

Isabella dam's failure could lead to 'shocking' flooding

Carol Ferguson, KBAK (Bakersfield television), 10-30-13

LAKE ISABELLA -- Officials have an eye on conditions at the Lake Isabella dams while engineers get ready to address the concerns. If the dams failed, a lot of water would reach a wide area around Bakersfield, and it could be very deep.

But, emergency planners have an idea of what could happen, and what the public should do.

"It still surprises me to look at it, and just how far water would go," Kern County Emergency Services Director Georgianna Armstrong said. "It's surprising, and it's shocking, and the depths."

Eyewitness News was first to uncover new and major concerns about the dams about seven years ago. Since 2006, the U.S. Army Corps of Engineers has worked on plans to address the concerns, which include newly discovered earthquake faults in the area, a spillway that's too small and water seepage through the earth-filled structures.

Because of these concerns and the number of people living below the dams, they've been considered some of the most at-risk dams among those across the nation that the Corps manages.

Water levels in the reservoir have been restricted since the concerns were found. But, local emergency responders have plans in place if something happened when there was a lot of water in Isabella Lake.

"We assume that the triggering event for the dam would be an earthquake of some sort," Armstrong says. If the dams were compromised, water would start heading down the Kern River. "They have told it us it would reach the northwest portion of (Bakersfield) in four to six hours," she says.

That's an assessment based on inundation maps from the Corps of Engineers, the analysis also shows how deep the water could get.

Eyewitness News asked the Kern County Engineering and Surveying and Permit Services Department for details about specific depths at various places around Bakersfield. If the lake was full, and there was complete dam failure -- water could reach eight to nine feet at the Auto Mall south of White Lane, for example.

In northwest Bakersfield, water could get eight to nine feet deep at the Promenade shopping center on Rosedale Highway. In downtown Bakersfield, county officials say it could get 16 feet deep, and at the Father Garces statue the flood water could reach 22 feet high.

Again, that's the worst case scenario.

Armstrong says emergency plans must be based on what that worst situation could be. "If you have your protocol in place for the worst case scenario, you can meet the lesser case scenario," she says.

But, the threat can't be taken lightly. "Twenty feet of water is fatal," Armstrong says. "Ten feet of water is fatal."

Eyewitness News has learned the response plan continues to be fine-tuned. After an emergency drill in January,

planners started to look at potential problems even before the dams actually fail.

"You find the gaps, and improve it," Armstrong says. The "gap" was planning for a very large release of water down the Kern River which could happen if Corps engineers were trying to prevent a complete dam failure. The dams might not simply burst, but could crumble. During that time, engineers would try to release a lot of water, to reduce pressure on the dams.

County emergency responders are now looking at what they'll do for a so-called "pre-release" of water. "The downstream consequences are just something we have to deal with later, because dam failure is so much more severe," Armstrong says. But, a pre-release response will now be added to the emergency plan.

And the planning is vital.

The dams were built in 1953, and more than 300,000 people live and work below them. The latest update from the Corps of Engineers shows they plan to raise the tops of both dams by 16 feet to prevent water going over in an extreme flood situation.

They will also add a filter and drainage system to address seepage, and increase safety in the event of an earthquake. The plan includes adding a new spillway and lining the existing one. The Borel canal will also be moved. And, parts of Highways 155 and 178 will have to be moved.

At last word, work on the roads could start during the summer of 2015, and construction on the dams is now set to happen from 2017 to 2020. In the meantime, water levels have been ordered reduced and there's more monitoring of the dams.

Right now, water levels in Isabella Lake are extremely low. As of late October, it was reported at just 9 percent of capacity. So, the amount of water that would be released down river under those conditions is significantly reduced. But, water levels vary based on winter weather and how much the reservoir fills up.

Still, the Kern County Fire Department website calls dam failure "unlikely," and Armstrong says local responders have plans in place -- just in case. "Everyone take a breath, we're all OK," she says. "the Army Corps is working on it."