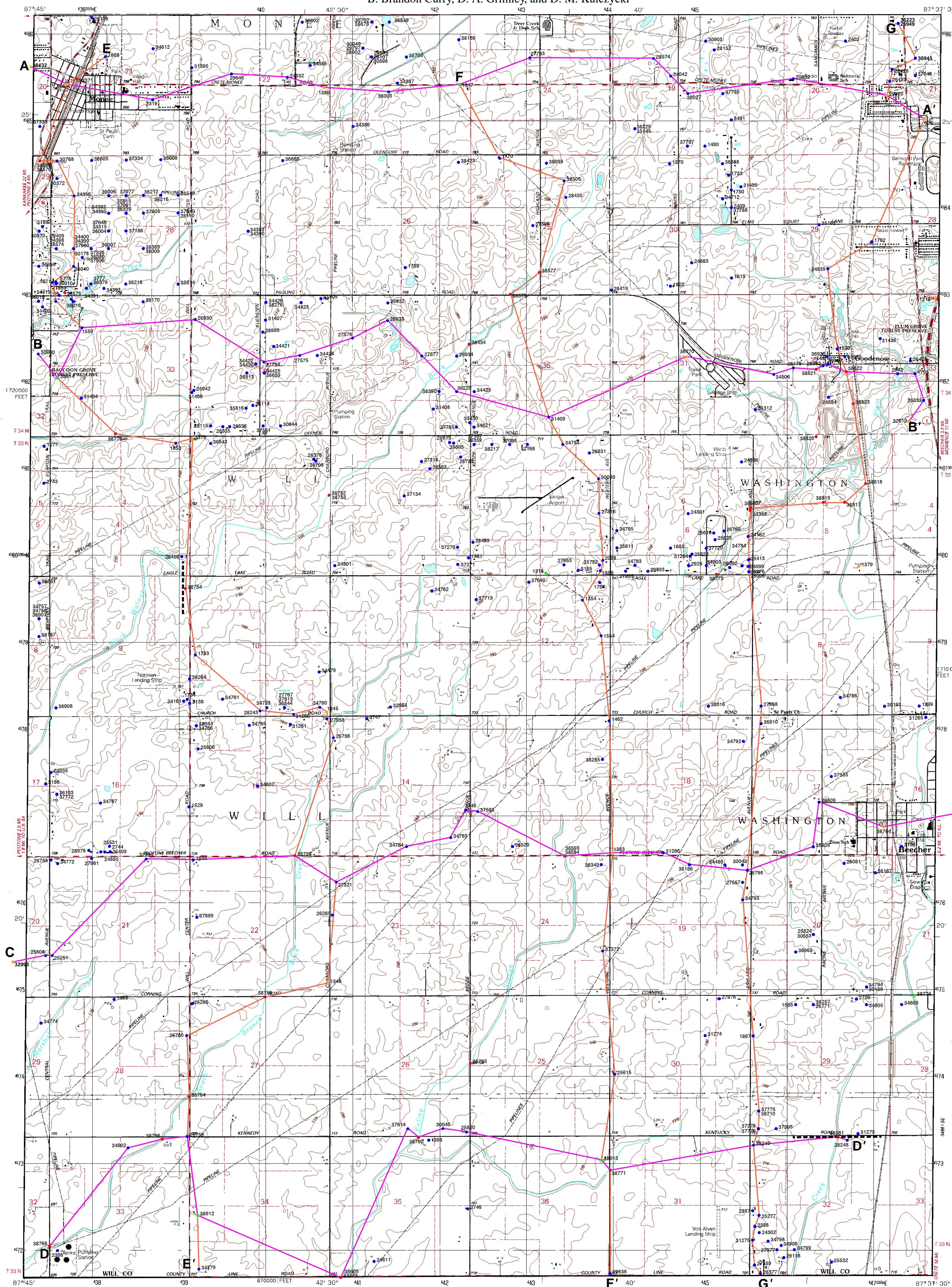


DATA POINT LOCATION MAP

Selected Water Wells, Test Borings, and Electrical Earth Resistivity Transects, Northern Beecher West and Southern Steger 7.5-minute Quadrangles, Will County, Illinois

B. Brandon Curry, D. A. Grimley, and D. M. Kulczycki



This map shows the locations for the borings and electrical earth resistivity transects that provided the data used to map the surficial geology (Curry and Grimley 2001), and the bedrock topography and drift thickness (Grimley et al. 2001) of the northern Beecher West and southern Steger 7.5-minute Quadrangles. Also shown are the lines of the cross sections for the surficial geology map (Curry and Grimley 2001). Numbers by each data point are unique identification numbers, part of the API number assigned to each unique data point, for the records of borings on file at the Geological Records Unit at the Illinois State Geological Survey (ISGS). "API" is the acronym for American Petroleum Institute.

Blue dots show the locations of water wells with drillers' descriptive logs in the well records. Most water wells in this region pump water from the upper bedrock; the glacial drift is generally cased off. The locations of the wells were not verified in the field, but, in many cases, the locations were confirmed by street address.

Orange dots show the locations of water wells with sets of samples of the geologic materials on file at the Geological Samples Library of the ISGS. Sample sets are washed cuttings collected every 5 feet and at every significant change in lithology. Each sample set was examined, and the description of the samples is on file in the ISGS Geological Records Unit.

Red dots denote the locations of engineering borings. The logs of engineering borings are typically very detailed and often include data such as moisture content, blow counts, and unconfined compressive strength. Most engineering borings were drilled for bridge construction and for piezometer construction at the Beecher facility, a landfill in the village of Goodenow (Section 32, T. 34 N., R. 14 E., and Section 5, T. 33 N., R. 14 E.). With their laboratory test results, carefully surveyed locations, and detailed descriptions of materials, the quality of the information from engineering borings is superior to the descriptive information available from most water wells.

The highest quality geologic data, shown by the green dots, come from stratigraphic test holes that are drilled, sampled, and described by geologists of the ISGS. Results of particle-size distribution analyses and of mineralogical analyses of the < 2-µm sediment fraction are available for samples from these borings. Two such stratigraphic test holes, 1315 and 1317, were drilled for the Northeastern Illinois Planning Commission (Lund 1966). They are located in Section 1, T. 33 N., R. 13 E., and Section 23, T. 34 N., R. 13 E., respectively. The other three detailed stratigraphic test holes, 38912, 38913, and 38914, were drilled expressly for this study. These borings are located in Section 34, T. 33 N., R. 13 E.; Section 36, T. 33 N., R. 13 E.; and Section 33, T. 34 N., R. 13 E., respectively.

Electrical earth resistivity (EER) surveys were done along two transects. The thickness and distribution of sand and gravel deposits were determined from the results of these surveys. Reynolds (1997) describes EER surveying techniques.

References

- Curry, B.B., and D.A. Grimley, 2001. Surficial geology map, northern Beecher West and southern Steger 7.5-minute Quadrangles, Will County, Illinois: Illinois State Geological Survey, Illinois Geological Quadrangle Map IGQ-Beecher West-Steger-SG, scale, 1:24,000.
- Grimley, D.A., B.B. Curry, and D.M. Kulczycki, 2001. Bedrock topography and drift thickness maps of the northern Beecher West and southern Steger 7.5-minute Quadrangles, Will County, Illinois: Illinois State Geological Survey, Illinois Geological Quadrangle Map IGQ-Beecher West-Steger-BT, scale, 1:24,000.
- Lund, C.R., 1966. Data from controlled drilling program in Will and southern Cook Counties, Illinois: Illinois State Geological Survey, Environmental Geology Notes 10, 56 p.
- Reynolds, J.M., 1997. An introduction to applied and environmental geophysics: Chichester, John Wiley and Sons, 796 p.

Acknowledgments

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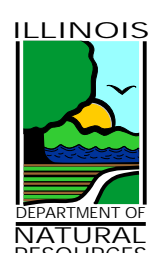
Types of data points

- Water wells
- Water wells with sample sets
- Engineering borings
- Stratigraphic borings with particle-size and other data
- Electrical earth resistivity (EER) transects (2)
- Lines of north-south cross sections
- - - Lines of east-west cross sections

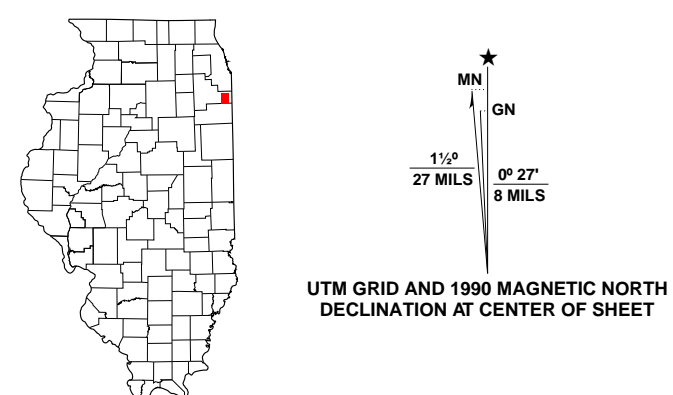
Data points are labeled with county API numbers, unique numbers that identify records of water wells and borings available at the Geological Records Unit at the Illinois State Geological Survey. The locations of the water wells and sample sets were not field verified, but many locations were confirmed by street address.

Base map produced by the United States Geological Survey Control by USGS and NOS/NOAA
 Topography by photogrammetric methods from aerial photographs taken 1987. Field checked 1988. Map edited 1990 (Steger Quad.), taken 1987. Field checked 1989. Map edited 1990 (Beecher Quad.).
 Projection and 10,000-foot grid ticks: Illinois coordinate system, east zone (Transverse Mercator)
 1000-meter Universal Transverse Mercator Grid, zone 16
 1927 North American Datum
 Fine red dashed lines indicate selected fence and field lines where generally visible on aerial photographs. This information is unchecked.

Recommended Citation
 Curry, B.B., D. A. Grimley, and D.M. Kulczycki, 2001. Location Map, Selected Water Wells, Test Borings, and Electrical Earth Resistivity Transects, Northern Beecher West and Southern Steger 7.5-minute Quadrangles, Will County, Illinois: Illinois State Geological Survey, Illinois Geological Quadrangle Map, IGQ Beecher West-Steger-DP, 1:24,000.



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1	2	3
4	5	6
7	8	9
10	11	12

- 1 Tinley Park
- 2 Harvey
- 3 Calumet City
- 4 Frankfort
- 5 Steger
- 6 Dyer
- 7 Peotone
- 8 Beecher West
- 9 Beecher East
- 10 Bradley
- 11 Momence
- 12 Illiana Heights

IMPORTANT INFORMATION ON THE USE OF THESE MAPS AND OTHER MATERIALS

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ROAD CLASSIFICATION

Primary highway, hard surface	Light-duty road, hard or improved surface
Secondary highway, hard surface	Unimproved road
Interstate Route	U.S. Route
	State Route