

Cloud Seeding Program

Suspension Criteria – Idaho Power Company

The following are included in suspension criteria for cloud seeding projects Idaho Power operates:

- Total snowpack
- Surface Water Supply Index
- Potential flood situations (including rain-on-snow)
- Severe weather threats, including tornadoes, locally heavy precipitation, strong or damaging winds, hail, or lightning
- Avalanche conditions
- Special circumstances

Total Snowpack:

Snowpack can begin as early as October and continue through April and sometimes into May. A hazard potential from snowmelt exists after excessive snow accumulations because it creates unmanageable runoff or it creates flood-stage runoff. Therefore, certain percentages of April first's basin-wide average snow water equivalent (SWE) are used as threshold criteria for seeding operations.

Total snowpack status is evaluated from the Natural Resources Conservation Service (NRCS) SNOTEL network. The table below lists these percentages. Once suspended, the program may resume seeding operations if subsequent SNOTEL SWE data indicate the accumulation has fallen below these percentages.

Snowpack levels that suspend seeding:

Date	Threshold SWE value (percentage of April 1 average)
January 1	95%
February 1	110%
March 1	125%
April 1	140%

Potential Flood Situations

Winter flooding from excessive rainfall is possible in the Central Mountains. A large portion of the Payette basin lies below 4,500' elevation and frequently receives rain rather than snow. Sometimes, heavy rain falls well above the 4,500' contour.

The table below shows several river locations that are monitored to determine whether cloud seeding operations in the Payette should be suspended. Seeding will be suspended when any of the criteria listed in the table are met or forecast to occur within 24 hours.

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Location	USGS Gauge Identification	Flood Stage (GH – feet)	Flood Discharge (cfs)
Weiser River near Weiser	13266000	9.5	8,890
Snake River at Weiser	13269000	12	67,560
South Fork Payette at Lowman	13235000	7.5	7,205
Payette River near Emmett	13249500	10.51	16,000

Severe Weather Warnings

Seeding operations will be suspended whenever the NWS issues a severe weather warning for a cloud seeding region. This includes warnings for adjacent areas if the weather activity prompting the warning is likely to move into a cloud seeding region.

Usually, warnings are issued when strong convective activity is expected. The official criteria are heavy local rainfall, winds at 50 knots (60 mph or higher) or if the winds cause observed damage, large hail (hailstones $\frac{3}{4}$ inches in diameter or larger), tornadoes, or funnel clouds.

Other Special Circumstances

IPC has the authority to suspend or terminate seeding activities under any special or unusual circumstances that may be deemed hazardous or might be perceived to be so by the public. Examples of special circumstances are extreme avalanche hazard as reported in United States Forest Service USFS avalanche status bulletins, very strong winds, unusually warm temperatures, heavy snow at low elevations, or other unforeseen circumstances.

Note: If suspension criteria are met during a seeding period, IPC will stop seeding operations immediately.