

Dam Break Scenario August 1, 2021  
Millet Swale Pond, Piping and release of contents  
Little Colorado Drainage, somewhere near Snowflake/Taylor Area, AZ

Navajo County, AZ  
AZ00059

Easiest Searching entire RFC for the name in 'Dam Catalog Interface

Custom Run is best option to tweak parameters

Twitter Video

[https://twitter.com/NavajoCountyAZ/status/1419473894428184582?ref\\_src=twsrc%5Etfw%7Ctwcamp%5Etweetembed%7Ctwterm%5E1419473894428184582%7Ctwgr%5E%7Ctwcon%5Es1\\_c10&ref\\_url=https%3A%2F%2Fpublish.twitter.com%2F%3Fquery%3Dhttps3A2F2Ftwitter.com2FNavajoCountyAZ2Fstatus2F1419473894428184582widget%3DTweet](https://twitter.com/NavajoCountyAZ/status/1419473894428184582?ref_src=twsrc%5Etfw%7Ctwcamp%5Etweetembed%7Ctwterm%5E1419473894428184582%7Ctwgr%5E%7Ctwcon%5Es1_c10&ref_url=https%3A%2F%2Fpublish.twitter.com%2F%3Fquery%3Dhttps3A2F2Ftwitter.com2FNavajoCountyAZ2Fstatus2F1419473894428184582widget%3DTweet)

Arizona Newspaper Photos

<https://arizonadailypress.com/residents-south-of-snowflake-warned-of-the-risk-of-flooding-after-the-dam-breach-arizona-news/>

What we knew:

1. The amount of water in the dam was 320 acft.
2. The dam failed over a period of time > 1 hour. The breach was small.

Solution:

Assume that the failure time was = 1 hour and force the flow with volume = 320 acft to occur in a single hour. So,

Mean hourly flow =  $320 \text{ acft/hour} \times (12 \text{ cfs}/(\text{acft/hour})) = 3840 \text{ cfs / hour}$

Or the flow was 3840 cfs over one hour of time. (This number is an average number in an hour, Peak flows would be a little higher). The key here is how long the water took to empty out of the dam. For example, if it took

30 minutes the max flow would have been double. I'm guessing it took longer than 1 hour, probably closer to 3-4 hours for most of the water to move through the breach (the key information is that the dam owner felt it was taking longer than expected). Actual peak flows may have been closer to 2000 cfs.