VERMONT

Vermont Department of Environmental Conservation *Agency of Natural Resources*
Dam Safety Program
Water Investment Division
1 National Life Drive
Montpelier, VT 05620-3510

Public Comment Responses

SUBJECT: Act 161 – Chapter 43 - Regulation of Dams
Draft Pre-file Dam Safety Rules - Comment Responses

DATE: January 27, 2020

PREPARED BY: Benjamin Green, PE and Steven Hanna, VTDEC Dam Safety Program (DSP)

The following are written public comments submitted to the Department of Environmental Conservation (DEC) in response to the Draft, Pre-file Administrative Dam Safety Rule that was presented at the November 5, 2019 Dam Safety Workshop held at the Pavilion Auditorium in Montpelier. The Rule has been available for download on the Department website since late October 2019. Public comments were received up until December 10, 2019. Comments were requested of the Workshop attendees, dam owners, other State and Federal Officials, environmental groups, and the engineering consultant community. In some instances, the comments have been paraphrased or edited for clarity, readability, and conciseness. Responses from the DEC Dam Safety Program (DSP) are provided. All written comments as received are appended to the end of this document.

COMMENT 1:
Current wording: "Federal dam" means a dam owned by the United States or a dam subject to Federal Energy Regulatory Commission license.

I suggest changing to: "Federal dam" means a dam owned by the United States or a dam subject to a Federal Energy Regulatory Commission license or exemption.

The Federal Power Act (FPA) defines a class of hydroelectric projects that are under Federal Energy Regulatory Commission (FERC) jurisdiction but are exempt from certain provision of the FPA. They are issued a "FERC exemption" that specifies operating conditions but does not have to be reissued periodically, i.e., it runs forever. Exempt projects are subject to FERC inspections and compliance oversight.

RESPONSE 1:
The suggested edit follows the statutory language and the intent of the rule to not include/regulate any dam that is under FERC jurisdiction. The suggested edit was incorporated into the definition of "Federal Dam."

COMMENT 2:
It is encouraged that during Emergency Action Plan (EAP) development, the public be involved and or notified about the risks associated with the dam

RESPONSE 2:
The DSP agrees that public involvement during EAP development is important and preferable, and such requirements will be considered in the Standards Rules, which are due for completion and adoption in 2022.

COMMENT 3:
There is a lot of discussion around the 500,000 CF/11.5 A-FT threshold and what owners are expected to do regarding that. If you can modify a dam or even remove it without impacting the downstream hydraulics to become below the threshold of regulation, than just do it. There is a cost benefit to not even having a dam and being regulated if you do not need to have a dam.

RESPONSE 3:
Vermont State Statute is clear that for dams that impound >500,000 cf of water or liquid at maximum pool, an application and Order (permit) is required for alteration, including removal, see 10 V.S.A. § 1082.

COMMENT 4: Dam owners seem displeased with liability and responsibilities of dam ownership stated in the rule.

RESPONSE 4:
Section 43-106 of the proposed rule clearly defines general dam owner liability and responsibilities. While most of these concepts are applicable through common law, they are articulated in the rule for greater clarity The DSP acknowledges that there is a common misperception that the State or Town is responsible for safely maintaining and operating privately owned dams. The DSP will strive to provide Dam Owner outreach and education on these and all requirements of the proposed Dam Safety Rules.

COMMENT 5:
Some dam owners and those with an interest in dams are concerned that dam safety engineering consultants may take advantage of the rules for their professional benefit, especially if doing work for a private client. If it is a state regulated dam of significance, it should be required that the State be copied and involved on any developments in construction, Emergency Action Planning, etc. to prevent this issue.

RESPONSE 5:
The DSP concurs. The DSP currently has authority through 10 V.S.A. § 1082 to require application and approval to construct, enlarge, raise, lower, reconstruct, or alter any non-federal, non-power dam capable of impounding more than 500,000 cubic feet of water or other liquid. DSP also intends to update Dam Order application requirements, but that update is not contemplated in this part of the Rule. In addition, development of EAPs and other standards relative to dams will be considered in the next phase of the Rules.

COMMENT 6:
It could be made clear to the owners and public that if anyone wants information on dams, they can put in a request through the Freedom of Information Act (FOIA) to gain access to information (inspections, EAPs, etc.).

RESPONSE 6:
The DSP's files are public record and searchable through the Vermont Public Records Act process.

COMMENT 7:
Is there anything that can be added to the rules that prescribes any memos of understanding or partnerships between the four dam safety regulators in Vermont (VT DEC DSP, Public Utility Commission (PUC), FERC, and Federal Owners (USACE, etc.))? Is there a disconnect between the four regulators in terms of information sharing?

RESPONSE 7:
There is no overlap with respect to jurisdiction between the four dam safety regulators in the State:

- DEC regulates non-power, non-federal dams (~1,000 dams total)
- PUC regulates power dams generally constructed before 1935 (~20 dams total)
- FERC regulates power dams generally constructed after 1935 (~80 dams total)
- The Federal Government self-regulates the dams it owns, such as those owned by the US Army Corps of Engineers (~15 dams total)

The distinct jurisdictions of DEC and the PUC is described in Title 10, Chapter 43 of Vermont statute, but the proposed Rules only apply to DEC regulated dams.

COMMENT 8:
43-103 Breached Dam. It's possible to imagine a dam that maintains its reservoir drained under normal flows and rapidly fills the reservoir during storm inflows in an unsafe fashion. Should say, "maintains the reservoir drained under average annual peak flow conditions."

RESPONSE 8:
In this definition, the condition described above is considered, which is why a Breached Dam is a regulated dam, while a Removed Dam is no longer regulated. The phrase, "mean annual flow conditions" was selected because it describes the normal or typical conditions at the dam.

COMMENT 9:
43-103 Dam. The definition of dam for the purpose of the rule must include a minimum size below which the structure is non-regulatory. Spring boxes, artesian wells and artesian frog ponds, children's stone and gravel weirs, USGS gage weirs, any highway embankment and culvert with a minimum flow, there will be hundreds if not thousands of structures statewide included in rule jurisdiction to no useful dam safety effect. Under this rule, the owner of, for example, a spring box would have to record his dam with the town, allow the Department free access to his property, subject to random inspection requests by any "interested person" and information requests by the Department. In the hearing before the Senate committee that reviewed the legislation that authorized this rule, the question of minimum size was raised and an Agency Representative stated that yes there would be a minimum size and that it would be in the rule proposed. The definition of Dam should be amended to say that a dam for the purpose of these regulations is any artificial barrier taller than three feet or capable of impounding more than 1 acre-foot of water under normal conditions.

RESPONSE 9:
The definition of a Dam is codified in State Statute 10 V.S.A. § 1080. There is no allowance in the statutory definition to further define what a dam means, but there is opportunity to exempt certain structures from regulation through the rule. Exempted structures includes: barriers or structures created by wildlife, transportation infrastructure with no normal water storage capacity (i.e, culverts), stormwater management structures, agricultural tanks or waste storage facilities, wastewater tanks and vessels, dug ponds, wastewater tanks, and levee. Many of the structures referred to in the comment are minimal hazard and will not be subject to regular inspection under the rules.

COMMENT 10:
43-103 Minimal hazard potential dam. Language like, "Dams capable of impounding…" should be used to rope in dams which are drawn down but may store water in a storm. There is a question of impounding up to what level. "(Impounding) below the top of the highest non-overflow portion of the dam or embankment"

RESPONSE 10:
As stated in 10 V.S.A. § 1082(b), "For the purposes of this chapter, the volume a dam or other structure is capable of impounding is the volume of water or other liquid, including any accumulated sediments, controlled by the structure with the water or liquid level at the top of the lowest nonoverflow part of the structure." Minimal hazard dams are those that impound or in the case of a drained or breached dam, are only capable of impounding less than 500,000 cf of water or other liquid and are of LOW hazard classification. The phrase, "capable of impounding," was incorporated into the rules.

COMMENT 11:
43-104 sub 2. (No action shall be brought against the State….) Can the Department by rule preclude legal actions against itself? It might be possible to prevent a dam owner from taking legal action against the State, but a person injured downstream? If it's possible, then the language should be a broadened to include 43-115 Emergency Actions as well which are more likely to give rise to claims.

RESPONSE 11:
This provision has been removed from the Rule. Limited liability regarding actions against the State is already established in 12 V.S.A. 5601. State is statutorily liable for the negligent or wrongful actions of employees resulting in injury or loss of property.

COMMENT 12:
43-109 sub 1. Should recognize that hundreds of dams have already been classified and that the historic classification is the default classification. Otherwise "shall be assigned" could create a requirement for the State to undertake hundreds of classification studies and assignments. Each of the resulting assignments would be an administrative action that could be appealed by the dam owner.

RESPONSE 12:
For dams that have been previously classified, the classification documented in the Vermont Dam Inventory will be the default classification until the first hazard creep review is performed. The exception to this is dams that meet the definition of a MINIMAL hazard dam will be reclassified as Department resources allow.

COMMENT 13:
43-109 sub 3. Who will do hazard creep reviews on MINIMAL hazard dams? If there are thousands of minimal hazard dams, it's a burden on the dam owners and an unmanageable workload for the State.

RESPONSE 13:
It is our intention that the Department will perform the hazard creep reviews. It is intended that the hazard creep reviews for these dams will generally consist of a simple desktop review of available topographic and aerial mapping to determine if any changes in downstream hazard exist. In the case that new development in the potential dam failure inundation zone is identified, the Dam Owner will be contacted and a site visit scheduled to further investigate.

COMMENT 14:
43-115 In general. Does an administrative Emergency Action under 43-115 require a dam order under 43-112? It shouldn't, because it's an emergency. This reg should state so explicitly.

RESPONSE 14:
A Dam Order under 43-112 is not required to take emergency action under 43-115. The following statement has been added to this section, "A Dam Order as required under 43-112 is not required to undertake emergency actions regulated in this section."

COMMENT 15:.
The proposed new rules maintain a dangerous status quo whereby Vermonters are uninformed and at risk, both physically and financially. The following shortcomings are not addressed: 1 & 2 Safety data is generated by self-interested parties who, in turn, have a disproportionate say in the drafting of Emergency Action Plans. 3.The public is left in the dark about the location of inundation areas. 4. Jurisdiction over dam safety is weakened by giving separate classification to dams that produce power. 5. There are no insurance requirements to protect those effected by dam failures.

The insurance requirement is the most critical. Presently those hurt by dam failures are left to the whims of the civil litigation process. You might have the law on your side but that does not mean you have the resources to prove your case. Having the dam owners purchase insurance on the behalf of effected parties would solve this problem. Furthermore the insurers themselves could be an extra set of eyes policing safety. I have little doubt that any insurer who took a close look at the goings-on at the Marshfield #6 dam would immediately demand common sense upgrades. It would also protect the taxpayer from endless litigation when huge swaths of public infrastructure are destroyed.

The Department of Environmental Conservation (DEC) should have jurisdiction over ALL dams. The Public Utility Commission (PUC), which currently has say over power-generating dams, has no on staff engineers and an unhealthy relationship with some dam owners. The bottom line is that DEC's funding needs to be drastically increased.

RESPONSE 15:
The purpose of the proposed Dam Safety Rules, within statutory limitations, is to provide guidance regarding the inventory, inspection, and evaluation of dams under DEC's jurisdiction. These regulations are adopted in large part to protect the safety of property owners located in potential dam failure flood inundation zones located downstream of dams.

1&2: Generation of Safety Data and Emergency Action Plans (EAPs): This rule requires that Periodic, Non-Periodic, Inventory, and Construction, inspections be performed in compliance with Department requirements by the Department or an Engineer hired by the Owner. The rule also requires that Comprehensive Inspections be performed by an Engineer hired by the Owner of HIGH and SIGNIFICANT dams on the basis required in the Rule. In all cases, the Owner and Department shall be furnished a copy of the report and the DSP will review the reports, make follow-up site visits/inspections as necessary, and contemplate necessary actions, if applicable. The specific requirements around the content and format requirements for inspections, other safety data, and EAPs is not contemplated in this rule but will be addressed in the Standards portion of the rulemaking, to be adopted in 2022.

3: The Public is unaware of Dam Failure Inundation Areas: The DSP supports further public outreach, education, and availability of information regarding the safety impacts of dams and the locations of dam failure inundation areas.

4: Jurisdiction over dam safety is weakened by bifurcation: Vermont Title 10 Chapter 43 maintains the jurisdictional bifurcation between DEC, which regulates non-hydropower, non-federal dams and the Public Utility Commission, which regulates non-federal, hydropower dams generally constructed before 1935 (i.e. pre- Federal Energy Regulatory Commission Authority). The proposed rule only impacts non-hydropower, non-federal dams regulated by the DEC.

5: Insurance to protect those impacted by Dam Failure: Requiring Dam Owners to maintain liability insurance coverage to protect against losses caused by dam failure is not considered in the rule for the following reasons:

- Statutory authority to require the maintenance of liability insurance is not provided in Chapter 43.
- Dam Liability insurance is generally available for Federal, State, and Municipally-owned and revenue generating dams. Insurance policies for privately owned, non-revenue generating dams (which constitute the majority of dams under DEC's jurisdiction), are generally either prohibitively expensive for insufficient coverage or not available. The Insurance industry cites the lack of a standardized categorization of risks for dams, the complexity of dams, and the challenges with statistically predicting dam performance as the reason for the lack of insurance coverage for non-revenue generating, private dams. It is the DSP's hope that with the Periodic and Comprehensive inspection requirements in these rules, some of this concern will dissipate over time.
- In the case of many large, HIGH hazard dams, the potential extent of effected parties and resulting claims from a dam failure is outside the capacity of many insurance providers. While insurance is generally available to the various levels of Government and revenue generating dams, it is typically limited, and the coverage may not be sufficient to cover all claims in every case.
- For a Dam Owner with Liability Insurance in the event of a dam failure resulting in downstream losses, the policy provides a degree of assurance that there are funds available to provide some level of compensation to effected parties. However, for effected downstream parties to access insurance payouts, they would still need to expend resources to prove their case to the insurance company.

- Based on our research and in consultation with the Association of State Dam Safety Officials (ASDSO) which collects data and information on State Dam Safety Programs across the country, we have not discovered any State through their dam safety laws and rules that require dam owners to maintain Dam Liability Insurance. One State, Colorado, exempts dam owners from liability if they hold sufficient liability insurance coverage, but they do not require owners to have coverage. The Dam Safety Programs in both New Hampshire and New York attempted to institute a Dam Liability Insurance requirement in recent years. In New Hampshire, the bill was determined to be not practical or advisable, while in New York, the requirement was removed during the rule development phase, both for the reasons outlined above.

6: The DSP should have jurisdiction over all dams and their funding should increase: See the response to 4, above. The DSP acknowledges the additional resource constraints the proposed rules place on the Program.

COMMENT 16:. "No political subdivision of this State may enact a rule, ordinance, or other such law which results in a dam or reservoir under the jurisdiction of the Department being regulated less stringently than it would otherwise be regulated under this Rule." The proposed underlined change is to ensure that no one could misinterpret the ANR Dam Safety Rule as applying to Public Utility Commission or Federal Energy Regulatory Commission (FERC) regulated dams.

RESPONSE 16:
The suggested edit follows the statutory language and the intent of the rule to not include any dam that is under FERC jurisdiction. The suggested edit was made to 43-104 (1).

COMMENT 17: The volume of water retained by a dam negatively effects the upstream environment. The way the regulations are currently drafted, they specifically concentrate on the effects downstream hence ignoring damage to lake shorelines upstream of the dam. With a dam being a dividing barrier between upstream and downstream, how can one side be considered but not the other? They are both directly impacted by the water volume. I would like to see verbiage to address this issue included in the regulations

RESPONSE 17:
The impact to or flooding of property due to a dam whether upstream or downstream is a civil matter between the dam owner and the impacted party. The rights of upstream and downstream landowners to take legal action against a dam owner for damages are well established. Depending on the circumstances, dam owners may be responsible for losses upstream of their dam in terms of property damages resulting from the flooding of areas outside of their flowage rights (area that the dam owner has legal easements or permissions to flood). While these issues may exist at certain dams, Chapter 43 and the proposed rule is not designed to provide a regulatory framework for regulating this matter.

COMMENT 18: With the current regulations under consideration for change, I would also suggest the following: When an abutting landowner(s) upstream is not controlling the outfall structure, that they be allowed to have party status (much like the Act 250 process) in all decisions pertaining to an H&H study and be warned in advance of all studies, report releases and public meetings.

RESPONSE 18:
Vermont currently has no mechanism for formally assigning responsibility to property owners upstream of dams regarding dam management issues. This concept is beyond the authority permitted in Chapter 43. The management of dams and decisions regarding alteration or modification to a dam are up to the dam owner. In many cases, owners of property upstream of dams derive significant benefits from the presence of a dam. These benefits may include access to usable water, access to open water recreation, aesthetics, etc. While these owners may experience higher property taxes than non-water frontage property owners, their properties typically have increased property values which accompany these benefits. These benefits are unencumbered by any of the legal responsibilities and liability shouldered by the dam owner. Dam owners are responsible for safely operating the dam and the risk and liability associated with dam ownership. The Dam Safety Program encourages upstream property owners to collaborate with dam owners regarding necessary studies, potential alternatives, and funding. The existing Dam Safety Application process, necessary before any alteration, modification, repair, rehabilitation or removal project is permitted requires that the applicant provide names and addresses of effected landowners in the flowage area (area that is or could be flooded up with water levels equal with the dam crest) and provide copies of flowage easements or letters of permission from affected landowners.

Green, Benjamin

From: Hanna, Steven
Sent: Thursday, November 7, 2019 9:01 AM
To: Brian T. Fitzgerald
Cc: Green, Benjamin; Smith, Hannah
Subject: RE: Dam Safety Rule

The suggested edit also follows the statutory language. Good catch.

S

Steven Hanna
Dam Safety Program, Water Investment Division
National Life Building, Main 1
1 National Life Drive
Montpelier, VT 05620-3510

802-490-6123 (cell)
Steven.Hanna@vermont.gov
http://dec.vermont.gov/facilities-engineering/dam-safety
"You can accomplish a lot if you don't care who gets credit"

From: Brian T. Fitzgerald <fitzgerald@madriver.com>
Sent: Sunday, November 3, 2019 1:17 PM
To: Green, Benjamin <Benjamin.Green@vermont.gov>; Hanna, Steven <Steven.Hanna@vermont.gov>
Subject: Dam Safety Rule

Gentlemen,

I'm reading over the latest draft rule and noticed a definition that may need attention, presuming the intent is for the rule to NOT include any dam that is under FERC jurisdiction.

Current wording: "Federal dam" means a dam owned by the United States or a dam subject to Federal Energy Regulatory Commission license.

I suggest changing to: "Federal dam" means a dam owned by the United States or a dam subject to a Federal Energy Regulatory
Commission license or exemption.

The Federal Power Act (FPA) defines a class of hydroelectric projects that are under FERC jurisdiction but are exempt from certain provision of the FPA. They are issued a "FERC exemption" that specifies operating conditions but does not have to be reissued periodically, i.e., it runs forever. The hydros in Pownal and Northfield are a couple of examples. Exempt projects are subject to FERC inspections and compliance oversight.

Sorry I didn't spot this before. Jeff Crocker can give you additional details.

Looking forward to Tuesday's workshop.

BT

Brian T. Fitzgerald

55 Ward Hill Road
South Duxbury, VT 05660

802.496.7094 (home)
fitzgerald@madriver.com

Conservation is a cause that has no end. There is no point at which we will say our work is finished.
- Rachel Carson

Green, Benjamin

From: Green, Benjamin
Sent: Monday, November 11, 2019 11:04 PM
To: Skelley, John
Subject: RE: Dam Safety Seminar 11/5

Hi John,

It was nice to meet you also and glad you could join in, and thanks for the feedback. I have some follow-up questions and comments below in ***bold italics***.

Best,

Ben

VERMONT
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Benjamin T. Green, PE
Dam Safety Program
Water Investment Division
1 National Life Drive
Montpelier, VT 05620-3510

Phone: 802-622-4093
Email: Benjamin.Green@vermont.gov

http://dec.vermont.gov/facilities-engineering/dam-safety

From: Skelley, John <John.Skelley@maine.gov>
Sent: Wednesday, November 6, 2019 3:49 PM
To: Green, Benjamin <Benjamin.Green@vermont.gov>
Subject: Dam Safety Seminar 11/5

Hi Ben,

It was great meeting you yesterday, I just wanted to give some feedback on some things from yesterday's workshop. There seemed to be some malcontent from the public on some proposed changes or notifications to Dam rules, here are some thoughts and what Maine kind of does in regard to that:

- EAP and notifications
    - We generally encourage whomever is doing the EAP (the owner, consultant, etc.) to involve the public or notify the public that one is being created and that there are risks associated with dam failures. There is even a section on our website in EAP development that involving the public creates a better product and keeps people informed. We involve most everyone, public safety officials, county, state, NWS employees, etc. to Tabletop Exercises as well to bring everyone on the same page. This goes to the comment that the gentleman that was sitting near you made about involving the public more or creating a self-sufficiency. Just because the rules do or don't say something, it doesn't mean they can't

go above and beyond; they are just minimums. ***Agreed, we certainly plan to encourage owners to involve the public as much as possible.***

  - Maine is a little different in the way of dam regulation, though. MEMA regulates the dams, not any sort of environmental agency so we don't really have a disconnect with the emergency aspect of things. We are already involved with everything since we are required to inspect all dams that fall within our jurisdiction and approve the EAPs, regardless if it has been done by a consultant already. Granted, inland fisheries and wildlife and the DEP are involved in fishways and water level orders, but I am drafting an MOU for info sharing currently because we don't know what goes on with those agencies and what modifications happen to dams because of it. As out public says, "Typical State, the left hand not talking to the right". Very true in a lot of cases. Our offices have the same staffing woes, with all of us wearing lots of hats. Hopefully the people of Vermont see things from your perspective. ***I would be curious to understand, how many engineers and other staff members you have and what is your inventory of jurisdictional HIGH, SIGN, and LOW hazard dams? How many inspections to you do on a yearly basis? How many EAP workshops or tabletops? Do you have other responsibilities outside of regulation (i.e. own and operate dams, manage State properties, etc/)?***

- Rule writing
  - There seemed to be a lot of talk about the 500,000 CF/11.5 A-FT threshold and what owners are expected to do in regard to that. I guess a suggestion would be to write the new rules to not be really prescriptive, just any way to get the end goal. My thoughts, if you can modify a dam or even remove it without impacting the downstream hydraulics to become below the threshold of regulation, just do it. There's a cost benefit to not even having one and being regulated if you do not need to have a dam. ***Agree on the dam removal front, but our Statute is very clear that for dams that impound >500,000 cf at maximum pool, an application and Order (permit) is required for alteration, including removal.***
    - They seemed to be miffed at liability and their responsibilities. Absolutely, I probably would be too since it isn't their full-time job. One way to reduce it, just don't have one if that is an option. ***Yes, we have not had the authority to hold owners to much of a standard in the past, but with the new rules, that is changing. It is going to take some time to educate owners, many have this idea that the State is responsible for their dam.***
  - Some owners were concerned that consultants may take advantage of the rules for their professional benefit, especially if doing work for a private client. If it is state regulated dam of significance, it should be required that the State be copied and involved on any developments in construction, EAPs, etc. regardless to prevent back-channel "good ol' boy behavior" that can pop up. ***Agreed. Our program also has the final oversight through the Order process.***
  - We might be looking to amend rules in the future given new grant opportunities and that they haven't been revised in quite a while. We probably won't be too detailed though, generally there is more play for all parties if you leave things broad enough. ***State grants or Federal grant opportunities? Did you go after the FEMA HHPD Grant?***
- Information
  - It could be made clear to the owners and public that if anyone wants information on dams, they can always FOIA the information (inspections, EAPs, etc.) if they feel people aren't being transparent enough. For Maine, we release whatever we legally can right-off just because it saves a lot of time and energy and legal fees. This doesn't necessarily help with the privatized dams, but the second comment above regarding dam modifications might address that. They can also write their state representative and formally ask their office get involved if a private company is unwilling to share that information if it involves public safety. That usually gets things moving along… ***Yes, I believe in making information available and in our new database that will come eventually, people will be able to access basic file information online.***
- Liability
  - You touched on this, but I got the feeling that the public almost wants VT to limit their liability and be proactive for them by writing the rules to be such to prevent bad behavior. I mentioned it above, if they are responsible for their dams, they themselves can and should be as proactive as possible to do

whatever they need to do to ensure that the people they would impact in case of failure are taken care of, not just what it says in the rules. This again goes to holding public outreach, public involvement, etc. I know if I owned something that had the potential to kill someone, I'd sing from the rooftops and let everyone know what was going on for their benefit and mine. ***Agreed.***

- Jurisdiction
    - Is there anything you can add to the draft rules that prescribes any memos of understanding or partnerships between the 4 regulators in Vermont? Is there a lot of disconnect between all of you guys in regard to info sharing, etc.? I know Maine has our own problems with that! ***Yes, we are pretty disconnected. FERC invites us out on inspections and we need to get out on some to open up that channel, but have not as of yet. The Federal USACE flood control dams also operate in a vacuum. We have been to a couple of their table tops, but I would like to open up better communication with them. The PUC and us share Chapter 43, and they regulate two of the dams we own. We have a meeting coming up with them to discuss the rules. Despite regulating dams, they do not have any engineers, just legal staff, it's an odd arrangement and can be inefficient and convoluted.***

I was hoping to discuss liability a little more instead of having the long last session with the costs and projects. ***An informal poll held at the break with some folks down front helped make that decision. I guess they thought we had discussed enough liability issues to that point, but we got many comments like yours also.*** But overall, I thought it was a great workshop full of great slides and examples and content. I did take some things away for my program as well. Ideas for analysis, and fee collection for a new grant/loan program for fixes and removals. I thought it was great to get out into the dam community as well. ***I also always relish these opportunities. Did you go to ASDSO National? Also, EBC New England has a yearly dam meeting over the winter with NE dam safety engineers, I have found that helpful to compare notes with our colleagues (CT, MA, NH, RI) and dam safety engineering consultants too.*** I am sure I won't hesitate to ask you guys any questions if they come up in relation to how we can better our program as well.

Best,

John Skelley, P.E.
State Dam Inspector
Maine Emergency Management Agency
72 State House Station
45 Commerce Drive
Augusta, ME 04333
Desk: (207) 624-4465 | Cell: (207) 458-9556
john.skelley@maine.gov

Green, Benjamin

From: robert finucane <bobfinucane@hotmail.com>
Sent: Sunday, November 24, 2019 5:11 PM
To: Green, Benjamin
Subject: Re: Prefile

Ben,

Below are my comments on the pre-file rules.

At this stage in the proceedings, I'm not sure where to send them.

Have a good thanksgiving.

Bob

Comments on

PRE-FILE DRAFT CHAPTER 43 DAMS VERMONT DAM SAFETY RULE October 2019

43-103 Breached Dam. It's possible to imagine a dam that maintains its reservoir drained under normal flows and rapidly fills the reservoir during storm inflows in an unsafe fashion. Should say, maintains the reservoir drained under average annual peak flow conditions.

43-103 Dam. The definition of dam for the purpose of the rule must include a minimum size below which the structure is non-regulatory. Spring boxes, artesian wells and artesian frog ponds, children's stone and gravel weirs, USGS gage weirs, any highway embankment and culvert with a minimum flow, there will be hundreds if not thousands of structures state wide included in rule jurisdiction to no useful dam safety effect.

Under this rule, the owner of, for example, a spring box would have to record his dam with the town, allow the Department free access to his property, subject to random inspection requests by any "interested person" and information requests by the department.

In the hearing before the Senate committee that reviewed the legislation that authorized this rule, the question of minimum size was raised and Agency representative stated that yes there would be a minimum size and that it would be in the rule proposed.

The definition of Dam should be amended to say that a dam for the purpose of these regulations is any artificial barrier taller than three feet or capable of impounding more than 1 acre-foot of water under normal conditions.

43-103 Minimal hazard potential dam. My experience indicated that careful, careful language is needed here. Language like "Dams capable of impounding…" should be used to rope in dams which are drawn down but may store water in a storm.

There is a question of impounding up to what level. "(Impounding) below the top of the highest non-overflow portion of the dam or embankment"

43-104 sub 2. (No action shall be brought against the State….) Can the Department by rule preclude legal actions against itself? It might be possible to prevent a dam owner from taking legal action against the State, but a person injured downstream? If it's possible, then the language should be a broadened to include 43-115 emergency actions as well which are more likely to give rise to claims.

43-109 sub 1. Should recognize that hundreds of dams have already been classified and that the historic classification is the default classification. Otherwise "shall be assigned" could create a requirement for the State to undertake hundreds of classification studies and assignments. Each of the resulting assignments would be an administrative action that could be appealed by the dam owner.

43-109 sub 3. Who will do hazard creep reviews on MINIMAL hazard dams? If there are thousands of minimal hazard dams, it's a burden on the dam owners and an unmanageable workload for the State.

43-115. Paragraph 3. The Department shall maintain full control over the dam….

43-115 In general. Does an administrative Emergency Action under 43-115 require a dam order under 43-112? It shouldn't,because it's an emergency. This reg should state so explicitly.

From: robert finucane <bobfinucane@hotmail.com>
Sent: Monday, November 18, 2019 12:10 PM
To: Green, Benjamin <Benjamin.Green@vermont.gov>
Subject: Re: Prefile

thanks

From: Green, Benjamin <Benjamin.Green@vermont.gov>
Sent: Monday, November 18, 2019 11:54 AM
To: robert finucane <bobfinucane@hotmail.com>
Subject: RE: Prefile

Hi Bob,

I have attached the pre-file Administrative rules that are due to be adopted July 2020. We are also required to make Standards rules which are due July 2022. Our plan is to take public comments through the end of this month on these pre-file rules and address as it makes sense and then file the rules and go through ICAR/LCAR early next year to hopefully hit the adoption date of July 2020.

Best,

Ben

VERMONT
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Benjamin T. Green, PE
Dam Safety Program

Water Investment Division
1 National Life Drive
Montpelier, VT 05620-3510

Phone: 802-622-4093
Email: Benjamin.Green@vermont.gov

https://dec.vermont.gov/water-investment/dam-safety

From: robert finucane <bobfinucane@hotmail.com>
Sent: Saturday, November 16, 2019 8:23 AM
To: Green, Benjamin <Benjamin.Green@vermont.gov>
Subject: Prefile

Hi Ben,

Are the pre file draft rules available somewhere for public comment?

And a schedule for adoption?

Thanks.

Bobf

Sent from my iPad

Green, Benjamin

From: Bram Towbin <hihoau@gmail.com>
Sent: Monday, December 9, 2019 10:29 AM
To: Green, Benjamin
Cc: Asst Clerk Smith; Jim Volz; Linda Wells; T. Farnham; sasha Thayer; Michael Cerulli Billingsley; amos; susan grimaldi; Justine and Dan Gadd; Steven Pappas; Janet Ancel; Andy Perchlik; Ann Cummings; avram@avrampatt.com; Dolan, Kari; jmccullough@leg.state.vt.us
Subject: Comments on DEC draft of Dam Safety Rules

The proposed new rules maintain a dangerous status quo whereby Vermonters are uninformed and at risk, both physically and financially. The following shortcomings are not addressed: 1 & 2 Safety data is generated by self-interested parties who, in turn, have a disproportionate say in the drafting of Emergency Action Plans. 3.The public is left in the dark about the location of inundation areas. 4. Jurisdiction over dam safety is weakened by giving separate classification to dams that produce power. 5. There are no insurance requirements to protect those effected by dam failures.

The insurance requirement is the most critical. Presently those hurt by dam failures are left to the whims of the civil litigation process. You might have the law on your side but that does not mean you have the resources to prove your case. Having the dam owners purchase insurance on the behalf of effected parties would solve this problem. Furthermore the insurers themselves could be an extra set of eyes policing safety. I have little doubt that any insurer who took a close look at the goings-on at the Marshfield #6 dam would immediately demand common sense upgrades. It would also protect the taxpayer from endless litigation when huge swaths of public infrastructure are destroyed.

The Department of Environmental Conservation (DEC) should have jurisdiction over ALL dams. The Public Utility Commission (PUC), which currently has say over power-generating dams, has no on staff engineers and an unhealthy relationship with some dam owners. (see: https://www.vpr.org/post/can-we-get-you-tesla-test-drive-documents-show-utility-and-its-regulators-contact#stream/0) The bottom line is that DEC's funding needs to be drastically increased to cover the new work load. This need not burden the general public as fees can be assessed from dam owners.

Text of editorial on the issue in the Times Argus:

RELEASE THE MAPS

Experts in car safety should not design car insurance. Knowledge about the mechanics of car crashes does not translate to the real world implications of being in a road accident. Engineers make vehicles that mitigate injury. They have no understanding of the legal system that determines the cost of hospitalization or car repair. The script for how to recover funds and seek monetary redress was born of citizens' experience in the courts, not rarified car safety expertise.

Vermont's dam safety protocols share this myopia of technical knowledge over real world ramifications of having your world wiped out in a wall of water. Luckily, the state is rethinking the regulations.

I was at a meeting about the new rules and heard the story of a Vermonter whose $100,000 driveway bridge was taken out by a dam mishap. The litigation was costly so they personally funded the repair. The dam owner paid nothing. None of the proposed rules address this problem. A quick overview of the regulatory system explains why the regulators have this blindspot.

The system's conception of safety looks at structural failure, rather than after-effects. The process is heavily based on information gleaned from the the interested parties themselves.

Due to staffing constraints at the Department of Environmental Conservation (DEC), dam owners hire their own engineers to assess risk. Regulators are fragmented in their oversight. The Public Utility Commission (PUC), with no onstage engineers, handles dams that generate power. In addition to the potentially biased information, the public is hamstrung by having to master different sets of agency rules if they have concerns. There is also the matter of disclosure. When dam owners hire consultants and pay for reports, they feel this is proprietary information.

When the town of Plainfield made inquiries to a private engineer, the reaction was predictable. They shut down the line of inquiry and immediately called the client saying “Plainfield is asking questions.” It’s understandable as the public is not their boss.

The regulators are mired in the bromide that everyone is working in the public interest. One need only look to the recent case of Boeing Corp. to understand how private entities have a different understanding of reasonable safety measures. Under current rules, the public is outmatched by the machinations of interested parties. Dam owners’ private inspectors present the material to the owner before the regulator. Public access is via cumbersome state data bases. If you live in an area that would be leveled by dam failure, you are not informed as inundation maps are considered proprietary. This stems from the strange process by which Emergency Action Plans (EAPs) are formulated.

The dam owners work with the local first responders to formulate a plan. Sadly, the owners have an unreasonable amount of control. They, quietly, push costs and liability on to the towns. They direct the conversation but fail to shoulder the real expense. In Plainfield’s case, since the dam is located outside of our borders, we receive zero dollars from the owner.

The inundation maps included this caveat: “for your eyes only.” The rationale is that dam failures are rare events and there is no need to create undue concern. And “undue” concerned is defined by them. Full knowledge, however, is the grist-mill for public discourse which gives rise to meaningful regulation. Most people don’t know they would be affected. The water’s path might provoke fear, but it also would direct policy makers to focus on liability.

The EAP document received by the the town of Plainfield places all liability on the government. There are two paragraphs specifically saying the government, not the dam owner, is responsible for communication, evacuation and rescue.

Owner indemnification reigns supreme. The town must formally acknowledge the aftermath is the public’s problem. It completely ignores the fact that, in many cases, these are private entities causing the mess. Why isn’t the private entity required to cover all costs? In a sense the system creates a state-certified blank check on property owners’ and taxpayers’ accounts. This goes beyond the enormous financial restitution for physical property damage but the cost of lawsuits involving injury and death. The dam owner isn’t the villain. The system encourages the off-loading of meaningful responsibility.

Provisions need to spell out who pays after the disaster. Increased costs must be weighed against the catastrophic damage by a single large dam failure. In the case of Plainfield, our village center would be decimated, not to mention huge swaths of Route 2.

All affected properties must be notified and fully indemnified and insured by the dam owner. A robustly funded DEC must be completely in charge of all Vermont dams.

Private engineers are hired and supervised by DEC, who bill dam owners for the cost. All safety measures are funded by dam owners.

Affected municipal governments are fully in charge of EAPs.

Contact your state representatives to change the rules. They might not know they, themselves, are at risk. The safety conference was held next to the state capital. The chief dam engineer revealed a nearby dam failure would flood the conference room under 15 feet of water. Engineers know the physical effects of an event. But stakeholders live in the aftermath. If you get into a fender bender, engineers’ designs reduce injury. Stakeholders create the playbook of police and insurance notification.

It's not perfect but what if your house is destroyed and your loved ones are injured due to dam failure? What do you do? We can no longer afford to hide maps and have interested parties dictate the rules. Remember the small bridge owner. That could be you.

I'm sure the Plainfield Hazard Mitigation Committee also has more reform ideas. Hopefully, many others will weigh in on the conversation. Public policy is shaped by stakeholder conversations which is informed by expert opinions. Not the other way around. The Legislature and DEC have done a great job of opening up the dialogue. It is now our time to shape the rules.

Bram Towbin serves on the Plainfield Hazard Mitigation Committee.

Link to editorial:
https://www.timesargus.com/opinion/commentary/release-the-maps/article_753a293e-e614-53bc-b00c-258beb207b06.html

--
Bram Towbin

802 476 5789
studio93.photo
fotogosaurus.wordpress.com

LAKE ASSOCIATION
SHADOW

P.O Box 135

Glover, Vermont 05839

www.shadowlakeassociation.org

November 12, 2019

Benjamin Green: Dam Safety Engineer

Dear Mr. Green,

I 'd like to thank the Vermont DEC and you for hosting the Dam Safety Workshop on Tuesday November 5th. It was very informative and certainly well-attended.

During one of your presentations, I brought to your attention that after rain events (we no longer have gentle rains) the watershed drains and hence the lake level rises significantly. The volume of water retained by the dam negatively effects the upstream environment. The way the regulations are currently drafted, they specifically concentrate on the effects downstream hence ignoring damage to lake shorelines upstream of the dam. With a dam being a dividing barrier between upstream and downstream, how can one side be considered but not the other? They are both directly impacted by the water volume. On behalf of the Shadow Lake Association (SLA) and its Board, I would like to see verbiage to address this issue included in the regulations.

With the current regulations under consideration for change, I would also suggest the following: When an abutting landowner(s) upstream is not controlling the outfall structure, that they be allowed to have party status (much like the Act 250 process) in all decisions pertaining to an H&H study and be warned in advance of all studies, report releases and public meetings.

To capture my point, the Shadow Lake Association (SLA) has no say in a current Hydrologic and Hydraulics study (that the Town of Glover has been requested to perform) and its five points of emphasis. Item One; risk -based hydrologic and hydraulic analysis to quantify the hydraulic adequacy of the dam's spillway, Item Two; preparation of a breach analysis and associated inundation mapping and summary report, Item Three; preparation of an Emergency Action Plan, ***Item Four; the operation and maintenance plan; Item Five; the identification of conceptual level alternatives to address any required term improvements to the dam.***

*Shadow Lake has an approximately 2.6 miles of shore frontage.

*The SLA has 145 tax paying members with vested interest in the lake. Only twenty-one of those property owners are town residents who have voting privileges in the community which operates and maintains the dam.

*The dam's original function no longer exists. Its primary use today is to regulate water level. It's undersized discharge and emergency spillway do not accommodate the current flow surges and seasonal high water as *presently* operated. It also appears the emergency spillway elevation is too high as the lake level rises an estimated three feet during spring run-off.

*Dam inspection report 2003 poor condition, 2009 report poor condition with a downstream class 2 "significant hazard" based on 1991 Dam-Break Flood Analysis, 2012 report not available and 2015 report poor condition still class 2 "significant hazard".

*Glover is a rural community which has not budgeted funds for engineering or studies. A grant was applied for in 2019 but declined by the State. The last H&H study was done 28 years ago. The Town has not budgeted funds for outfall structure update and modern controls of outflow for ease of operation. (Capital improvements)

* It appears to the SLA that the Town has become a passive dam owner to high water events and the repercussions. Moreover, it has been unwilling to draw down the lake to create available freeboard for the ice thaw, impending snow melt and historic rains. High water in combination with wave action and ice flow creates havoc on the shoreline and structures which require costly repairs born solely by property owner.

Although these scenarios may be isolated to Shadow Lake, I believe (suggest) there should be a sixth point of emphasis. As the new rule changes are reviewed, our Board feels there should be rule changes that incorporate the shoreline and structures on the body of water above the dam. Flow needs to be evaluated in the H&H study process before final conclusions of the study are rendered and decisions about the future are made. A public forum should be incorporated with testimony from current and long-term residents including the introduction of photos as a working tool to find the best results.

SLA would like to thank you in advance for accepting these suggestions as they were intended which is to identify a serious need that is currently impacting both shoreland and homeowner property.

Sincerely,

Jenifer Andrews,

Shadow Lake Association President

Member of Shadow Lake Association Shoreline Protection and Preservation Committee (SLASPP)

The Shadow Lake Association's stewardship mission is to collaborate with Shadow Lake residents, the Town of Glover, and the State of Vermont, to learn, educate and foster best management practices around the lake, in order to preserve and promote the healthy ecology of the lake and to ensure pristine water quality for the benefit of current and future generations.