REGIONAL PROJECT PRIORITIZATION

PROJECT INFORMATION FORM

1.0 PROJECT NAME: **Shadow Lake Dam Restoration Project DRAFT**

2.0 TYPE OF PROJECT: *(Check Type and Circle Subtype)*

☒ Infrastructure: Water, Wastewater, Broadband, Transportation, Public Facility, Other

☐ General Development: Industrial, Commercial, Residential, Mixed

☐ Site/Facility Development for Specific Business

☐ Workforce Development

☐ Business Development

☒ Other: __Dam upgrading to avoid dam failure due to flooding in the last three years.

3.0 PROJECT SPONSOR: Name, address, contact info for who is submitting project information.
Theresa Perron-Janowski, Town Administrator, Town of Glover, VT

4.0 PROJECT PRINCIPALS: Town of Glover, 51 Bean Hill Road, Glover, VT 05839 - Municipality

Theresa Perron-Janowski, Town Administrator, Town of Glover, 51 Bean Hill Rd, Glover, VT 05839. Theresa@townofglover.com 802-525-7199, mobile: 802-673-8943

Weston Sampson Engineering: Thomas Strike, PE, StrikeT@wseinc.com, Team Lead
603 263-9499, 150 Dow Street, Tower 4, Suite 350, Manchester, NH 03101

5.0 PROJECT DESCRIPTION: (Brief 2-4 sentences)

The Town of Glover, Vermont seeks funding to rebuild and upgrade the dam at Shadow Lake after flooding the last three years has degraded the dam and deteriorated its condition such that the lake level must remain lower than normal to reduce the threat of failure. Fixing the dam will prevent a disaster which could lead to the loss of Glover's downtown village including all the businesses and homes. It could also seriously damage the towns of Barton, Orleans and Coventry, as the "Runway Pond" dam break did back in 1810.

The Town owns the dam which is on the outfall of Shadow Lake. The lake is surrounded by year-round homes and summer camps. **See Appendix 2** It is a recreational destination for residents and visitors to the region. The dam has been classified as a "significant" hazard by Benjamin Green, PE, Dam Safety Engineer, Vermont Dam Safety Program (DSP). The dam's condition is also considered "unsatisfactory" which requires immediate or emergency remedial action. Engineering currently being done by Weston and Sampson Engineering will determine the extent of repairs and rebuild necessary. As well as develop a repair and enhancement plan,

secure necessary permits, develop a repair plan with proposed design and cost estimates by fall of 2026.

Describe the purpose and benefits to the community/region of the project. Describe if/how the project builds capacity within the region for improved regional development/economic development/community development, including: advancing workforce development; expanding entrepreneurship efforts; supporting or enhancing existing business clusters, or other economic impacts within the region.

The Town of Glover is applying for funding to upgrade and repair the Shadow Lake Dam after three years of damaging flooding. Bringing the dam into compliance with the Vermont Dam Safety Program (DSP) requirements will prevent the dam from failure and the resulting catastrophic destruction in Glover and Barton.

The dam was built to power mills in Glover in the 1800's. That power source is no longer needed and the dam now provides recreation activities for lake property owners, townspeople and visitors. Tourism supports many businesses in the Glover/Barton area. If the dam fails, the resulting flood will destroy anything in its path negatively affecting the towns of Glover and Barton. Numerous houses and businesses would be severely impacted and destroyed. Roads and bridges could be taken out, cutting off access to the villages for emergency vehicles and regular transportation needs. Glover hosts a nursing home and senior housing in the Village which could be severely impacted if there was a breach.

The Town is undertaking a survey of businesses in Glover and Barton Spring of 2026. This will determine business impacts from the recent floods. Should the dam breach, those impacts will be repeated with likely far worse destruction. The survey will provide a profile of the potential for loss of jobs and businesses if the dam fails. As of this writing, the survey is underway with no results to report. Results will inform future grant applications.

Upgrading the dam will preserve Shadow Lake and the economic development which has resulted from the economic activity and tourism the lake provides. Upgrading will retain jobs in the businesses providing services, retail, construction and other needs in Glover and the area.

Page 13 contains the businesses likely to be affected if not lost should this dam fail. This is not a complete list but gives a sense of the potential loss of economic activity and job.

7.0 PROJECT TIMELINE, MILESTONES, AND STATUS: *Describe the project timeline, the current status, and impediments to proceeding. Include factors such as site control, engineering and*

design, financing/funding identification and commitment, and permitting. Clearly identify where the project is in the timeline and what work remains.

To date, the Town's engineering firm, Weston and Sampson have completed several steps to move this project forward to be construction ready:

1. Information Review: Review existing information on Shadow Lake Dam available from the Town and the Vermont Dam Safety Program (DSP). **DONE.**

2. Dam Observations: Dam safety and structural engineers have completed visual observations of the dam and document observed conditions. **DONE.**

3. Wetland Delineation: Wetland delineation has been completed along the upstream and downstream sides of the dam. Flags are in place so their locations can be included in the site survey. The delineation was completed and documented in accordance with the Vermont Department of Environmental Conservation (VTDEC) Wetland Rules. **DONE.**

4. Survey and Base Plan: A topographic survey at the dam and areas within 20 feet of the dam has been completed creating a base plan of existing conditions. The plan will assist with developing plans for dam rehabilitation permitting and design. The survey was tied into the North American Vertical Datum of 1988 (NAVD88) and the VT State Plane Coordinate System using GPS-based technology. We have also established two temporary survey benchmarks that can be used by the contractor during construction. **DONE.**

5. Field Explorations: Completed bores at the dam to collect information on embankment and foundation soils and groundwater. This has informed evaluating embankment stability and seepage conditions. Weston & Sampson retained the services of a drilling subcontractor to complete up to two (2) bores at the dam to depths up to 30 feet or refusal. Weston & Sampson staff have marked the boring locations, observed the boring in the field, and prepared boring logs. **DONE.**

6. Hydrologic and Hydraulic Analyses: January 30, 2023, D&K H&H Assessment Report included a detailed summary of H&H modeling and evaluations of existing conditions and three proposed alternative dam geometries under various design storms and dam failure scenarios. Weston & Sampson used existing models developed by D&K, as a starting point, to evaluate up to five new spillway and/or dam modification alternatives that would allow the dam to safely pass the design storm event without increasing downstream hazards. Given the steep terrain and relative lack of significant floodplain storage, in conceptualizing and evaluating the alternatives, we assume downstream hazards are not increased if peak discharge from the dam is not increased above and beyond existing conditions during any design storm. **DONE.**

7. Engineering Analyses: Evaluated data collected during the field activities described above and conducted engineering analyses to assess the dam's existing embankment stability and seepage

conditions. These analyses support alternatives for rehabilitation, including the need for any drainage/seepage collection systems and structural improvements. **DONE AND WORKING ON A REQUIRED SECOND ANALYSES**.

The Town of Glover owns the dam and conducts dam maintenance as needed. The site is controlled by the Town of Glover.

Moving forward, our timeline is to issue an RFP in June 2026 for design, hire an architect and contractor in July 2026 to finalize the design, scope of work/cost estimates by October 2026. Obtain all required permitting before starting construction in late Spring 2027 when weather permits. Construction is expected to be completed by the Spring 2028.

Once the design and cost estimates are completed in the fall of 2026, that information will be forwarded to FEMA which will determine how much funding FEMA will provide. The Town will be expected to fund a 12.5 % match of the FEMA funding as well as fill any funding gap. Early estimated indicate the cost will be more than $2.5 million dollars. The town needs assistance with the 12.5% match and any funding gap emerging from what FEMA will do. The match alone will be several hundred thousand, which is a very heavy burden for a town the size of Glover.

8.0 PROJECT PRINCIPAL EXPERIENCE: *Describe project principal experience, ability to complete the project, and describe any partnerships that will help ensure success.*

Weston & Sampson (W&S) Engineering is the principal project management for dam analysis with the Town and is a highly qualified and competent in dam engineering and construction. They will ensure successful completion of the project. They have extensive experience and expertise (**see Appendix 1**). The Town procured their services through a competitive bid process.

W&S analysis is closely reviewed by Vermont Dam Safety Engineer, Ben Green with the Vermont Dam Safety Program (DSP). Mr. Green is extensively familiar with Shadow Lake Dam and will oversee the analysis to guarantee that it will come into compliance with applicable regulations. DSP has performed several inspections of the dam and is always available for questions and concerns when the town administrator contacts them. His recommendations have the safety of the dam and community in the forefront. W&S and DSP are the primary partners with the Town of Glover.

The Town of Glover is another principal for this project. The Town has experience with grant administration having had federal and state grants in the past. The Town Administrator, Theresa Perron-Janwoski and Treasurer and Town Clerk Cynthia Epinette, have extensive grant administration and property management from prior related experiences. The Selectboard will be directly involved providing guidance and making executive decisions.

The Town is also versed in dam maintenance and operation. The Town Administration has a very full plate and grant management assistance will be needed. The Town could seek grant management assistance from the Northeast Vermont Development Association (NVDA) which has extensive grant management experience. Or put out an RFP for grant management services. A final decision will be made as funding is secured.

The town administrator has been the project manager for Shadow Lake Dam since 2023 managing all communication regarding the dam. She is in close contact with the engineers and the VT Dam Safety Program (VTDSP). She is supervised by the Selectboard member Anne Eldridge, who is also the Shadow Lake Liaison, who sits in on most zoom meetings regarding the dam.

The Town is also being assisted by the VT Agency of Natural Resources Dam Safety Program as needed. They inspect the dam regularly and provide oversight and assistance.

The Town is currently being assisted by the Vermont Disaster Recovery Officer, Pat Moulton.

9.0 PROJECT SUPPORT AND REGIONAL NEED: *Describe how the project is consistent with identified local and regional goals, advances regional needs identified in plans, reports or public forums, and describe the community support and engagement. Include reference and link to the municipal and/or regional plan, report, or forum identified. Also describe how the project leverages regional human, social, financial, cultural, and/or physical capital, and supports, compliments, or enhances existing efforts.*

The project is consistent with many goals of the Regional Plan and Local Plan. The dam is of great concern for the Town including updating their Flood Hazard Bylaw in 2025. The Town also adopted River Corridor Bylaws in 2025. Both are significant steps to make the Town more resilient. The Town updated their Shadow Lake Emergency Action Plan also in 2025.

The Shadow Lake Emergency Action Plan contains a list of roadways to be affected (Page 4), the "Population at Risk" on Page 5 indicates 200-400 people would be at risk if the dam fails. The Action Plan has roles and responsibilities of officials if such an emergency occurs.

The Town has developed inundation maps created from river modeling done by DuBois & King Engineering in 2023 showing areas of inundation if the dam fails. These maps show the inundation boundaries along the Barton River in Glover and Barton, represented by the blue lines depicting the "dam failure inundation boundaries" along the river. The first map is the full watershed with submaps depicting various reaches of the river. The first map shows the entire stretch of Barton River from the dam down to the village of Barton. Subsequent maps break out the inundation of the numbered areas. Map 2 shows the areas of Glover that would be inundated. Maps 7 and 8 show impacts to Barton and map 9 shows the impact to the river along Barton Orleans Road which is US Rte. 5. Clearly these are hazards that no town should

endure! Failure of the dam must be avoided at all costs. Yet the cost is a huge burden to approximately **1,100 community members.** Support is essential to prevent critical failure.

The Glover Town Plan speaks to many overall goals for the Town. These goals are:

- Preserve the rural nature of Glover. (page 6)
    - Strategies include "Encouraging growth using local and non-regulatory incentive-based tools."
- Preservation of Natural Resources and Historic Sites. (starts on Page 6)
    - Preserve Glover's rural appearance.
    - Encourage preservation and efficient use of natural and historic resources.
    - Preservation of historic sites (Page 9)
- Section 12 of the Plan is "Flood Resilience" (Page 24)
    - This section lists flood history (Page 27)
    - There is a section on "Dam breaks" providing more detail on the risks of overtopping and failure. (Page 28)
    - Subsequent sections focus on the transportation infrastructure, local planning and funding resources, Emergency Relief Fund (ERAF), Roads and Bridges, National Flood Insurance program, flood hazard area regulation, local hazard mitigation planning, areas of special consideration (pages 29-36)

Regional Plan:

The prevailing regional plan is the 2015-2023 adopted regional plan. The regional plan speaks to regional goals around preserving and enhancing recreational uses, protecting water bodies and retaining historic structures. The Shadow Lake Dam project fits with these goals by preserving an existing significant recreational activity in Glover and for the region.

The plan speaks to having utilities and facilities meeting current safety standards. At present the Dam does not meet the Dam Safety Program safety standards and must be upgraded.

Economic Development goals speak to revitalizing downtowns and village centers as well as balancing the economic needs with protection of natural resources. Shadow Lake is a natural resource to protect. It also speaks to how private; public and community interests should be considered in affecting local recreation and open space. Shadow Lake and the dam are important natural resources Glover and communities around the lake can enjoy.

The regional plan includes goals to "Mitigate risks to public safety, critical infrastructure, historic structures, and municipal investments." (Page 30) Shadow Lake is one of those critical recreational resources as well as being an historic structure. It presents a significant risk to Glover and downstream communities like Barton and Orleans.

Dam failure would be worse than the "Runway Pond" catastrophe in 1810 which wiped out the towns mills and had a wall of water 75' high through Glover, Barton and Coventry. The story of Runaway Pond was used by National Life back in the 1800's as a way of encouraging folks to buy life insurance! https://vermonthistory.org/runaway-pond Glover does NOT wish to relive that scenario.

Weston & Sampson and Selectboard have held several public forums with the community and offered open conversations with questions and answers and extensive PowerPoint information demonstrations. The Town website created a special page for all activities regarding the dam to create a transparency between town appointees and community members. See: https://townofglover.com/lakes/ on this same website under documents you can find all municipal plans and reports identified above. This website will bring you to the photo of the sink hole and a video of the water that was escaping via the sink hole: https://shadowlakedam.org/

The Shadow Lake Association has developed a fundraising committee which meets every-other-week to work on creative ways to raise money for the reconstruction of the dam. The Association has a newsletter that sends updates to everyone from the town administration.

10.0 PROJECT COST, IDENTIFIED AND COMMITTED FUNDS/FINANCING, AND FUNDING GAP:
Provide the total project cost, describe the amount of funds/financing that have been identified and include a clear status of the funds (Received, committed, applied for, identified, etc.) including the dates of receipt, commitment, application, expected distribution, etc. Clearly identify a funding gap.

REGIONAL PROJECT PRIORITIZATION

PROJECT INFORMATION FORM

Glover Shadow Lake Dam Sources and Uses:		4.23.26		
Uses:				
Engineering:	$58,388 spent	$ 500,000		
Construction:	*Estimate only*	$ 2,500,000		
Project manager	*Estimate only*	$ 300,000		
		$ 3,300,000		
Contingency of 25%		$ 825,000		
		$ 4,125,000	**Total estimate only**	
Sources:				
Engineering FEMA		$ 500,000	In process	
Town Dam reserve in hand		$ 65,000	In hand Rollover	
Town 2026 Allocated Funds		$ 35,000	in hand	
SLD Fundraising		$ 26,148	in hand	
Town Weston & Sampson A&E		$ 20,000	in hand	
Construction FEMA	*Estimate only*	$ 2,500,000	Timing & amount TBD	
Town match 12.5% of FEMA		$ 228,872	No source	
		$ 3,375,020	**Total estimate only**	
	Funding Gap	**$ 749,980**	**FUNDING Gap**	

The Town of Glover is receiving FEMA assistance to conduct the "engineering and related" work currently underway. FEMA will fund 75% of the construction work. FEMA requires a 12.5% match from the Town of Glover. The Town must find resources for any funding gap after the engineering and design work is completed and FEMA has determined the portion they will fund. The cost of construction, engineering, project management and contingency, to be more than $4 million dollars.

The Town of Glover is waiting for final engineering, design and cost estimating underway by Weston and Sampson Engineering and Environmental Consulting. FEMA covers 75% of the architectural and engineering (A&E) costs the dam. That report will contain cost estimates, which will be the basis FEMA's review of what funding FEMA will provide for the dam. This analysis will also identify the funding gap needed by the Town to cover all the costs of upgrades. This work is expected to be completed by fall of 2026.

11.0 JOB CREATION: *Provide the number of full-time jobs to be created and/or retained by the project, a description of the benefits package to be offered to the majority of the new/retained jobs, and the average wage of the jobs to be created/retained.*

The focus of this project is long term retention of jobs and commercial, tourism, construction, plumbing businesses and other jobs existing to service residents and the hospitality industry in Glover. This industry creates jobs and provides services. The Town is undertaking a survey of Glover and Barton businesses in the Spring of 2026 to understand their past flooding impacts

and quantify the jobs potentially lost if this dam fails. That survey we hope to have completed by May 2026.

Eligibility and Scoring Criteria

Projects should address the following criteria to be included on the Regional Priority Project list. These are the criteria that will be used to score and prioritize each project. Scoring and prioritization is conducted on a continuum for each criterion regarding the degree to which the project meets each criterion. For example, a project that is truly "shovel-ready" (no obstacles to implement except the funding gap) will score higher than one that requires permitting or the project managers do not have site control. A second example is a project that creates 20 new, high-paying jobs will score higher than a project that retains a few jobs. Projects that meet the criteria to a higher degree will score higher and be placed in a higher priority. Because the lists are living and dynamic, projects can be added to the list each year and move up in priority as the project is more fully developed and more fully meets criteria. Projects should, at a minimum be able to address the following on the Project Information Form:

- **Project Purpose and Benefits to the Region**: The project should build capacity in the region for improved economic and community development. Projects that advance economic and community development, especially in areas such as workforce development, developing entrepreneurial ecosystems, and enhancing business clusters, will score highest.

- ***Discussion:*** This project is *critical* to the safety of the residents, infrastructure and economic well-being of the towns of Glover, Barton, Orleans, Coventry and Newport. A dam breach would cripple much of Glover and parts of Barton destroying homes, businesses, roads, electrical power, farmers' lands and possible loss of life. There would be loss of jobs for local people working at those businesses. Upgrades to the dam will guarantee safety and will help assure the community that they are safe**,** have job security, and peace of mind. Also, we must maintain the tourism industry in Glover, Barton and surrounding areas. The tax base generated by the lake front properties is critical to the Town of Glover. While it may not directly create "capacity for improved economic and community development," it prevents an economic crisis and protects the development that already exists in the small communities of our two towns should the dam fail. Further, landowners are not happy with the lowering of the lake to help minimize failure. This created an even greater challenge for lake goers when walking many feet from the land to reach the lake waterline. The drought the fall of 2025 lowered the lake and two feet further and exposed a "muck" on the lake floor. Many residents experienced getting stuck in the muck and seeking help to get out and it was even more dangerous for children. The drought negatively impacted fish habitat and boaters found it nearly impossible to launch their boats without damage. This project may not result in significant new employment or other economic activity. However, the project will protect and retain employment and prevent economic disaster for Glover, Barton, Orleans or Newport where the Barton River meets Lake Memphremagog. **See appendix 12**

- **Project Timeline, Milestones, and Status:** The project should be prepared to get underway if funded, including factors such as site control, engineering and design, permitting, and funding identification and commitment. Project should also have identified milestones measurable outcomes. Projects that are considered "shovel-ready;" that is, the project is underway, ready to implement or close to ready, and identifies milestones and outcomes, will score higher.

  Discussion: The Town of Gover owns the dam and has site control. Engineering, design and permitting work is underway with Weston and Sampson and will complete fall of 2026. Any remaining permits will be obtained during the winter with expectation for construction starting spring of 2027.

  Please see Section 7 for project milestones, pages 3 and 4.

  Moving forward, our timeline is to issue an RFP for design in June 2026. Hire an architect and contractor July 2026 (through competitive bidding), finalize scope of work/cost by October 2026, obtain all required permitting before start construction in late Spring 2027 until weather permits, likely going into Spring 2028 to complete all construction.

- **Project Principal Experience:** The project should involve an entity that has successfully executed similar projects, managed federal or state grants, and/or successfully developed similar business models, or involve a partnership or collaboration that provides adequate experience. Projects showing experienced project managers or a collaboration/partnership that provides experience, will score higher.

  Discussion: Weston & Sampson, if assigned after a competitive bid process, or another firm, will be the Construction Administration for this project. They will see the project through to the end of analysis, permits, and construction. (**See Appendix 1** for information on adequate experience.) The Town of Glover has managed grants in the past with the treasurer as the grant administrator. However, this is a large project for the Town. FEMA funding to assist with the dam will also include project management costs to ensure an experienced full-time PM will be hired if necessary. The Dam Safety Division at the Agency of Natural Resources (ANR) will be available when needed to inspect the project. An RFP will be issued for construction services experienced in dam construction.

  The Town will need help managing grants and it is expected grant management will be part of any grant budget. The Town Administrator has managed grants and is presently Project Manager for a salt shed construction and ADA construction project on town property, she has also managed the FEMA portal for three years due to floods. She is well versed in the Town's procurement, bidding and financial processes. She is also just one person whose plate is already full. The Town will need additional project and grants management assistance.

REGIONAL PROJECT PRIORITIZATION

PROJECT INFORMATION FORM

- **Project Support and Regional Need:** The project should address and advance local and regional economic and community development goals and objectives, as identified by the regional plan and/or other studies and reports, and have community support and engagement. The project should not be redundant or duplicate ongoing projects or programs in the region unless there remains a need, such as with housing or childcare ; rather, projects should fill a need in the region. Projects that address a regional goal as expressed in the regional plan and are not duplicative, will score higher.

  Discussion: We have strong community support and engagement with small fundraising ideas that brought in over $26,000 in the winter of 2024. We are a small community and every person that gave money felt this project was a priority. The Lake Association recently developed a fundraising committee and are pursuing larger donations with a marketing package to solicit corporations for funding.

  We are aware of many flood recovery project needs in the region. We do not know of any other critical dam projects in the region.

  As addressed above in section 9.0, this project meets many of the goals in the current NEK Regional Plan. The most recent dam inspection by the Agency of Natural Resources Dam Division still places the dam as a "significant hazard." While the dam overflowed in the flooding, it did not let go. There are "mini breaches" in the dam which are problematic. All points to the need for repair before conditions worsen.

  Project Cost, Identified and Committed Funding/Financing, and a Funding Gap: The project should have a budget developed that includes total project cost, identified sources and uses, and a clearly identified funding gap. The project description should state the funding sources the project is pursuing, the status of those funding/financing sources and, if not secured, identify when the sources are expected to be committed. Also, identify the type of resource (cash, grant, loan, sponsor in-kind, third party in-kind, etc.) and describe which resources can serve as a match, noting that, for example, some grant sources do not allow matching federal funding with other federal funds. Projects that include a budget, all funding information, have an identified gap, and have funding commitments and a match, will score higher.

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Construction FEMA	*Estimate only*	$ 2,500,000	Timing & amount TBD
Town match 12.5% of FEMA		$ 228,872	No source
		$ 3,375,020	**Total estimate only**
	Funding Gap	**$ 749,980**	**FUNDING Gap**

Discussion: The Town of Glover expects all this work could exceed $4 million dollars based on early estimates. The Town will need to provide a 12.5% match of over $300,000 based on early estimates. This is a heavy lift for a town the size of Glover.

This project will receive FEMA funding. FEMA funded engineering which is underway by Weston and Sampson with expected completion by the fall of 2026. The Town will need a design based on the engineering work. After that is completed, all are submitted to FEMA which will come back to the Town with a figure of what they can provide for funding for the dam. There will likely be negotiations between FEMA and the Town to obtain the maximum funding. The Town must match the FEMA funding with 12.5% of eligible funds. The other 12.5% will hopefully be funded by ERAF. If not, the town will be forced to secure a loan or bond.

The Town is investigating grant sources to find that 12.5% match as well as the funding gap. There are *very* few funding programs for dam repair on the state and federal level. And even fewer which can serve as match of federal dollars. The town is exploring all options.

The Town is undertaking a business survey of Glover and Barton businesses this spring to determine flood damage. That information will help project the loss of jobs, tax base and revenue should the dam fail. With that information, we may be able to meet

economic development goals of additional funding sources such as NBRC, CDBG or USDA RD. These sources are certainly not guaranteed.

The Natural Resources Conservation Service (NRCS) has a watershed program aimed at dam repair. We are in touch with NRCS as well as the Orleans County Resource Conversation District (NRCD) to determine if funding is available in that program. The local conservation services pointed us to the state level to determine which programs have remaining funding. NRCS only provides funding to "high hazard dams" which is a step above the "significant hazard" rating of Shadow Lake Dam.

The Town is also raising private funds and investigating a fund-raising campaign with lakeside property owners and visitors to augment funding.

The worst-case scenario is the town may have to bond for their 12.5% match. That will have an impact on the taxes for the Town. That is very concerning coupled with education tax increases. Therefore, it is imperative that the town finds additional funding sources for this work.

Job Creation and Retention: The project should create or retain jobs. The project description should state the number and type of jobs to be retained and/or created, including the period of time over which the jobs will be created, the average wage of the jobs, and the benefits expected to be offered. Projects that create new, high-paying jobs with good benefits, will score higher.

Discussion: The primary focus of the funding we seek is to retain jobs and economic activity in Glover and Barton and the surrounding area if the dam can be stabilized *before* a catastrophe happens. Repairing the dam returns the lake to the elevation of twelve inches below natural lake level instead of the two feet first predicted. This enables the tax base from property owners to be maintained at current levels. If the dam fails, lakefront property values will drop without the lake! According to the Common Level and Assessment (CLA) used by town to value properties and assess taxes, the first 200 feet of lakefront property is assessed at a higher rate than the balance of the property due to the lakefront. That additional revenue would be lost in the event of failure. The value of the homes along the lake will diminish over time if there is no lake there. Summer tourism in Glover will shrink or disappear without the lake.

Such as failure would wipe out or severely impact businesses like Curriers Market in the Village. This market is the only general store in Glover. It is a mainstay for locals and the working population in and around the Town. Other likely impacted businesses include but are not limited to, any business located near the Barton River from the dam into the Village of Glover, the Town of Barton and Orleans. Glover impacted businesses include but is not limited to any business on Barton Road (Rte. 16 from Glover to Barton):

D&D Sugarwoods Farm Red Sky Baking

Glover Public Library
Glover Town Clerk's office
Glover Village School
Busy Bee Diner
Labour of Love Landscape
NEK Information Consultant
Fire Department
Glover Hall
Millside Nursery
Town Garage
Glover Post Office and more.
Stoneglass Jewelry
Glover Senior Meals
Morning Star Farm
Red Sky Trading
Nana's Bears & Buttons
Trevits Art Studio
Waring Woodworking

Businesses in Barton located along the Barton River on Glover Road (Rte. 16) and Main Street and would be significantly impacted including, but not limited to:

Barton school
Baptist Church
Orleans County Fairgrounds
Bond Auto Parts
The Barton Chronicle
Barton Chambers Apartments
McMaster Antiques
JP Sicard
Leroux Brothers
Lyons Farming
Taylor Automotive
AJM Construction
law offices, farm stands and more

Businesses in Orleans which are likely to be severely impacted include but are not limited to:

Ethan Allen Furniture company (the Barton River runs through the Ethan Allen site)
Post Office
Thibault's Market
Village & Town Office
JB Colton
Orleans Pit Stop
Senior Center,
Town emergency services
TD Bank

Appendix 1:

FIRM OVERVIEW of Weston and Sampson

Weston & Sampson has provided public agencies, municipalities, and private sector clients with cost-effective and innovative solutions to infrastructure and environmental challenges since its founding in 1899. As a full-service, interdisciplinary consulting firm with more than 1,100 professional staff, we offer capabilities ranging from project development, assessment, and planning through permitting, design, construction, and long-term operation and maintenance.

They have a steady record of growth and the ability to understand the needs of our clients, develop appropriate solutions, and provide comprehensive services on time and on budget. In further testimony of our performance and creativity, Weston & Sampson is often recognized for excellence in design and engineering consulting by municipalities, agencies, regulators, and peers. All this has contributed to a high company-wide client return rate.

Dam SAFETY engineering

Weston & Sampson's dam safety practice combines geotechnical, structural, and water resources expertise with other support services such as environmental engineering and landscape architecture as project needs arise. They provide full-service capabilities related to dam evaluation, rehabilitation, and removal including visual inspections, detailed design evaluations and design, and preparation of contract documents to support dam rehabilitation and removal projects. They are routinely engaged in dam inspections, field investigations on dams, identifying and evaluating dam rehabilitation and removal alternatives, designing dam rehabilitations and removals, and managing construction of practicable and cost-effective dam improvement or removal projects. W&S's dam safety related work has included:

Evaluation of existing conditions, including subsurface explorations, existing structure and low-level drain/gate evaluations, wetland delineation, topographic survey, hydrologic and hydraulic studies, seepage and stability assessments, and development of conceptual design options

- Evaluation and design of dam modifications to improve stability, increase hydraulic capacity, increase resistance to overtopping and erosion, reduce seepage, and enhance downstream drainage, which has included:
    - Repairs to and replacement of spillways and walls
    - Mineral filter and toe drain construction
    - Vertical cut-off walls
    - Spillway modifications to increase hydraulic capacity
    - Repairs to and replacement of outflow control structures
    - Fish ladder design and construction

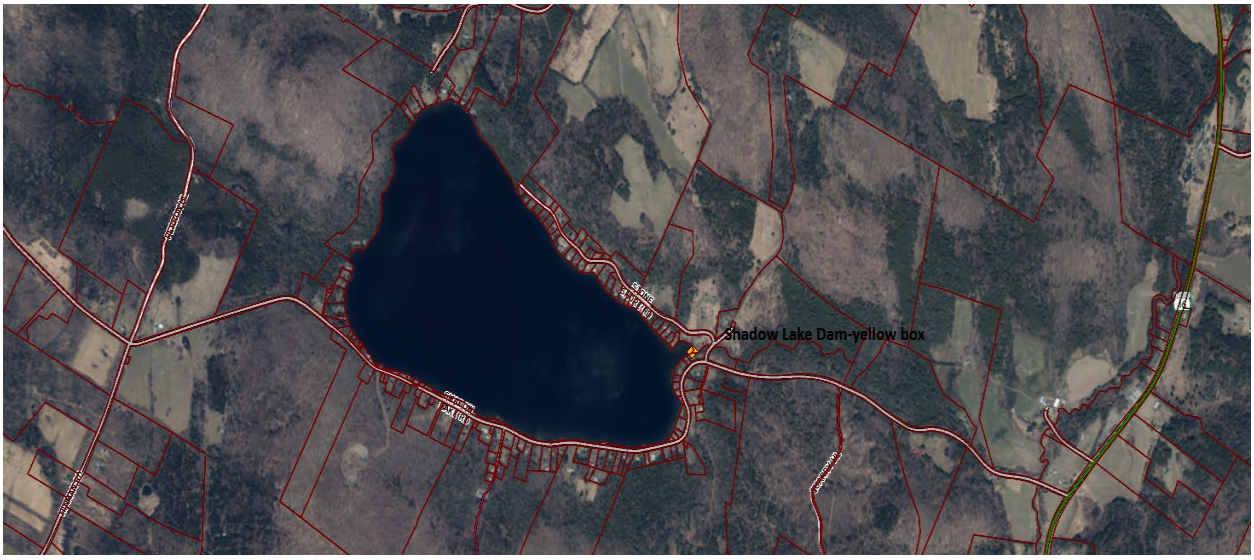
    - Operations and maintenance plans
    - Emergency Action Plans (EAPs)
    - Visual inspections
    - Alternative analyses
    - Dam removal/river restoration design
    - Bridge rehabilitations
    - Watershed modeling
    - Dam breach analyses
    - Resiliency planning and climate resilient design
- Sediment transport analyses
- Landscape design and restorations
- Asset management
- Geotechnical instrumentation and monitoring
- Support of excavation design and groundwater control
- Underwater and confined entry inspections
- Environmental permit preparation
- Wetlands delineation/replication
- Dam failure emergency response and repairs
- Cost estimating
- Contract document preparation and bidding services
- Construction administration
- Community Engagement

W&S's technical team regularly completes visual inspections, local and regional hydrologic/hydraulic analyses, subsurface explorations, structural inspections, and geotechnical analyses of dams to help our clients prioritize their dam maintenance and operation needs. W&S's team of hydrologists and hydrogeologists regularly conduct watershed modeling, stream channel modeling, dam spillway size alterations modelling, restoration, sediment transport analysis, and environmental impact assessment.

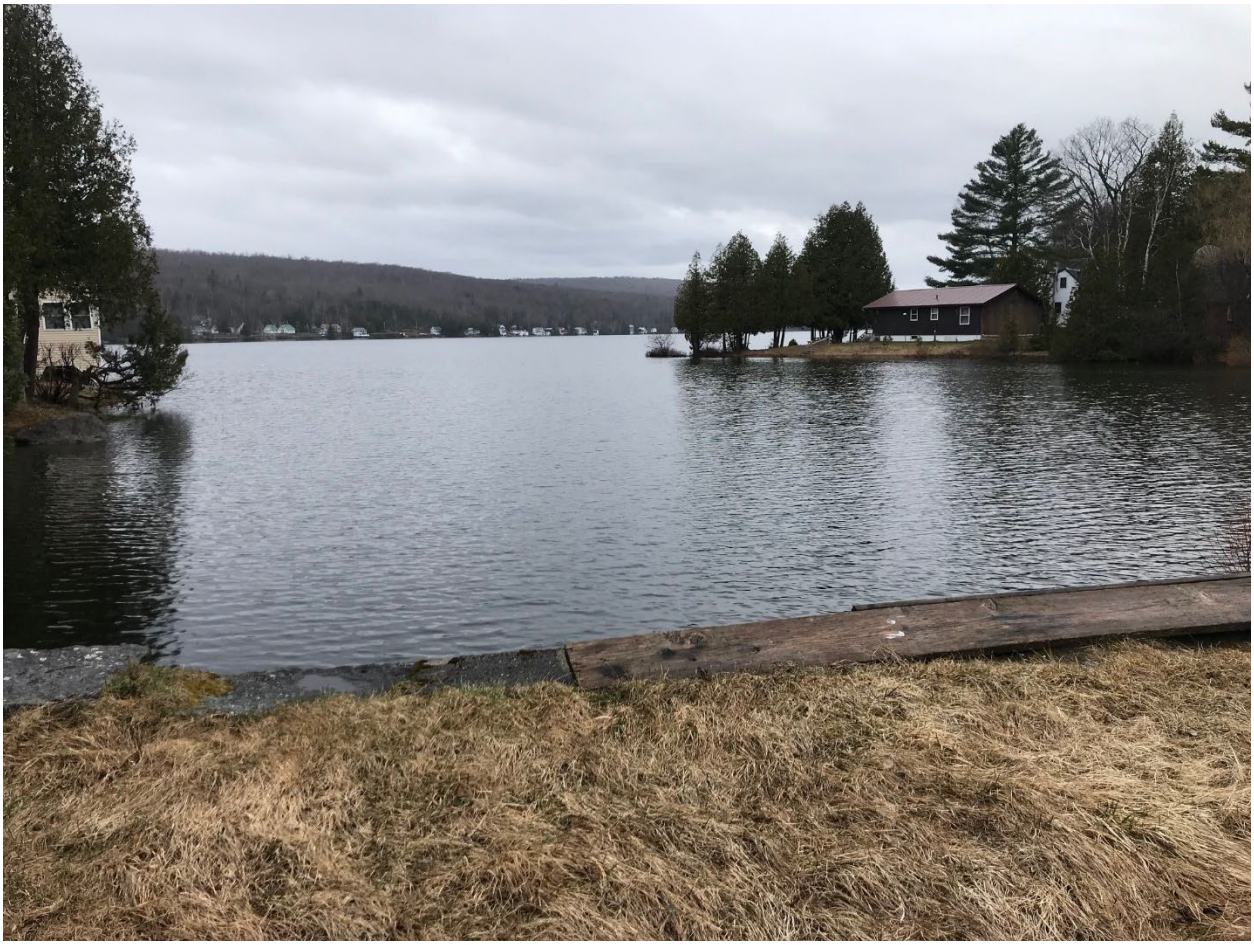
Appendix 2: Aerial of Shadow Lake

Appendix 3:

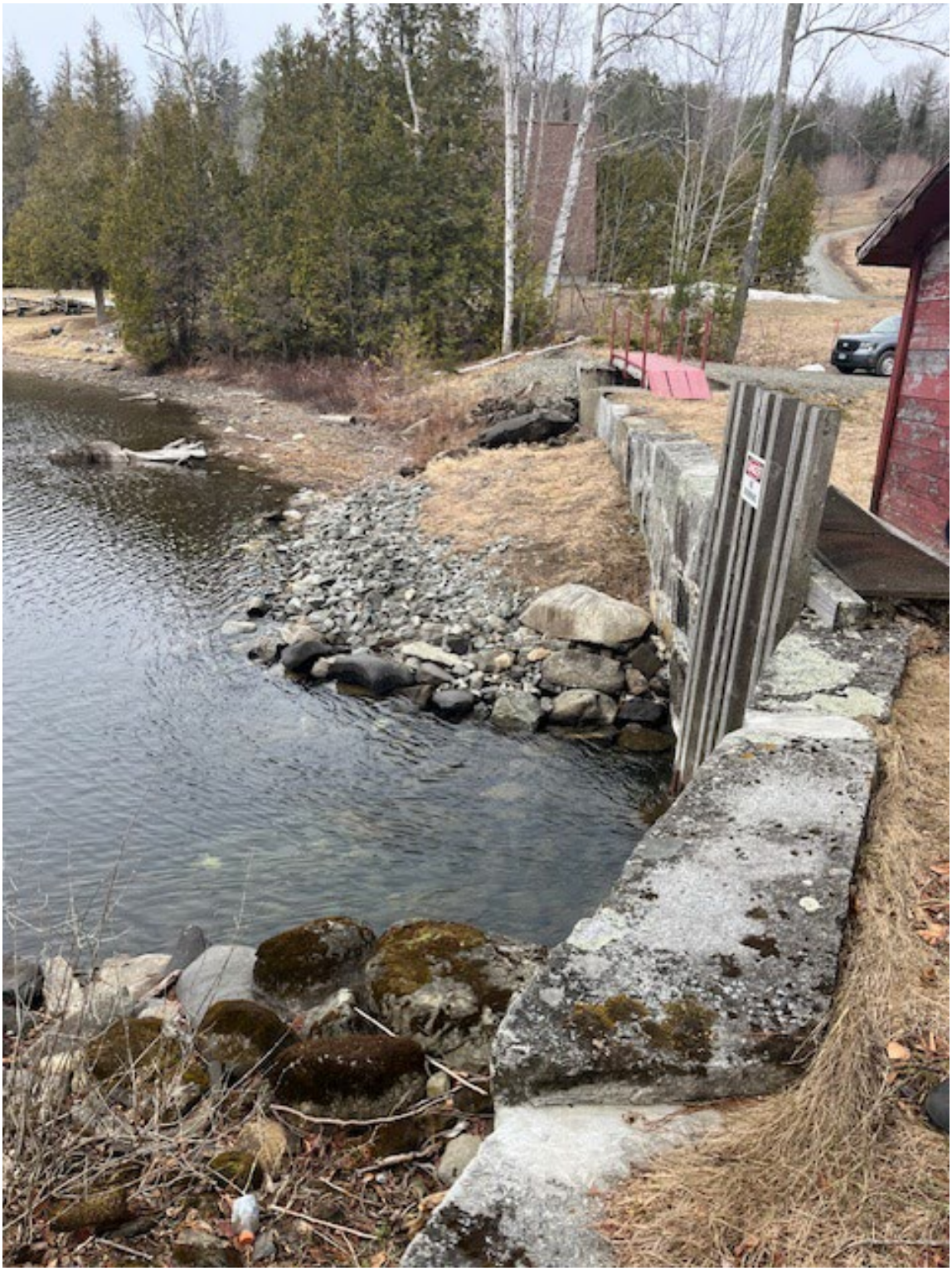
Aerial from the ANR Atlas of the lake. The dam is the tiny yellob box on the right side of the picture.



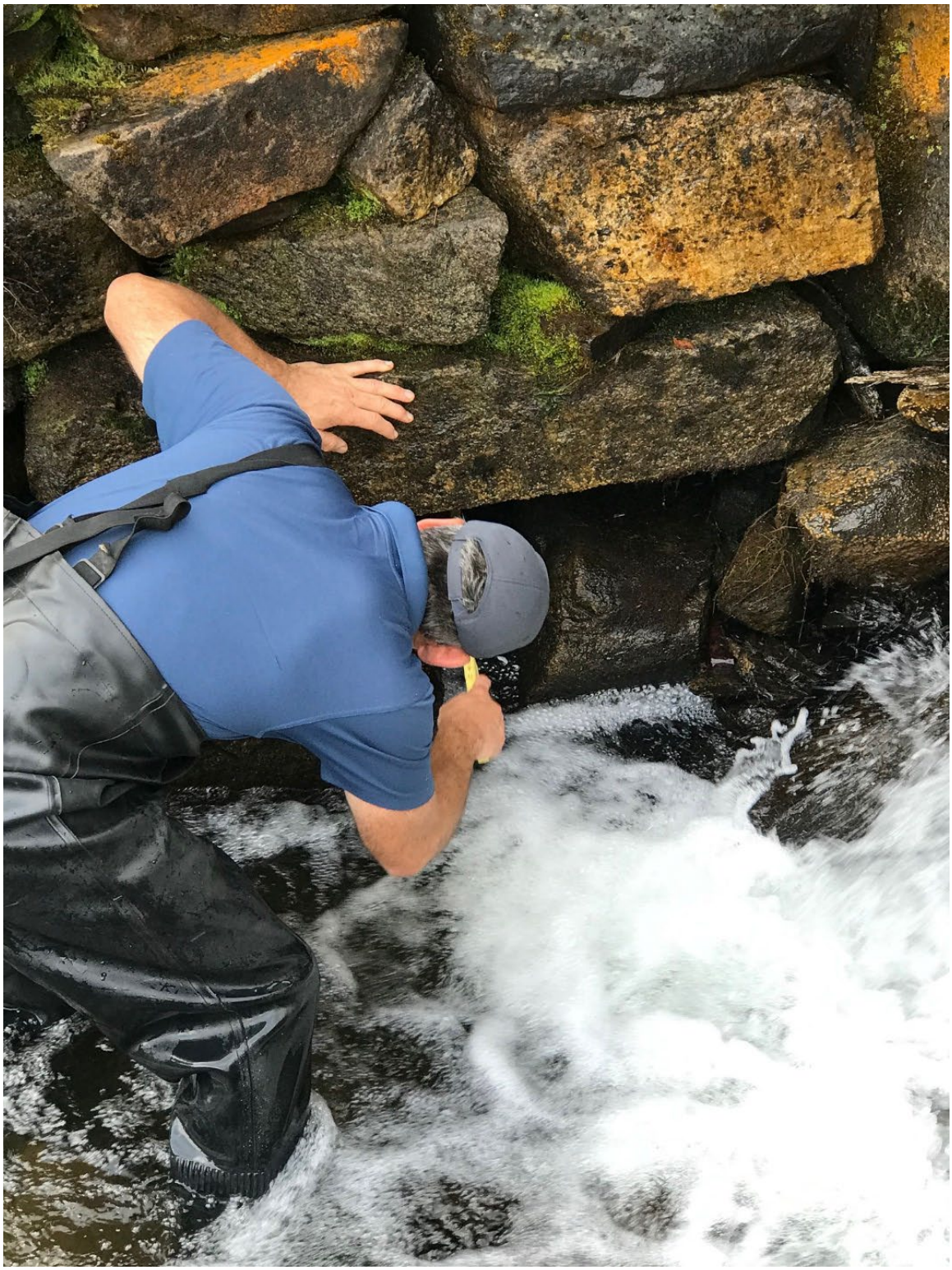
Appendix 4: granite wall facing the lake.



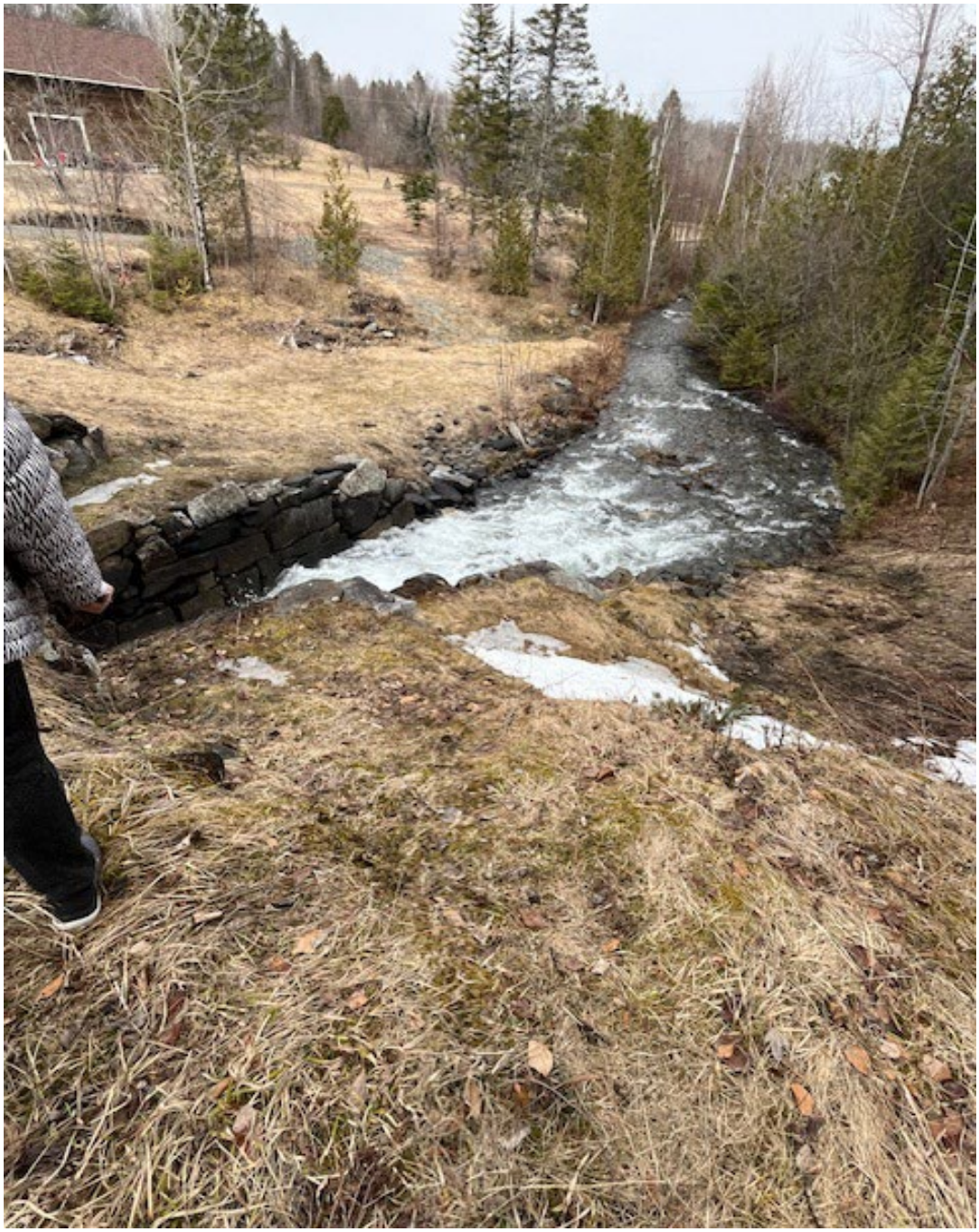
Appendix 5: The granite wall facing the lake, view from the shore.



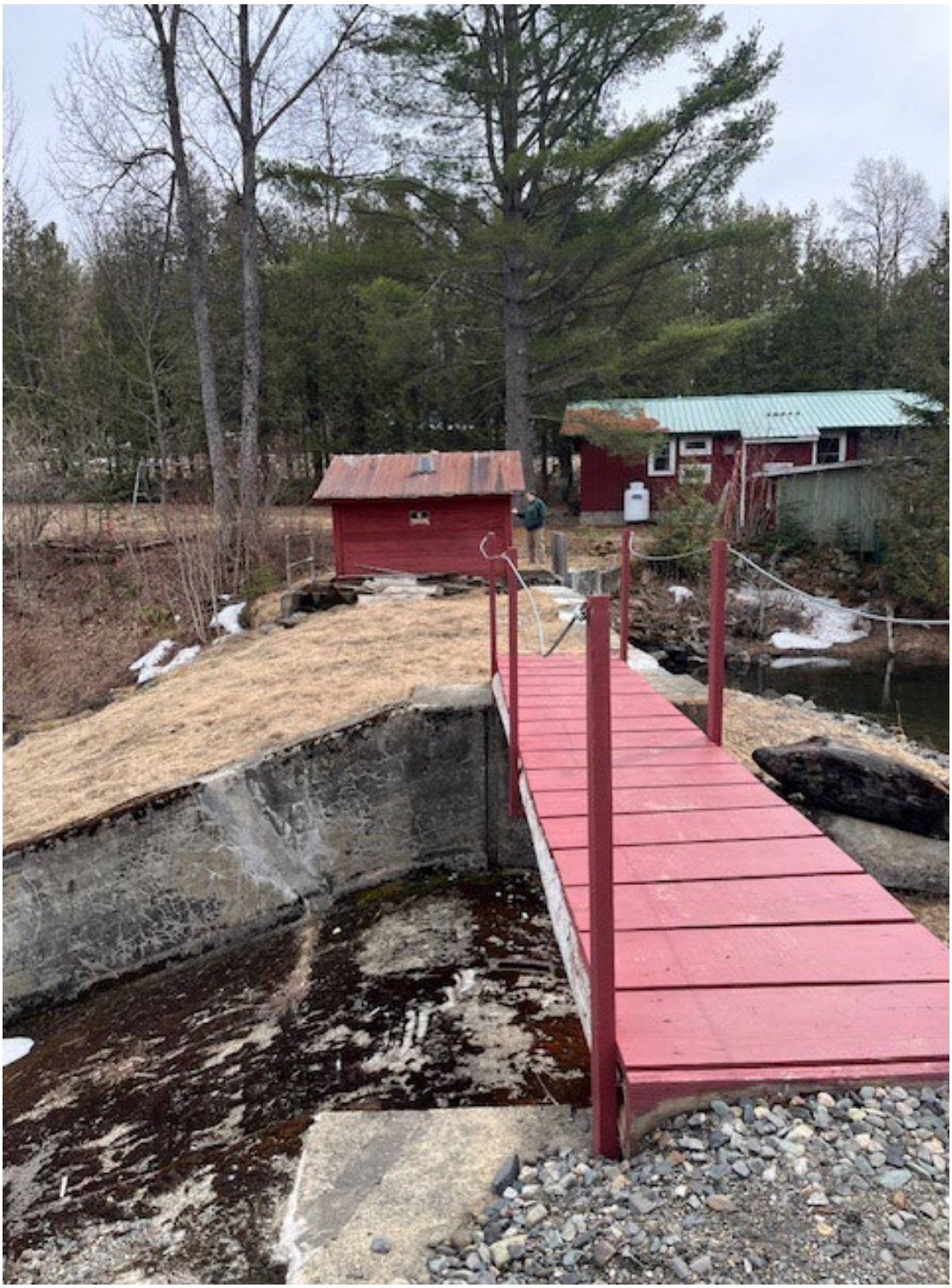
Appendix 6: Measuring the gaps in the stone wall of the spillway. Water ran through these stones from the dam side to the spillway. This is erosion happening under the dam.



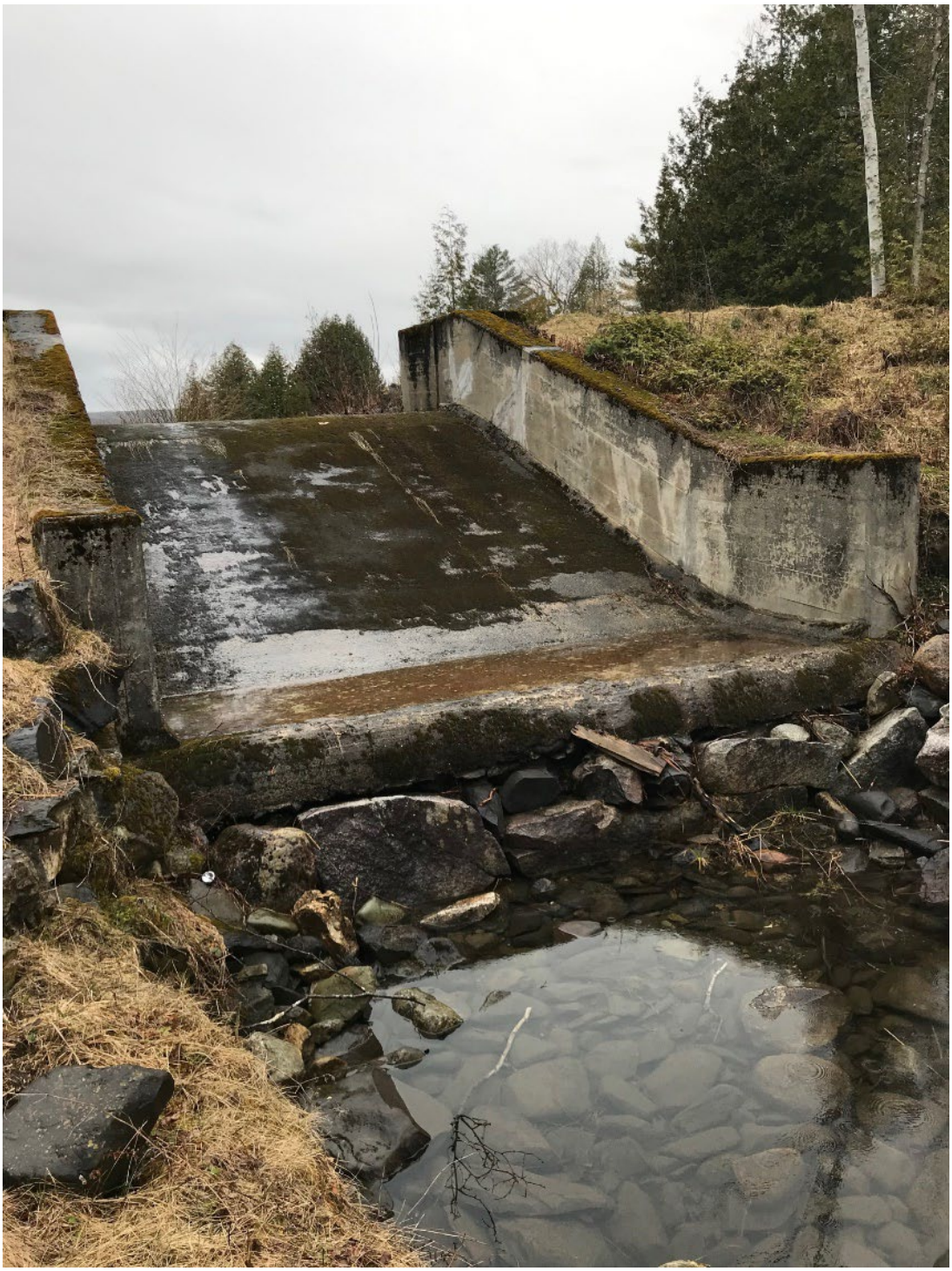
Appendix 7: Area between the dam and the spillway. Water moved through this area during the flood with water running into the spillway from under this ground. This suggests seepage flow, which is causing "piping," and could cause failure of the dam. Piping can occur along a spillway and other conduits through the embankment. Sinkholes may develop on the surface of the embankment as internal erosion takes place. There were two sinkholes at the dam suggesting piping is happening at this dam.



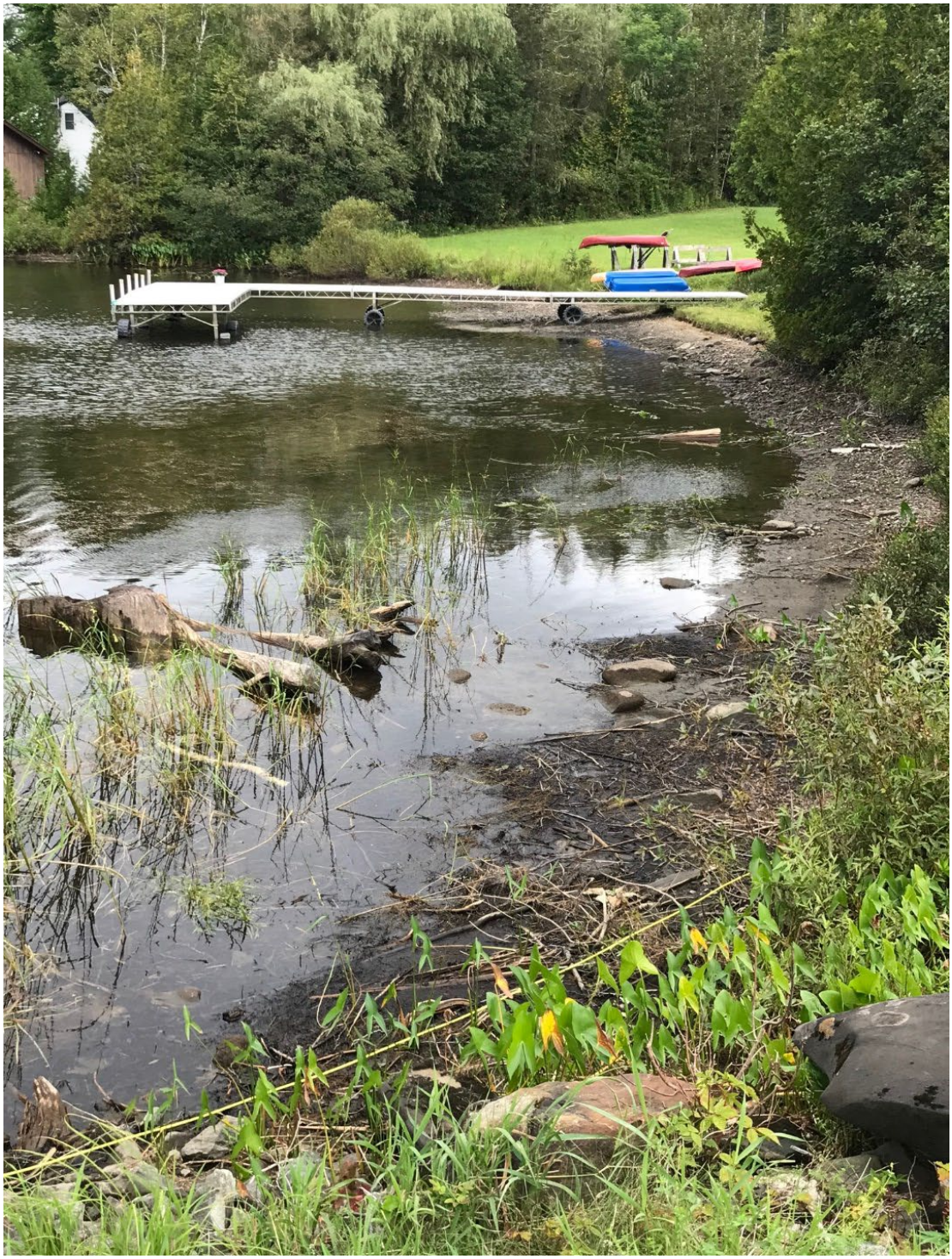
Appendix 8: View of the dam with spillway in the forefront. At the end of this walkway in the center of the embankment is where the sink hole was formed by underground erosion.



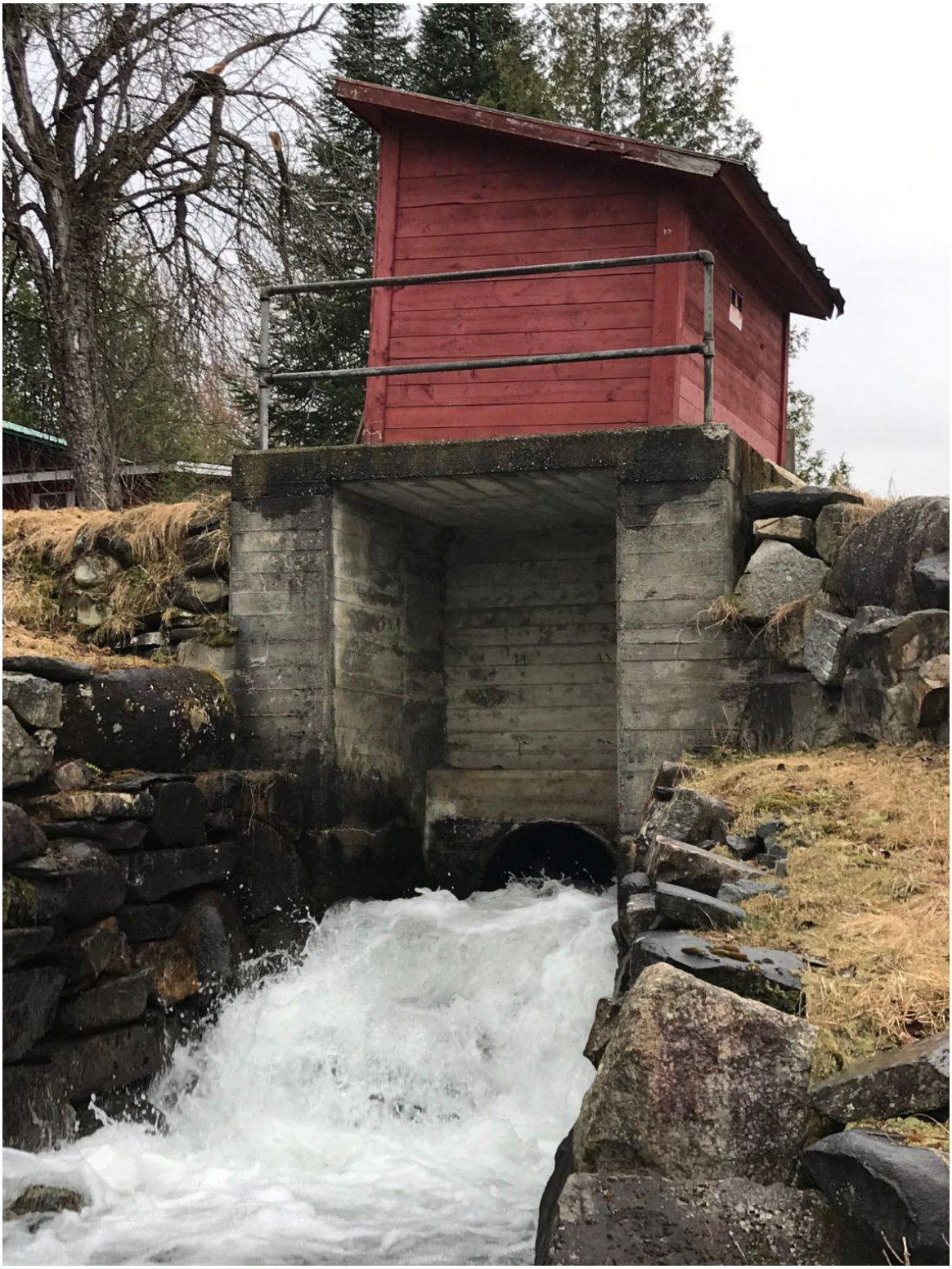
Appendix 9: Spillway. Water ran underground from the dam to this spillway. At the rocks on the left side of this picture. That water movement is erosion happening under the earthen area between the dam and the spillway. Look closely to see a beverage can. That is where the water was seeping through.



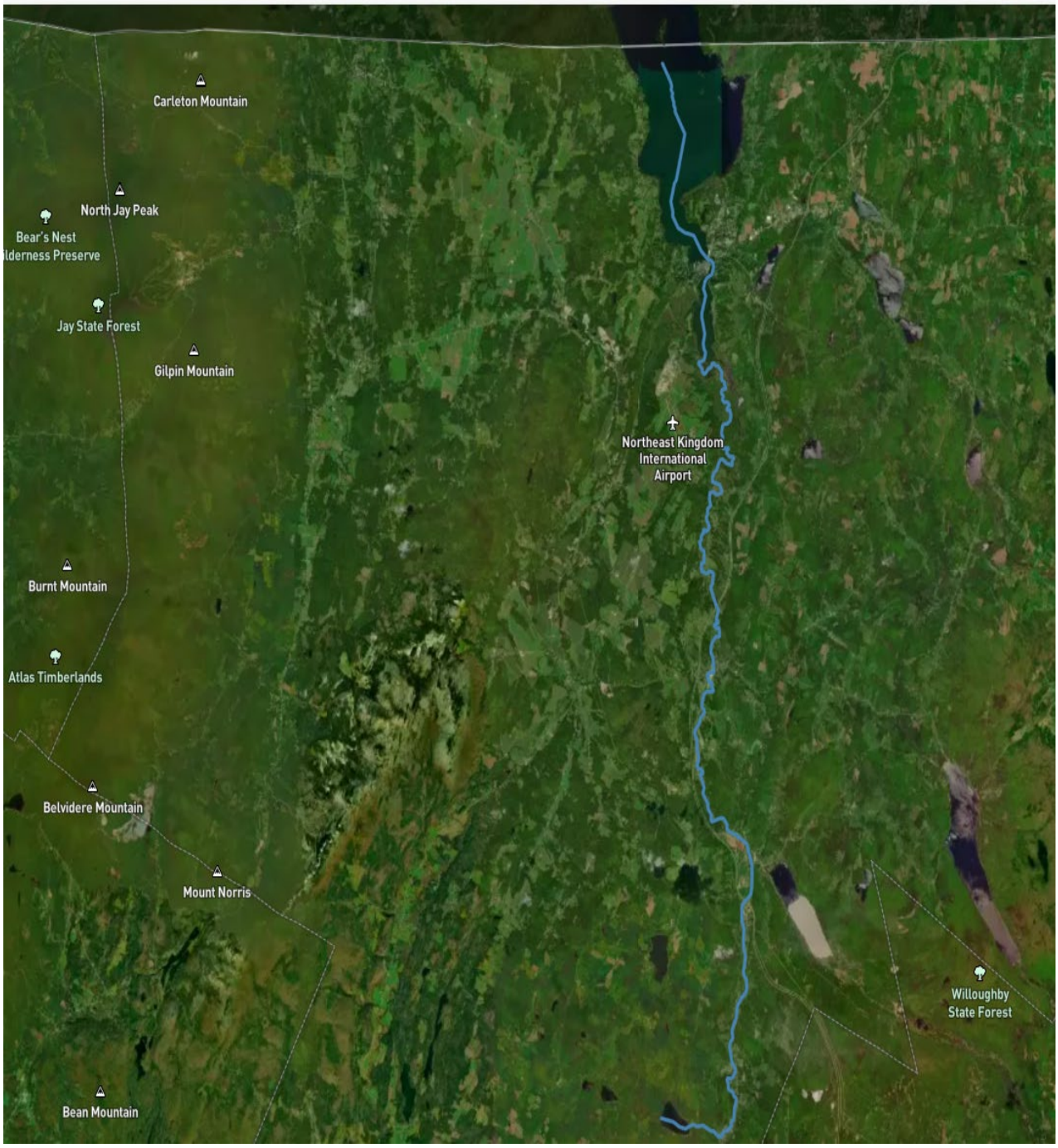
Appendix 10: Lake level lowered 1 ft. as required by the Dam Safety Division of ANR. One month later it was lowered another foot for a total of 2'. The drought of 2025 had a severe negative impact on the lake level



Appendix 11: The Shadow Lake Dam outflow. The gearworks are in the building.



Appendix 12: Where the Barton River flows to the north into Lake Memphremagog. Through Glover, Barton, Orleans, and into Newport South Bay**.** The line at the dam and flows into the Barton River and runs through Glover, Barton, Orleans, Charleston then into South Bay of Lake Memphremagog in Newport. If the dam fails, a "wall of water" would rush forward, as it did in the Runaway Pond disaster.



Appendix 13: This video shows the underground erosion which extended six feet below the embankment and exited through the stone wall on the Secondary Spillway. A significant underground stream of water eventually caused a five-by-five-foot sinkhole. This indicates "pipping" is occurring. This is when natural "pipes" form due to erosion. These pipes eventually could grow and the dam would fail.

Click on movie icon below to start video.

DR-4810 Glover SLD underground erosic