iSnobal Modeling

Boise and Big Lost Basins

May 7 Model Results

Idaho Water Supply Committee
May 9, 2023

M3Works

Boise Basin Model Volumes

Peak SWE:
2710 TAF

May 7 SWE:
1192 TAF

44% snow volume remaining

SNOTEL Site-Index and Model

- SNOTEL site index (11 site median)
- Model site index (11 site median of pixels containing pillows)
- Full basin mean

Recent storms ‘paused’ melt more than net addition of snow volume

Difference in Remaining Volume

Site index
81% remaining

Model basin volume
44%
remaining

Station Comparisons

Pillow represents < 1% of a 50 m² model pixel

Station Comparisons

Station Comparisons

April SWE Change

May 1 to May 7 SWE Change

Boise Basin Runoff Efficiency

WY 2021

WY 2022

WY 2023

Streamflow is: Boise R nr Boise + Δ Lucky Peak + Δ Arrowrock + Δ Anderson Ranch

Boise Basin Remaining Inflow?

streamflow / SWI

NO FUTURE PRECIP

Snow Volume Remaining [TAF]	Runoff Ratio [%]	May 7 - July Inflow [TAF]
1192	32	381
1192	34	405
1192	**36**	**429**
1192	38	453
1192	40	477
1192	42	501
1192	44	524

Runoff Ratios

Big Lost Basin

Big Lost Basin

Peak:
1121 TAF

May 7:
505 TAF

45% snow volume remaining

SNOTEL Site-Index and Model

Site index
80% remaining

Basin volume
45% remaining

Recent storms ‘paused’ melt more than net addition of snow volume

SWE Station Comparisons

April SWE Change

Mark Robertson
Micah Johnson
Micah Sandusky
m3works.io