Hardwick Development Review Board
Conditional Use Review Request
*Applicant: Caledonia County Natural Resources Conservation District*
*Landowner: Bair, LLC*
*64 North Main Street, Hardwick*
*Application #2021-023*
June 2, 2021 via Zoom

*To consider a Conditional Use Review request by Caledonia County Natural Resources Conservation District for installation of an underground municipal storm water treatment system in the Central Business and Village Neighborhood zoning districts. Development would occur at 64 North Main Street, Hardwick, VT. Site is in Zone AE in the Flood Hazard Area Overlay and the Floodway of the Lamoille River.*

The application requires a review under the following sections of the Hardwick Unified Development Bylaws: Table 2.8 Flood Hazard Area Overlay; 3.11 Performance Standards; 3.12 Protection of Water Resources; and 5.3 Flood Hazard Review.

**Warnings** were posted on Monday, May 17, 2021 at the Hardwick Memorial Building, the Hardwick Post Office and the East Hardwick Post Office. The warning was sent to the following neighboring property owners: Cornerstone Restoration CP, LLC; K. Wolfe & J. Greenwood Rev. Trust; Lamoille Housing Partnership Inc; SSM Properties, LLC; Glenn Mink; American Legion Post #7; Shawn Allen; Jeffrey Newman; K2 Reality LLC; Grass Roots Art & Comm. Efforts; HVM Real Estate LLC; and 91 Mill Street, LLC on Wednesday, May 19, 2021. It was also published in The Hardwick Gazette on Wednesday, May 19, 2021.

**Development Review Board members present**: Ed Keene; Kate Brooke; John Mandeville, Chair; Helm Nottermann; and Ruth Gaillard.

**Development Review Board members absent**: none

**Others present**: Kristen Leahy, Zoning Administrator (acting clerk); Roy Schiff, engineer from SLR; and Kerry O'Brien, District Manager of Caledonia County NRCD.

**During the course of the hearing and prior to the hearing the following exhibits were submitted:**

1. Email letter from Sacha Pealer, Floodplain Manager dated May 28, 2021.
2. Email Memo from Roy Schiff with the conversions for the elevations into NGVD29 to allow direct comparison with the FEMA data and the certification that the system will not change flood levels or flood risk – dated June 2, 2021.

## Summary of Discussion

Chair John Mandeville began the hearing at 7:00 pm. He noted that the hearing was quasi-judicial, explained the hearing procedure, asked board members for any disclosures of conflict of interest, and swore in all those who wished to speak at the hearing.

Mr. Mandeville invited the applicants to present the proposal. Kerry O'Brien, Caledonia County NRCD District Manager, explained that the project was identified in earlier storm water mapping reviews of Hardwick. This is a Clean Water Fund project which has been in development for 8 years. The storm water system will improve run-off from a 31 acre drainage area with outfalls into the Lamoille River. The existing parking lot adjacent to the Lamoille River provides the opportunity for the improvement to occur.
Roy Schiff from SLR Engineering presented the overview of the proposed system. The unit is actually sited outside the floodway, behind the stone wall, and underground. These aspects minimize the flood risk level.

90% of the proposal will require no change in the grade. There will be changes to the two entries into the parking lot – each entry will have a more gentle transition. These changes will be located outside of the Floodway/Flood Plain.

There are three outfalls in the design. The center outfall already existed and had a backflow preventer in its design. Per the recommendation of the Flood Plain Manager, the 2nd and 3rd outfalls will have backflow preventer valves as well.

Once the project is funded, Mr. Schiff anticipates that there will be a 1-2 month period of construction. This will depend on the weather and on the equipment of the contracted company. The disruption to the parking lot will be minimal and the landowner has indicated that he can address any parking issues during the construction time.

The parking area will be paved after the installation is complete. This will reduce the amount of sediment which would enter the system. The system will be addressing urban run-off such as sediment and phosphorus in the Lamoille River. The paving will keep the designed flow paths more consistent with the plans.

The hearing ended at 7:28 pm. Kate Brooke made the motion to enter into deliberative session after the hearing and Ed Keene seconded. All members were in favor.

## Findings of Fact:

Based on the application and testimony, the Development Review Board makes the following findings:

**2.8 Flood Hazard Area Overlay District** – municipal storm water systems with associated outfall pipes to the Lamoille River are allowed as a conditional use (Public Utilities). According to the Floodplain Manager, the project is primarily located in the Special Flood Hazard Area and the regulatory floodway of the Lamoille River. The following three primary issues were identified:

- The town can waive the hydrologic and hydraulic analyses required by H(1) since the project is a public storm water project largely below ground where the dimensions of the retaining wall and land below BFE appear to be unchanged by the proposal. In order to grant this waiver, the Town needs certification from a registered professional engineer that "there will be no change in grade and the utilities will be protected from scour." **The memo from Roy Schiff provides this certification.**
- The town will need to maintain documentation that the project was built as proposed. **See Condition #2.**
- The town will need to confirm that the outfalls will be equipped to prevent backflow and protection of the new storm water unit. **Confirmation was received in Roy Schiff's memo. Back flow prevention valves will be installed in the 3 outfalls.**

**3.11 Performance Standards** – No review was made of the performance standards by the DRB due to the fact that the proposal is completely underground.

**3.12 Protection of Water Resources** – the property is located in the 25 feet buffer strip but is allowed to accommodate streambank stabilization and restoration projects, in accordance with applicable state and federal regulations. Reasonable provisions must be made for the protection of water quality such as stormwater management provisions to collect and disperse stormwater away from the stream or river." **The project is designed to mitigate and assist in stormwater restoration.**

## Section 5.2 Conditional Use Review

***E) General Review Standards***

*The proposed conditional use will/ will not result in an undue adverse effect on any of the following:*

1. **The capacity of existing or planned community facilities and services**. The proposed use will not affect either capacity.

2. **Character of the area affected**. The proposed improvements are compatible with the area. As an underground installation, the project will not be visible to the neighborhood. As a storm water treatment system, the project will theoretically improve the water quality of the Lamoille River.

3. **Traffic on roads and highways in the vicinity**. The existing parking lot will not change in use.

4. **Bylaws in effect**. N/A

5. **The utilization of renewable energy resources**. N/A

## F) Specific Review Standards shall include:

1. **Siting & Dimensional Standards**. All conditional uses shall meet minimum applicable dimensional and density standards as specified for the district in which the use is located (Article 2), the particular use (Article 4), and for the protection of surface waters (Section 3.12). **All standards are met by the proposal.**

2. **Performance Standards**. All conditional uses shall meet performance standards as specified in Section 3.11. **Performance Standards were not reviewed as the system will be underground.**

3. **Access & Circulation Standards**. All conditional uses shall meet applicable access management standards as specified in Section 6.6. **Standards will be met by the proposed changes.**

4. **Landscaping & Screening Standards**. The Board may require landscaping, fencing, screening or site grading as necessary to maintain the character of the area, or to screen unsightly or incompatible uses from town highways, other public rights-of-way, or adjoining properties. **Landscaping was not indicated as necessary.**

5. **Stormwater Management & Erosion Control Standards**. All conditional uses shall incorporate accepted stormwater management and erosion control practices as appropriate for the setting, scale and intensity of the existing and planned development. **No additional plans were indicated as necessary.**

## Section 5.2 Flood Hazard Review

H2 – Public utilities may be placed underground and the analyses may be waived, where a registered professional engineer certifies that there will be no change in grade and the utilities will be adequately protected from scour. **Received previously in the hearing**.

## Decision and Conditions

Based upon these findings, the Development Review Board voted 5-0 to approve the Caledonia County Natural Resources Conservation District conditional use application as presented and amended with the following conditions:

**Conditions:**

1. Any and all necessary state and federal permits must be in place before development can commence.

2. As-built documentation for the finished project must be submitted to the zoning office upon project completion. The documentation will be completed and stamped by a licensed professional engineer or land surveyor.

Signed:

_____, Chair
John Mandeville, DRB Chair
Date 6/7/21

Kristen Leahy, acting clerk
Kristen Leahy, Zoning Administrator
Date 6/7/21

**NOTICE:**
This decision may be appealed to the Vermont Environmental Court by an interested person who participated in the proceeding (in person or in writing) before the Development Review Board. Such appeal must be made within 30 days of the date of this decision, pursuant to 24 V.S.A. #4471 and Rule 5(b) of the Vermont Rules for Environmental Court Proceedings.

Exhibit # 1

Via E-mail

Fri, May 28, 12:03 PM (4 days ago)

**Pealer, Sacha**
to me

Dear Kristen Leahy:

Thank you for sending the zoning application packet for the proposed municipal stormwater treatment system at 64 North Main Street, Hardwick. Below are my comments on this application in relation to Hardwick's flood hazard regulations (Unified Development Bylaws).

The project involves installation of an underwater stormwater system with associated outfall pipes to the Lamoille River. Based on the effective Flood Insurance Rate Map (FIRM) for Hardwick dated 7/17/2002, the proposed project is partially within the Special Flood Hazard Area (Zone AE) and regulatory floodway of the Lamoille River. The floodplain (Zone AE) and the regulatory floodway boundaries are coincident with each other at this location along the river.

Based on the effective FEMA FIRM and Flood Insurance Study, the base flood elevation (BFE) ranges from approximately 829.5' to 827.5' (NGVD 29) from the upstream end of the project area to the North Main Street bridge. Note the FEMA data has been provided in the vertical datum system NGVD29, and the application plans show elevations using the vertical datum system NAVD88, making direct comparison tricky (generally, the two systems differ by a few tenths of a foot). Your office/the DBR may want to request the engineers provide conversions for the elevations into NGVD29 to allow direct comparison with the FEMA data (see Hardwick bylaw 5.3 (E)(1) Application).

The project site is on the edge of the Special Flood Hazard Area; the floodplain and floodway boundary run along the existing retaining wall, and the existing parking area is on land just above the floodplain. Project plans show the "100-year flood" water level against the retaining wall on Sheet 8, Profile 3. Based on this information, the outfall pipes and retaining wall repairs are below base flood elevation (BFE) and within the floodplain/floodway.

Before a permit can be issued, it looks like the following items still need attention:

**Floodway standard: 5.3 H (1) and (2)**

The floodway standard is intended to keep the floodway unobstructed by development so floodwater can pass freely downriver during the "100-year" or "base" flood. Some projects need a "no rise" analysis (as described in H(1) of this standard) where an engineer uses flood modelling to show the development will not raise floodwaters or flood velocities. However, this stormwater system can likely qualify under H(2), where the town could waive the hydrologic and hydraulic analyses required by H(1), since the project is a public stormwater project largely below ground where the dimensions of the retaining wall and land below BFE appear to be unchanged by the proposal. In order to grant this waiver, it looks like the town still needs certification from a registered professional engineer that "there will be no change in grade and the utilities will be adequately protected from scour" as required in H(2). I suggest requesting a letter or similar statement with P.E. certification that specifically speaks to the zoning requirement in H(2).

Also, the town will need to maintain documentation that the project was built as proposed, once the project is complete. Documentation is especially important for projects in the floodway. One way to ensure the town has these records would be to include a permit condition that as-built documentation, certified by a licensed

land surveyor or professional engineer, be submitted to your office upon project completion (or within a specified timeframe after project completion, e.g. 90 days).

**Backflow prevention 5.3 G (1)(a)**

Although the majority of the stormwater system is on land outside the floodplain, it is buried low enough next to the floodplain that it appears possible floodwater could travel from the river up the outfall pipe into the stormwater system. It appears the plans may include valves on the outfall(s) to prevent this backflow. However, I recommend the town confirm that the outfalls will be equipped to prevent backflow and protection of the new stormwater unit.

Please let me know if you have any questions. You may consider this email as ANR flood hazard review to assist with the local permit process per 24 V.S.A. §4424.

Best wishes,

**Sacha Pealer**, CFM|Northeastern River Scientist & Floodplain Manager (she, her)
Vermont Agency of Natural Resources | Department of
Environmental Conservation
Watershed Management Division, Rivers Program
1 National Life Drive, Davis 3 | Montpelier, VT 05620-3522
802-490-6162 office & cell
Sacha.Pealer@vermont.gov
http://dec.vermont.gov/watershed/rivers

Exhibit #2

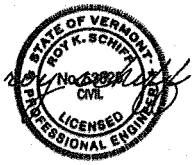
SLR

# Memorandum

**To:** Kerry Obrien, Caledonia County NRCD

**From:** Roy Schiff, SLR

**Date:** June 2, 2021




June 2, 2021

**Subject:** North Main Street Stormwater Improvements – Hardwick, VT

The installation of the proposed stormwater treatment system is not anticipated to change flood levels or flood risk along the Lamoille River. The infiltration system and associated pipes will be located underground and placed behind the existing stone retaining wall. Only minor changes to the existing surface grades are proposed to properly slope the entrance driveway and to direct surface runoff to the treatment system inlet.

An existing stormwater discharge will be used as the main outflow from the proposed treatment system. In addition, two additional outlets will be installed to bypass runoff that exceeds the system's inflow capacity. The outfalls are in the FEMA effective 100-year flood elevation (Table 1 and Figure 1) and thus each of the three pipes will be fitted with backflow prevention valves to stop flood waters from entering the treatment system and site.

Table 1. Outfall Elevations and FEMA 100-Year Flood Elevations (NGVD29 = NAVD88 + 0.22)

| Location | Pipe Elevation Feet NAVD88 | Pipe Elevation Feet NGVD29 | FEMA 100-Year Floodplain Feet NGVD29 |
|---|---|---|---|
| Proposed Outlet #1 | 827.15 | 827.37 | 827.5 |
| Proposed Outlet #2 | 827.50 | 827.72 | 829.5 |
| Ex/Pr 24" Outlet | 822.74 | 822.96 | 828.5 |

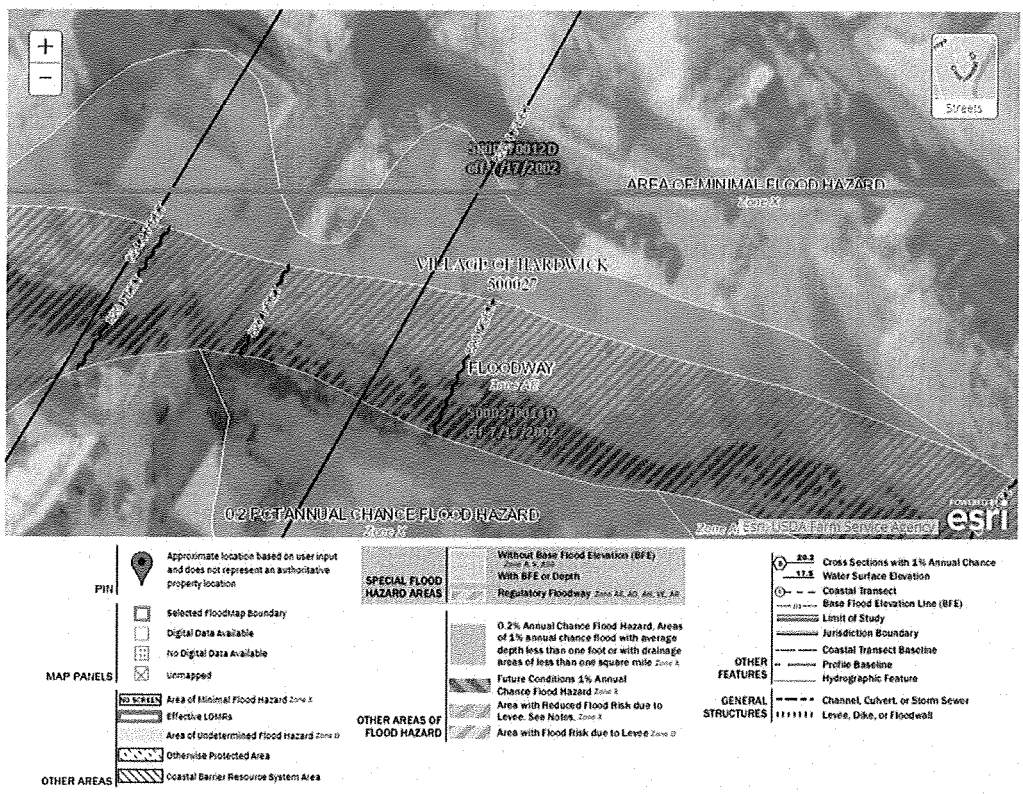



Figure 1. FEMA Flood Insurance Rate Map