

A Message from John McCain, PE - Manager Dams and Reservoirs Safety

I realize 2020-2021 has been a trying time in all our lives. I sincerely hope this year's version of our newsletter finds you healthy and well. This year, I would like to briefly talk about the ways that dam safety is not just a job for DHEC, but a partnership between you, DHEC, your County and local governments, and many other players you may not even realize. While the dams themselves often go unnoticed, the lakes and ponds they create are enjoyed by many, and some serve very valuable and beneficial functions in society. However, impounding water behind a dam – in other words, attempting to defy gravity – has inherent risk, as we see in the news when gravity wins and a dam fails, releasing its water to cause death and destruction downstream. This lurking threat is why a partnership is needed. As the owners and operators of dams across the state, it is your eyes and your actions that ultimately allow us to safely co-exist with dams and reservoirs in our communities. As the state's regulatory agency for dams, DHEC obviously plays a critical role in ensuring compliance with and enforcement of the state's dam safety law and regulations. The consulting engineers, who have the expertise and knowledge to design dams and make repairs, are also key to this partnership. Local government officials, who help with planning for and responding to dam-related emergencies, are the professionals trained and ready to step in to when disaster strikes. And we have other partners, too, willing to help with

education, training, resources, and other means of assistance. They include SCDOT, SCDNR, SCEMD, Clemson University, the University of South Carolina, USDA-NRCS, ASDSO, FEMA, the US Army Corps of Engineers, and others. We talk about some of these partnerships in our State of the Dams Report, published in August 2020, and available at scdhec.gov/dams.

To help you, our most important partner, we have and continue to undertake endeavors to lift the burden of dam ownership and give you tools to help you be better informed, educated, and prepared. Some of these endeavors, past, present, and future, include:

- A free-of-charge Emergency Action Plan creation service, including performing the dam breach inundation modeling and map creation
- Dam Owners Workshop videos (course offered November 2019, recording available via DHEC's YouTube channel)
- Dam Information Technical Bulletins (e.g., how to install a temporary siphon)
- An interactive, web-based Dam Ownership Course in partnership with Clemson Extension. For more information, please visit: clemson.edu/extension/water/dam-ownership.html
- An Emergency Action Plan creation and storage website (on the horizon)

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- A do-it-yourself remote, internet-based water level monitoring system (in partnership with University of South Carolina—still in the prototype stage)
- High Hazard Potential Dams Rehabilitation Grant program (for eligible High Hazard dams)
- Webinar series held in 2020 specifically targeted to the challenges faced by neighborhood associations that own dams (recordings available via our web site)

We hope you take advantage of some of these resources, and please send us your ideas and suggestions for other ways we can help. Until next year!

News/Information

CodeRed/ReadyOp Emergency Notification Change

DHEC has switched to a new system for making emergency notifications to dam owners called ReadyOp, which replaces the CodeRED notification system we have been using since 2016. The ReadyOp system offers more functionality for lower cost to the state, but you as a dam owner should see virtually no change.

ReadyOp, like CodeRED, allows the Dam Safety Program to send scripted telephone calls (robocalls), text messages, and emails to owners and operators of regulated dams. ReadyOp will be used in a targeted manner, where alerts are sent to dam owners in the counties which may be affected by a given weather event. Only under certain circumstances, such as a hurricane approaching the state with a large cone of uncertainty, do we send an alert to all dams across the state. Once a year, the Dam Safety Program conducts a test alert to all owners of regulated dams. This year, our test will take place on June 18, 2021. If you are already registered with CodeRED, your information has been transferred to ReadyOp. If you were not previously registered with CodeRED, registering for the new ReadyOp system notifications is easy, and owners may register themselves and/or a desired emergency contact by contacting the Dams and Reservoirs Safety Program at 803-898-4050 or by emailing us at response@dhec.sc.gov.

Dam Safety Information Bulletins

The Dam Safety Program has developed technical information bulletins for various dam safety-related topics. Topics are chosen by Program Staff to assist dam owners and to broaden their knowledge on these subjects. Technical bulletins are available on the DHEC Dam Safety Program website at scdhec.gov/DamResources. Suggestions for future topics from owners is welcome and encouraged. Please reach out to us at response@dhec.sc.gov.

Understanding Dam Classifications

Dams are classified based on their size (large, intermediate, small, very small) and their hazard potential (high, significant, low). For a dam to be regulated by SCDHEC, it must meet at least one of the following criteria and not qualify for a regulatory exemption.

A dam is subject to regulation under the Dams and Reservoirs Safety Act if it:

- Is 25 feet or greater in height from dam crest (top) to lowest point on the downstream side; or,
- Can impound (hold back) 50 acre-feet (i.e., 2,178,000 cubic feet) or more of water at maximum storage; or,
- Represents a high-hazard potential where improper operation or dam failure may cause loss of human life, regardless of the overall size of the dam.

Dams exempted from state regulation are those that meet at least one of the following circumstances applies:

- It does not meet the regulated size and potential loss-of-life criteria
- It is owned or operated by a department or agency of the federal government
- It is owned or licensed by an appropriate federal licensing agency in the department's judgment, including the Federal Energy Regulatory Commission or the United States Army Corp of Engineers.
- Where the South Carolina Department of Transportation or a county or municipal government has accepted maintenance responsibility for a road or highway and that road or highway is the only danger to life or property if the dam were to fail.
- In the Department's judgment and because of the dam's size and location, there is no significant threat or danger to downstream life or property.

Hazard potential is determined by the department using the best available data and evaluating the potential loss of human life or property damage in the event of failure or improper operation of the dam.

- A High Hazard Potential (Class 1) dam is a structure where its failure will likely cause loss of life and/or serious damage to homes, industrial and commercial facilities, important public utilities, and main highways or railroads.
- A Significant Hazard Potential (Class 2) dam is a structure where its failure will not likely cause loss of life, but may cause damage to homes, industrial and commercial facilities, secondary highways or railroads, or cause interruption of use or service relatively important public utilities.
- A Low Hazard Potential (Class 3) dam is a structure where its failure may cause limited property damage to others and loss of life is not expected.

Notices/Reminders

Preparing for Summer Storms/Hurricane Season

With a new Hurricane Season quickly approaching, all dam owners should ensure they and their dams are as prepared as possible for the extreme rain events that can be caused by tropical systems. Also keep in mind that summer thunderstorm can drop several inches of rain in a matter of hours, and these often come with little or no warning. After any rainfall event, the incoming flow from the upstream watershed can continue to flow into your pond for hours – or even days - after the rainfall stops. In fact, you may not even receive a drop of rain at your dam, but rain in the upstream watershed will eventually flow into your pond and cause the water level to rise. When such an event is forecast or has occurred, dam owners should:

- Evaluate the water level in the pond/lake and determine if water levels can be safely lowered to make room for incoming flows.
- Coordinate with dam owners and/or property owners downstream.
- Routinely clear debris from spillways.
- Review your Emergency Action Plan.
- Keep alert. As the storm passes, watch for rising waters.
- Report any concerns to the DHEC Dam Safety Program staff at 803-898-1939 (we are available 24/7 at this number)

Emergency Action Plans.

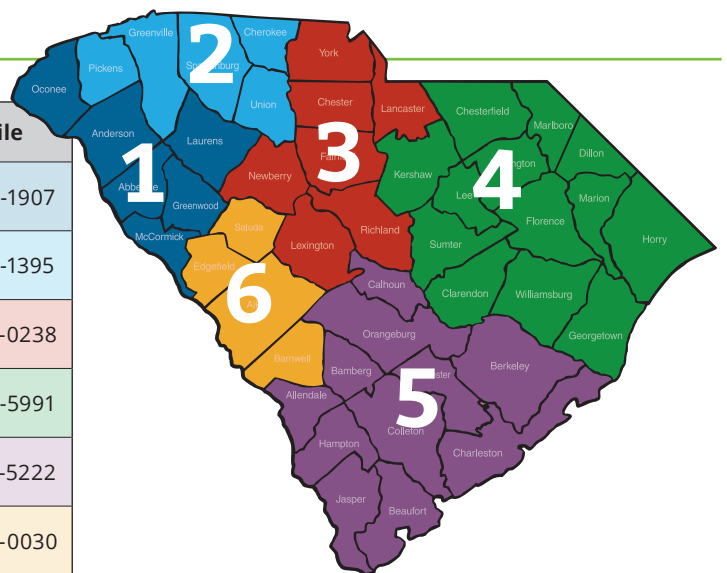
No one wants to be in an emergency situation and find themselves having to make snap decisions or searching the phone book or internet for phone numbers to alert emergency personnel or people that may be in harm’s way. The way to avoid this situation is to prepare in advance for a potential dam safety emergency or threat by creating an Emergency Action Plan (EAP).

So what is an Emergency Action Plan (EAP)? It is a formal document that assists the dam owner in identifying potentially unusual or emergency conditions at a dam and defines the process that an owner will use to minimize the potential loss of life and property damage. It is required by law for all dams classified as High or Significant Hazard (and although not required for Low Hazard dams, it is recommended to have one). It is the dam owner’s responsibility to detect unusual or emergency conditions and implement their EAP when necessary.

Can I get some help in creating an EAP? Yes, DHEC can assist you in creating your EAP. Upon request, DHEC will provide you with the most current template based on FEMA guidelines, and will pre-populate the template with information we have in our files. We will also prepare a dam breach inundation map and identify any potentially habitable structures that might be in harm’s way from a dam breach. Please reach out to us at response@dhec.sc.gov if you are interested in this service.

DHEC Regional Staff Listing

Area	Office	Staff	Office	Mobile
1	Anderson	Hannah Vinson vinsonhm@dhec.sc.gov	864-260-5585	864-276-1907
2	Greenville	Chuck Owens owensc2@dhec.sc.gov	864-372-3273	864-561-1395
3	Columbia	Ryan Sullivan sullivrd@dhec.sc.gov	803-896-9548	843-992-0238
4	Florence	Jared Woodard woodarjc@dhec.sc.gov	843-673-6684	843-687-5991
5	Orangeburg	Dani Felkel felkeldh@dhec.sc.gov	803-533-5490	803-614-5222
6	Aiken	Brian Young youngbc@dhec.sc.gov	803-642-1637	803-995-0030





Dam Safety Program
2600 Bull Street
Columbia, SC 29201



We're On Call

**Dam Safety Program Staff
are available 24-7 in the event
of an emergency situation at**

803-898-1939

View past issues of this newsletter at scdhec.gov/dams.