

VIA Email

August 7, 2025; Revised November 11, 2025

Mike Forrence
17247 Annandale Road
Emmitsburg, MD

Field Verification of Flooding Soils
17247 Annandale Road
Emmitsburg, MD
Colliers Engineering & Design Project No. 25010683A

Dear Mr. Forrence,

A field investigation was completed on August 6, 2025, to verify the presence and location of floodplain soils on the above reference property in the vicinity of a proposed sunroom addition. The Frederick County Soil Survey indicates that the area for the proposed sunroom addition is located within soils that are subject to flooding.

Based on this investigation, floodplain soils are not present within 59.2 feet of the proposed sunroom addition. The discrepancy in the soil mapping can be attributed to the scale at which the County Soil Survey maps were prepared. The actual boundary of flooding soils should be shifted approximately 135 feet west to coincide with the landscape position of the stream valley.

Background Information

The Soil Survey of Frederick County (Exhibit 1) identifies floodplain soils on the property within the RwA mapping unit (Rowland silt loam, 0 to 3 percent slopes). The Rowland series consists of very deep, moderately well and somewhat poorly drained soils. These soils formed in alluvial sediments weathered from red and brown shale, sandstone, and conglomerate. They are on relatively narrow nearly level flood plains.

The information provided in the Soil Survey is intended for general land planning, and inclusions of other soil types may be present within individual Soil Survey mapping units' due limitations with mapping scale. Detailed soil mapping is sometimes needed when regulatory approvals or building decisions are affected by Soil Survey information. In many cases, adjusting soil boundaries to fit proper landscape positions using accurate topographic information may be all that is required. Where complex landscapes exist, additional soil descriptions are needed to accurately characterize site specific conditions.

Results

Two shovel test pits were examined in the vicinity of the proposed sunroom addition area as shown on the enclosed site plan (Exhibit 2). Soil morphology observed in TP1, and the associated landscape position is consistent with the moderately well and somewhat poorly drained soils Rowland series,



which is subject to frequent flooding for very brief duration. The soil consists of brown (10YR 4/3) loam to a depth of 7 inches, underlain by dark grayish brown (10YR 4/2) loam with many reddish-brown iron concentrations to a depth of 15 inches. Bedrock was encountered at 15 inches.

Soil morphology observed in TP2 does not reflect evidence of flooding and the landscape position (3-15 percent slope) is not consistent with floodplain soils. The soil consists of dark brown (7.5YR 3/3) gravelly silt loam to a depth of 5 inches, underlain by brown (7.5YR 4/3) and strong brown (7.5YR 5/6) channery silt loam- silty clay loam to a depth of 25 inches.

Exhibit 2 shows the location of the field verified floodplain soil boundary in the vicinity of the proposed sunroom addition. The corrected floodplain soil boundary is also shown to extend to other areas of the property using contour interval information provided on the site plan.

If you have any questions regarding these findings, please contact me at (877) 627-3772.

Very truly yours,

COLLIERS ENGINEERING & DESIGN, INC.

A handwritten signature in black ink, appearing to read "Austin Young".

Austin Young, CPSS, PWS
Certified Professional Soil Scientist
SSSA #327589

Enclosures:

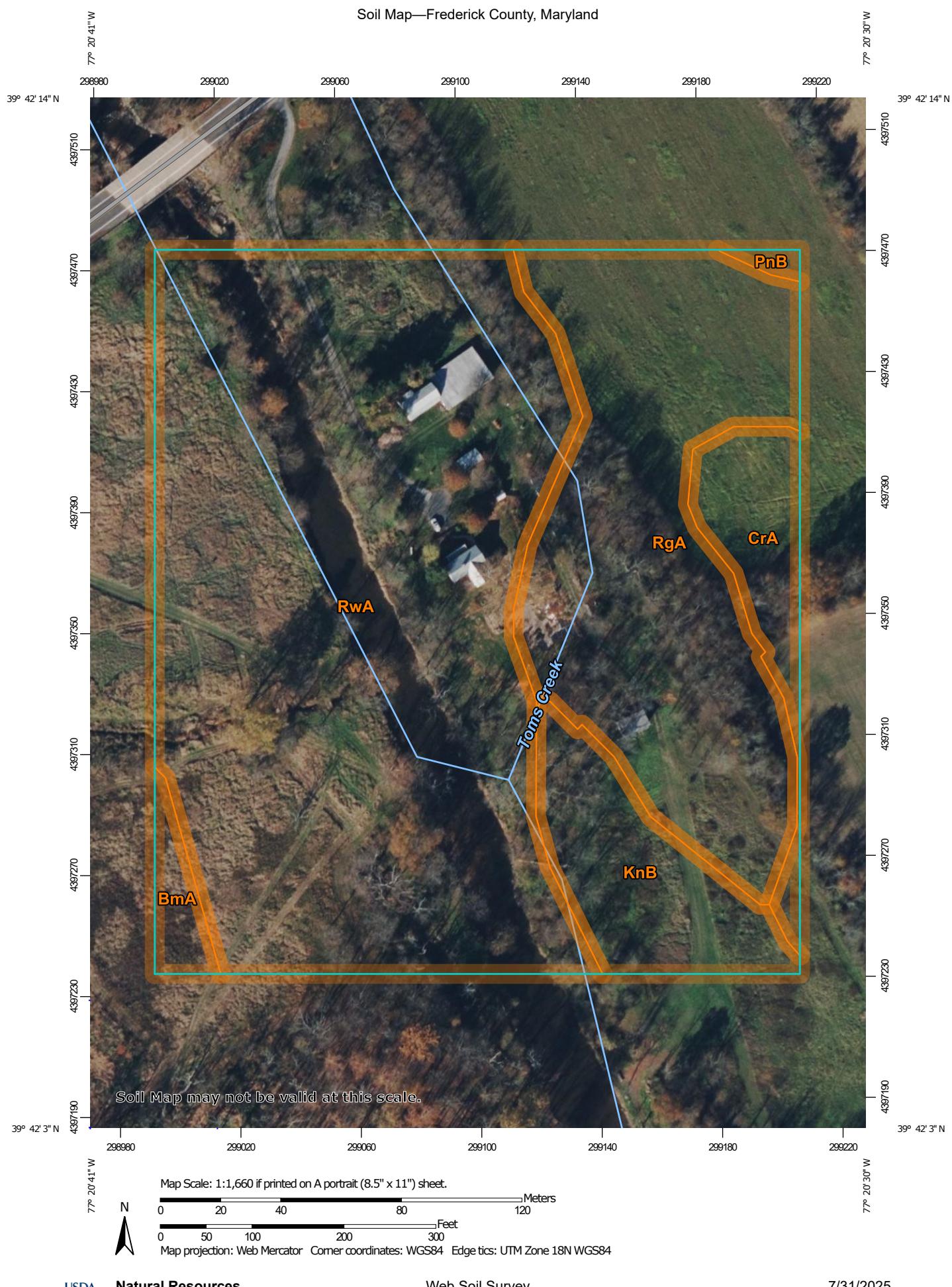
Exhibit A (Soil Survey)

Exhibit B (Site Plan)

Appendix

Appendix A | Soil Survey

Soil Map—Frederick County, Maryland



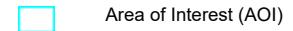
Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

7/31/2025
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MAP LEGEND

Area of Interest (AOI)



Area of Interest (AOI)

Soils



Soil Map Unit Polygons



Soil Map Unit Lines



Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot

- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Frederick County, Maryland

Survey Area Data: Version 21, Sep 6, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 23, 2020—Nov 20, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.



Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BmA	Bowmansville-Rowland silt loams, 0 to 3 percent slopes	0.2	1.6%
CrA	Croton-Abbottstown silt loams, 0 to 3 percent slopes	0.6	4.9%
KnB	Klinesville channery silt loam, 3 to 8 percent slopes	1.0	7.7%
PnB	Penn silt loam, 3 to 8 percent slopes	0.0	0.3%
RgA	Readington silt loam, 0 to 3 percent slopes	3.4	26.5%
RwA	Rowland silt loam, 0 to 3 percent slopes	7.5	59.0%
Totals for Area of Interest		12.7	100.0%

Appendix

Appendix B | Site Plan

