

# Proposal to get Funding through the Municipal Vulnerability Preparedness Program (“MVP”) to fix the Causeway Problem

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## ABSTRACT

The [Municipal Vulnerability Preparedness grant program \(“MVP”\)](#) provides support for cities and towns in Massachusetts to begin the process of planning for climate change resiliency and implementing priority projects. The state awards communities with funding to complete vulnerability assessments and develop action-oriented resiliency plans. Communities who complete the MVP program become certified as an MVP community and are eligible for MVP Action Grant funding and other opportunities. The grants are in addition to the Administration’s proposal to invest \$900 million in funding from the [American Rescue Plan Act \(“ARPA”\)](#) into key energy and environmental initiatives, including \$300 million to support climate resilient infrastructure.

In extreme weather situations, the Mashapaug Road causeway dividing Hamilton reservoir into the north and the south basins, dams the water and thereby floods dwellings close to the shoreline of the south basin. The problem is a costly undertaking to solve. A nonsensical 116 page report named, [LOCAL NATURAL HAZARDS MITIGATION PLAN 2016 \(“LHMP2016”\)](#), issued by the [Pioneer Valley Planning Commission \(“PVPC”\)](#), and published on the Town’s website, does not help as the creators of said [LHMP2016](#) report utterly failed to understand the problem the causeway presents. **In said report, the PVPC and involved town officials suggest to solve the problem by raising the causeway without increasing the size of the culvert. This would actually exacerbate the problem if implemented.** Said [LHMP2016](#) report was adopted by the Holland Board of Selectmen on April 5, 2016. In case said report should disappear from the town’s website, [click here](#), to read said report. With ever increasing extreme weather events due to global warming or climate change, the reoccurring flooding of dozens of homes around the south basin could be eliminated by increasing flow from the south basin to the north basin.

In a [press release](#) issued by Terry MacCormack, Press Secretary of the Governor’s Office, “culvert upgrades” is mentioned as one of the primary objectives of the MVP program. If done the right way, the causeway problem could be solved by replacing the insufficient culvert with a larger concrete box culvert or little bridge with funding through the MVP program without any matching funds by the town. A problem can only be solved if it is known. This report is meant to create awareness about the problem as the [LHMP2016](#) report fails to identify the problem.

Easthampton recently received \$2,000,000.00 for a slope restoration project. But, Easthampton made an effort early on to get the funding!

This proposal is consistent with MGL c.41, s.81C, Studies and Reports of Planning Board, and was unanimously endorsed by the Planning Board on March 8, 2022.

**Please note, any underlined text in blue is a link if your computer is online!**

The picture<sup>1</sup>/ below shows the causeway culvert as it existed before the flood of 1955.



This culvert, which was unable to handle the water of the 1955 flood, seems to be larger than the one put in place during reconstruction of the causeway after the flood of 1955.

If this culvert would have been able to handle the water in 1955, the causeway would not have been washed away.

The motorboat in the picture to the left of the culvert gives an idea about the diameter of the culvert. A motor boat from the 1950's measures about 15 feet; the culvert therefore measured around 10 feet across.

For comparison, the corrugated steel pipe culvert in place at the causeway now is shown in the picture<sup>2</sup>/ below:

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1 Picture courtesy of Gerry Germain.



## THE CAUSEWAY PROBLEM

**The trend in extreme precipitation events for the Northeast is clearly upwards.** During heavy rain, the south-basin's water-level of Hamilton Reservoir is rising as the causeway culvert is too small to allow the water to drain into the north-basin. The first such event witnessed by this writer who lives at the west shore of the south-basin occurred in April of 1986, the second incident in 2005, and the third such incident in August of 2011.

As the causeway culvert is undersized, the causeway acts like a dam causing the water-level of the south-basin to rise. During the flood of October 14/15, 2005, the water-level of the south-basin rose until the evening of October 14, when the water-level reached the top of the causeway, (see picture below). The top of the causeway is about five feet and six inches above the normal water-level of the lake. This rise of the water-level causes dozens of homes close to the shore of the south basin to be flooded.

It kept raining on October 14 until the next morning around 5:30 AM when the highest water-level at the dam was noticed (see picture below). The water rushing over the causeway washed away parts of the causeway and up to five feet of the causeway's pavement in certain areas (see picture below). The four repairs to the pavement on the north-side of the causeway are still visible to this day (see picture below). The rain total for the October 14/15 flood of 2005 was about four to six inches; the exact amount for Holland is not available.

It is noteworthy that the same houses will flood again with lesser precipitation as we saw on October 14/15, as the water-level did not rise any higher after the evening of October 14. For at least another 12 hours, the additional water was not dammed by the causeway any-longer but was washing away part of it as the water reached the top of the causeway and rushed down on the north side, (see picture below).



The image above shows the causeway looking west on the evening of October 14, 2005; in the lower corner on the right you can see the water rushing down the north side of the causeway. By morning of October 15, part of the causeway was washed away.<sup>2</sup> The concrete post in the lower right corner is shown in another picture below from a different angle in a picture taken today, on March 6, 2022.

The picture on the right shows one of four repair patches where the water over the causeway washed part of it away. The material which was washed away was filled-



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2 Picture courtesy of Chad Brigham

in and the pavement repaired; hence the four patches on the north side to repair the pavement of Mashapaug Road. (This picture was taken today, March 6, 2022.)

A couple of homes between the west-shore of Hamilton reservoir and May Brook Road south of the intersection of Sandy Beach Road and May Brook Road were also flooded by the Browns Brook. The culvert underneath May Brook Road carrying Browns Brook's water into Hamilton Reservoir is adequately designed (see picture below) and able to handle the water of an event of the magnitude of the flood we experienced in October of 2005.



However, since the causeway dammed the water up to five foot and six inches above normal water-level, the culvert was submerged and was unable to carry the water of Browns Brook, the water found

its way of least resistance which was through the homes to the north of the culvert. The picture<sup>3/</sup> of the culvert mentioned above located under May Brook Road, south of the intersection of Sandy Beach Road and May Brook Road, is taken with the same lens with the same distance to the culvert as the picture above taken of the culvert of the Mashapaug Road causeway. The culvert underneath May Brook Road is clearly larger than the causeway culvert and able to handle the water stemming from Browns Brook (Brown's Brook is wrongly identified as May Brook throughout the [LHMP2016](#) report. While the [LHMP2016](#) report fails to recognize the fact that the causeway culvert is undersized, the report fails to recognize that the May Brook culvert is adequate and suggests to enlarge the May Brook Road culvert. See page 32 of the [LHMP2016](#) report.

The picture<sup>2/</sup> below was taken in the morning of October 15, 2005, showing the water flooding the Sturbridge Road bridge at the dam. The bridge also functioned as a dam. The water is at its highest level at the time this picture was taken.



## **THE NONSENSICAL REPORT NAMED, THE TOWN OF HOLLAND LOCAL NATURAL HAZARDS MITIGATION PLAN 2016**

A nonsensical 116 page report named, [LOCAL NATURAL HAZARDS MITIGATION PLAN 2016 \(“LHMP2016”\)](#), issued by the [Pioneer Valley Planning Commission \(“PVPC”\)](#), and published on the Town’s website, does not help as the creators of said [LHMP2016](#) report utterly failed to understand the problem the causeway presents. The solution PVPC and other involved individuals suggest to solve the causeway problem in said report would actually exacerbate the problem if implemented. Said [LHMP2016](#) report was adopted by the Holland Board of Selectmen on April 5, 2016. In case said report should disappear from the town’s website, [click here](#), to read said report.

This writer is mentioning the history of previous reports, plans, and initiatives to show that giving birth to an idea — as fixing the problem of the causeway culvert — in this town does not guarantee the needed nurturing it takes to bring such a proposal to fruition.

If done the right way and the idea — in the shape of this proposal — gets the needed attention and nurturing, the causeway problem could be funded under the MVP program without any matching funds by the town. Easthampton recently received \$2,000,000.00 for a slope restoration project. But, Easthampton made an effort early on to get the funding!

The [LHMP2016](#) was funded by a grant from the [Massachusetts Emergency Management Agency \(“MEMA”\)](#) and the [Massachusetts Division of Conservation Services \(“DCS”\)](#).

The [LHMP2016](#) has a less than stellar history; the creation of Holland’s initial Hazard Mitigation Plan began in late 2006, with a full draft plan developed for the town in 2007. This draft was submitted to [MEMA](#), who provided comments that were then incorporated into an updated version of the document. The plan was then submitted to [FEMA](#) for conditional approval, which was provided on June 18th, 2008. The plan was then sent back to the town for Select Board approval.

However, approval did not occur, and thus the plan has remained a draft. The [LHMP2016](#) followed and was initiated in November of 2012. Besides the PVPC, the following individuals were involved creating said [LHMP2016](#) report; Amy Bishop, Former Executive Secretary of the Select Board; Kelli Robbins, Executive Secretary of the Select Board; Paul Foster, Fire Department Chief; James Gagne, Deputy Fire Chief; Brian Haughey, Police Chief; JoAnne Higgins, Highway Clerk; and Brian Johnson, Highway Surveyor.

The “Goal Statement” on page 89-90, set , “Proposed Completion Dates” for the different projects. For instance, “Dredge Hamilton Reservoir to increase flood storage capacity” has a proposed completion date of 2035<sup>4</sup>. Some proposed but unmet completion dates are as early as 2016.

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4 Dredging the lake was necessary according to the “Goal Statement: To minimize the loss of life, damage to property, and the disruption of governmental services and the general business activities due to flooding.” This writer does not understand **how dredging the lake will increase its storage capacity to mitigate flooding**; unless the entire Reservoir is drained before every storm event.

Action Item 10 has a completion date of 2030 and this writer is glad that this action item 10 has not been implemented or even started yet. Action item 10 is, “Raise Mashapaug Road causeway to reduce flood hazard.”

**The misconception:**

The [LHMP2016](#) is based on the misconception that the water level of the south basin was the same as the water level on the north basin at any given time on October 14/15 of 2005; the fact that the culvert is too small causing the causeway to function as a dam went unnoticed by everybody involved. Part of the causeway was washed away on the north side as the water —once it reached the top of the causeway on October 14 — rushed down on the north side.

PVPC and other involved individuals failed to notice and/or made no effort to look at the culvert; the culvert at the causeway is described as “box-culvert” when it is actually a corrugated steel pipe culvert.

The [LHMP2016](#) missed the fact that the causeway functions as a dam, preventing the water to drain from the south basin to the north basin during heavy rain, hence, causing the water level of the south basin to rise up to five feet and six inches above the regular water level of Hamilton Reservoir.

The [LHMP2016](#) report falsely claims the culvert was blocked by canoes and debris, (page 18). However, this writer watched the water rushing through the culvert unobstructed.

The [LHMP2016](#) suggests to raise the causeway to prevent it from getting flooded! Increasing the size of the culvert is not part of the plan and not mentioned at all. Raising the causeway would actually exac-





erbate the problem.

**In 2005, the water-level reached the top of the causeway in the evening of October 14. All the water it took to washout part of the causeway would have been dammed by the causeway raising the lake-level way beyond the five foot and six inch level, flooding even more homes to a higher level. It rained throughout the night of October 14/15 till around 5:30AM on October 15.**

**The concrete post shown in the picture<sup>3/</sup> on the right above is also shown from a different angle in the picture<sup>3/</sup> above ,showing the flooded causeway looking west. The water level on this side, the north side was no more than 24” above the normal lake-level. The drop of the water level between the south and north basin at least 36 inches on the evening of October 14, 2005.**

The “Prioritized Implementation Schedule” on page 92 of the [LHMP2016](#) lists on top, “Ability to reduce disaster damage.” You would expect the enlargement of the causeway culvert to have the top priority. But since it was not recognized as a hazard, this is not the case. On place 10 in the priority list (page 90 and 95), you will find, “Raise Mashapaug Road causeway to reduce flood hazard.” The price tag was listed as \$2,500,000.

The [LHMP2016](#) explicitly fails to recognize the causeway culvert as an undersized culvert to cause flooding; “Additional locations where undersized culverts cause flooding include Stafford Road (the home at 230 Stafford Road has flooded twice in the past ten years), Kimball Hill Road, May Brook Road and Sturbridge Road.” (page 32). As mentioned above, the culvert on May Brook Road is actually adequate in size.

On page 38, Category 2, paragraph “3. Problem Culverts,” lists Mashapaug Road as “undersized causeway,” and Mashapaug Road Little Causeway -culvert undersized.”

Please note that Mashapaug Road lists the causeway as “undersized,” not the culvert.

Lets assume that the [LHMP2016](#) intended to keep the causeway passable as an escape route and for that reason proposed raising the causeway; what about the little causeway?



Eliminating the causeway problem of the large causeway would also eliminate the problem of the little causeway.

**Other nonsensical statements of the [LHMP2016](#):**

On page 45 is the following statement, “The 1956 reconstruction of Hamilton Reservoir Dam sited the elevation of the dam higher than its previous construction and slightly higher than the elevation of the Mashapaug Road causeway. Significant sediment loading in the reservoir since the reconstruction of the dam has led to a loss of flood storage capacity within the reservoir. This coupled with the higher dam elevation has created flooding of the Mashapaug Road causeway during significant storm events.”

The cottage this writer lives in was built at the south end of the lake in Connecticut and was moved by the wind during the hurricane of 1938 to its present location, (not a joke!). The cabin floated over the water and ended up sideways at the very tip of the peninsula where it sits now. This writer has several pictures of the cabin as it sat in its place till 1994, when he remodeled the cottage and raised it on concrete piers. The lake level in the pictures dating to the early 1940 show the level of the lake at the same height. The flooding of the Mashapaug Road causeway has nothing to do with the height of the dam or sediment loading in the reservoir. The real reasons are outlined in this proposal.

## **THE PROPOSAL**

**This proposal is an attempt to inform the community of the unique opportunity to get funding through the MVP program to eliminate the causeway problem. Funding by the MVP program could be used to build a concrete culvert or little concrete bridge with a span of two times 15 feet or three times 10 feet and high enough to accommodate boats, canoes, and more to pass.**

**Not only would such a structure allow the water to drain from the south basin into the north basin and prevent further flooding of homes close to the shore of the south basin; it would also prevent flooding of both Mashapaug Road causeways, the causeway dividing the reservoir into a south and north basin, and the little causeway towards I84.**

**Boats, canoes, and kayaks could venture out to the other side of the causeway. The Lake would be more attractive for boaters, canoers, and kayakers.**

**Upgrading the causeway culvert will improve public safety, allow safe passage of the main causeway and the little causeway during flood events, and enable boaters to access the opposite side of the lake.**

## **THE Municipal Vulnerability Preparedness Program (“MVP”)**

The [MVP program](#) was created in 2017 as part of Governor Baker’s [Executive Order 569](#), and a [press release](#) issued on September 16, 2016. The MVP program is available since March 30, 2018, and the town was informed by email just five days later.

This writer has access to the following documents (**click on the dates to read the pertinent documents**):

The first email to inform the town of the availability of the MVP funding was sent on [April 18, 2018](#), but the recipients failed to recognize the potential of the program. The town was informed again by email on [September 10, 2019](#), again on [July 6, 2020](#), and again on [April 19, 2021](#). During this time, from 2018 to 2021, Bettina Schmidt was a member of the Planning Board, a member of the Board of Selectman, and the [PVPC](#) Commissioner of the Town of Holland.

However, the Board of Selectmen at their joint meeting with the Lake Oversight Committee of [February 23, 2021](#), failed to recognize that the [MVP program](#) was available. There was talk about another grant (319), which is mentioned in the minutes but ultimately it was decided not to pursue any action as the Highway Department was already managing this other grant. This is verbatim what is written in the minutes:

1. Culvert Grant—chances of getting grant are not high based on last culvert (Mashapaug Rd) report from Mass DOT; would need to balance

oversight with another grant (319) that highway dept is already managing Action –Ms. Stout confirm with Jay Mooney/Grant writer that we will not apply for this at this time

Dori-Ann Ference and this writer were the only remaining members on the Planning Board after Dennis Allard, Allen Johnson resigned after the [November 16, 2020](#), meeting and public hearing by the Planning Board. Bettina Schmidt resigned on January 28, 2021. Remaining Member Dori-Ann Ference and this writer who both were elected to serve on the Planning Board on June 25, 2020, only gained access, or were privy to the Planning Board’s email server on or after April 28, 2021, when Bettina Schmidt finally handed over the password to the email server after she had resigned from the Planning Board three month earlier, on January 28, 2021.

At that time, April 28, 2021, this writer noticed the email of [April 19, 2021](#), and contacted Bob Hartzel of [CLM, Comprehensive Environmental Inc.](#), per email two days later, on [April 30, 2021](#). Hartzel responded with his email dated [May 4, 2021](#), noting, “I think the Hamilton Reservoir culvert project is a strong candidate for funding with an MVP Action Grant.” And, that the MVP Action Grant, “gives the Town funds to work with a consultant to develop a report assessing Town risks and vulnerabilities to climate change in 3 major categories – infrastructure, environment, and societal.” Other emails and phone conversations between Bob Hartzel and this writer followed.

Bob Hartzel eventually supplied this writer per email dated [May 6, 2021](#), with two examples of letters necessary to apply for a Planning Grant. This writer thereafter fashioned a [letter](#) consistent with the provided examples to have it approved by the members of the Planning Board. Since nobody made an effort to obtain available MVP funding for over three years, this writer as acting secretary at the time suggested in the agenda to the Planning Board meeting of [May 12, 2021](#). the following: “Discussion about taking leadership to obtain grant under the Municipal Vulnerability Preparedness Program with the goal to replace the undersized culvert at the causeway.” (The Planning Board meeting had to be moved to a Wednesday as the Finance Board had to hold a meeting on May 12, 2021, to be in conformance with the law.) To fill the open positions, the Board of Selectmen appointed Kyle Merolla and James Whalen to the The Planning Board. The agenda to the meeting of May 12 also included, “Reorganize the Board by appointing members to chair, treasurer, and secretary positions; and also a representative of the Board to sit on the Bylaw Committee according to General Bylaw section 2.13.1.”

However, The town administrator requested information about this writers initiative he took to get the ball rolling with the MVP program. This writer then sent an email to the town administrator Stacy Stout on [May 13, 2021](#). Stacy Stout, thereafter reported to the Attorney General’s office that the dial-in number stated in the agenda this writer wrote for the meeting of May 12, 2021, was incorrect. The Attorney General’s office thereafter declared said meeting “invalid” and requested that all votes would be re-taken.

James Whalen, the secretary of the Planning Board at the time posted minutes to the Planning Board meeting with a date of [May 18, 2021](#) (the meeting was actually on May 25, there was no meeting on [May 18, 2021](#)). The minutes mentions:

**Municipal Vulnerability Grant**

Peter had brought this up previous meeting, Stacy informed the Board the Grant Writer is working on this grant for other departments as well including Police.

Since Stacy Stout took over, the chief of police, Bryan Haughey, was appointed to the position of Emergency Management Director and has since produced the following documents he shared with the Planning Board in connection with the MVP program:

October 15, 2021, [Preliminary project proposal submitted to the Town of Holland Board of Selectmen.](#)

October 15, 2021, [Environmental Hazard Mitigation Project Preliminary Proposal.](#)

February 18, 2022, [Municipal Staff Commitment.](#)

February 19, 2022, [MVP Planning Grant Environmental Hazard Mitigation Project Request for CORE TEAM Participation Holland.](#)

An MVP Action Grant in the amount of \$27,000 is already secured by the Town.

It is now time to figure out what is most needed in our town. This proposal if accepted, would eliminate many hazards:

- The repeated flooding of dozens of homes located along the shore of the south-basin,
- the danger of having the large Mashapaug causeway flooded and washed away,
- the repeated flooding of the little causeway,
- and the repeated flooding of the houses north of the May Brook Road culvert.

March 6, 2022, Peter Frei, Member of the Planning Board.