

# METADATA MANAGEMENT TOOL (LIO)

## Enhanced Flow Direction Grid - Provincial - Replaced

[Metadata](#) | [Metadata \(XML\)](#)

Title	Enhanced Flow Direction Grid - Provincial - Replaced
Date	2008-04-28
Date type	Creation
Date	2008-04-28
Date type	Revision
Abstract	<p>“THIS PRODUCT HAS BEEN REPLACED BY THE ONTARIO INTEGRATED HYDROLOGY DATA (OIH).</p> <p>Click for more information: <a href="https://www.javacoeapp.lrc.gov.on.ca/geonetwork/srv/en/main.home?uuid=5383ed26-4a12-4026-b624-65c2e431c861">https://www.javacoeapp.lrc.gov.on.ca/geonetwork/srv/en/main.home?uuid=5383ed26-4a12-4026-b624-65c2e431c861</a></p> <p>This product is no longer available for download. If you need access, please contact <a href="mailto:pmu@ontario.ca">pmu@ontario.ca</a> indicating the reason why you need this product.</p> <p>PLEASE EXERCISE CAUTION WHEN USING THIS PRODUCT. THE DATA NO LONGER REPRESENTS THE CURRENT STATE OF OUR WATER RESOURCES.</p> <p>The Enhanced Flow Direction Grid is a collection of related elevation and mapped water features that are used in combination for generating watersheds and to support hydrology applications.</p> <p>The Enhanced Flow Direction Grid is a grid representing surface flow directions derived from Version 2.0 Digital Elevation Model (DEM) with the added enhancement of having the photogrammetrically mapped hydrology (WRIP Water Virtual Flow and NRVIS water body segment) embedded within the grid so that known hydrology is accurately represented within the grid.</p> <p>Also included in version 2 is an alternative assignment of flow direction to shoreline areas. The inclusion has the following effects: Brings the limit of the Flow Direction grid closer to the shoreline resulting in a cleaner product; Allows for the delineation of distinct shoreline catchments not possible in the previous EFD product; Minimizes effects of shoreline bleeding (erroneous catchments being formed in -no-data- areas usually upstream of project areas); and Assigns proper flow directions to minor bays and inlets.</p> <p>To cover Ontario the grid has been divided into 16 pieces, existing in their respective UTM zones 15, 16, 17, and 18. Each grid covers major watersheds within these zones. The naming conventions of the grid follow the naming conventions of the Secondary and Tertiary Provincial watershed layers. The resolution of the Enhanced Flow Direction Grid is the same as the Provincial Digital Elevation Model - 10m for southern Ontario (where 1:10,000 base data exists) and 20m for Northern Ontario (where 1:20,000 base data exists). Currently, 16 of the 16 grids covering Ontario are included in the package. There are index shapefiles included within the package to show the extent of each grid.</p> <p>Legislated or Legal Authority for Collection: None</p>
Purpose	<p>The requirement to digitally delineate accurate watershed boundaries is a routine task necessary in numerous natural science disciplines. The Provincial Enhanced Flow Direction grid is designed for this purpose. Embedded in the enhanced flow direction grid are three commonly used layers in developing watershed divides; 1) flow directed stream network, 2) lakes and other water bodies, and 3) interpreted flow directions from a digital elevation model. A normal flow direction grid is derived solely from a digital elevation model where flow directions are determined by examining grid elevation values surrounding any one cell, and assigning the flow direction to the steepest down slope neighbour. The enhancement in the provincial enhanced flow direction grid is the inclusion of photogrammetrically mapped, flow directed hydrology, or known hydrology, which forces the derived watershed boundaries to honour.</p>
Metadata language	
Hierarchy level	Dataset
Individual name	

Organisation name	Ontario Ministry of Natural Resources and Forestry - Provincial Mapping Unit
Position name	
Role	Point of contact
Keyword	WATER
Keyword	Water Resource Information Program
Keyword	WRIP
Keyword	WATER MANAGEMENT
Keyword	WATER/WASTEWATER
Keyword	WETLANDS
Keyword	WATER
Keyword	RASTER
Keyword	DRAINAGE CHANNELS
Keyword	WATER RESOURCES
Keyword	WATER FLOW
Keyword	WATERSHEDS
Type	Theme

West bound	-95.1569900512695
East bound	-74.3079833984375
South bound	41.6722984313965
North bound	56.8501167297363

Description	Water bodies (lakes, wetlands etc) were extracted from the Water body Segment layer, and raster flow directions were computed for each water body that had a virtual segment passing through it (from the Water Virtual Flow data set).
Citation	missing
Title	Water body Segment ()
Alternate title	
Organisation name	Ministry of Natural Resources and Forestry
Presentation form	Digital table
Other citation details	A Waterbody Segment is a polygon or line feature that identifies a segment of a body of water such as a lake, pond, river, stream, or reservoir. A Waterbody Segment may be the Waterbody in its entirety or a component of the Waterbody. These include : river/stream - intermitent/approxiamate, river/stream - single line, virtual segment - stream, lake centroid, marsh/fen centroid, reservoir centroid and river/stream centroid - double line.
Description	The Provincial Digital Elevation Model was filled for sinks (conditioning for hydrological analysis) and then flow directions are computed for each cell within the DEM by assigning the flow direction to its steepest downslope neighbour. the Enhanced Flow direction grid also used the DEMs for its origin and resolution to ensure the grids lined up across the province. Data collected on 01/09/2005
Title	Provincial Digital Elevation Model
Alternate title	DEM
Organisation name	Water Resources Information Program

Presentation form	Digital table
Other citation details	The provincial Digital Elevation Model (DEM) is a high resolution raster data set covering the province of Ontario to the 51st parallel. It has been interpolated using ANUDEM 4.6.3 software with NRVIS contour and water virtual flow as inputs. Cell resolutions are 20 metres in northern Ontario and 10 metres in southern Ontario.
Description	The Water Virtual Flow data rasterized and through topological analysis of the flow direction of the water flow, flow directions were assigned to the raster cells representing the water flow. The cells are then merged with the flow directions computed from the Provincial Digital Elevation Model and with flow directions calculated for the water bodies from the Water Body Segment Layer Data collected on 01/08/2005
Citation	missing
Title	Water Virtual Flow - Seamless Provincial Data Set
Alternate title	
Organisation name	WRIP
Presentation form	Digital table
Other citation details	The provincial Digital Elevation Model (DEM) is a high resolution raster data set covering the province of Ontario to the 51st parallel. It has been interpolated using ANUDEM 4.6.3 software with NRVIS contour and water virtual flow as inputs. Cell resolutions are 20 metres in northern Ontario and 10 metres in southern Ontario.
Use limitation	None
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#### File identifier

689ac4c2-b365-4794-835e-8e106efae5a6

#### Metadata language

eng

#### Character set

UTF8

#### Individual name

#### Organisation name

Ontario Ministry of Natural Resources and Forestry - Provincial Mapping Unit

#### Role

Custodian

