The Floods of 2022

Over the years the Irrigation Company has had many floods come down Mill Creek. When we hear of one coming, we open up the sand boxes so that water can flow thru the diversion tunnels and exit quickly. If we don't, the sand boxes will fill with sand and sand gets into the pipelines. Usually, a flood is not a big issue. It passes over the two dams easily and is soon over. The outer grills get plugged up and need to be cleaned. The pipelines are kept empty for a couple of days to let the sediment in the creek decrease. Then the irrigation system is back in business.

There had been several smaller floods this summer, then a very large one came down the creek on August 9th. This flood did two things. At the lower dam it flowed up and around the sides of the diversion dam a little bit and started to cut a small channel around the dam on the west side. At the upper dam, there is a culvert built into the bottom of the dam. This culvert was put there to allow the creek to flow though while they built the dam. Well, the flood opened this culvert up and all the creek water was flowing through it. First time we had ever seen the inside of the dam wall as no water was being backed up. A smaller flood several days later, silted the area back in and blocked the culvert again. **(The picture on the left shows the culvert location – the picture on the right is the inside of the dam. Dirty brown water in the lower right corner is flowing through the dam)**

City officials said that this August 9th flood probably was a 100-year flood. About 2600 cubic feet per second (CFS) of water was flowing down the creek. Normal floods are in the range of 100-300 cfs. Well – as most of you know – mother nature laughed at us and she said – "Let me show you a real flood". Eleven days later on August 20th, she sent us a 500-year flood with 5600 cfs flowing through Mill Creek in Moab.

This flood caused extensive damage in the town. For the irrigation company we had damage too. The upper dam along Powerhouse Lane held up ok. Water flowed around the sides of the dam, but did not cause significant damage. Two concerns after the flood were that some of the side banking below the dam was washed away and just about exposed our underground pipeline. The flood also took three small divots out of the top of the dam. This may cause us a future problem. **(The picture shows the 3 divots in the top of the dam wall.)**

The lower main dam area experienced greater damage. Water also flowed around the sides of the dam. An inspection after the flood showed cover plates ripped off the Ditch 2 sand box area, damage to the rock gabion side wall of the dam, and the water had bored down FIVE feet in one area and exposed the Ditch 2 pipeline line. The flood then proceeded to break the Ditch 2 line and fill the water measuring dip with mud and sand. The power of water can be so amazing. **(The picture shows the overall damage to the Ditch 2 side of the lower irrigation dam. Just past the yellow fitting, the pipeline drops 4' into short dip. This is done so the pipe is always full of water in the dip and then water flow measurements can be taken. This 4' dip was filled with sand/mud.)**

(The picture shows the Ditch 2 sandbox with heavy metal plates ripped off the top.)

It took us over a week to repair the damage to the Ditch 2 pipeline and sandbox and get it flowing again. The rock gabion wall however is another story. Options are being looked at to see how to best repair the wall.

(The whole lower dam is made of rock gabions. You have the main section and two wings – one on each side of the creek. The east wing had suffered some small damage in previous floods over the years, but the Aug 20th flood really caused damage. The west wing held up ok.)