City of Rutland Fire Department
William Lovett, Chief Engineer
104 Center Street
Rutland, VT 05701-2490
Ph. 802-773-1812
blovett@rutlandcity.org

Chief William Lovett, EMD for the City of Rutland, Testimony presented on April 11, 2024 1530hrs., before the House Committee on Environment & Energy pertain to the bill S.213.

I am honored to be asked to testify about the cooperative interaction between the State of Vermont and the City of Rutland, when dealing with the Dunkley Dam situation. Had it not been for the great efforts put forth by the State Team, I'm sure, the outcome would have been much different.
To set the stage, this old mill pond that was initially built in 1792 on the east side of the road, when a dam of cobble and stone was constructed to impede a brook. The resulting pond, approximately 1 acre, was created to supply water, as power, for a Tannery, built on the west side of the road, and to aid in the discharge of waste chemicals into the existing brook. This is believed to be the origin of the outflowing Tanney Brook, aka Tenney Brook name.

As the community grew, homes were built closer to this sight. The chemical discharge from the tannery killed fish, caused the water to be tainted brown with a foul smell. For this and other factors, the tannery eventually closed.

The property became a site for a lumber mill and then a pencil factory. In 1858 after the pond's impediment was increased with soil and cement berms, it became an ice pond, for the B.F. Dunklee Ice Company, which built storage sheds and become a leading supplier of ice for the rapidly growing community. This Pond became known as Dunkley Pond.

The ice company and pond changed hands quite often until the last blocks were harvested in the 1920's, after 130 years of business. The dam and pond remained unmaintained as a testament to the past, where neighboring children swam, fished, and played hockey. I often fished there as a child.

This all changed in October of 1999, when Tropical Storm Irene hit the area, and the resulting deluge filled in the pond with sediment, lowering the water's depth, raising the pond's temperature, resulting in pour water quality, high phosphorous levels, murky pungent condition and a fish kill. The pond essential died. Any significant storm caused the pond to overtop the dam, or its banks. Evacuations of residents living close to the dam became somewhat routine.

On June 20, 2017, I received a call in the night from dispatch stating that the homes at 184 and 186 North Main Street were flooding and that Dunkley Pond was overtopping its banks. As this had occurred multiple times since Tropical Storm Irene, I assumed it was like to other times; an overtopping, residents evacuated, the water receded and then our department helping the evacuees back into their homes.

I arrived at the scene to find the parking lot between these two homes filled with 2 feet of water. The occupants had evacuated, with their homes flooded. By the end of this event, 28 residents were asked to evacuate until the situation was resolved.
I observed water splashing through the guard rails of the bridge on North Main, US Rte 7. A tree had been torn from its banking and had jammed into the water passage under this bridge. If the bridge failed, it would have severed the main North South artery through the City, and the resulting wave effect would likely taken out 6 of the 7 downstream bridges. Sewer and water mains would be lost. As the storm passed, the water receded, and we saw great evidence of damage to the earthen berms, the cement walls, and the dam's spillway and face. Water was undermining the berms and was shooting through the dam face.
To augment the earthen berm and divert the water flowing through it, the City of Rutland brought truckloads of asphalt grindings to the site. This slowed the flow to where the homes could be cleared of water. Vermont Emergency Management was advised. The owner of the Dam, Snehal and Michele Shah, were notified.
On June 20, 2017, Ben Greene PE, Dam Safety Engineer, Josh Carvajal State River Management Engineer and Todd Menees PE, River Management Engineer met with the City. The water level had gone down, but now the dam face had failed on its east side, and there was a significant lean to the dam. Water was flowing through the face of the dam, the water level now below the spillway. It was estimated to contain less than 500,000 cubic feet of water. The recommendation was to take the dam down, in a controlled manner.
On June 21, 2017, the Dam was judged to pose a SIGNIFICANT HAZARD meaning failure is expected to cause loss of lives, and appreciable damage to homes, roads, and other downstream infrastructures.
As the City's EMD, I created an evacuation plan, to deal with the probable failure of this dam. 93 Properties would be affected, with 21 deemed to be in immediate significant danger to life, and 24 with severe property damage.
The State contacted the property owner where it was agreed that the State would take the lead, to facility at quick resolution to this danger. The City agreed to do daily monitoring of the site, and participate as needed. As we lacked the expertise in this sort of emergency to resolve the issue, the State's participation was critical.
As more players came on board, the scope of this herculean task became obvious. The amount of detail was enormous, and the State's commitment to see this project through, was and is to this day, unshaken.
We met and made many new friends through this project. Foremost is Todd Menees PE, River Management Engineer. He promised he'd see this project through, and he has. He led us through the regulatory requirements as well as the relationships we would need to build, to resolve this issue to the State, City and neighbor's satisfaction.
He introduced me to the skilled professionals at the State's disposal:
Karina Dailey, Restoration Ecologist, VT Natural Resource Counsil,
Zapata Courage, District Wetland Ecologist,
Steve Libby, Executive Director of the VT River Conservancy,
Julie Butler, Lake Champlain Fish and Wildlife Conservation Office,
Polly Allen, who would prepare out historical analysis of the site,
Elizabeth Peebles, VT Division of Historic Preservation,

Angela Repella, US Army Corps of Engineer.
I hope I haven't forgotten anyone, as everyone's efforts should be noted. We as a state should be proud of the work they did.
A 2019 Vermont Ecosystem Restoration Program (ERP) Grant to the Vermont River Conservancy facilitated the creation of designs for the full removal. A plan was created by Milone & Macbroom to restore the floodplain, to restore wetlands and aquatic organism passage,
to remediate Tenney Brook, and improve wildlife habitat, while providing improved flood
protection for the City of Rutland. The primary components of the Project include 1) Removal of
accumulated sediment, 2) Site Grading for natural stream flow, 3) Removal of remnant dam
elements and select feature retention, and 4) Restoration of representative plant communities
and aquatic habitat.

Public meetings were held, a sediment storage and utilization plan were created and a contractor was hired to do a lowering of the dam face to aid the spillage of run off overflow and to lessen the amount of water held back by the dam. The City would receive the removed sediment, and after appropriate isolation, were free to use it for public use.

On the morning of October 30, 2019, the first stone was removed from the top of the dam, the second stone resulted in the entire dam collapsing. Because of their knowledge and the plans that were made: the drawdown before the work started and the skill of the equipment operator, disaster was avoided. The site was made safe for the winter.

For the first time in many years, the neighborhood experienced no flooding in the spring. The entire downstream area saw no spring flooding at all.

April 15, 2020, vegetation began to reclaim the site. Native animal life was rediscovering land it had never seen. On May 20, 2022 riparian buffer planting was started and finished on May 26, 2022

Since September 26,2023, Historic Markers are in place, to educate the public on the history of the site, and its value to the earliest Indigenous people over 13,000 years ago through the recent history.
Today, with the restored Floodplain, native plantings, native animals such as deer, foxes, squirrels, bobcats, beavers, and birds are commonly seen. Wild ducks, herons, and birds of prey are feeding in the cool, clean water. Fish have migrated back into the site after navigating the fish ladder installed by the falls. The sitting benches are utilized by neighboring residents, and the traveling public and the historical markers above and below the "old pond site" spark conversations.

This has been a win for the cooperative efforts between the State, the City of Rutland and the community. The removal of this dam, and the elimination of the dangers posed from a dam failure and of the infrastructure damage are long reaching. The benefits of this site to absorb the impact of a sudden water event and then to gradually release it back into the stream basin, has lessened spring runoff, and the recreational benefits of this project are enormous.
I invite you to visit this site firsthand, so that you can see why I support these people, this agency, and the passage of this legislation.

Sincerely,

William Lovett, Chief Engineer