

JOHNSON PLANNING COMMISSION

MINUTES

Regular Meeting: THURS, 09 NOV 2023, 7PM EDT

In person at Butternut Mountain Farm Store, 31 Main St., Johnson

Members (P=Present; A=Absent)

Adrienne Stevson	A	Kim Cotnoir	P	Paul Warden	P
Charles Gallanter	P	Kyley Hill	P	<i>Vacant Seat</i>	
David Butler	A	Rob Rodriguez	P	<i>Vacant Seat</i>	

Other Attendees:

- Meghan Rodier and Alberto Della Torre, LCPC
- Jessica Louisos, PE and Doug Osbourne, PE - SLR Consulting, Inc.

MINUTES

Call to Order at 7:02 and Roll call (above; Kim arrived at 7:23).

Agenda Changes & Public Comment - None.

Presentation by SLR Consulting: Hydraulic Modeling and Flood Evaluation in Johnson, VT

1. Jessica and Doug presented the Lamoille River HEC-RAS hydraulic model that has been updated with current survey and LIDAR data. The purpose of the model is to simulate various flood conditions and the effect that various flood mitigation measures may have on flooding. Concepts discussed included water storage areas (lowered land areas adjacent to a river), the importance of upland forest land to minimizing runoff, compensatory (water) storage, flood plain connection (upstream storage), river corridor importance for headwater flood water storage, etc.
2. Explained cross-sectional river profiles that are used to characterize the river at a given location; these profiles are a key input to the model.
3. Discussed riverbed roughness coefficient (N values, another key model input) and slope, both of which affect the velocity of water flow.
4. Reviewed model validation using the 2019 Halloween Flood in Johnson (50 yr flood) performed by comparing the model predicted flood water depth to the actual recorded depth at the USGS stream gauge and other sites on the Lamoille River. The model predictions were within 0.5 – 1.0 foot of the observed values, indicating that it is suitable for evaluating flood mitigation alternatives.
5. Discussed water storage and water storage areas, which are “river areas that allow the river to expand and slow, minimizing the amount and velocity of water that affects downstream locations. Ideal water storage areas are large, flat, forested/vegetated areas (hold a lot of water, reduce flow rate, and trap debris).
6. Gave examples of other floodplain restoration projects where buildings, road and sewer lines were moved and the land surface lowered by removing thousands of cubic yards of fill and replanting with native vegetation.
7. Flood water storage areas are generally natural areas adjacent to a river that can be cut down (fill removed) – typically cut to the 5 year or 10 year flood elevation.

8. Modeling suggested 4 potential flood water storage areas in Johnson that could reduce flooding, along with several potential “redevelopment areas” that could be elevated for safer development (Note: SLR is not recommending specific areas for water storage or redevelopment at this time, this was a theoretical exercise to demonstrate potential flood mitigation actions and predicted change in flooding). Evaluation of alternatives by modeling showed 0.1 – 0.4 foot decrease in flooding – not dramatic relative to the flooding experienced in Sterling Market, but potentially very significant for people whose homes are on the edge of flood waters.
9. “Compensatory Storage”, the concept that any fill added to a property in the flood hazard area should be offset by water storage created elsewhere to mitigate subsequent flood damage, was discussed in some detail. Projects in Johnson discussed included Skate Park ramp development and plans to raise mobile home platforms by bringing in fill; these projects and others should mitigate the effect of new fill in the flood hazard area by providing compensatory storage elsewhere. Johnson’s Flood Hazard Bylaws are dated and JPC discussed that we should review the current town bylaws and recommend updates to the Selectboard as needed. ANR/DEC has flood hazard bylaw templates; Meghan will send to JPC members.
10. No action taken at this meeting based on the presentation, but the model discussion was very useful as food for thought as we review the Flood Resiliency chapter of the Municipal Development Plan.

Flood Resiliency Chapter - Reviewed briefly, members to come to next meeting with proposed edits.

Housekeeping

- Approval of Minutes from 12 OCT 2023 meeting. Kyle moved, Kim seconded, no discussion. Unanimous approval.
- Mail - None

Chair / Member Updates – None.

Review of previously edited Town Plan Chapters - Education & Recreation. No discussion.

Next Meeting - 14 DEC 2023. Some brief discussion regarding having remote or hybrid meetings to allow remote attendance. Chair will investigate VSU-Johnson facilities; no decision made.

Adjourn – 9:20