

VERMONT
Department of Environmental Conservation
Dam Safety Program



Waterbury Dam

Senate Natural Resources and Energy
S.213

January 12, 2024

Ben Green, PE
Dam Safety Engineer
VTDEC Dam Safety Program

Presentation Overview

- General Dam Safety Program Overview
- Dam Ownership Overview
- Dam Regulation Overview
- Rulemaking
- S.213 Review



Noyes Pond Dam, Groton

Brief Program Overview

- Located in the Water Investment Division (WID) within VTDEC
- "The mission of the Vermont Dam Safety Program is to reduce risks to life, property, and the environment from dam incidents and dam failure through effective communication, education, regulation, and dam ownership"
- RESPONSIBILITIES:
 - dam regulation
 - dam ownership
 - lands management
- CURRENT STAFFING:
 - (2) licensed engineer
 - (2) staff engineers
 - (1) program administrator/analyst
 - Summer Temporary (pending funding)
- STATUTE/RULES:
 - 10 V.S.A Chapter 43: Dams, Non-federal, non-power dams (Rules in development)
- DAM OWNERSHIP: 14 dams including the (3) Winooski River Flood Control Dams.



Silver Lake Dam, Barnard

Brief Program Overview Continued



Waterbury Dam Construction

LEGISLATIVE HISTORY OVERVIEW:

- 1876 VT Enacts 1st in the Nation Dam Safety Law
- 1929 VT Dam Permit Program Enacted
- 1981/1982 Chapter 43: Dams Enacted
- 2018 – Act 161, Dam Safety Rule Authority

STAFFING HISTORY OVERVIEW:

- Early Years - Water Resources Board, other entities managed Dam Regulation/Dam Safety
 - 1970s to 2001 - Dam Safety 1.0 – Peter Baranco, PE
 - 2001 to 2008 - Dam Safety 2.0 – Robert Finucane, PE
 - 2008 to 2017 - Dam Safety 3.0 – Stephen Bushman, PE
 - 2017 – Current - Dam Safety 4.0 – Current DSP Team**
- Ranged from 1 to 4 Engineers, Typical/Average 2 Engineers with Statute for Regulation, limited resources for ownership**

**

- 2017 to 2021 – 2 engineers, limited resources for ownership
- 2022 – Added two Limited-Service Engineers on 5-year contracts (ARPA GF Funded)
- 2023 – Added one Limited-Service Program Administrator (FEMA Grant funded)
- Goal for Future – Properly resource and staff Dam Safety Program
 - ❖ ANR Dam Ownership Program
 - ❖ Regulatory Program

ANR-Owned Dams

- DEC directly owns 14 (including the 3 flood control dams)
- ANR owns ~100.
 - F&W (76)
 - FPR (15)

TYPICAL TASKS

- *Site visits and checks*
- *Operation and Maintenance*
- *Emergency Action Planning*
- *Flood monitoring/operations*
- *Incident Response*
- *Capital Planning*
- *Design, permitting, construction*
- *Project Management*
- *Debris removal*
- *Beaver conflicts*
- *Mowing and Brushing Contract*



Lake Bomoseen Dam, Castleton



Waterbury Dam Tunnel

Winooski River Flood Control Dams

- Own/operate three HIGH hazard 1930s era USACE Flood Control Dams :

Waterbury Dam: 109 SM drainage area, 187 ft. tall, 2,100 ft. long.

Wrightsville Dam: 68 SM drainage area, 115 ft. tall, 1,525 ft. long.

East Barre Dam: 39 SM drainage area, 65 ft. tall, 1,460 ft. long. Dry pool.



Waterbury



Wrightsville



East Barre

Flood Monitoring and Operations

- Monitor and operate Flood Control Dams
- Communicate with DEC Management, SEOC (as needed)
- Communicate with Downstream Communities (as needed)
- During flood and post-flood inspections
- Evaluate ANR-owned Dams
- Design and oversee implementation of temporary repairs (as needed)
- Examples:
 - Spring 2019
 - July 2023
 - December 2023



Wrightsville Dam



Waterbury Dam

Flood Release at Waterbury Dam



Ownership Challenges

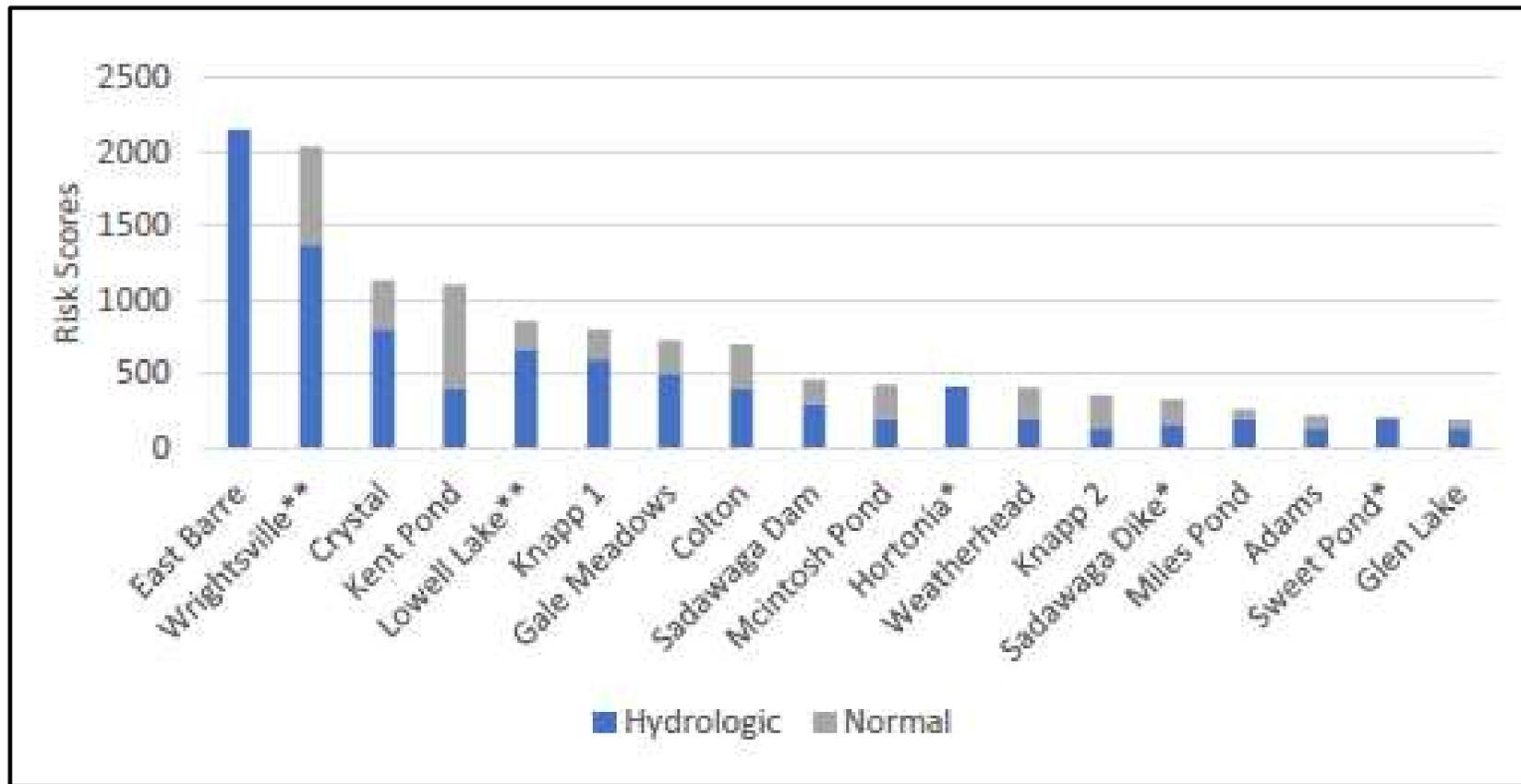
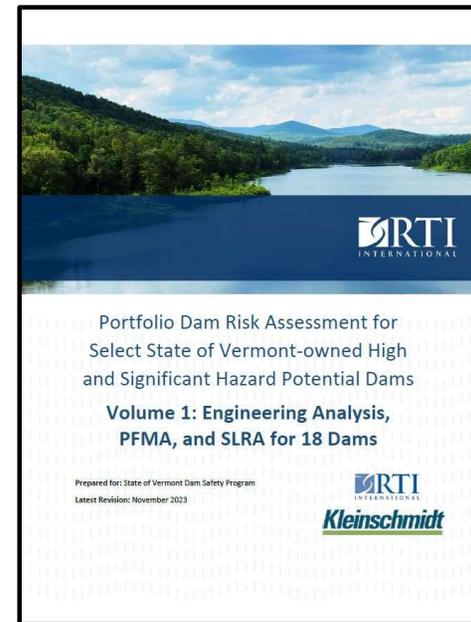
- ~40% ANR-owned Dams in POOR/UNSATISFACTORY Condition
- ~80% are more than 50-years old
- Rough estimate, ~\$20-25M to rehabilitate ANR dams (Excluding Flood Dams)
- Lack of coordinated ANR Dam Management Strategy/dam owner safety program.
- Upcoming dam safety rules/compliance



Lowell Lake Dam, Londonderry

ANR DAM RISK ASSESSMENT

- 18 ANR Dams, HIGH and SIGNIFICANT Hazard Potential
- Better understand vulnerabilities and consequences of these dams
- Develop Risk Ranking for project prioritization /“buy-down” risk/allocate limited funds
- Cost \$445,000, completed 12/31/2023, (RTI International).



General and Capital Funding

- Moving to focus on projects at 18 HIGH and SIGNIFICANT hazard potential dams identified in the ANR Risk Assessment
- Need to bring ANR dams into compliance with upcoming rules.
- Start to an increased commitment to funding and repairs/rehabilitation of ANR owned dams.

General Fund:

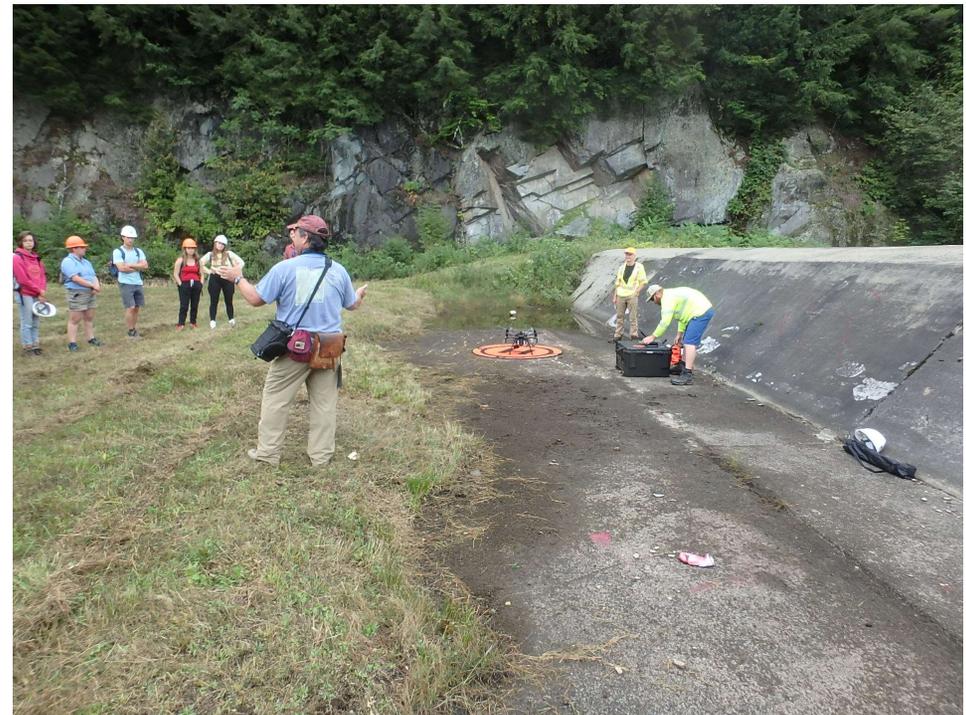
- \$5M available
- Two new temporary engineering positions hired (2 Engineers)

Capital Funding:

- FY2023 , \$3.5M available



Lake Carmi Dam

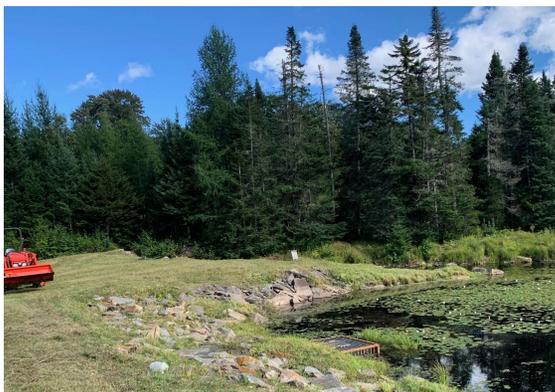
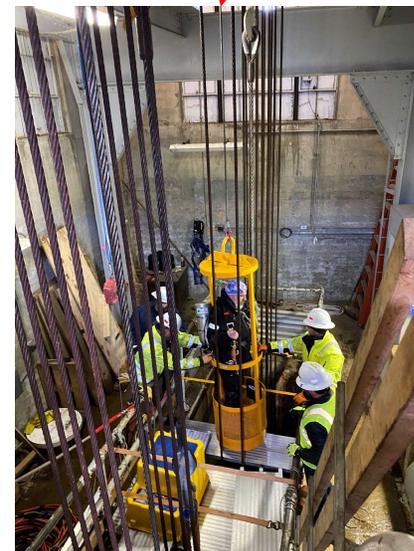


Wrightsville Spillway Geology

Project Management and Oversight

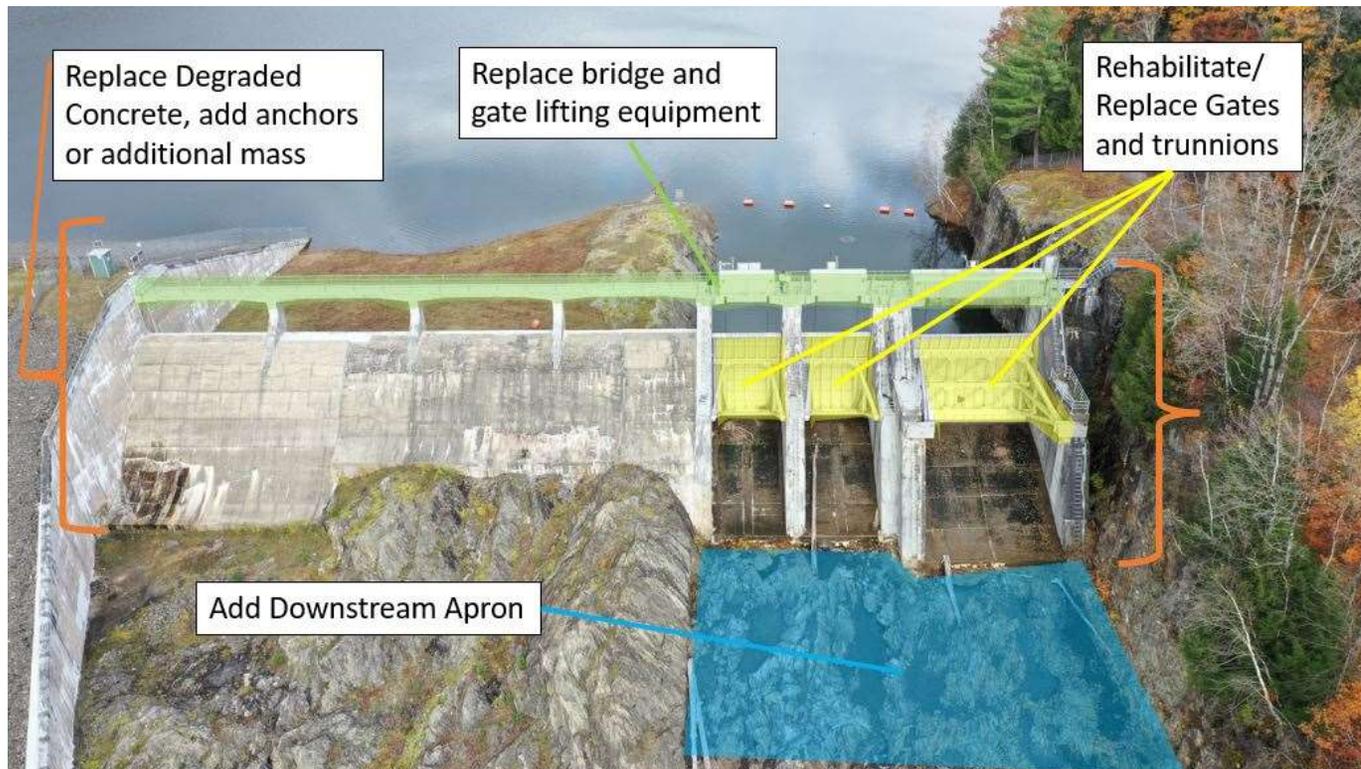
- Example 2023 Projects (not inclusive, budgets approximate):

- Wrightsville Dam Aux. Spillway - \$530,000
- ANR-Owned Dams Risk Assessment - \$445,000
- Noyes Pond Dam Comprehensive Assessment - \$170,000
- Silver Lake Dam Comprehensive Assessment - \$170,000
- Lake Bomoseen Dam Actuator Replacement - \$50,000
- Waterbury Dam Risk Reduction - \$727,000
- Waterbury Dam Broome Gate Structural Assessment - \$85,000
- DEC Dam Instrumentation - \$170,000
- East Barre Dam Debris Management - \$10,000
- DEC Dam Mowing and Brushing - \$35,000



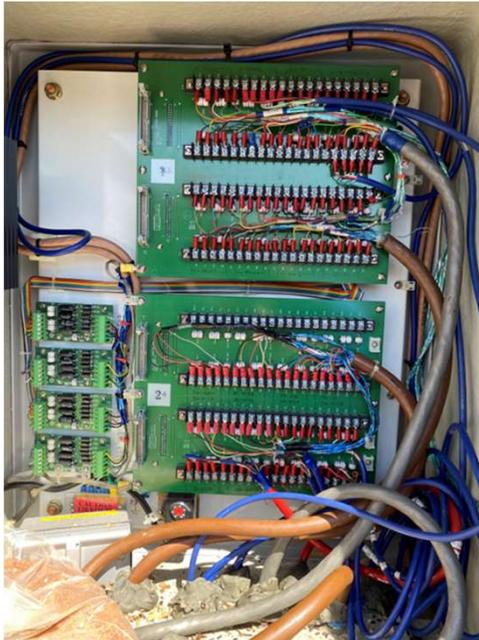
Waterbury Dam - Spillway Replacement Project

- In 2000s Radial Arm Flood Gate jamming, leading to Flood load restrictions on gates
- Section 1177, WIIN 2016 Funding, \$70-100M Project, US Army Corps New England
- General Assembly has allocated match needed for up to \$60M in Federal Funds
- Improvements to gates, concrete spillways, bridge, lifting equipment, discharge channel
- Mod. Study ~2023/2024, Design ~2025/2026, Construction ~2027/2028
- <https://dec.vermont.gov/water-investment/dam-safety/dec-owned-dams/waterbury-dam-spillway-project>



Dam Safety Instrumentation Project

- GOALS:
 - Improve remote dam monitoring, more efficient prioritization of limited staff.
 - Revitalize critical but antiquated dam safety instrumentation at Waterbury Dam.
 - Add additional/redundant instrumentation at 3 flood control dams for normal and flood monitoring.
 - Add basic instrumentation to other 11 DEC-owned dams, including real-time water level, weather data, and photographs.
 - System to be expandable to include additional ANR-owned Dams
- \$170,000 initial study contract underway, implementation contract in 2024/2025



Lands Management

- The DSP is responsible for the “management” of State Lands connected to the flowage areas of the three Winooski River Flood Control Dams as well as the other applicable DEC-owned dams.
- Wrightsville Dam:
 - Hydropower Easement – Washington Electric Coop
 - Shady Rill Picnic Area
 - Wrightsville Beach District
 - Wrightsville Boat Launch
 - Former Gun Range
- East Barre Dam:
 - Model Airplane Club Lease.
 - Local Dairy Farmer Lease on Hay Lands.
 - Town of Washington Ball Field Lease.
- Miles Pond Dam:
 - Town Beach



Shady Rill



East Barre Flowage Area – Model Airplane Club Area

Other Initiatives/Challenges

- Pressure to take on ownership of additional dams. Range from large HIGH hazard dams to small LOW hazard dams.
- Green River Reservoir Dam – currently managing \$350k+ study to evaluate state ownership of the dam and dike.



Green River Reservoir Dam (Source: VPR)

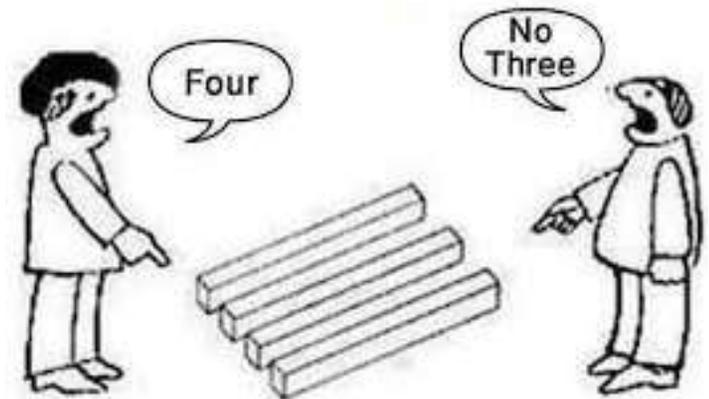


Sunrise Lake Dam

Regulation of Dams in Vermont

Dams in Vermont regulated by one of four agencies:

1. Department of Environmental Conservation (DEC) = Non-hydropower, non-federal dams at the State Level
2. Public Utility Commission (PUC) = Hydropower Dams Constructed pre-1935 at the State Level
3. Federal Energy Regulatory Commission (FERC) = Hydropower Dams Constructed post 1935 at the Federal Level
4. United States Army Corps of Engineers (USACE) = Dams owned by the Corps or other Federal Entity



Hazard Potential Classifications

- Potential for loss of life, property losses, lifeline losses, or environmental losses due to a dam failure or incident.

Classification¹	Direct Loss of Life	Property Losses	Lifeline Losses	Environmental Losses
HIGH	Probable or Certain (one or more) (extensive downstream residential, commercial, or industrial development)	Not considered for this classification	Not considered for this classification	Not considered for this classification
SIGNIFICANT	None expected	Major or extensive public and private facilities	Disruption of essential or critical facilities and access	Major or extensive mitigation required or impossible to mitigate
LOW	None expected	Private agricultural lands, equipment and isolated non-occupied buildings, non-major roads.	No disruption of services – repairs are cosmetic or rapidly repairable damage	Minimal incremental damage
MINIMAL	Same as LOW hazard, above			

1) Categories are based on overall dam performance and do not apply to appurtenances.

- Independent of condition rating of the dam.

Vermont Dam Inventory / Natural Resources Atlas

- Contains ~1,119 records (active and historic sites)
- ~992 under jurisdiction of VTDEC (Non-Power, Non-Federal)
44 HIGH, 133 SIGNIFICANT, 252 LOW, 563 MINIMAL or not rated
- ~21 PUC (Hydropower pre-1935)
4 HIGH, 4 SIGNIFICANT, 13 LOW, 1 not rated
- ~82 FERC (Power post-1935)
15 HIGH, 7 SIGNIFICANT, 46 LOW, 14 MINIMAL or not rated
- ~24 other dams are under jurisdiction of Federal Government (USACE, National Park Service, US Forest Service, etc.)

VERMONT OFFICIAL STATE WEBSITE
AGENCY OF NATURAL RESOURCES
DAM INVENTORY

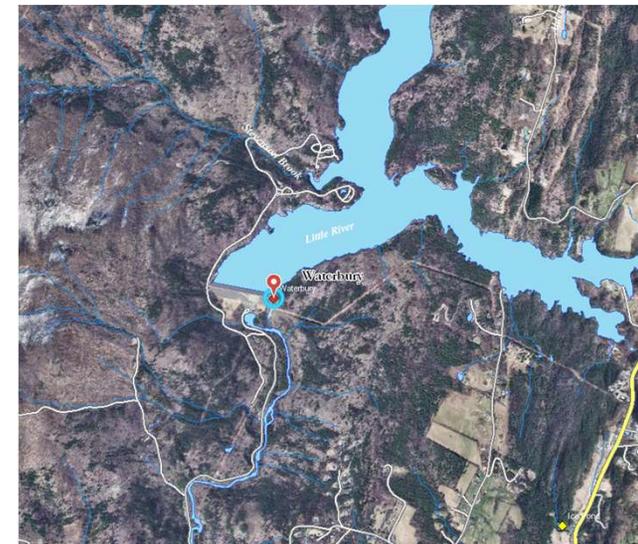
HOME DAMS PERMITS CONTACTS MAINTENANCE LOGINS

View Dams Record

Edit Close Tools

Names/Location	Contacts	Permits	Reservoir	Dam	Construction/Reconstruction
StateID:	226.01				
Dam Type:	RE				
Construction Type:	Zoned Earthfill				
Core:	IEK				
Foundation:	RSK				
Low Level Outlet:					
Length:	2130.0				
Height (feet):	187.0				
Upstream Height (feet):	145				
Structural Height (feet):	187				
Hydraulic Height (feet):	183				
Maximum Discharge (cfs):	84000				
Principal Spillway:					
Principal Spillway Design Capacity (cfs):					
Principal Spillway Maximum Capacity (cfs):					
Auxiliary Spillway:					
Auxiliary Spillway Design Capacity (cfs):					

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Chapter 43: Dams

- **Legislation that guides regulation of dams at the State level (DEC and PUC)**
- **Main Takeaways:**
 - Basic Definitions
 - Jurisdiction between DEC and PUC
 - Authorization/Permits/Application for dams that impound more than 500,000 cubic feet (about 11.5 acre-feet)
 - Public Good Criteria
 - Dam Inspections
 - Unsafe Dams
- **Recently underwent updates in the 2018 session as Act 161**



Dam Registration Program

- Annual fee to dam owners of dams that are capable of impounding >500,000 cf
 - **HIGH** hazard Dams = \$1,000
 - **SIGNIFICANT** hazard Dams = \$350
 - **LOW** Hazard Dams = \$200
- Designed ~2015 to fund an additional Dam Safety Engineer (never realized)
- Potential to raise ~\$130k annually
- Currently working to attempt to recover ~\$65k in unpaid fees.

Agency of Natural Resources & Natural Resources Board (Act 250)

an official VERMONT government website

VTANR Home Home Form Finder Dashboard My Submissions Help Benjamin Green Sign Out

Annual Dam Registration

VERSION 1.37

INSTRUCTIONS

Register Your Dam(s) Online

IMPORTANT: Please do not fill out and submit this online form if you are not going to pay the annual dam registration electronically by credit card or electronic check. This form should only be used if you are paying electronically.

The benefits of completing the form online are that; the form will be prefilled with data from the Vermont Dam Inventory database so there will be almost nothing you have to enter; if you have multiple dams they will all be registered in a single submittal, and you can pay the registration fee electronically by credit card or electronic check. If you have questions or need assistance with completing the online form, contact us by email at ANR.OnlineServices@vermont.gov or by phone at 802-272-4529.

Please review the following instructions before beginning your online registration:

[Follow these instructions to submit your annual dam registration electronically](#)

Registration Fees

Your registration fee will be calculated by the system. The registration fee is based on the hazard class of the dam(s) as follows:

- \$200 per year for each **LOW** hazard dam
- \$350 per year for each **SIGNIFICANT** hazard dam
- \$1,000 per year for each **HIGH** hazard dam

CONTACT INFORMATION

Contact

Vermont Department of Environmental Conservation
Water Investment Division
Dam Safety Program
Davis Building - 3rd Floor
One National Life Drive
Montpelier, VT 05620-3510

Payment Remittance Address

Vermont Department of Environmental Conservation
Water Investment Division
Dam Safety Program
Davis Building - 3rd Floor
One National Life Drive
Montpelier, VT 05620-3510

CONTACTS

For issues with submitting payment contact::
ANR.DamSafety@vermont.gov

Periodic Inspections

- Performed according to schedule:

Periodic Inspections ⁽¹⁾	
Hazard Classification	Frequency
HIGH	2 years
SIGNIFICANT	5 years
LOW	10 years
MINIMAL	None

- Determine condition rating.
- Currently/historically performed by Program Staff, Rules allow for Program to require owners hire an engineer to perform.

iPad Solution for Inspections/Reporting

- Used extensively since 2021 field season.
- Standardized checklist and reporting, saves times, improves consistency.



VERMONT Department of Environmental Conservation		Dam Safety Inspection Report		Dam Safety Program One National Life Drive Montpelier, VT 05602-1510 (802) 423-4200 https://www.vermont.gov	
Name: Lowell Lake		Town: Londonderry			
State ID: 115.02 NID ID: VT00079		Watershed: West River			
Hazard Class: High Hazard Potential		Stream: West River-TR			
Inspection Details					
Inspection date: 06/28/2021 11:00					
Inspection type: Periodic				Weather: Sunny, Cloudy, 84F	
Inspected by: Steven Hanna, Katherine King, Peyton Lienhart					
Dam Safety Recommendations					
The following recommendations and remedial measures describe the recommended approach to address current deficiencies on the dam. Maintenance level activities can be performed by the Owner, while Studies and Analyses and Remedial Repair Recommendations will require the services of a qualified professional engineer registered in the State of Vermont who is experienced in dam safety engineering design, permitting, and construction.					
Overall dam condition: <input checked="" type="checkbox"/> Satisfactory <input type="checkbox"/> Fair <input type="checkbox"/> Poor <input type="checkbox"/> Unsatisfactory <input type="checkbox"/> Not Rated <small>*See General Information section at the end of report for further details.</small>					
Maintenance level recommendations					
Spillways		<ul style="list-style-type: none"> Maintain the principal and/or auxiliary spillway free of debris to ensure free-flow conditions. 			
Low-level outlets		<ul style="list-style-type: none"> Test operate the low-level outlet twice yearly to maintain operability and check leakage. Remove debris and maintain outlet trash racks. 			
Studies and analysis					
Dam Information					
Type: Earth		Status: In Service		Construction date:	
Purpose: Recreation		Height: 16 ft		1850	
		Length: 225 ft		Foundation conditions: Glacial till	



Dam Orders (Permits)

- Required for construction, alteration, rehabilitation, removal of dams >500,000 cf.
- Receive/process about 5+/- per year.
- Review application, engineering analyses, basis of design report, plans, and specifications.
- Public Comment Period
- Issue Dam Safety Order with Conditions or deny application.
- Monitor project, approve reservoir filling



Lake Champagne Dam,
Randolph, 1st CIPP Project in VT



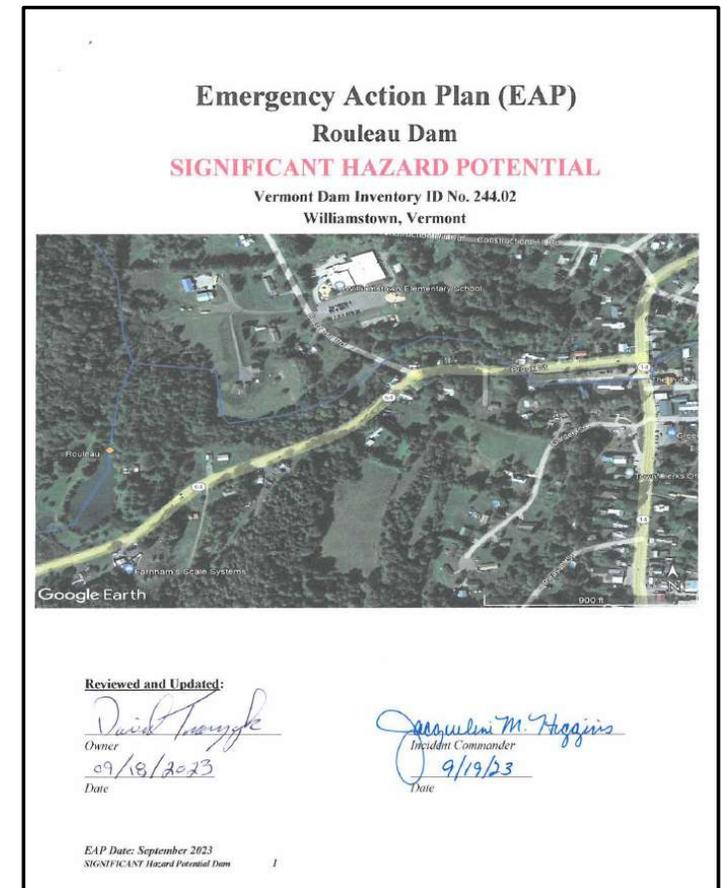
Magic Mountain Snow Making Dam,
Londonderry



Sweet Pond Dam
Guilford

Emergency Action Planning (EAP)

- “written plan that identifies the area that would likely be inundated by dam failure and identifies Owner actions to protect life, property, lifelines, and the environment in the event of a dam incident or failure. Typically implemented in cooperation with the local, regional, and state emergency personnel.”
- Historically no authority to require dam owners to develop or maintain.
- New Rules will require development and updating.
- Many existing EAPs paid with FEMA Grant funds.
- Developing EAP templates
- Simplified EAPs and Full EAPs
- Leveraging DSS-Wise Lite, free dam failure flood analysis software.



Dam Incident/Flood Response

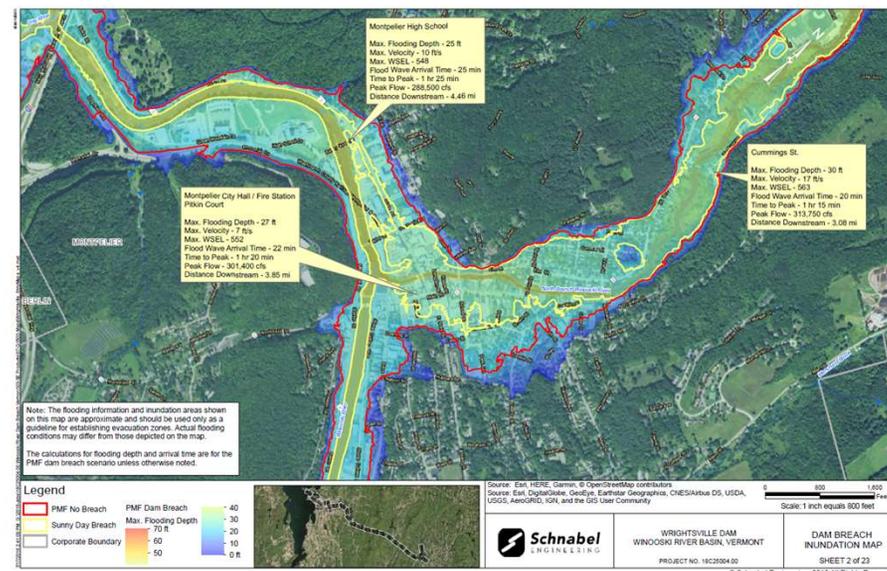
- Respond to dam failures, incidents, and floods.
- Rapid/emergency inspections, emergency actions, risk reduction measures.
- Examples:
 - Nissenbaum Dam Failure, December 2022
 - ❖ Private Dam in Stowe that was completed in 2022
 - ❖ Internal erosion failure, slope instability
 - ❖ Downstream impacts
 - July 2023 Flood
 - ❖ Rapid Inspections – 390 dams
 - ❖ Follow-up Inspections – 65 dams
 - ❖ Ongoing/related regulatory work
 - December 2023 Flood
 - ❖ Communication with dam owners
 - ❖ Targeted site visits



FEMA GRANTS:

Dam Safety Assistance Grant:

- Program historically ~\$60-\$100k/year:
 - Supplies and Equipment
 - Vehicles and associated maintenance
 - Summer Temporary salary
 - EAP/H&H Projects as budget allows
 - Recently able to fund Program Administer Position
- 2024 funding increase to ~**\$246k/year**



High Hazard Potential Dam Grant (HHPD):

- FEMA awarded State \$311,000 (35%/65% Cost Share)
- Targeting Risk Assessment Project at 7 HIGH hazard dams that are in POOR condition.
- Potential for dam owners to apply in future to obtain funding for their HIGH hazard potential dams.

HHPD RISK ASSESSMENT

- Completed December 2023
- Figures from Portfolio Dam Risk Assessment Report by GZA GeoEnvironmental, Inc.

<i>Owner</i>	<i>Dam Name</i>	<i>Town</i>	<i>State ID</i>	<i>NID ID</i>	<i>Dam Type</i>
City of Barre	Thurman W. Dix Reservoir Dam	Orange	147.01	VT00069	Earthen
City of St. Albans	St. Albans North Reservoir Dam	Fairfax	70.01	VT00058	Earthen
Hardwick Electric Department	East Long Pond Dam	Woodbury	252.02	VT00185	Earthen/Gravity
	Wolcott Dam	Wolcott	251.04	VT00179	Gravity
Lyndon Institute	Institute Pond Dam	Lyndon	119.01	VT00216	Earthen
Town of Essex	Indian Brook Reservoir Dam	Essex	69.01	VT00055	Gravity
Town of St. Johnsbury	Stiles Pond Dam	Waterford	227.01	VT00054	Earthen/Gravity

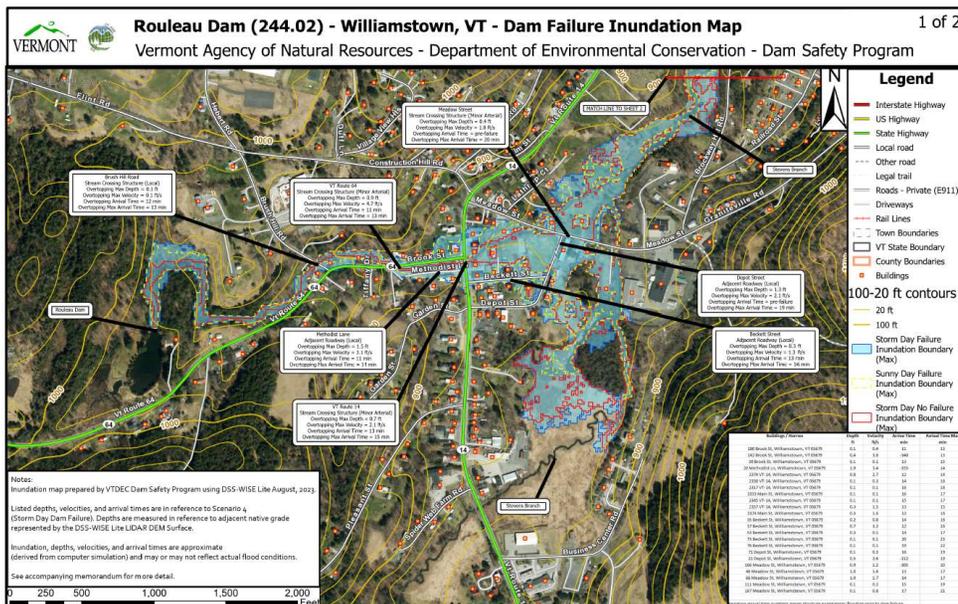
Rank	Dam	Modified SLPRA Score	Life Safety Consequences						Downstream Economic Impacts	
			Fair Weather Failure			Incremental PMF Failure			Fair Weather Failure	Incremental PMF Failure
			PAR	Loss of Life		Incremental PAR	Incremental Loss of Life			
				Best Est.	Range		Best Est.	Range		
1	East Long	1850	129	0.3	0-5	25	1.4	0-3	\$8,313,000	\$9,032,000
2	Indian Brook	1650	712	5.3	0-9	52	18	1-33	\$8,185,000	\$15,043,000
3	Stiles	1500	5	0	0-0	10	3	2-5	\$1,643,000	\$11,371,000
4	Wolcott	1400	6	0	0-0	2	7.7	4-13	\$54,000	\$3,090,000
5	Institute	1200	9	0	0-0	8	0	0-1	\$140,000	\$1,320,000
6	Thurman	1000	7	0	0-0	1,536	7.1	0-17	\$530,000	\$96,321,000
7	St Albans	800	5	0	0-0	17	1.6	0-3	\$181,000	\$444,000

Modified SLPRA Score = Summation of 4 highest rated risks for each dam.

PAR = Population at Risk.

Unsafe Dams

- Quasi-judicial process to deal with dams with imminent safety concerns and an unwilling or unable dam owner.
- Possible funding assistance generally up to \$50,000:
 - Dam Removal = 25% Grant, 75% Loan
 - Reconstruction = 100% Loan
- Post-July 2023 Flood - Petition from Town of Williamstown regarding Rouleau Dam
- Funded design and construction of partial breach to lower dam 3-4 ft to reduce loading on dam, improve stability, and decrease potential consequences.
- Dam slated for future removal.



Enforcement

- Actively work with Environmental Compliance Division when infractions discovered.
- Commonly include unauthorized dam alterations.
- Historically relatively low volume due to limited authorities of Program, anticipating uptick with completion of Dam Safety Rules.



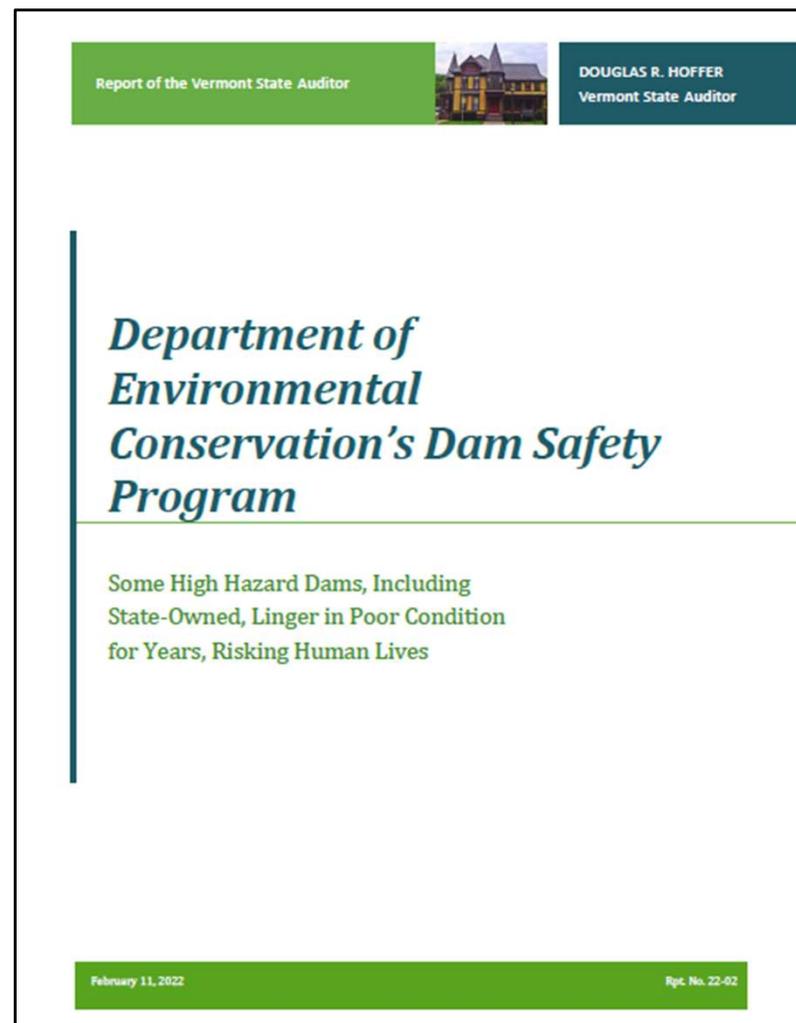
Temporary reservoir reduction due to an unauthorized repair to a dam in Stowe



Breaching of a failed dam in Stowe that resulted in an environmental release

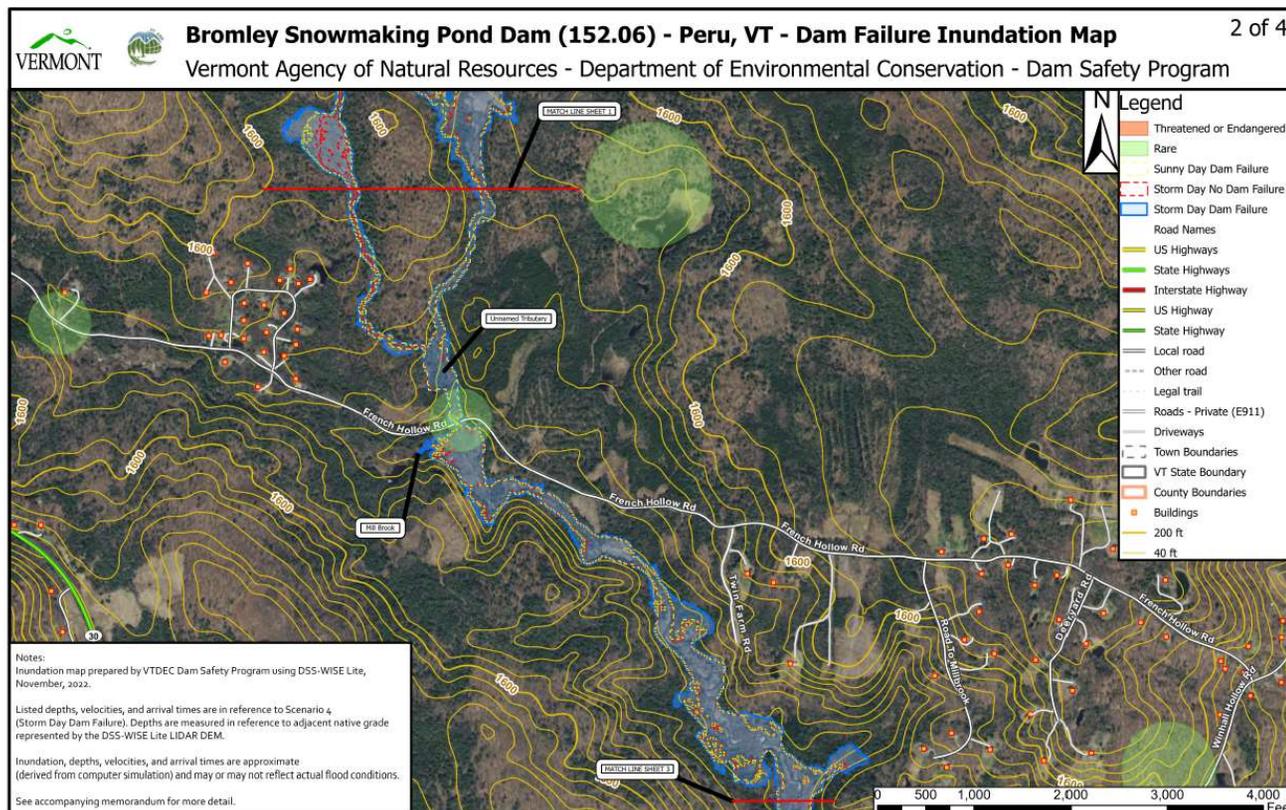
Dam Safety Program Audit

- State Auditor of Accounts completed Audit of Program, Aug 2021-Feb 2022.
- Audit focused on regulatory practices, periodic inspections and inventorying on HIGH and SIGNIFICANT hazard dams.
- Identified some deficiencies in these areas.
- Recommended:
 - Accelerated Rulemaking.
 - Inspection and inventory improvements.
 - Staffing level assessment
- DSP hopes to use Audit results to make programmatic improvements and increase staffing levels.



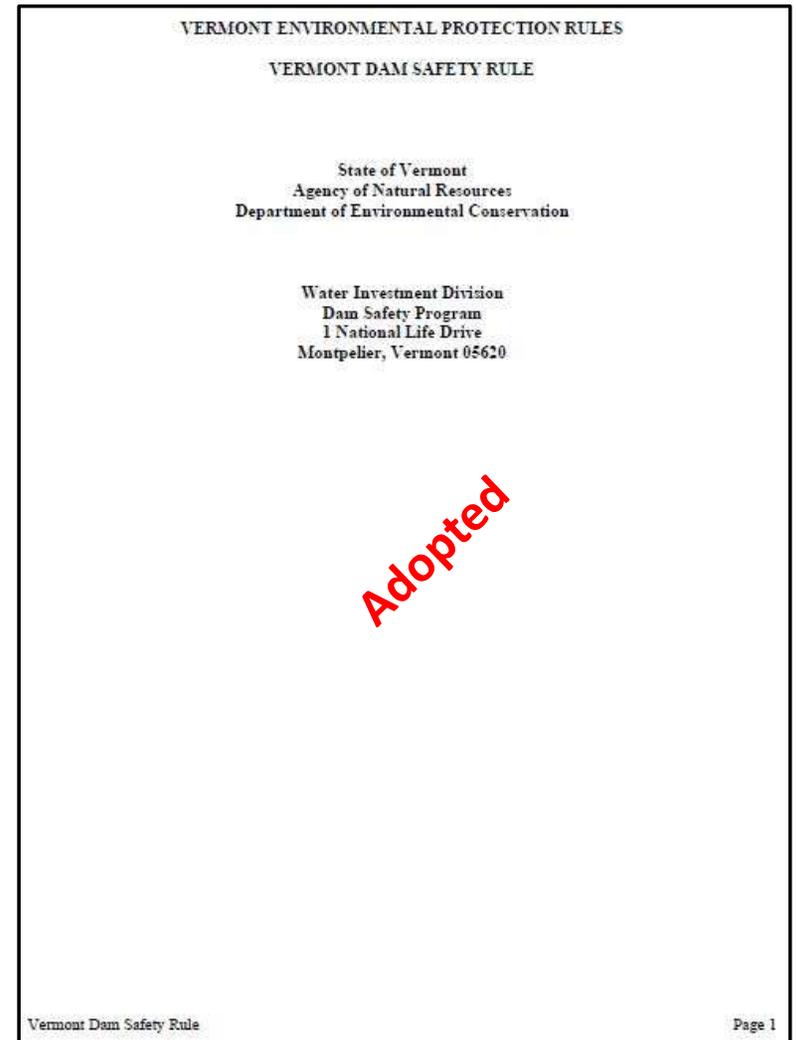
Simplified Hazard Potential Classification Evaluation

- Many existing hazard potential classifications established by our predecessors in the 1970 and 1980s with limited resources.
- Updates in hazard potential classification definitions as part of the rule and changes into downstream development of some dams has caused “hazard creep”
- DSP developed an efficient methodology to evaluate/screen hazard potential classifications of existing dams leveraging publicly available tools.
- ~50 dams have been evaluated, goal to evaluate the entire inventory in time.



Rulemaking – Act 161 of 2018

- Phase I, Administrative Rules adopted
- Phase II, Standards Rules in development
 - Siting, design, construction, alteration
 - Operation & Maintenance
 - Inspection, monitoring, record keeping, reporting
 - Repair or removal
 - Application for authorization
 - EAP requirements and guidance
- Extension to July 1, 2025 being pursued



Dam Safety Rulemaking Process

- Entirely **NEW** rule
- Paradigm change in regulation of dams in VT, shift from passive to proactive.
- Interest Group
- Peer Review
- Dam Safety Workshop for Dam Owners and those interested in proposed Rules.
- Formal Rulemaking, ICAR/LCAR
- Implementation



2019 Dam Safety Workshop

Rulemaking Continued

- **Phase I Rules - Major changes/updates:**
 - Refined Definition of a “Dam” with exemptions
 - Dam Owner Obligation and Responsibility
 - Recording Dams in the Land Records
 - Hazard Potential Definitions updated to match NID
 - Periodic Inspection Schedule
 - Periodic Inspections may be performed by State or Owner
 - Comprehensive Inspections
 - Compliance with Inspection Results



Miles Pond Dam, Concord

Rulemaking Continued

- **Phase II Rules – Planned Major changes/updates:**
 - Dam Order Application Requirements
 - Design, Planning, and Construction Requirements
 - Operation and Maintenance Requirements
 - Inspection Requirements
 - EAPs required for all SIGNIFICANT and HIGH hazard dams, updated every 2 years. Regional training and testing.
 - Detailed technical standards:
 - H&H
 - Geotechnical
 - Structural
 - Mechanical
 - Instrumentation



Lake Groton Dam, Groton

S.213 Review High Level Review

- Primary focus is funding and liability for dams.
 - Functional Funding Program is critical to the future success of Dam Regulation
 - Concerns with the Liability proposal
- Funding Program - high-level concerns:
 - Need to keep the focus of the fund squarely on Risk Reduction
 - The Dam fund does not include an appropriation.
 - No mention of needed staffing resources to administer the fund.
 - It is noted that “State agency having jurisdiction” is stricken and replaced with “Department” in areas considered by this Bill, implying jurisdictional transfer of PUC dams to Department, which is part of another Bill.
 - An Alternative Analysis will not be done by the Department it is not our role. It could be done as a funded activity and would be a requirement of a Comprehensive Assessment before starting project design, which would be an eligible activity.
 - Removal of public hearings in Unsafe Dam Process not supported.
 - Unclear purpose for adding the definition of the word, “harm.” Existing loss types already established.

S.213 Review High Level Review Continued

- Liability- high-level concerns:
 - The DSP does not support this addition. Appears to imply a dam that is in “full compliance” results in a dam owner holding less liability.
 - There should be nothing to relieve a dam owner of the legal duties, obligations, or liabilities of dam ownership and operation.
 - Liability is not created nor extinguished, so therefore it is only really transferred. In today’s society where someone must be at fault, it seems like the proposal could shift liability from the dam owner. Does this impact the of the responsibility of the DSP?
 - Potentially dangerous concept that could transfer some liability from dam owners to others, including the State and/or DSP.
 - DSP does not provide full compliance certification, full compliance is dynamic
 - It could provide a false sense of security.
 - Our standards are only minimum safety standards.
 - Anyone can sue for anything and as to how these issues would play out in court would be situation dependent.
 - Could result in owners of SATISFACTORY condition dams, including HIGH hazard dams with high consequences to disengage from proactive maintenance. Look at Oroville Dam in California, should the owner of that dam had reduced liability? There are too many internal factors relative to dams to bring that level of certainty.

**Thank you!
Questions?**



View from Wrightsville Dam

Ben Green, PE
Dam Safety Engineer
VTDEC Dam Safety Program
802-622-4093
Benjamin.Green@vermont.gov