

EMERGENCY PREPAREDNESS POINTER

March 2017

From Snow to River

Snow is vital to water supplies in the western United States. As snow melts, it moves into rivers that bring the water to many valley areas. Snowmelt rate depends upon the amount of snow in the mountains and the Spring weather. Nearly 75 percent of water supplies in the western states are filled from snowmelt according to the US Geological Survey. The relationship between the snowpack and spring weather is usually a good one for the Treasure Valley. Mountain runoff is managed by reservoirs, rivers, and creeks usually without any flooding issues. However, these conditions do not exist every year and flooding can occur. Several factors can influence snowmelt flooding.

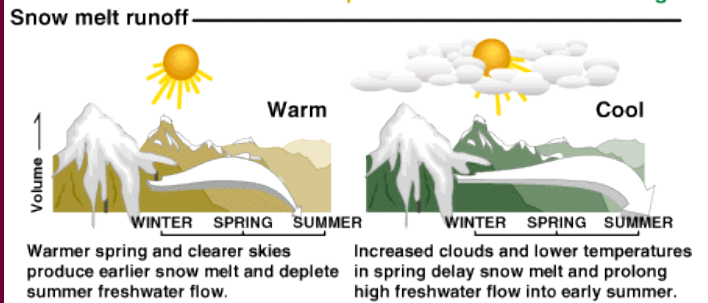


Image Credit: sfbay.wr.usgs.gov

Causes of Snowmelt Flooding

Very moist soil prior to the snowmelt: Fall rains can soak the soil and cool weather can keep the ground from drying out. This limits how much moisture the ground can absorb.

Frozen soil of ground frost: Frozen ground will prevent water infiltration into the soil

Heavy winter snow cover: More snow equals more water. If the heavy snow is widespread, it will keep the air cool and the snow may stay later in the year. This snow is then susceptible to rain-on-snow events and rapid snowmelt.

Rain-on-snow events: Widespread rain during the snowmelt will warm up the snowpack and increase the flow to rivers and streams. The combination of rain and snowmelt can cause flash flooding.

Rapid snowmelt: Snowmelt rates are normally similar to a light to moderate rainfall. However, a sudden warming trend with night time temperatures above freezing can create much higher melt rates.

In addition to flooding, rapid snowmelt can cause landslides, debris flows and contribute to ice jams.

Current River Conditions and System Information

We comprised a list of websites you can visit to access current snow melt information. These websites provide information on the current snowpack in the mountains and the river flows in the valleys.

[Snow Water Equivalent Maps](#)

[Reservoir Storage Teacup Diagram](#)

[Real-Time Data for Idaho Streamflows](#)

Ada County Emergency Management shares current event and preparedness information on social media. Find us on Twitter and Facebook: @adacountyem. For additional flood information, visit <https://adacounty.id.gov/accem/How-to-Prepare-Resources/Flood>

