From: Andersen, Glen
To: DAMSafety2022
Subject: Rules Changes and Additional Permitting Criteria
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EXTERNAL MESSAGE
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To Whom It May Concern:

As a practicing dam safety engineer in the State of Florida, I am very concerned about legacy dams from the mining industry that have been placed into service as water retention facilities. Some of these are (or should be) classified as high-hazard dams and were not designed and nor constructed using modern standards of care. The original owners never intended them as long-term water storage facilities.

These legacy facilities were created by a dragline operator by simply casting the materials to form embankments. There was little or no engineering, no foundation preparation, and no engineering compaction control. When they were abandoned and then pressed into service as full-time water retention facilities, some engineering was performed for the conversion but not anywhere near the level necessary for a modern federally-regulated dam.

In my opinion, these facilities pose a significant and unacceptable risk to public safety. Unfortunately, development continues below these dams resulting in an ever increasing risk to lifelines and loss of life.

Unfortunately, there is no dam safety regulation in the State of Florida to require owners to apply modern dam safety criteria to the design, operation, and maintenance of these legacy facilities. The rules changes and additional permitting criteria being considered are a step in the right direction.

Requiring a downstream hazard potential analyses is essential in safeguarding the public, especially as more development occurs in the flood zone. Risk creep coupled with a lack of public awareness of the upstream hazard, creates an even larger danger.

Requiring an emergency action plan is also important. However, I would encourage the additional step that owners of High Hazard Dams be required to periodically conduct mock emergency training using real-world scenarios so they are better prepared.

A condition assessment for existing dams not under permits is also a great idea. I would suggest that both these types of dams and those that are operating under existing permits should be required to establish current conditions based on understanding the behavior of both the embankment and foundation soils, the ability of the dams to pass design flood events, and the current factors of safety against potential failures. In many cases, this will require additional subsurface explorations and geophysical work to establish baseline conditions.

I am also in favor of developing a dam registration database for hazardous dams and requiring critical condition notifications.

If I can be of further help in advancing the state-of-practice in dam safety engineering in the State of Florida and bringing our level of safety up to federally-developed guidelines, please let me know how I can participate.

Unfortunately, I believe we are just one very bad storm event away from having a major manmade catastrophe in the State of Florida through the failure of one of these legacy dams. We have the knowledge and expertise to prevent such a failure, but we need the State of Florida to step up and develop a dam safety regulation that mandates the application of state-of-the-art knowledge and expertise.

Sincerely,

Glen

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