

The following write up is from Duke Doering, Historian for the South Dakota National Guard, contributed on June 28, 2016:

Today In History - June 28, 1972 - this date in SDNG history, Demolition of Ft. Meade Dam has been completed

While no lives were lost in Sturgis during the flood of June 9, 1972 in the Black Hills, emergency management officials were concerned that high water had stressed the mostly abandoned Fort Meade Dam, located in Deadman Gulch about 2.5 miles southwest of town. They feared that any subsequent rain could cause a dam failure, forcing a wall of flood water through the already soggy community.

Built in 1909, the reservoir behind the dam was designed to provide a dependable water supply to the Fort Meade cavalry post located east of Sturgis. Two major construction projects, one in 1924 and another in 1936, increased the height of the vertical concrete dam face to 56 feet above the seasonal streambed. Ironically, the porous rock formation beneath the reservoir rendered the location as an unreliable water source - it leaked too much to meet the needs of the garrison that had been converted into a Veterans Administration hospital as World War II was ending.

In the hectic days following the 1972 flood representatives from the Army Corps of Engineers, who had responsibility for the dam, performed an aerial survey and determined a course of action to eliminate future flooding caused by this dam's potential failure. The Corps designed a plan to remove most of the water in the dam with pumps, then blast a section of the face of the dam with explosives. Corps staff members requested assistance from the local National Guard unit, the 109th Engineer Battalion. Maj. Chris R. Mechling, the executive officer for the 109th was appointed the Officer in Charge (OIC).

A task force of South Dakota National Guardsmen from the 109th Engineer Battalion, 842nd Engineer Company and the 200th Engineer Company worked for more than one week build a road to the dam; deliver pumps, an air compressor, a rough terrain crane and other equipment to the little-known Black Hills reservoir. Trained as Army engineers, the soldiers also provided technical expertise in combination with their knowledge of the hometown terrain to execute the complicated and sometimes risky mission.

The existing unimproved road to the dam had washed out. Mechling detailed Capt. Robert Daane to find a way to get the necessary equipment into the area. Daane had the 842nd Engineer Company's International Model TD-18 bulldozer delivered to the entrance of the old trail going to the dam. Daane directed an experienced dozer operator, Sgt. Robert Grams, to cut a road wide enough to bring pumps, generators and equipment to the dam. Grams, a Sturgis native who had been a heavy equipment operator as a member of the U.S. Army in Vietnam, had experienced road building in dangerous places. He remembers, "This job, with the steep grades and cutting into the sides of mountains, was as dangerous as any job I was ever on."

When the road was completed on June 13, six trailer-mounted pumps were hooked to the unit's 5-ton dump trucks and hauled to the dam. The pumps worked most of the week, lowering the water level.

Retired Col. Larry Weiss, past commander of the 109th Engineer Group, remembers working the recovery after the flood. At the time he was a first lieutenant in the Chamberlain-based 200th Engineer Company. "I was a support platoon leader assigned to the 200th Engineer Company at the time of the flood. We had been in Rapid City building a fixed Bailey bridge over Rapid Creek, near the golf course. We were using timbers from the washed out timber bridges to build cribs for piers. We also built a single span bridge near the fish hatchery. One afternoon we were asked to take our equipment to Sturgis to build a raft and load pumps to pump down the reservoir because the pumps on top of the dam no longer had suction because of the height of lift. We took our equipment up "Bob Grams Road," which was a challenge. We found an assembly area away from the dam, assembled our Light Tactical Raft, loaded

the pumps in preparation for moving the raft and pumps to the face of the dam to begin pumping. Due to a damaged pontoon, we were short one bay. However, I had done some engineering calculations which showed we were OK, but with only about six inches of freeboard. With our small 25 horsepower outboard motors we moved the raft slowly to the face of the dam and began pumping at about dark. The pumping went well, however those pumps took considerable fuel. The only way to get fuel to them was carry it. I believe it was Capt. Tracy Hamblet and I who carried two, five-gallon cans each on that ledge at the top of the dam to fuel the pumps at about midnight, a very scary experience. The lighting was not great, and I don't like heights; however, we accomplished the mission."

By the evening of June 19 the pumps were removed from the water and the troops were getting everything ready for placing the explosives the next day.

On June 20th preparations for demolition of the Ft. Meade Dam had been completed. Most of the water had been removed from the reservoir. The 842nd Engineer Company brought in a Rough Terrain Crane and removed the pumps and raft.

Master Sgt. Roger B. Peterson, Maintenance NCO for the 109th Engineer Battalion commented, "Part of my job was to pick up the explosives from the storage facility at Ellsworth Air Force Base. I was driving a Jeep and trailer loaded with explosives down the Interstate and severe weather occurred with lightning strikes all around me. Needless to say I was relieved when I finally got the explosives secured the Ft. Meade Dam worksite."

Late in the afternoon of June 21, a cavity was blasted in the upstream face of the dam near the abutment. The blast was accomplished by blowing 2-inch diameter holes into the concrete with 15-pound shaped charges. Five charges were used to form an X-pattern and a sixth charge was used to deepen the center hole. Each hole was then loaded with C4 plastic explosive in order to create a cavity for a heavier charge. Earlier in the week 40 members of the 147th Field Artillery had drilled 89 holes, two inches in diameter, two to four feet deep around the section to be removed. These holes were loaded with a total of 250 pounds of dynamite. Seven, 150-pound satchel charges were strategically located to break the concrete, and 1,700 pounds of explosives were placed in the cavity in the face of the Ft. Meade Dam to eject the broken concrete. Detonation of the charge broke out a 25-foot deep section which was 80 feet wide at the top of the dam and 25 feet wide at the base.

Officials from the U.S. Army Corps of Engineers considered this a very successful mission. 44 years later the rubble pile of the old Fort Meade Dam stands as a quiet reminder of the National Guard's diverse role in the recovery following the Rapid City flood.