



NATOMA FLOODS AGAIN 28 YEARS AFTER THE FLOOD OF 1993

Beginning Saturday May 15, 2021, north-central Kansas had a significant rain event resulting in a flash flood warning, with more heavy rain expected during the next few days.

The storms from Saturday night to Sunday morning in some areas of Rooks, Osborne and Russell counties dropped up to eight inches of rain in the Paradise Creek basin. At approximately 6:00 AM, on May 16, a flood warning was issued after water had started to cross Highway 18 a few miles west of Natoma. After Roy Hockett, city of Natoma Operator, started his inspection of the system that morning, he realized he would also have to warn the residents south of the Paradise Creek. Within a half hour, he became stranded on the south side of Natoma as the creek had come out of the bank and started to flood the homes and go over the bridge that crossed Paradise Creek. He managed to get to the city's tractor because it was obvious that Well 6 was going to be impacted. On the way into Well 6 the fast-rising water level stalled the tractor and Roy had to be rescued. Roy contacted me

and stated he was trying to contact KDHE, since Well 6 was under water and a boil water advisory was needed.

A large front-end loader had to be used to rescue many people during this event. A boat was also used but the strong current made this less effective and more dangerous than the using the front-end loader. In fact, the boat and crew manning it were almost lost when it was pinned against a bridge.

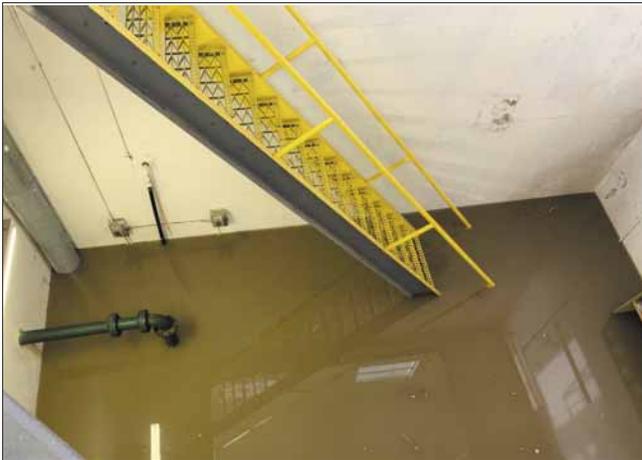
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Natoma's water system has three wells (5, 6 and 7) and all are drilled into the Paradise Creek alluvium. Well 6 was built to be above the floodplain, but not high enough for a 100-year type flood event, as this appears to be. This is the second time that well has gone under water in 28 years. A KDHE boil water advisory lasted from the May 16 to May 21, after being cleared by three random samples. Luckily, 40 psi was maintained through the entire flood event and nothing broke to cause a loss of pressure.

Natoma has always had infiltration problems during high rain events and this was the worst I had seen there. The sewage treatment system that consists of a collection lift



Note the flood water level at Well No. 6. This well was to have been built above the flood plain but it has been flooded on at least one previous occasion.



Shown here is several feet of flood water that has accumulated in the dry well side of the sewer lift station.



The portable pump in this photo is being used to dewater the lift station.

station and 3-cell lagoon system was overwhelmed and the two pumps were not able to keep up, while the 3rd cell was needing to be discharged to Paradise Creek before overflow damaged the dike. By Sunday afternoon, KDHE issued a permit to discharge to Paradise Creek. A pumper truck and trash pumps were then used to stay ahead of the incoming storm surge. The ground water level had also risen higher than the pump station floor and water was coming through the floor joints. Several homes were having the same issue when the water table rose higher than their basement floors. The impact on the sewer system was overwhelming with the combination of the storm water with the groundwater level rising above the mains and basements of homes. This has been a problem in the past and will need attention.

The 2021 flood appears to have crested just a few inches lower than 1993, but people that have witnessed both events say this flood came up faster, had higher current and then went down faster. Between 130 and 140 homes are uninhabitable and will likely remain so for some time. The post office and elevator also suffered flood damage.

Doug Guenther has worked as a Technical Assistant for KRWA for 16 years. Doug worked for the City of Oakley in the Water and Electric Department for eight years. He has also worked several years for an industry supplier. Doug is a Class II Certified Water Operator.



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