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Using Topographic Maps in Extension

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Availability

Enclosed is an index of available topographic maps, as of September, 1990, which covers the entire state. Most counties will need twelve maps to obtain complete coverage. County agents will find that these maps will significantly aid producers in making decisions about pond locations, drainage, location of structures, elevation differences, slopes, etc. Detailed topographic maps can be obtained from:

KY Geological Survey
228 Mining & Mineral Resources Bldg.
University of Kentucky
Lexington, Ky 40546-0107

Western Distribution Branch
U. S. Geological Survey
Federal Center, Box 25286
Denver, CO 80225

Eastern Distribution Branch
U.S. Geological Survey
1200 South Eads Street
Arlington, VA 22202

The cost of a topographic map is $2.50. Ordering information is contained in the enclosed index of maps.

What is a topographic map?

A topographic map contains a large quantity of information but basically it displays lines of constant elevation. To understand the concept of a contour line, think of an imaginary line following the ground which takes any shape needed to always remain at a constant elevation. For instance, a zero elevation contour line would follow the coast line. If the oceans were to be raised 20 ft and cover the land, then the 20 ft

contour line would trace this new water level. Contour lines are colored brown and normally every fifth contour line is emphasized by a heavier line. The scale is 1:24, 000 which is 1 in equal 2,000 ft.

What Features are listed in a topographic map?

Topographic maps use a color code. Symbols for water features are blue; man-made objects such as buildings, roads, railways, transmission lines are shown in black; green is used for vegetation such as woods or swampland; and brown is used for contours. Specific symbols are used to designate roads, primary bridges, tunnels, and overpasses; building such as homes, schools, churches, barns, cemeteries, airports, and landing strips; railroads, transmission lines, quarries, borrow pits, mines, and tailings. Different symbols exist for intermittent and perennial streams and rivers, dams, ponds, water wells, spring or seeps. Marsh land and weeded marsh land have different designations for submerged or unsubmerged conditions.

How are topographic maps used?

Topographic maps have numerous uses for planning projects and doing studies. Siting of airports, roads, dams, ponds, landfills, pipelines, etc. are initially based on contour maps. Hydrologic and geologic assessments for environment and soil conservation project depend upon topographic maps. Additionally, outdoor recreational activities such as hunting, fishing, and hiking can take advantage of topographic maps.

Topographic map uses for county agents.

A small sampling of potential uses of topographic maps is discussed. Since topographic maps display elevations the elevation difference between any two points can be readily determined. This would be useful in finding the required height needed to raise water for irrigation or for other water supply needs. Since distance can be measured on a contour map the slope of the land can be quickly determined. For example, a 40 ft elevation difference between two points that are 2,000 ft apart yield an average slope of 40/2000 or 2 percent. This information is very useful in field layout for trickle irrigation for instance. Also, distances from ponds, city water lines, springs, etc. can be easily determined. The flow path for stormwater is also indicated from a topographic map. This information is useful in determining the drainage area which will contribute runoff to a pond to be built in a specific location. Each square inch on a topographic map is 91.8 acres. Obviously siting of structures or waste lagoons would benefit from topographic considerations.

A set of topographic maps covering a county can help your producers get quick answers to many farming concerns.