Notes from Comprehensive Plan Committee - Meeting #2
January 26, 2022

Present:

	Garret Barry, Public Works	√	John Kostek, Recreation Committee
	Mike Bartlett, Community Preservation Committee	√	Luke Longstreeth, Conservation Commission
	Rebecca Bench, School Committee	√	John Pease, Agricultural Commission
√	Angelica Dewey, Open Space Committee	√	Shawn Robinson, Council on Aging
√	Julia Frisby, At Large*		Micki Sanderson, Historical Commission
√	Jahlil Johnson, At Large	√	Stephanie Slysz, Planning Board
√	David Keir, At Large	√	Christopher Smith, Redevelopment Committee

Also attending: Marlene Michonski, Town Administrator; Michael Cahill, Hatfield Resident; Rich Niles, Joe Kirby*, and Carly Quinn*, Woodard & Curran; Andrew Smith*, Greater Connecticut River Valley MVP Coordinator; Patty Gambarini and Erica Larner*, Pioneer Valley Planning Commission; and Doc Pruyne, Reminder publications.

* = attended meeting through video link rather than in person

Next steps:

- Next committee meeting will be on Wednesday, February 22, 6 to 8 p.m.
- Send any flood photos and information to Woodard & Curran team: RNiles@woodardcurran.com; JKirby@woodardcurran.com; cnquinn@woodardcurran.com
- Also, help Woodard & Curran team with information on any building floor elevations, especially in Town Center, to help with cross sections.
- Town and Woodard & Curran staff to schedule a site visit to review the levee and critical areas of interest in Town.
- PVPC to work with core Town and consulting team on planning for upcoming meetings and share for feedback with Committee Co-chairs.
- Woodard & Curran will prepare cross sections and approach to discussion around flood adaptation and share for feedback with core Town and consulting team.
- PVPC to finish draft webpage for Committee to be able to access documents.

Discussion notes:

Welcome and introductions

Marlene provided welcome to committee members and others and noted that Micki and Shawn have agreed to serve as co-chairs for the Comprehensive Plan Committee.

Attendees, both in person and through the virtual meeting link, introduced themselves one by one, noting their name and any town committee they may be representing.

Meeting #1 review and approval of meeting notes

Marlene reviewed two slides covering key content from the Comprehensive Plan Committee's first meeting on December 8. *Slides are attached here as part of the meeting record.*

Stephanie led discussion on the December 8 meeting notes and asked for a vote for approval of notes as presented.

VOTE: Motion by David, seconded by Shawn provided change recommended by Chris of Clarence to Cory Bardwell, and unanimously approved to otherwise approve notes as presented from December 8, 2022 meeting.

Climate Data and Projections

Marlene briefly introduced the consulting team from Woodard & Curran. Rich Niles then began speaking, noting that the focus of tonight's presentation would be on flood risk, a topic that had been identified in both the Town's Municipal Vulnerability Preparedness (MVP) Plan and the Hazard Mitigation Plan.

Rich said that the hope is to come away from the presentation tonight with a better understanding of what has changed and what is expected for future flood risk. He noted this will help toward a conversation at the next meeting around adaptation in the context of planning. *The presentation is attached here as part of the meeting record.*

Following were key points from the presentation (denoted with bullet points throughout here):

- FEMA's 1978 flood map shows base flood elevation, commonly referred to as 100-year flood.
- Base flood elevation (BFE) is based on flow and flow is expressed as cubic foot per second (CFS).
- Cubic foot of water is like the size of a basketball.
- No closure structures on Mill River so Connecticut River backwaters somewhat.
- Montague City gauge provides recorded flows that we can compare against FEMA's 1978 base flood elevation of 180,000.
- Flood risk is also affected by flow regulation, dams, activities up and downstream
- Levee largely protecting farmland…what was driver for levee and protection? Always a bit different in every community. Hatfield levee not built to protect critical infrastructure. Starting to look at this in Hadley…so much at risk that

There was some discussion about why the levee was built. Chris said he thought the levee was a WPA project dating to the 1920s and 1930s while Michael said that the levee was built after the flood of 1936.

- It is not high enough to protect from flows like 1936 though so what was it meant to protect? And what does that levy do for you today? Has it been activated any time in the recent past? Does it just protect farmland or from your perspective does it also protect other facilities?

Luke noted that the Mill River is the bigger threat. He continued that the levee was more likely built to give the Town some time to evacuate. It is not intended to fully protect town and seems more a preventative measure, to delay flood.

Joe asked if there has been any recent need to evacuate.

John noted that the last flooding came from the Mill River and South Street had to evacuate.

Dave added that the wetland area near the mouth of the Mill River, Smith Academy all flooded. Usually backflow from the Connecticut River coming up the Mill River is more of a problem. It will creep into the farmlands.

John said that the Bashin Road area backed up quickly during one flood event. The Town needs to confirm if this comment is referencing the 1960 Flood event. Old timers said they had not seen that from other floods. It washed out the road.

He noted too that with last night's rain, the entire watershed is flooding, Whately Road is all flooded.

Rich said that there is something to be said about smaller flood events like last night.

Michael observed that in the flood of 1960, there was only one road where you could get away from the Center of Town. The bridge by the Legion was the only place to get through. Center of Town very close to evacuation. Since then there have been no changes to flood control system. So there is no other way to get out. There was a doctor, Doc Burn, who had a patient that needed tending so he canoed up School Street to get to the patient. Flooding came from the north where there is not a dike.

There was some discussion, comparing other floods. One member noted that there was lots of flooding in 1984. Someone noted that with the 1936 storm there were ice jams that made flooding much worse.

Dave said we have not had a 100-year flood since 1936, even 1960 and 1984 were not 100-year. So think about adding another 25% of water to those events we remember and just imagine.

- Only the lower portion of Hatfield's levee is in the National Levee Data Base. That's what FEMA is looking at. To the north, those features are levee-like, but not recognized.
- The hazard mitigation plan provides some good information to use in this project.
- Flood preparedness is important. Access, and adaptation are important too.
- What we want to know is what is actual flood depth at certain points?
- If there is something to which we should pay more attention, let us know.

Rich then began a section of his presentation on <u>current conditions and the FEMA regulatory context</u>:

- As you may know, FEMA is updating maps based on new data. They are evaluating levees as part of the LAMP process, asking does this qualify in flood protection? Takes time for these maps to become final and effective and there are implications for insurance.
- The assessment is that the levee does not provide protection, but as Luke notes does provide delay.
- FEMA has produced an updated flood map that shows base flood elevation change and a change in the flood area.

Luke observed so what was 500 is now the 100-year flood area.

- These 100 and 500 flood areas have a flow related value. The 1978 base flood elevation was related to 180,000 cubic square feet (CFS).
- The 1936 flood is the highest flow of record.

Joe noted that today that flow from 1936 of 236,000 cfs is higher than the flows associated with the FEMA 500-year base flood elevation. We need to ask who ran the model and when did they do it? Annual chances will change. What's clear is that you do have significant flooding events with higher probability storms and at around 140,000 cfs.

Showing the updated FEMA flood map, Rich explained:

- We overlayed the FEMA model over the Hazard Mitigation critical facilities map done by PVPC.
- This is new information, developed by FEMA, that we were able to get for our work.
- Pointing to the updated FEMA mapping, Rich interpreted certain polygons to show where higher ground is located and noted that only parts of the levy qualifies as higher ground with updated mapping.
- The model for the Connecticut River only extends so far. The Mill River is not included, but Joe can extend the model up through the Mill River.
- Joe interjected that he would do this based on elevations that are static so this would not represent flooding, but rather more the backwater condition with the Connecticut River into the Mill River.
- This represents the updated model from FEMA and you can look at the color coding to get an idea of the new 182,000 cfs flood flow and what that means to base flood depths from ground surface. In the Town Center where flood depths could be around four feet, it is important to know what the elevations are for buildings and we can do some cross sections to show what this means.
- The model is based on LIDAR terrain, which is enough detail to provide a sense of how we get drain surface of overland. Rich explained, so that means that at most the model is off by a few inches rather than a few feet.
- In these current conditions, the flow associated with the FEMA 100-year base flood elevation has not changed much since 1978, only from 180,000 cfs to 182,000 cfs, but there is more flooding, the elevation of water is higher. What is happening downstream has some influence in changing what is happening upstream.

There was some discussion about how much flood water Town Hall would experience. Stephanie noted that roadways are in purple indicating great depth of floodwaters. John said he had heard that the high

flows from Irene had "cleaned out" the Connecticut River and asked if that affects what is shown in the current conditions. Rich noted that it's not clear why there is similar flow, but more flooding. Joe added that some of the changes since 1970 are not always clear, but it is important to work with current data.

Rich moved into a section of his presentation on future conditions:

- To understand future flood conditions and risk, Woodard & Curran used the 2019 MassDOT study conducted by UMass that focuses on the Connecticut River Valley. This study includes changes in precipitation and changes in river flow with scenarios that look through to 2100. This is really good data with lots of good documentation in the report. Our meteorologist on staff looked at this study and noted that the assumptions are very reasonable.
- Climate data is based on the global circulation model and we worked with the worst case scenario in terms of emissions and global warming change.
- So our question is: What is the worst case flow based on information in this report?
- Working from the updated FEMA base flow, we agreed that the 15% increase in the MassDOT/UMass study is a reasonable flow projection to use. This takes us from the current 182,000 cfs to 209,300 cfs for the future flow scenario. So you can see too that this scenario is below the 1936 flow.

With the two side by side scenarios showing in the presentation (current and future), Stephanie asked whether the 15% increase covers more area. Rich noted that given the size of the images on the slide it is hard to read, but that the lateral extent of flooding did not change much. What really changes is the depth of flooding. Now we are getting into the 5-foot range in the Town center.

Shawn asked if Woodard and Curran could show the 236,000 cfs that the Town experienced in 1936.

Chris asked if the scenario assumes a north to south flow or whether it takes into account the south backing up? Stephanie noted too that flooding in the Mill River could also lead to dam breaks that have downstream impacts.

Joe explained that the way model is done assumes that water flows north to south, but the calculations are done from downstream to upstream, so there is a backwater approach. He continued by saying that when we look at critical facilities, we look at the 500-year flood. A lot of the regulations around them relate to 500-year. Dams if high hazard should have dam break analysis. We have not considered dams as that is a whole other ball of wax.

Shawn asked that if the big one happens wouldn't everything be affected? Rich agreed and added that in such an event, the Connecticut River flows will dominate. Shawn said he sees the need to access evacuation routes, but that a hazards analysis would help to understand evacuation routes.

Michael asked, where is all of this heading? No question that Connecticut River poses risks to citizenry, critical assets. Looking forward, how do we deal with some of these risks?

This last question presented a good segue to the last part of Rich's presentation on upcoming project work related to flood assessment.

- Photos and any other information from all of you would be helpful. Would help us to paint a picture for the written document.

John noted that there are some good pictures of the 1936 flood and pictures of house across the street from Fish Tales. There may also be some from the 1984 flood.

- We also need building floor elevations in the Town Center to help us with the cross sections.

Rich then acknowledged the great conversation that had occurred in the course of his presentation and asked those in attendance whether there were any last clarifying questions or concerns and thoughts.

John noted the photo of the in-ground flood gauge. He said that was installed so that the rise of water could be measured from a safe location. He added that there are a range of things to be looking at in terms of preparedness.

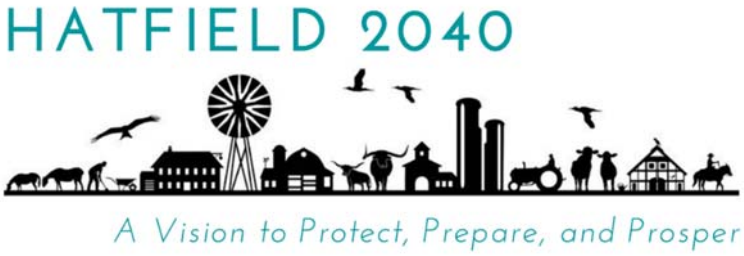
Andrew shared that his office has loaded new data in December to the Resilient MA portal. He noted that it is a good resource and that the data is now finer grained.

John noted that there was some conversation about moving the town center in the 1980s to higher ground. He suggested that since then there have been some choices about locating facilities that may have not been great, including the sewer treatment plant, which was originally planned for Elm Court.

Project Branding

Stephanie explained that at the last meeting there had been a request for ideas around branding the Comprehensive Planning process to give the project visibility and immediate recognition in Town.

Micki and David had provided some ideas that PVPC's Ken Comia worked with to develop a mock-up. Showing the mock-up branding on a slide, members responded as follows:



Shawn said he really liked the three words. It is what I think of in this planning process. He also indicated that he liked the color. Someone else noted that it need not be purple.

Chris said that he also liked the image and especially liked the word prosperity.

Julie indicated that she likes the Blandford branding of "Small Town Big Plans," but unfortunately that was already used.

Patty noted that PVPC's graphic designer could customize the silhouette to include some iconic Hatfield elements. Ideas for the silhouette included: tobacco barn, water tower, old mill dam, crops in the ground, town buildings, and a basketball hoop.

Next Steps and Wrap Up

Following are key last points raised during the meeting:

- It is important to talk about schools at one of the next meetings.
- Capawonk Housing was built in 1972 and the Housing Authority is looking at redoing the entire plumbing system because there are back up issues. It is located more in the flood danger area. Is this something that we could get grants for, perhaps addressing these 44 units of elderly housing or acquiring a parcel on higher ground? Would be good to do study to get this moving.
- Several reflected that the information presented was good, but a lot to take in and that they are very interested on how this will all come together.
- To a question about where to access information, Patty explained that a web page is in development and that the branding element is part of that design. That web page should be up very soon.