Memorandum

To: Josh Arneson, Town Manager
Town of Richmond
P.O. Box 285
Richmond, VT 05477

From: Watershed Consulting

Date: July 31, 2025

Re: ***Southview Subdivision Stormwater Project – Disconnection Investigation Summary***

Attachments:

1 – Example Field Photos

Dear Josh,

Watershed Consulting is pleased to present this memorandum summarizing the process of developing the mapped disconnection areas that were presented in draft to the Town of Richmond and the Southview Subdivision community.

Disconnection mapping involves documenting existing vegetated areas within the subdivision where stormwater sheet flows in a distributed matter over that vegetated area where it can soak into or filter over the ground. The Vermont Department of Environmental Conservation (VT DEC) has issued requirements that guide which areas may be classified as disconnected. Factors that influence this classification include slope, underlying soils, length and width of the vegetated area, length of impervious area that drains toa vegetated area, and how distributed (as opposed to concentrated) the stormwater is as it flows off of the impervious area. Impervious areas include rooftops, driveways, roads, and walkways.

The first step in documenting disconnection areas includes a desktop assessment within a geographic information system (GIS). When soils and slopes preclude potential disconnections, these areas are noted so that field assessments are more targeted within areas where disconnections may be feasible.

A field assessment is then completed for all sites with potentially feasible disconnection areas. In this neighborhood, two homeowners denied site access, so these two residences were unable to be included in this assessment. At each site, potential disconnection areas were reviewed and documented in a mobile data collection app. An overview map of the field data collected is provided in Figure 1. The point locations indicate assessment points within the neighborhood. The two large blue points indicate the residences where access was denied. Additional example field collected photos are provided as Attachment 1.

Figure 1. Overview map of the field data collection assessments to make disconnection areas.

In some cases, areas that appeared to be possible disconnection areas during desktop review were removed from consideration due to concentrated hydrologic connectivity, slope, existing flow patterns, or other site-specific factors. For example, a roof drain may discharge down a steep slope or to a stormwater swale, both of which would preclude that rooftop's inclusion as an area that is disconnected.

It is important for the Town and owners to understand that disconnection encumbers private lots. If disconnection areas are called out in the permit and relied on for calculations, they must be preserved for the duration of the permit in such a way that stormwater must flow is a distributed fashion across vegetated terrain to provide water quality benefits. Changes to the lot including but not limited to regrading, construction of walkways, sheds, or patios, and other yard improvements could impact the disconnection area and may impact the overall permit compliance. For this reason, we always recommend a conservative approach for disconnection mapping. Disconnection areas are generally focused on wooded or undeveloped portion of private lots or areas where additional development is unlikely. However, as noted above, even undeveloped wooded areas must not exceed slope requirements as determined by the VT DEC. Within the Southview subdivision, in many instances grass lawns are relatively flat but then steeply drop off into wooded areas unsuitable for disconnection due to these high slopes. Furthermore, disconnection areas that are already within the collection area for one of the proposed chamber treatment systems are not eligible as disconnection areas. These areas are not able to be classified as disconnections as they are already considered to be managed by the chamber systems.

The disconnection areas identified to date can be further refined in conjunction with the remainder of the full engineering design for the neighborhood.

Sincerely,

Andres Torizzo
Principal

Kerrie Garvey
GIS Program Manager


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