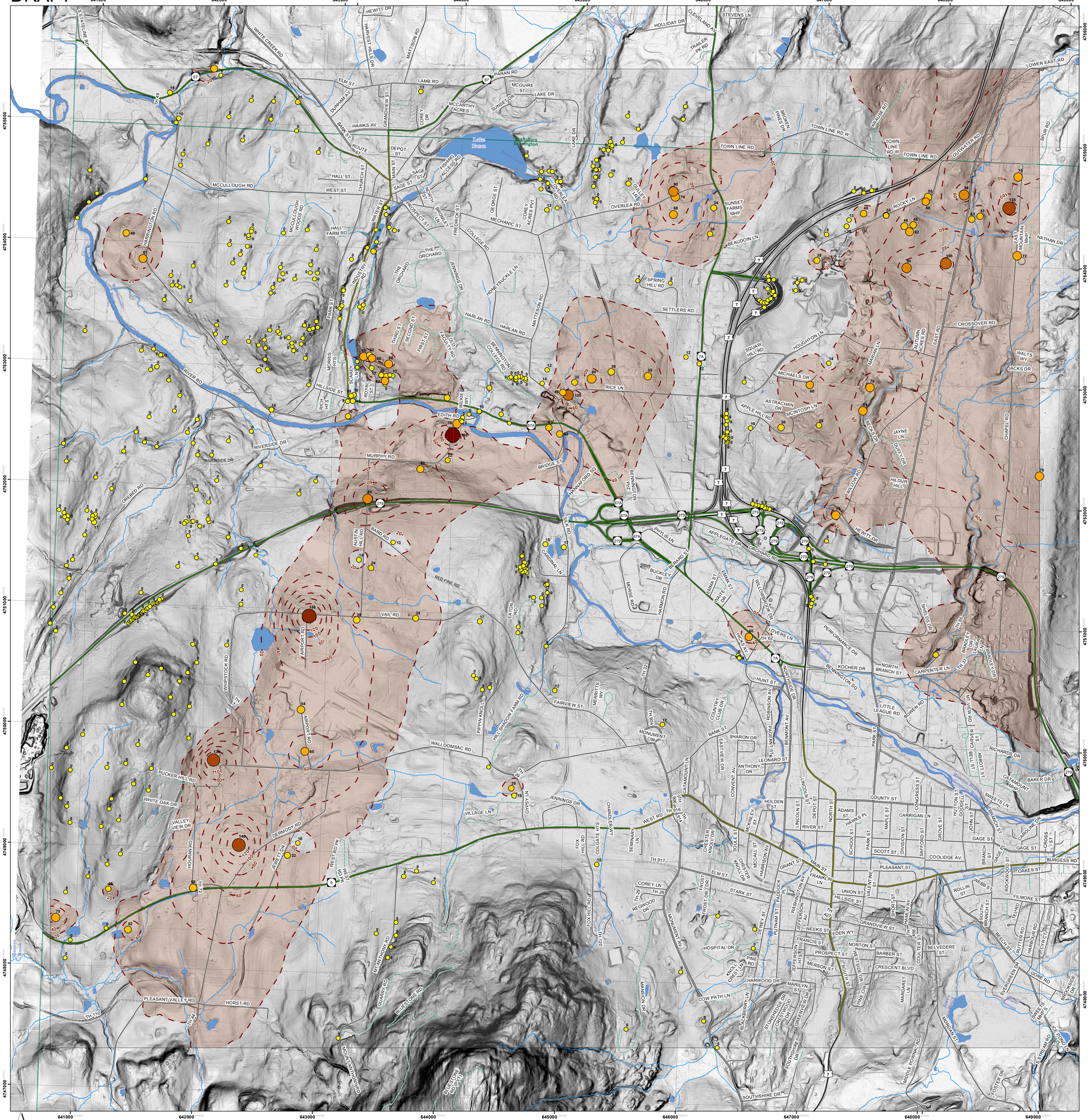
DRAFT

DRAFT



Legend

Depth to Bedrock (ft) from Well and Outcrop Locations

(Labels = Depth to Bedrock)

- 0-1
- 1-20
- 20-40
- 40-60
- 60-80
- 80-100
- 100-120
- 120-140
- 140-160
- 160-180

Study Area

Town Boundary

LiDAR-Derived Slope Map (°)

High : 76.4366

Low : 0

Generalized Overburden GIS Outputs derived from raster contouring of well and outcrop data

Isopach showing Overburden Thickness (20ft intervals)

Depth to Bedrock (ft)

Less than 20 ft (or Limited Data)

Greater than 20 ft

This map was produced at a scale of 1:12,000 and is designed to show general overburden thickness for the entire Bennington field area. It is not suitable for any detailed evaluation of the Bennington landfill area, for which McLaren-Hart (1997) should be consulted.

This map includes Depth to Bedrock (Overburden Thickness) contours (20 ft) derived from an interpolated Depth to Bedrock raster. This raster was interpolated using the Inverse Distance Weighted interpolation technique from the Depth to Bedrock data in the (Kim, 2017a) database. Only wells with Depth to Bedrock information were included in the interpolation. IDW parameters: Output cell size = 2, Power = 2, Search radius = variable, Number of points = 12. The resulting raster was smoothed using the FOCAL STATISTICS tool. FOCAL STATISTICS parameters: Neighborhood = circle, Radius = 50 map units, Statistics type = mean. The Depth to Bedrock contours were constructed using the CONTOUR tool with a 20 foot contour interval. Some contours were hand edited in places to more accurately portray overburden thickness data.

Software: ArcGIS 10.3.1, Spatial Analyst Tools 10.3.1
Coordinate System = NAD 1983 StatePlane Vermont FIPS 4400 (m)

References:

DeSimone, D. J., 2017, Surficial Geology of the Bennington area, Vermont: Vermont Geological Survey Open-File Report VG2017-1, Plates 1 - 3, scale 1:12,000.

Kim, J. J., 2017a, "DRAFT Bennington correlated well logs, J. Kim, VT Geo. Survey 2-09-17", Unpublished, Data derived from anrweb.vt.gov/DEC/WellDrillerReports/Default.aspx and other sources.

Kim, J. J., 2017b, DRAFT Preliminary Bedrock Geologic Map of the Bennington area, Vermont: Vermont Geological Survey Open-File Report VG2017-4, 1 sheet, scale 1:12,000.

McLaren-Hart Environmental Engineering Corp., 1997, Final Draft, Remedial Investigation Report, Bennington Landfill Site, Bennington Vermont: Submitted to U. S. EPA Region 1, 483 p.

Potter, D.B., 1971, Stratigraphy and structure of the Hoosic Falls area, New York-Vermont, east-central Taconics: New York State Museum and Science Service Map and Chart Series, no. 19, 71 p., scale 1:24,000.

Vermont Center for Geographic Information, 2012, VT Lidar Hydro-flattened DEM (2 meter) - 2012 - Bennington. Accessed 01/2017 from http://geodata.vermont.gov/.

N

1:12,000

0 0.25 0.5 1 Kilometers

0 0.25 0.5 1 Miles

Preliminary Isopach Map (Overburden Thickness) of the Bennington Area, Vermont (feet, smoothed)

Vermont Geological Survey Open-File Report 2017-3B 06-08-17 Version

Authors: Jonathan Kim and Colin Dowey
Vermont Geological Survey
Montpelier, Vermont

VERMONT
AGENCY OF NATURAL RESOURCES
Vermont Geological Survey

DRAFT