

Reading Topographic Maps

Watershed Delineation

Floodplains

Human Impacts



DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Introduction

- This presentation is set up to introduce you to:
 - How to read topographic maps and
 - How to delineate a watershed
- It also introduces the concepts of human impacts on river systems

Topographic Map Symbols

- Base Colors: vegetation (green), water (blue), and densely built-up areas (gray or pink), open land (white)
- Lines: topographic contours (brown); lakes, streams, irrigation ditches, and other hydrographic features (blue); land grids and important roads (red); and other roads and trails, railroads, buildings, boundaries, and other cultural features (black)



Map Symbols

This graphic is the Grid and Magnetic North Declination Arrow. The vertical black line with the star at the top is the True North indicator. This line points towards Geographic or "True" North. > The red arrow is "Magnetic" north, the red number is the 0°45' 13 MILS number of degrees magnetic north differs from true north. INATION AT CENTER OF SHEET

Map Symbols

Scale Bar: the scale represents the ratio of a distance on the map to the actual distance on the ground

The majority of USGS published topographic maps are in the 1:24,000 scale map series this means 1" = 2000' also known as the 7.5-minute map series



Map Symbols

- Map Version: the date printed is under the map name in the lower right-hand corner in black or brown ink
- Photoinspection date: printed in red ink gives the date of the most recent revisions based on new data







Human Impacts

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Green Marsh

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All these sites have been altered by people.

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Consider what impact they have on the river.

Liban



U shaped contour lines point downhill

topozone

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V shaped contour lines point up a stream valley

1332

Delineate a Stream Watershed

Delineate a Stream Watershed

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Copyright 1999-2003 Marris a la

ERNION



Connect the peaks by following the U shaped contours up and down hill

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Delineate a Stream Watershed

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All the land between the peaks that drains to the stream is its watershed

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Delineate a Stream Watershed

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Trail Maps > Larger scale Locate N > Symbol designates type of use Must know if public or private access

Resources for more information

- Introduction to Topographic Maps Idaho State University: <u>http://geology.isu.edu/geostac/Field_Exercise/topomaps/index.htm</u>
- Topographic Map Symbols USGS: <u>http://egsc.usgs.gov/isb/pubs/booklets/symbols/topomapsymbols.pdf</u>
- OA Guide to Map & Compass The Backpacker's Field Manual by Rick Curtis: <u>http://www.princeton.edu/~oa/manual/mapcompass.shtml#Maps</u>
- MSR Maps USGS & Microsoft: <u>http://msrmaps.com/default.aspx</u> (on-line topo maps)



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