



Baker River Watershed Stream Crossing Assessment Project

Project Summary:

A team of three regional planning commissions (North Country Council, Upper Valley Lake Sunapee Regional Planning Commission, and Lakes Region Planning Commission) are partnering to perform assessments of stream culverts in the Baker River Watershed. The project will result in informational and advisory reports and maps that communities can use to help prioritize, plan, budget, and fund culvert replacements and improvements.

Project Background:

The Baker River watershed encompasses portions of 12 communities in Grafton County. The steep and mountainous terrain of the watershed creates significant flood hazards that threaten environmental quality and infrastructure resiliency. The increasing frequency of severe rain events in recent years underscores the need for proactive planning to mitigate potential flood hazards and environmental impacts. Culverts, particularly stream culverts, are an important component in planning for flood resiliency. Poorly performing stream culverts can cause erosion, disrupt aquatic habitat connectivity, and increase the vulnerability of roadway infrastructure to flood impacts. The 2003 *Baker River Watershed Management Plan*, prepared by the Baker River Watershed Association, recommends that watershed partners "inventory and document all culverts, especially at stream crossings."



A comprehensive, watershed-wide assessment of culverts provides a regional context that allows for better understanding of culvert-related challenges in the watershed and for the identification of projects and priorities that may span multiple towns.

Project Schedule:

1. *Field Assessment (spring, summer, and fall 2019)*: project partners will perform field assessments of stream crossings in the Baker River watershed using a statewide assessment protocol developed through the New Hampshire Stream Crossing Initiative. Assessments will focus on stream crossings located on public roads and rail trails. Culverts located on private lands, private roads and driveways, hiking/OHRV trails, and drainage culverts will not be assessed as part of this project.
2. *Data Analysis and Reporting (fall 2019)*: project partners will perform analyses of the collected data and will place project results into reports for communities. The reports will provide information regarding 1) aquatic habitat barriers; 2) culverts' compatibility with streams; 3) vulnerability to flood

impacts. The reports will also provide advisory recommendations for prioritizing, budgeting, and funding culvert replacements.

3. *Community Outreach (winter & spring 2020)*: project partners will meet with communities in the watershed to disseminate the results of the project and participate in a discussion about community priorities and strategies for potential improvements.

Benefits to Communities:

- Comprehensive assessments of stream culverts, include structure dimensions and conditions, and stream characteristics. Assessment data will be uploaded to the NH Aquatic Restoration Web Mapper for easy access: <https://bit.ly/2tXNoiq>.
- Data, analyses, and recommendations to 1) inform prioritization and planning of culvert improvement or replacement projects; 2) assist with the development of Master Plans and other community planning documents; 3) inform annual and/or multi-year municipal budgeting; and 4) support grant applications and requests for funding.
- Access to certain follow-up technical assistance services from project partners.

Project Partners:

Lead project partners: North Country Council Regional Planning Commission, Upper Valley Lake Sunapee Regional Planning Commission, and Lakes Region Planning Commission.

With support from New Hampshire Department of Environmental Services; New Hampshire Geological Survey; New Hampshire Department of Transportation; New Hampshire Fish and Game; New Hampshire Homeland Security & Emergency Management; University of New Hampshire Technology Transfer Center.

Project Contacts:

- Alex Belenz, North Country Council (towns of Woodstock, Benton, Warren, Wentworth, Ellsworth, Rumney, and Groton): abelenz@nccouncil.org
- Meghan Butts, Upper Valley Lake Sunapee Regional Planning Commission (towns of Piermont, Orford, and Dorchester): mbutts@uvlsrc.org
- David Jeffers, Lakes Region Planning Commission (town of Plymouth): djeffers@lakesrpc.org

