

# DARTMOUTH

April 16, 2019

## RENNIE FARM SITE INFORMATION SUMMARY

The following is a summary of information regarding the cleanup of groundwater contamination at Dartmouth's Rennie Farm, a 223-acre parcel in Etna.

Hydrogeologic conditions at Rennie Farm and the location of 1,4-dioxane contamination have been extensively investigated and mapped, with the work approved by the New Hampshire Department of Environmental Services (DES).

A Groundwater Management Permit (Permit) was issued by DES in August 2017, establishing a long-term water quality monitoring program, including 96 water quality monitoring locations (groundwater, surface water, and water supply wells). The Permit also establishes a groundwater management zone (GMZ) that includes the area of known contamination (the "plume"), and a buffer area established to monitor groundwater quality. Both the plume (in orange) and the GMZ (perimeter in red) are shown clearly on the map appearing on the back of this sheet.

A groundwater pump and treat system was approved by DES, began operation in January 2017, and is operating effectively. The system removes 1,4 dioxane from groundwater within the source area and portions of the plume located on the Rennie Farm property.

Groundwater and surface water quality monitoring continue to show no expansion of the plume.

Testing has shown that there have been no impacts to the more than 140 private and community water supplies in the surrounding area. Of the wells tested, one water supply well, at 9 Rennie Road, which is located within the plume, has been impacted.

Current sampling results indicate that there continue to be reductions in the concentration of 1,4-dioxane and source and portions of the plume are being captured and treated by the system.

An agreement was reached in February 2019, with an abutting owner to install a groundwater extraction system that will pump groundwater from a portion of the plume located off the Site to the existing treatment facility. The combined on-site and off-site system will expedite remediation of the plume.

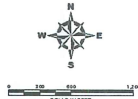
In February 2017, Dartmouth announced its Value Assurance Program (VAP), which assures property owners in the defined Program Area (48 properties) that they will receive fair market value for their property if sold within the five-year program. The properties in the VAP are shown in green on the attached map. The Program Area includes properties that abut the Rennie Farm property, properties that were impacted by the contamination, and properties within a buffer zone surrounding those properties.

For more information, please see Dartmouth's FAQs available at <https://www.dartmouth.edu/~ehs/rennie.html>





- LEGEND:**
- INTERMITTENT/PERENNIAL STREAM, ARROW INDICATES DIRECTION OF SURFACE WATER FLOW
  - INTERMITTENT STREAM
  - TOWN AND/OR STATE BOUNDARY
  - RENNIE FARM PROPERTY BOUNDARY
  - GMZ BOUNDARY
  - APPROXIMATE PARCEL BOUNDARY
  - INFERRED LIMITS OF 1,4-DIOXANE AT CONCENTRATIONS EXCEEDING 0.32 MICROGRAMS PER LITER
  - DEFINED VAP PROGRAM AREA



- GENERAL NOTES:**
- 1) 2016 2016 1-FT COLOR AERIAL PHOTOS FOR THE TOWN OF HANOVER WERE OBTAINED FROM THE NH GRANIT NEW HAMPSHIRE STATEWIDE GIS CLEARINGHOUSE.
  - 2) APPROXIMATE PROPERTY BOUNDARIES OBTAINED FROM THE NEW HAMPSHIRE PARCEL MOSAIC DATASET, AVAILABLE FROM THE NH GRANIT NEW HAMPSHIRE STATEWIDE GIS CLEARINGHOUSE.
  - 3) LOCATIONS OF MONITORING WELLS, WATER SUPPLY WELL W23W-1 DUG WELL (FORMERLY WATER SUPPLY WELL FOR 8 RENNIE ROAD, AND ON-SITE PORTION OF INTERMITTENT STREAM BASED ON SURVEYS BY WSP TRANSPORTATION AND INFRASTRUCTURE DURING OCTOBER 2014, JUNE 2016, JANUARY 2016, AND MAY 31, 2016.
  - 4) APPROXIMATE GROUND SURFACE ELEVATION CONTOURS SHOWN HEREON WERE DERIVED FROM THE CONNECTICUT RIVER WATERSHED (02) BARE EARTH DIGITAL ELEVATION MODEL, OBTAINED FROM THE NH GRANIT NEW HAMPSHIRE STATEWIDE GIS CLEARINGHOUSE.
  - 5) INTERMITTENT/PERENNIAL STREAMS SHOWN HEREON WERE DERIVED FROM THE NEW HAMPSHIRE HYDROGRAPHY DATASET OBTAINED FROM THE NH GRANIT NEW HAMPSHIRE STATEWIDE GIS CLEARINGHOUSE.
  - 6) LOCATIONS OF WATER SUPPLY WELLS BASED ON OBSERVATIONS BY GZA PERSONNEL OR BASED ON PRESENCE OF STRUCTURE ON THE AERIAL PHOTO REFERENCED UNDER NOTE 1. WATER SUPPLY WELL LOCATIONS SHOULD BE CONSIDERED APPROXIMATE.

NO.	DATE	DESCRIPTION	BY	DATE

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**DARTMOUTH COLLEGE**  
 RENNIE FARM SITE  
 HANOVER, NEW HAMPSHIRE  
 NHDES SITE NO. 201111109, PROJECT NO. 27737

**VALUE ASSURANCE PLAN AREA**

PREPARED BY: **GZA** GeoEnvironmental, Inc.  
 Engineers and Scientists  
 www.gza.com

PREPARED FOR: **DARTMOUTH COLLEGE**

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