



Meeting Notes

Place: Blastos Community Room
380 Marlborough Street
Keene, NH

Date: January 21, 2020

Notes by: P. Walker

Project #: 52636.00

Re: Keene-Swanzey 40100
Floodplain Compensatory Storage
Public Information Meeting

Kirk Mudgett, NH Department of Transportation (NHDOT), opened the meeting by welcoming the attendees and outlining the purpose of the project: to identify an appropriate floodplain mitigation site to offset 19.9 acre-feet of floodplain impacts associated with NHDOT highway construction projects within Keene over the last decade. The project is included in the approved 2019-2028 NH Transportation Ten Year Plan, with construction anticipated in 2022. This is the first public information meeting and is intended to review the project approach; no decisions have yet been made as project planning has recently started. NHDOT has retained VHB, a consulting firm based in Bedford, to help with this project.

Pete Walker, VHB, outlined the agenda for the meeting, including a review of the Project Purpose and Need, a discussion of the project background and history, the study approach and project work scope, and a review of the study schedule and process. Most importantly, the meeting is intended to provide an opportunity for public questions and comments, including suggestions for potential floodplain mitigation sites.

The project seeks to identify an appropriate site to provide compensatory flood storage in Keene to offset four NHDOT construction contracts. These construction projects were completed from 2007-2017. Wetland mitigation was completed, but NHDOT has been unable to find an acceptable floodplain mitigation site. Pete presented the Project Purpose as follows:

Identify an appropriate floodplain mitigation site or sites, in consultation with the City of Keene and state and federal agencies, to provide 19.9 acre-feet of floodplain compensatory storage within the Ashuelot River watershed for four construction contracts:

- *Contract 10309A: Base Hill Road Intersections with NH 9 and NH 10 (Completed 2007)*
- *Contract 10309H: NH 10/Winchester Street Roundabout (Completed 2008)*
- *Contract 10309O: West Street Improvements (Completed 2008)*
- *Contract 10309P: Multi-use trail over NH 12/101 (Completed 2017)*

Kürt Blomquist, City of Keene Department of Public Works, asked whether the reconstruction of the T-intersection of NH 9/10/12 with NH 101 was included in the study scope. Pete responded that he would confirm with NHDOT, but if



that construction was included in one of the four construction contracts listed in the project purpose, then it would be addressed by this mitigation project.¹

Pete defined "floodplain compensatory storage" as being an artificially excavated, hydraulically equivalent volume of storage within the 100-year flood plain that is used to balance the loss of natural flood storage when artificial fill or structures are placed within the floodplain.

VHB has compiled a GIS database, which will allow a series of operations to identify high priority floodplain mitigation sites. Initial screening criteria will include:

- Minimum parcel size, most likely a 5-acre minimum parcel size, based on tax parcels;
- Geomorphic position relative to existing floodplain to find sites within or adjacent to the 100-year floodplain;
- Ownership and development status - Publicly-owned site preferred, but private sites not excluded; and
- At least 5 acres undeveloped.

Once the initial screening is completed, VHB will estimate potential compensation flood storage volume for a set of the most promising sites – likely up to eight (8) parcels. Then, a total of four sites will be selected for field studies, which will include development of an existing conditions survey, wetland delineations, preliminary cultural resource reviews, rare species coordination, and possibly geotechnical surveys.

NHDOT and VHB will be looking for feedback from agencies and the City of Keene during the screening process. Conceptual designs will be developed for all four alternatives (i.e., 30% design - preliminary grading plan). An engineering report will be submitted in the fall, which would serve as an alternatives analysis document, and eventually identify a "Proposed Action" - the most feasible floodplain mitigation site. A NEPA Categorical Exclusion will be prepared, since the Federal Highway Administration is helping to fund the project.

Pete reviewed the overall project schedule. An initial site screening is on track to be completed in March. Field studies and conceptual designs are anticipated to be completed during the summer, and a second public information meeting would be held once that work is completed. An engineering report and environmental study are planned for September-October, and a public hearing, if needed, would be conducted in the late fall or early winter 2020.

Following the prepared presentation, Pete and Kirk opened the meeting to questions.

Question: Why does the West Street project require floodplain mitigation if there was no impact? And, why wasn't the floodplain mitigation completed during the roadway construction?

¹ Following the meeting, NHDOT verified that Contract 10309H continued to the lane taper of the T-intersection. It is clear on the as-built plans that this work was in the floodplain and has been accounted for.



Response: Pete explained that West Street was part of the larger set of interim highway projects, and did have some wetland impact. However, that specific project did not impact floodplains, and does not contribute to the 19.9 acre-foot mitigation target. Kirk explained that NHDOT had previously proposed a site near the T-intersection, but the resource agencies rejected that previous proposal.

Question: Wouldn't using state property be cheaper than buying private property?

Response: Pete replied that the study will consider economic impacts – both cost to the state and also potential impacts on the local tax base. But, we cannot limit our search to state-owned parcels based on feedback from the resource agencies.

Question: Why does NHDOT need to study four sites in detail?

Response: Pete replied that NEPA and the wetlands rules requires study of a reasonable range of alternatives to find the best solution. Review of the four parcels will also allow us to select a final site based on detailed information, and to fully consider impacts and benefits. Kirk added that NHDOT would prefer to select a single site, but multiple sites may be needed.

Question: Barbara Skuly, a member of the Ashuelot River Local Advisory Committee, asked whether there are any parameters on where the mitigation site would be located. How far up- or downstream could the site be? Would the mitigation be limited to the same "HUC" unit?

Response: Pete explained that the mitigation site should be in the same hydraulic reach as the impacts, and at the same elevation as the impacts. HUC units are not directly related to hydraulic reach. If no suitable site can be found in the same hydraulic reach, then the project may need to identify a creative solution outside of the immediate impact area. Pete also pointed out that, although the project's official title references both Keene and Swanzey, all of the actual floodplain impacts occurred in Keene. Kirk reiterated that NHDOT is open to finding a creative solution, and may form a technical advisory group to help with the site search.

Question: Will existing city infrastructure, including sewer and water lines, be considered?

Response: Pete explained that conflicts with existing infrastructure would be evaluated. Kürt Blomquist offered to send sewer and water lines in GIS format to VHB for inclusion in the project planning. Pete also requested recent city-wide LiDAR mapping.

Question: How was the 19.9 acre-feet target established?

Response: Pete explained that previous floodplain impacts were calculated by NHDOT. Due to the age of these projects, VHB is planning to verify these impacts. Based on experience with similar projects, VHB has found that older floodplain impact calculations can sometimes overestimate actual impacts.

Question: Will climate change be considered as part of this project?



Response: Pete said that NHDOT intends to approach the mitigation project using volumetric analysis; the project scope does not include hydrological or hydraulic modeling. However, finding a solution that would be resilient to future climate change is a goal. Rhett Lamb, City of Keene, encouraged NHDOT to consider climate change, but acknowledged that the impacts are based on previously issued FEMA floodplain mapping.

Question: Barbara Skuly asked whether storage on Beaver Brook might be considered.

Response: Pete replied that the project intends to find a site in the same area as the impacts – in the same hydraulic reach and at a similar elevation as the impact (roughly el. 471). Beaver Brook is located higher in the watershed, so would not provide “foot per foot” mitigation. Creation of storage in the Beaver Brook watershed could help desynchronize flood flows and therefore indirectly benefit the impacted hydraulic reach. However, a hydraulic model would be necessary to evaluate the benefit of this approach. If no suitable site can be found in the impacted floodplain reach, then Beaver Brook would be an option to consider, especially if there are projects currently under development.