SELECT BOARD MEETING
Monday, June 24, 2024
6:30 pm
Nowak Room, Town Offices
10 Front Street, Exeter, NH 03833
REGULAR BUSINESS MEETING BEGINS AT 7:00 PM

Virtual Meetings can be watched on Ch 22 or Ch 98 and YouTube.

To access the meeting, click this link: https://us02web.zoom.us/j/84060220964

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Please join the meeting with your full name if you want to speak.

Use the "Raise Hand" button to alert the chair you wish to speak. On the phone, press *9.

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Contact us at extvg@exeternh.gov or 603-418-6425 with any technical issues

AGENDA

1. Call Meeting to Order
2. Non-Public Session RSA: 91-A:II,l
3. Proclamation – Police Officer Albert L. Colson Day
4. Swearing In – Donald Matheson, Assistant Fire Chief; Ryan Booth Deputy Fire Chief
5. Public Comment
6. Approval of Minutes
   a. Regular Meeting: June 10, 2024
7. Appointments/Resignations
8. Discussion/Action Items
   a. Squamscott River Siphons Update – Stephen Cronin, Public Works Director
   b. Pickpocket Dam Decision – Paul Vlasich, Town Engineer
   c. Natural Hazard Mitigation Plan Update – Theresa Walker, Rockingham Planning Commission
   d. Public Works Projects Update – Stephen Cronin, Public Works Director
   e. ARPA Request for PFAS-Free Turnout Gear – Fire Chief Justin Pizon
9. Regular Business
   a. Tax Abatements, Veterans Credits & Exemptions
   b. Permits & Approvals
   c. Town Manager's Report
   d. Select Board Committee Reports
   e. Correspondence

10. Review Board Calendar
11. Non-Public Session RSA: 91-A:II,c
12. Adjournment

Niko Papakonstantis, Chair
Select Board

Posted 6/21/24 Town Office, Town Website

Persons may request an accommodation for a disabling condition in order to attend this meeting. It is asked that such requests be made with 72 hours notice.

AGENDA SUBJECT TO CHANGE

Proclamation

Town of Exeter, New Hampshire
A Proclamation

Police Officer Albert L. Colson Day

July 3, 2024

Whereas, On this day, July 3rd, one hundred years ago, in 1924, Exeter Police Officer Albert L. Colson was killed in the line of duty;

And Whereas, Officer Albert L. Colson, along with a friend and neighbor, Arthur C. Bennett, reported to the home of J. Parker McDuffy on Franklin Street due to Mr. McDuffy notifying the police that after being greatly annoyed by local boys the night before Independence Day the previous year he would protect himself against any intruders;

And Whereas, Upon arrival, Officer Albert L. Colson saw Mr. McDuffy sitting on his steps with a shotgun on his lap. After speaking with Mr. McDuffy, Officer Albert L. Colson tried to disarm Mr. McDuffy, who pulled out a revolver and shot Officer Albert L. Colson in the abdomen;

And Whereas, Officer Albert L. Colson died almost instantly;

And Whereas, Law Enforcement Officers of every rank and file have chosen a profession that puts their life on the line every day for their communities in answering all calls to public service, making communities safer through commanded dedication;

Now, therefore, I, Niko Papakonstantis, Select Board Chair of the Town of Exeter, do hereby proclaim and affirm July 3, 2024 as Police Officer Albert L. Colson Day within the Town of Exeter, NH. All people are hereby called upon to promote gratitude, respect and support for Law Enforcement Officers who serve and protect our citizens and uphold the law.

In witness whereof, I have hereunto set my hand and caused the Seal of the Town of Exeter to be affixed this 24th day of June, the year of our Lord, Two Thousand and Twenty-Four.

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Niko Papakonstantis,
Select Board Chair, Exeter, NH

TOWN OF EXETER FOUNDED 1638 NEW HAMPSHIRE

Swearing-In

Approval of Minutes

Select Board Meeting
Monday June 10, 2024
6:40 PM
Nowak Room, Town Offices
Draft Minutes

1. Call Meeting to Order
   Members present: Chair Niko Papakonstantis, Vice-Chair Molly Cowan, Clerk Julie Gilman, Dan Chartrand, Nancy Belanger, and Assistant Town Manager Melissa Roy were present at this meeting.

   The meeting was called to order by Mr. Papakonstantis at 6:40 PM and the Board went downstairs to the Wheelwright Room for interviews.

2. Board Interviews
   a. Fran Hall for the Budget Recommendations Committee

   The Board reconvened in the Nowak Room at 7 PM.

3. Public Comment
   a. There was no public comment at this time.

4. Proclamations/Recognitions
   a. There were no proclamations/recognitions at this time.

5. Approval of Minutes
   a. Regular Meeting: May 28, 2024
      Corrections: Ms. Belanger said that Mollie Ruffner should be removed from the Board interviews. On page 3, where it says, "David Kovar of 38 Cross," add Road. On pages 5 and 7 where it says, "Bob Collier of Conney Road," it should read Connie Road.

MOTION: Ms. Belanger moved to approve the minutes of May 28, 2024 as amended. Ms. Gilman seconded. Ms. Cowan abstained. The motion passed 4-0-1.

6. Appointments

MOTION: Ms. Belanger moved to appoint Fran Hall to the Budget Recommendations Committee for 2024. Mr. Chartrand seconded. The motion passed 5-0.

7. Discussion/Action Items
   a. Squamscott River Siphons Update
      Public Works Director Stephen Cronin was present remotely via Zoom. He said the drill attempt was successful, and on Friday the 12" pipe was installed. The contractor has completed the river crossing. They'll move on to the next phase of installing the outlet structures and decommission the existing

siphons. We anticipate substantial completion around mid-August.

Mr. Chartrand asked Mr. Cronin to thank Mr. Vlasich for his work on this project. Mr. Papakonstantis thanked staff for updating abutters and thanked the abutters for their patience.

b. Rugg Property Update

Mr. Papakonstantis read a statement:

On the potential acquisition of land from the Rugg Family, the Select Board has been kept updated and conducted discussions with town staff, as well as legal counsel, in non-public meetings. Pursuant to RSA 91-A:3, only the following matters shall be considered or acted upon in non-public session: RSA 91-A:3II(d) reads "consideration of the acquisition, sale, or lease of real or personal property which if discussed in public would likely benefit a party or parties whose interests are adverse to those of the general community." The Town of Exeter remains in favor of the proposed project, as it would secure this land for the public benefit. Unfortunately, the Rugg Family officially notified the town of Exeter on Friday, June 7, 2024, that they are not moving ahead with this project. This was a meeting that I asked for with the Rugg Family, their counsel, our counsel, and the Town Planner. This was my first opportunity to meet the Rugg Family and discuss this face-to-face. Prior to that we had also offered mediation. The Town of Exeter had no role in this decision to not move forward with the project. The Rugg Family asserts ownership of a portion of several parcels north of and including parcel 19-16 to the town boundary with the Town of Newfields. Importantly, this assertion is not only as to ownership interest, but also as to configuration of the parcels of land in this area. The Town of Exeter has deeds from various sources to most of this area. Consequently, to resolve any title issues, the Town of Exeter or the Rugg Family would have to forego their respective rights to any of the parcels in question. The Rugg Family's position is that the Town of Exeter should relinquish all its claims. By doing so, the project as conceived would then necessitate the town purchasing land it already has deeds to from the Rugg Family. As the Select Board are stewards of town property and taxpayer dollars, and must marshal these assets responsibly, it would be irresponsible for the Town to forgo any rights it may have without some compensation, especially when thereafter it is contemplated that the Town of Exeter will pay tax dollars for the same land. The Rugg Family have done their own title work and presented this information to the Town of Exeter supporting their claim. However, the Town of Exeter has no authority to determine respective ownership rights of parties to land. This is only something the Superior Court can decide. The Town of Exeter was hopeful to avoid such a protracted court action and instead made an offer whereby the Town of Exeter would relinquish various claims to parcels in exchange for the contested portion of lot 19-

16. The required statutory process regarding land would have to be followed, but this was a framework that, from the Town's standpoint, could lead to an expeditious resolution. The Town extended this proposal in January 2024, two months before the election. Until Friday, June 7, 2024, the Town of Exeter had not received a formal acceptance or rejection of this offer. Unfortunately, it appears that the project will not advance at this time, however, should this change, the Town of Exeter will resume our discussions.

Town Planner Dave Sharples and Town Legal Counsel Laura Spector-Morgan were present to discuss the Rugg property. Mr. Sharples said this has been framed as a boundary dispute, but there are also ownership questions and legal questions. In 2017, the Natural Resources Planner at the time brought to his attention that the Rugg Family had claimed 5 parcels that the Town of Exeter has deeds for. He met with the Ruggs several times and explained that he would need something substantive to bring forward to the Select Board, such as title research and survey work. The work took about 5 years to complete, and the town also did legal work. We received the report in July 2023. We reached out to legacy counsel to review the report and the opinion was that the report was not conclusive. The report in 2023 added other areas to the property which the town owns, making it 7 parcels instead of 5, and their boundaries didn't follow our tax maps. We brought this to the Select Board in non-public session. The town believes it has legitimate claims to property. We made the Ruggs a fair offer to solve the issue judiciously in advance of the town vote. We met with the Ruggs Friday and learned that the offer of placing the entirety of the property into conservation is no longer on the table. We still hope for a resolution to clear the title. We've heard claims of a lack of transparency, but given the legal situation we're in, he believes we've given appropriate updates. He did not witness any motive except for performing due diligence on behalf of the town. It's very unfortunate that the deal has been removed from the table.

Ms. Cowan asked if there is a path forward for the Select Board to work with the Ruggs. Preserving this land is important. Mr. Papakonstantis said we asked that question on Friday when we met with them and didn't get a direct answer. We made it clear that the town was willing to listen in the future. Mr. Chartrand said there is no one on this Board that has expressed anything but support for this project. It was primarily in non-public because of the title issues, but there was nothing but support. We want to save the Fort Rock trails.

Janice Stevens of 19 Colonial Way Exeter asked what the financial implications for the Town of Exeter would be if we were to work with the Ruggs on what they are proposing. Mr. Papakonstantis said the Rugg Family has made it clear as of June 7 that the deal is off the table. With all of the grants that were going to be applied for, it was about $1M in taxpayer dollars. Mr. Chartrand said the owners of the property said they're no longer interested in working with the towns of Exeter and Newfields, so we remain interested but he doesn't know where we can go from there.

Vanessa Lazar of 35 Woodridge Lane Exeter read prepared comments:
Dear Mr. Papakonstantis and the Exeter Select Board and Mr. Dave Sharples, we are here tonight because over the past 18 months, Trust for Public Land, SELT, and a vibrant network of volunteers in Newfields and Exeter worked tirelessly to conserve 148 acres of beloved forest and wetlands and 12 miles of the Fort Rock trail system. This land is a gathering spot for the community, a driver of the town's recreational economy, and a place for our children to play, have adventures, and connect with nature instead of screens. These efforts were rewarded on March 12, 2024, when Exeter overwhelmingly signaled its support for conservation by passing the Article 24 advisory measure with 88% of the vote. Newfields went even further, voting to fund the conservation initiative with 67% of the vote, despite the fact that none of their Select Board members supported us. From the public's perspective, the hard work was done. Due to the position of the Newfields Select Board, passing the funding measure felt like climbing Mount Everest. In contrast, given the Exeter Select Board's support and overwhelming results at the polls, it seemed like a layup to resolve the dispute over 6.8 acres of land. We didn't know all of this [the other disputed land]. The 6.8 acres in dispute represents a mere 4.7% of the total 148 we sought to conserve and only $250,000 approximate value of the $5.5M appraisal for the land, a value that pales in comparison to the dollar value of the time and energy volunteered by residents in support of the conservation effort. Instead of a layup, we stand here as a community devastated by what appears to be the loss of a once-in-a-lifetime opportunity to conserve this land forever. Despite already having secured $3.4M in funding and just last week we learned the project ranked #1 in the country, in a record competitive year, for a $600,000 Community Forest and Open Space Acquisition for Newfields. Given the magnitude of the volunteer time and energy, the overwhelming support from the polls, and the significance of the funds secured to date, it feels impossible that Exeter was not able to resolve a 6.8 acre blip of an issue on behalf of its residents. We stand here today and demand accountability. We ask the Select Board to specifically address each of the following questions before adjourning. Our first question is about effort. You just gave us a brief overview but we understand the position of the Town of Exeter is that there is no known dispute over the 6.8 acres because Exeter made a formal offer to the Rugg Family in January that asked them to surrender their claim to 6.8 acres of land and never received a formal response. However, Exeter knew that the Rugg Family had shared its due diligence to support their position already on the 6.8 acres so the community feels that the Town of Exeter is hiding behind an irrelevant procedural detail, especially given the overwhelming show of support at the polls. Can town officials explain what steps they took - which I believe Mr. Sharples already did - if any, to

resolve this issue between March 12 and May 28, the grant application deadline, and why Exeter's inability to resolve this issue was not made public prior to the eve of said deadline so that there was no opportunity for us to help resolve the problems. Our second question is about evidence. The Rugg Family has shared extensive title research and stamped survey work to support their position of ownership. Can Exeter share what documentation or diligence supports its position? There's no public record of Exeter's assessment of the Ruggs' extensive title work and survey or of Exeter's own title work or survey work. Has this been completed, and if so, why hasn't it been made public? In the absence of any such work, Exeter's position of sitting back and waiting for the Rugg Family to disprove in court a warranty deed Exeter received for the land from a developer seems egregious given the public mandate at the polls to proactively move forward with the conservation. Given the resounding will of the voters, is there any immediate action town officials can take to try and resolve the boundary dispute in a way that might allow the Trust for Public Land and SELT and all the passionate supporters here tonight an opportunity to conserve the land? Perhaps they'll change their mind. Who will be responsible for these initiatives, who will be responsible for overseeing that work, and when will that be completed?

Helen Kruppa of 27 Captains Way Exeter said the Captain's Meadow Homeowners Association stands united in supporting the acquisition of the Rugg Property. Article 24 passed with overwhelming support. This land is a gathering space for our community and serves as a sanctuary for wildlife. Its loss would harm the local wildlife and potentially lead to the decline of some species. We urge the Select Board to take immediate action. We acknowledge that you have been trying to resolve this dispute for a long time. The land dispute, while significant, should not overshadow the larger goal of conserving this property.

David Reyes of 11 Ash Street said this could easily become "the Select Board says X, the Rugg Family says Y," and the public doesn't know who's right or wrong. Is it possible for the towns of Exeter and Newfields to wind up owning this land? It's hard to understand why we can't wind up owning all the land and set aside the question about who owned what to begin with. It's 148 acres, there could just be a set price to negotiate that land and set aside the property disputes.

Mr. Chartrand said there's an assumption that it's about the property line disputes, but his feeling was that all along that was not really the issue. The Board had great urgency in resolving those issues in non-public sessions. We have no choice but to proceed that way in these matters. For close to 6 months we've been trying to engage and it's been very difficult. The boundary dispute may just be an excuse not to move forward.

Mr. Papakonstantis said when you all came before us in December 2023, we had a good feeling that the town would support it, so in January we started really having aggressive discussions with the property owner to move this along.

We made an offer and we continued to try to initiate conversation, but it's difficult when the other party doesn't respond. It wasn't for lack of trying that it took over 6 months. We offered mediation, because it doesn't take as much time as litigation, and they declined. He asked for a meeting with the family as the Chair of the Select Board, and they didn't accept our invitation until after this came out in the newspaper. Their attorney left the meeting after 10 minutes. We stayed for an hour and a half asking repeatedly what we need to do to save this. We got an answer and it wasn't the answer we wanted. We want to do something. We don't disagree with anything that you're saying.

Attorney Spector-Morgan said the question is the price, and that's the sticking point. The Ruggs have given zero credence to the town's ownership of this property, and the Selectmen [sic] feel very strongly they should not be paying for land the town already owns.

David Reyes said there was a [cost] number that Southeast Land Trust and the Trust for Public Land were working with. Whether you divide a set number by 140 acres or 148 acres, the total would be the same.

Attorney Spector-Morgan said the town was looking for some concession at least for the warranty deed. Mr. Papakonstantis said the citizens' petition had no dollar figures. The message sent to the Select Board was to take the next step, but there were no dollars associated. If he was going to ask for tax dollars to be spent on something we already own, that would be malpractice. Mr. Chartrand said we have our oath of office and rules for operating as a Select Board, so we have some restrictions that aren't there on the other side of the equation. The way for Newfields was clearer, and there was no boundary dispute there, but he still doesn't feel like this was a boundary dispute. It doesn't explain the lack of engagement. Mr. Papakonstantis said the numbers that were presented were estimated numbers from the Trust for Public Land.

Mr. Sharples said he would answer further questions from Ms. Lazar. Regarding "Can you share what the town's position is?", we have shared what we could so far. Other information is protected under attorney-client privilege. Regarding survey and title work, we haven't done any survey work, but we did title work, and it's all been inconclusive. Regarding "Is there any immediate action from the town?", the Ruggs own the property. They have the right to do whatever they want to do. We have no control over that. It's up to them to negotiate what they own, most of which is in Newfields.

Helen Kruppa asked if, since there's this dispute, the Ruggs would not be able to sell that land to a developer until something is resolved. Attorney Spector-Morgan said it depends whether the developer would assume the title dispute. They can sell it, but whoever buys it would have to deal with it.

Mr. Papakonstantis asked if the Board would allow non-Exeter residents to speak, and the Board agreed.

Tara Barker of York Maine asked if the Board would put funds aside to acquire the land in the future in case the Ruggs change their minds. Mr.

Papakonstantis said we would still have to put it on the ballot in March so the voters could vote to raise and appropriate the money.

David Kovar of 38 Cross Road said the wildlife preservation issue is similar to Pickpocket Dam. Mountain bikers use the property and take incredibly good care of it. They have made an investment in that property and there is economic benefit to the community. He asked if the Ruggs could sell off the part that is not in dispute and we can't stop them; Mr. Sharples said yes. Mr. Kovar said he agrees that there's something off about the negotiations. The property lines expanded over the course of the negotiations, into property that Exeter has a clear deed to in the public record. He hopes that we can all stay engaged as much as possible.

Mike Mackey of Newfields said he's speaking on behalf of a group of Newfields volunteers who worked hard in support of the acquisition of the Rugg property. There was a unanimous vote of the Newfields Board against the project, but the voters authorized $3.7M in funding. Our community is committed to preserving this green space. We were aware of the boundary dispute but looked at it as a bump in the road. We raised over $3M. It's disappointing that this could not be resolved in a year. The project is done because of funding deadlines. Newfields feels betrayed by the lack of action from the Exeter Select Board and town employees. Mr. Chartrand said that's not true. Mr. Mackey said since there was an issue in July 2023, and the project was moving along, where was the initiative to get the Ruggs to work with Exeter? We lost a great deal of time.

Jonathan Ring of 24 String Bridge in Exeter, who identified himself as a Civil Engineer, said Donald Wilson is the surveyor for the Ruggs, and he is the "god of surveyors" in NH. Tax maps are frequently wrong, especially for wooded lots. He would be happy to help if he can be of assistance.

Dan Longcope of 7 Ridgecrest Drive said he's been riding those trails since 2009. He's part of the Fort Rock Riders that take care of those trails. There was some harsh language used in the Seacoast Online story and he would like to see accountability. He's disappointed, frustrated, and angry that this is going south. He's unhappy that someday his daughter will say "we used to mountain bike where that neighborhood is." He'd like to know what happened here and if we can put things back together. This bickering seems petty when we're talking about keeping this land in recreational conservation in perpetuity. Over the last 5 years, we've increased the recreational value of that land with hoes, shovels, and pickaxes building those trails. We got that 88% vote, and we don't get mandates like that in the United States, but here we are.

Victor Deleo of 11 Captains Way said he trusts this has all been done in the best way. He wants to say to the Rugg Family that he's thankful they brought this to the table in the first place, and we want to do whatever we can to make it right.

Gabe Klaff of 27 Wood Ridge Lane, who identified himself as a hunter, said this family [the Ruggs] has kept this property open for us to use. His concern

is that we as a community did not do enough to break down the red tape for these people. This isn't a massive corporation, this is a family. If they bulldoze and excavate the property, we'll never get the wildlife back. This family has done their due diligence. The surveyors walked every inch of the property. Have we done enough to preserve this opportunity? He can't believe that the motivation changed and that's why we have a broken deal.

Vanessa Lazar said we lost. When we started, we were told by the family that both parcels had to be sold together. It doesn't look like there is a plan to develop the Exeter portion. If houses start going in in Newfields, is it possible to just conserve the Exeter portion? Mr. Papakonstantis said in rejecting our offer, the family did not indicate what they're doing. He made it clear that we're open to continuing discussion. He was hoping for more of a discussion, but got yelled at for an hour. If they are willing to discuss this with us, we are too. It's been six months of almost one-sided conversations. He wanted to meet them personally and have a conversation beyond the attorneys talking to each other.

Mr. Chartrand said he left the Select Board initially because it was too big a lift for him, but he agreed to come back because of these four exceptional people on the Board. They are so ethical and disciplined. It's frustrating not to have the talents of this Board resolve the issue. Mr. Papakonstantis said the Town Planner has invested 7 years in trying to work with the family. He's as invested in this project as we all are. He's gone above and beyond and he's frustrated too. Ms. Belanger said Exeter is committed to conservation land. ⅓ of our land is in conservation. We're #2, under Durham, in the State. We support what you're trying to do.

Frye Macomber of Woodridge Lane in Exeter asked if Mr. Sharples said 47 acres in Exeter is incorrect. Mr. Sharples said the town has deeds to about 37 acres of that 48. The Ruggs have deeds to 11 of those acres. There's more than 6.8 acres in question. Ms. Macomber asked what the offer that was made to the Ruggs was back in January. Attorney Spector-Morgan said the town was willing to give up the land obtained by tax deeds, while the Ruggs were to give up their claims on the 6.8 acres under warranty deed. Mr. Sharples explained that a deed is either "quit claim" or "warranty." Warranty means they've done title work and are sure there are no third-party claims to the land. It was given in exchange for a density bonus for more units for the developer.

Mr. Chartrand said our conservation efforts led to us getting this warranty deed. It was a development deal that Chinburg did with the town. Walking away from that would be violating our oath.

Scott Don of East Hampstead asked if these parcels are in current use and if they're paying taxes on it. Mr. Sharples said they're under conservation easement: 7 acres through a warranty deed; 15 acres through a tax auction in the 1940s; and15 acres in 5 parcels are owned by tax collector deeds. The Select Board gave them to conservation. No one pays taxes on them.

Shannon Turner of East Hampstead said the Newfields section had a dollar amount attached, but that wasn't the case with the Exeter warrant article. If

that was written in there, would there have been no negotiation? Mr. Papakonstantis said it was a citizens' petition asking the town if they had the appetite to purchase the Exeter land. It was more advisory. Attorney Spector-Morgan said it would have given the Board a cap on what they could spend, but it wouldn't have committed them to a dollar amount, especially if it turned out the town owned some of the land.

Tara Barker asked about the citizens' petition. Mr. Sharples read the petition:

> *By petition, to see if the voters in the Town of Exeter support the future purchase of approximately 47 acres of property owned by the Rugg family located north of Oaklands Town Forest and east of Wood Ridge Lane by the Town of Exeter for the purposes of expanding the town-owned Oaklands Town Forest, and preserving open space, trails, public outdoor recreation, drinking water supplies, and wildlife habitat; to request that the Selectmen review the project, including evaluation of potential funding options such as bonds; and to advise and authorize the Selectmen to apply for, obtain, accept, and pass through any federal or state grants, loans, or private gifts, if any, which may be available for said acquisition, in collaboration with and facilitated by conservation organizations.*

Mr. Sharples said the article passed by 88%. The petition assumed that the 47 acres was owned by the Rugg family, but the town has deeds for 37 acres of that. Ms. Barker said that said "advised and authorized to obtain," the taxpayers gave the go-ahead to do that. To lose the property because of this doesn't make sense. Attorney Spector-Morgan said it gave the authority to apply for and pass through grants. It doesn't give the town the authority to give land away for nothing.

Alex Durden-Guest of Stratham said it was clear that the Select Board was in support of this. The frustration is with the bureaucracy. We don't know if the facts in dispute are the facts. There's an overwhelming sense that there's been some disrespect that the family's efforts haven't been met. He would like to see the minutes from the original meetings around the Chinburgs. There are a lot of inconsistencies. We know that the Ruggs own north of Newfields and then 10 acres discontinuous to that, why is that? He's looked at tax maps that show those two slivers of property that the Ruggs own and the town owns. When the Ruggs have these questions and hire the gold standard surveyor, the town should also be doing an internal audit of these inconsistencies.

Mr. Sharples said he found the minutes. During that time frame, the Planning Board minutes are very general, with just the topic and motion. Barb McEvoy was the secretary and took detailed notes. Both of those are available to the public.

David Kovar said between what we are seeing in the public discourse and what we're hearing about is going on in non-public, there's a lot that we don't know. It would be helpful to the Ruggs and everyone present to meet and leave

the lawyers out of the room. People should continue doing this research. There are ways of gathering information that could still be pursued. We can try to find some way of bridging the communication gap.

Chris Walstad, who was present remotely via Zoom, asked if the town considered making a claim on that deed where the town could be financially compensated. Attorney Spector-Morgan said we're exploring that option. Eleanor Walstad, who was also present remotely via Zoom, said we could add onto the grantor and title insurance. The title insurance company would either litigate the matter or compensate the losses. Attorney Spector-Morgan said it was a donation, so there was no title insurance with the town as a beneficiary.

Karishma Manzur of 6 Windemere Lane said she worked with the Ruggs to beautify her property and the love they have for trees and nature is so evident. She would love to offer them an olive branch and bring them back to the Board. From the article, they've spent $400,000 on lawyer fees and other work. She asked them to come back to the table and see how we can resolve this issue.

Nick Michaud of 11 South Street Newmarket said he's troubled that the Ruggs spent an enormous amount of money on an impartial third-party survey. We haven't seen Exeter respond to that. Why are we fighting that? This needs to be disproven with fact.

Mr. Papakonstantis said he's read the report, and there is some confusion regarding the issues that we're talking about. Their attorney admitted that there was some confusion in the report. It's not a matter of spending taxpayer dollars to do our own work, it also takes time to have an independent study done. We knew the deadlines and wanted to try to move this forward.

Mr. Michaud said this survey was done to the "gold standard," and this has to be resolved at some point.

Mr. Papakonstantis said we didn't get the rejection from the Ruggs until Friday morning. We need to look at what the next steps are.

Mr. Chartrand said we have a form of government that allows our citizens wide latitude to go past the Select Board, using a citizens' petition.

Janelle Schander of 93 Park Street Exeter said if communication does open up again, it may be beneficial to have a group of passionate people in the room to work with the family.

Mr. Papakonstantis said we're willing to continue to work with the Ruggs, and the people can always create a citizens' petition.

c. Peace Proclamation

Mr. Papakonstantis said this is a continuation of an action item from the last two meetings, a request for the Board to consider a peace proclamation. Mr. Chartrand had made some suggested revisions to the proclamation, and we took two weeks to review and to allow Ms. Cowan to be present.

Mr. Chartrand said he eliminated a clause about financing which he thought was beyond the Board's purview. He also eliminated any reference to

federal officials, as he couldn't vote for any proclamation that claimed to instruct federal officials.

Ms. Gilman said she started out fully in support of just sending a letter but became more reticent because of Mr. Chartrand's references to us representing the whole town, and since then she's gone further and now thinks this is a slippery slope. If there's some disagreement about decisions being made at the Federal level, it may come to the Board in the future. We can't guarantee that we represent the whole body of the town. Ms. Belanger said she feels the same way.

Ms. Cowan said she would be amenable to talking about this and hearing from our constituents.

David Kovar asked if a citizens' petition could ask the Board to support such a proclamation. Mr. Papakonstantis said yes. Mr. Kovar said that could be a good course of action. Mr. Chartrand said that's not until next March. Mr. Kovar said democracy sucks. People are dying. But if you short circuit democracy, you're contributing to the problem.

Bob Collier of Connie Road asked if the group has submitted the letter to Washington DC. You're asking the Board to form an opinion when there are 18,000 different opinions. He understands why they can't do what you want them to do.

Karishma Manzur of 6 Windemere Lane said there have been nationwide resolutions and efforts. Our elected officials are not always listening to us. If the 10 of us send a letter to Washington, it's not going to go anywhere. Our Representative Chris Pappas is not interested in meeting with us. Our government has more clout than individuals. We're only calling for peace. We will join 80 towns and cities nationwide, as well as unions and national organizations, that have made similar proclamations. At this moment, this country is complicit in a full-blown genocide.

Jeff Agitsi of 20 Chestnut Street said we live in a representative democracy and empower representatives to make tough decisions in our names. The recognition of Indigenous Peoples' Day was approved without a referendum, and that was about a balanced interpretation of history and recognizing the victims of that history.

David Kovar said what's happening in Gaza is one of the worst atrocities he's seen in his lifetime. It needs to stop and we need immediate peace. But, this is a representative government, and if the Board wishes to pass the proclamation, there will be people who do not feel represented, and that may dilute the message. Let's look at our community to see what other organizations can support these efforts.

Mr. Papakonstantis said Elias [Kaufman, who was present] said something at the last meeting that it would set an incredible precedent if the Board voted in favor of the proclamation, but he's still struggling with the other part of precedent. Personally he wants peace, but he's afraid of what would happen if another group came in the future to ask the Board to support something we weren't comfortable with. When Russia invaded Ukraine, folks

wanted us to fly the Ukrainian flag at Town Hall, but there would be some that would be offended by it, and some who would say "now hang our flag." The legislative body can ask the voters in a citizens' petition, but he hopes that this isn't something we're still seeing every day in March.

Ms. Belanger said we respect that you keep coming back. Whether or not this proclamation passes, there are things individually that we all can do to get aid and feed people. In your advocacy you could get the word out. She's very respectful of what you're trying to do.

Mr. Chartrand said there's some language below the date that he didn't write, so that would not be part of his motion. He read his revision of the proclamation:

> *By the Select Board of Exeter NH, a proclamation calling for peace. Whereas the Select Board of Exeter recognizes that all human life is precious, and all people have a right to live with dignity, feel safe, and be respected, regardless of nationality, race, or religion, and whereas international humanitarian law requires all parties to an armed conflict protect children and non-combatants in all circumstances and prevent the commission of grave violations against them, including killing, maiming, attacks on schools, medical infrastructures and hospitals, and whereas hundreds of thousands of lives are at imminent risk of famine and death if a permanent ceasefire is not reached and humanitarian aid is not delivered without delay; and now therefore we the Select Board of Exeter urge an immediate de-escalation and a sustained bilateral ceasefire to bring peace and prosperity to Israel and Palestine; the immediate entry of humanitarian aid assistance to Gaza, including medicine, food, and water, at the scale required; moving injured and sick people out of Gaza to receive essential medical treatment at the scale required; the release of all Israeli hostages and all Palestinian people unjustly held in the region, including Israel, Gaza, and the West Bank; with the international community to work toward long-term political solutions that could afford safety and dignity to all people in Israel and Palestine. Dated this day by the Select Board of Exeter, and it calls for our signatures.*

MOTION: Mr. Chartrand moved that the Select Board approve the proclamation as read. Ms. Cowan seconded. Mr. Chartrand and Ms. Cowan voted aye. Ms. Belanger, Ms. Gilman, and Mr. Papakonstantis voted nay. The motion failed 2-3.

Karishma Manzur thanked the Select Board for their time and effort and read further information about the genocide in Gaza. She said we condemn Hamas and the terrorism in October of last year. We also condemn the Israeli government and its terrorism and genocide of the last 8 months. Mr. Papakonstantis said he would like to thank her and her group for being respectful of the process and how our government works. On a personal level, not as a representative of the Board, he would be willing to work with her further on this issue.

Ali Muckle of 28 Chestnut Street thanked the Board for taking the time to consider the issue deeply. Was there anything we could have done differently to convince the Board that we represent the town? Mr. Chartrand said it was clear to him as a resident that there was broad support for this, which was a deciding factor for him. Mr. Papakonstantis said it was a question of process and setting precedent. If we had gone forward with this, it scared him what requests we might have gotten in the future. Ms. Cowan said the other NH towns that have voted for this are town councils or city councils. This is a little out of our lane but felt like something we could do. This is worded in a way that "lifts us up by our better angels" so that's why she felt she could vote for it.

d. Permits and Approvals [agenda changed at the request of the Chair]

Town Planner Dave Sharples asked the Board to authorize the expenditure of up to $100,000 out of funds for the Police Station/Fire Substation. Our purchasing policy allows staff to authorize purchases of under $25,000. The Select Board are considered agents of the warrant and CIP articles. We're exploring tree clearing of the site. We have two quotes and are waiting on a 3rd. Geotechnical work needs to be done. We also need a wetlands delineation. Each one is under $25,000. He's looking for the Select Board to authorize up to $100,000 for these projects.

MOTION: Ms. Belanger moved to authorize the Town Manager or their designee to expend up to $100,000 for any work associated with the new Police Station/Fire Substation at 6 Continental Drive. All purchases made under this authorization shall follow all provisions in the Town's purchasing policy. Ms. Gilman seconded. The motion passed 5-0.

The Board took a 5-minute recess at this time and reconvened at 9:37 PM.

e. Pairpoint Park Stakeholders Committee

Mr. Chartrand recused himself from this discussion and vote.

Mr. Papakonstantis said we're ready to appoint the folks that we interviewed for the Pairpoint Park Stakeholders Committee.

Mr. Papakonstantis proposed a revision to the charge, to add 3 alternate positions to the 9 voting positions. This committee could work for the next two years, and some of the members might not be available. We interviewed a diverse and inclusive group of people and this will allow everyone to potentially be a voting member.

Ms. Gilman said we should give more structure to this committee by having someone lead it. Mr. Papakonstantis said it should have a Chair, Vice-Chair, and a Clerk for minutes.

Ms. Gilman said both the HDC and the Historic District Commission have expressed interest in this committee. They could be made non-voting members.

Mr. Papakonstantis volunteered to attend the first meeting for the Select Board and reconsider the representation when we know when they will meet.

MOTION [withdrawn]: Ms. Belanger moved to revise the mission statement or charge for the Pairpoint Park Stakeholders committee to include 3 alternates, to include a charge of electing a Chair, Vice-Chair, and Clerk, and also to include a member of the Heritage Commission as non-voting. Ms. Gilman seconded. Mr. Papakonstantis asked if it should be a member of the Heritage Commission or Historic District Commission.

Ms. Belanger withdrew her motion and Ms. Gilman withdrew her second.

MOTION: Ms. Belanger moved to revise the mission statement or charge for the Pairpoint Park Stakeholders committee to include 3 alternates, to include a charge of electing a Chair, Vice-Chair, and Clerk, and also to include as non-voting members a member of the Heritage Commission and Historic District Commission as appropriate. Ms. Gilman seconded. Mr. Chartrand was recused and did not vote. The motion passed 4-0.

Mr. Papakonstantis said there is no term for the appointments.

MOTION: Ms. Belanger moved to appoint Mary Tegal as a voting member to the Pairpoint Park Advisory Committee. Ms. Gilman seconded. The motion passed 4-0.

MOTION: Ms. Belanger moved to appoint Devon Skerritt as a voting member to the Pairpoint Park Advisory Committee. Ms. Gilman seconded. The motion passed 4-0.

MOTION: Ms. Belanger moved to appoint Steven Jones as a voting member to the Pairpoint Park Advisory Committee. Ms. Gilman seconded. The motion passed 4-0.

MOTION: Ms. Belanger moved to appoint Judy Rowan as a voting member to the Pairpoint Park Advisory Committee. Ms. Gilman seconded. The motion passed 4-0.

MOTION: Ms. Belanger moved to appoint Ann Hohenberger as a voting member to the Pairpoint Park Advisory Committee. Ms. Gilman seconded. The motion passed 4-0.

MOTION: Ms. Belanger moved to appoint Jennifer Martel as a voting member to the Pairpoint Park Advisory Committee. Ms. Gilman seconded. The motion passed 4-0.

MOTION: Ms. Belanger moved to appoint Amanda Kelly as a voting member to the Pairpoint Park Advisory Committee. Ms. Cowan seconded. The motion passed 4-0.

MOTION: Ms. Belanger moved to appoint David Short as a voting member to the Pairpoint Park Advisory Committee. Ms. Gilman seconded. The motion passed 4-0.

MOTION: Ms. Belanger moved to appoint Keith Whitehouse as a voting member to the Pairpoint Park Advisory Committee. Ms. Gilman seconded. The motion passed 4-0.

MOTION: Ms. Belanger moved to appoint William Campbell as an alternate to the Pairpoint Park Advisory Committee. Mr. Papakonstantis seconded. Ms. Gilman said he's also serving on the Heritage Commission which would like to participate in the process. Ms. Belanger said if he decides he would rather be the Heritage Commission representative, we can change that. The motion passed 4-0.

MOTION: Ms. Belanger moved to appoint Suzanne Stone as an alternate to the Pairpoint Park Advisory Committee. Ms. Cowan seconded. The motion passed 4-0.

Ms. Belanger said Mollie Ruffner withdrew her application, so we have one alternate opening left.

f. Tax Deeds

Ms. Roy said every year, the town puts together a property tax deed list. This year, the Board has to decide before June 18th whether they would like to move forward with deed waivers or start the deed transfer process. We tend to waive mobile homes as we would owe lot rent, but there are four non-mobile home properties on the list this year. We've sent letters and would continue reaching out.

The Board indicated support of moving forward with the deed process for these properties.

8. Regular Business
   a. Tax Abatements, Veterans Credits and Exemptions
      i. There were no abatements or exemptions considered at this meeting.

   b. Permits & Approvals
      i. The permit request was considered as part of the discussion items above.

   c. Town Manager's Report
      i. Ms. Roy said we had a fantastic meeting with the Departments we expect to submit CIP items this year. All of the Departments listened to each others' proposals to decide as a group how to move forward.
      ii. Parks and Rec had a successful senior BBQ. It was very well attended.
      iii. She joined the Brentwood Town Administrator and Chair of the Brentwood Select Board in a meeting regarding Pickpocket Dam
      iv. We issued the RFP for design services for the Police Station/Fire Substation. We expect those back by June 21.
      v. We're continuing to work on an implementation plan for the Keegan report.

   d. Select Board Committee Reports
      i. Ms. Belanger said she volunteered for the Senior BBQ. A lot of town personnel helped with serving. There was a Planning Board/Conservation

Commission joint sitewalk at 131 Portsmouth Ave for a Foss Motors project. There's a June 13 meeting to hear more information.

ii. Ms. Gilman had no report. She said we have to put together a committee for the Semiquincentennial and Mr. Papakonstantis said we can start it this summer.

iii. Ms. Cowan had no report. She said there is legislation pending that would shift how we run elections in NH and would require proof of citizenship to register to vote. Only 40% of NH residents have a passport. There is no other state in the country that requires this. We need to support peoples' right to vote. The Town Clerk and Supervisors of the Checklist are very worried about this. This is HB1370; SB1569 already went to the Governor. This was tried in Kansas and resulted in millions of dollars in litigation costs.

iv. Mr. Chartrand had no report.

v. Mr. Papakonstantis said he spent time last week preparing for this evening's property update. He met with the Town Administrator and Chair of the Select Board in Brentwood and told them about the Pickpocket Dam final feasibility study. He asked whether Brentwood had a preferred alternative and if they would be willing to collaborate financially, but did not get an answer.

e. Correspondence

i. A note from Mr. Kovar about an electronic speed sign. Mr. Papakonstantis will be meeting with him this week.

ii. Correspondence between a citizen near the Westside Drive project who is working with Mr. Cronin.

iii. Emails regarding the Rugg property. Ms. Belanger asked about the timing of receiving the TPL email, and Ms. Roy said it was after it was released to the public. It was emailed in last week.

iv. The NHMA Legislative Bulletin.

9. Review Board Calendar

a. The All-Boards meeting is June 25. The next Select Board meetings are June 24, July 8, July 22, August 5, August 19, Tuesday September 3, September 16, and September 30.

10. Non-Public Session

MOTION: Ms. Belanger moved to enter into non-public session under RSA 91-A3II(a) and (c). Ms. Gilman seconded. In a roll call vote, the motion passed 5-0 and the meeting entered non-public at 10:10 PM.

MOTION: Ms. Belanger moved to seal the minutes of the Non-Public Session. Ms. Gilman seconded. In a roll call vote, the motion passed 5-0.

MOTION: Ms. Belanger moved to exit Non-Public Session. Ms. Gilman seconded. In a roll-call vote, the motion passed 5-0.

11. Adjournment

MOTION: Ms. Gilman moved to adjourn the meeting. Ms. Belanger seconded. Motion passed 5-0. The Board adjourned at 10:25 pm

Respectfully Submitted,
Joanna Bartell
Recording Secretary

Resignations

Town of Exeter

Pam McElroy <pmcelroy@exeternh.gov>

Fwd: Renay Resignation

2 messages

Kristen Murphy <kmurphy@exeternh.gov> Tue, Jun 18, 2024 at 6:16 AM
To: Cliff Sinnott <cliffsinnott@gmail.com>, Pam McElroy <pmcelroy@exeternh.gov>

Good morning Pam,

Please see the resignation from Renay Allen.

Kristen Murphy
Conservation and Sustainability Planner
Town of Exeter
10 Front Street, Exeter, NH 03833
(603) 418-6452

---------- Forwarded message ---------
From: **RM Allen** <rmallennh@gmail.com>
Date: Mon, Jun 17, 2024 at 8:33 PM
Subject: Renay Resignation
To: Cliff Sinnott <cliffsinnott@gmail.com>, Kristen Murphy <kmurphy@exeternh.gov>

Hello Cliff and Kristen,

As mentioned, I have been waiting in the wings for the insulation grant program to begin but the delay of 6 months is just too great. I saw at the last meeting that there was a potential new member. Hooray! I think the time is right, and you will still have a quorum now.

Could you please pass the bit below to the select board? Thanks

June 17, 2024

Please accept my resignation from the Energy Committee as of July 11, 2024. It has been my pleasure to be associated with the committee, a wonderful group of committed volunteers.

Sincerely,
Renay Allen

Pam McElroy <pmcelroy@exeternh.gov> Tue, Jun 18, 2024 at 10:51 AM
To: Kristen Murphy <kmurphy@exeternh.gov>
Cc: Cliff Sinnott <cliffsinnott@gmail.com>

Thank you.

Pam
[Quoted text hidden]
--
Pam McElroy
Town of Exeter
Senior Executive Assistant, Town Manager's Office
603-773-6102
Human Services Administrator
603-773-6116

Discussion/Action Items

Squamscott River Siphons Update

Pickpocket Dam Decision

Natural Hazard Mitigation Plan Update

DRAFT

Town of Exeter, NH

Natural Hazard Mitigation Plan Update 2024

Adopted by the

Exeter Select Board

_____date_____

Prepared with the Assistance of the

ROCKINGHAM PLANNING COMMISSION
theRPC.org

This project was partially funded by

NH Homeland Security and Emergency Management

Certificate of Adoption

WHEREAS, the Town of Exeter received funding from the NH Office of Homeland Security and Emergency Management under a Pre-Disaster Mitigation Grant and assistance from Rockingham Planning Commission in the preparation of the Exeter Hazard Mitigation Plan Update 2024; and

WHEREAS, several public planning meetings were held between May 2023 and _____ regarding the development and review of the Exeter Hazard Mitigation Plan Update 2024; and

WHEREAS, the Exeter Hazard Mitigation Plan Update 2024 contains several potential future projects to mitigate hazard damage in the Town of Exeter; and

WHEREAS, a duly-noticed public hearing was held by the Exeter Select Board on _____ to formally approve and adopt the Exeter Hazard Mitigation Plan Update 2024.

NOW, THEREFORE BE IT RESOLVED that the Exeter Select Board:

- The Plan is hereby adopted as the official plan of the Town of Exeter:
- The respective individuals identified in the mitigation strategy of the Plan are hereby directed to pursue implementation of the recommended actions assigned to them;
- Future revisions and Plan maintenance required by 44 CFR 201.6 and FEMA are hereby adopted as part of this resolution for a period of five (5) years from the date of this resolution;
- An annual report of the progress of the implementation elements of the Plan shall be presented to the Select Board by the Town's Emergency Management Director or Town Manager.

NOW, THEREFORE BE IT RESOLVED that the Exeter Select Board adopts the Exeter Hazard Mitigation Plan Update 2018.

IN WITNESS THEREOF, the undersigned has affixed his/her signature and the corporate seal of the Town of Exeter on this _____ day of _____.

_____ Select Board

_____ Select Board

_____ Select Board

_____ Select Board

_____ Select Board

ATTEST

_____
Public Notary

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EXECUTIVE SUMMARY

The *Exeter Hazard Mitigation Plan* (herein also referred to as the *Plan*) was compiled to assist the Town of Exeter in reducing and mitigating future losses from natural hazard events. The *Plan* was developed by the Rockingham Planning Commission and participants from the Town of Exeter *Natural Hazard Mitigation Committee* and contains the tools necessary to identify specific hazards, and aspects of existing and future mitigation efforts.

The following *natural* hazards are addressed:

- Flooding
- Hurricane-High Wind Event
- Severe Winter Weather
- Wildfire
- Earthquake
- Drought
- Extreme Temperatures
- Climate Change
- Infectious Disease

The list of *critical facilities* includes:

- Municipal facilities
- Communication facilities
- Fire stations and law enforcement facilities
- Exeter Hospital
- Schools
- Shelters
- Evacuation routes
- Vulnerable Populations

The Exeter Hazard Mitigation Plan Update 2024 is considered a work in progress and should be revisited after every natural event to assess whether the existing and suggested mitigation strategies are successful. Copies have been distributed to the Town Office and the Emergency Operations Center. A copy of the Plan is also on file at The Rockingham Planning Commission, New Hampshire Homeland Security and Emergency Management (NHHSEM) and the Federal Emergency Management Agency (FEMA). This Document was approved by both agencies prior to adoption at the local level.

CHAPTER I – INTRODUCTION

Background

The New Hampshire Homeland Security and Emergency Management (NHHSEM) has a goal for all communities within the State of New Hampshire to establish local hazard mitigation plans to reduce and mitigate future losses from natural hazard events. The NHHSEM outlines a process whereby communities throughout the State may be eligible for grants and other assistance upon completion of a local hazard mitigation plan. A handbook entitled *Hazard Mitigation Planning for New Hampshire Communities* was created by NHHSEM to assist communities in developing local plans. The State's Regional Planning Commissions are charged with providing assistance to selected communities to develop local plans.

The Exeter Hazard Mitigation Plan Update 2024 was prepared by the Exeter Hazard Mitigation Committee with the assistance and professional services of the Rockingham Planning Commission (RPC) under contract with the New Hampshire Homeland Security and Emergency Management operating under the guidance of Section 44 CFR 201.6. The Town's Hazard Mitigation Committee included representatives from all town departments and Exeter Hospital. Academia, including public schools and Phillips Exeter Academy, local businesses and organizations assisting socially vulnerable and underserved members of the community were also invited to participate in the Plan Update. The Plan serves as a strategic planning tool for use by the Town of Exeter in its efforts to identify and mitigate the future impacts of natural hazard events.

Methodology

The Rockingham Planning Commission (RPC) organized the first meeting with emergency management officials from the Town of North Hampton on May 23, 2023, to begin the initial planning stages of the Plan Update. This meeting precipitated the development of the Natural Hazards Mitigation Committee (herein after, the Committee). RPC and participants from the Town developed the content of the Plan using the ten-step process set forth in the Hazard Mitigation Planning for New Hampshire Communities. Publicly noticed work session meetings were also held on July 20, 2023, September 14, 2023 and _____. All work session meetings were open to the public, but members of the public did not attend any of the meetings. The Select Board held a duly noticed public hearing on the draft Plan Update on _____. Members of the public were in attendance at the meeting but did not request changes to the draft Plan. The Selectmen initiated a 30-day public comment period at the _____ meeting. The Town of Exeter Emergency Management Director and staff from the Rockingham Planning Commission solicited input on the Plan from academia, businesses, local officials, agencies supporting socially disadvantaged community members and vulnerable populations, abutting municipalities, and residents throughout the Plan development.

The Town's 2018 Plan served as the starting point for discussion on hazards impacting the Town, as well as discussions on mitigation strategies. The 2018 Plan served as a reference for local land use regulations and policies, development of the Town's Capital Improvement Plan and department budgets, and has been referenced in several reports, including the 2016 NH Coastal Risks and Hazards Commission Final Report, the RPC's 2015 Regional Master Plan, the Town's

2017 Sea Level Rise and Coastal Storm Surge Vulnerability Assessment, the 2022 Exeter's Path to Resilience Rep and other adaptation planning initiatives.

Step 1- Form the Committee

The Emergency Management Director invited Department Heads from all the Town's departments to participate in the Plan Update process, as well as staff from Exeter Hospital and SAU 16. As a result, the Plan Update Committee included the Emergency Management Director/Fire Chief, Town Administrator, Select Board Members, Assistant Fire Chief, Public Works Director, Health Office, Recreation Director, Water and Sewer Managing Engineer, DPW Director, Town Planner, Town Natural Resource Planner, Building Inspector/Code Enforcement Officer, Exeter Hospital's Emergency Management Director, and SAU 16's Facilities Manager. Public notices about the Plan Update process were posted on the Town website and the Rockingham Planning Commission's website and monthly newsletter. All meetings were open to the public, and RPC staff kept municipalities in the region informed of the Plan Update. In addition, RPC staff working on Plan Updates in the abutting towns of North Hampton and Hampton Falls kept local officials in these communities informed of the update to Exeter's Plan Update and the opportunity to comment on regional mitigation strategies.

Step 2 – Public Outreach and Stakeholder Involvement

RPC staff worked with the Town Administrator and Emergency Management Director to coordinate meaningful community engagement and public outreach about the Plan Update process to residents, local businesses, academia, organizations supporting socially vulnerable populations, and Emergency Management Directors in the abutting municipalities of Brentwood, NH, Epping, NH, East Kingston, NH, Kensington, NH, Hampton Falls, NH, Hampton, NH, and Stratham, NH. All these stakeholders were provided with an opportunity to comment on the Plan and contribute updated information.

Public notices about the Plan Update meetings were posted on the Town website to inform viewers and followers about meetings and opportunities to comment on the Plan. Notice about the Plan Update process was also posted on the Rockingham Planning Commission's website and published in the RPC's monthly newsletter. The newsletter is distributed to local officials in the 27-town RPC region. A representative of from the school district was on the Plan Update committee. Phillips Exeter Academy was invited to participate in the Plan Update process and a representative reviewed the draft Plan Update and provided feedback. The director of the Town's Housing Authority also reviewed the plan and provided feedback. The Town's Economic Development Director assisted with soliciting feedback from Exeter businesses via email inviting participation in the Plan Update and requesting review of the draft Plan Update.

All Plan Update meetings were open to the public. RPC staff facilitated the Plan Update Committee meetings, guided the plan update process, and prepared the Plan Update. Appendix O documents the individuals and organizations invited to participate in the

Plan Update as well as the public outreach materials distributed by the Town of Exeter and the Rockingham Planning Commission.

Step 3 – Identify Natural Hazard Impacting Exeter
The Committee reviewed the list of natural hazards impacting Exeter that were included in the 2018 Plan and added Climate Change and Infectious Disease to the list of hazards impacting the community.

Step 4 – Identify Critical Facilities and Areas of Concern
The Committee identified facilities and areas considered to be important to the Town for emergency management purposes, for provision of utilities and community services, evacuation routes, and for recreational, historical, cultural, and social value. Participants in the Committee identified areas where damage from historic natural disasters have occurred and areas where critical man-made facilities and other features may be at risk in the future for loss of life, property damage, environmental pollution, and other risk factors. RPC generated a set of base maps with GIS (Geographic Information Systems) that were used in the process of identifying past and future hazards.

Step 5 – Identify Existing Mitigation Strategies
After collecting detailed information on each critical facility in Exeter, the Committee and RPC staff identified existing Town mitigation strategies relative to flooding, hurricane and wind events, severe winter weather, wildfire, earthquake, drought, extreme temperatures, climate change, and infectious disease. This process involved reviewing the Town's 2018 Hazard Mitigation Plan, the State of New Hampshire Hazard Mitigation Plan 2023 Update, the Town's Master Plan and Capital Improvements Program, Zoning Ordinance, Subdivision Regulations, Site Plan Review Regulations, 2017 Climate Change Vulnerability Assessment, 2018 Project WISE Report, the Town's Emergency Operations Plan, and the Town's participation in the National Flood Insurance Program (NFIP).

Step 6 – Identify the Gaps in Existing Mitigation Strategies
The existing strategies were then reviewed by the RPC and the Committee for coverage and effectiveness, degree of completion as well as the need for improvement.

Step 7 – Identify Potential Mitigation Strategies
A list of additional hazard mitigation actions and strategies for the Town of Exeter was developed. The recently updated Hazard Mitigation Plans of Rye, Raymond, and Sandown were just a few towns that were utilized to identify new mitigation strategies as well as the Town's Master Plan and Zoning Ordinance, 2017 Climate Vulnerability Assessment, and the 2022 Exeter's Path to Resilience Report.

Step 8 – Develop the Action Plan

The proposed hazard mitigation actions and strategies were reviewed, and each strategy was rated (good, average, or poor) for its effectiveness according to several factors (*e.g.*, technical, and administrative applicability, political and social acceptability, legal authority, environmental impact, financial feasibility). Each factor was then scored, and all scores were totaled for each strategy. Strategies were ranked by overall score for preliminary prioritization then reviewed again under Step 9.

Step 9 – Determine Priorities

The preliminary prioritization list was reviewed to make changes and determine a final prioritization for new hazard mitigation actions and improvements to existing protection strategies. RPC staff also presented recommendations to be reviewed and prioritized by the Plan Update Committee.

Step 10 – Develop Implementation Strategy

Using the chart provided under Step 9 in the handbook, an implementation strategy was created which included person(s) responsible for implementation (who), a timeline for completion (when), and a funding source and/or technical assistance source (how) for each identified hazard mitigation actions. Also, whenever the Master Plan or Capital Improvement Plan (CIP) are updated the Newington Hazard Mitigation Plan Update 2024 shall be consulted to determine if strategies or actions suggested in the Plan can be incorporated into the Town's future land use recommendations and capital expenditures.

Step 11 - Adopt and Monitor the Plan

RPC staff compiled the results of Steps 1 to 11 into a draft document. This draft Plan was reviewed by members of the Committee and by staff members at the RPC. The draft Plan was also placed on the Town of Exeter website for review by the public. Stakeholders (listed in Appendix O) were emailed the draft Plan and invited to comment. Stakeholders included Emergency Management Directors in neighboring communities, local businesses, and agencies serving socially vulnerable and underrepresented communities. A duly noticed public meeting was held by the Exeter Select Board on _____. The meeting allowed all stakeholders to provide comments and suggestions for the Plan in person, prior to the document being finalized. After the meeting the Selectmen instituted a 30-day comment period, ending on (date). The draft Plan was revised to incorporate comments from the Select Board and Town staff and then submitted to the NH HSEM and FEMA Region I for their review and comments. Any changes required by NH HSEM and FEMA were made and a revised draft document was then submitted to the Exeter Select Board for their final review. A public meeting was then held by the Select Board on _____ to approve and adopt the Plan. The formal letter of approval from FEMA Region 1 can be found in the Appendix. The Town will post the approved Plan Update on the Town website to facilitate continued public participation in hazard mitigation activities.

To track progress and update the Mitigation Strategies identified in the Action Plan, the Hazard Mitigation Committee will remain active and will revisit the Plan annually and after each natural hazard event. These reviews will assess the Plan's effectiveness, accuracy, and completeness in achieving its stated purpose and goals. Plan reviews will also address the recommended improvements to the Plan as contained in the FEMA plan review checklist and any weaknesses the Town identified that the Plan did not adequately address. The Plan will also be thoroughly updated every five years.

Hazard Mitigation Goals and Objectives of the Town of Exeter, New Hampshire

The Town of Exeter sets forth the following hazard mitigation goals and objectives:

- Reduce or avoid long-term vulnerabilities posed by natural hazards impacting Exeter, including the impacts from flooding, hurricanes and high wind events, severe winter weather, wildfire and conflagration, earthquakes, drought, extreme temperatures, and climate change, including sea-level rise and coastal storm surge, and infectious disease.

- Improve upon the protection of the Town of Exeter's general population, the citizens of the State and guests, from all natural and man-made hazards.

- Reduce the potential impact of natural and man-made disasters on Exeter and the State's Critical Support Services.

- Reduce the potential impact of natural and man-made disasters on Exeter's Critical Facilities in the State.

- Reduce the potential impact of natural and man-made disaster on Exeter's and the State's infrastructure.

- Improve Exeter's Emergency Preparedness.

- Improve Exeter's Disaster Response and Recovery Capability.

- Reduce the potential impact of natural and man-made disasters on private property in Exeter.

- Reduce the potential impact of natural and man-made disasters on Exeter's and the State's economy.

- Reduce the potential impact of natural and man-made disasters on Exeter's and the State's natural environment.

- Reduce Exeter's and the State's liability with respect to natural and man-made hazards generally.

- Reduce the potential impact of natural and man-made disasters on Exeter's and the State's specific historic treasures and interests as well as other tangible and intangible characteristics that add to the quality of life to the citizens and guests of the State and the Town.

- Identify, introduce, and implement cost effective Hazard Mitigation measures to accomplish Exeter's and the States' goals and objectives to raise the awareness and acceptance of hazard mitigation planning.

Through the adoption of this Plan the Town of Exeter concurs and adopts these goals and objectives.

Acknowledgements

The Exeter Select Board extends special thanks to those that assisted in the development of this Plan Update by serving as member of Natural Hazards Mitigation Committee:

Greg Bisson, Parks and Recreation Director, Town of Exeter
Stephen Dalton, Interim Water and Sewer Manager, Town of Exeter
Russell Dean, Town Manager, Town of Exeter
Doug Eastman, Building Inspector, Town of Exeter
Rich Kane, Coordinator of School Safety and Security, SAU 16
Ray Leblanc, Exeter Hospital Emergency Management
Josh McCain, Deputy Police Chief, Town of Exeter
Kristen Murphy, Natural Resource Planner, Town of Exeter
James Murray, Health Office, Town of Exeter
Justin Pizon, Assistant Fire Chief/Assistant EMD, Town of Exeter
Stephen Poulin, Police Chief, Town of Exeter
Dave Sharples, Town Planner, Town of Exeter
Paul Vlasich, Interim Director, Public Works, Town of Exeter
Eric Wilking, Fire Chief/EMD, Town of Exeter

Appendix O lists additional people that participated in the Plan Update process.

The Exeter Select Board offers thanks to the NHHSEM which provided funding and assistance with the development of this Plan Update.

In addition, thanks are extended to the staff of the Rockingham Planning Commission for professional services, process facilitation and preparation of this document.

CHAPTER II – COMMUNITY PROFILE

The Town of Exeter is located in Rockingham County, New Hampshire. Exeter is bordered by the towns of Kingston, East Kingston, Hampton Falls, Hampton, and Kensington to the south, Stratham to the east, Newfields to the north, and Brentwood and Epping to the west, as seen below in Figure 1. The Town's population was 16,049 at the 2020 U.S. Census. The median age of Exeter residents was 46.5 years, and the median household income was $77,298, lower than the statewide median household income of $88,235. The population density was 818 people per square mile of land. The town encompasses 19.8 square miles of land area and 0.3 square miles of inland water area.

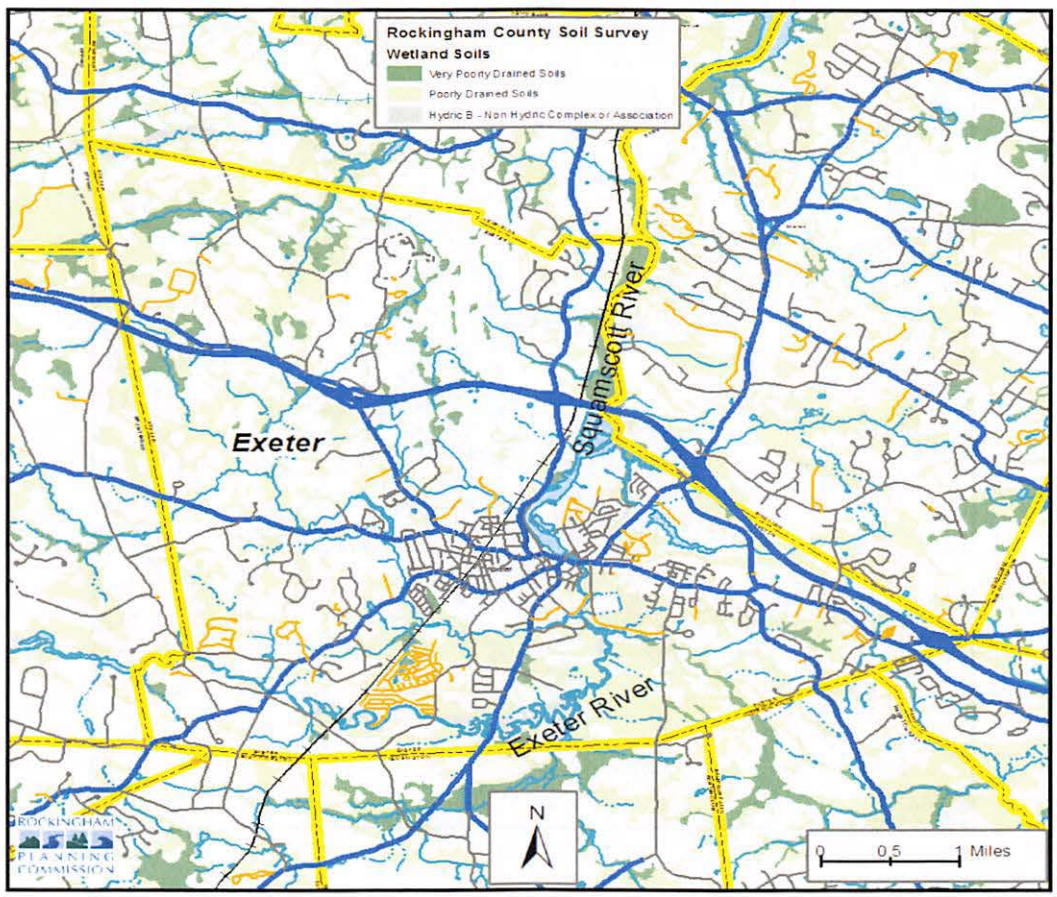
Figure 1: Location Map of Exeter, New Hampshire

Figure 2: Watershed Map of Exeter, New Hampshire.

Exeter has portions of four regional watersheds: the Piscassic River, Exeter River, the tidal Squamscott River, and the Coastal Watershed. The first three watersheds are part of the larger Piscataqua River Basin, while the Coastal Watershed is part of the larger Coastal River Basin. To delineate meaningful drainage patterns, two sub-watersheds were identified in the 1994 Exeter Master Plan. The first is the Dearborn Brook Sub-Watershed which forms a portion of the Squamscott River Watershed, and the second is the Little River Sub-Watershed which forms a portion of the Exeter River Watershed. Figure 2 shows the Watershed Boundaries in the Town of Exeter.

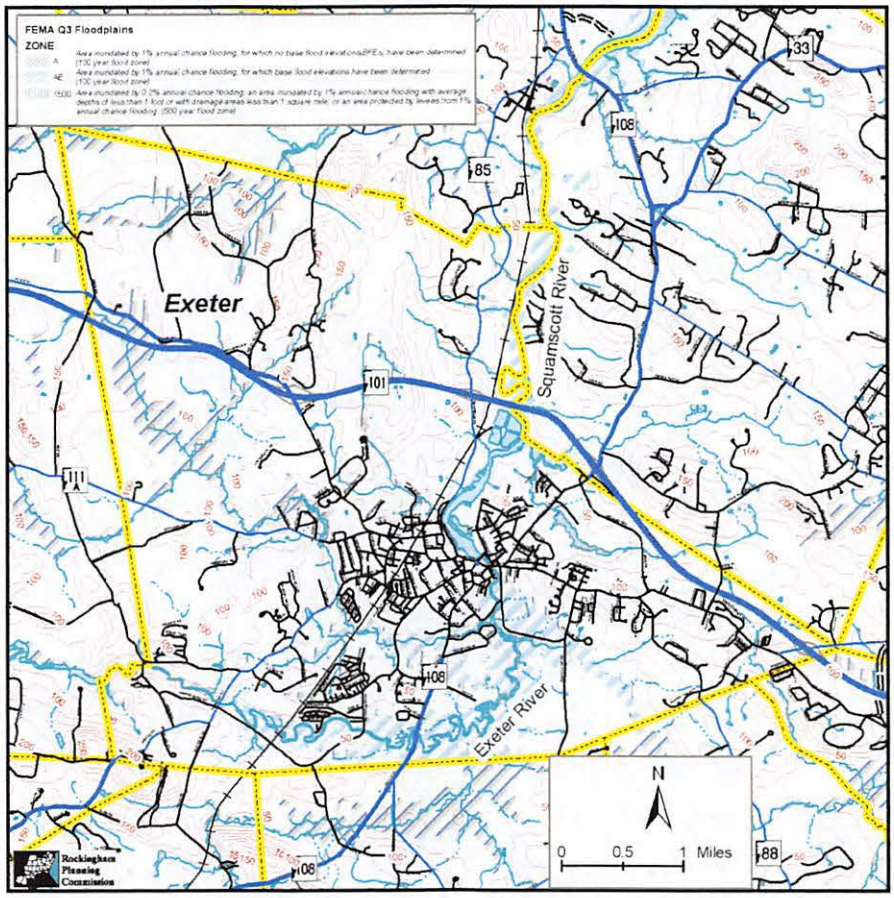
Wetlands are an important part of the Town of Exeter's surface water. Wetland, or hydric, soils include poorly and very poorly drained soils. These soil types are often associated with marine silts and clays where the water table is at or near the surface for five to nine months of the year. Exeter has mapped and identified Prime Wetlands in the community and has adopted stricter land use regulations for work adjacent to prime wetlands.

Figure 3: Wetlands Map of Exeter, New Hampshire. Wetland delineated as poorly and very poorly drained soils, and Wetlands from the National Wetland Inventory.



Floodplains for this *Plan* are defined as the 100-year and 500-year flood hazard zones, as depicted on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM). Floodplains in the Town of Exeter are shown below in Figure 4. Exeter maintains participation in the National Flood Insurance Program administered by FEMA. Development should be located away from wetlands and floodplains whenever possible. The filling of wetlands for building construction not only destroys wetlands and their numerous benefits but may also lead to groundwater contamination. Building within a flood zone may also reduce the floodplain's capacity to absorb and retain water during periods of excessive precipitation and runoff. Moreover, in regard to building within floodplains, contamination may result from flood damage to septic systems.

Figure 4: Floodplains of Exeter, New Hampshire



Current and Future Development Trends

Current Development is predicated on the Town of Exeter's Zoning Ordinance. The Town is divided into 24 zoning districts encompassing residential, commercial, corporate/technology, industrial, and healthcare zones, as well as overlays zones for the historic district, aquifer protection, shoreland protection, flood hazard and wetland conservation. For more information on these specific zones see the Exeter Zoning Ordinance. Map 1 – Existing Land Use shows current land use as defined by Exeter's current Existing Land Use chapter of the Master Plan. Commercial growth is expected to continue to be concentrated along Routes 27 and 108 and to include the renovation and replacement of some businesses in the downtown historic district. The Town is served by several major roads, including State Routes 101, 108, 150, 111 and 27, with easy access to Interstate 95. The Town is also served by the Amtrak Downeaster train. Land development in Exeter is primarily single family residential surrounded by undeveloped forest land and open space. Exeter has a vibrant downtown located along the Exeter-Squamscott River, and a commercial corridor which serves as a regional economic and retail hub.

The Town has adopted and enforces land use regulations designed to mitigate hazards, including shoreland buffer protection, wetlands protection, stormwater management, and prevention of development on steep slopes. Despite these efforts, the Town's vulnerability may increase due to climate change and an increasing number of hazard events. Natural hazards identified in this Plan, as well as mitigation strategies discussed in this Plan, will be considered during local review of development proposals, especially as they relate to development in flood prone areas of town.

Map 1: Existing Land Use

CHAPTER III. – NATURAL HAZARDS IN THE TOWN OF EXETER

What are the Hazards?

The first step in planning for natural hazard mitigation is to identify hazards that may affect the town. Some communities are more susceptible to certain hazards (i.e., flooding near rivers, hurricanes on the seacoast, etc.). The town of Exeter is prone to several types of natural hazards. These hazards include flooding, including sea level rise, storm surge, and extreme precipitation events; hurricanes or other high-wind events; severe winter weather; earthquakes; drought; wildfire; extreme temperatures; climate change; and infectious disease. Other natural hazards can and do affect the Town, but these were the hazards prioritized by the Committee for mitigation planning because they occur with regularity and/or were considered to have high damage potential.

Natural hazards that are included in the State's Hazard Mitigation Plan 2023 Update that are not included in this Plan Update include: landslide, subsidence, radon, avalanche, solar storm, and space weather. Subsidence and avalanche are rated by the State as having Low and No risk in Rockingham County, respectively; due to this they were left out of the Plan. Exeter has no record of landslides and little chance of one occurring that could possibly damage property or cause injury and so landslides were not included in this Plan. The State's Plan indicates that Rockingham County is at Moderate risk to radon; this hazard was not included in the Plan. When compared with natural hazards that could be potentially devastating to the town, such as flooding and severe winter weather, it was not considered an effective use of the Committee's time to include radon in the Plan at this time. Solar storms and space weather are rated as a low risk for all of New Hampshire. There are no significant past occurrences of impact from space weather or solar storms in the state per the State Plan, so the Committee did not include this hazard in the Plan Update.

The hazard profiles below include a description of the natural hazard, the geographic location of each natural hazard (if applicable), the extent of the natural hazard (e.g. magnitude or severity), probability, past occurrences, and community vulnerability. Past occurrences of natural hazards were mapped on Map 2: Past and Future Hazards. Community vulnerability identifies the specific areas, general type of structures, specific structures, or general vulnerability of the Town of North Hampton to each natural hazard. Probability was defined as high, a roughly 66-100% chance of reoccurrence; medium, roughly a 33-66% chance of reoccurrence; and low, roughly a 0-33% chance of reoccurrence.

Flooding

Description - Floods are defined as a temporary overflow of water onto lands that are not normally covered by water. Flooding results from the overflow of major rivers and tributaries, storm surges, and/ or inadequate local drainage. Floods can cause loss of life, property damage, crop/livestock damage, and water supply contamination. Floods can also disrupt travel routes on roads and bridges.

Inland floods are most likely to occur in the spring due to the increase in rainfall and melting of snow; however, floods can occur at any time of the year. A sudden thaw in the winter or a major

downpour in the summer can cause flooding because there is suddenly a lot of water in one place with nowhere to go.

- *100-year Floodplain Events* - Floodplains are usually located in lowlands near rivers, and flood on a regular basis. The term 100-year flood does not mean that flood will occur once every 100 years. It is a statement of probability that scientists and engineers use to describe how one flood compares to others that are likely to occur. It is more accurate to use the phrase "1% annual chance flood". What this means is that there is a 1% chance of a flood of that size happening in any year.

- *Erosion and Mudslides* - Erosion is the process of wind and water wearing away soil. Typically, in New Hampshire, the land along rivers is relatively heavily developed. Mudslides may be formed when a layer of soil atop a slope becomes saturated by significant precipitation and slides along a more cohesive layer of soil or rock. Erosion and mudslides become significant threats to development during floods. Floods speed up the process of erosion and increase the risk of mudslides.

- *Rapid Snow Pack Melt* - Warm temperatures and heavy rains cause rapid snowmelt. Quickly melting snow coupled with moderate to heavy rains are prime conditions for flooding.

- *River Ice Jams* - Rising waters in early spring often breaks ice into chunks, which float downstream and often pile up, causing flooding. Small rivers and streams pose special flooding risks because they are easily blocked by jams. Ice in riverbeds and against structures presents significant flooding threats to bridges, roads, and the surrounding lands.

- *Dam Breach and Failure* - Dam failure results in rapid loss of water that is normally held by the dam. These kinds of floods are extremely dangerous and pose a significant threat to both life and property. Table 2 describes active dams in town. After much research and expense, the Town of Exeter removed the Great Dam along the Exeter River in downtown Exeter in 2016 to reduce the risk of flooding and improve water quality and wildlife habitat. An analysis to determine future management of the dam at Pickpocket Road, partially located in Brentwood, which is owned and operated by the Town of Exeter, is underway.

- *Severe Storms* - Flooding associated with severe storms can inflict heavy damage to property. Heavy rains during severe storms are a common cause of inland flooding.

- *Sea Level Rise, Coastal Flooding, Storm Surge, and Compound Flooding* - Exeter's tidal coastline along the Squamscott River means homes and businesses, roadways and infrastructure, and critical natural habitats such as salt marsh and mud flats are at risk due to coastal flooding caused by storm surges and rising water levels in Great Bay. A storm surge, especially when coupled with astronomical high tides and sea level rise, presents a threat to all land areas adjacent to the marine environment. Compound flooding can occur when storm surge and heavy precipitation happen concurrently. High

tide or surge water levels can impede stormwater draining into the sea, causing flooding inland. The risks of flood impacts from compound flooding in low-lying coastal areas is often much greater than from either coastal flooding or inland flooding in isolation. The Town's 2017 Vulnerability Assessment Report of Sea Level Rise and Coastal Storm Surge Flooding, completed by the Rockingham Planning Commission, identifies areas in town at risk of flooding from expected increases in storm surge and rates of sea level rise. https://www.therpc.org/application/files/1214/9400/9302/Exeter_Assessment_Report_Final.pdf

Research shows the climate of New Hampshire, and the Seacoast region has changed over the past century and predicts the future climate of the region will be affected by human activities that are warming the planet. Overall, New England has been getting warmer and wetter over the last century, and the rate of change has increased over the last four decades. The challenges posed by climate change, such as more intense storms, frequent heavy precipitation, heat waves, drought, extreme flooding, and higher sea levels could significantly alter the types and magnitudes of hazards faced by Exeter.

Location - Exeter is vulnerable to flooding in several locations. Generally, the Town is at risk within the Flood Zones identified by FEMA on Flood Insurance Rate Maps (FIRM). Exeter has two major flood zones: A and X. These flood zones correspond to the Special Flood Hazard Area (100-year flood zone) and the 500-year flood zone respectively. There are also several areas susceptible to flooding that are not within these flood zones. These areas are listed below and displayed on Map 2: Past and Future Hazards.

- Franklin and River Street neighborhoods
- Court Street (NH Route 108) at the intersection of Bell Avenue and at the Exeter/Kensington town line
- Kingston Road (NH Route 111) at Brickyard Pond to West Side Drive
- Portsmouth Avenue (NH Route 108) abutting the Town of Exeter's Surface Water Treatment Plant, which lies in the 100-year floodplain
- Swasey Parkway is vulnerable to tidal storm surges
- Powder Mill Road at the railroad crossing the Exeter River
- Lary Lane, Gary Lane, and Court Street neighborhoods
- Brentwood Road (NH Route 111A) at the intersection of Greenleaf Drive and west of the intersection of Greenleaf Drive, and west of the intersection with Dogtown Road.
- Exeter River Landing at Little John Drive
- Exeter River Coop at Hilton Avenue
- Industrial Drive near the Rinks at Exeter and Stockbridge Funeral Home
- Gilman Lane, which accesses the Exeter River pump station and Stadium well
- Drinkwater Road at Prentiss Way
- Court Street at Exeter River
- Brentwood Road at Little River

Table 1: FEMA Flood Zones in Exeter and Structures in each Zone
Source: NH Office of Planning and Development
July 2023

FEMA Special Flood Hazard Area	Description of FEMA Zone	Number of Structures in North Hampton in Zone
Zone A	Areas subject to inundation by the 1-percent-annual-chance flood event. Because detailed hydraulic analyses have not been performed, no Base Flood Elevations (BFEs) or flood depths are shown.	4
Zone AE	Areas subject to inundation by the 1-percent-annual-chance flood event determined by detailed methods. BFEs are shown within this zone.	0
Zone AO	Areas subject to inundation by 1-percent-annual-chance shall flooding where average depts are 1-3 feet. Average flood depth derived from detailed hydraulic analyses are shown within this zone.	0
Zone VE	Areas along coasts subject to inundation by the 1-percent-annual-chance flood event with additional hazards due to storm-induced velocity wave action. BFEs derived from detailed hydraulic coastal analyses are shown within this zone.	0
Zone X	Areas of minimal flood hazard, usually depicted on FIRMs as outside the 500-year flood level.	8

Extent - The extent of the flood zones can be seen in Map 2: Past and Future Hazards. This area includes FIRM Zones A and X, as well as areas of locally chronic flood problems. The Town of Exeter actively manages six dams, listed above. Failure of the two low hazard dams could result in flooding of roadways and abutting forests and fields. Failure of the two significant hazard dams could result in the discharge of stormwater and treated wastewater into adjacent Squamscott River. Failure of the two high hazard dams could result is flooding of roadways, homes, and businesses.

Dams – The State of New Hampshire places every dam into one of four classifications, which are differentiated by the degree of potential damage that a failure of the dam is expected to cause. The classifications are as follows:

- Non-Menace structure – not a menace because it is in a location and of a size that failure or mis-operation of the dam would not result in probable loss of life or loss to property, less than six feet in height if it has a storage capacity greater than 50-acre feet, or less than 25 feet in height if it has a storage capacity of 15 to 50 acre-feet.

- Low Hazard structure – has a low hazard potential because it is in a location and of a size that failure or mis-operation of the dam would result in no possible loss of life, low economic loss to structures or property, structural damage to local or private roads that could render roads impassable, the release of liquid industrial, agricultural or commercial wastes, septage or contaminated sediment if the storage capacity is less than two-acre feet and is located more than 250 feet from a water body, reversible environmental losses to environmentally sensitive areas.

- Significant Hazard structure – has a significant hazard potential because it is in a location and of a size that failure or mis-operation of the dam would result in no probable loss of lives, major economic loss to structures or property, structural damage to a Class I or II road that could render the road impassable, major environmental or public health losses.

- High Hazard structure – has a high hazard potential because it is in a location and of a size that failure or mis-operation of the dam would result in probable loss of human life, structural damage to an interstate highway which could rend the road impassable, the release of a quantity and concentration of hazardous waste, and any other circumstance that would more likely cause one or more deaths.

Additional information is available online, https://www.fema.gov/media-library-data/20130726-1516-20490-7951/fema-333.pdf

Table 2: Active Dams in Exeter or Owned by Exeter
Source: NH Dam Bureau, July 2023

Dam Name	Dam Owner	Hazard Classification	River	Height/ Impoundment Area
Exeter Reservoir Dam	Town of Exeter	High	Dearborn Brook	15 feet/26 acres
Pickpocket Dam in Brentwood	Town of Exeter	High	Exeter River	15 ft/75 acres
Exeter Sewage Holding Pond Dam	Town of Exeter	Significant	NA	10 feet/7acres
Exeter Sewage Lagoon Dam	Town of Exeter	Significant	NA	12 feet/8.5 acres
Sloans Brook Dam	Town of Exeter	Low	Sloans Brook	10 feet/0.02 acres
Dellacroce	R. Macomber	Low	Runoff	14 feet/0 acres

Detention Pond Dam				
Colcord Pond Dam	Town of Exeter	Non-Menace	Little River	7 feet/8 acres
Fort Rock Farm Pond Dam	P. Carey	Non-Menace	Norris Brook	8 feet/0.63 acres
Raynes Farm Pond Dam	B. Norton	Non-Menace	Unnamed stream	13 feet/0.5 acres
Exeter Country Club Dam	Exeter Country Club	Non-Menace	Wheelwright Creek	11 feet/0.38 acres
Exeter Falls Estates Detention Pond Dam	Exeter Falls Association	Non-menace	Runoff	6.5 feet/0.87 acres
Stone Recreation Pond Dam	H. Stone	Non-menace	Unnamed stream	9.8 feet/1.67 acres
Apollo Comp Detention Pond Dam	Unknown	Non-menace	Runoff	6.1 feet/1.6 acres
Farmington Estates Detention Pond Dam	M. Ryan Realty Trust	Non-menace	Runoff	10 feet/0.14 acres
Forest Ridge Detention Pond 51 Dam	Oaklands Forest Ridge Homeowners Association	Non-menace	Runoff	12 feet/0.25 acres
Exeter Backwash Ponds Dam	Town of Exeter	Non-menace	NA	10 feet/0.09 acres

Probability - The probability of flooding roadways and properties from heavy rain, rapid snow melting, and compound flooding is high, especially in the areas listed above. The NH Dam Bureau classifies two dams owned by the Town as High Hazard and two dams owned by the Town as Significant Hazard, as described in Table 2. The Town works with dam owners and abutters to monitor dam integrity and manage water levels. The Town also regularly assesses culverts to ensure integrity and the ability to pass stormwater.

Past Occurrence - Flooding is a common hazard for the Town of Exeter. Several locations were identified by the Committee as areas of chronic reoccurring flooding or high potential for future flooding, as listed above and identified on Map 2 and listed above. The Town has not experienced a dam failure and maintains pro-active dam management program.

Community Vulnerability - Flooding is most likely to occur in the 100-year flood zones adjacent to the Exeter River, Little River, Dudley Brook and tidal Squamscott River.

National Flood Insurance Program (NFIP) - In 1968, Congress created the National Flood Insurance Program (NFIP) in response to the rising cost of taxpayer funded disaster relief for flood victims and the increasing amount of damage caused by floods. The Federal Insurance and Mitigation Administration (FIMA), a component of the Federal Emergency Management Agency (FEMA) manages the NFIP and oversees the floodplain management and mapping components of the program.

Communities participate in the NFIP by adopting and enforcing floodplain management ordinances to reduce flood damage. In exchange, the NFIP makes federally subsidized flood insurance available to homeowners, renters, and business owners in these communities. Flood insurance, Federal Grants and loans, Federal disaster assistance and federal mortgage insurance is unavailable for the acquisition or construction of structures located in the floodplain shown on the NFIP maps for those communities that do not participate in the program.

To get secure financing to buy, build or improve structures in the Special Flood Hazard areas, it is legally required by federal law to purchase flood insurance. Lending institutions that are federally regulated or federally insured must determine if the structure is in the SFHA and must provide written notice requiring flood insurance. Flood insurance is available to any property owner located in a community participating in NFIP.

Repetitive Loss Properties - A specific target group of repetitive loss properties is identified and serviced separately from other NFIP policies by the Special Direct Facility (SDF). The target group includes every NFIP insured property that, since 1978 and regardless of any change(s) of ownership during that period, has experienced four or more paid losses, two paid flood losses within a 10-year period that equal or exceed the current value of the insured property, or three or more paid losses that equal or exceed the current value of the insured property, regardless of any changes of ownership, since the buildings construction or back to 1978. Target group policies are afforded coverage, whether new or renewal, only through the SDF.

The FEMA Regional Office provides information about repetitive loss properties to State and local floodplain management officials. The FEMA Regional Office may also offer property owners building inspection and financial incentives for undertaking measures to mitigate future flood losses. These measures include elevating buildings from the flood area, and in some cases drainage improvement projects. If the property owners agree to mitigation measures, their property may be removed from the target list and would no longer be serviced by the SDF.

Table 1: Exeter NFIP Policy and Loss Statistics

Policies in force	Insurance in Force	Number of Paid Losses (since 1978)	Total Losses Paid (since 1978)
45 24 Pre-FIRM policies and 21 Post-Firm Policies 27 single-family residential, 4 multi-family, 7 other residential, 7 non-residential	$12,941,000	92	$1,225,038

Source: NH Office of Planning and Development, July 2023

Exeter NFIP Repetitive Flooding Losses - Exeter joined the Regular Program of the NFIP on May 17, 1982. As of July 2023, Exeter has 17 repetitive loss buildings with payments totaling $1,066,565. Twelve buildings were residential, one building was commercial, and four were classified as non-residential with two of these buildings classified as Severe Repetitive Losses.

Floodplain Management Goals/Reducing Flood Risks - A major objective to floodplain management is to continue participation in the NFIP. Communities that agree to manage Special Flood hazard Areas shown on NFIP maps participate in the NFIP by adopting minimum standards. The minimum requirements are the adoption of the floodplain Ordinances and Subdivision/Site Plan Review requirements for land designated as Special Flood hazard Areas. Under Federal Law, any structure located in a floodplain is required to have flood insurance. Federally subsidized flood insurance is available to any property owner located in a community participating in the NFIP. Communities that fail to comply with the NFIP will be put on probation and/or suspended. Probation is a first warning where all policy holders receive a letter notifying them of a $50 increase in their insurance. In the event of suspension, the policyholders lose their NFIP insurance and are left to purchase insurance in the private sector, which is of significantly higher cost. If a community is having difficulty complying with NFIP policies, FEMA is available to meet with staff and volunteers to work through the difficulties and clear up any confusion before placing the community on probation or suspension.

Potential Administrative Techniques to Minimize Flood Losses in Exeter - A potential step in mitigating flood damage is participating in NFIP. Exeter continues to consistently enforce NFIP compliant policies to continue its participation in this program and has effectively worked within the provisions of NFIP. Below is a list of actions Exeter should consider, or continue to perform, to comply with NFIP:

- Participate in NFIP training offered by the State and/or FEMA (or in other training) that addresses flood hazard planning and management.
- Establish Mutual Aid Agreements with neighboring communities to address administering the NFIP following a major storm event.
- Address NFIP monitoring and compliance activities.
- Revise/adopt subdivision regulations, erosion control regulations, board of health regulations to improve floodplain management in the community.

- Prepare, distribute, or make available NFIP insurance and building codes explanatory pamphlets or booklet.
- Identify and become knowledgeable of non-compliant structures in the community.
- Inspect foundations at time of completion before framing to determine if lowest floor is at or above Base Flood Elevation (BFE) if they are in the floodplain.
- Require the use of elevation certificates.
- Enhance local officials, builders, developers, local citizens, and other stakeholders' knowledge of how to read and interpret the FIRM.
- Work with elected officials, the state and FEMA to correct existing compliance issues and prevent any future NFIP compliance issues through continuous communications, training, and education.
- Prohibit septic systems in floodplains.

Hurricane-High Wind Events

Description - Significantly high winds occur especially during hurricanes, tornadoes, winter storms and thunderstorms. Falling objects and downed power lines are dangerous risks associated with high winds. In addition, property damage and downed trees are common during high wind occurrences.

- *Hurricanes* - A hurricane is a tropical cyclone in which winds reach speeds of 74 miles per hour or more and blow in a large spiral around a relatively calm center. The eye of the storm is usually 20-30 miles wide and may extend over 400 miles. High winds are a primary cause of hurricane-inflicted loss of life and property damage. Hurricanes can also include coastal storm surges. The Saffir–Simpson hurricane wind scale (SSHWS), or the Saffir–Simpson hurricane scale (SSHS) for short, classifies hurricanes into five categories distinguished by the intensities of their sustained winds. To be classified as a hurricane, a tropical cyclone must have maximum sustained winds of at least 74 mph, Category 1. The highest classification in the scale, Category 5, is reserved for storms with winds exceeding 156 mph. The Saffir/Simpson Hurricane Scale is included in Appendix C.

- *Tornadoes* - A tornado is a violent windstorm characterized by a twisting, funnel shaped cloud. They develop when cool air overrides a layer of warm air, causing the warm air to rise rapidly. The atmospheric conditions required for the formation of a tornado include great thermal instability, high humidity, and the convergence of warm, moist air at low levels with cooler, drier air aloft. Most tornadoes remain suspended in the atmosphere, but if they touch down, they become a force of destruction. Tornadoes produce the most violent winds on earth, at speeds of 280 mph or more. In addition, tornadoes can travel at a forward speed of up to 70 mph. Damage paths can be in excess of one mile wide and 50 miles long. Violent winds and debris slamming into buildings cause the most structural damage. The Enhanced Fujita Scale is the standard scale for rating the severity of a tornado as measured by the damage it causes. A tornado is usually accompanied by thunder, lightning, heavy rain, and a loud "freight train" noise. In comparison with a hurricane, a tornado covers a much smaller area but can be more violent and destructive.

- *Severe Thunderstorms* - All thunderstorms contain lightning. During a lightning discharge, the sudden heating of the air causes it to expand rapidly. After the discharge, the air contracts quickly as it cools back to ambient temperatures. This rapid expansion and contraction of the air causes a shock wave that we hear as thunder, which can damage building walls and break glass.

- *Lightning* - Lightning is a giant spark of electricity that occurs within the atmosphere or between the atmosphere and the ground. As lightning passes through air, it heats the air to a temperature of about 50,000 degrees Fahrenheit, considerably hotter than the surface of the sun. Lightning strikes can cause death, injury, and property damage.

- *Hail* - Hailstones are balls of ice that grow as they're held up by winds, known as updrafts, which blow upwards in thunderstorms. The updrafts carry droplets of supercooled water – water at a below freezing temperature – but not yet ice. The supercooled water droplets hit the balls of ice and freeze instantly, making the hailstones grow. The faster the updraft, the bigger the stones can grow. Most hailstones are smaller in diameter than a dime, but stones weighing more than a pound have been recorded. Details of how hailstones grow are complicated, but the results are irregular balls of ice that can be as large as baseballs, sometimes even bigger. While crops are the major victims, hail is also a hazard to vehicles and windows.

Location - Hurricane events are more potentially damaging with increasing proximity to the coast. Exeter's proximity to the Atlantic Coast makes hurricanes and high wind events severe threats. For this Plan, high-wind and lightning events were considered to have an equal chance of affecting any part of the Town of Exeter, however Pickpocket Road and Pickpocket Ridge were identified by the committee as an area of town at risk of high wind events.

Extent – Hurricane strength is measured using the Saffir-Simpson scale, located in the appendix of this Plan. Exeter is located within Zone II hurricane-susceptible region (indicating a design wind speed of 160 mph). From 1950 to 2018 Rockingham County was subject to 9 tornado events, these included 2 type F0 (Tornado, 40-72 mph), 2 type F1 (Moderate Tornado, 73-112 mph), 4 type F2 (Significant Tornado, 113-157 mph) and 1 type F3 (Severe Tornado, 158-206 mph). Type 3 tornados can cause severe damage including tearing the roofs and walls from well-constructed homes, trees can be uprooted, trains over-turned, and cars lifted off the ground and thrown. Between 1900 and 2018 2 hurricanes have made landfall in New Hampshire, category 1 and category 2. Measurement scales for thunderstorms, lightning risk, and hail are in the appendix of this Plan.

Probability -High. The State of New Hampshire's Multi-Hazard Mitigation Plan Update 2023 rates Rockingham County with high likelihood of hurricane, tornado, and "Nor'-Easters" events. Also, it rates the risk of downbursts, lightning, and hail events as moderate.

Past Occurrence – Between 1635 and 2018 14 hurricanes have impacted the State of New Hampshire. The worst of these occurred on September 21, 1938, with wind speeds of up to 186 mph in MA and 138 mph elsewhere. Thirteen of 494 people killed by this storm were residents

of New Hampshire. The Storm caused $12,337,643 in damages (1938 dollars), timber not included. Hurricanes Sandy and Irene created areas of localized flooding in Exeter and power loss. High wind events in 2010, 2014, 2018, 2023, and 2024 resulted in extensive power outages, downed wires and trees. Neither lightning nor tornadoes have impacted Exeter in recent memory.

Community Vulnerability – The Committee determined that lightning and high wind and heavy rain associated with hurricanes can impact every neighborhood in Exeter before, during and after the storm, resulting in downed trees, flooding of ponds, rivers, streams, roads and basements, and damage to home, businesses, and infrastructure.

Severe Winter Weather

Description – Severe winter weather in the form of heavy snowstorms, ice storms and Nor'easters are a threat to the community with subzero temperatures from extreme wind chill and storms causing low visibility for commuters. Heavy snow loads from storms are known to collapse buildings. Ice storms disrupt power and communication services. Extreme cold affects vulnerable populations, including the elderly.

- *Heavy Snowstorms* - A winter storm can range from moderate snow to blizzard conditions. Blizzard conditions are considered blinding wind-driven snow over 35 mph that lasts at least three hours. A severe winter storm deposits four or more inches of snow during a 12-hour period or six inches of snow during a 24-hour period.

- *Ice Storms* - An ice storm involves rain, which freezes upon impact. Ice coating at least one-fourth inch in thickness is heavy enough to damage trees, overhead wires, and similar objects. Ice storms also often produce widespread power outages.

- *Nor'easter* - A Nor'easter is large weather system traveling from South to North passing along or near the seacoast. As the storm approaches New England and its intensity becomes increasingly apparent, the resulting counterclockwise cyclonic winds impact the coast and inland areas form a Northeasterly direction. The sustained winds may meet or exceed hurricane force, with larger bursts, and may exceed hurricane events by many hours (or days) in terms of duration.

Location - Severe winter weather events have an equal chance of affecting any part of the Town of Exeter.

Extent - Large snow events in Southeastern New Hampshire can produce 30 inches of snow. Portions of central New Hampshire recorded snowfalls of 98" during one slow moving storm in February of 1969. Ice storms occur regularly in New England. The Sperry-Piltz ice accumulation scale is found in the Appendix of this Plan. Seven severe ice storms have been recorded that have affected New Hampshire since 1929. These events caused disruption of transportation, loss of power and millions of dollars in damage.

Probability - High. The State of New Hampshire's Multi-Hazard Mitigation Plan Update 2023 rates Rockingham County with high likelihood of heavy snows and ice storms.

Past Occurrence – Exeter has been impacted by six severe winter storms in the past five years. Two Nor'easters in 2018, a heavy snowstorm in December 2022 resulted in power outages and damage to the town docks, and two Nor'Easters in March 2023 and March 2024 required extensive snow removal, removal of fallen trees, and utility repairs.

Community Vulnerability - Severe winter weather has struck Exeter and every other community in the region on an annual basis in recent memory. The Committee determined that heavy snow, strong and gusty winds, and frigid temperatures can impact all parts of town equally, resulting in downed trees and power lines, extended power outages, and unsafe driving condition. Extended power outages and the resulting loss of heat in homes of elderly residents are of concern. Rapid snow melting after severe winter weather can result in flooding of rivers and streams, posing risk to roads and structures. The Committee identified the elderly and vulnerable populations, utility lines and towers, and trees at greatest risk from severe winter weather.

Wildfire

Description - Wildfire is defined as an uncontrolled and rapidly spreading fire, including grass and forest fires. A forest fire is an uncontrolled fire in a woody area. They often occur during drought and when woody debris on the forest floor is readily available to fuel the fire. Grass fires are uncontrolled fires in grassy areas.

Location - The Committee identified the following areas of Town at-risk to wildfires, which are also located on Map 2 Past and Future Hazards:

- The Oakland's Town Forest
- Marsh land abutting the Squamscott River
- Marsh land abutting the CSX rail line
- Front Street to the Town line
- Newfields Road to the Town line

Extent - A wildfire in the Town of Exeter is unlikely, but if a crown fire were to occur it could be very damaging to several small sections of Town, such as the Town Forest. A large grass fire could damage structures and neighborhood buildings near large open areas. The Wildland-Urban Interface Scale, a tool to quantify the expected severity of wildfire events in developed areas, is included in Appendix K.

Probability - Moderate. The State of New Hampshire's Multi-Hazard Mitigation Plan Update 2023 rates Rockingham County with moderate risk to wildfires.

Past Occurrence - The majority of wildfires in Exeter are minor brush fires. No Large fires have occurred within recent memory. Smoke form Canadian wildfires impacted air quality in 2023.

Community Vulnerability - The Committee determined that all forested and open areas in Exeter are prone to wildfires, with the threat increasing during periods of drought. The Committee summarized the threat as follows:

- Structures located near large open vegetated areas are prone to lightning strikes.
- Vulnerability increases during drought events.
- Tree debris created by high wind and winter storm events.

Earthquakes

Description – Seismic activity including landslides and other geologic events. Geologic events are often associated with California, but New England is considered a moderate risk earthquake zone. An earthquake is a rapid shaking of the earth caused by the breaking and shifting of rock beneath the earth's surface. Earthquakes can cause buildings and bridges to collapse, disrupt gas, electric and phone lines, and often cause landslides, flash floods, fires, and avalanches. Larger earthquakes usually begin with slight tremors but rapidly take the form of one or more violent shocks, and end in vibrations of gradually diminishing force called aftershocks. The underground point of origin of an earthquake is called its focus; the point on the surface directly above the focus is the epicenter. The magnitude and intensity of an earthquake is determined using scales such as the Richter Magnitude Scale, located in the Appendix of this Plan.

Location – An earthquake has an equal chance of affecting all areas on Exeter.

Extent - New England is particularly vulnerable to the injury of its inhabitants and structural damage because of our built environment. Few New England States currently include seismic design in their building codes. Massachusetts introduced earthquake design requirements into their building code in 1975 and Connecticut very recently did so. However, these specifications are for new buildings, or very significantly modified existing buildings only. Existing buildings, bridges, water supply lines, electrical power lines and facilities, etc. have rarely been designed for earthquake forces (New Hampshire has no such code specifications).

Probability - Moderate. The State of New Hampshire's Multi-Hazard Mitigation Plan 2023 ranks all the Counties in the State with at moderate risk to earthquakes.

Past Occurrence - Large earthquakes have not affected the Town of Exeter within recent memory.

Community Vulnerability - The Committee determined that earthquakes do not pose a frequent threat to Exeter, but if one were to occur the most vulnerable structures include dams, bridges, brick structures, infrastructure, and utility lines, as well as secondary hazards such as fire, power outages or a hazardous material leak or spill.

Drought

Description - Drought is a period of unusually constant dry weather that persists long enough to cause deficiencies in water supply (surface or underground). Droughts are slow-onset hazards that can severely affect municipal water supplies, crops, recreation resources, and wildlife. If drought conditions extend over several years, the direct and indirect economic impacts can be significant. High temperatures, high winds, and low humidity can worsen drought conditions and make areas more susceptible to wildfire. In addition, human actions and demands for water resources can accelerate drought-related impacts.

Location – The Committee determined that drought poses risks to water supplies throughout Town, both private and municipal. The risks of wildfire associated with drought conditions are greatest in forested and open grassland areas.

Extent - Although New Hampshire is typically thought of as a water-rich state, there are times the demand for water can be difficult to meet. A combination of increased population and extended periods of low precipitation can cause reduced water supplies. Drought can impact Exeter after extended periods with limited rain and snowfall, often for several months, and is a town-wide hazard, impacting both private wells and the Town's municipal water system surface water and groundwater supplies. The Town of Exeter monitors the information provided by NH DES Drought Management Program. The U.S. Drought Monitor Scale is in the appendix of this Plan.

Probability - Low.

Past Occurrence - The State of New Hampshire Multi-Hazard Mitigation Plan Update 2023 rates Rockingham Count at low risk for drought. However, drought conditions persisted across southern New Hampshire for two of the last five years, resulting in the Town of Exeter issuing both voluntary and mandatory outdoor watering bans. The town is aware of private wells going dry during periods of drought.

Community Vulnerability - The Committee determined that water supply and fire flow are the most at risk due to drought conditions:

<u>Extreme Temperatures</u>

Description - Extreme temperatures are typically recognized as conditions where temperatures consistently stay ten degrees or more above a region's average high temperature for 24-72 hours (extreme heat) or stay ten degrees or more below a region's average low temperature for a 24-72-hour period (extreme cold). Fatalities can result from extreme temperatures, as they can push the human body beyond its limits.

Location – Extreme temperatures can affect all areas of Exeter.

Extent - Extreme heat events impact Exeter for 2-3 days each summer, and extreme cold events impact the Town 5-7 days each winter. Heat Index measures a number in degrees Farenheit that tells how hot it feels when relative humidity is added to the air temperature. The National Weather Service Heat Index is included in this Plan as Appendix K, and the Wind Chill Chart is included as Appendix L.

Probablility – High.

Past Occurrence - Annually

Community Vulnerability - The Committee determined that all parts of Exeter are at risk of impacts associated with extreme temperatures. The young, elderly and vulnerable populations are especially vulnerable to heat stroke. The EMD maintains a list of these populations, including addresses for homes, day care centers, and congregate care facilities.

Table 2: State of New Hampshire
Presidentially Declared Disasters (DR) and Emergency Declarations (EM) 1982-2018
Source: *State of NH Multi-Hazard Mitigation Plan, 2013 Update and FEMA*

Date Declared	Event	FEMA DR	Program	Amount	Counties Declared
08/27/86	Severe storms/flooding	FEMA-771-DR	PA	$1,005,000	Cheshire and Hillsborough
04/16/87	Severe storms/flooding	FEMA-789-DR	PA/IA	$4,888,889	Carroll, Cheshire, Grafton, Hillsborough, Merrimack, Rockingham, and Sullivan
08/29/90	Severe storms/winds	FEMA-876-DR	PA	$2,297,777	Belknap, Carroll, Cheshire, Coos, Grafton, Hillsborough, Merrimack, and Sullivan
09/09/91	Hurricane	FEMA-917-DR	PA	$2,293,449	Statewide
11/13/91	Coastal storm/flooding	FEMA-923-DR	PA/IA	$1,500,000	Rockingham
03/16/93	Heavy snow	FEMA-3101-DR	PA	$832,396	Statewide
01/03/96	Storms/floods	FEMA-1077-DR	PA	$2,220,384	Carroll, Cheshire, Coos, Grafton, Merrimack, and Sullivan
10/29/96	Severe storms/flooding	FEMA-1144-DR	PA	$2,341,273	Grafton, Hillsborough, Merrimack, Rockingham, Strafford, and Sullivan
01/15/98	Ice storm	FEMA-1199-DR	PA/IA	$12,446,202	Belknap, Carroll, Cheshire, Coos, Grafton, Hillsborough, Merrimack, Strafford, and Sullivan
07/02/98	Severe storms	FEMA-1231-DR	PA/IA	$3,420,120	Belknap, Carroll, Grafton, Merrimack, Rockingham, and Sullivan
10/18/99	Hurricane/tropical storm Floyd	FEMA-1305-DR	PA	$750,133	Belknap, Cheshire, and Grafton
3/2001	Snow emergency	FEMA-3166-EM	PA	$4,500,000	Cheshire, Coos, Grafton, Hillsborough, Merrimack, Rockingham, and Strafford
2/17/2003 - 2/18/2003	Snow emergency	FEMA-3177-EM	PA	$3,000,000	Cheshire, Hillsborough, Merrimack, Rockingham, and Strafford
09/12/03	Severe storms/flooding	FEMA-1489-DR	PA	$1,300,000	Cheshire and Sullivan
03/11/03	Snow emergency	FEMA-3177-EM	PA	$3,000,000	Cheshire, Hillsborough, Merrimack, Rockingham, and Strafford

01/15/04	Snow emergency	FEMA-3193-EM	PA	$3,200,000	Belknap, Carroll, Cheshire, Coos, Grafton, Hillsborough, Merrimack, and Sullivan
03/30/05	Snow emergency	FEMA-3207-EM	PA	$4,654,738	Belknap, Carroll, Cheshire, Grafton, Hillsborough, Merrimack, Rockingham, Strafford, and Sullivan
03/30/05	Snow emergency	FEMA-3208-EM	PA	$1,417,129	Carroll, Cheshire, Coos, Grafton, and Sullivan
04/28/05	Snow emergency	FEMA-3211-EM	PA	$2,677,536	Carroll, Cheshire, Hillsborough, Rockingham, and Sullivan
10/26/05	Severe storm/flooding	FEMA-1610-DR	PA/IA	$14,996,626	Belknap, Cheshire, Grafton, Hillsborough, Merrimack, and Sullivan
05/31/06	Severe storm/flooding	FEMA-1643-DR	PA/IA	$17,691,586	Belknap, Carroll, Grafton, Hillsborough, Merrimack, Rockingham, and Strafford
4/15/2007 - 4/23/2007	Severe storm/flooding	FEMA-1695-DR	PA/IA	$27,000,000	Belknap, Carroll, Cheshire, Coos, Grafton, Hillsborough, Merrimack, Rockingham, Strafford, and Sullivan
08/11/08	Severe storms/tornado/flooding	FEMA-1782-DR	PA	$1,691,240	Belknap, Carroll, Merrimack, Rockingham, and Strafford
09/05/08	Severe storms/flooding	FEMA-1787-DR	PA	$4,967,595	Belknap, Coos, and Grafton
10/03/08	Severe storms/flooding	FEMA-1799-DR	PA	$1,050,147	Hillsborough and Merrimack
12/11/08	Severe winter storm	FEMA-3297-EM	DF A/P A	$900,000	Belknap, Carroll, Cheshire, Coos, Grafton, Hillsborough, Merrimack, Rockingham, Strafford, and Sullivan
01/02/09	Severe winter storm	FEMA-1812-DR	DF A/P A	$19,789,657	Belknap, Carroll, Cheshire, Coos, Grafton, Hillsborough, Merrimack, Rockingham, Strafford, and Sullivan
03/29/10	Severe winter storm	FEMA-1892-DR	PA	$9,103,138	Merrimack, Rockingham, Strafford, and Sullivan
05/12/10	Severe winter storm	FEMA-1913-DR	PA	$3,057,473	Hillsborough and Rockingham
07/22/11	Severe storms/flooding	FEMA-4006-DR	PA	$1,664,140	Coos and Grafton

09/03/11	Tropical storm Irene	FEMA-4026-DR	PA/IA	$11,101,752	Belknap, Carroll, Coos, Grafton, Merrimack, Strafford, and Sullivan
12/07/11	October Nor'easter	FEMA-4049-DR	PA	$4,411,457	Hillsborough and Rockingham
06/18/12	Severe storms/flooding	FEMA-4065-DR	PA	$3,046,189	Cheshire
10/30/12	Hurricane Sandy	DR-4095 EM-3360	PA DFA	$2,132,376	Belknap, Carroll, Cheshire, Coos, Grafton, Hillsborough, Merrimack, Rockingham, Strafford, and Sullivan
2/8/2013 - 2/10/2013	Severe storm/blizzard	DR-4105	PA	$6,127,598	Belknap, Carroll, Cheshire, Hillsborough, Merrimack, Strafford, and Rockingham
6/26/2013 – 7/3/2013	Severe storms/flooding	DR-4139	PA	$6,389,705	Cheshire, Sullivan, and Grafton
1/26/2015 – 1/29/2015	Severe winter storm/snowstorm	DR-4209	PA	$4,607,527	Strafford, Rockingham, and Hillsborough
3/14/2017 – 3/15/2017	Severe winter storm/snowstorm	DR-4316	PA	$80,306.55	Belknap and Carroll
1/1/2017 – 1/2/2017	Severe storms/flooding	DR-4329	PA	NA	Grafton and Coos
10/29/2017 - 11/1/2017	Severe Storm/flooding	DR-4355	PA	NA	Sullivan, Merrimack, Belknap, Carroll, Grafton, Coos
3/2/2018 – 3/8/2018	Severe Storm/flooding	DR-4370	PA, IA	NA	Rockingham
3/13/2018 – 3/14/2018	Severe Winter Storm/snowstorm	DR-4371	PA. IA	NA	Carroll, Strafford, Rockingham
7/11/2019- 7/12/2019	Severe Storm/flooding	DR-4457	PA	$675,907,70	Grafton
7/17/2021- 7/19/2021	Severe Storm/flooding	DR-4622	PA	$1,195,832	Cheshire
3/13/2020 – 5/11/2023	COVID-19 Pandemic	EM-3445	PA, IA	NA	New Hampshire
1/20/2020- 5/11/2023	COVID-19 Pandemic	DR-4516	PA, IA	$284,982,234	New Hampshire
7/29/2021- 8/2/2021	Severe Storm/flooding	DR-4624	PA	$3,530,071	Cheshire, Sullivan
12/22/2022- 12/25/2022	Severe Storm/flooding	DR-4693	PA	$1,251,386	Belknap, Carroll, Grafton, Coos
7/9/2023- 7/13/2023	Severe Storm/flooding	DR-4740	PA	$170,675	Rockingham, Cheshire, Sullivan, Grafton, Belknap, Carroll, Coos

Program Key: PA: Public Assistance IA: Individual Assistance DFA: Direct Federal Assistance

Severe St

Map 2: Past and Future Hazards

CHAPTER IV – CRITICAL FACILITIES

The Critical Facilities List for the Town of Exeter has been identified by Exeter's Hazard Mitigation Committee. The Critical Facilities List has been broken up into four categories. The first category contains facilities needed for Emergency Response in the event of a disaster. The second category contains Non-Emergency Response Facilities that have been identified by the committee as non-essential. These are not required in an emergency response event but are considered essential for the everyday operation of Exeter. The third category contains Facilities/Populations that the committee wishes to protect in the event of a disaster. The fourth category contains Potential Resources, which can provide services or supplies in the event of a disaster. Map 3: Critical Facilities at the end of this Chapter identifies the location of the facilities and the evacuation routes. A detailed description of critical facilities can be found in Table 3 through Table 6.

Table 3: Category 1 - Emergency Response Services and Facilities

Critical Facility Name	Address	Description
Exeter Safety Complex	20 Court Street	EOC, fuel, back-up power
Exeter Town Offices	10 Front Street	Back-up Power
Exeter Public Works	13 Newfields Road	Fuel
Exeter Recreation Center	10 Hampton Road	
Exeter Hospital	5 Alumni Drive	Back-up Power, Helipad
Electric Substation	River Street	Power supply
Cell Tower	Guinea Road	Communication Infrastructure
Cell Tower	Watson Road	Communication Infrastructure
Cell Tower	Commerce Way	Communication Infrastructure
Cell Tower	115 Epping Road	Communication Infrastructure
Cell Tower	Continental Drive	Communication Infrastructure
Cell Tower	10 Chestnut Street	Communication Infrastructure
Cell Tower	21 Front Street	Communication Infrastructure
Cell Tower	8 Kingston Road	Communication Infrastructure
Cell Tower	20 Meeting Place Dr.	Communication Infrastructure

Table 4: Category 2 - Non-Emergency Response Facilities:

The town has identified these facilities as non-emergency facilities; however, they are considered essential for the everyday operation of Exeter.

Critical Facility Name	Address	Description
Sewer Pump Station	Colcord Pond Drive	Back-up generator
Sewer Pump Station	Court Street	Back-up generator
Sewer Pump Station	Folsom Way	Back-up generator

Sewer Pump Station	Front Street	Back-up generator
Water Pump Station	Kingston Road	Back-up generator
Sewer Pump Station	Langdon Avenue	Back-up generator
PEA Power Station	Marston Street	Power supply
Electric Substation	Portsmouth Avenue	Power supply
Wastewater Treatment Plant	13 Newfields Road	Sewage treatment
Sewer Pump Station	Webster Avenue	Back-up generator
Sewer Pump Station	Riverbend Circle	Back-up generator
Sewer Pump Station	Riverwoods Drive	Back-up generator
Surface Water Treatment Plant	109 Portsmouth Avenue	Water treatment
Water Supply Reservoir	109 Portsmouth Avenue	Water supply
Water Supply Well	50 Lary Lane	Water supply
Water Pump Station	33 Gilman Lane	Water supply
Surface Water Supply Intake	Gilman Lane	Water supply
Water Tower	9 Cross Road	Water supply
Water Tower	13 Fuller Way	Water supply
Water Tower	Meeting Place Drive	Water supply
Telephone Building	Center Street	Communications
Water Supply Well	33 Gilman Lane	Water Supply
Water Supply Well	45 Bell Avenue	Water Supply
Groundwater Treatment Plant	48 Lary Lane	Water Supply
Sewer Pump Station	279 Water Street	Back-up generator
Sewer Pump Station	Winslow Way	Back-up generator

Table 5: Category 3 - Facilities/Populations to Protect:

The third category contains people and facilities that need to be protected in the event of a disaster.

Critical Facility Name	Address	Description
Exeter High School	Blue Hawk Drive	School
Lincoln Street School	25 Lincoln Street	School
Main Street School	40 Main Street	School
Seacoast School of Technology	40 Linden Street	School
Former High School Fields	Linden Street	Recreation
Appleseeds Day School	15 Hampton Road	Childcare
Building Blocks School	125 Kingston Road	Childcare
Primrose School	5 McKay Drive	Childcare
Exeter Day School	11 Marlboro Street	School

Great Bay Kids Company	64 Epping Road	Childcare
Phillips Exeter Academy (PEA)	20 Main Street	School
PEA Harris Family Children's Center	20 Water Street	Childcare
PEA Stadium	Gilman Street	Recreation
PEA Fields	Gilman Street	Recreation
PEA Love Gym	Court Street	Recreation
Winding River Campground	188 Court Street	Recreation
Green Gate Campground	185 Court Street	Recreation
Rinks at Exeter	40 Industrial Drive	Recreation
Town Pool and Fields	4 Hampton Road	Recreation
Brickyard Pond Fields	Kingston Road	Recreation
American Independence Museum	Center Street	Historic resource
Exeter Bandstand	Front Street	Attraction
Exeter Historical Society	47 Front Street	Historic resource
Gilmore Garrison House	12 Water Street	Historic resource
Genesis	8 Hampton Road	Elderly housing
Squamscott View	277 Water Street	Elderly housing
Genesis	17 Hampton Road	Elderly housing
The Woods at Riverwoods	Riverwoods Drive	Elderly housing
The Boulders at Riverwoods	5 Timber Lane	Elderly housing
The Ridge at Riverwoods	10 White Oak Drive	Elderly housing
Christs Church Episcopal	43 Pine Street	Religious facility
Church of Jesus Christ Latter Day Saints	55 Hampton Falls Road	Religious facility
Community Church of Exeter	134 Front Street	Religious facility
Congregational Church	21 Front Street	Religious facility
Exeter Assembly of God	47A Hampton Falls Road	Religious facility
Exeter Presbyterian Church	73 Winter Street	Religious facility
Faith Lutheran Church	4 Elm Street	Religious facility
First Unitarian Church of Exeter	12 Elm Street	Religious facility
Phillips Church	Tan Lane	Religious facility
St. Michael's Catholic Church	9 Lincoln Street	Religious facility
St. Vincent de Paul Assistance Center	53 Lincoln Street	Food pantry
United Methodist Church	307 Epping Road	Religious facility

Table 6: Category 4 - Potential Resources:

This category contains facilities that provide potential resources for services or supplies in the event of a natural disaster.

Critical Facility Name	Address	Description
AMTRAK Rail Station	Lincoln Street	Transportation
Arjay's Hardware	Lincoln Street	Building supplies
Exeter Lumber	120 Portsmouth Avenue	Building supplies
First Student Transportation	Epping Road	Transportation
Market Basket Supermarket	Portsmouth Ave, Stratham, NH	Food and water
Shaw's Supermarket	Portsmouth Ave, Stratham, NH	Food and water
Simpson Gravel Pit	Kingston Road	Sand and gravel
Hannaford's Supermarket	Portsmouth Avenue	Food, water, supplies
Walmart	Route 125, Epping, NH	Food, water, supplies
Lowe's	Rt. 125, Epping, NH	Building, construction supplies
Buxton	49 Shirking Road, Epping, NH	Fuel
Convenient MD	1 Portsmouth Avenue, Stratham, NH	Urgent medical care
Clear Choice MD	1 Beehive Drive, Epping, NH	Urgent medical care
Access Sports Medicine	1 Hampton Road	Medical facility

Map 3: Critical Facilities Map

CHAPTER V. – POTENTIAL HAZARD DAMAGE

Identifying Vulnerable Facilities

It is important to determine which critical facilities are the most vulnerable and to estimate their potential loss. The first step is to identify the facilities most likely to be damaged in a hazard event. To do this, the location of critical facilities illustrated on Map 3 was compared to the location of various topographical elements, floodplains, roads, and water bodies using GIS (Geographic Information Systems). Vulnerable facilities were identified by comparing their location to possible hazard events.

Calculating the Potential Loss

The next step in completing the loss estimation involved assessing the level of damage from a hazard event on structures in Exeter. To estimate general losses, the total value for all structures in Exeter in 2023, $1,612,128,233, was used, to estimate potential damages.

The damage estimates are divided into two categories based on hazard types: hazards that are location specific (e.g. flooding), and hazards that could affect all areas of Exeter equally, such as extreme temperatures. Damage estimates from hazards that could affect all of Exeter equally are much rougher estimates, based on percentages of the total assessed value of all structures in the community. Damage estimates from hazards with a specific location are derived from the estimated values of the parcels within the hazard area. Assessing and tax map data were used to determine buildings at risk. After identifying the parcels and buildings that are at risk, the next step was to calculate a damage estimate for each potential hazard area. The following discussion summarizes the potential loss estimates due to natural hazard events.

Flooding

In addition to the potential of flood damage and high wind damage discussed in Chapter III, sea-level rise and coastal storm surge could damage buildings and infrastructure in Hampton Falls, primarily in neighborhoods along and east of Route 1. The average replacement value of structures damaged by flooding was calculated using FEMA's process for calculating potential loss, which involves multiplying the replacement value by the percent of damage expected from the hazard event. Residential and non-residential structures were combined. The costs for repairing roadways, utilities, and other infrastructure are not included in this estimate but were estimated in the 2017 Vulnerability Assessment and discussed under Climate Change.

Potential Structure Damage: 49%, based on eight-foot flooding:
Approximately 443 structures with an average assessment of $600,000 = $130,242,000 potential damage

Potential Structure Damage 28%, based on four-foot flooding:
Approximately 443 structures assessed with an average assessment of $600,000 = $74,424,000 potential damage

Potential Structure Damage 20%, based on two-foot flooding:

Approximately 443 structures with an average assessment of $600,000 = %53,160,000 potential damage

Exeter has sixteen active dams. Two dams are classified as High Hazard dams, two are classified as Significant Hazard dams, two as Low Hazard dams, and ten as Non-menace dams. Potential losses will depend on the extent of the breach and impacts on residential and non-residential structures as well as infrastructure.

Sea Level Rise, Coastal Storm Surge, and Compound Flooding

Sea level rise, storm surge, and compound flooding could damage buildings and infrastructure along the Squamscott River and its tributaries. In 2017, the Rockingham Planning Commission completed a Vulnerability Assessment for the Town of Exeter of impacts associated with projected sea level rise and coastal storm surge. The Assessment estimated the value of structures and infrastructure impacted by a 6.3-foot sea level rise scenario, plus storm surge, would be $32,480, 100.

Hurricane/ High Wind Events

Hurricane - Hurricanes do affect the Northeast coast periodically. Since 1900, 2 hurricanes have made landfall in the State of New Hampshire. Due to the coastal location of the Town of Exeter, hurricanes and storm surges present a real hazard to the community. Even degraded hurricanes or tropical storms could still cause significant damage to the structures and infrastructure of the Town of Exeter. The assessed value of all residential and commercial structures in the Town of Exeter in 2023 was $1,613,128,233. Assuming 1% to 5% damage, a hurricane could result in $16,131,22 to $80,656,412 of structure damage.

Tornado - Tornadoes are relatively uncommon natural hazards in New Hampshire. On average, about six tornadoes touch down each year. Damage largely depends on where the tornado strikes. If is strikes an inhabited area, the impact could be severe. The assessed value of all residential and commercial structures in the Town of Exeter in 2023 was $1,613,128,233. Assuming 1% to 5% damage, a tornado could result in $16,131,22 to $80,656,412 of structure damage.

Severe Lightning - The amount of damage caused by lightning will vary according to the type of structure hit and the type of contents inside. There is no record of monetary damages inflicted in the Town of Exeter from lightning strikes.

Severe Winter Weather

Heavy Snowstorms - Heavy snowstorms typically occur during January and February. New England usually experiences at least one or two heavy snowstorms with varying degrees of severity each year. Power outages, extreme cold and impacts to infrastructure are all effects of winter storms that have been felt in Exeter in the past. All these impacts are a risk to the community, including isolation, especially of the elderly, and increased traffic accidents. Damage caused because of this type of hazard varies according to wind velocity, snow accumulation and duration. The assessed value of all residential and commercial structures in the Town of Exeter

in 2023 was $1,613,128,233. Assuming 1% to 5% damage, a heavy snowstorm could result in $16,131,22 to $80,656,412 of structure damage.

Ice Storms - Ice storms often cause widespread power outages by downing power lines, making power lines at risk in Exeter. They can also cause severe damage to trees. Ice storms in Exeter could be expected to cause damage ranging from a few thousand dollars to millions of dollars, depending on the severity of the storm.

Wildfire

The risk of fire is difficult to predict based on location. Forest fires are more likely to occur during years of drought. The area identified as at risk to wildfire (Map 2: Past and Future Hazards) by the Hazard Mitigation Committee is in the northern section of Town and includes the Town Forest. The assessed value of all residential and commercial structures in the Town of Exeter in 2023 was $1,613,128,233. Assuming 1% to 5% damage, a wildfire could result in $16,131,22 to $80,656,412 of structure damage.

Earthquakes

Earthquakes can cause buildings and bridges to collapse, disrupt gas, electricity and phone lines and are often associated with landslides and flash floods. Four earthquakes in New Hampshire between 1924-1989 had a magnitude of 4.2 or more. Two of these occurred in Ossipee, one west of Laconia, and one near the Quebec border. If an earthquake were to impact the Town of Exeter, underground utilities would also be susceptible. In addition, buildings that are not built to a high seismic design level would be susceptible to structural damage. The assessed value of all residential and commercial structures in the Town of Exeter in 2023 was $1,613,128,233. Assuming 1% to 5% damage, an earthquake could result in $16,131,22 to $80,656,412 of structure damage.

Drought

Extended drought can impact municipal water supplies, private drinking wells, and make vegetated areas more susceptible to wildfire (see above). The Town has no record of monetary damage related to drought. The Town advises residents to limit water use during periods of drought. The EMD maintains a list of vulnerable residents and checks in on these people as needed.

Extreme Temperatures

The Committee determined that all parts of town are at risk of impacts associated with extreme heat and cold. Young and elderly populations are particularly vulnerable and the EMD can direct vulnerable residents to heating and cooling stations.

Climate Change

The potential hazard damage from climate change is described above under flooding, sea-level rise, storm surge, compound flooding, and extreme temperatures.

Infectious Disease

Epidemics have the potential to cause a significant loss of life and/or widespread illness throughout the State, as well as cause disruptions to economies at all levels. The threat of a pandemic influenza, such as COVID-19, exemplifies a devastating situation where there may be an extreme shortage of essential service workers, a rapid transmission of disease from person-to-person, and no effective vaccination to prevent the illness. The monetary value of this impact cannot be determined.

CHAPTER VI – EXISTING HAZARD MITIGATION PROGRAMS

The next step involves identifying existing mitigation strategies for the hazards likely to affect the town and evaluate their effectiveness. This section outlines those programs and recommends improvements and changes to these programs to ensure the highest quality emergency service possible.

Table 8: Existing Hazard Mitigation Programs for the Town of Exeter

Existing Protection	Description-Area Covered	Responsible Local Agent	Effectiveness (Poor, Average, Good)	Recommended Changes-Actions-Comments
2015 Town of Exeter Local Emergency Operations Plan	Town-wide	EMD, Police and Fire Departments, DPW	Good	Plan is updated every five years
2024 Zoning Ordinance	Town-wide	Code Enforcement Officer	Good	Reviewed annually and amended as needed
2015 Town Building Code	Town-wide	Building Inspector	Good	Updated as needed
2022 NFIP Floodplain Ordinance	Development restriction in Special Flood Hazard Areas	Building Inspector and Planning Board	Good	Includes an advisory area for sea-level rise
2018 Town Master Plan	Town-wide	Town Planner, Planning Board	Good	Updates occur annually
2024 Town Capital Improvements Plan	Town-wide	Town Administrator/Department Heads	Good	Updated annually
2017 Elevation Certificates	Component of building permit	Building Inspector	Good	Reviewed annually
2018 Fire Code	Town-wide	Building Inspector	Good	Reviewed annually
Emergency Services	Town-wide	EMD, Police Chief, Fire Chief	Good	Emergency Personnel training occurs regularly for effective emergency response.
CEMPS (Comprehensive Emergency Management Planning for Schools)	Schools	SAU 16 Superintendent, EMD	Good	Reviewed annually

Existing Protection	Description-Area Covered	Responsible Local Agent	Effectiveness (Poor, Average, Good)	Recommended Changes-Actions-Comments
Emergency Water Plan	Town Water System	Water and Sewer Department	Good	Reviewed annually
Wellhead Protection	Specific areas of town	Code Enforcement Officer	Good	Regularly reviewed for use violations and compliance
Wetlands Protection	Specific areas of town	Code Enforcement Officer	Good	Town has designated Prime Wetlands
Shoreland Protection	Specific areas of town	Code Enforcement Officer and Building Inspector	Good	Town follows state and local regulations pertinent to the zoning district
Aquifer Protection	Specific areas of town	Code Enforcement Officer	Good	Ordinance should be monitored to ensure latest BMP's are being utilized for development uses
Stormwater Management Regulations	Town-wide	Code Enforcement Officer	Good	Designed to enable on-site infiltration of stormwater
2017 Sea Level Rise and Coastal Storm Surge Vulnerability Assessment	Exeter/ Squamscott River Watershed		Good	Identified land and infrastructure at risk from rising sea levels and storm surge
2023 Exeter River Corridor and Watershed Management Plan	Exeter/ Squamscott River watershed	Exeter River Local Advisory Committee and Exeter Conservation Commission	Good	Plan is reviewed annually
Exeter River Study	Exeter River watershed in Exeter	Exeter River Study Committee	Good	Conducting studies on use and management of the Exeter River and its tributaries
Tree Inventory and Maintenance Program	Town-wide	Department of Public Works	Good	Updated as needed

Existing Protection	Description-Area Covered	Responsible Local Agent	Effectiveness (Poor, Average, Good)	Recommended Changes-Actions-Comments
Local Road Design Standards	Town-wide	Planning Board, Code Enforcement Officer, DPW	Good	Updated as needed
Bridge Design and Inspection	Town-wide	State DOT and Town DPW	Good	Bi-annual engineering review
Storm Drain/Culvert Maintenance Program	Town-wide	DPW	Good	Annual engineering review
Great Dam Study	NHDES/Town/ Private Owners	DPW	Good	Resulted in removal of Great Dam
Pickpocket Dam Study	Exeter River	DPW	Good	In progress
Stormwater Asset Management Plan	Town-wide	DPW	Good	Updated as needed
Emergency Backup Power	Exeter Safety Complex, Exeter Town Office, High School, DPW, portable generators	Emergency Management Director	Average	Elementary Schools need of back-up power New recreation center needs generator
Hazard Mitigation Grants	Town-wide	EMD, DPW	Good	Reviewed as needed
Geographic Information Systems (GIS)	Town-wide	Planning and Building Department, Assessor's Office, DPW	Good	Updated as needed
Land Conservation Program	Town-wide	Planning Department, Conservation Commission, Select Board	Good	On-going
2022 Exeter's Path to Resilience	Town-wide	Planning Department, DPW, Conservation Commission, Select Board	Good	Report provides an overview of the Town's climate resilience accomplishments
2017 Seacoast Public Health Community Health Improvement Plan	Multi-town	Seacoast Public Health Network	Good	Includes public health emergency preparedness

CHAPTER VII – MITIGATION ACTIONS

The Action Plan was developed by analyzing the existing Town programs, the proposed improvements and changes to these programs. Additional programs were also identified as potential mitigation strategies. These potential mitigation strategies were ranked in five categories according to how they accomplished each item:

- Prevention
- Property Protection
- Structural Protection
- Emergency Services
- Public Information and Involvement

Table 9: List of Hazard Mitigation Strategies or Actions Developed by the Hazard Mitigation Committee

Mitigation Strategies or Action	Mitigation Category	Hazard(s) Mitigated	Status 2024: New/Completed/Deferred/ Removed
Construct Northside Fire Station	Emergency Services	All Hazards	Deferred
Portable Lights (2)	Emergency Services	All Hazards	Deferred, one purchased, another needed
Modifications to Pickpocket Dam	Structural Project	Flooding	Deferred, study in process
Modifications to Colcord Pond Dam	Structural Project	Flooding	Completed
Move and or upgrade (Modified flood proofing) Exeter Surface Water Treatment Plant	Structural	Flooding	Deferred
Powder Mill Road Flood Analysis/Capacity assessment	Prevention	Flooding	Removed
Acquisition of development rights/conservation of Exeter Elms	Prevention/Property Protection	Flooding	Removed
Replace undersized water lines	Property protection, Emergency Services	Drought, Wildfire	Completed
Acquire additional groundwater resources	Prevention	Drought, Wildfire, Extreme Temperatures	Deferred
Implement recommendations in Vulnerability Assessment and other climate change plans	Prevention, Property Protection	Sea Level Rise and Coastal Storm Surge, Hurricane	Completed

Mitigation Strategies or Action	Mitigation Category	Hazard(s) Mitigated	Status 2024: New/Completed/Deferred/ Removed
Develop and implement a deliberate public outreach campaign using the Town social media platforms – website, Facebook, Twitter, cable access TV, roadside electronic signs – to inform and educate residents about hazards impacting Exeter and ways in which they can prepare for hazards and prevent/mitigate damage	Public Outreach, Prevention, Property Protection	All Hazards	Completed and ongoing
Develop a pandemic response plan documenting best practices for every Town department	Emergency Services	Infectious Disease	New
Purchase supplies to restock emergency response trailer with traffic cones, barricades, signs, and traffic and crowd control barriers	Emergency Services	All Hazards	New
Purchase communications equipment for the emergency operations and public safety center, including a dispatch console, and communications tower and transmitter	Emergency Services	All Hazards	New
Purchase and install a generator at the new Recreation Center to enable the center to be used as a shelter and heating and cooling center	Emergency Services	All Hazards	New

Mitigation Strategies or Action	Mitigation Category	Hazard(s) Mitigated	Status 2024: New/Completed/Deferred/ Removed
Purchase and install a generator for the Fuller Lane water tower to enable water distribution and emergency communications. There is communications repeater on the tower	Emergency Services	All Hazards	New
Develop and adopt an MOU with Seacoast Public Health Network to strengthen the partnership with the Town during public health emergencies	Prevention/ Emergency Services/ Public Information and Involvement	Infectious Diseases	New

CHAPTER VIII. FEASIBILITY AND PRIORITIZATION OF PROPOSED MITIGATION STRATEGIES

The goal of each strategy or action is reduction or prevention of damage from a hazard event. To determine their effectiveness in accomplishing this goal, a set of criteria was applied to each proposed strategy. A set of questions developed by the Committee that included the STAPLEE method was developed to rank the proposed mitigation actions. The STAPLEE method analyzes the Social, Technical, Administrative, Political, Legal, Economic and Environmental aspects of a project and is commonly used by public administration officials and planners for making planning decisions. The following questions were asked about the proposed mitigation strategies identified in Table 10 a – 10h:

- Does it reduce disaster damage?
- Does it contribute to other goals?
- Does it benefit the environment?
- Does it meet regulations?
- Will historic structures be saved or protected?
- Does it help achieve other community goals?
- Could it be implemented quickly?

STAPLEE criteria:

- **Social:** Is the proposed strategy socially acceptable to the community? Are there equity issues involved that would mean that one segment of the community is treated unfairly?
- **Technical:** Will the proposed strategy work? Will it create more problems than it solves?
- **Administrative:** Can the community implement the strategy? Is there someone to coordinate and lead the effort?
- **Political:** Is the strategy politically acceptable? Is there public support both to implement and to maintain the project?
- **Legal:** Is the community authorized to implement the proposed strategy? Is there a clear legal basis or precedent for this activity?
- **Economic:** What are the costs and benefits of this strategy? Does the cost seem reasonable for the size of the problem and the likely benefits?
- **Environmental:** How will the strategy impact the environment? Will the strategy need environmental regulatory approvals?

Each proposed mitigation strategy was evaluated using the above criteria and assigned a score (Good = 3, Average = 2, Poor = 1) based on the above criteria. An evaluation chart with total scores for each strategy can be found in the collection of individual tables under Table 10.

Table 10a: Construct Northside Fire Station

Criteria	Evaluation Rating (1-3)
Does it reduce disaster damage?	3
Does it contribute to other goals?	3
Does it benefit the environment?	2
Does it meet regulations?	3
Will historic structures be saved or protected?	3
Does it help achieve other community goals?	3
Could it be implemented quickly?	2
S: Is it Socially acceptable?	2
T: Is it Technically feasible and potentially successful?	3
A: Is it Administratively workable?	2
P: Is it Politically acceptable?	2
L: Is there Legal authority to implement?	3
E: Is it Economically beneficial?	2
E: Are other Environmental approvals required?	2
Score	**34**

Table 10b: Purchase Portable Light

Criteria	Evaluation Rating (1-3)
Does it reduce disaster damage?	2
Does it contribute to other goals?	3
Does it benefit the environment?	1
Does it meet regulations?	3
Will historic structures be saved or protected?	2
Does it help achieve other community goals?	3
Could it be implemented quickly?	3
S: Is it Socially acceptable?	3
T: Is it Technically feasible and potentially successful?	3
A: Is it Administratively workable?	3
P: Is it Politically acceptable?	3
L: Is there Legal authority to implement?	3
E: Is it Economically beneficial?	3
E: Are other Environmental approvals required?	3
Score	**38**

Table 10c: Modifications to Pickpocket Dam

Criteria	Evaluation Rating (1-3)
Does it reduce disaster damage?	3
Does it contribute to other goals?	3
Does it benefit the environment?	3
Does it meet regulations?	3
Will historic structures be saved or protected?	1
Does it help achieve other community goals?	2
Could it be implemented quickly?	1
S: Is it Socially acceptable?	2
T: Is it Technically feasible and potentially successful?	3
A: Is it Administratively workable?	3
P: Is it Politically acceptable?	2
L: Is there Legal authority to implement?	3
E: Is it Economically beneficial?	2
E: Are other Environmental approvals required?	3
Score	**33**

Table 10d: Move or Upgrade Surface Water Treatment Plan

Criteria	Evaluation Rating (1-3)
Does it reduce disaster damage?	3
Does it contribute to other goals?	3
Does it benefit the environment?	3
Does it meet regulations?	3
Will historic structures be saved or protected?	3
Does it help achieve other community goals?	3
Could it be implemented quickly?	2
S: Is it Socially acceptable?	3
T: Is it Technically feasible and potentially successful?	3
A: Is it Administratively workable?	3
P: Is it Politically acceptable?	3
L: Is there Legal authority to implement?	3
E: Is it Economically beneficial?	3
E: Are other Environmental approvals required?	3
Score	**41**

Table 10e: Acquire Additional Groundwater Resources

Criteria	Evaluation Rating (1-3)
Does it reduce disaster damage?	3
Does it contribute to other goals?	3
Does it benefit the environment?	2
Does it meet regulations?	3
Will historic structures be saved or protected?	1
Does it help achieve other community goals?	3
Could it be implemented quickly?	2
S: Is it Socially acceptable?	3
T: Is it Technically feasible and potentially successful?	3
A: Is it Administratively workable?	3
P: Is it Politically acceptable?	3
L: Is there Legal authority to implement?	3
E: Is it Economically beneficial?	3
E: Are other Environmental approvals required?	3
Score	**38**

Table 10f: Develop a Pandemic Response Plan Documenting Best Practices for Every Town Department

Criteria	Evaluation Rating (1-3)
Does it reduce disaster damage?	2
Does it contribute to other goals?	3
Does it benefit the environment?	3
Does it meet regulations?	3
Will historic structures be saved or protected?	2
Does it help achieve other community goals?	3
Could it be implemented quickly?	3
S: Is it Socially acceptable?	2
T: Is it Technically feasible and potentially successful?	3
A: Is it Administratively workable?	3
P: Is it Politically acceptable?	2
L: Is there Legal authority to implement?	3
E: Is it Economically beneficial?	3
E: Are other Environmental approvals required?	3
Score	**39**

Table 10g: Purchase Supplies to Restock Emergency Response Trailer

Criteria	Evaluation Rating (1-3)
Does it reduce disaster damage?	3
Does it contribute to other goals?	3
Does it benefit the environment?	3
Does it meet regulations?	3
Will historic structures be saved or protected?	2
Does it help achieve other community goals?	3
Could it be implemented quickly?	3
S: Is it Socially acceptable?	3
T: Is it Technically feasible and potentially successful?	3
A: Is it Administratively workable?	3
P: Is it Politically acceptable?	3
L: Is there Legal authority to implement?	3
E: Is it Economically beneficial?	3
E: Are other Environmental approvals required?	3
Score	**41**

Table 10h: Purchase Emergency Communications Equipment for the Emergency Operations Center and Public Safety Complex

Criteria	Evaluation Rating (1-3)
Does it reduce disaster damage?	3
Does it contribute to other goals?	3
Does it benefit the environment?	3
Does it meet regulations?	3
Will historic structures be saved or protected?	3
Does it help achieve other community goals?	3
Could it be implemented quickly?	3
S: Is it Socially acceptable?	3
T: Is it Technically feasible and potentially successful?	3
A: Is it Administratively workable?	3
P: Is it Politically acceptable?	3
L: Is there Legal authority to implement?	3
E: Is it Economically beneficial?	3
E: Are other Environmental approvals required?	3
Score	**42**

Table 10i: Purchase and Install a Generator for the New Recreation Center

Criteria	Evaluation Rating (1-3)
Does it reduce disaster damage?	1
Does it contribute to other goals?	3
Does it benefit the environment?	1
Does it meet regulations?	1
Will historic structures be saved or protected?	1
Does it help achieve other community goals?	3
Could it be implemented quickly?	3
S: Is it Socially acceptable?	3
T: Is it Technically feasible and potentially successful?	3
A: Is it Administratively workable?	3
P: Is it Politically acceptable?	3
L: Is there Legal authority to implement?	3
E: Is it Economically beneficial?	3
E: Are other Environmental approvals required?	3
Score	**34**

Table 10j: Purchase and Install a Generator for the Fuller Lane Water Tower

Criteria	Evaluation Rating (1-3)
Does it reduce disaster damage?	3
Does it contribute to other goals?	3
Does it benefit the environment?	1
Does it meet regulations?	1
Will historic structures be saved or protected?	1
Does it help achieve other community goals?	3
Could it be implemented quickly?	3
S: Is it Socially acceptable?	3
T: Is it Technically feasible and potentially successful?	3
A: Is it Administratively workable?	3
P: Is it Politically acceptable?	3
L: Is there Legal authority to implement?	3
E: Is it Economically beneficial?	3
E: Are other Environmental approvals required?	3
Score	**36**

Table 10i: Develop and adopt an MOU with Seacoast Public Health Network to strengthen the partnership with the Town during public health emergencies

Criteria	Evaluation Rating (1-3)
Does it reduce disaster damage?	2
Does it contribute to other goals?	3
Does it benefit the environment?	1
Does it meet regulations?	3
Will historic structures be saved or protected?	1
Does it help achieve other community goals?	3
Could it be implemented quickly?	3
S: Is it Socially acceptable?	3
T: Is it Technically feasible and potentially successful?	3
A: Is it Administratively workable?	3
P: Is it Politically acceptable?	3
L: Is there Legal authority to implement?	3
E: Is it Economically beneficial?	3
E: Are other Environmental approvals required?	3
Score	**37**

CHAPTER IX - IMPLEMENTATION SCHEDULE FOR PRIORITY MITIGATION STRATEGIES

This step involves developing an action plan that outlines who is responsible for implementing each of the prioritized strategies determined in the previous step, as well as when and how the actions will be implemented. The following questions were asked to develop an implementation schedule for the identified priority mitigation strategies:

WHO? Who will lead the implementation efforts? Who will put together funding requests and applications?

HOW? How will the community fund these projects? How will the community implement these projects? What resources will be needed to implement these projects?

WHEN? When will these actions be implemented, and in what order?

Table 12 is the Action Plan. In addition to the prioritized mitigation projects, Table 11 includes the responsible party (WHO), how the project will be supported (HOW), and what the timeframe is for implementation of the project (WHEN). Also included is a cost estimate for each project if available.

Table 11: Action Plan for Proposed Mitigation Actions

STAPLEE Score	Project	Responsibility/ Oversight	Funding/ Support	Estimated Cost	Time frame
42	Construct Northside Fire Station	Town Manager/Select Board	Town/HMPG	$17.5M	Medium Term 2-3 years
42	Purchase communications equipment for emergency operations and public safety center	Fire Chief/Police Chief	Town/HMPG	$300,000	Short Term 1 year
41	Purchase supplies to restock emergency response trailer	EMD	Town/HMPG	$10,000	Short Term 1 year
41	Move or upgrade surface water treatment plant	DPW	Town/DES/ EPA	$28M	Medium Term 2-3 years
39	Develop a pandemic response plan	EMD/Town Manager	Town	$2,000	Short Term 1 year
38	Purchase portable light	EMD	Town/HMPG	$20,000	Short Term 1 year
38	Acquire additional groundwater resources	DPW/Select Board	Town/HMPG	$6M	Short Term 1 year

STAPLEE Score	Project	Responsibility/ Oversight	Funding/ Support	Estimated Cost	Time frame
37	Develop and MOU with Seacoast Public Health Network	EMD	Town	$1,000	Short Term 1 year
36	Purchase and install a generator at Fuller Lane water tower	EMD/DPW	Town/EMPG	$50,000	Medium Term 3-5 years
34	Purchase and install a generator at new Recreation Center	Recreation Director	Town/EMPG	$50,000	Medium Term 3-5 years
33	Modifications to Pickpocket Dam	DPW	Town/EMPG	$2M	Long Term 3-5 years
27	Modifications to Colcord Pond Dam	DPW	Town/EMPG	$500,000	Long Term 3-5 years

CHAPTER X - MONITORING, EVALUATING AND UPDATING THE PLAN

Incorporating the Plan into Existing Planning Mechanisms

Upon review and approval by FEMA and the State of New Hampshire, the Plan will be adopted as a standalone document of the Town and as an appendix of the Town's Emergency Operations Plan (EOP). The Plan will also be consulted when the Town updates its Capital Improvement Program (CIP). The Planning Board is responsible for updating the CIP annually and will review the Action Plan during each update. The Planning Board in conjunction with Emergency Management Director will determine what items can and should be added to the CIP based on the Town's annual budget and possible sources of other funding. Considerations about future land use and proximity to current and potential hazard areas need to be inherently part of the planning process. NH RSA 674:2 III (e) gives cities the authority to include a natural hazards section, which documents the physical characteristics, severity, and extent of any potential natural hazards to the community, within the framework of a Master Plan.

Monitoring, Evaluating and Updating the Plan

Recognizing that many mitigation projects are ongoing, and that while in the implementation stage communities may suffer budget cuts, experience staff turnover, or projects may fail altogether, a good plan needs to provide for periodic monitoring and evaluation of its successes and failures and allow for updates of the Plan where necessary.

To track progress and update the Mitigation Strategies identified in the Action Plan, the Hazard Mitigation Committee shall remain active and will revisit the Plan annually and after each natural hazard event. These reviews will assess the Plan's effectiveness, accuracy, and completeness in achieving its stated purpose and goals. Plan reviews will also address the recommended improvements to the Plan as contained in the FEMA plan review checklist and any weaknesses the Town identified that the Plan did not adequately address. The Plan will also be thoroughly updated every five years. This review will incorporate any new information based on changing conditions in land use, hazard types, and climate change. The Emergency Management Director is responsible for initiating these reviews and will involve appropriate stakeholders. In keeping with the process of adopting the 2024 Plan Update, a public hearing to receive public comment on Plan maintenance and updating will be held during any review of the Plan. This publicly noticed meeting will allow for members of the community not involved in developing the Plan to provide input and comments each time the Plan is revised. The final revised Plan will be adopted by the Select Board appropriately, at a second publicly noticed meeting, and posted on the Town website to enable public review.

Changes should be made to the Plan to accommodate for projects that have failed or are not considered feasible after a review of their consistency with STAPLEE, the timeframe, the community's priorities, and funding resources. Priorities that were not ranked high, but identified as potential mitigation strategies, should be reviewed as well during the monitoring and update of this Plan to determine feasibility of future implementation.

APPENDIX A:
SUMMARY OF HAZARD MITIGATION STRATEGIES

I. RIVERINE MITIGATION

A. PREVENTION - Prevention measures are intended to keep the problem from occurring in the first place, and/or keep it from getting worse. Future development should not increase flood damage. Building, zoning, planning, and/or code enforcement officials usually administer preventative measures.

1. Planning and Zoning - Land use plans are put in place to guide future development, recommending where - and where not - development should occur. Sensitive and vulnerable lands can be designated for uses that would not be incompatible with occasional flood events - such as parks or wildlife refuges. A Capital Improvements Program can recommend the setting aside of funds for public acquisition of these designated lands. The zoning ordinance can regulate development in these sensitive areas by limiting or preventing some or all development - for example, by designating floodplain overlay, conservation, or agricultural districts.

2. Open Space Preservation - Preserving open space is the best way to prevent flooding and flood damage. Open space preservation should not, however, be limited to the flood plain, since other areas within the watershed may contribute to controlling the runoff that exacerbates flooding. Land Use and Capital Improvement Plans should identify areas to be preserved by acquisition and other means, such as purchasing easements. Aside from outright purchase, open space can also be protected through maintenance agreements with the landowners, or by requiring developers to dedicate land for flood flow, drainage and storage.

3. Floodplain Development Regulations - Floodplain development regulations typically do not prohibit development in the special flood hazard area, but they do impose construction standards on what is built there. The intent is to protect roads and structures from flood damage and to prevent the development from aggravating the flood potential. Floodplain development regulations are generally incorporated into subdivision regulations, building codes, and floodplain ordinances, which either stand-alone or are contained within a zoning ordinance.

Subdivision Regulations: These regulations govern how land will be divided into separate lots or sites. They should require that any flood hazard areas be shown on the plat, and that every lot has a buildable area that is above the base flood elevation.

Building Codes: Standards can be incorporated into building codes that address flood proofing for all new and improved or repaired buildings.

Floodplain Ordinances: Communities that participate in the National Flood Insurance Program are required to adopt the minimum floodplain management regulations, as developed by FEMA. The regulations set minimum standards for subdivision regulations and

building codes. Communities may adopt more stringent standards than those set forth by FEMA.

4. **Stormwater Management** - Development outside of a floodplain can contribute significantly to flooding by covering impervious surfaces, which increases storm water runoff. Storm water management is usually addressed in subdivision regulations. Developers are typically required to build retention or detention basins to minimize any increase in runoff caused by new or expanded impervious surfaces, or new drainage systems. Generally, there is a prohibition against storm water leaving the site at a rate higher than it did before the development. One technique is to use wet basins as part of the landscaping plan of a development. It might even be possible to site these basins based on a watershed analysis. Since detention only controls the runoff rates and not volumes, other measures must be employed for storm water infiltration - for example, swales, infiltration trenches, vegetative filter strips, and permeable paving blocks.

5. **Drainage System Maintenance** - Ongoing maintenance of channel and detention basins is necessary if these facilities are to function effectively and efficiently over time. A maintenance program should include regulations that prevent dumping in or altering watercourses or storage basins; regrading and filling should also be regulated. Any maintenance program should include a public education component, so that the public becomes aware of the reasons for the regulations. Many people do not realize the consequences of filling in a ditch or wetland or regrading their yard without concern for runoff patterns.

B. **PROPERTY PROTECTION** - Property protection measures are used to modify buildings subject to flood damage, rather than to keep floodwaters away. These may be less expensive to implement, as they are often carried out on a cost-sharing basis. In addition, many of these measures do not affect a building's appearance or use, which makes them particularly suitable for historical sites and landmarks.

1. **Relocation** - Moving structures out of the floodplain is the surest and safest way to protect against damage. Relocation is expensive, however, so this approach will probably not be used except in extreme circumstances. Communities that have areas subject to severe storm surges, ice jams, etc. might want to consider establishing a relocation program, incorporating available assistance.

2. **Acquisition** - Acquisition by a governmental entity of land in a floodplain serves two main purposes: (1) it ensures that the problem of structures in the floodplain will be addressed; and (2) it has the potential to convert problem areas into community assets, with accompanying environmental benefits. Acquisition is more cost effective than relocation in those areas that are subject to storm surges, ice jams, or flash flooding. Acquisition, followed by demolition, is the most appropriate strategy for those buildings that are simply too expensive to move, as well as for dilapidated structures that are not worth saving or protecting. Relocation can be expensive; however, there are government grants and loans that can be applied toward such efforts.

3. **Building Elevation** - Elevating a building above the base flood elevation is the best on-site protection strategy. The building could be raised to allow water to run underneath it, or fill could be brought in to elevate the site on which the building sits. This approach is cheaper than relocation and tends to be less disruptive to a neighborhood. Elevation is required by law for new and substantially improved residences in a floodplain and is commonly practiced in flood hazard areas nationwide.

4. **Floodproofing** - If a building cannot be relocated or elevated, it may be floodproofed. This approach works well in areas of low flood threat. Flood proofing can be accomplished through barriers to flooding, or by treatment to the structure itself.

Barriers: Levees, floodwalls, and berms can keep floodwaters from reaching a building. These are useful, however, only in areas subject to shallow flooding.

Dry Flood proofing: This method seals a building against the water by coating the walls with waterproofing compounds or plastic sheeting. Openings, such doors, windows, etc. are closed either permanently with removable shields or with sandbags.

Wet Flood proofing: This technique is usually considered a last resort measure since water is intentionally allowed into the building to minimize pressure on the structure. Approaches range from moving valuable items to higher floors to rebuilding the floodable area. An advantage over other approaches is that simply by moving household goods out of the range of floodwaters, thousands of dollars can be saved in damages.

5. **Sewer Backup Protection** - Storm water overloads can cause backup into basements through sanitary sewer lines. Houses that have any kind of connection to a sanitary sewer system - whether it is downspouts, footing drain tile, and/or sump pumps, can be flooded during a heavy rain event. To prevent this, there should be no such connections to the system, and all rain and ground water should be directed onto the ground, away from the building. Other protections include:

- Floor drain plugs and floor drain standpipe, which keep water from flowing out of the lowest opening in the house.
- Overhead sewer - keeps water in the sewer line during a backup.
- Backup valve - allows sewage to flow out while preventing backups from flowing into the house.

6. **Insurance** - Above and beyond standard homeowner insurance, there is other coverage a homeowner can purchase to protect against flood hazard. Two of the most common are National Flood Insurance and basement backup insurance.

National Flood Insurance: When a community participates in the National Flood Insurance Program, any local insurance agent can sell separate flood insurance policies under rules

and rates set by FEMA. Rates do not change after claims are paid because they are set on a national basis.

Basement Backup Insurance: National Flood Insurance offers an additional deductible for seepage and sewer backup, provided there is a general condition of flooding in the area that was the proximate cause of the basement getting wet. Most exclude damage from surface flooding that would be covered by the NFIP.

C. **NATURAL RESOURCE PROTECTION** - Preserving or restoring natural areas or the natural functions of floodplain and watershed areas provide the benefits of eliminating or minimizing losses from floods, as well as improve water quality and wildlife habitats. Parks, recreation, or conservation agencies usually implement such activities. Protection can also be provided through various zoning measures that are specifically designed to protect natural resources.

1. **Wetlands Protection** - Wetlands can store large amounts of floodwaters, slowing and reducing downstream flows, and filtering the water. Any development that is proposed in a wetland is regulated by either federal and/or state agencies. Depending on the location, the project might fall under the jurisdiction of the U.S. Army Corps of Engineers, which in turn, calls upon several other agencies to review the proposal. In New Hampshire, the N.H. Wetlands Board must approve any project that impacts a wetland. And, many communities in New Hampshire also have local wetland ordinances. Generally, the goal is to protect wetlands by preventing development that would adversely affect them. Mitigation techniques are often employed, which might consist of creating a wetland on another site to replace what would be lost through the development. This is not an ideal practice, however, since it takes many years for a new wetland to achieve the same level of quality as an existing one.

2. **Erosion and Sedimentation Control** - Controlling erosion and sediment runoff during construction and on farmland is important, since eroding soil will typically end up in downstream waterways. And, because sediment tends to settle where the water flow is slower, it will gradually fill in channels and lakes, reducing their ability to carry or store floodwaters. Practices to reduce erosion and sedimentation have two principal components: (1) minimize erosion with vegetation and; (2) capture sediment before it leaves the site. Slowing the runoff increases infiltration into the soil, thereby controlling the loss of topsoil from erosion and the resulting sedimentation. Runoff can be slowed by vegetation, terraces, contour strip farming, no-till farm practices, and impoundments (such as sediment basins, farm ponds, and wetlands).

3. **Best Management Practices** - Best Management Practices (BMPs) are measures that reduce nonpoint source pollutants that enter waterways. Nonpoint source pollutants are carried by storm water to waterways, and include such things as lawn fertilizers, pesticides, farm chemicals, and oils from street surfaces and industrial sites. BMPs can be incorporated into many aspects of new developments and ongoing land use practices. In New Hampshire, the Department of Environmental Services has developed best management practices for a range of activities, from farming to earth excavations.

D. EMERGENCY SERVICES - Emergency services protect people during and after a flood. Many communities in New Hampshire have emergency management programs in place, administered by an emergency management director (very often the local police or fire chief).

1. Flood Warning - On large rivers, the National Weather Service handles early recognition. Communities on smaller rivers must develop their own warning systems. Warnings may be disseminated in a variety of ways, such as sirens, radio, television, mobile public-address systems, or door-to-door contact. It seems that multiple or redundant systems are the most effective, giving people more than one opportunity to be warned.

2. Flood Response - Flood response refers to actions that are designed to prevent or reduce damage or injury, once a flood threat is recognized. Such actions and the appropriate parties include:

- activating the emergency operations center (emergency director)
- sandbagging designated areas (public works department)
- closing streets and bridges (police department)
- shutting off power to threatened areas (public service)
- releasing children from school (school district)
- ordering an evacuation (selectmen/city council/emergency director)
- opening evacuation shelters (churches, schools, Red Cross, municipal facilities)

These actions should be part of a flood response plan, which should be developed in coordination with the persons and agencies that share the responsibilities. Drills and exercises should be conducted so that the key participants know what they are supposed to do.

3. Critical Facilities Protection - Protecting critical facilities is vital, since expending efforts on these facilities can draw workers and resources away from protecting other parts of the community. Buildings or locations vital to the flood response effort:

- emergency operations centers
- police and fire stations
- hospitals
- highway garage
- selected roads and bridges
- evacuation routes
- buildings or locations that, if flooded, would create secondary disasters
- hazardous materials facilities
- water/wastewater treatment plants
- schools
- nursing homes

All such facilities should have their own flood response plan that is coordinated with the community's plan. Nursing homes, other public health facilities, and schools will typically be required by the state to have emergency response plans in place.

4. **Health and Safety Maintenance** - The flood response plan should identify appropriate measures to prevent danger to health and safety. Such measures include:

- patrolling evacuated areas to prevent looting
- providing safe drinking water
- vaccinating residents for tetanus
- clearing streets
- cleaning up debris

The plan should also identify which agencies will be responsible for carrying out the identified measures. A public information program can be helpful to educate residents on the benefits of taking health and safety precautions.

Structural Projects - Structural projects are used to prevent floodwaters from reaching properties. These are all man-made structures and can be grouped into the six types of discussed below. The shortcomings of structural approaches are that:

- they can be very expensive
- they disturb the land, disrupt natural water flows, and destroy natural habitats
- they are built to an anticipated flood event, and may be exceeded by a greater-than-expected flood
- they can create a false sense of security

Reservoirs - Reservoirs control flooding by holding water behind dams or in storage basins. After a flood peaks, water is released or pumped out slowly at a rate the river downstream can handle.

Reservoirs are suitable for protecting existing development, and they may be the only flood control measure that can protect development close to a watercourse. They are most efficient in deeper valleys or on smaller rivers where there is less water to store. Reservoirs might consist of man-made holes dug to hold the approximate amount of floodwaters, or even abandoned quarries. As with other structural projects, reservoirs:

- are expensive
- occupy a lot of land
- require periodic maintenance
- may fail to prevent damage from floods that exceed their design levels
- may eliminate the natural and beneficial functions of the floodplain

Reservoirs should only be used after a thorough watershed analysis that identifies the most appropriate location and ensures that they would not cause flooding somewhere else. Because they are so expensive and usually involve more than one community, they are typically implemented with the help of state or federal agencies, such as the Army Corps of Engineers.

Levees/Floodwalls - Probably the best know structural flood control measure is either a levee (a barrier of earth) or a floodwall made of steel or concrete erected between the watercourse and the land. If space is a consideration, floodwalls are typically used, since levees need more space. Levees and floodwalls should be set back out of the floodway, so that they will not divert floodwater onto other properties.

Diversions - A diversion is simply a new channel that sends floodwater to a different location, thereby reducing flooding along an existing watercourse. Diversions can be surface channels, overflow weirs, or tunnels. During normal flows, the water stays in the old channel. During flood flows, the stream spills over the diversion channel or tunnel, which carries the excess water to the receiving lake or river.

Diversions are limited by topography; they won't work everywhere. Unless the receiving water body is relatively close to the flood prone stream and the land in between is low and vacant, the cost of creating a diversion can be prohibitive. Where topography and land use are not favorable, a more expensive tunnel is needed. In either case, care must be taken to ensure that the diversion does not create a flooding problem somewhere else.

Channel Modifications - Channel modifications include making a channel wider, deeper, smoother, or straighter. These techniques will result in more water being carried away, but, as with other techniques mentioned, it is important to ensure that the modifications do not create or increase a flooding problem downstream.

Dredging: Dredging is often cost-prohibitive because the dredged material must be disposed of somewhere else, and the stream will usually fill back in with sediment. Dredging is usually undertaken only on larger rivers, and then only to maintain a navigation channel.

Drainage modifications: These include man-made ditches and storm sewers that help drain areas where the surface drainage system is inadequate or where underground drainage ways may be safer or more attractive. These approaches are usually designed to carry the runoff from smaller, more frequent storms.

Storm Sewers - Mitigation techniques for storm sewers include installing new sewers, enlarging small pipes, street improvements, and preventing back flow. Because drainage ditches and storm sewers convey water faster to other locations, improvements are only recommended for small local problems where the receiving body of water can absorb the increased flows without increased flooding.

In many developments, streets are used as part of the drainage system, to carry or hold water from larger, less frequent storms. The streets collect runoff and convey it to a receiving sewer, ditch, or stream. Allowing water to stand in the streets and then draining it slowly can be a more effective and less expensive measure than enlarging sewers and ditches.

Public Information - Public information activities are intended to advise property owners, potential property owners, and visitors about the hazards associated with a property, ways to

protect people and property from these hazards, and the natural and beneficial functions of a floodplain.

1. **Map Information** - Flood maps developed by FEMA outline the boundaries of the flood hazard areas. These maps can be used by anyone interested in a property to determine if it is flood-prone. These maps are available from FEMA, the NH Office of Emergency Management, the NH Office of State Planning, or your regional planning commission.

Outreach Projects - Outreach projects are proactive; they give the public information even if they have not asked for it. Outreach projects are designed to encourage people to seek out more information and take steps to protect themselves and their properties. Examples of outreach activities include:

- Mass mailings or newsletters and e-newsletters to all residents
- Posting resource information on town website and social media accounts
- Notices directed to floodplain residents
- Displays in public buildings, malls, etc.
- Newspaper articles and special sections
- Radio and TV news releases and interview shows
- A local flood proofing video for cable TV programs and to loan to organizations
- A detailed property owner handbook tailored for local conditions
- Presentations at meetings of neighborhood groups

Research has shown that outreach programs work, although awareness is not enough. People need to know what they can do about the hazards, so projects should include information on protection measures. Research also shows that locally designed and run programs are much more effective than national advertising.

Real Estate Disclosure - Disclosure of information regarding flood-prone properties is important if potential buyers are to be able to mitigate damage. Federally regulated lending institutions are required to advise applicants that a property is in the floodplain. However, this requirement needs to be met only five days prior to closing, and by that time, the applicant is typically committed to the purchase. State laws and local real estate practice can help by making this information available to prospective buyers early in the process.

Library - Your local library can serve as a repository for pertinent information on flooding and flood protection. Some libraries also maintain their own public information campaigns, augmenting the activities of the various governmental agencies involved in flood mitigation.

Technical Assistance - Certain types of technical assistance are available from the NFIP Coordinator, FEMA, and the Natural Resources Conservation District. Community officials can also set up a service delivery program to provide one-on-one sessions with property owners. An example of technical assistance is the flood audit, in which a specialist visits a property. Following the visit, the owner is provided with a written report, detailing the past and potential flood depths, and recommending alternative protection measures.

Environmental Education - Education can be a great mitigating tool, if people can learn what not to do before damage occurs. And the sooner the education begins, the better. Environmental education programs for children can be taught in the schools, park and recreation departments, conservation associations, or youth organizations. An activity can be as involved as course curriculum development or as simple as an explanatory sign near a river. Education programs do not have to be limited to children. Adults can benefit from knowledge of flooding and mitigation measures. And decision-makers, armed with this knowledge, can make a difference in their communities.

II. EARTHQUAKES

A. PREVENTIVE - Planning/zoning to keep critical facilities away from fault lines.
Planning, zoning and building codes to avoid areas below steep slopes or soils subject to liquefaction.
Building codes to prohibit loose masonry, overhangs, etc.

B. PROPERTY PROTECTION:
Acquire and clear hazard areas.
Retrofitting to add braces, remove overhangs.
Apply mylar to windows and glass surfaces to protect from shattering glass.
Tie down major appliances provide flexible utility connections.
Earthquake insurance riders.

C. EMERGENCY SERVICES - Earthquake response plans to account for secondary problems, such as fires and hazardous materials spills.

D. EMERGENCY SERVICES - Slope stabilization.

III. DAM FAILURE

A. PREVENTIVE:
Dam failure inundation maps.
Planning/zoning/open space preservation to keep area clear.
Building codes with flood elevation based on dam failure.
Dam safety inspections.
Draining the reservoir when conditions appear unsafe.

B. PROPERTY PROTECTION - Acquisition of buildings in the path of a dam breach flood. Flood insurance.

C. EMERGENCY SERVICES - Dam conditioning monitoring; warning and evacuation plans based on dam failure.

D. EMERGENCY SERVICES - Dam improvements, spillway enlargements. Remove unsafe dams.

IV. WILDFIRES

A. PREVENTIVE:
Zoning districts to reflect fire risk zones.
Planning and zoning to restrict development in areas near fire protection and water resources.
Requiring new subdivisions to space buildings, provide firebreaks, on-site water storage, wide roads multiple accesses.
Building code standards for roof materials, spark arrestors.

Maintenance programs to clear dead and dry bush, trees.
Regulation on open fires.

B. PROPERTY PROTECTION:

Retrofitting of roofs and adding spark arrestors.
Landscaping to keep bushes and trees away from structures.
Insurance rates based on distance from fire protection.

C. NATURAL RESOURCE PROTECTION - Prohibit development in high-risk areas.

D. EMERGENCY SERVICES - Fire Fighting

V. WINTER STORMS

A. PREVENTIVE - Building code standards for light frame construction, especially for wind-resistant roofs.

B. PROPERTY PROTECTION:

Storm shutters and windows
Hurricane straps on roofs and overhangs
Seal outside and inside of storm windows and check steals in spring and fall.
Family and/or company severe weather action plan & drills:
include a NOAA weather radio
designate a shelter area or location
keep a disaster supply kit, including stored food and water
keep snow removal equipment in good repair; have extra shovels, sand, rock, salt and gas
know how to turn off water, gas, and electricity at home or work

C. NATURAL RESOURCE PROTECTION - Maintenance program for trimming tree and shrubs

D. EMERGENCY SERVICES - Early warning systems/NOAA Weather Radio Evacuation Plans

APPENDIX B:
TECHNICAL AND FINANCIAL ASSISTANCE FOR HAZARD MITIGATION

Local Municipalities must have a FEMA-approved Hazard Mitigation Plan to be eligible for Hazard Mitigation Assistance Grants. Information on these grants may be found at:
http://www.fema.gov/media-library-data/1424983165449-38f5dfc69c0bd4ea8a161e8bb7b79553/HMA_Guidance_022715_508.pdf

HAZARD MITIGATION GRANT PROGRAM (HMGP) - Authorized under Section 404 of the Stafford Act, the Hazard Mitigation Grant Program (HMGP) provides grants to States and local governments to implement long-term hazard mitigation measures after a major disaster declaration. The purpose of the program is to reduce the loss of life and property due to natural disasters and to enable mitigation measures to be implemented during the immediate recovery from a disaster. The purpose of the program is to reduce the loss of life and property due to natural disasters and to enable mitigation measures to be implemented during the immediate recovery from a disaster.
Hazard Mitigation Grant Program funding is only available in States following a Presidential disaster declaration. Eligible applicants are:

- State and local governments
- Indian tribes or other tribal organizations
- Certain private non-profit organization

Individual homeowners and businesses may not apply directly to the program; however, a community may apply on their behalf. HMGP funds may be used to fund projects that will reduce or eliminate the losses from future disasters. Projects must provide a long-term solution to a problem, for example, elevation of a home to reduce the risk of flood damages as opposed to buying sandbags and pumps to fight the flood. In addition, a project's potential savings must be more than the cost of implementing the project. Funds may be used to protect either public or private property or to purchase property that has been subjected to, or is in danger of, repetitive damage.

PRE-DISASTER MITIGATION GRANTS PROGRAM - The Pre-Disaster Mitigation (PDM) program provides technical and financial assistance to States and local governments for cost-effective pre-disaster hazard mitigation activities that complement a comprehensive mitigation program, and reduce injuries, loss of life, and damage and destruction of property. FEMA provides grants to States and Federally recognized Indian tribal governments that, in turn, provide sub-grants to local governments (to include Indian Tribal governments) for mitigation activities such as planning, and the implementation of projects identified through the evaluation of natural hazards.

FLOOD MITIGATION ASSISTANCE (FMA) PROGRAM - FEMA provides funding to assist States and communities in implementing measures to reduce or eliminate the long-term risk of flood damage to buildings, manufactured homes, and other structures insurable under the National Flood Insurance Program (NFIP). There are three types of grants available under FMA: Planning, Project, and Technical Assistance Grants. FMA Planning Grants are available to States and communities to prepare Flood Mitigation Plans. NFIP-participating communities with approved Flood Mitigation Plans can apply for FMA Project Grants. FMA Project Grants are available to States and NFIP participating communities to implement measures to reduce flood losses. Ten percent of the Project Grant is made available to States as a Technical Assistance Grant. These funds may be used by the State to help administer the program. Communities receiving FMA Planning and Project Grants must participate in the NFIP.

EMERGENCY MANAGEMENT PERFORMANCE GRANT
GUIDELINES - Emergency Management Performance Grant (EMPG Program) funding is available to local communities and eligible Agencies for projects that fall in FOUR general areas of Emergency Management: Planning activities; Training activities; Drills and Exercises; and Emergency Management Administration. Contact Heather Dunkerley at NHHSEM,
The following list of possible projects and activities is meant to guide you in selecting projects for an EMA Grant Submission. This list of suggested projects is not intended to be all-inclusive. Local communities or agencies may have other specific projects and activities that reflect local needs based on local capability assessments and local hazards.

Planning Activities may include:

- Develop a Hazard Mitigation Plan for your community.
- Prepare a hazard mitigation project proposal for submission to NHHSEM.
- Create, revise, or update Dam Emergency Action plans.
- Update your local Emergency Operations Plan (EOP). Consider updating a number of specific annexes each year to ensure that the entire plan is updated at least every four years.
- If applicable, develop or incorporate a regional HazMat Team Annex into your EOP.
- Develop an Anti-Terrorism Annex into your EOP.
- Develop a local/regional Debris Management Annex into your EOP.
- Develop and maintain pre-scripted requests for additional assistance (from local area public works, regional mutual aid, State resources, etc.) and local declarations of emergency.
- Develop and maintain written duties and responsibilities for EOC staff positions and agency representatives.
- Develop and maintain a list of private non-profit organizations within your local jurisdiction to ensure that these organizations are included in requests for public assistance funds.
- Prepare a submission for nomination as a "Project Impact" Community.

Training Activities may include:

- Staff members attend training courses at the Emergency Management Institute.
- Staff members attend a "field delivered" training course conducted by NHHSEM.
- Staff members attend other local, State, or nationally sponsored training event, which provides skills or knowledge relevant to emergency management.
- Staff members complete one or more FEMA Independent Study Courses.
- Identify and train a pre-identified local damage assessment team.

Drills and Exercises might include:

- Conduct multi-agency EOC Exercise (Tabletop or Functional) and forward an Exercise Evaluation Report, including after action reports, to NHHSEM (external evaluation of exercises is strongly encouraged). Drills or Exercises might involve any of the following scenarios:
    - Hurricane Exercise
    - Terrorism Exercise
    - Severe Storm Exercise
    - Communications Exercise
    - Mass Causality Exercise involving air, rail, or ship transportation accident
- Participate in multi-State or multi-Jurisdictional Exercise and forward Exercise Report to NHHSEM.
- HazMat Exercise with Regional HazMat Teams
- NHHSEM Communications Exercises
- Observe or evaluate State or local exercise outside your local jurisdiction.
- Assist local agencies and commercial enterprises (nursing homes, dams, prisons, schools, etc.) in developing, executing, and evaluating their exercise.
- Assist local hospitals in developing, executing and evaluating Mass Care, HazMat, Terrorism, and Special Events Exercises.

- Administrative Projects and Activities may include:
- Maintain an Emergency Operations Center (EOC) and alternate EOC capable of accommodating staff to respond to local emergencies.
- Establish and maintain a Call-Down List for EOC staff.
- Establish and maintain Emergency Response/Recovery Resource Lists.
- Develop or Update Emergency Management Mutual Aid Agreements with a focus on Damage Assessment, Debris Removal, and Resource Management.
- Develop and maintain written duties and responsibilities for EOC staff positions and agency representatives.
- Develop or Update Procedures for tracking of disaster-related expenses by local agencies.

FLOOD MITIGATION ASSISTANCE (FMA) PROGRAM - FMA was created as part of the National Flood Insurance Reform Act (NFIRA) of 1994 (42 U.S.C. 4101) with the goal of reducing or eliminating claims under the National Flood Insurance Program (NFIP). FMA regulations can be found in 44 CFR Part 78. Funding for the program is provided through the National Flood Insurance Fund. FMA is funded at $20 million nationally. FMA provides funding to assist States and communities in implementing measures to reduce or eliminate the long-term risk of flood damage to buildings, manufactured homes, and other structures insurable under the National Flood Insurance Program (NFIP).

There are three types of grants available under FMA: Planning, Project, and Technical Assistance Grants. FMA Planning Grants are available to States and communities to prepare Flood Mitigation Plans. NFIP-participating communities with approved Flood Mitigation Plans can apply for FMA Project Grants. FMA Project Grants are available to States and NFIP participating communities to implement measures to reduce flood losses. Ten percent of the Project Grant is made available to States as a Technical Assistance Grant. These funds may be used by the State to help administer the program. Communities receiving FMA Planning and Project Grants must be participating in the NFIP. A few examples of eligible FMA projects include: the elevation, acquisition, and relocation of NFIP-insured structures.

States are encouraged to prioritize FMA project grant applications that include repetitive loss properties. The FY 2001 FMA emphasis encourages States and communities to address target repetitive loss properties identified in the Agency's Repetitive Loss Strategy. These include structures with four or more losses, and structures with 2 or more losses where cumulative payments have exceeded the property value. State and communities are also encouraged to develop Plans that address the mitigation of these target repetitive loss properties.

APPENDIX C:
SAFFIR/SIMPSON HURRICANE SCALE

Courtesy of National Hurricane Center

This can be used to give an estimate of the potential property damage and flooding expected along the coast with a hurricane.

Category	Definition	Effects
One	Winds 74-95 mph	No real damage to building structures. Damage primarily to unanchored mobile homes, shrubbery, and trees. Also, some coastal road flooding and minor pier damage
Two	Winds 96-110 mph	Some roofing material, door, and window damage to buildings. Considerable damage to vegetation, mobile homes, and piers. Coastal and low-lying escape routes flood 2-4 hours before arrival of center. Small craft in unprotected anchorages break moorings.
Three	Winds 111-130 mph	Some structural damage to small residences and utility buildings with a minor amount of curtainwall failures. Mobile homes are destroyed. Flooding near the coast destroys smaller structures with larger structures damaged by floating debris. Terrain continuously lower than 5 feet ASL may be flooded inland 8 miles or more.
Four	Winds 131-155 mph	More extensive curtainwall failures with some complete roof structure failure on small residences. Major erosion of beach. Major damage to lower floors of structures near the shore. Terrain continuously lower than 10 feet ASL may be flooded requiring massive evacuation of residential areas inland as far as 6 miles.
Five	Winds greater than 155 mph	Complete roof failure on many residences and industrial buildings. Some complete building failures with small utility buildings blown over or away. Major damage to lower floors of all structures located less than 15 feet ASL and within 500 yards of the shoreline. Massive evacuation of residential areas on low ground within 5 to 10 miles of the shoreline may be required.

Additional information: http://www.nhc.noaa.gov/aboutsshws.php

APPENDIX D:
ENHANCED FUJITA TORNADO DAMAGE SCALE

The Enhanced Fujita Scale			
F-Scale Number	Potential Damage	Wind Speed	Type of Damage
F0	Light	65 – 85 mph	Little to no damage to man-made structures. Breaks branches off trees; pushes over shallow-rooted trees; damages signs
F1	Moderate	86 – 110 mph	Beginning of hurricane wind speed; peels surface off roofs; mobile homes pushed off foundations or overturned; moving autos pushed off roads; Moderate damage.
F2	Considerable	111 – 135 mph	Considerable damage. Roofs torn off frame houses; mobile homes demolished; boxcars from trains pushed over; large trees snapped or uprooted; light object missiles generated.
F3	Severe	136 – 165 mph	Roof and some walls torn off well-constructed houses; trains overturned; most trees in forest uprooted; heavy cards lifted and thrown.
F4	Devastating	166 – 200 mph	Well-constructed houses leveled; structures with weak foundations blown away some distance; cars thrown and large missiles generated.
F5	Incredible	Over 200 mph	Strong frame houses leveled off foundations and carried considerable distances; automobile-sized missiles fly through the air in excess of 109 yards; trees debarked; steel reinforced concrete structures badly damaged. Complete devastation.

Additional Information:
http://www.spc.noaa.gov/faq/tornado/ef-scale.html

APPENDIX E:
THE RICHTER MAGNITUDE SCALE

Earthquake Severity

Magnitudes	Earthquake Effects
Less than 3.5	Generally not felt but recorded.
3.5-5.4	Often felt, but rarely causes damage.
Under 6.0	At most slight damage to well-designed buildings. Can cause major damage to poorly constructed buildings over small regions.
6.1-6.9	Can be destructive in areas up to about 100 kilometers across where people live.
7.0-7.9	Major earthquake. Can cause serious damage over larger areas.
8 or greater	Great earthquake. Can cause serious damage in areas several hundred kilometers across.

Additional information: https://earthquake.usgs.gov/learn/topics/mercalli.php
https://earthquake.usgs.gov/learn/topics/measure.php
https://earthquake.usgs.gov/data/shakemap/

The Richter Magnitude Scale - Seismic waves are the vibrations from earthquakes that travel through the Earth; they are recorded on instruments called seismographs. Seismographs record a zig-zag trace that shows the varying amplitude of ground oscillations beneath the instrument. Sensitive seismographs, which greatly magnify these ground motions, can detect strong earthquakes from sources anywhere in the world. The time, locations, and magnitude of an earthquake can be determined from the data recorded by seismograph stations.

Earthquakes with magnitude of about 2.0 or less are usually call microearthquakes; they are not commonly felt by people and are generally recorded only on local seismographs. Events with magnitudes of about 4.5 or greater - there are several thousand such shocks annually - are strong enough to be recorded by sensitive seismographs all over the world. Great earthquakes, such as the 1964 Good Friday earthquake in Alaska, have magnitudes of 8.0 or higher. On the average, one earthquake of such size occurs somewhere in the world each year. The Richter Scale has no upper limit. Recently, another scale called the moment magnitude scale has been devised for more precise study of great earthquakes. The Richter Scale is not used to express damage. An earthquake in a densely populated area which results in many deaths and considerable damage may have the same magnitude as a shock in a remote area that does nothing more than frightens wildlife. Large-magnitude earthquakes that occur beneath the oceans may not even be felt by humans.

Appendix F

Extreme Weather Madness
Thunderstorm Criteria

THUNDERSTORM TYPES	Rainfall Rate/hr	MAX WIND GUST	HAIL SIZE	PEAK TORNADO Possibility	LIGHTNING FREQUENCY (5 min Intervals)	Darkness Factor	STORM IMPACT
T-1 – Weak thunderstorms or Thundershowers	.03-.10	< 25 MPH	None	None	Only a few strikes during the storm.	Slightly Dark. Sunlight may be seen under the storm.	1. No damage. 2. Gusty winds at times.
T-2 – Moderate Thunderstorms.	.10"-.25"	25-40 MPH	None	None	Occasional 1-10	Moderately Dark. Heavy downpours may cause the need for car lights.	1. Heavy downpours. 2. Occasional lightning. 3. Gusty winds. 4. Very little damage. 5. Small tree branches may break 6. Lawn furniture moved around
T-3 – Heavy Thunderstorms 1. Singular or lines of storms.	.25"-.55"	40-57 MPH	1/4 " to ¾"	EF0	Occasional to Frequent 10-20	Dark. Car lights used. Visibility low in heavy rains. Cars may pull off the road.	1. Minor Damage. 2. Downpours that produce some flooding on streets. 3. Frequent lightning could cause house fires. 4. Hail occurs within the downpours. 5. Small branches are broken. 6. Shingles are blown off roofs.
T-4 – Intense Thunderstorms 1. Weaker supercells 2. Bow Echos or lines of Storms	.55" – 1.25"	58 to 76 MPH	1" to 1.5"	EF0 to EF2	Frequent 20-30	Very Dark. Car lights used. Some street lights come on.	1. Moderate Damage. 2. Heavy rains can cause flooding to streams and creeks. Roadway flooding. 3. Hail can cause dents on cars and cause crop damage. 3. Wind damage to trees and buildings. 4. Tornado damage. 5. Power outages.
T-5 – Extreme Thunderstorms 1. Supercells with fatality of tornadoes 2. Derecho Windstorms	1.25" – 4"	Over 70 Mph	Over 1.5" to 4"	EF3 to EF5	Frequent to Continuous >30	Pitch Black. Street Lights come on. House lights may be used	1. Severe Damage to Trees and Property. Damage is widespread. 2. Flooding rains. 3. Damaging hail. 4. Damaging wind gusts to trees and buildings. 5. Tornadoes F3-F5 or family of tornadoes can occur. Tornadoes can cause total devastation. 6. Widespread power outages.

Appendix G
Lightning Risk Definitions

Lightning Risk Definitions	
Low Risk	Thunderstorms are only expected to be isolated or widely scattered in coverage (20 Percent Chance). Atmospheric conditions do not support frequent cloud-to-ground lightning strikes.
Moderate Risk	Thunderstorms are forecast to be scattered in coverage (30-50 Percent Chance). Atmospheric conditions support frequent cloud-to-ground lightning strikes.
High Risk	Thunderstorms are forecast to be numerous or widespread in coverage (60-100 Percent Chance). Atmospheric conditions support continuous and intense cloud-to-ground lightning strikes.

Appendix H
Hail Size Description Chart

Hail Size Description Chart

Hailstone size	Measurement	
	in.	cm.
bb	< 1/4	< 0.64
pea	1/4	0.64
dime	7/10	1.8
penny	3/4	1.9
nickel	7/8	2.2
quarter	1	2.5
half dollar	1 1/4	3.2
golf ball	1 3/4	4.4
billiard ball	2 1/8	5.4
tennis ball	2 1/2	6.4
baseball	2 3/4	7.0
softball	3.8	9.7
Compact disc / DVD	4 3/4	12.1

Note: Hail size refers to the diameter of the hailstone.

Appendix I

Sperry-Pitz Ice Accumulation Index

The Sperry-Piltz Ice Accumulation Index, or "SPIA Index" – Copyright, February, 2009

ICE DAMAGE INDEX	DAMAGE AND IMPACT DESCRIPTIONS
0	Minimal risk of damage to exposed utility systems; no alerts or advisories needed for crews, few outages.
1	Some isolated or localized utility interruptions are possible, typically lasting only a few hours. Roads and bridges may become slick and hazardous.
2	Scattered utility interruptions expected, typically lasting 12 to 24 hours. Roads and travel conditions may be extremely hazardous due to ice accumulation.
3	Numerous utility interruptions with some damage to main feeder lines and equipment expected. Tree limb damage is excessive. Outages lasting 1 – 5 days.
4	Prolonged & widespread utility interruptions with extensive damage to main distribution feeder lines & some high voltage transmission lines/structures. Outages lasting 5 – 10 days.
5	**Catastrophic damage to entire exposed utility systems, including both distribution and transmission networks. Outages could last several weeks in some areas. Shelters needed.**

(Categories of damage are based upon combinations of precipitation totals, temperatures and wind speeds/directions.)

Appendix J

NOAA U.S. Drought Monitor Scale

Appendix K
Glossary Size Class of Wildfire

Size Class of Fire

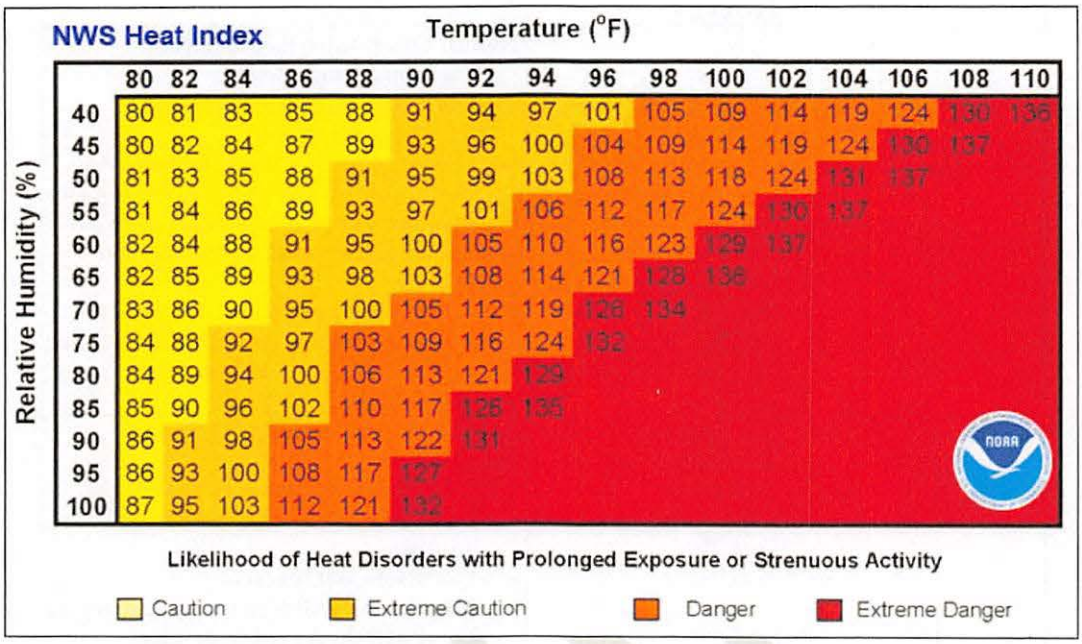
As to size of wildfire:

- Class A - one-fourth acre or less;
- Class B - more than one-fourth acre, but less than 10 acres;
- Class C - 10 acres or more, but less than 100 acres;
- Class D - 100 acres or more, but less than 300 acres;
- Class E - 300 acres or more, but less than 1,000 acres;
- Class F - 1,000 acres or more, but less than 5,000 acres;
- Class G - 5,000 acres or more.

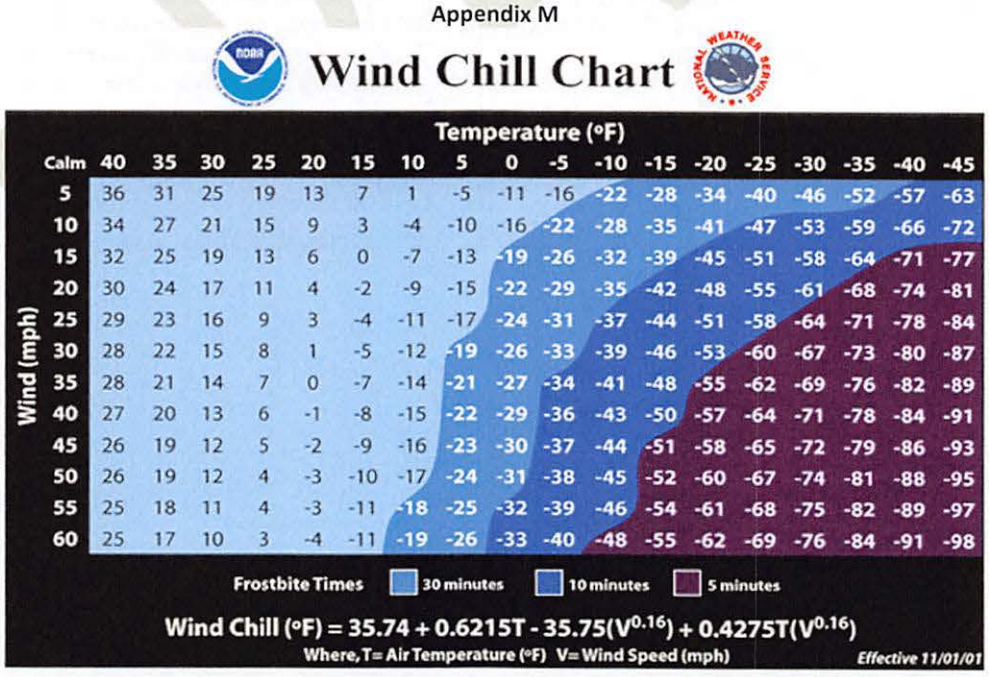
Table 4: E-Scale Building Construction Classes and Attributes

WUI scale	Building Construction Class	Ignition Vulnerabilities from Embers and Fire	Building Construction and Landscaping Attributes for Protection against Embers
E1 or F1	WUI 1	None	Normal Construction Requirements: - Maintained Landscaping - Local AHJ-Approved Access for firefighting equipment
E2 or F2	WUI 2	In this area, highly volatile fuels could be ignited by embers. Weathered, dry combustibles with large surface areas can become targets for ignition fro m embers.	Low Construction Hardening Requirements: - Treated combustibles allowed on structure - Attached treated combustibles allowed - Treated combustibles allowed around structure - Low flammability plants - Irrigated and well maintained Landscaping - Local AHJ-Approved Access for firefighting equipment
E3 or F3	WUI 3	Exposed combustibles are likely to ignite in this area from high ember flux or high heat flux	Intermediate Construction Hardening Requirements: - No exposed combustibles on structure - Combustibles placed well away from structure - Low flammability plants - Irrigated and well maintained landscaping - Local AHJ-Approved Access for firefighting equipment
E4 or F4	WUI 4	Ignition of combustibles from direct flame contact is likely.	High Construction Hardening Requirements: - No exposed combustibles - All vents, opening must be closed - Windows and doors must be covered with insulated non-combustible coverings. - Irrigated and well maintained low flammability landscaping - Local AHJ-Approved Access for firefighting equipment

Appendix L
Extreme Temperatures Heat Index



Appendix M



Appendix N
Definition of Infectious Diseases – Mayo Clinic

Infectious diseases are disorders caused by organisms — such as bacteria, viruses, fungi or parasites. Many organisms live in and on our bodies. They're normally harmless or even helpful. But under certain conditions, some organisms may cause disease.

Some infectious diseases can be passed from person to person. Some are transmitted by insects or other animals. And you may get others by consuming contaminated food or water or being exposed to organisms in the environment.

Signs and symptoms vary depending on the organism causing the infection, but often include fever and fatigue. Mild infections may respond to rest and home remedies, while some life-threatening infections may need hospitalization.

Many infectious diseases, such as measles and chickenpox, can be prevented by vaccines. Frequent and thorough hand-washing also helps protect you from most infectious diseases.

Appendix O
Documentation of Planning Process

The Emergency Management Director and Town Administrator invited Department Heads from all the Town's departments to participate in the Plan Update process, as well as representatives from the business community, academia, and organizations serving vulnerable populations. As a result, the Plan Update Committee included the individuals listed below.

Plan Update Committee Member Name	Plan Update Committee Member Title
Greg Bisson	Parks and Recreation Director, Town of Exeter
Stephen Dalton	Interim Water and Sewer Manager, Town of Exeter
Russell Dean	Town Manager, Town of Exeter
Doug Eastman	Building Inspector, Town of Exeter
Rich Kane	Coordinator of School Safety and Security, SAU 16
Ray Leblanc	Exeter Hospital Emergency Management
Josh McCain	Deputy Police Chief, Town of Exeter
Kristen Murphy	Natural Resource Planner, Town of Exeter
James Murray	Health Officer, Town of Exeter
Justin Pizon	Assistant Fire Chief/Assistant EMD, Town of Exeter
Stephen Poulin	Police Chief, Town of Exeter
Dave Sharples	Town Planner, Town of Exeter
Paul Vlasich	Interim Director, Public Works, Town of Exeter
Eric Wilking	Fire Chief/EMD, Town of Exeter

Rockingham Planning Commission (RPC) staff worked with the Emergency Management Director and Town Manager to directly seek input from residents, local businesses, Phillips Exeter Academy, organizations supporting socially vulnerable populations, and Emergency Management Directors in the abutting municipalities of Hampton, NH, Hampton Falls, NH, Kensington, NH, East Kingston, NH, Kingston, NH, Brentwood, NH, Epping, NH, Newfields, NH, and Stratham, NH. The Town maintains a list of businesses in Exeter and a list of human resource organizations serving socially vulnerable and underrepresented residents. The Town's Economic Development Director maintains an email list of all local businesses and invited all businesses to participate in the Plan Update process and to review the draft Plan Update. The EMD and RPC reviewed the draft Plan Update with representatives serving vulnerable populations. Emergency Management Directors in the abutting communities were emailed the draft Plan Update and invited to comment.

Social Service Organization	Contact Person
Southern New Hampshire Services - Provides social service programs for economically disadvantaged elderly, youth, and other vulnerable populations in Rockingham and Hillsborough County.	Ryan Clouthier, Chief Operating Officer

Greater Seacoast Community Health/Families First Health and Support Center – Not-for-profit community health and family resource center	Jessica Garlough, Director of Family and Social Services
Seacoast Regional Public Health Network – Provides multiple public health services, including public health emergency preparedness	Julia Meuse, Public Health Network Manager Public Health Emergency Preparedness Coordinator
Exeter Housing Authority	Tony Texiera, Executive Director
Academia	**Contact Person**
Phillips Exeter Academy	Paul Gravel, Director Campus Safety Services and Risk Management
Abutting Communities	**Contact Person**
Town of Hampton, NH	Michael McMahon, Fire Chief/EMD
Town of Hampton Falls, NH	Jay Lord, Fire Chief/ EMD
Town of Kensington, NH	Jonathon True, Fire Chief/EMD
Town of East Kingston, NH	Ed Warren, Fire Chief/EMD
Town of Kingston, NH	Graham Pellerin. Fire Chief/EMD
Town of Brentwood, NH	Rick Murphy, EMD
Town of Epping, NH	Don DeAngelis, Fire Chief/EMD
Town of Newfields, NH	Thomas Conner, EMD
Town of Stratham, NH	David Barr, EMD
Business Community	**Contact Person**
Darren Winham	Economic Development Director, Town of Exeter

Public notices about the Plan Update meetings were posted on the Town website and social media accounts to inform viewers and followers about meetings and opportunities to comment on the Plan. Notice about the Plan Update process was also posted on the Rockingham Planning Commission's website and published in the RPC's monthly newsletter. The newsletter is distributed to local officials in the 27-town RPC region. All Plan Update meetings were open to the public. RPC staff facilitated the Plan Update Committee meetings, guided the plan update process, and prepared the Plan Update.

Fire

- About
- Health Department
- Emergency Management
- Message from Fire Chief
- Covid-19
- Fire Department Forms
- Latest News

FOLLOW US

CONTACT INFORMATION

Hazard Mitigation Plan Update Meeting

Calendar Date:
Thursday, July 20, 2023 - 9:00am
Add to your calendar: Outlook (iCal) - Google

The Town of Exeter is working with the Rockingham Planning Commission to update the Town's Hazard Mitigation Plan. A meeting to review and discuss hazards impacting Exeter and identify strategies to mitigate the impacts of natural hazards will be held July 20th at 9am at the Exeter Fire Department. The public is welcome to attend. For more information, contact Fire Chief Eric Wilking at ewilking@exeternh.gov.

DIRECTIONS

Exeter Department
20 Court Street
Exeter, NH
See map: Google Maps

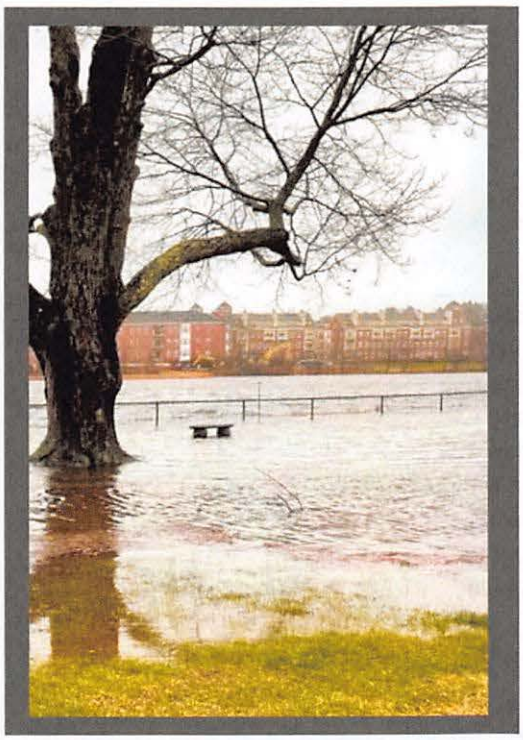
RPC Begins Updates to Hazard Mitigation Plans in Four Communities

NH Homeland Security and Emergency Management has awarded FEMA grant funds to the RPC to work with the towns of Exeter, Newington, Hampton Falls, and North Hampton on updates to their Hazard Mitigation Plans. These Plans will include actions to mitigate and reduce the risks and impacts of natural hazards on people and property. Residents, landowners, business owners, municipal officials and other members of the public are welcome to attend plan update meetings. Please contact Theresa Walker, RPC Consulting Planner, for information on meeting dates, or to share comments or questions. theresawalker@comcast.net

Town of Exeter, NH Business Outreach

Hello Exeter Business!

I wanted to pass along information relating to two projects the Town is working on with the Rockingham Planning Commission (The RPC) in the hopes that you can help us with your feedback and participation.



Hazard Mitigation Plan Update

The Town of Exeter is updating the Town's Hazard Mitigation Plan and welcomes review and comment from the community. FEMA requires every municipality in the country to develop and maintain a Hazard Mitigation Plan to identify and evaluate the risks posed by natural hazards, such as flooding and extreme temperatures.

Feedback on the plan can be shared with Fire Chief Justin Pizon at jpizon@exeternh.gov.

Learn more about the Town's Hazard Mitigation Plan

Read the DRAFT 2024 Hazard Mitigation Update

View related Hazard Mitigation Maps

Meeting Date	Meeting Agenda	Meeting Participants
May 23, 2023 Plan Update Committee	Review Plan Update process with Town Department heads and other stakeholders	Plan Update Committee: Greg Bisson, Parks and Recreation Director, Town of Exeter Stephen Dalton, Interim Water and Sewer Manager, Town of Exeter Russell Dean, Town Manager, Town of Exeter Doug Eastman, Building Inspector, Town of Exeter Rich Kane, Coordinator of School Safety and Security, SAU 16 Ray Leblanc, Exeter Hospital Emergency Management Josh McCain, Deputy Police Chief, Town of Exeter Kristen Murphy, Natural Resource Planner, Town of Exeter James Murray, Health Office, Town of Exeter Justin Pizon, Assistant Fire Chief/Assistant EMD, Town of Exeter Stephen Poulin, Police Chief, Town of Exeter Dave Sharples, Town Planner, Town of Exeter Paul Vlasich, Interim Director, Public Works, Town of Exeter Eric Wilking, Fire Chief/EMD, Town of Exeter
July 20, 2023 Plan Update Committee	Review 2018 Plan; discuss and update community profile and natural hazards impacting town; update past and future hazards map; review and update list of critical facilities and existing hazard mitigation programs	Plan Update Committee
September 14, 2023 Plan Update Committee	Review and update newly identified mitigation strategies and actions; prioritize proposed mitigation strategies; complete implementation schedule for priority mitigation strategies; discuss monitoring, evaluating and update the Plan	Plan Update Committee
April 17, 2024	Review draft Plan Update	Eric Wilking, EMD/Fire Chief Justin Pizon, Asst. Fire Chief/Asst. EMD

Appendix P
Approval Letter from FEMA

Public Works – Projects Update

EXETER PUBLIC WORKS DEPARTMENT

13 NEWFIELDS ROAD • EXETER, NH • 03833-3792 • (603) 773-6157 •FAX 772-1355

www.exeternh.gov/publicworks · publicworks@exeternh.gov

TO: Exeter Select Board

FROM: Stephen Cronin, Public Works Director

DATE: June 21, 2024

RE: Public Works Project Updates

The Public Works Department has several projects in various states of design or construction. Please find below a summary of the status of each project.

Sewer Siphons

On Monday, June 10th, the second 12-inch sewer siphon pipe successfully passed a pressure test, thereby completing the river crossing. Work has now transitioned to the final phases of the project. This includes installation of the inlet and outlet control structures, connection to the existing sewer system and Main Pump Station, decommissioning of the existing siphons, and restoration of the Swasey Parkway and Exeter Mills construction sites. The outlet structure was completed on Thursday, June 20th and work has shifted across the river to the Mill site. It is anticipated that installation of the inlet structure will be completed on Saturday, June 22nd. Installation of new sewer main to the Jady Hill and High Street service areas will begin the week of June 24th. The project is on track to be substantially completed by the end of July.

Kingston Road Transportation Alternatives Program Project

The Kingston Road project includes widening of both shoulders along Kingston Road from the bridge over the Little River to Pickpocket Road. Additionally, sidewalks will be extended westerly from the bridge to Tamarind Lane on the south side (Brickyard Park) of the road. Construction activities began the week of April 15th. To date, the first phase of widening has occurred from Tamarind Lane to Pickpocket Road, with the binder course of pavement installed the first week of June. Widening and drainage installation from Tamarind Lane to the bridge is ongoing, with paving of the binder course of the shoulders and sidewalks occurring the week of June 24th. This project is currently on schedule and anticipated to be substantially completed by the end of July.

Webster Avenue Pump Station and Force Main Replacement

A pre-construction meeting with our engineering consultants, NHDES, and the contractor (Northeast Earth Mechanics) was held on April 10th. Equipment and material submittals are currently in the review process. Construction activities are scheduled to begin in mid-July. The first phase of work will include demolition of the existing, and construction of the new, pump

station. This will be followed by the installation of the new force main. This project is anticipated to take two construction seasons, with substantial completion anticipated in Spring 2026.

Septage Receiving Upgrades Project

A contract for the septage receiving equipment was awarded on February 20th and a Purchase Order was issued at the end of March. The Department was notified of the lead time for equipment delivery in early May and authorized the engineering consultant to proceed with issuing a bid for installation services. The bid solicitation period began June 20th, with the public bid opening scheduled for July 22nd.

Intersection Improvements (2023 Article 5) - Columbus Avenue/Winter Street/ Railroad Avenue

The 2021 Exeter Intersection Evaluations Study by VHB provided three options for improvements to this intersection. Based on the low crash history, and to better understand the impacts of the nearby Brentwood Road intersection improvements, it was recommended that the Town consider near-term intersection modifications to address sight distance and turning movements. The contractor, Bell & Flynn, began work the week of April 29th and completed construction the week of June 3rd.

Intersection Improvements (2023 Article 5) – Front Street/Pine Street/ Linden Street

The Department continues to advance the design of a roundabout for the intersection, as recommended in the 2021 Exeter Intersection Evaluations Study. We are currently on the fourth design concept and working with abutters to minimize property impacts. Recent inspections of the sewer and drainage systems have determined that they are beyond rehabilitation. The Department will be requesting funding through the 2025 CIP process for replacement. It is anticipated that construction will occur during the 2025 construction season.

Linden Street Bridge over Exeter River

Construction bids for this project, opened on January 29th, were significantly higher than the existing appropriations. The Town's engineering consultant attempted to secure additional Bridge Aid from NHDOT but was unsuccessful. A request for supplemental funding has been added to the 2025 CIP. If approved, this project would be re-bid in Spring 2025, with construction beginning later in 2025.

Westside Drive Utility Improvements

The Department and its engineering consultant, Underwood Engineers, held a neighborhood meeting in March 2024 to present the 60% design. Several attendees expressed concern with the unprecedented groundwater levels that they had experienced over the winter and asked the Department to conduct additional groundwater level monitoring. The results warranted design modifications that require additional review and approval from NHDES. The Department and

Underwood met with NHDES on June 18th to respond to NHDES' comments on the modifications. We anticipate that the Department will receive final approval to bid the project in October, with the bid opening tentatively scheduled for November 2024. Construction is anticipated to begin in Spring 2024.

Groundwater Source/PEA Well

NHDES approved the Town's Preliminary Application for a Large Groundwater Withdrawal Permit on March 12th. This authorizes the Town to proceed with the development and testing of a proposed well on PEA property, off Drinkwater Road. The Town executed a Letter of Intent – Option to Purchase with PEA on February 23rd and is working to finalize an Option Agreement to secure easements related to the project. Drilling and testing of the new production well will begin in July and is expected to be completed by the end of August. If the source proves to be viable, the Department will proceed with the permitting process. A 2025 CIP request has been added for final design and construction of the well. If approved, design would begin in 2025, with construction of the new well in 2026. A DWSRF Pre-application has been submitted for the project.

Surface Water Treatment Plant Conceptual Design

A Request for Qualifications for conceptual design of a new Surface Water Treatment Plant has been drafted and will be advertised in July.

ARPA Request for PFAS-Free Turnout Gear

EXETER FIRE DEPARTMENT

20 COURT STREET • EXETER, NH • 03833-3792 • (603) 773-6131 • FAX 773-6128

www.exeternh.gov

Advanced Life Support / EMS - Fire Suppression - Health Department - Emergency Management

INTEROFFICE MEMORANDUM

TO: Russ Dean

FROM: A/C Donald Matheson

SUBJECT: ARPA Request for PFAS-Free Turnout Gear

DATE: June 21, 2024

Recent studies have shown that all three layers of firefighter turnout gear contain Per and Polyfluoroalkyl Substances (PFAS), a class of fluorinated chemicals known as "forever chemicals" which have been linked to cancer and other serious health effects. These studies highlight the risks associated with the materials and finishes used in turnout gear even before it is exposed to its first fire. Below are links to two peer-reviewed studies:

https://www.iaff.org/wp-content/uploads/Muensterman-27DEC21-Flourine-FF-gear-002.pdf

https://www.iaff.org/wp-content/uploads/PeasleeStudy.pdf

PFAS are used as a durable water repellent (DWR) finish/coating applied to provide water and oil repellency in accordance with the National Fire Protection Association's 1971 Standards. It is a major component of the moisture barrier within turnout gear.

Studies link PFAS exposure to the development of cancer, and other health effects related to behavioral development, metabolism, and the circulatory, digestive, endocrine, immune, neurological, and reproductive systems.

Expanded polytetrafluoroethylene (ePTFE) moisture barriers still contain and emit PFAS.

Steadair, a moisture barrier manufacturer, recently introduced a PFAS-free moisture barrier. Our members wear their PPE multiple times every day for fire alarm activations, motor vehicle accidents, car fires, hazardous materials incidents, and building fires. Given the scientific data about the toxicity of PFAS, and a high concern for health and safety, changing to PFAS-free PPE will complete our comprehensive cancer prevention program and provide our members with one less stressor in an already stressful occupation

QUOTATION

No. : 214382

BERGERON PROTECTIVE CLOTHING
a limited liability company

1024 Suncook Valley Hwy., Unit 5-D
Epsom NH, 03234
TEL: 603.736.8500
www.BergeronProtectiveClothing.com

Doc. Date : 03/12/2024
Payment Terms : NET30
Valid Until: 06/30/2024
Customer PO:
Salesperson : Nathan Farnham
Page : Page 1 of 2

Bill To

Exeter NH Fire Dept
Chief Erik Wilking
20 Court Street
Exeter NH 03833-2818

Ship To :

Chief Erik Wilking
20 Court Street
Exeter NH 03833-2818

Stedair Clear Moisture Barrier

Quantity	Style	Description	Your Cost
1	1C7	Globe G-Xtreme 3.0 Jacket, Pioneer - FreeFAS Color: Gold Zipper/Velcro closure (Moisture Barrier Contains Pfas)	878.40
1	62	GXT 3.0 Jacket Liner, Glide ICE 2 Layer	497.40
1	L	GXT 3.0 Jacket Moisture Barrier, Stedair Clear	472.80
1	179703G	Scotchlite Triple Trim, NYC 3" Trim Color: Red Orange	164.55
1	197XX3	Scotchlite 3" Letters Per Row Color: RO Location: Row E "EXETER"	25.00
1	197XX3	Scotchlite 3" Letters Per Row Color: RO Location: Row A Add $25 per line to add Rank for Chief offiicers only	
1	N1BA132	Letter Patch, Hanging 5" x 20" Color: Gold	40.04
1	197XX3	Scotchlite 3" Letters Per Row Color: RO Location: Hung Letter Patch Add $25 per name. Add LT before name for Lieutenants	
1	19BA413L	Pocket, #13P-L Radio 2"x 3.5"x 9" Color: Gold Location: Left Chest	52.73
1	19BA564	Self Mic Strap Color: Gold	3.05

*Notice: Products marked as 'Contains PFAS Chemicals' are considered notification; pursuant to NH Law 154:8-c Firefighting PPE. Financing options available on turnout gear purchases. Prices quoted do not include shipping and handling. Shipping is FOB factory. This quote is based on current prices, subject to change by Manufacturer without notice. TERMS NET 30 Days. Add 3% fee when paying via credit card. Exchanges may incur additional handling charges. Late fee 2% per mo. $25 returned check fee MC/ Visa /Discover accepted.

From: BERGERON PROTECTIVE CLOTHING LLC
To: Exeter NH Fire Dept

Document No. : 214382
Doc. Date : 03/12/2024

Quantity	Style	Description		Your Cost
		Location: Above Radio Pocket		
1	1927590	Hanging Strap with Dee Ring		6.56
		Location: Right Chest		
		Top of D-Ring 2 inches from edge of storm flap and (RC2" F/STF 9.5" ABV trim)	9.5 inches above center trim band	
1	19BA546	Sunlance Flashlight Holder		18.27
		Color: Gold		
		Location: Right Chest		
1	190549N	Wristers, Nomex Hand and Wrist Guards		7.57
1	19BA506	Reinforcement, Cuffs, Self Material		4.39
		Color: Gold		
1	N100107E	Embroidered American Flag Right Sleeve		16.72
1	VELRECONLY	Receiving Velcro for Future Sleeve Patch		14.00
		Left Shoulder		
			Subtotal:	**$2,201.48**
1	GC7	Globe GPS IH Pant, Pioneer, FreeFAS		791.40
		Color: Gold		
		With Nomex belt		
		(Moisture Barrier Contains Pfas)		
1	62-IH	GPS IH Pant Thermal Liner, Glide Ice 2Lyr		427.80
1	L-IH	GPS IH Pant Moisture Barrier, Stedair Clear		428.40
1	27903	Scotchlite Triple Trim, 3" Around Cuffs		35.93
1	29DH103	Black Dragon Hide Knees		41.79
1	N2FL102	Silizone Padding in Cathedral Knees		50.59
		Sewn on Liner		
1	29BA109	Self Pant Cuffs		10.22
		Color: Gold		
			Subtotal:	**$1,786.13**

Subtotal	3,987.61
Total	3,987.61

*Notice: Products marked as 'Contains PFAS Chemicals' are considered notification; pursuant to NH Law 154:8-c Firefighting PPE. Financing options available on turnout gear purchases. Prices quoted do not include shipping and handling. Shipping is FOB factory. This quote is based on current prices, subject to change by Manufacturer without notice. TERMS NET 30 Days. Add 3% fee when paying via credit card. Exchanges may incur additional handling charges. Late fee 2% per mo. $25 returned check fee MC/ Visa /Discover accepted.

QUOTATION

No. : 214780

BERGERON PROTECTIVE CLOTHING
a limited liability company

1024 Suncook Valley Hwy., Unit 5-D
Epsom NH, 03234
TEL: 603.736.8500
www.BergeronProtectiveClothing.com

Doc. Date : 05/27/2024
Payment Terms : NET30
Valid Until: 11/30/2024
Customer PO:
Salesperson : Nathan Farnham
Page : Page 1 of 2

Bill To

Exeter NH Fire Dept
Chief Erik Wilking
20 Court Street
Exeter NH 03833-2818

Ship To :

Chief Erik Wilking
20 Court Street
Exeter NH 03833-2818

Prices are based on a minimum order of 35 sets of turnout gear

Quantity	Style	Description	Your Cost
1	1C7LMB	Globe G-Xtreme 3.0 Jacket, Pioneer, FreeFAS Color: Gold Trim Color: Red Orange Titanium SL2 Stedair Clear moisture Barrier NYC Triple Trim 3" R/O R/O 3" Scotchlite Letters Row E "EXETER" Hung Letter Patch Snaps/Velcro 5x20 Fleece and handwarmer Kevlar backed Pockets Self Sunlance Flashlight Holder Right Chest Hanging Strap W D-Ring Right Chest Above Sunlance Radio Pocket 2x3.5x9 Left Chest Mic Strap Left Chest above Radio Pocket US Flag Embrodiery Right Sleeve Nomex Hand and Wrist guard Self Cuff Reinforcement	1,993.06
1	197XX3	Scotchlite 3" Letters Per Row Color: RO Location: Row A Add $25 per row Rank for Chief Officers Only	
1	197XX3	Scotchlite 3" Letters Per Row Color: RO Location: Hung Letter Patch Add $25 to add Name to hung letter patch Add LT before last name	
		Subtotal:	**$1,993.06**
1	GC7LMB	Globe GPS IH Pant, Pioneer, FreeFAS	1,628.49

*Notice: Products marked as 'Contains PFAS Chemicals' are considered notification; pursuant to NH Law 154:8-c Firefighting PPE. Financing options available on turnout gear purchases. Prices quoted do not include shipping and handling. Shipping is FOB factory. This quote is based on current prices, subject to change by Manufacturer without notice. TERMS NET 30 Days. Add 3% fee when paying via credit card. Exchanges may incur additional handling charges. Late fee 2% per mo. $25 returned check fee MC/ Visa /Discover accepted.

From: BERGERON PROTECTIVE CLOTHING LLC
To: Exeter NH Fire Dept

Document No. : **214780**
Doc. Date : 05/27/2024

Quantity	Style	Description	Your Cost
		Color: Gold Trim Color: Red Orange Titanium SL2 Stedair Clear Moisture Barrier Triple Trim Around Cuff R/O Velcro Closure Wide belt loops Nomex belt IH Rope Pocket Left side Self Cuff Reinforcement Dragonhide Knee Silizone Knee Pads H Back Suspenders	

Subtotal	3,621.55
Total	3,621.55

*Notice: Products marked as 'Contains PFAS Chemicals' are considered notification; pursuant to NH Law 154:8-c Firefighting PPE. Financing options available on turnout gear purchases. Prices quoted do not include shipping and handling. Shipping is FOB factory. This quote is based on current prices, subject to change by Manufacturer without notice. TERMS NET 30 Days. Add 3% fee when paying via credit card. Exchanges may incur additional handling charges. Late fee 2% per mo. $25 returned check fee MC/ Visa /Discover accepted.

Tax Abatements, Veteran's Credits, Exemptions

Permits & Approvals

EXETER PUBLIC WORKS DEPARTMENT

13 NEWFIELDS ROAD • EXETER, NH • 03833-3792 • (603) 773-6157 •FAX 772-1355

www.exeternh.gov/publicworks · publicworks@exeternh.gov

TO: Exeter Select Board

FROM: Stephen Cronin, Public Works Director

DATE: June 21, 2024

RE: Epping Road Near-Term Improvements Contract Awards

SUGGESTED MOTION:

Motion to award a contract to Severino Trucking, Co. for the construction of Epping Road Near-Term Improvements in the amount of $800,000, and to amend the existing contract with VHB to include construction phase engineering services in the amount of $69,900.

VHB was contracted in April 2021 to design the Near-Term Improvements to Epping Road as outlined in the Corridor Study: Epping Road (NH Route 27), dated December 2020. The location of these improvements will be from the Continental Road signalized intersection to Route 101. The project generally entails widening the roadway for center turn lanes, adding sidewalks, and improving the drainage utility.

In May 2023, with the approval of the Town Manager, Severino Trucking Co., Inc. partnered with the Town and design consultant to provide suggestions for constructability and cost saving perspectives. Of concern were: the shallow drainage pipes conflicting with a large gas main; flat road profiles and a pinch point in the available right-of-way. In July 2023 a project cost was negotiated for $1,421,572. This approach had been previously used successfully in 2018/2019 for the TIF utility extensions and the TIF Epping Rd/Continental Dr signalization projects.

However, the total cost of the project, as negotiated, exceeded the amount authorized under 2020 Article 24: Epping Road Tax Increment District Financing Plan Amendment (dated January 7, 2020). The contractor has agreed to hold the estimated unit costs, allowing the Town to proceed with a phased approach to the project. The Department recommends the award of construction for the reduced construction to Severino Trucking Co., Inc. in the amount of $800,000. The initial phase will widen the roadway and install the required drainage. Sidewalks and finish paving will be a later phase. If approved, construction will start in July and this phase will be substantially complete by mid-October 2024.

A construction administration and inspection contract amendment is required with the designers of the project, VHB. The department recommends the approval of the VHB amendment for $69,900.

As part of the project, a large gas main will need to be relocated. Several utility poles have already been moved in preparation for the next phase of construction. Additionally, the Seabrook Station siren has been relocated and wetlands permits have been secured.

It is anticipated that another amendment to the Epping Road Tax Increment District Financing Plan will be proposed in 2025 to fund the next phase of construction.

TOWN OF EXETER

NEW HAMPSHIRE

EPPING ROAD (NH27)
TRANSPORTATION IMPROVEMENTS
CONTINENTAL DRIVE TO CRONIN ROAD

NON-TRANSFERABLE: Severino Trucking Co. Inc.
Contractor

CONTRACTOR'S BASE BID TOTAL: $ $ 800,000.00

Designed By: Vanasse Hangen Brustlin, Inc.
Kilton Road
2 Bedford Farms Drive Suite 200
Bedford, NH 03110

For: Town of Exeter

June, 2024

SEVERINO
TRUCKING CO. INC.
P.O. Box 202 512 Raymond Road Candia, NH
Phone: 603-483-2133 www.severinotrucking.com Fax: 603-483-2998

To:	Town Of Exeter	**Contact:**	Paul Vlasich
Address:	Public Works Department, 10 Front Street	**Phone:**	
	Exeter, NH 03833	**Fax:**	
Project Name:	Epping Road Improvements - Phased 2024-2025	**Bid Number:**	2
Project Location:	Epping Road, Exeter, NH	**Bid Date:**	5/10/2024

Item #	Item Description	Estimated Quantity	Unit	Unit Price	Total Price
Preliminary Work - 2024					
201.1	ROADSIDE CLEARING AND GRUBBING	1.00	LS	$11,500.00	$11,500.00
202.7	REMOVAL OF GUARDRAIL	250.00	LF	$10.00	$2,500.00
203.1	COMMON EXCAVATION	5,000.00	CY	$27.00	$135,000.00
203.5554	GUARDRAIL 50' EAGRT PLATFORM	1.00	UNIT	$2,800.00	$2,800.00
203.6	EMBANKMENT-IN-PLACE	1,100.00	CY	$31.00	$34,100.00
214	FINE GRADING	0.40	UNIT	$60,000.00	$24,000.00
304.4	CRUSHED STONE (FINE GRADATION)	2,100.00	CY	$45.00	$94,500.00
585.3	STONE FILL, CLASS C	450.00	CY	$43.00	$19,350.00
592.1	MECHANICALLY STABILIZED EARTH RETAINING WALL	120.00	SF	$85.00	$10,200.00
593.211	GEOTEXTILE; SEPARATION CL. 1, NON-WOVEN	1,225.00	SY	$2.00	$2,450.00
603.00312	12" R.C. PIPE, 3000D	424.00	LF	$182.00	$77,168.00
603.00315	15" R.C. PIPE, 3000D	48.00	LF	$204.00	$9,792.00
603.30112	12" R.C. END SECTIONS	1.00	EACH	$930.00	$930.00
603.81012	12" PVC PIPE	14.00	LF	$252.00	$3,528.00
604.0007	POLYETHYLENE LINER	12.00	EACH	$267.00	$3,204.00
604.12	CATCH BASINS TYPE B	12.00	UNIT	$6,700.00	$80,400.00
604.32	DRAINAGE MANHOLES	1.00	UNIT	$6,500.00	$6,500.00
604.325	DRAINAGE MANHOLES, 5-FOOT DIAMETER	2.00	UNIT	$7,400.00	$14,800.00
604.4	RECONSTRUCTING/ADJUSTING CATCH BASIN & DROP INLET	2.00	EACH	$418.00	$836.00
604.51	RECONSTRUCTING/ADJUSTING SEWER MANHOLES	9.00	EACH	$438.00	$3,942.00
604.52	RECONSTRUCTING/ADJUSTING DRAINAGE MANHOLES	1.00	EACH	$418.00	$418.00
606.417	PORTABLE CONCRETE BARRIER FOR TRAFFIC CONTROL	1,200.00	LF	$30.00	$36,000.00
606.9513	TEMP. IMPACT ATTENUATION DEVICE (REDIRECTIVE), TEST LEVEL 3	1.00	UNIT	$4,025.00	$4,025.00
611.811	ADJUSTING/RELOCATING HYDRANTS	1.00	EACH	$4,100.00	$4,100.00
618.61	UNIFORMED OFFICERS WITH VEHICLE	50.00	HR	$115.00	$5,750.00
618.7	FLAGGERS	800.00	HR	$81.00	$64,800.00
619.1	MAINTENANCE OF TRAFFIC	0.50	UNIT	$20,000.00	$10,000.00
619.25	PORTABLE CHANGEABLE MESSAGE SIGN	1.00	UNIT	$3,450.00	$3,450.00
645.512	COMPOST SOCK FOR EROSION AND SEDIMENT CONTROL	3,000.00	LF	$11.00	$33,000.00
645.531	SILT FENCE	3,000.00	LF	$4.00	$12,000.00
646.51	TURF ESTABLISHMENT WITH MULCH, TACKIFIERS AND LOAM	2,200.00	SY	$24.00	$52,800.00
692	MOBILIZATION	0.60	UNIT	$106,000.00	$63,600.00
			Total Price for above Preliminary Work - 2024 Items:		**$827,443.00**

ESTIMATE

Item #	Item Description	Estimated Quantity	Unit	Unit Price	Total Price
Project Completion - 2025					
214	FINE GRADING	0.60	UNIT	$60,000.00	$36,000.00
304.32	CRUSHED GRAVEL FOR SHOULDER LEVELING	32.00	CY	$102.00	$3,264.00
403.11	HOT BITUMINOUS PAVEMENT, MACHINE METHOD	744.00	TON	$117.00	$87,048.00
403.12	HOT BITUMINOUS PAVEMENT, HAND METHOD	480.00	TON	$178.00	$85,440.00
403.6	PAVEMENT JOINT ADHESIVE	6,000.00	LF	$0.35	$2,100.00
411.1	HOT BITUMINOUS CONCRETE LEVELING COURSE	288.00	TON	$123.00	$35,424.00
417	COLD PLANING BITUMINOUS SURFACES	9,400.00	SY	$2.60	$24,440.00
520.1	CONCRETE CLASS A	1.00	CY	$1,550.00	$1,550.00
544.1	REINFORCING STEEL (ROADWAY)	11.00	LB	$7.00	$77.00
604.62	DRAINAGE MANHOLE COVERS AND FRAMES	2.00	EACH	$906.00	$1,812.00
606.12551	BEAM GUARDRAIL (TERM. UNIT TYPE EAGRT TL 2) (STEEL POST)	1.00	UNIT	$3,750.00	$3,750.00
606.127	BEAM GUARDRAIL (TERM. UNIT TYPE G-2) (STEEL POST)	2.00	UNIT	$1,440.00	$2,880.00
606.18001	BEAM GUARDRAIL (STANDARD SECTION) (STEEL POST)	1,063.00	LF	$33.00	$35,079.00
606.91	RESETTING OR SETTING GUARDRAIL	225.00	LF	$20.00	$4,500.00
608.13	3" BITUMINOUS SIDEWALK	700.00	SY	$30.00	$21,000.00
608.24	4" CONCRETE SIDEWALK	110.00	SY	$63.00	$6,930.00
608.54	DETECTABLE WARNING DEVICES, CAST IRON	4.00	SY	$518.00	$2,072.00
609.01	STRAIGHT GRANITE CURB	1,390.00	LF	$45.00	$62,550.00
609.02	CURVED GRANITE CURB	116.00	LF	$57.00	$6,612.00
609.216	STRAIGHT GRANITE SLOPE CURB 6" HIGH	102.00	LF	$26.00	$2,652.00
611.90001	ADJUSTING WATER GATES AND SHUTOFFS SET BY OTHERS	14.00	EACH	$700.00	$9,800.00
615.0301	TRAFFIC SIGN TYPE C	58.00	SF	$110.00	$6,380.00
615.0601	TRAFFIC SIGN TYPE CC	13.00	SF	$29.00	$377.00
618.61	UNIFORMED OFFICERS WITH VEHICLE	50.00	HR	$115.00	$5,750.00
618.7	FLAGGERS	550.00	HR	$81.00	$44,550.00
619.1	MAINTENANCE OF TRAFFIC	0.50	UNIT	$20,000.00	$10,000.00
619.25	PORTABLE CHANGEABLE MESSAGE SIGN	1.00	UNIT	$3,450.00	$3,450.00
621.31	SINGLE DELINEATOR WITH POST	20.00	EACH	$87.00	$1,740.00
622.1	STEEL WITNESS MARKERS	7.00	EACH	$110.00	$770.00
628.2	SAWED BITUMINOUS PAVEMENT	3,500.00	LF	$4.00	$14,000.00
632.0104	RETROREFLECTIVE PAINT PAVE. MARKING, 4" LINE	7,800.00	LF	$1.50	$11,700.00
632.3112	RETROREFLECT. THERMOPLAS. PAVE. MARKING, 12" LINE	250.00	LF	$7.50	$1,875.00
632.3118	RETROREFLECT. THERMOPLAS. PAVE. MARKING, 18" LINE	90.00	LF	$11.50	$1,035.00
632.32	RETROREFLECT. THERMOPLAS. PAVEMENT MARKING, SYMBOL OR WORD	22.00	EACH	$426.00	$9,372.00
692	MOBILIZATION	0.40	UNIT	$106,000.00	$42,400.00
1008.11	ALTERATIONS AND ADDITIONS AS NEEDED-UNANTICIPATED WORK	1.00	DLR	$4,600.00	$4,600.00
1010.2	ASPHALT CEMENT ADJUSTMENT	1.00	DLR	$1,150.00	$1,150.00
	Total Price for above Project Completion - 2025 Items:				**$594,129.00**

Total Bid Price: $1,421,572.00

Notes:

- Pricing based on plans by VHB dated July 7, 2023.
  Pricing based on liquid asphalt index of $637.50/liquid ton.

Exclusions:

SWPP Plan & Monitoring.
Ledge, unsuitable & contaminated material excavation testing & disposal.
Geotechnical testing.
P.E. Stamped as-built drawing. (as-builts will be provided).

ACCEPTED: The above prices, specifications and conditions are satisfactory and are hereby accepted. **Buyer:** _____ **Signature:** _____ **Date of Acceptance:** _____	**CONFIRMED:** **Severino Trucking Co., Inc** **Authorized Signature:** _____ **Estimator:** Thomas Severino

June 21, 2024

Ref: 52776.00

Mr. Paul Vlasich
Town of Exeter
13 Newfields Road
Exeter, NH 03833

Email:
pvlasich@exeternh.gov

Re: Epping Road (NH Route 27) – 2024 Construction Phase Services
Exeter, New Hampshire

Dear Mr. Vlasich,

Following is an amendment to the existing Epping Road (NH Route 27) design contract between the Town of Exeter and VHB dated March 21, 2021. The work under this amendment is for VHB to provide construction phase support to the Town as described below.

Scope of Services:

VHB will perform the following construction phase services on behalf of the Town of Exeter.

Preconstruction Conference & Neighborhood Meeting

VHB will prepare for and attend the pre-construction meeting with the Contractor and the Town. To facilitate an efficient use of all parties' time, VHB will request the following information be supplied by the Contractor at or prior to this meeting:

- Name of Contractor's person-in-charge and contact information
- Any subcontractors' names and contact information
- Contractor's anticipated schedule of milestones
- Contractor's proposed approach to construction phasing and traffic control

During this meeting, VHB will outline general requirements regarding materials testing and construction observation procedures. Traffic control, utility coordination, environmental requirements and any other special requirements will be covered during the meeting. If requested by the Town VHB will present the project at a locally held neighborhood meeting to disseminate project information and receive public input.

The estimated labor cost for this task is **$2,000**.

2 Bedford Farms Drive
Suite 200
Bedford, New Hampshire 03110
P 603.391.3900
F 603.518.7495

Submittal Reviews

This project involves very few components requiring shop drawings, such as drainage structures, castings, curbing and guardrail. VHB will review shop drawings and manufacturer's catalog cut submittals from the Contractor for general conformance to the VHB and/or NHDOT plans and specifications. This review shall not include review of the accuracy or completeness of details, such as quantities, dimensions, weights or gauges, fabrication processes, construction means or methods, coordination of the work with other trades, or construction safety precautions, all of which are the sole responsibility of the contractor and other unrelated parties. VHB shall not be responsible for any deviations from VHB's documents or other documents which are not brought to the attention of VHB in writing by the Contractor.

The Contractor will be responsible for supplying materials that are in conformance with the contract specifications including standard NHDOT material specifications. An allowance for materials testing is included in this contract to ensure that the materials and workmanship comply with the specifications. When testing is required VHB will subcontract with a qualified testing firm acceptable to the Town.

The estimated labor cost for this task is **$2,000**.

Construction Observation

VHB will observe the progress and work completed by the Contractor. VHB will become generally familiar with all work in progress and determine, in general, if the work is proceeding in accordance with the approved plans and applicable specifications. VHB will provide "part time" construction observation services on the basis of Town direction as the work progresses. This will include presence at the construction site on days when the Contractor is working. These visits may be brief or all day, depending on the nature of the work.

Because the Epping Road corridor experiences high traffic volumes and because the project is close to the NH Route 101 interchange it will be important for the VHB representative to be present when construction operations are impacting the flow of traffic to ensure the Contractor is following traffic control protocols.

VHB shall not supervise or have control over the Contractors' work nor have any responsibility for construction ways, means, methods, techniques, sequences, or procedures selected by the contractor nor for the Contractors' safety precautions or programs in connection with the Work.

VHB will coordinate work schedules directly with the Contractor on a weekly and daily basis. Based on our understanding of this project we assume the work will not require full time coverage, and the Town has indicated that for budgetary reasons Town staff will be available to conduct observation services at times to relieve VHB personnel from the site. For budgeting purposes, we have assumed an 12-week construction period and partial coverage by one engineer with periodic visits and/or assistance from VHB's design project manager.

VHB will provide administration and construction observation services during construction. The duties shall generally include:

- Performing on-site construction observation and reporting results to the Town.
- Advising the Town on progress and providing construction notes and photos.
- Reviewing requests for payment from the Contractor and providing recommendations to the Town for reimbursement. VHB will track approximate construction quantities as the project progresses but will not be measuring exact quantities in the field.
- Preparing change orders.

Administration or office engineering shall include change orders, daily logs, and extra work orders. The estimated hours during construction for overall construction observation services are shown below. The hours and associated costs for the construction phase services are based upon an estimated construction timeframe which includes project startup and closeout by VHB.

Neither the professional activities of VHB nor the presence of VHB or its employees or subconsultants at a project site shall relieve the other parties on this project of their obligations, duties and, including but not limited to, construction means, methods, sequence, techniques, or procedures necessary for performing, superintending, and coordinating the Work in accordance with the contract documents and any health or safety precautions required by any regulatory agencies. VHB and its personnel have no authority to exercise any control over any construction Contractor or its employees in connection with their work or any health or safety programs or procedures. The Client agrees that the Contractor shall be solely responsible for job site safety and warrants that this intent shall be carried out in the Client's contract with the Contractor.

The Contractor will be responsible for laying out the work in the field according to the design plans. If required, VHB will provide electronic design files of the proposed finished improvements for use by the Contractor at their own risk to supplement the construction staking and layout information contained in the plans.

VHB will provide construction observation logs, photos, field measurements, and meeting memos. For each day VHB makes a site visit, a construction observation log will be provided. The logs will be prepared by the VHB field representative and will include information such as the following:

- Weather
- Operations that are in progress
- Information affecting overall progress of the work
- Completeness of various phases of work
- Record of discussions with Contractor and any actions taken as a result
- Records of any delays

- Records of any visitors to the site
- Records of any accidents

For the purposes of this agreement, the following hours have been assumed considering an estimated project duration of up to 12 weeks (3 months) for this project:

- Up to 30 hours per week for a Construction Representative to be on site and provide construction observation at $140/hour for up to 12 weeks = **$50,400.**
- Up to 2 hours per week for a Project Manager to provide project and client coordination and attend brief on-site meetings if needed at $250/hour for up to 18 weeks = **$6,000**

Punch List and As-built Drawings

VHB shall conduct a site visit to perform a final inspection of the Work and shall create a punch list, listing any items that VHB deems to not be in conformance with the Contract Documents. VHB will not generate electronic as-built drawings during this first phase but will maintain paper records of field changes so they may be incorporated in electronic as-built drawings that reflect field changes on the contract plans when the overall project in completed in 2025. For budgeting purposes, VHB has assumed up to 20 hours for this task including the inspector and project manager = **$2,000**.

Direct Costs

Expenses are assumed at **$2,500** for the above Construction Administration services. These expenses are primarily to cover travel costs for the inspector from his home to the site and back, and for the project manager to periodically attend site meetings from Bedford, NH.

An allowance of **$5,000** is also included for material testing by an independent testing firm as a subconsultant to VHB. This would primarily include testing roadway base materials and performing compacting tests.

Services Not Included

Should services be required in areas not previously described, VHB will prepare a proposed amendment, at the Client's written request, that contains the scope of services, compensation, and schedule to complete the additional services.

COMPENSATION

VHB will perform the Scope of Services contained in this Agreement on a Time and Materials basis. The estimated Upset Limit for Labor and Expenses for this Scope of Services is $106,360 allocated approximately as follows:

Preconstruction and Public Meetings	$ 2,000
Submittal Reviews	$ 2,000
Construction Observation	$ 56,400

Punch list	$ 2,000
Estimated Labor Total	$62,400
Direct Expenses and Material Testing	$ 7,500
AMENDMENT TOTAL	**$69,900**

VHB shall be reimbursed for expenditures made specifically for the project such as: printing and reprographics; travel and subsistence; shipping, postage, etc. These direct expenses will be billed at their direct cost. Subconsultants engaged by VHB for this project that are, therefore, under contract to VHB, will be invoiced at their actual cost.

VANASSE HANGEN BRUSTLIN, INC. AUTHORIZATION

By:____

Title:____

Date:____

CLIENT AUTHORIZATION

TOWN OF EXETER, NEW HAMPSHIRE agrees with the above Scope of Services and Compensation. Upon execution, this amendment is subject to all terms, conditions and provisions of the original contract.

By:____

Title:____

Date:____

TOWN OF EXETER

Planning and Building Department

10 FRONT STREET • EXETER, NH • 03833-3792 • (603) 778-0591 •FAX 772-4709

www.exeternh.gov

Date: **June 13, 2024**

To: **Russ Dean, Town Manager**

From: **Doug Eastman, Building Inspector/Chairman E911**

Re: **E 911 Recommendations for Street Names & Street Addressing**

I'm writing this memorandum after the E911 Committee voted to recommend a new street name for a new public street (cul-de-sac) being created off of Watson Road for a recently approved 12-lot subdivision on the former Carlisle property at 19 Watson Road (Tax Map Parcel #33-26).

The recommendation action is outlined below with a brief description of why the decision was made. I have enclosed a map which illustrates the recommendation.

Recommendation: **To name the newly created public street providing access to a 12-lot subdivision off of Watson Road as "Signature Circle"; and to number the proposed dwelling(s) accordingly in compliance with Chapter 14 of the Town Ordinance, as depicted on the attached map dated 06/11/24.**

Analysis: This is not a name change but assignment of a name for a newly created public street (cul-de-sac) providing access to a new 12-lot subdivision off of Watson Road. The name, "Signature Circle" was proposed by the new property owner, StoneArch Development (John O'Neill) and the proposed name meets the Town ordinance criteria.

Summary:

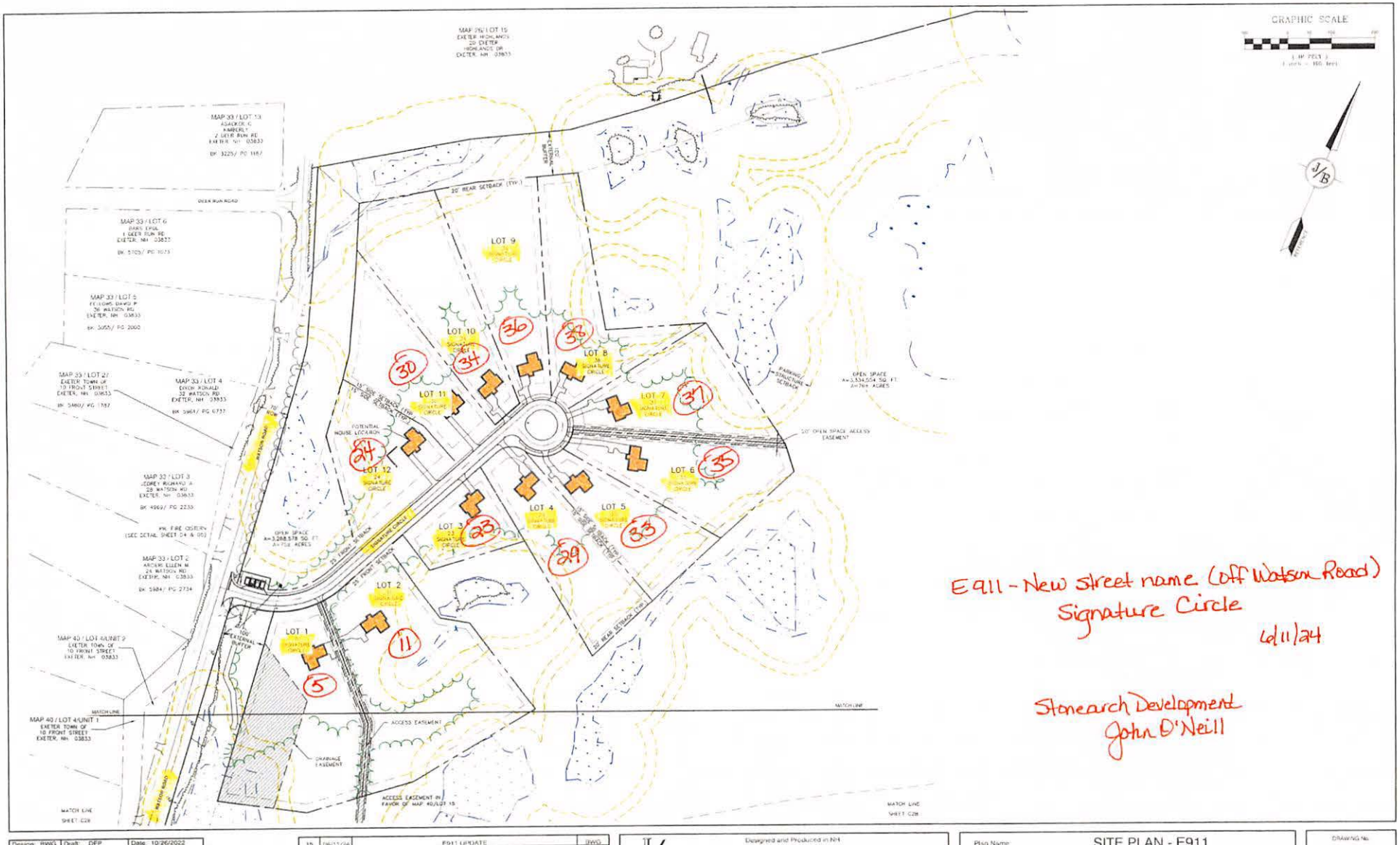
The E911 Committee is advisory and only the Select Board can approve new street names and change street names. In accordance with Chapter 14, the Select Board will have to hold a public hearing on the recommendations prior to taking any action.

I am requesting that this matter be placed on the Select Board's June 24th, 2024 meeting agenda for consideration. The Building Department will provide the required certified notification to all property owners with the date and time of the public hearing. An E911 Committee representative will be present at the meeting to answer any questions.

Thank you.

Enclosure – 1

cc: Jason Fritz, Deputy Fire Chief



E911 - New street name (off Watson Road)
Signature Circle

6/11/24

Stonearch Development
John O'Neill

Design: BWG	Draft: DFP	Date: 10/26/2022
Checked: BWG	Scale: AS-NOTED	Project No.: 19102
Drawing Name: 19102-PLAN.dwg		

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM JONES & BEACH ENGINEERS, INC. (JBE). ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO JBE.

REV.	DATE	REVISION	BY
15	06/11/24	E911 UPDATE	BWG
14	11/10/23	UPDATED WETLAND FLAGS	BWG
13	04/24/23	DRAINAGE REVISION PER TOWN ENGINEER	BWG
12	03/23/23	DRAINAGE REVISION PER TOWN ENGINEER	BWG
11	01/02/23	REVISED PER FINAL SUBMITTAL	BWG

Designed and Produced in NH
J/B Jones & Beach Engineers, Inc.
Civil Engineering Services
85 Portsmouth Ave.
PO Box 219
Stratham, NH 03885
603-772-4746
FAX: 603-772-0227
E-MAIL: JBE@JONESANDBEACH.COM

Plan Name:	SITE PLAN - E911
Project:	TAX MAP 33 LOT 26 19 WATSON ROAD, EXETER, NH
Owner of Record:	SCOTT W. CARLISLE III 14 CASS STREET, EXETER, NH 03833

DRAWING No.
E911
SHEET 1 OF 1
JBE PROJECT NO. 19102

Town Manager's Report

Select Board Committee Reports

Correspondence

Town of Exeter

Pam McElroy <pmcelroy@exeternh.gov>

Fwd: Pickpocket Dam

1 message

Niko Papakonstantis <npapakonstantis@exeternh.gov> Tue, Jun 18, 2024 at 4:00 PM
To: Melissa Roy <mroy@exeternh.gov>, Pam McElroy <pmcelroy@exeternh.gov>

For the packet

---------- Forwarded message ---------
From: **Niko Papakonstantis** <npapakonstantis@exeternh.gov>
Date: Tue, Jun 18, 2024 at 4:00 PM
Subject: Re: Pickpocket Dam
To: Nick Drinker <sndrinker@comcast.net>

Hi Nick,

Thank you for your correspondence. The SB will certainly consider the points you have brought up. The SB will be taking this up next Monday night.

Your letter will be included in our packet.

Respectfully,

Niko

On Tue, Jun 18, 2024 at 2:07 PM Nick Drinker <sndrinker@comcast.net> wrote:

> Dear Niko,
>
> In addition to multiple environmental reasons to eliminate the Pickpocket Dam, it will also save Exeter taxpayers a lot of money.
>
> As you know the state has mandated the dam must be taken down or rebuilt, calling it “a high hazard dam,” and since Exeter owns Pickpocket its taxpayers are fiscally responsible for the project.
>
> You have seen the three options … dam removal, which will cost $1,513,000, raise the dam which will be $3,671,900 or an auxiliary spillway for $3,515,700. These 30-year Life Cycle Costs are from the current Exeter Select Board Pickpocket Dam Feasibility Study and factor initial capital costs, capital replacement fees, operations and maintenance and long range climate change factors.
>
> Safely removing the dam is the least expensive alternative, saving taxpayers over two million dollars. It will also relieve the town of long-term dam maintenance and spare us expensive climate change ramifications.
>
> So I ask the Exeter Select Board to please help us taxpayers by favoring to take out the Pickpocket Dam.
>
> Thank you,
> Nick Drinker
> 26 Franklin Street
> Exeter, NH
>
> 603-686-6409

Town of Exeter

Pam McElroy <pmcelroy@exeternh.gov>

Remove Pickpocket Dam

2 messages

James Breeling <jmsbreeling9@gmail.com> Tue, Jun 18, 2024 at 7:09 PM
To: selectboard@exeternh.gov, pmcelroy@exeternh.gov
Cc: npapakonstantis@exeternh.gov, rdean@exeternh.gov

To the Selectboard Town of Exeter,

I do not yet see an agenda for the upcoming Selectboard meeting on Monday June 24th. However, I would like to convey an opinion for dam removal in case there is discussion of the Pickpocket Dam project.

Since 2004 the State of New Hampshire has seen 39 dam removals, 8 removal projects currently in the works and 9 additional dams being considered for removal. However, the State also counts at least 4800 dams, many in failing condition and posing hazard as well as causing degraded conditions for a variety of aquatic and terrestrial species normally in the New England riparian (river) habitat. Experience has shown that dam removal improves the health of the river and the aquatic habitat. In Rockingham County, the 7 river systems that feed the Great Bay National Estuarine Reserve have drawn the focus of the New Hampshire Rivers Management and Protection program, meaning that dams in any portion of the watershed have serious downstream implications for the health of the Great Bay.

The Pickpocket Dam is currently classified as a 'high hazard' dam by the NH Department of Environmental Services. The long process of developing a Breach Analysis and Dam Feasibility Study is reaching its conclusion and three options (2 for dam repair, one for dam removal) are being considered by the Town's Selectboard. The Town's River Advisory Committee suggests removal as the best option. The Selectboard should have a strong preference for removal of the dam and the restoration of the river's natural flow.

Besides the restoration of the river's natural flow, the cost of dam removal is much less than the cost of dam repair. The ecological benefits are strong enough to prefer dam removal, but if economic benefits are to be considered, the removal of the Pickpocket Dam poses a much lower impact to Exeter taxpayers. Exeter has yet another dam with a NHDES Letter of Deficiency (the Exeter Reservoir dam) and town residents should support the lower cost option of the Pickpocket dam removal, since the Exeter Reservoir dam can only be repaired (it supports the town's water supply). For both reasons, concerned Exeter residents should support removal of the Pickpocket dam.

I wish to draw attention to two attachments that support dam removal - the first being a State of Maine presentation (see page 9 to review a list of dam removal benefits) and second, a UNH Carsey study of NH citizen opinion about dam removal (which finds most citizens preferring dam removal once they have more information about the benefits).

The Exeter River has been a central actor in our region for centuries, stretching back to pre-colonial times. The successful removal of the Exeter Great Dam serves as a shining example of river revitalization, with the exciting return of alewife/herring runs, bald eagles, osprey, and more. Please consider this viewpoint and the attached information as part of the Selectboard's decision process.

Sincerely,

James Breeling
7 Nelson Drive
Exeter, NH 03833
jmsbreeling9@gmail.com
781-775-7978

2 attachments

nrcm_river_restoration.pdf
1785K

What Do We Know About What to Do With Dams_ How Knowledge Shapes.pdf
320K

Niko Papakonstantis <npapakonstantis@exeternh.gov> Tue, Jun 18, 2024 at 9:24 PM
To: Melissa Roy <mroy@exeternh.gov>, Pam McElroy <pmcelroy@exeternh.gov>

For the packet

---------- Forwarded message ---------
From: **Niko Papakonstantis** <npapakonstantis@exeternh.gov>
Date: Tue, Jun 18, 2024 at 9:24 PM
Subject: Re: Remove Pickpocket Dam
To: James Breeling <jmsbreeling9@gmail.com>

Good evening Mr. Breeling,

Thank you for your correspondence. The SB will certainly consider the points you have brought up. The SB will be taking this up next Monday night.

Your letter will be included in our packet.

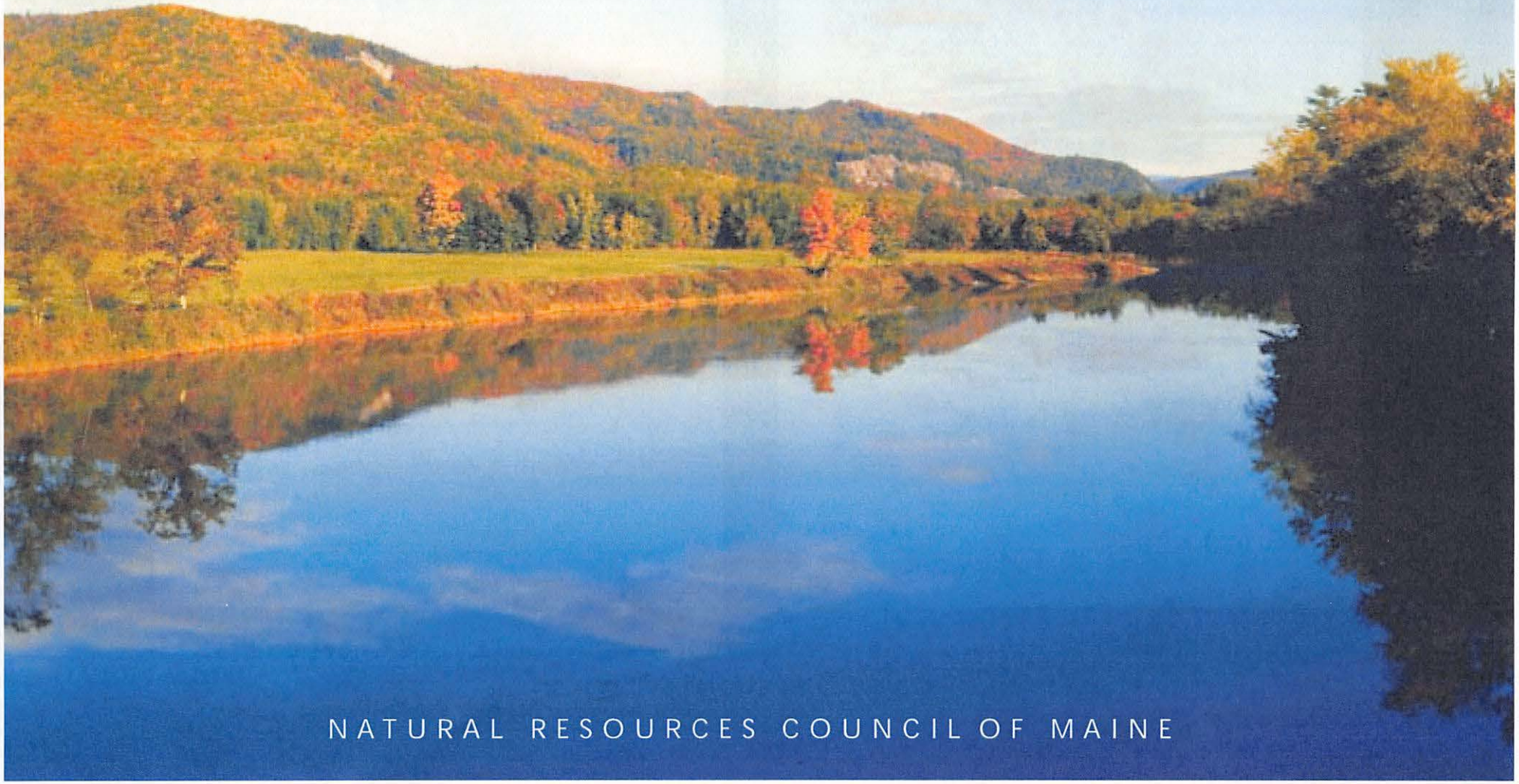
Respectfully,

Niko

[Quoted text hidden]

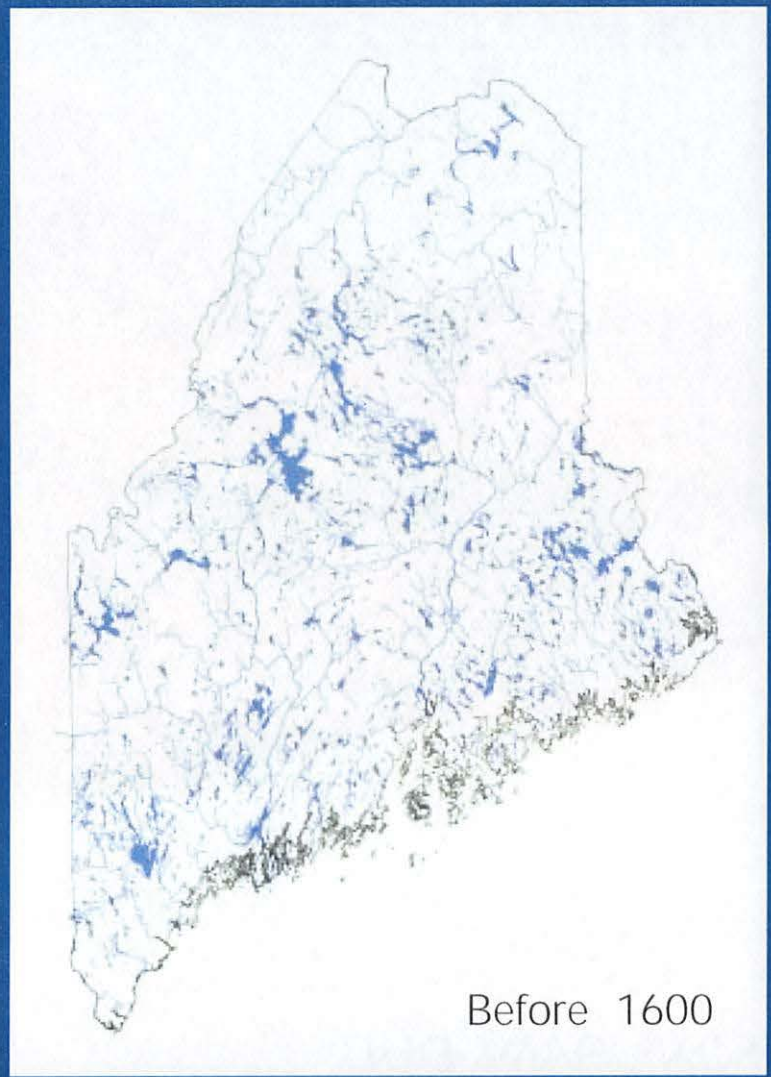
Toward a New Balance in the 21st Century

A Citizen's Guide to Dams, Hydropower, and River Restoration in Maine

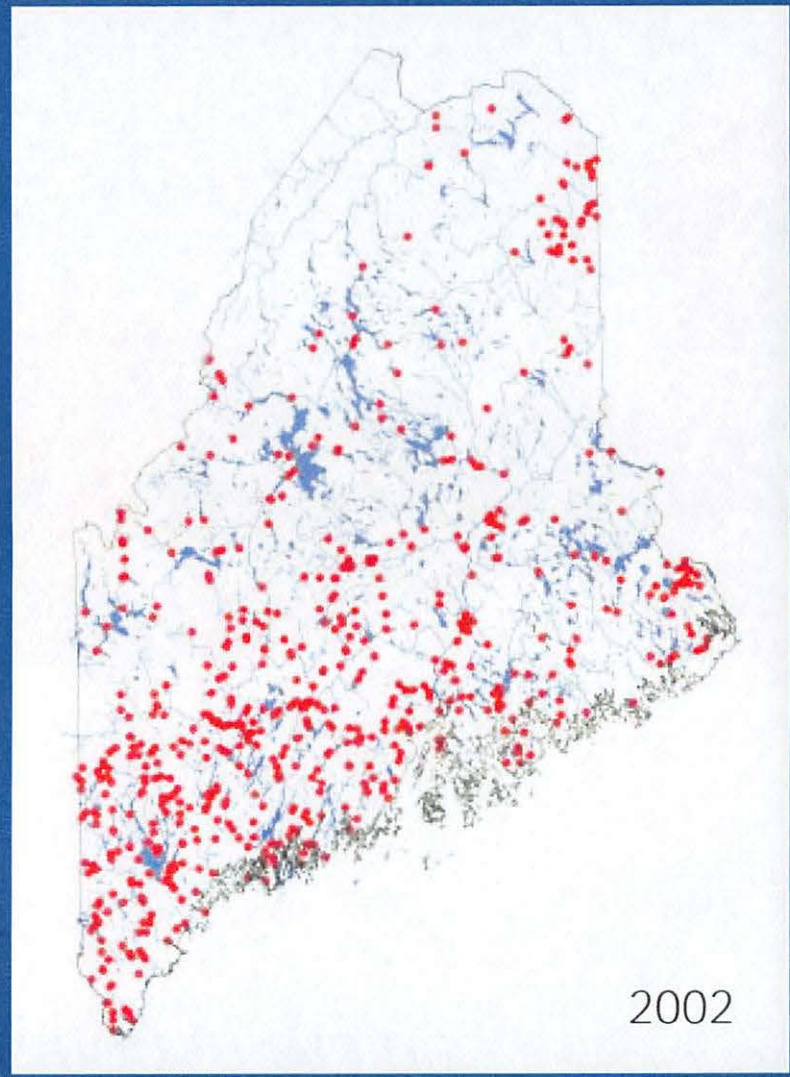


NATURAL RESOURCES COUNCIL OF MAINE

Maine Rivers



Maine Dams



Maine's rivers and streams once flowed freely to the sea, carrying nutrients and allowing unimpeded fish passage deep inland. Today, more than 1000 dams exist on Maine waterways. The 2002 map depicts 649 dams listed in the National Inventory of Dams database, which includes dams with four feet or greater height. Hundreds of smaller dams are not shown on this map.

Toward a New Balance in the 21st Century

A Citizen's Guide to Dams, Hydropower, and River Restoration in Maine

This publication was principally funded by a grant from River Network's Watershed Assistance Program. Additional generous support was provided by the Gilbert and Ildiko Butler Foundation, the French Foundation, the Hillsdale Fund, the Henry P. Kendall Foundation, the Helen and George Ladd Charitable Corporation, Patagonia, Inc., The Pew Charitable Trusts, the Sudbury Foundation, the Sweet Water Trust, the Rau Foundation, the Wallis Foundation, and the members of the Natural Resources Council of Maine.

For information about how you can become a member of the Natural Resources Council of Maine, see the inside back cover.

Editor and Writer: Pete Didisheim

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Managing Editor: Judy Berk

Project Assistants: Jessica Lavin & Tanya Swain

Design: Jill Bock Design

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Paper: Totally chlorine-free

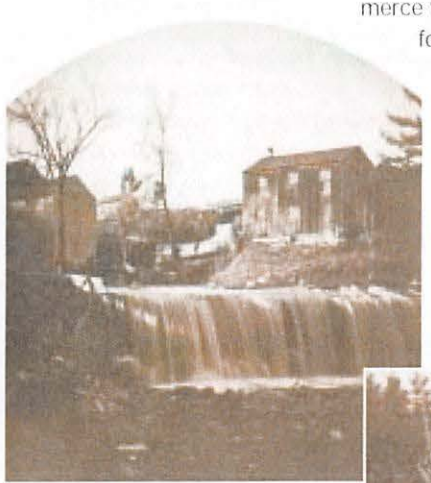
Toward a New Balance in the 21st Century

A Citizen's Guide to Dams, Hydropower and River Restoration in Maine

Maine is interlaced with beautiful and powerful rivers: the Saco, Androscoggin, Kennebec, Penobscot, Allagash, Aroostook, and St. John – to name a few. These and countless other rivers and streams shaped Maine's landscape, nurtured our environment, and provided sustenance for people and wildlife throughout history.

For thousands of years, Maine's rivers have served the many needs of tribal people. They were used as trade routes for commerce with neighboring nations, and as a central spiritual force in their cultures. Most of Maine's rivers have derived their modern names from the tribes that occupied these watersheds.

When European settlers came to Maine, their earliest towns were located along or at the mouths of rivers, which eased transportation to and from the sea. Commercial fisheries flourished on the Kennebec River for fifty years before any significant dams were built on the river. The settlers built dams to capture the power of Maine's rivers for mills and factories. These early forms of business and industry – textiles, saw mills, tanneries – attracted immigrants whose descendants remain a vital cultural feature in our communities to this day.



Above: *Dam on the Little Androscoggin, Norway, Maine, December 1864.*

Right: *Maine's rivers served as highways for moving entire forests to processing plants.*

As highways, Maine's rivers have carried entire forests of timber to processing plants. As ecosystems, they once supported a fisheries industry that sold salmon, sturgeon, and shad to markets around the world. And, before modern pollution controls, Maine's rivers also served as open sewers for carrying untreated human and industrial wastes to the sea.

As we move into the 21st century, the roles of Maine's rivers are changing. They continue to generate a significant amount of electricity, although a declining share compared to other sources of power. Maine's rivers also have become an increasingly important resource for recreation and a defining feature for our way of life.

After suffering extreme pollution for nearly 100 years, the water quality of Maine's rivers has improved considerably – allowing the return and recovery of significant fish populations. Maine residents and visitors alike are spending more time fishing, kayaking, canoeing, rafting, camping, hiking, and picnicking along our rivers – creating economic activity for local communities. Most significantly, Maine towns are reorienting themselves back toward the rivers in their backyards.

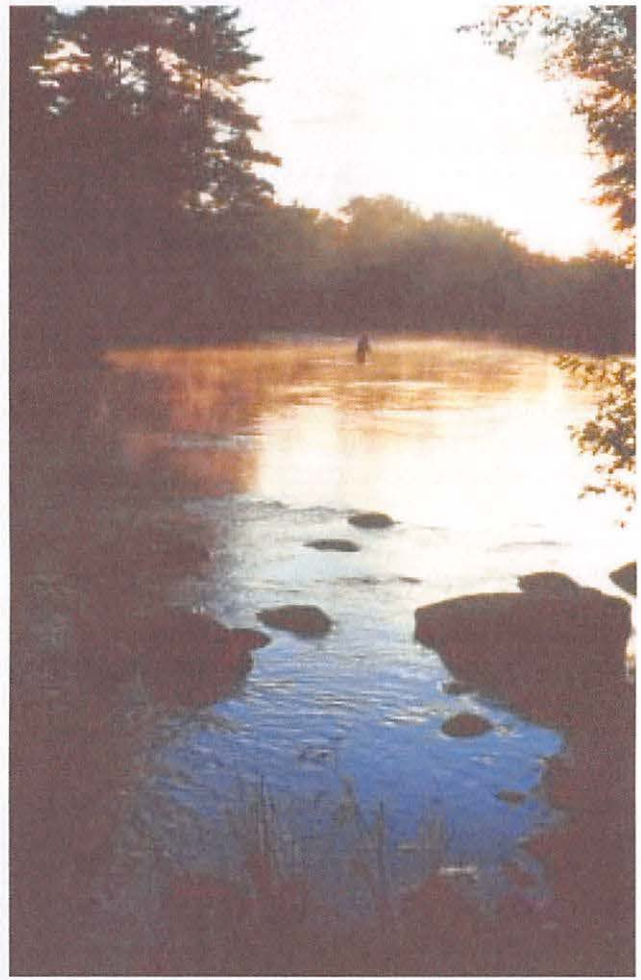
Dams have extensively altered the natural functioning of Maine's rivers and streams. Most of the dams in Maine are small structures, and most dams continue to serve important purposes, whether for electricity, for recreation in their ponds, or in relation to homes that have been built around some of them. Most are likely to remain in place for years to come. However, some have outlived their original design lives. Several dams in Maine have been

Above: *Maine people are rediscovering rivers in Maine that once were so polluted they peeled paint from waterfront homes.*

Right: *Fishing on inland waters in Maine provided an estimated $293 million in annual revenues in 1996.*

removed in recent years, for economic, safety, and environmental reasons. Additional dam removals are under consideration. Most of these projects have received little public attention, yet some have been highly controversial.

The goal of dam removal projects in Maine is to secure a new balance of economic, environmental, and quality of life factors – a balance that is in line with the priorities and realities of our times. This guide provides interested citizens with an overview of some of the issues associated with Maine's rivers and dams, so that you can be an informed participant in discussions about how Maine's rivers can best be shared by people, fisheries, and wildlife for generations to come.



After suffering extreme pollution for over 100 years, the water quality of Maine's rivers has improved considerably – allowing the return and recovery of significant fish populations.

The Dams of Maine

Dams played a critical role in the settling of the United States, in general, and of Maine, in particular. Dams have been built on every major and minor river system in the lower 48 states and are found in every county in the nation. An estimated 2.5 million dams of various sizes span rivers and streams across America; approximately 76,000 of these dams are greater than six feet tall. The exact number of dams in Maine is not known. More than 750 dams greater than two feet high have been registered with the state, but the total number is estimated to exceed 1,000. Only 111 dams in Maine produce electricity.

As European settlers arrived in Maine, they built dams to enhance water supplies and provide mechanical power for sawmills and gristmills. Large dams were built on the Kennebec at Augusta and Waterville, on the Androscoggin at Brunswick and Lewiston, and on the Penobscot at Bangor and Old Town. The number of dams proliferated not just on the major rivers, but on smaller rivers and streams as well. Dams were built almost everywhere in the state where significant falling water could be used to operate a mill.

Dams are now a major fixture of Maine's landscape, even though many dams in Maine no longer serve their original purpose and are no longer used by their original owners. Water stored behind dams is sometimes used for recreation, drinking water supplies, irrigation, fire control and electricity generation.

The dams of Maine also are aging. Dams typically are designed to last 50 years, yet many dams in Maine are older than that. As dams reach the end of their life expectancies nationwide, hundreds of failures have been documented – raising significant safety issues and cost implications.

Of the 617 largest dams in Maine, 23 were identified in 2000 as being "high hazard" dams – in which a dam failure, if it occurred, would likely result in the loss of life.

As dams age, the cost of maintenance and repair work increases. Aging dams also can cause increased insurance liabilities for the dam owner. In Wisconsin, more than 35 small aging dams have been removed in the past 15 years because it was three to five times less expensive, on average, than repairing the dams.

As Maine was settled, dams – such as the Pejepscot Dam (circa 1890) on the Androscoggin River in Topsham – were built on essentially every major river to provide mechanical power to operate mills.

How Dams Work

Ever since the Greeks discovered how to use falling water to turn water wheels for grinding wheat into flour, people have harnessed the energy produced by rivers to make their work easier.

Water is stored behind a dam to allow power producers to manipulate river flow. By holding water back, upstream water levels are higher than downstream. This creates a "hydraulic head" – the difference in height between the surface of a reservoir and the river downstream. The stored water can be channeled through a turbine to generate power.

Left: *Granite blocks from the Union Gas Dam on Messalonskee Stream in downtown Waterville suddenly collapsed in June 2001. To reduce safety risks, the dam's owner, Florida Power and Light, dismantled a large portion of the dam, allowing the river to run through it.*

Below: *Many dams in Maine are aging and in disrepair, such as the Collins Mill Dam on Cobbosseecontee Stream, West Gardiner.*

Above: *This water powered mill in Andover was on the Ellis River, a tributary of the Androscoggin, circa 1930.*

Right: *The Gardiner Paperboard Dam, on Cobbosseecontee Stream in Gardiner, is slated to be removed.*

Dams typically are designed to last 50 years, yet many dams in Maine are older than that.

The Damming of Maine's Rivers

Although Maine's rivers once flowed freely between inland reaches of the state and the sea, dams have turned our rivers into highly fragmented waters – with stretches that are physically and biologically separated from each other. More than 1,000 dams now exist on Maine's 31,000 miles of rivers and streams. The majority of these dams are small, do not generate electricity and do not create a sizable impoundment. However, the dams that are most familiar to Maine people are the ones on our major rivers, shown here.

Salmon Falls River

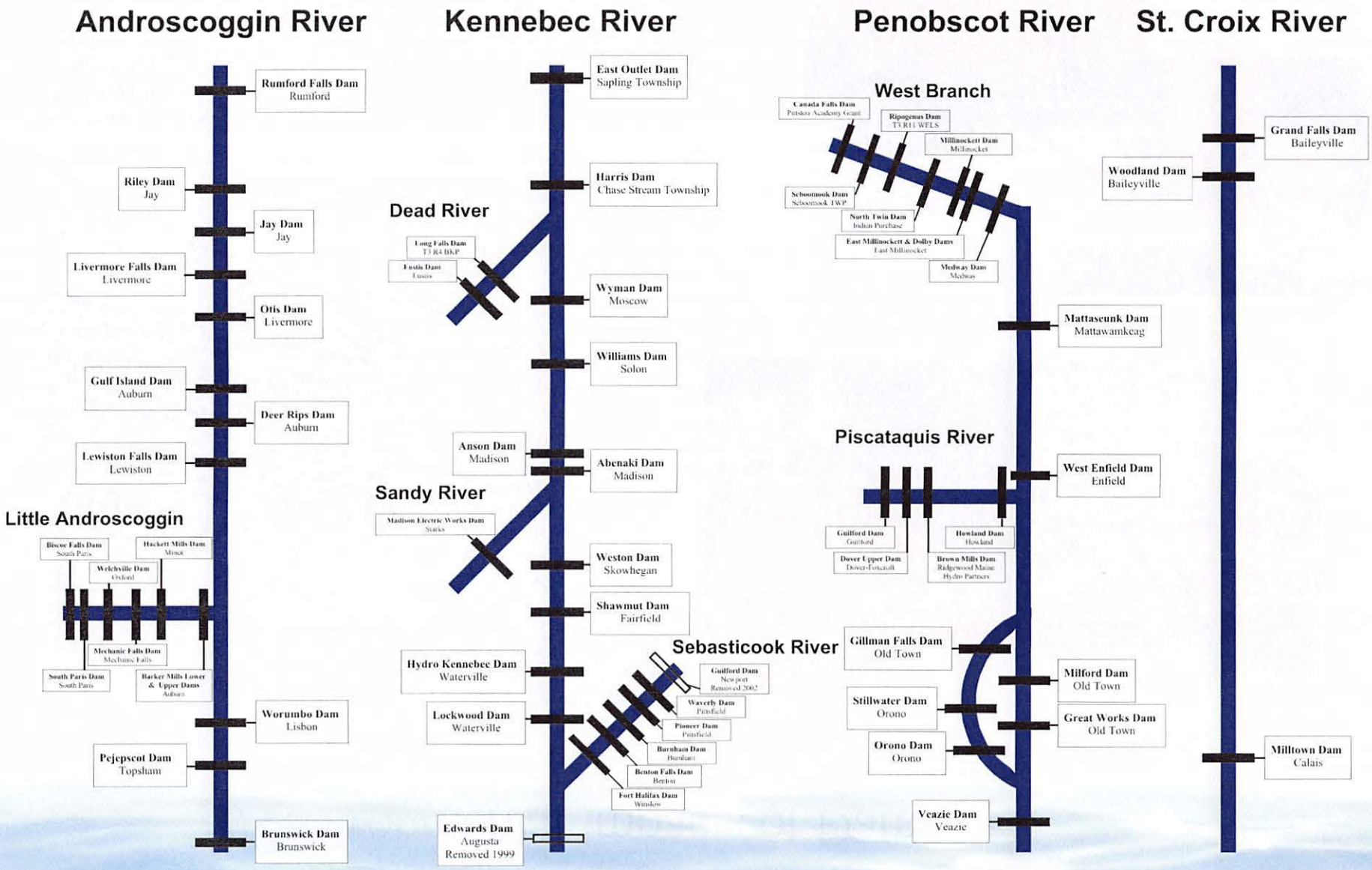
- **Great East Pond Dam** – Acton
- **Horn Pond Dam** – Acton
- **Rowe Dam** – Acton
- **Wambeck Dam** – Acton
- **Mill Dam** – Acton
- **Milton Three Ponds Dam** – Lebanon
- **Milton Leatherboard Dam** (removed 1999) – Lebanon
- **South Milton Dam** – Lebanon
- **Spaulding Dam** – Lebanon
- **Boston Felt Dam** – South Lebanon
- **Mast Point Dam** – Berwick
- **Upper Great Falls Dam** – Berwick
- **Lower Great Falls Dam** – Berwick
- **Rollinsford Dam** – South Berwick
- **South Berwick Dam** – South Berwick

Saco River

- **Swans Falls Dam** – Fryeburg
- **Hiram Dam** – Hiram
- **Bonny Eagle Dam** – Hollis
- **West Buxton Dam** – Buxton
- **Bar Mills Dam** – Buxton
- **Skelton Dam** – Dayton
- **Spring & Bradbury Dams** – Saco
- **Cataract Dam** – Saco

Presumpscot River

- **Eel Weir Dam** – Standish
- **North Gorham Dam** – Windham
- **Dundee Falls Dam** – Windham
- **Gambo Falls Dam** – Windham
- **Little Falls Dam** – Windham
- **Mallison Falls Dam** – Windham
- **Saccarappa Dam** – Westbrook
- **Cumberland Mills Dam** – Westbrook
- **Smelt Hill Dam** – Falmouth, Removed 2002


Androscoggin River
Rumford Falls Dam
Rumford
Riley Dam
Jay
Jay Dam
Jay
Livermore Falls Dam
Livermore
Otis Dam
Livermore
Gulf Island Dam
Auburn
Deer Rips Dam
Auburn
Lewiston Falls Dam
Lewiston
Little Androscoggin
Biscoe Falls Dam
South Paris
Hackett Mills Dam
Minot
Welchville Dam
Oxford
Mechanic Falls Dam
Mechanic Falls
South Paris Dam
South Paris
Barker Mills Lower & Upper Dams
Auburn
Worumbo Dam
Lisbon
Pejepscot Dam
Topsham
Brunswick Dam
Brunswick
Kennebec River
East Outlet Dam
Sapling Township
Harris Dam
Chase Stream Township
Dead River
Long Falls Dam
T3 R4 BKP
Eustis Dam
Eustis
Wyman Dam
Moscow
Williams Dam
Solon
Anson Dam
Madison
Abenaki Dam
Madison
Sandy River
Madison Electric Works Dam
Starks
Weston Dam
Skowhegan
Shawmut Dam
Fairfield
Hydro Kennebec Dam
Waterville
Lockwood Dam
Waterville
Sebasticook River
Guilford Dam
Newport
Removed 2002
Waverly Dam
Pittsfield
Pioneer Dam
Pittsfield
Burnham Dam
Burnham
Benton Falls Dam
Benton
Fort Halifax Dam
Winslow
Edwards Dam
Augusta
Removed 1999
Penobscot River
West Branch
Canada Falls Dam
Pittston Academy Grant
Ripogenus Dam
T3 R11 WELS
Millinocket Dam
Millinocket
Schoodmook Dam
Schoodmook TWP
North Twin Dam
Indian Purchase
East Millinocket & Dolby Dams
East Millinocket
Medway Dam
Medway
Mattaseunk Dam
Mattawamkeag
Piscataquis River
West Enfield Dam
Enfield
Guilford Dam
Guilford
Howland Dam
Howland
Dover Upper Dam
Dover-Foxcroft
Brown Mills Dam
Ridgewood Maine Hydro Partners
Gillman Falls Dam
Old Town
Milford Dam
Old Town
Stillwater Dam
Orono
Great Works Dam
Old Town
Orono Dam
Orono
Veazie Dam
Veazie
St. Croix River
Grand Falls Dam
Baileyville
Woodland Dam
Baileyville
Milltown Dam
Calais

Environmental Impacts of Dams

Although dams have provided – and in many cases continue to provide – valuable services to our society, they have done so at a significant cost to the original ecosystems of our rivers and streams. Dams fundamentally alter the habitat of a free-flowing river. The damage caused by dams on Maine's rivers has been very high.

Maine's major rivers once supported large populations of sea-run fish and eels. Generally, these species are born in inland streams in freshwater, travel downstream to live most of their adult lives at sea, then return to spawn in the rivers of their origin. With the construction of dams on Maine's rivers, these fish were cut off from their spawning grounds and their populations began to plummet.

From the Falmouth Gazette and Weekly Advertiser, *Sept. 23, 1785.*

Sluice-Ways.

THE Owners of the Mills on Presumpscot river, having neglected to open Sluice-ways in their dams, agreeable to the notice and request of the Committee—The Committee hereby request, that if any other person or persons will perform that service, they would apply to them without delay.

N. B. The Committee propose to meet once more at the house of Mr. Jonathan Webb at Saccarappa, viz. on Wednesday next, (being the 28th current) at ten o'clock in the forenoon.

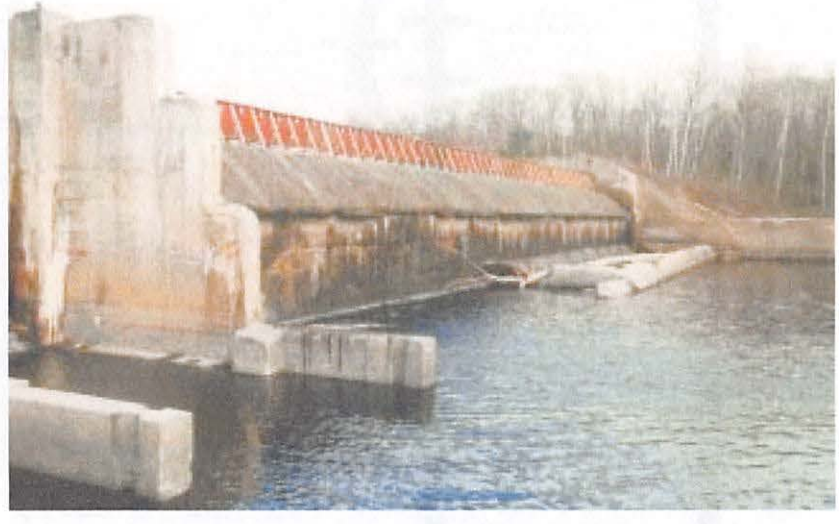
WILLIAM GORHAM,
SAMUEL FREEMAN,
EDMUND PHINNEY.

Falmouth, Sept. 23, 1785.

The damage caused by dams on Maine's rivers has been very high.

The wealth of fisheries that once surged in Maine's rivers is captured well in historic records. For example, a commercial fisherman estimated that during the 1870s more than 30,000 Atlantic salmon were harvested each year from the Kennebec below Bath alone.

But the construction of dams took a toll on these landings. The first major dam on the Kennebec River in 1837, for example, resulted in dramatic and deep reductions in fish populations. Within a decade, landings of salmon, herring, and sturgeon dropped to a small fraction of their levels before the Augusta dam was built. A man who reported catching 500 salmon at Augusta in 1838, reported that by 1850 a good year might bring four or five salmon.



Above: *Dams create an impenetrable wall for upstream fish migration. Fish passage systems have generally served as poor substitutes to free-flowing rivers.*

Right: *The State has taken enforcement actions in recent years against dam owners in Maine where thousands of fish have been killed while passing through turbines.*

Left: *Alewives were trapped each spring below Edwards Dam, until the dam's removal in 1999.*

Recent research has documented that the water stored behind a dam has neither the habitat of a river, nor the habitat of a naturally occurring lake. As a result, dams produce an ecosystem that is not well designed for the species that occur in either of these habitats.

Environmental impacts of dams

- **Dams block the movement of river life** – preventing fish migration, halting the flow of plants and nutrients, and curbing downstream recreational use.
- **Dams slow rivers** – interfering with the steady flows that some species, such as salmon, need to flush young fish downriver and guide them upstream years later to spawn.
- **Dams flood upland areas** – by creating a reservoir that inundates land that previously served as terrestrial habitat, and may have been valued floodplains.
- **Dams alter water temperatures** – usually increasing temperatures by slowing flow; sometimes decreasing water temperatures by releasing cooled water from the reservoir bottom. Temperature irregularities can harm aquatic life.
- **Dams alter timing of flows and cause water level fluctuation** – by withholding and then releasing water to generate power. These releases can act like a firehose washing away plants and animals downstream, eroding soil and vegetation, and flooding or stranding wildlife, disturbing fisheries and waterfowl. These irregular releases destroy seasonal flow variations that trigger natural growth and reproduction cycles in many species.
- **Dams reduce dissolved oxygen** – reducing circulation of the water and increasing its temperature, which can result in less oxygen than is necessary for the survival of many species.
- **Dams hold back silt, debris, and nutrients** – by slowing flows, dams can allow silt to collect on river bottoms and bury fish spawning habitat. Dams also trap gravel, logs and other debris, eliminating their availability downstream as food and habitat.
- **Dams can harm fish** – by following currents downstream, fish can be drawn into and cut up by power turbines.
- **Dams increase predator risk** – warm, murky reservoirs often favor predators of naturally occurring species. In addition, passage through fish ladders or turbines can injure or stun fish, making them easy prey for flying predators like gulls and herons.
- **Dams reduce productivity of estuaries and bays** – because there are fewer juvenile fish due to the inaccessibility of spawning grounds to sea-run fish. Maine's Department of Marine Resources estimates that for every returning adult fish, 300-400 juveniles return to our estuaries and bays each year, adding tremendously to the ocean food chain.

Left: *"Converting a river to a lake causes many riverine species to perish. Many studies have documented drastic declines in diverse mussel communities following the construction of dams."*

The Freshwater Mussels of Maine, *Maine Department of Inland Fish and Wildlife, 2000*

Right: *Wild Atlantic salmon like this one on Cobbosseecontee Stream in 1997, are nearly extinct in the U.S., in part due to the construction of impassable dams.*

More than 600,000 miles of the nation's rivers and streams have been flooded beneath waters stored behind dams.

Dam Removals

Removal of the seven-foot-high Quaker Neck Dam in 1997 in North Carolina opened up 1,000 miles of upstream spawning habitat for migratory fish.

Dams have been built across the United States, and they have also been removed across the nation for safety, environmental, and economic reasons. A report issued in 1999 documented nearly 500 dams that have been removed across the country, yet other estimates have placed the number at 1,000 or more, most of which have been small, non-hydropower dams. Officials in Wisconsin estimate that as many as 500 dams have been removed in that state alone. Sixty-three dams in 15 states and the District of Columbia were scheduled for removal in 2002.

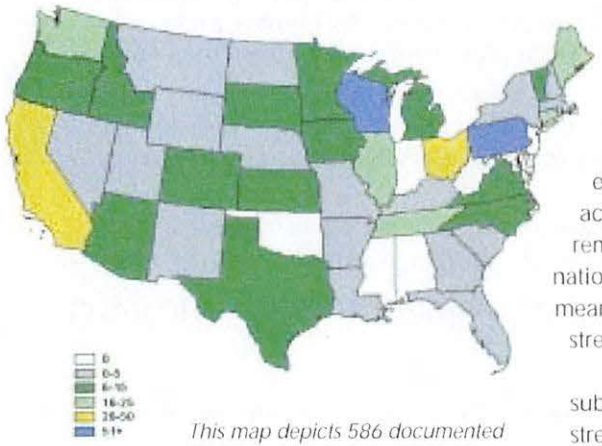
Dams have been removed throughout history when it made sense to do so in terms of costs or safety, or when the original purpose of the dam had been served. Dams built to generate power for sawmills in remote forests, for example, were removed when the harvesting operation was over.

What is new in recent years, however, is the consideration of environmental benefits that can be achieved through selective dam removals. Communities across the nation are viewing dam removals as a means of creating healthier rivers and streams.

The removal of a dam can have a substantial, positive impact for a river or stream. Most significantly, it can restore access to upstream habitat and spawning areas for migratory and resident fish. Improved water quality, increased species diversity, and enhanced ecosystem function also can be achieved through a dam removal. Most of the dam removals that have occurred or are under discussion in the U.S. involve small dams.

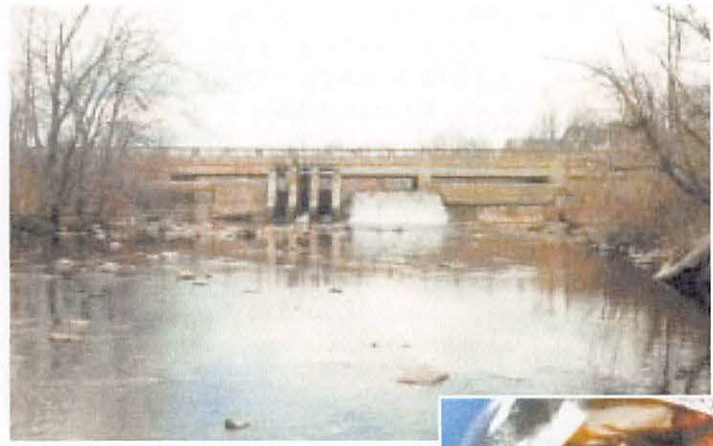
Maine has had several highly successful dam removals – which have resulted in significant benefits for Maine's environment. These projects have been the result of collaborative efforts involving citizens; local, state and federal government agencies; and various organizations.

Removal of the Smelt Hill Dam on the Presumpscot River in October 2002, for example, was called "a resurrection of this river" by Edward Kitchel, chairman of the Falmouth Town Council.



This map depicts 586 documented dam removals in the United States, including 63 slated for removal in 2002.

– Source: American Rivers



Above: *The Guilford Dam, on the E. Branch of the Sebasticook River in Newport, was removed in 2002 as part of an economic development plan for the community.*

Right: *Atlantic salmon need to be able to return to their native spawning grounds to reproduce.*

With dam removals the population of living organisms in the sediment, such as this dobson fly larva, an indicator of healthy streams, has increased dramatically.

Dam's demise seen as river's 'resurrection'

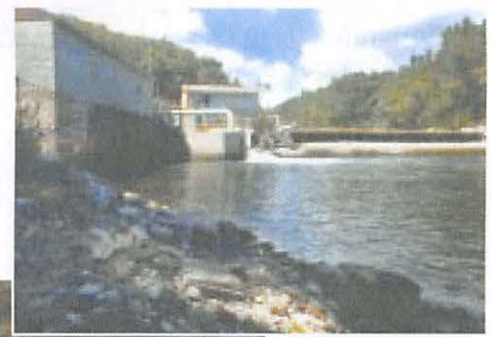
— Portland Press Herald, September 28, 2002

● A section of the Presumpscot River flows free through Falmouth Friday for the first time since 1734.

Recent Dam Removals in Maine

Columbia Falls Dam	*Pleasant River*	1990
Grist Mill Dam	*Souadabscook Stream*	1998
Hampden Dam	*Souadabscook Stream*	1999
Souadabscook Falls Dam	*Souadabscook Stream*	1999
Archer's Mill Dam	*Stetson Stream*	1999
Edwards Dam	*Kennebec River*	1999
Brownville Dam	*Pleasant River*	1999
East Machias Dam	*East Machias River*	2000
Eastland Woolen Mill Dam	*E. Branch Sebasticook River*	2001
Union Gas Dam	*Messalonskee Stream*	2001
Guilford Dam	*Sebasticook River*	2002
Smelt Hill Dam	*Presumpscot River*	2002
Sennebec Dam	*St. George River*	2002

Right: *Smelt Hill Dam was breached on October 2, 2002 at a location where a dam has stood since 1734.*



Left: *Removal of the dam has freed up Presumpscot Falls and other rapids, allowing fish passage to more than seven miles of habitat on the Presumpscot River for the first time in 268 years.*

Benefits Galore

"Dam removal is often touted because it benefits anadromous fish species, but opening up rivers with impoundments helps more than fish. Once floodplain habitat returns on the submerged section of river, avian life such as warbling vireos, northern parulas, northern orioles, American redstarts, wood thrushes, pileated woodpeckers, woodcock, whip-poor-wills, etc. will flourish. This ecosystem also attracts gray treefrogs, wood frogs, wood turtles, spring peepers and ribbon snakes. The brief list just touches the top, too. We live in exciting times, and obviously, the news isn't all bad."

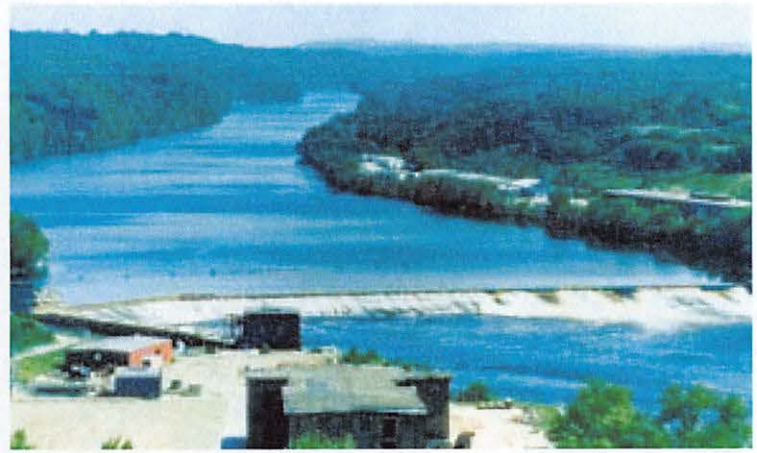
Ken Allen, Maine Sportsman, August, 2002

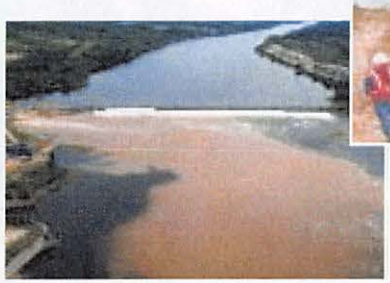
The Kennebec River – Augusta Rediscovers a Natural Resource

The environmental benefits from the 1999 removal of the Edwards Dam in Augusta have greatly exceeded initial expectations – resulting in a rebirth of the river and new found connections between riverside communities and the Kennebec River.

Swimming and fishing along the Kennebec's western shores in Fairfield are not what Bob Dionne remembers of his childhood relationship with one of Maine's largest rivers. "I grew up on this river and remember when you wouldn't put your big toe in," Dionne said. Now he owns and operates a growing business guiding anglers on the river.

In the 1950s, mill waste, raw sewage and log drives had turned the Kennebec into what many citizens viewed as an open sewer. In Augusta, the Edwards Dam, built in 1837, powered a textile mill, the last of nearly a dozen mills originally powered by the dam. The mill provided hundreds of area jobs but blocked migratory fish from being able to move up the river.





Breaching of the Edwards Dam on July 2, 1999 was recognized with a ceremonial bell ringing, signaling the passage of one era and the beginning of a new one for this stretch of the Kennebec River. Thousands of people, including Maine's Governor and entire congressional delegation, participated in this historic event.

Over a century earlier, the Kennebec River had been a different place.

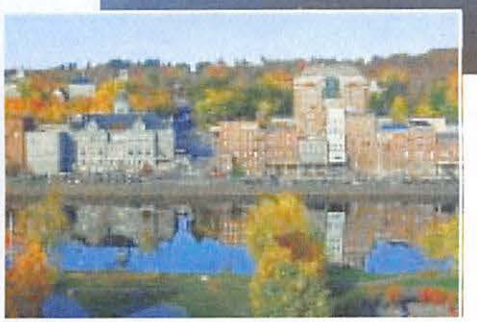
When Bob Dionne grew up, people still talked of the old Kennebec – the Kennebec with clean water. In an attempt to improve water quality in the river, environmental laws in the 1970s forced an end to the log drives and untreated waste dumping. By the 1980s, water quality and the conditions of fisheries had improved, but sea-run fish were still blocked by dams on all of Maine's major rivers, including the Kennebec, where the Edwards Dam prevented fish from ever reaching the 17 miles of prime spawning ground above Augusta.

By the early 1990s, the mill that was once powered by the dam had burned to the ground and

Back to the Future

Before 1837, from its headwaters at Moosehead Lake to its mouth at Merrymeeting Bay, the Kennebec flowed unimpeded across miles of rich spawning habitat. The river's banks were yet unspotted by mills. Alewives, salmon, American shad, striped bass and sturgeon were in such abundance that in the early 1800s drift net fishermen often caught thousands of fish in just one night. Communities looked to the river as a source of food, water and transportation.

The removal of the Edwards Dam in 1999 has helped clear the way for the Kennebec to be this kind of river again.



The Kennebec now flows freely from Waterville to the sea, creating a new "backyard" natural resource that is teeming with life for the City of Augusta

Benefits of Edwards Dam Removal

- *Water quality has improved and now supports more numerous and diverse forms of river life.*
- *Sea-run fish have arrived in Waterville for the first time in more than 160 years, including shad, striped bass, sturgeon, alewives, and Atlantic salmon.*
- *Nearly two million alewives have arrived each spring at the base of Ft. Halifax dam at the mouth of the Sebasticook River in Winslow.*
- *The 17-mile stretch of river from Waterville to Augusta has become popular for sport fishing for shad and striped bass, with landings of striped bass greater than 50 inches reported.*
- *The free-flowing river from Waterville to Augusta, with restored rapids, has become a popular canoe and kayak trip.*
- *Biological life in the river is healthier, with river sediment samples showing huge increases in the number and diversity of organisms.*
- *Restoration of the river has benefited species that depend on a healthy river, including osprey, eagles, hawks, and great blue herons.*
- *The City of Augusta is creating a riverfront redevelopment plan for the former dam site.*

ceased operating. The remaining hydropower operation employed only three people and produced only a small amount of electricity. For that small economic benefit, it was blocking passage of sea-run fish to a large watershed.

With increased national interest in outdoor recreation, wildlife, natural resources and restoring fisheries, a growing number of Maine people began to see that the economic benefits of continued operation of Edwards Dam were less than the environmental and economic benefits of dam removal. Atlantic salmon fisheries and big game fish such as stripers and

"Now that the Edwards Dam has been removed, the fishing is unbelievable from Waterville to Augusta; 17 miles of angler heaven!"

– George Smith, Sportsman's Alliance of Maine
Kennebec Journal, October 2, 2002

Delaine Nye, Augusta City Councilwoman

"I grew up on a farm about 50 miles north of Augusta. Almost 20 years ago I can remember driving through the city on a hot summer day and smelling the putrid odor from the river. Down the road, I think this will be an incredible location for reinvestment and that real estate values are going to increase. People have been used to turning their backs to the river for so long. I see the removal of the dam and the creation of a riverfront improvement district as a catalyst for the rehabilitation and restoration of the downtown and northern end of Augusta."

sturgeon were stifled because of their inability to reach areas where they could reproduce. The dam blocked the passage of canoes and other boats. Water quality suffered because the dam slowed the flow of the river – reducing oxygenation and natural flushing of silt and pollutants.

Not everyone was in favor of removing the dam. Land owners above and below the dam feared that their property would be devalued if water levels dropped drastically. Others were concerned that a shallower, quicker flowing river would also expose ugly debris left on the river bottom from the last log drives.

Despite these concerns, in 1997 the Federal Energy Regulatory Commission (FERC) made a landmark decision not to renew the dam's license and to order its removal. Following a decade of public meetings, FERC's decision reflected their belief that the benefits of removing the dam outweighed the benefits of relicensing it.

The dam was breached in July 1999. Just months later, striped bass had returned to the Waterville-Winslow section of the river. In January 2000, the river's water quality had improved sufficiently to earn a higher rating from the Department of Environmental Protection. Scientists found that the number and diversity of organisms living in the river bottom upstream from the old dam had increased by several orders of magnitude. This change is a strong indicator of improved ecosystem health.

"The fishing is unbelievable... the river was waiting for the right moment."

– **Bob Dionne**, Aardvark Outfitters

A year later, Bob Dionne was making regular driftboat trips down the river with clients of his fishing outfitter business. "We thought it would be good for the river, but we thought it would take at least a couple years," he said. "The fishing is unbelievable... the river was waiting for the right moment. In terms of just sheer economic development, the river's recovery is going to bring incredible results."

Left: *Spring alewife runs provide bait for lobster fishing*

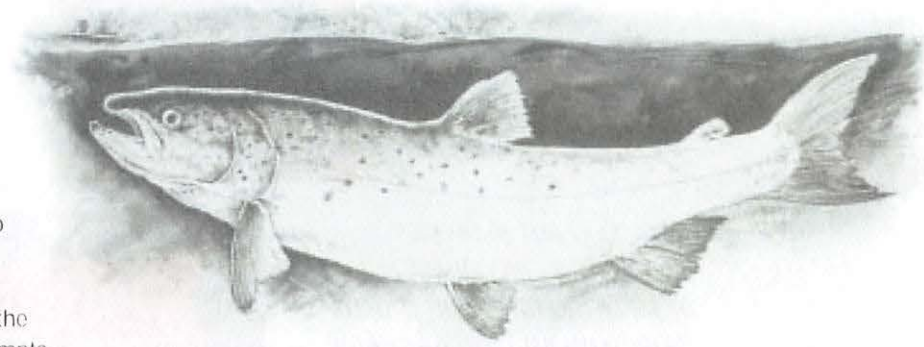
Why was the Edwards Dam Removal Significant?

A First for FERC

FERC, the Federal Energy Regulatory Commission, is the government body responsible for licensing hydroelectric dams. In 1997, FERC decided not to renew the license for the Edwards Dam because the benefits of removing this dam outweighed its usefulness. It was the first time the agency had denied a license renewal for an operating dam and ordered that the dam be removed.

The dam was breached in July 1999. Just months later, striped bass had returned to the Waterville-Winslow section of the river.

The East Machias River – Free-flowing and Safer



In January 2002, town officials from East Machias traveled to Washington, D.C. to receive a presidential award for successfully removing an abandoned, unsafe former hydroelectric dam on the East Machias river. A letter of congratulations from President Bush commended the project team, which included civil engineers from the U.S. Air Force Reserve who helped remove the dam from the river as a training exercise.

"We gated the dam and posted no trespassing signs but we still had trouble keeping the kids off."

Selectman Ken "Bucket" Davis

Built in 1926 and owned by the town since the 1960s, the East Machias Dam was an irresistible temptation to youth who often climbed on the structure, posing a potential liability for the town.

"We gated the dam and posted no trespassing signs but we still had trouble keeping the kids off," said Selectman Ken "Bucket" Davis. A lifelong resident of the area, Davis saw the dam as a costly liability and a negative impact on the town's river and its historic fisheries.

Davis remembered years past when the alewives and sea-run smelt had run thick. Fishermen used the alewives as bait for lobster and to trawl for halibut. Alewives and smelt also provided food for striped bass, relieving pressure on young salmon which stripers also consume.

Although the dam had "fish ladders" that could help certain fish species pass by, it was difficult for fish like salmon to pass above the site. Waiting in eddies below the dam, the fish were easy prey for predators and poachers.

Built of hand-mixed concrete and steel by Bangor Hydro-Electric Company in 1926, the 230-foot wide dam was one of several former dams that had blocked this section of the river for over 150 years. By the 1990s, it was the only obstruction from the river's source in Pocomoonshine Lake, near the Canadian border, all the way to Machias Bay. When Bangor Hydro was operating the dam as a hydroelectric facility it was a significant deterrent to the migration of salmon and other anadromous fish species.

The dam on the East Machias River had become a financial liability to the town.

Liability Issues

In the late 1990s, liability issues prompted the town to look seriously into removing the dam. Townspeople overwhelmingly supported an item on the town warrant to raise $5,000 toward a dam removal project. With the help of the Atlantic Salmon Federation, the town attracted support from the Coastal America Partner-

ship, a national initiative created to improve coastal conditions.

Through Coastal America, a collaboration of conservation groups secured help from the military and state and municipal agencies to carry out demolition and restoration – and save the town hundreds of thousands of dollars. In May 2000, a demolition team of Air Force reservists from around the country traveled to East Machias to dismantle the dam as part of a training exercise. Local residents gathered at a small park alongside the river in July 2000 to commemorate the opening of approximately 300 miles of stream habitat.

A team of 12 civil engineers from the Air Force Reserve Command removed the dam as a training exercise, through a partnership with Coastal America.

New possibilities

Fishermen expect to someday see the return of sea-run brook trout, smelt, alewives, striped bass and American shad that once occupied the river. Recreationists are excited about new canoeing possibilities and town officials are discussing what types of trees to plant along the river's shores to shade the water and keep temperatures cool – which is important for the survival of many fish species.

"With the dam out, people will be able to canoe out into the estuary and up to Helen's Restaurant in Machias for a piece of pie," said Dwayne Shaw of the Wild Salmon Resource Center in nearby Columbia Falls.

WHITE HOUSE

"Congratulations... Your project brought together Federal agencies, state and local governments, and a variety of nonprofit organizations to remove an obsolete dam, which opened 300 miles of migration corridors for Atlantic salmon and anadromous fish. My Administration strongly supports efforts like this..."

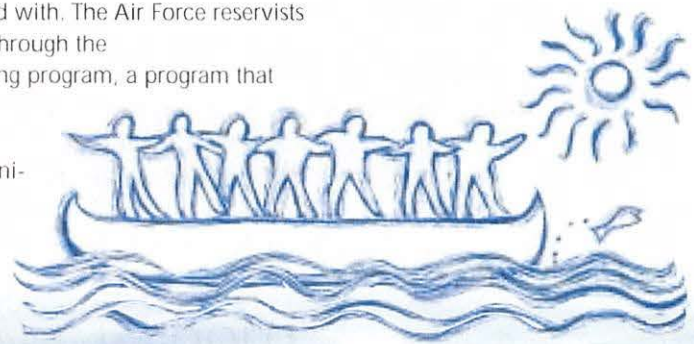
President George W. Bush

Excerpt from letter from President Bush which was presented at the awards ceremony for removal of the East Machias Dam, 1/22/02.

Why was the East Machias Dam Removal Significant?

Collaboration makes dam removal affordable and limits town liabilities

The East Machias Dam was the first dam removal Air Force reservists had been involved with. The Air Force reservists participated in the project through the Innovative Readiness Training program, a program that provides them with training while leaving something of value behind for communities. In this case, the dam's removal helped eliminate a potential legal liability for the town.



Souadabscook Stream – A River Reborn

Souadabscook Stream, a tributary to the Penobscot River, in Hampden, Maine, drains runoff from approximately 160 square miles, including abundant cold water streams, bogs, and ponds. It provides exceptional cold water spawning and rearing habitat for migratory fish.

In the late 1700s, the Grist Mill Dam was built at head-of-tide on the Souadabscook to provide mechanical power for a mill. The 14-foot high, 75-foot wide dam was later converted to a hydroelectric facility that was regulated by the Federal Energy Regulatory Commission (FERC). The dam was the first obstruction fish met when migrating up from the Atlantic Ocean, blocking access to this exceptional spawning habitat.

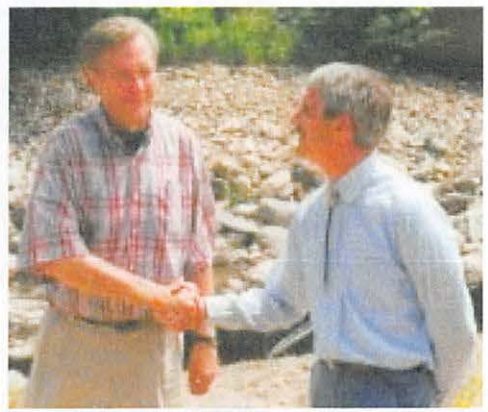
Above: *The fishway for the Grist Mill Dam on the Souadabscook Stream no longer functioned.*

Right: *After removal, upstream fish passage was assured for the first time in 200 years.*

By the late 1990s, the dam clearly showed signs of its age. It was inactive and had an inoperable fishway. It was in poor condition and in need of repairs more expensive than the dam's existence justified. The owner petitioned FERC for approval to remove the hydropower dam. The estimated cost of repairing and maintaining the dam was $150,000. The cost of removal was $56,000. Through a cooperative effort involving numerous government agencies and Facilitators Improving Salmonid Habitat (FISH), the dam was removed in October 1998. Less than three months after the Grist Mill Dam was removed, Atlantic salmon from the Penobscot River returned to the Souadabscook Stream for the first time in over 200 years.

Restoration of the River

The removal of the Grist Mill Dam benefited migratory fish such as Atlantic salmon, sea-run brook trout, American shad, smelt, striped bass, alewife and the wildlife that depend on them. Alewives have returned in record numbers, while resident brook trout also benefit from lower water temperature, enhanced food availability, and improved flow condi-



Then U.S. Secretary of the Interior, Bruce Babbitt meets with John Banks, Director of Natural Resources, Penobscot Indian Nation, on the banks of the Souadabscook Stream.

"On the Souadabscook, Atlantic salmon wasted no time in showing us just how resilient they are when given a chance by digging egg nests above the dam site less than three months after the removal."

– **John Banks**, Director of Natural Resources, Penobscot Indian Nation

Penobscot tribal elder Arnie Neptune, conducted a ceremonial "smudging" of the Grist Mill Dam before its removal.

tions and habitat. Other wildlife benefit, too, including bald eagles, osprey, herons, and river otters.

Towns along the Souadabscook may find ways to take advantage of the new wildlife resource. Trout, American eel and smelt all are economically valuable species. Canoeists and kayakers frequent the Souadabscook. Many people feel that the Town of Hampden just plain looks better since the dam was removed.

Saving money is a clear benefit not only to the dam's owners, but also to its neighbors. The risk of flooding to nearby properties has been reduced. The dam was considered a serious public hazard due to the precarious position of the impoundment, which abutted US Route 1A. The Maine Department of Transportation reported that the dam caused significant damage and repair costs along US Route 1A and the bridge over the dam. Removing the dam will reduce the cost to taxpayers of road repairs.

"The dam under Route 1A in Hampden had no fish passage and generated a tiny amount of power. Faced with the need to upgrade the dam or remove it, the owner chose removal, and the results for the Souadabscook have been spectacular."

– **Bill Townsend**, Board Member, FISH

Why was the Souadabscook Dam Removal Significant?

Spawning habitat returns

Removal of this dam demonstrated how rapidly Atlantic salmon, alewives, sea-run brook trout and other anadromous fish will respond to the availability of new spawning habitat. If given the chance, these persistent fish will quickly return to river segments that have been blocked by a dam – even if that dam was there for hundreds of years.

Hydroelectric Power in Maine

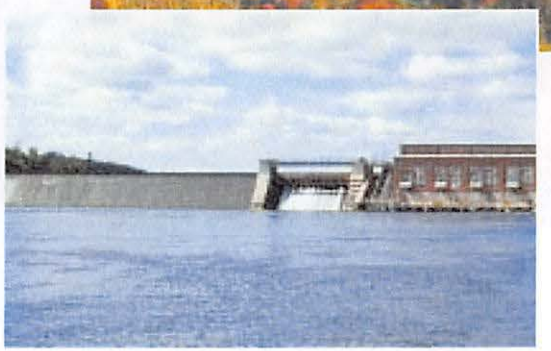
The electricity generated by just two of the natural gas power plants built in Maine during the past few years is more than the total production of all of the operating hydroelectric dams built in Maine over the past 200 years.

Of the 750 dams in Maine greater than two feet high, 111 produce electricity. Virtually all of these dams were built prior to the existence of environmental laws. Thus, there was little consideration at the time of construction of their impact on rivers and fisheries. The overwhelming majority of dams in Maine do not produce power. According to the U.S. Army Corps of Engineers, only three percent of the dams nationwide produce electricity.

The electrical power system in New England has changed dramatically in recent years. Electricity generated in Maine goes into a region-wide electrical grid involving more than 500 generating facilities and 8,000 miles of transmission line, servicing 6.5 million customers in a six state region.

The relative importance of hydropower dams also has changed enormously over the past 100 years. Although dams once were a leading form of electrical power generation in America, dams currently provide only about 10% of the nation's electricity and about 6% of the electricity within New England.

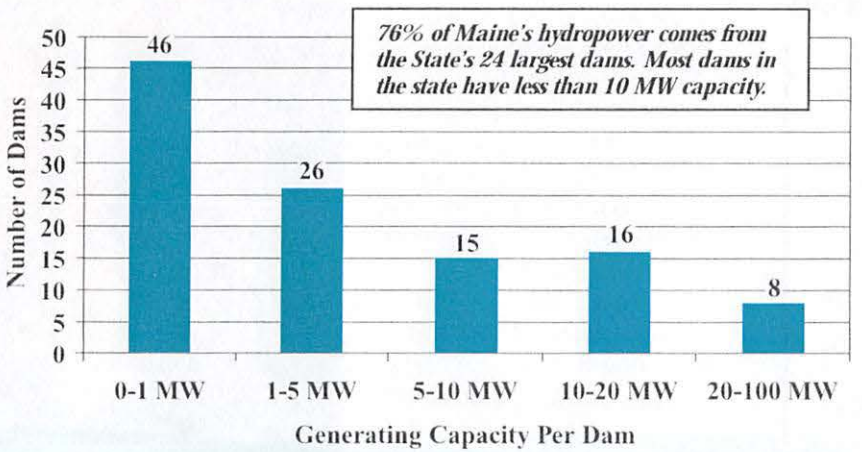
Coal, oil, nuclear, and natural gas plants now dwarf dams in terms of the amount of electricity generated in New England. As an example, the electricity generated by just two of the natural gas power plants built in Maine during the past few years exceeds the total production of all of the operating hydroelectric dams built in Maine over the past 200 years.



Above: *Wyman Dam on the Kennebec River is the second largest hydropower facility in the state, with a generating capacity of 72 megawatts (MW).*

Left: *Mattaceunk Dam, on the Penobscot River, has installed capacity of 19.2 MW*

Power Capacity of Maine Dams

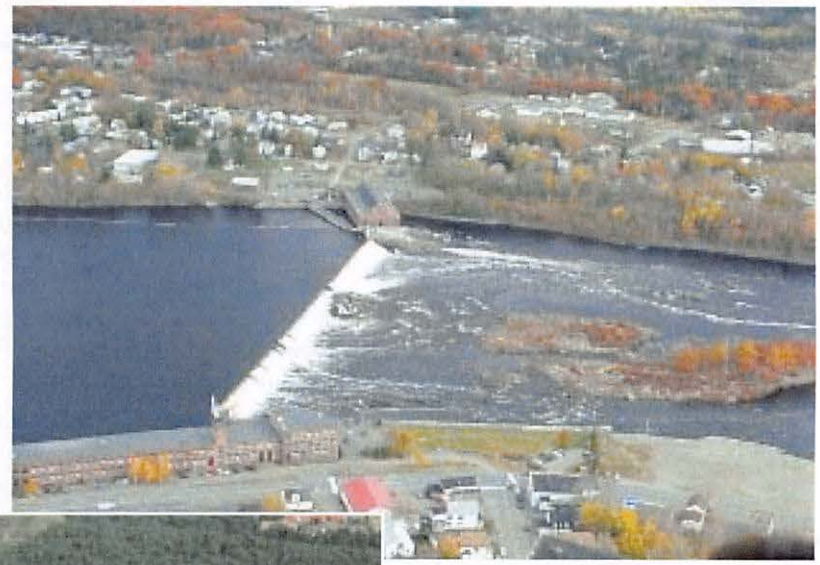


Most of Maine's operating hydroelectric dams are small facilities: 78% of Maine's hydroelectric dams have a generating capacity of less than 10 MW. By comparison, the Calpine natural gas plant in Westbrook has a capacity of 525 MW. Several small hydropower dams in Maine have become uneconomic to operate in recent years and have been shut down.

Although hydropower is not the dominant form of electricity it once was, it remains a significant form of electricity nonetheless. Unlike coal, oil or natural gas, hydropower dams do not produce other forms of air pollution or nuclear, toxic, or hazardous wastes. Hydropower dams and non-generating dams do, however, have other significant environmental impacts, as discussed elsewhere (see pages 8-9).

Because hydropower remains a significant form of power, major efforts have been made in recent years to reduce the environmental impacts of existing dams so that they can continue to produce electricity. These efforts include the installation of fish passage systems, modifications in water flow, fish stocking programs, and habitat protection agreements. For hydropower dams licensed by the Federal Energy Regulatory Commission, these changes generally have been made within the context of the relicensing process (see sidebar).

Efforts to reduce the environmental impacts, of hydropower dams include the installation of fish passage systems, modifications in water flow, fish stocking programs, and habitat protection agreements.



Above: *Milford Dam, located between Milford and Old Town on the Penobscot River, has 6.4MW of installed capacity, generating enough electricity for approximately 5,000 households. For reference, Maine has an estimated 518,200 households, according to the 2000 Census.*

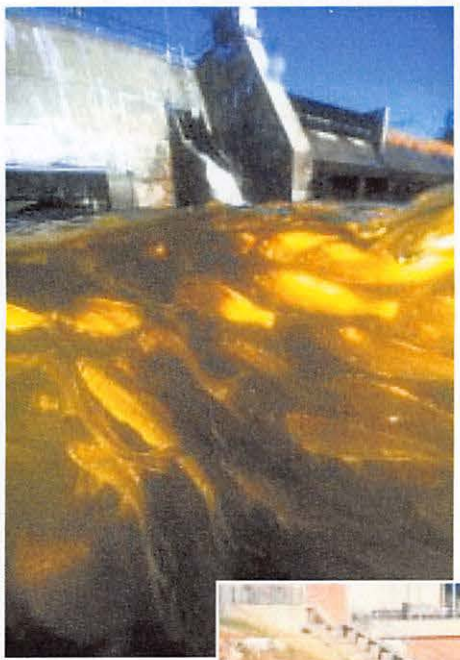
Left: *Calpine's natural gas-fired Westbrook Energy Center has installed capacity of 525 MW.*

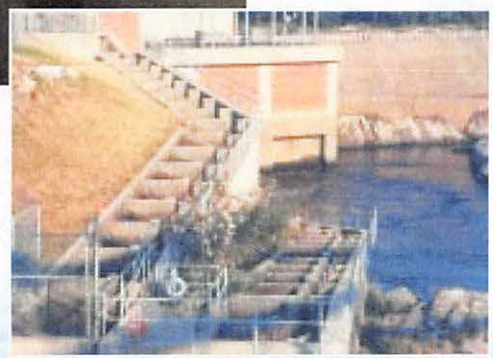
Dam Operating Licenses

Most hydropower dams in Maine have been licensed to operate by the Federal Energy Regulatory Commission. These licenses provide authority to generate power through the use of a public resource - a river - generally for 20-50 years. Many of the original licenses granted to dams across America have expired in recent years. The relicensing process allows federal and state agencies, conservation organizations, the public, and other interested parties to review the environmental impacts of dams and propose ways to mitigate those impacts as conditions of a new license. In the case of the Edwards Dam, FERC decided that the most appropriate mitigation was dam removal.

Fish Passage

The removal of a dam is the most effective means of restoring a river or stream and providing for the passage of sea-run fish to upstream spawning grounds. Dam removal is not, however, a viable option for all dams, due to energy generation considerations, existing land uses, and other issues. As such, fish passage systems have been developed to assist fish in getting around dams which are expected to remain in place or operational for the foreseeable future. Some approaches work reasonably well for some species of fish, while others have proven to be failures. Different types of fish passage include:





Above: *Alewives are stopped by the Fort Halifax Dam in Winslow.*

Right: *Fish ladder on the Androscoggin River in Brunswick. Recent studies show it has not passed American shad.*

Fish Ladders consist of a series of gradually inclining steps with resting pools located at regular intervals. Usually located off to one side of a dam, fish must physically jump from one tier to the next. The ladders usually are effective only for strong swimming fish like salmon and trout, and not for other species. Fish may be damaged during the process. If insufficient water flow exists, then fish will not be attracted to the ladder. If too much flow runs through the ladder, then fish are deterred from using it.

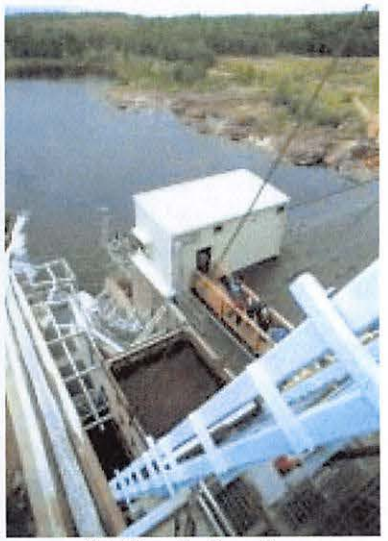
Denil Fishway (pronounced den–neel) is a type of fish ladder designed with a series of sloped channels. Water flows through a chute, with baffles inserted at an up-stream angle providing resting areas for fish as they swim into the current.

Fish Lifts are like an elevator for fish. Fish swim into a chamber at the base of the dam, guided by currents, and the chambers are mechanically lifted up and over the dam, depositing fish on the other side. Advanced fish lifts are among the most successful current means for allowing fish passage, yet have not proven to work for all species.

Trap and Truck approaches involve capturing fish in a tank, usually with the assistance of a pump, and transporting the fish in vehicles to release sites above the dam. This method works best for fish that are easily trapped, such as alewives that often congregate below a dam. A fish pump works only for select species and can cause damage to the fish. Federal and tribal fisheries agencies consider trap and truck only as a temporary measure.

Fish pump at Ft. Halifax Dam on the Sebasticook River.

Some fish passage systems cause injuries or stress that can make the fish more vulnerable to predators. Overcrowding within fish passage systems can increase the incidence of disease. Some fishways fail to create an effective "attraction flow" to guide fish to the entrance. Others fail because they were not designed to pass large fish or bottom dwelling species or fish that do not congregate in schools. Fish mortality can increase due to the cumulative impacts of multiple passages. Downstream



Fish lift on the Saco River

passage must also be provided to allow fish and their progeny to return to the ocean.

Research continues around the world to collect data on fish passage systems to evaluate their success in passing viable numbers of specific species, and to help determine options for improving fish passage. For a fish passage system to succeed, it must take into account the behavior of the target fish species, including swimming capabilities; the water velocity needed throughout the fishway, without inducing spawning partway up the system; and the specific dynamics of the river. Large dams on large rivers may require multiple fish passage systems. Conservation organizations, dam owners, and state and federal agencies have reached agreement on fish passage provisions for several dams in Maine, such as the Harris Dam on the Kennebec River.

The costs of installing effective fish passage can be prohibitive for some dams, particularly small dams. If river and fisheries restoration objectives are more important in such cases than the values associated with other existing uses of the dam (e.g. power generation, land uses), then dam removal may become the preferred option for the dam owner and interested parties.

"No matter how good your engineering is, if the fish don't like, it doesn't work."

– FPL Energy President Ron Green
Journal Tribune, June 7, 2002

Dam Removal Controversies

Although most of the dam removals that have taken place in Maine and across the nation have occurred without public controversy, some proposed dam removals have been contentious – with divergent perspectives expressed about the best current and future uses and values for a given segment of a river or stream. Just as the proposed construction of a dam can be very controversial, so, too, can a proposed removal of a dam. Both actions change the river, and how it will be used by humans, fish, and wildlife.

Ft. Halifax Dam

Construction of a dam introduces major changes, sometimes flooding a large area, creating a lake-like impoundment, and altering the ecosystem and water quality. With the changed system come ecological and human adaptations – land use developments, recreational uses, and ecological conditions that favor some species and not others. The proposed removal of a dam may be greeted with opposition by landowners who prefer the existing waterway conditions to a free-flowing river, by anglers who prefer existing fishing conditions to what might exist after removal of the dam, or by communities that are attached to the aesthetic, historic, cultural, or economic (e.g. property tax payments) values of the dam.

Existing state and federal policies provide significant opportunities for the public to comment on a proposed dam removal. For any dam that generates electricity, the Federal Energy Regulatory Commission will hold a public hearing in order to gather broad input from the public, state agencies, and other interested parties before approving a dam removal.

Interestingly, some opponents of particular dam removals have changed their views with the passage of time. This has been true with the Edwards Dam on the Kennebec, removed in 1999. As George Viles, a resident of Sidney said in November 2002: "We had enjoyed the impoundment we lived on. The planned removal of the Edwards Dam started out as an offense to us. But a varied and vibrant river has emerged that's far more interesting than the impoundment. It draws life to it. It's attractive, the water is clear. It's great."

Celebrating Maine's Rivers

The Kennebec River Trail opened in 2001.

Boats make trip from Waterville to Augusta

— *Morning Sentinal, August 1, 2002*

Maine's rivers have always been a cherished resource – whether for transportation, water supply, power generation, recreation, or natural beauty. Over the past 30 years, however, they have taken on a new importance as water quality has improved with the passage of the Clean Water Act in 1972, the final log drives in 1976, and extensive investments by paper mills and municipalities in wastewater treatment.

Towns throughout Maine are discovering the importance of rivers as a central part of their quality of life. Many towns are investing in the redevelopment of riverfront properties in a way that would never have happened 40 years ago, when the stench of some heavily polluted Maine rivers kept people away and real estate values low.

Evidence that we have entered a new era for Maine's rivers can be found throughout the state. A recent magazine article heralded the waterfront of Waterville. A bicycle path along the Androscoggin River in Brunswick is in almost constant use. A river festival in Bucksport draws hundreds of people to the banks of the Penobscot each year. New businesses are locating along the Presumpscot since the paper mill in Westbrook stopped its pulping operations. A growing number of annual river festivals are further testament to the changing attitudes of Maine people toward our rivers.

The removal of dams has been a small, yet in some cases significant, factor in the larger context of river restoration in Maine. For some towns, dam removals have created economic, recreation, and quality of life enhancements that didn't exist before.

For the Town of Newport, for example, removal of the Guilford Dam on Main Street in July 2002 was one of the first steps toward an intensive renovation and rebuilding of the downtown area. A new library, historical society, River Walk, gardens, and park are planned along the riverbank in an effort to make the town a destination for tourists.

With the removal of Edwards Dam, many new opportunities have emerged to celebrate the Kennebec River. Scores of anglers

Above: *The 2001 Maine Rivers Conference visited the Penobscot River.*

Right: *The Androscoggin River Bike Path in Brunswick has become a favorite outing for walkers, runners, bird-watchers and families.*

Dam removal first step to renovating Newport

"Construction Divers of Westbrook, an underwater construction and demolition firm, will begin work next Tuesday on the removal of the Main Street dam in Newport.

Removal of the dam is one of the first steps towards an intensive renovation and rebuilding of Newport's downtown area. The town is also building a new library and historical society just steps from the river, while planning a River Walk, gardens and parks along the riverbank itself. There has also been an effort, not yet finalized, to acquire the century-old Grange building, also on Main Street."

Bangor Daily News, July 4, 2002

A year after dam demolition, river surges with life

— Maine Sunday Telegram, July 2, 2000

Canoeists, kayakers fill St. Croix

— Bangor Daily News, August 5, 1999

Dam removal first step to renovating Newport

— Bangor Daily News, July 4, 2002

Left: *The Georges River Canoe Race attracts hundreds of paddlers each spring.*

Westbrook pins revitalization hopes on once-ignored river

— Portland Press Herald, July 6, 1999

now travel to the Winslow-Waterville area to catch striped bass, keeping river guides in the area very active. Additionally, an annual "water pilgrimage" was started on the river following removal of the dam, with hundreds of kayaks and canoes paddling from the Public Boat Landing in Waterville to Old Fort Western in Augusta – recreating the trip between two outposts of early settlers.

As rivers in Maine are restored, they are attracting Maine people, tourists, and fish and wildlife in significant numbers. This is a cause for celebration.

SOURCE TO SEA

Week's activities focusing on river

— Sun Journal, July 11, 2001

St. Croix River study to gauge recreation use

— Bangor Daily News, July 2, 1999

The Passagassawakeag Canoe Race in Belfast is fun for paddlers of all ages.

Bucksport celebrates mighty river

Waterfront comes alive as Mainers gather in tribute to cleaner Penobscot

— Bangor Daily News, September 15, 1997

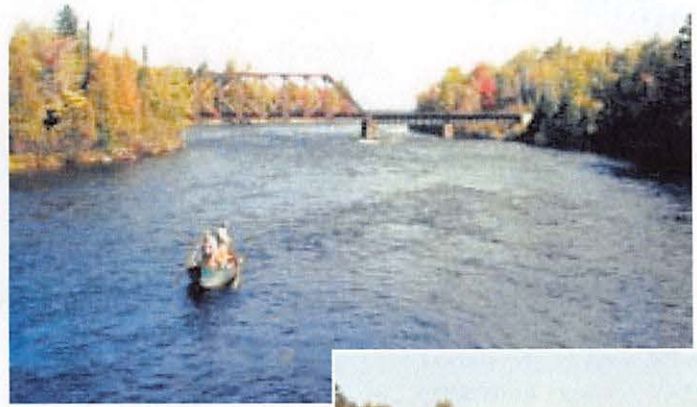
Maine River Events

(PARTIAL LIST)

- ***Augusta*** – *Ft. Western Whatever Paddle*
- ***Androscoggin River*** – *Source to the Sea Trek*
- ***Bangor*** – *Bangor Harbor Day, Kenduskeag Canoe Race*
- ***Belfast*** – *Passagassawakeag Canoe Race*
- ***Bethel*** – *Androscoggin Watershed Fish Festival*
- ***Bingham*** – *Kayak-A-Thon (Kennebec River)*
- ***Brunswick*** – *Androscoggin Hand Powered Regatta*
- ***Bucksport*** – *Penobscot River Festival*
- ***Calais*** – *St. Croix Kayak and Canoe Sail*
- ***East Machias*** – *Annual River Day Festival*
- ***Fort Kent*** – *Northern Forest Canoe Trail*
- ***Freeport*** – *Paddle for Hospice Kayak-a-Thon (Harraseeket River)*
- ***Greenville Junction*** – *Moosemainea Rowing Regatta*
- ***Hampden*** – *Souadabscook Canoe Race*
- ***Kenduskeag*** – *Kenduskeag Stream Canoe Race*
- ***Lincoln*** – *River Drivers' Supper*
- ***Old Town*** – *Riverfest on the Penobscot*
- ***Rockwood*** – *Moose River Canoe and Kayak Race*
- ***Searsmont*** – *St. George River Canoe Race*
- ***Skowhegan*** – *Log Days*
- ***Waterville*** – *Voices of the Kennebec Festival*
- ***Yarmouth*** – *Royal River Canoe & Kayak Race*

Toward a New Balance for Maine's Rivers

Maine's rivers serve a broad range of functions. They provide critical habitat for thousands of species of insects, fish, birds, water plants, and mammals. They serve as spawning grounds for Atlantic salmon, sturgeon, shad and other sea run fish. They carry fresh water to the ocean. They generate electricity through hydropower dams. They offer recreation opportunities for anglers, paddlers, and hikers. They also add immeasurably to our quality of life.



For much of the last century, the use of our rivers has been out of balance. Industrial activities including power generation, waste disposal, and log drives seemed like the best way to support and enable a growing economy. But these uses crowded out, or completely ruined, other values and functions of our rivers. The damage caused by these activities has become increasingly recognized, and has stimulated legislation, investments, and changes of behavior that collectively have helped create healthier rivers in Maine.

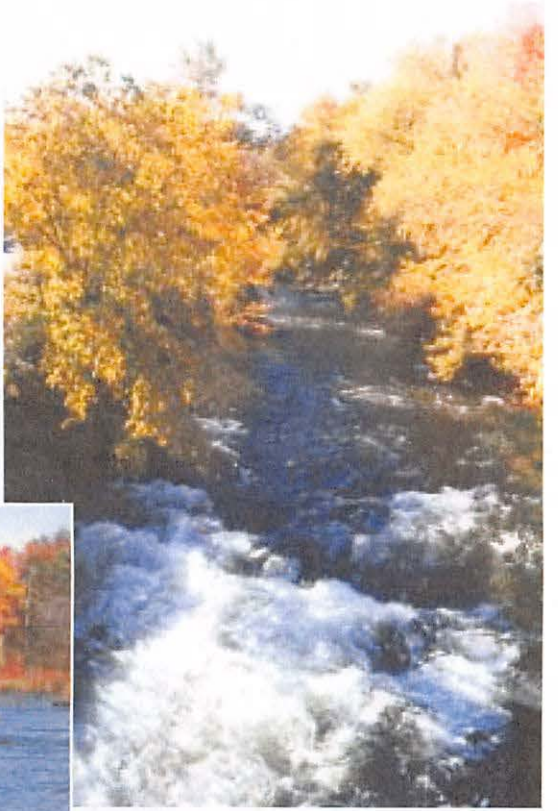
Maine's aging dam infrastructure, combined with a growing appreciation of the ecological impacts of dams, has led to a series of dam removals which have restored important functions to many stretches of Maine's rivers and streams. These dam removals have involved small dams, by-and-large, where the cost, safety, and fish migration issues have clearly weighed in support of the decision to remove the dam.

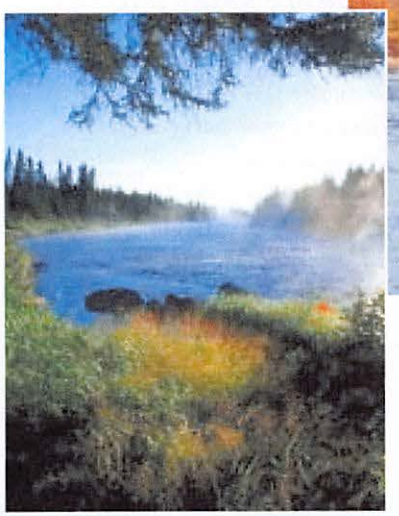
Dams will continue to provide an important source of electricity in Maine. They will continue to create lakes and ponds that are valued by individual landowners, communities, and tourists. They will also create ponds used as municipal and agricultural water supplies, sources of water for fire protection, and structures that help guard against flooding.

As we enter the 21st Century, the many different and at times competing functions of Maine's rivers and its dams are being weighed in a new way in order to strike an appropriate balance for Maine people and our environment. In some cases, fish passage

systems are being required at dams where no effective fish passage has previously existed. In other cases, dams are being repaired or their hydropower capacity is being increased. Elsewhere, dams are being removed.

Each dam in Maine has its own unique set of circumstances, and the fate of each dam must be examined on a case-by-case basis. With the involvement of Maine people and communities, a new balance of values can and will be achieved for Maine's rivers that will serve our needs and interests, and those of the flora and fauna that depend on healthy rivers, well into the future.





Maine's aging dam infrastructure, combined with a growing appreciation of the ecological impacts of dams, has led to a series of dam removals which have restored important functions to many stretches of Maine's rivers and streams.

Resources

Dam Removal: A Citizen's Guide to Restoring Rivers A Joint Project of River Alliance of Wisconsin and Trout Unlimited: 2000 – www.wisconsinrivers.org and www.tu.org

Dam Removal: Science and Decisionmaking, The H. John Heinz III Center for Science, Economics and the Environment: 2002: 220 p. – www.heinzctr.org

Dam Removal Success Stories: American Rivers, Friends of the Earth, and Trout Unlimited – www.americanrivers.org/damremovaltoolkits/default.htm

Dam Removal: A New Option for a New Century, The Aspen Institute: 2002: 68 p. www.aspeninst.org/damremovaloption

A River Reborn: Benefits for People and Wildlife of the Kennebec River Following Removal of Edwards Dam: Natural Resources Council of Maine: 1999: 12 p. nrcm@nrcm.org

National Inventory of Dams: U.S. Army Corps of Engineers and Federal Emergency Management Agency – http:/crunch.tec.army.mil/nid/webpages/nid.cfm

Taking a Second Look: Communities and Dam Removal: Video released jointly by the National Park Service, Trout Unlimited, American Rivers, Natural Resources Council of Maine, River Alliance of Wisconsin, and Atlantic Salmon Federation. Copies available from the Natural Resources Council of Maine – nrcm@nrcm.org

Organizations

American Rivers
1025 Vermont Avenue NW, Ste. 720
Washington, D.C. 20005
202-347-7550
www.amrivers.org

Atlantic Salmon Federation
Fort Andross, Suite 308
14 Maine Street
Brunswick, ME 04011
207-725-2833
www.asf.ca

Coastal America
300 7th Street, SW Suite 680
Washington, DC 20024
202-401-9821
www.coastalamerica.gov

Department of Environmental Protection
17 State House Station
Augusta, ME 04333-0017
207-287-7688
www.state.me.us/dep

Friends of the Presumpscot
P.O. Box 223
S. Windham, ME 04082
www.presumpscotriver.org

Maine Rivers
3 Wade Street
Augusta, ME 04330
www.mainerivers.org

Natural Resources Conservation Service
967 Illinois Avenue, Suite 3
Bangor, ME 04401
207-990-9100, Ext. 3
www.me.nrcs.usda.gov/

Natural Resources Council of Maine
3 Wade Street
Augusta, ME 04330
800-287-2345
www.maineenvironment.org

Trout Unlimited
1500 Wilson Boulevard, Suite 310
Arlington, VA 22209-2404
800-834-2419
www.tu.org

You, too, can help make a difference for the environment!

Support the Natural Resources Council of Maine

The Natural Resources Council of Maine is the leading voice for protecting Maine's environment. Supported by 8,000 citizens from across the state, we have been working since 1959 to ensure clean air, clear water, and healthy forests for our future.

Letting people know about the value of Maine's waterways is just one part of our mission.

The Council also:

- Spearheaded efforts to restore the fisheries and water quality in the Kennebec River through the removal of Edwards Dam.
- Continues to lead the fight to save the Allagash Wilderness Waterway, Maine's only National Wild and Scenic River. The Allagash is at risk today from increasing development of bridges, parking lots, and boat launches, which will bring more traffic, noise, and distractions to interrupt the beauty and solitude that makes the Allagash experience so extraordinary.
- Fought successfully for pollution reductions from Maine's largest air polluter, Wyman Station, an oil-fired power plant on the shores of Casco Bay, whose emissions travel up our coast, distressing those with asthma and other respiratory ailments, and causing smog over our scenic vistas.
- Led the campaign to phase out products that contain mercury, a toxic chemical that harms our children's health and the health of our loons, fish, and other wildlife.
- Helped win passage of the land bond that provided $50 million for the protection of land and shorelines in all 16 counties of the state.

By supporting the Natural Resources Council, you can play a part in critical environmental issues facing Maine.

As a member, you will be kept up-to-date on these issues, through our website, **www.maineenvironment.org**, our newsletter, *Maine Environment*, and action alerts on legislative issues. You may also take a more active part in raising your voice for the environment, by joining our e-mail based Environmental Network or participating in workshops and other events.

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Regional Issue Brief #63 Summer 2020

What Do We Know About What to Do With Dams?

How Knowledge Shapes Public Opinion About Their Removal in New Hampshire

Simone Chapman, Catherine M. Ashcraft, Lawrence C. Hamilton, and Kevin Gardner

On March 13, 1996, the failure of the Meadow Pond Dam in Alton, NH unleashed 92 million gallons of water downstream, causing one death, two injuries, more than $5 million in damage to homes, damage to about a quarter mile of road, and power outages.[1] More recent dam failures across the country, such as in Oroville, CA and Midland, MI, highlight the continuing challenges dam owners face in maintaining aging dams and upgrading them to meet current safety requirements. New building in floodplains and more intense rainfall in coming decades will likely make today's safety challenges more acute. New England, with over 14,000 dams,[2] has a dense cluster of older ones and, for many, failure would likely cause loss of life and significant economic damage.[3]

As a result, dam owners across New England are engaged in contentious policy discussions about what to do with dams that are aging, require costly upgrades, and no longer provide their intended benefits. In many cases the long-term environmental and safety benefits of removing these dams outweigh the short-term costs of removal.[4] For example, Exeter, NH decided to remove its historic downtown Great Dam in 2016 in order to restore the Exeter River.[5] In other cases, owners of specific dams may decide to repair and maintain a dam for other benefits, such as recreational opportunities, drinking water supply, and community identity. For example, in 2019 voters in Newmarket, NH decided to repair and keep the Macallen Dam on the Lamprey River.[6]

Publicly owned dams are the most obvious challenge, but the public also has significant influence over the roughly 75 percent of dams in the state that are privately owned. Private as well as municipal dams are eligible to use public funds, such as loans from the state-legislated Dam Maintenance Revolving Loan Fund, for maintenance, repair, improvement, and removal, and grants from the Aquatic Resources Mitigation Fund for preservation, restoration, and enhancement of wetlands and streams. Publicly funded state dam inspectors regulate the repair, reconstruction, maintenance, and operation of dams. And decisions about dams affect the state's stewardship of natural resources, including water, fish, and wildlife, held in trust for public benefit.

KEY FINDINGS

Most New Hampshire residents have not heard about the issue of removing old dams, but they express opinions when asked: 67 percent think such dams should be removed in some or most cases, while only 18 percent do not think any dams should be removed.

The more people have heard or read about the issue, the more likely they are to support dam removal.

Widespread lack of awareness and the connection between knowledge and opinions underline the need for better communication and outreach to inform the public.

Surveys of Public Opinion

An earlier series of statewide surveys in 2018 provided the first representative data at the state level about how New Hampshire residents weigh different tradeoffs regarding dam removal[7] and how demographic factors influence their preferences.[8] Faced with tradeoff questions about whether to remove dams or keep them to

preserve New Hampshire's industrial history, recreational opportunities, or waterfront property values, a majority of respondents favored dam removal. Only when the tradeoff involved dams that supply electricity did a majority prefer keeping them instead. In general, younger adults, women, and Democrats more often preferred dam removal.

To effectively steward New Hampshire's financial, human, and natural resources, it is important to know more about residents' preferences for keeping or removing dams in general. It is also important to know how salient this issue is for New Hampshire residents and how well informed they feel they are. While to some, dams may seem ubiquitous in New England, do most New Hampshire residents feel they hear and read much about dams? And does what they hear or read make any difference in their preference for keeping or removing dams? To investigate these questions, the October 2018 Granite State Poll[9] asked 607 New Hampshire residents the following questions:

There are thousands of dams in rivers all around New Hampshire. Many of these dams no longer serve their intended purpose. For environmental or safety reasons, some people think these dams should be removed. Other people prefer to leave the dams in place. Have you heard or read about the issue of dam removal?

- *I have heard or read a lot about dam removal.*
- *I have heard or read a moderate amount about dam removal.*
- *I have heard or read a little about dam removal.*
- *No, I have not heard or read about dam removal.*

With regard to keeping or removing dams in New Hampshire, which of the following comes closest to your own opinion?

- *I think dams should be removed in most cases.*
- *Removal may be a good idea in some cases.*
- *I do not think any dams should be removed.*

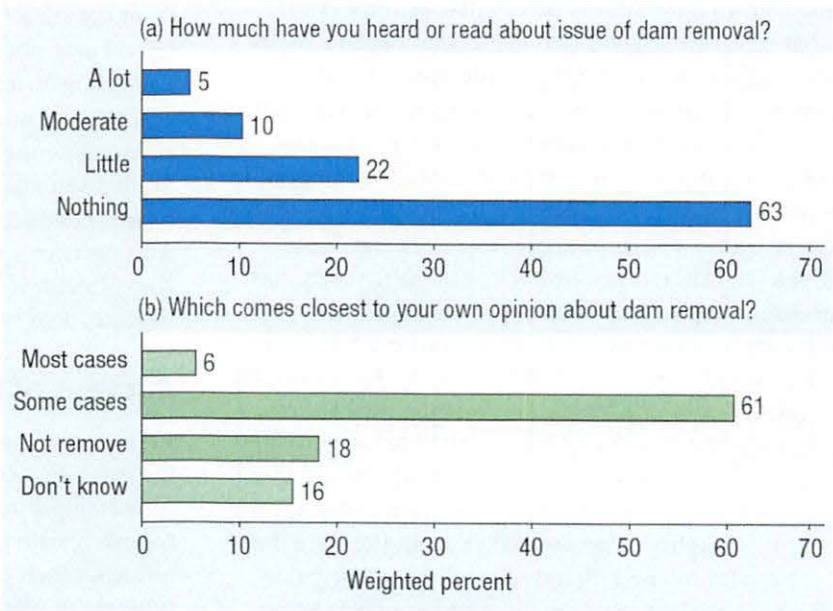
Figure 1 charts the responses. An overwhelming majority (85 percent) of respondents said they have heard or read little (22 percent) or nothing (63 percent) about dam removal. Even so, 67 percent considered that old dams should be removed in some or most cases. Only 18 percent opposed any dam removal and 16 percent said they didn't know. For the majority who have not heard or read about dam removal, our first question's introductory statement may have provided the most direct information on this issue.

Effects of Knowledge

How does knowledge about dam removal affect people's opinions? Figures 2 and 3 put the knowledge and opinion questions together. In Figure 2 we see that large majorities (78 to 85 percent) of those who say they have heard a lot, a moderate amount, or a little about this issue favor removing dams in at least some cases. The largest group of respondents, however, is those who say they have heard or read nothing about this issue (see Figure 1). Figure 2 shows that the no-knowledge group is least likely (58 percent) to support dam removal.

Figure 3 focuses on the strongest opinion, that old dams should be removed in most instances. Here the information gradient is steep, ranging from 18 percent support for removing most old dams among those best informed on this topic, to just 3 percent among the least. Taken together, Figures 2 and 3 suggest

FIGURE 1: RESPONSES TO QUESTIONS ABOUT (A) DAM-REMOVAL INFORMATION AND (B) DAM-REMOVAL OPINIONS



Source: NH Granite State Poll, October 2018 (n = 607).

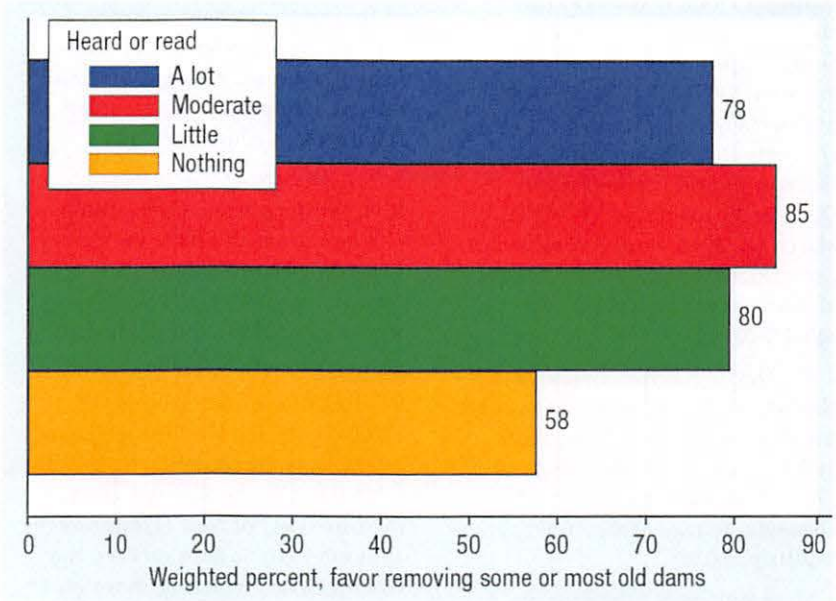
that a better-informed general public would be more supportive of dam removal for environmental or safety reasons.

Policy Implications for New Hampshire

Given the significance of dam decisions for state resources, public safety, community identity, and ecosystems, there is a need for information about public preferences to guide stewardship decisions. Our survey results indicate a majority of New Hampshire residents favor removing at least some dams, and support for dam removal rises with level of knowledge: people with at least some knowledge of this topic are more likely to favor removal of some or most dams. Yet a high fraction of New Hampshire residents say they have heard nothing about dam removal issues, and the greatest opposition to dam removal comes from this no-information group.

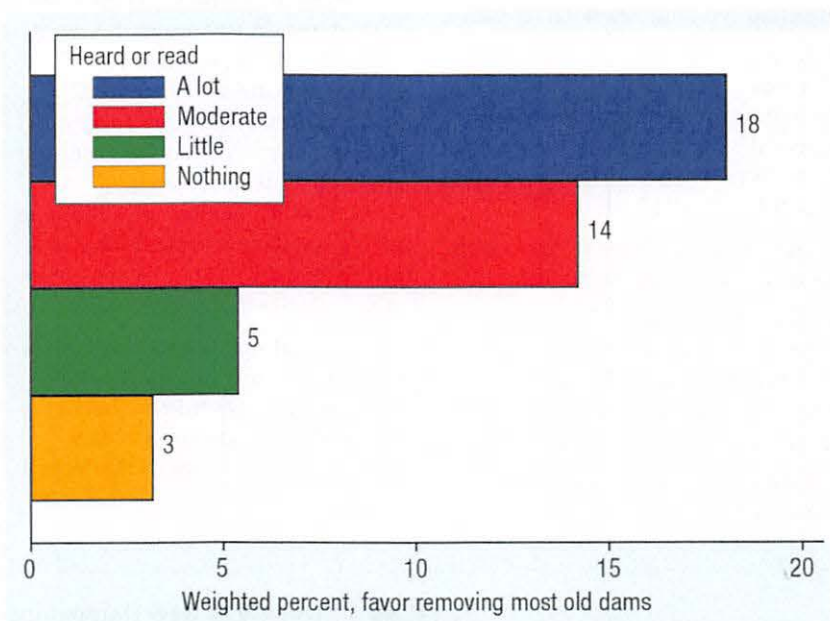
There is a clear need for enhanced public information about different dam management options—doing nothing, repairing and maintaining them, or removing them—and the associated short-term and long-term costs and benefits. Our findings highlight the importance of communication efforts and the need to better inform New Hampshire residents about dam issues, for example through news stories.

FIGURE 2: **SHARE OF RESPONDENTS FAVORING REMOVING SOME OR MOST OLD DAMS, BY HOW MUCH THEY HAVE HEARD OR READ ON THIS ISSUE**



Note: The effect of knowledge on opinions is statistically significant ($p < 0.001$).[10]
Source: NH Granite State Poll, October 2018 (n = 607).

FIGURE 3: **SHARE OF RESPONDENTS FAVORING REMOVING MOST OLD DAMS, BY HOW MUCH THEY HAVE HEARD OR READ ON THIS ISSUE**



Note: The effect of knowledge on opinions is statistically significant ($p < 0.001$).[11]
Source: NH Granite State Poll, October 2018 (n = 607).

Endnotes

1. "Dam Break in New Hampshire Damages Homes, Washes Out Highway," U.S. Water News Online, April 1996, web.archive.org/web/20071119115827/www.uswaternews.com/archives/arcsupply/6newhamp.html; "Memories Still Fresh of Alton Disaster 20 Years Ago," WMUR, March 10, 2016, https://www.wmur.com/article/memories-still-fresh-of-alton-dam-disaster-20-years-ago-1/5209313.

2. F.J. Magilligan, B.E. Graber, K.H. Nislow, J.W. Chipman, C.S. Sneddon, and C.A. Fox, "River Restoration by Dam Removal: Enhancing Connectivity at Watershed Scales," *Elementa: Science of the Anthropocene* 4 (2016): 000108.

3. Maya Wei-Haas, "The Problem America Has Neglected for Too Long: Deteriorating Dams," *National Geographic,* May 27, 2020, https://www.nationalgeographic.com/science/2020/05/problem-america-neglected-too-long-deteriorating-dams/.

4. F.J. Magilligan, C.S. Sneddon, and C.A. Fox, "The Social, Historical, and Institutional Contingencies of Dam Removal," *Environmental Management* 59, no. 6 (2017): 982–94, http://dx.doi.org/10.1007/s00267-017-0835-2.

5. Exeter Historical Society, "Exeter Dam," www.exeterhistory.org/exeter-dam.

6. Alexander LaCasse, "The Case for Approving $2M Macallen Dam Bond," Fosters.com, March 2, 2019, www.fosters.com/news/20190302/case-for-approving-2m-macallen-dam-bond.

7. Natallia Leuchanka Diessner, Catherine M. Ashcraft, Kevin H. Gardner, and Lawrence C. Hamilton, "What to Do With Dams: An Assessment of Public Opinion to Inform the Debate in New Hampshire" (Durham, NH: Carsey School of Public Policy, University of New Hampshire, 2019), https://scholars.unh.edu/carsey/374.

8. N.L. Diessner, C.M. Ashcraft, K.H. Gardner, and L.C. Hamilton, "I'll Be Dammed! Public Preferences Regarding Dam Removal in New Hampshire," UNH Scholars Repository (2020), https://dx.doi.org/10.34051/p/2020.395.

9. This Granite State Poll survey involved cell and landline telephone interviews of randomly selected adults, carried out by the Survey Center at the University of New Hampshire. In addition to these dam surveys, the Granite State Poll has been widely used both for political polling and scientific research. On environment- and science-related questions, its results often closely resemble those of nationwide surveys. See, for example, L.C. Hamilton, E. Bell, J. Hartter, and J.D. Salerno, "A Change in the Wind? U.S. Public Views on Renewable Energy and Climate Compared," *Energy, Sustainability and Society* 8 (2018), https://doi.org/10.1186/s13705-018-0152-5. Sampling weights, which mathematically adjust survey results to represent the state's population, are used in Figure 1 and other analyses in this brief.

10. Statistical significance results shown in Figures 2 and 3 ($p < 0.001$ in both cases) reflect t tests from probability-weighted logit regressions of dam opinions on self-assessed knowledge.

11. Ibid.

About the Authors

Simone Chapman is a master of science student in the Natural Resources and the Environment program and a graduate research assistant with a joint appointment in the Environmental Policy, Planning, and Sustainability Lab and the New England Sustainability Consortium Research Program at the University of New Hampshire. **Catherine M. Ashcraft** is an assistant professor of natural resources and the environment and a Carsey School of Public Policy faculty fellow at the University of New Hampshire. **Lawrence C. Hamilton** is professor of sociology and a senior fellow at the Carsey School of Public Policy at the University of New Hampshire. **Kevin Gardner** is executive vice president for research and innovation at the University of Louisville.

Acknowledgments

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See related publications at carsey.unh.edu

What to Do With Dams: An Assessment of Public Opinion to Inform the Debate in New Hampshire (July 2019)

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Town of Exeter

Pam McElroy <pmcelroy@exeternh.gov>

Bulletin #24: The Session Ends

1 message

NHMA Government Affairs <governmentaffairs@nhmunicipal.org> Fri, Jun 14, 2024 at 10:35 AM
To: Pam McElroy <pmcelroy@exeternh.gov>

New Hampshire Municipal Association

THE SERVICE AND ACTION ARM OF NEW HAMPSHIRE MUNICIPALITIES

LEGISLATIVE BULLETIN

Legislative Bulletin 24 **2024 Session** **June 14, 2024**

Live Bill Tracker

The Session Ends...

The House and Senate both met on Thursday and finished their work for the 2024 legislative session. With some notable exceptions, both chambers approved the committee of conference reports, so most of the results described in last week's *Legislative Bulletin* remain unchanged. Many bills are now on their way to the governor, and will be signed into law—or, in some cases, may be vetoed or become law without his signature—over the next two months or so. We will publish our *Final Legislative Bulletin*, summarizing all new laws of municipal interest, by mid-August, depending to some extent on how quickly the bills get signed.

If you are wondering when a particular law will take effect, look at the "effective date" section at the end of the bill. Many bills state a firm effective date, such as January 1, 2025. Others state that they will become effective "upon passage," or 30 or 60 days after passage. For this purpose, "passage" means signature by the governor. So, if a bill states that it will take effect 30 days after passage, and the governor signs it on July 7, the effective date is August 7.

The legislature will meet one more time, probably in late September or early October to consider bills that have been vetoed by the governor. It takes a two-thirds vote by each chamber to override a veto. We do not anticipate a veto of any bills NHMA has followed closely—but, as we have said many times before, anything can happen.

...But There's No Time to Slow Down

Given that the legislative session ends in mid-June (end of June in budget years), and the next one does not get underway until January, the government affairs staff are sometimes asked: What do you do all summer? Maybe we take three-month vacations or spend the summer working as house painters, landscapers, or lifeguards. Not quite.

Among other things, we will produce our *Final Legislative Bulletin*; oversee NHMA's legislative policy process (see separate article); monitor study committees and commissions; work with legislators on next session's bills and begin planning legislative initiatives for next year; and catch up on other administrative matters that have not gotten our full attention over the last five months. In addition, the government affairs staff have significant non-legislative duties, including responding to legal and finance questions from our members, giving presentations to various groups, participating in webinars and workshops, and assisting in planning NHMA's annual conference. And finally, yes—we do take some vacation time.

As we move into the fall, we will start to contact legislators (once we know who they are, or at least who they are likely to be) to discuss legislation for 2025 and look to understand state budget priorities. After the elections, we will shift into full gear, preparing for the excitement of another legislative session!

Final Action on Bills

HB 1370, the election "hotline" bill, was killed by the House yesterday. (Officially, it was tabled, but as the session ended today, it is dead).

HB 1400, the parking minimum mandate and land use omnibus bill, was passed yesterday. It is now headed to the governor.

Below is a table listing what happened with everything else of municipal interest.

Bill	Title	Last Action	Latest Version
HB 318	Title: (Third New Title) relative to bail commissioners, the standards applicable to and the administration of bail, and making an appropriation.	Sent to governor	Version adopted by both bodies
HB 458	Title: (New Title) reestablishing the commission to study the assessing of power generation.	Sent to governor	Version adopted by both bodies
HB 463	Title: (New Title) relative to the establishment of an election information portal and makes an appropriation therefor.	Died	As Amended by the Senate
HB 1069	Title: (New Title) relative to material subject to disclosure under the right-to-know law.	Died	As Amended by the Senate
HB 1079	Title: (Second New Title) relative to critical incident stress management team members and establishing a rural and underserved area educator incentive program for higher education and making an appropriation therefor.	Sent to governor	Version adopted by both bodies
HB 1091	Title: relative to the financing of political campaigns.	Sent to governor	Version adopted by both bodies
HB 1195	Title: relative to allowing school districts to approve different apportionment methods for school administrative unit costs.	Sent to governor	As Amended by the Senate
HB 1197	Title: (New Title) relative to criminal background checks and relative to insurance coverage for intrauterine insemination.	Sent to governor	Version adopted by both bodies

HB 1202	Title: (New Title) relative to the issuance of permits for the alteration of driveways exiting onto public ways and relative to the definition of disability or special needs under the child care scholarship program.	Sent to governor	As Amended by the Senate (2nd)
HB 1215	Title: (Second New Title) relative to development approvals and appeals, and allowing the town of Hampton to discontinue a particular highway in order to lease that property.	Died	As Amended by the Senate
HB 1223	Title: (New Title) creating local options for games of chance.	Died	As Amended by the Senate
HB 1292	Title: (New Title) relative to coverage of children under the state retiree insurance plan and relative to federal immigration enforcement.	Died	As Amended by the Senate
HB 1313	Title: relative to access to the voter checklist by candidates.	Sent to governor	Version adopted by both bodies
HB 1369	Title: relative to the verification of voter rolls every 4 years.	Died	As Amended by the Senate
HB 1370	Title: (New Title) relative to eliminating voter identification exceptions.	Died	As Amended by the Senate
HB 1380	Title: (New Title) relative to brew pub licenses, relative to insurance cost-sharing calculations, and relative to receipt of pharmaceutical rebates by insurers and pharmacy benefits managers.	Sent to governor	Version adopted by both bodies
HB 1386	Title: relative to prohibiting the disposal of lithium-ion batteries in solid waste landfill facilities, composting facilities, or incinerators.	Sent to governor	Version adopted by both bodies
HB 1400	Title: (Third New Title) relative to residential parking spaces, landlord-tenant law, unauthorized occupant evictions, and zoning procedures concerning residential housing.	Sent to governor	Version adopted by both bodies
HB 1521	Title: (New Title) relative to recovery houses.	Died	As Amended by the Senate
HB 1600	Title: (New Title) establishing a committee to study the aggregation of electric customers by municipalities and counties.	Sent to governor	As Amended by the Senate
HB 1633	Title: relative to the legalization and regulation of cannabis and making appropriations therefor.	Died	As Amended by the Senate
HB 2024	Title: (Third New Title) relative to the state 10-year transportation improvement plan; relative to adding a speed limit of 45 miles per hour on rural highways; relative	Sent to governor	As Amended by the Senate

	to disability pensions for public safety employees who are victims of violence; and making a capital appropriation to the department of corrections toward the replacement of the New Hampshire state prison for men.		
SB 84	Title: (Second New Title) repealing certain task forces, study committees, and study commissions , repealing the John G. Winant memorial commission and making the maintenance of the memorial a duty of the joint legislative historical committee, and establishing a committee to study the appeals process administered by the environmental councils established under RSA 21-O.	Died	As Amended by the House
SB 407	Title: (New Title) establishing a ground ambulance cost reporting program and a study by an independent actuarial and accounting expert of the cost of providing ground ambulance services in the state.	Sent to governor	As Amended by the House
SB 499	Title: relative to the Supplemental Nutrition Assistance Program and the Summer EBT program and making appropriations therefor and relative to providing disaster relief funding to municipalities after a natural disaster.	Sent to governor	As Amended by the House
SB 534	Title: relative to campaign finance.	Died	As Amended by the House

Legislative Policy Process Update

The first phase of NHMA's 2025-26 legislative policy process has been completed. The three legislative policy committees, comprising over 50 local officials from 44 municipalities, spent several weeks reviewing existing legislative policies and new proposals. They have made their recommendations, which will be sent to all member municipalities later this month. We will ask municipal governing bodies to review the recommendations, establish positions on them, and appoint a delegate to vote at the NHMA Legislative Policy Conference on Friday, September 27, 2024 at 9:00 am. Members will also have an opportunity to submit policy floor proposals, which are due by Friday August 9.

NHMA Events Calendar
2023 Final Legislative Bulletin
Website: www.nhmunicipal.org
Email: governmentaffairs@nhmunicipal.org

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