

**Virginia Department of Conservation and Recreation  
Public Hearing on Proposed Impounding Structure Regulations  
(4 VAC 50-20-10 et seq.)**

**October 10, 2007 in Richmond, Virginia**

**Meeting Officer:** David C. Dowling  
Director of Policy, Planning and Budget  
Department of Conservation and Recreation

**Opening:**

**Mr. Dowling:** Good Evening, I would like to call this public hearing on the Virginia Soil and Water Conservation Board's proposed Impounding Structure Regulations to order. I am David Dowling, Director of Policy, Planning and Budget for the Department of Conservation and Recreation. I will be serving as the meeting officer this evening. I welcome you to this hearing.

I would like to thank the Henrico County for allowing us to use this facility.

***Introduce DCR Staff assisting with the meeting.***

With me tonight I have Joe Maroon, DCR Director, Russ Baxter, DCR Deputy Director, Bill Browning, Division Director for DCR's Division of Dam Safety and Floodplain Management. Also with me are Jim Robinson, DCR's Dam Safety Program Manager, and Michael Fletcher, DCR's Board and Constituent Services Liaison. Michael will be audio taping our meeting and developing a set of minutes of the comments received tonight. Other DCR staff members with me this evening is Ryan Brown, our Policy and Planning Assistant Director, who will serve as our technical presenter, and Christine Watlington, our Policy and Budget Analyst.

Rob VanLier and David Conniff our regional dam safety engineers for this area is also joining us this evening.

I hope that all of you have registered on our attendance list. If not, please do so. Those wishing to speak should note that on the attendance list. Please also make sure that your contact information, including your name and address, is legible and complete as we will be utilizing it to keep you informed on the status of the regulatory action.

**Purpose of the public hearing:**

The purpose of this hearing is to receive input from interested citizens on the Board's proposed Virginia Impounding Structure Regulations during the 60-day public comment period which opened on August 20<sup>th</sup> [Vol 23 Issue 25] and closes on October 19th. These regulations not only impact dam owners but also impact the growing number of Virginians living downstream from dams.

The Department used the participatory approach to develop the proposal. Following the publication of the Notice of Intended Regulatory Action regarding these regulations in December of 2005 and the public comment period on the NOIRA, the Department formed a Technical Advisory Committee to assist in the development of the proposed regulations. The TAC included representatives from localities owning dams, owners of both large and small private dams, Soil and Water Conservation Districts, engineers, and federal and state regulators to name a few. The 28-member TAC met seven times between the months of May and October 2006. Following the completion of the TAC's work, the Soil and Water Conservation Board proposed these regulations at its meeting held on November 15, 2006. Copies of the proposed regulations are located on the table near the attendance list.

This concludes my introductory remarks. I would like to introduce Ryan Brown, DCR's Policy and Planning Assistant Director, who will explain in more detail what the proposed regulations do.

**Mr. Brown:** Thank you Mr. Dowling.

The Board's regulatory proposal has been developed to support and advance the goals of the Virginia Dam Safety Act, contained in § 10.1-604 et seq. of the Code of Virginia, which gives the Board the authority to adopt regulations to protect the health, safety, and welfare of citizens through ensuring that all regulated dams are properly and safely constructed, maintained, and operated.

Key provisions of this proposed regulatory action include the following:

1) First, a revision of the dam classification system found in 4VAC50-20-40 from four categories (Class I, II, III, and IV) to three hazard potential classifications (High, Significant, and Low). This conforms the classification categories contained in the regulations to those used by federal agencies and many other states.

2) Second, a specification that the Spillway Design Flood requirements found in Table 1 of 4VAC50-20-50 are applicable to all dams, and not just those constructed after July of 1982, as the currently-effective regulations state. In addition, Table 1 is revised to:

- Reflect the revised dam classifications
- Update spillway design requirements to enhance public safety and to move towards federal standards.
- Eliminate spillway design flood ranges within categories, which may result in inconsistency in application.
- Require that the spillway of all high-hazard dams be engineered to pass the full Probable Maximum Flood.
- Specify minimum thresholds for incremental damage assessments, which may be used to lower the required spillway design floods for dams.

3) Third, the creation of a new section, 4VAC50-20-52, that allows for the potential reduction of the spillway design flood requirement through an incremental damage assessment where the breach of a dam would not significantly worsen downstream flooding. This had previously been

applicable only to dams constructed prior to July 1982, but now would be applicable to all eligible dams.

4) Fourth, the creation of a new section, 4VAC50-20-54, that sets out dam break inundation zone mapping requirements for all dams to be used in hazard potential classification determinations and in the development of Emergency Action Plans for High and Significant Hazard Potential dams.

5) Fifth, a specification in a new section, 4VAC50-20-58, that for each Operation and Maintenance certificate (Regular or Conditional) issued, the impounding structure owner shall send a copy of the certificate to the appropriate local government(s) with planning and zoning responsibilities.

6) Sixth, the development of language in a new section, 4VAC50-20-125, establishing a delayed effective date for certain dams determined to have an adequate spillway capacity prior to the effective date of these regulations but that would require modifications due to changes in the regulations. This delayed effective date section would allow upgrades to these dams to be phased in over an 8 to 11 year period.

7) Seventh, the creation of a new section, 4VAC50-20-175, expanding emergency action plan requirements for High and Significant Hazard Potential dams. The plan would be developed and periodically tested in coordination with all entities, jurisdictions, and agencies that would be affected by a dam failure or that have statutory responsibilities for warning, evacuation, and post-flood actions.

8) Eighth, the creation of a new section, 4VAC50-20-177, establishing emergency preparedness plan requirements for each Low Hazard Potential dam. These plans contain lesser requirements than the Emergency Action Plans required for High and Significant Hazard Potential dams due to the reduced threat posed by Low Hazard Potential dams.

9) Ninth, the creation of a series of new sections that establish fees for the administration of the dam safety program. These include the following new sections:

- 4VAC 50-20-340 Authority to establish fees
- 4VAC 50-20-350 Fee Submittal Procedures
- 4VAC 50-20-360 Fee Exemptions
- 4VAC 50-20-370 Construction Permit Application Fees
- 4VAC 50-20-380 Regular Operation and Maintenance Certificate Application Fees
- 4VAC 50-20-390 Conditional Operation and Maintenance Certificate Application Fees
- 4VAC 50-20-400 Incremental Damage Analysis Review Fees

10) Tenth, the removal of all forms currently incorporated by reference and incorporation of required elements of the forms into the regulations. Recommended forms will still be available. This will allow for the modification and improvement of forms without going through a lengthy regulatory action.

11) Eleventh, the provision of definitions or modifications to definitions in section 4VAC50-20-30 for the terms “Agricultural purpose”, “Agricultural purpose dam”, “Alteration”, “Construction”, “Dam break inundation zone”, “Department”, “Drill”, “Emergency Action Plan or EAP”, “Emergency Action Plan Exercise”, “Emergency Preparedness Plan”, “Freeboard”, “Height”, “Spillway”, “Stage I condition”, “Stage II condition”, “Stage III condition”, “Sunny Day Dam Failure”, “Tabletop Exercise”, and “Watercourse”.

12) Twelfth, updates necessary to reorganize, clarify, and expand multiple sections related to permits and the repealing of sections that are incorporated into the reorganized sections. These updates are included in:

- **4VAC50-20-70** Construction permits.
- **4VAC50-20-80** Alterations permits.
- **4VAC50-20-90** Transfer of permits.
- **4VAC50-20-105** Regular Operation and Maintenance Certificates.
- **4VAC50-20-150** Conditional Operation and Maintenance Certificate.
- **4VAC50-20-155** Extension of Operation and Maintenance Certificates.
- **4VAC50-20-160** Additional operation and maintenance requirements.

13) Thirteenth, the creation of a new section, 4VAC50-20-165, stating that dams operated primarily for agricultural purposes which are less than 25 feet in height or which create a maximum impoundment capacity smaller than 100 acre-feet are exempt from the regulations.

14) Fourteenth, and finally, updates to section 4VAC50-20-180 related to inspections, section 4VAC50-20-200 related to enforcement, and section 4VAC50-20-220 related to unsafe conditions. These updates reflect changes in the Code of Virginia made during the 2006 General Assembly.

This concludes the summary of key provisions contained in the proposed regulations.

**Mr. Dowling:** Thank you Mr. Brown.

Before we begin receiving testimony on the proposed regulations, I would like to stress that this is an information-gathering meeting. Everyone wishing to speak will be heard. If necessary, we may ask speakers questions concerning their testimony or to request additional information concerning a subject believed to be important to the process in order to help the clarify and properly capture your comments. Staff will be available after this hearing to take any individual questions you may have.

We will now begin the public comment portion of the hearing. When I call your name, please come to the front and use the podium. Please state your name and whom you represent. If you have an extra copy of your comments, we will be happy to accept it.

### **Public Comment Portion**

*Barlow Delk*

I am Barlow Delk, General Manager of the Louisa County Water Authority.

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First, I would like to offer comments about the ongoing conflicts or disagreements with the Department on the inspection of a couple of our dams. There are a few things that don't make sense in the regulations.

I don't want anyone to take offense, but I feel like some people that come in to argue about a tax increase. They don't think they can do any good but they're going to say it anyway.

The last thing is a comment, and some personal experiences.

First, Louisa County and the Louisa County Water Authority have two multi-purpose dams that are flood control dams built by the Soil Conservation Service to control floods. One of them we use as a reservoir and for public drinking water. That's in the Louisa-Mineral Area, the Northeast Creek Reservoir, probably listed as South Anna Site #22. The other is Lake Gordonsville, which we purchased from the Town of Gordonsville for the same purpose. This is also a flood control lake.

I have conditional renewals on both of those permits from the fact that basically the County and my Board has refused to comply with what I read as the regulations on these dams.

We've been renewing those permits over the years doing whatever is necessary to renew those permits. The last time around I've been asked for dam break analysis and a flood inundation study. It's quite expensive. We requested the statutory requirement that required us to do this since this is something new and we are stewards of the taxpayers' money. We were basically told it will have to be done in the future, and that the Department feels right now that we do have the authority to do that.

My board voted two times to tell me to request the statutory requirement and if you gave us that we will comply. They are very pleasant people to work with. They understand where I'm coming from. I understand where they are coming from.

Each of us has a job to do, but that's the position we've taken.

We have no sense of any feeling that these dams are unsafe. If they were we would spend whatever money is necessary to fix them. I have conditional permits for both of those lakes

One of the things pointed out is possibly the spillways are not wide enough. The requirements were changed on the spillway. One of our points is that we didn't want to comply with proposed regulations. You're in the process of writing those regulations. If we comply with proposed regulations what's there to say after we've spent the money and we come back and a few things aren't different in the regulations.

I guess the end result is that we get extended into the period to where we can write the check for \$2,500 for the new permit and do it anyway. That was a position that my Board took. You understand I'm looking at a lake we built as a flood control lake in 1983. The County paid to have it oversized like a reservoir because the County wanted 1,500 acre-feet of usable water.

So the Soil and Water Conservation service paid 38% for the cost of the dam.

This lake has never seen water in the emergency spillway. The only hazard downstream is Route 33 that the lake was built to protect. The road has never closed; the emergency spillway has never had water on it. When we are looking at the data, we have a hard time saying we are going to spend the money to do these things so we'll wait for the regulations to come out.

We've asked Soil Conservation for a runoff study to make sure these lakes are large enough to control a flood. Our country attitude was that if the Soil Conservation Service designed them and built them for that purpose, then someone had already done this study and it would be sufficient.

I'll get to the part of looking through these regs.

The regulations are asking for a dam break analysis using a probable maximum flood without a dam failure. What is a dam break analysis if the dam didn't fail? That sounds like a probable maximum flood analysis, but you are asking us or somebody down the road to do something that is completely illogical.

Once again, I know there are politics involved with this. Somehow these regulations claim that 100 acre-feet of water in an agricultural pond that's say, 24.5 feet tall is of no hazard downstream. It doesn't even ask anything, it just asks the owner to say it's an agricultural pond. There is no analysis downstream.

But if you own a hotel or something and you have a pond with 50 acre feet and six feet high, that meets the requirements. That just points to me that politics has something to do with this.

I just want to point out the illogical part of this that I think you would have a hard time explaining.

What I get to now is the PMF, the probable maximum flood. PMF to me has a special meaning when I have the data sent to me saying 28 inches of rain in six hours. I would define that as August 19-20, 1969, Lovingston, Virginia in Nelson County. I was out in that probably maximum flood.

I think you are fooling yourselves and the people of Virginia if you think that you are going to save anyone or do anything in a probable maximum flood. I would suggest that you footnote probable maximum flood and say it will kill more than 1% of the population in the County where it hits.

The probable maximum flood will take out probably 103 bridges in a County in a matter of hours.

Many miles of highway will be washed away by the probable maximum flood. You are talking about asking us to design and maintain dams that will handle this water.

I saw five tractor-trailer trucks parked on the side of Route 29 washed away by a probable maximum flood. In months of looking, we never found a single trace of those trucks anywhere. One tractor-trailer was found buried in sand in a place called Nelson wayside.

For you to be using that term that we are going to design dams that will handle that you are fooling yourself.

The probable maximum flood caused the James River to flow backwards on two occasions. When the Rockfish and the Tye River flow into the James River at 25-30 ft higher than the flow of the James, the water goes upstream for approximately one mile washing out houses and tanks upstream.

This is the terminology all through here that I don't think you understand the concept if you weren't out in it.

No tabletop exercise done in a relaxed atmosphere is anywhere similar to this. To think that you'd waste your time on a tabletop exercise is absolutely ridiculous.

We're asked to build new dams and retrofit dams to do this.

After 9/11 did anyone say we should go through New York City and retrofit every building?

When a tornado comes through Kansas they don't say that we will build back to withstand a probable maximum tornado.

I recognize you have a heavy task. But I don't think you realize how big a task it is.

I work with the water and sewer business in Louisa County. I'm on the side of I-64 all the time. I look at a seven ft. by six ft. culvert. Every one of those at a probable maximum flood is a dam. I don't think any of them would take 28 inches of water in six hours.

Under the Southern Railroad in the county there is a tunnel about 20 feet wide about 25ft high. That tunnel under the Southern Railroad will back water up 50 ft. deep for over a mile. That's a probable maximum flood in reality.

I want to read you one thing. This was written after the flood by Major General Albert P. Denison:

“During the height of the rainfall there would have been no known refuge. It is probable that no known human act of ingenuity could have prevented the loss of a single life. Had mass excavation procedures been implemented in Nelson County, more lives could have been lost due to panic. Mountain slides, washed out roads and bridges clogged evacuation routes and a rain falling so far that vision would have been completely obscured.”

In 1969-70 he said there was nothing that could have been done to save one life.

I almost think PMF trivializes what we are talking about.

I think this is feel good legislation. I would hope you would put something realistic in there.

**Mr. Dowling:** That completes the list of those individuals who signed up to speak. Are there other individuals who would wish to comment or leave written remarks?

**Closing:**

**Mr. Dowling:** A handout is provided on the table outlining the public comment submittal procedures I am about to cover and the dates and locations of the remaining public meetings.

Persons desiring to submit written comments pertaining to this notice and this meeting may do by mail, by the internet, or by facsimile. Comments should be sent to the Regulatory Coordinator at: Virginia Department of Conservation and Recreation, 203 Governor Street, Suite 302, Richmond, Virginia 23219. Comments also may be submitted electronically to the Regulatory TownHall. Or comments may be faxed to the Regulatory Coordinator at: (804) 786-6141. All written comments must include the name and address of the commenter. In order to be considered, comments must be received by 5:00 PM on October 19, 2007.

I would also draw your attention to the copies of the Virginia Dam Safety, Flood Prevention and Protection Assistance Fund Loan and Grant Manual and the loan round announcement on the table. The Fund is authorized to make loans and grants for qualifying dam rehabilitation, dam break inundation zone mapping, and floodplain-related projects proposed by local governments and private entities. The Department of Conservation and Recreation in cooperation with the Virginia Resources Authority intends to open a loans only round on December 1, 2007 with applications due by February 1, 2008. All funding will be awarded on a competitive scoring basis, and all qualifying loan applicants must additionally undergo a financial capability analysis by the Virginia Resources Authority prior to final loan approval.

With that announcement, I would like to thank each of you for attending this meeting and providing us with your views and comments. This meeting is now officially closed. Staff will be available afterwards to take any individual questions you may have.

I hope that everyone has a safe trip home.

**Members of the Public Present**

Wade Biddux, Natural Resources Conservation Service

Lisa Cahill, Watershed Services

Dave Campbell, Schnabel Engineering

Nancy Cecil

Michael Claud, Timmons Group

Terry Cove, Roger Chenault

Barlow Delk, Louisa County Water Authority

Ron DiFrancesco

Davis Grant, Lake Barcroft WID

Bob McCarty

Rick McWhurter, Central Virginia Water Storage

John Woodburn, Henrico County Department of Public Works