> (snowfall ending 5 days prior to avalanche). The pre-existing surface on this slope appeared to be a sun crust with a few inches of loose faceting snow on top. At the Penguin Peak ridgetop weather station (4,200') the average temperature between April 9<sup>th</sup> and 13<sup>th</sup> was 2F and on the day of the avalanche temperature rose to 14F. The rise in temperature is thought to have contributed to the snowpack instability by increasing the slab character. Reports from skiers the previous day (April 13<sup>th</sup>) were of sluffs on this slope and hence the many tracks seen in the photos.

A crown profile was done on the slab that released mid-slope and is suspected of being the portion that buried the two ascending persons. The weak layer was a ~1cm layer of near surface facets with decomposing precipitation particles (very small surface hoar was intermixed but not standing up or the main grain type). The slab was settled storm snow from April 6-9<sup>th</sup>. It averaged 14 inches deep and 4 finger minus hardness. The bed surface was a 2cm sun crust, believed to have formed during the first week of April's dry spell. It is believed that the structure under the wind slab above was similar.



Close up of wind slab



**CNFAIC avalanche danger rating:**

MODERATE (advisory for the day here: <http://www.cnfaic.org/advisories/current.php?id=319>)

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