CRJC Mount Ascutney Local River Subcommittee

Tuesday, March 12th, 2019
Windsor Welcome Center
7:00PM

Minutes

Attendees

Plainfield	Elise Angelillo		Windsor		
Plainfield	David Taylor		Windsor		
Cornish	Bill Gallagher	X	Weathersfield	Howard Beach	X
Cornish	Colleen O'Neill	X	Weathersfield	Nancy Heatley	X
Claremont			Springfield	Bill Manner	
Claremont			Springfield	Kelly Stettner	X
Hartland	Cordelia Merritt	X	Rockingham	Thomas Hernon	
Hartland	Judy Howland	X	Rockingham	Margaret Perry	
Charlestown					
Charlestown					

Kristen Underwood (speaker)
7 Members of the public joined for the presentation
Olivia Uyizeye (staff, UVLSRPC)

Minutes

<u>Working Towards Flood Resilience in our Communities – Kristen Underwood</u>

Note: The regular MARS meeting was cancelled in lieu of the engaging speaker and subsequent conversation. The following are notes on that presentation, including a copy of the PowerPoint presentation attached at the end of these minutes.

Heatley opens the meeting by introducing the goals and activities of MARS. Heatley thanks guests for joining the reps in the presentation today. Stettner introduces the speaker – Kristen Underwood as a collaborator and someone who explores what rivers do.

Underwood begins by explaining that rivers are dynamic systems that move through space and time. Pictures are shown of the Ottauquechee River in 2011 at 2 different times – one at normal flow and one during a flood.

Rivers move not only water, but also sediments, large woody debris, trash, ice (subject to ice dams), and organic matter (feeds the food web). FEMA provides maps that analyze the risk of flooding to an area, however, these models can be inaccurate because they do not take into account erosion and other hazards that are a result of moving water.

In the New England region many utilities, farms, and homes lie in the river corridor. In the 1990s flooding prompted those in Vermont to dredge and armor the banks of rivers – a costly process that is not always effective management. How then do we give our rivers more room to move naturally?

VT performs a 3 phase assessment of their streams based on the science of fluvial geomorphology which allows them to categorize rivers into types.

- Field crew does an inventory of the river, including river profile, bank erosion, substrate, etc
- Determines any adjustment processes: 1) downward scour (can work its way upstream); 2) widening; 3) aggradation; 4) planform adjustments (river sections that tend to meander more than others - can be seen through historical images, including those available on google earth)
- These are all natural processes. A "stable" river will have the same general slope, meander distance, etc, but stressors can accelerate the rates of these changes

- Note that it can be hard to find good reference rivers, especially in the lowlands but not as much in the headwaters.
- The assessment gets turned into River Corridor Plans in VT, making suggestions on how to maintain a balanced river. These plans identify rivers that are stable, entrenched (often town centers), or adjusting laterally (changing floodplains)
- These plans can also identify river regions that can support expanded flood plain dynamics.

What can homeowners/community members do?

- Know your backyard river. Streamstats gives you watershed information for the river of interest. Volunteer for a local river group through activities like water sample collection, cleanup, education, etc.
- Look for opportunities to reconnect the river. Failing culverts, bridges, dams, etc. See something, share it. Town of Bristol is working to expand and preserve a meander belt width. This has included compensation to landowners for the area taken out of production. This was also an inexpensive stormwater management strategy. Another strategy is planting buffers along stream banks (like willows that can be planted as wattles or stakes). These are great active engagement projects for various groups, including students of all ages. Another strategy is putting in root wads along the bank for stabilizations, habitat and sediment capture.
- Engage in local planning and zoning. Many towns are accepting enhanced floodplain bylaws, river corridor easements, and restoration projects.

Q&A

- Heatley asks about how to collaborate with dam owners along the CT and tributaries. Also, what can be done to offset impacts when owners are not willing to collaborate? What can be done to remove unused dams when a very costly and culturally sensitive structure?
- Underwood responds that “it depends”. Not all dams are bad or good – they can provide hydropower and flood control while others are completely inactive and in disrepair. Each situation has to be evaluated for its context. There are mitigation strategies such as fish ladders and water release. Dam removal can often be done with public/private partnerships. Contact the state and Trout Unlimited. There is also a photo technique to help visualize removal (Tom Schiff is recommended as a speaker).
- Underwood – references a video in her slideshow that shows the use of a streamtable to help individuals visualize flooding impacts.
- Attendee – I am nterested to learn more how things work holistically – connecting in with wetlands, forests, etc. Do we create plans that look into this complexity?
- Underwood – Part 1 of the VT assessment is a watershed wide analysis, including soil, landcover, etc. NH also uses versions of these VT assessments with its own web based system. They have not covered the state as expansively as VT at this point, but working towards it.
- Heatley – Riparian buffers often require communication with homeowners. Any suggestions on how to communicate the importance of these buffers to those who buy property for the river view?
- Underwood – Ultimately this is an individual choice. Trees/shrubs can stabilize and save the bank on that property and those downstream. There are also ways to balance planting and maintaining river access and view (even if smaller impact).
- Uyizeye – How severely do undersized culverts impact flooding
- Underwood – Undersized culverts can jam up with debris, wash over and even blow out the road. USFS replaced many undersized culverts before Tropical Storm Irene. These survived the storm while those that were not replaced often did not. It is more costly to upsize for that moment; however, savings occur by replacing less and therefore lasting longer. It is less costly to be proactive, but it is hard for those reliant on FEMA funds (that now pay up to 75% of culvert replacements and have adopted a new policy to allow upsizing).
- Howland – I do a lot of work with stream tables as a way to get acquainted with river dynamics, including road crews and students. One will be up at the upcoming Flavors of the Valley event on April 7, 2019, 11am at the Hartford High School.
- Beach – Storms are likely to increase in intensity and decrease in duration that could create a higher frequency of failing structures.

- Attendee – Windsor has created a floodway adaptation program called the Windsor Improvement Corporation to help those living in the floodway.

Heatley thanks Underwood for her presentation and closes the event.

Minutes respectfully submitted by Olivia Uyizeye.