

# Wisconsin Land Type Associations (LTAs)

Metadata also available as

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  - [Spatial Data Organization Information](#)
  - [Spatial Reference Information](#)
  - [Entity and Attribute Information](#)
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  - [Metadata Reference Information](#)
- 

### *Identification\_Information:*

#### *Citation:*

##### *Citation\_Information:*

##### *Originator:*

Wisconsin Department of Natural Resources in cooperation with the  
Wisconsin LTA Project Team

*Publication\_Date:* 1999

*Title:* Wisconsin Land Type Associations (LTAs)

*Geospatial\_Data\_Presentation\_Form:* vector digital data

##### *Publication\_Information:*

*Publication\_Place:* Madison, WI

*Publisher:* Wisconsin Department of Natural Resources (DNR)

*Online\_Linkage:* <http://www.dnr.state.wi.us/maps/gis/geolibrary.html>

### *Description:*

#### *Abstract:*

Land Type Associations (LTAs) of Wisconsin represent a further definition of the National Hierarchical Framework of Ecological Units (NHFEU). The NHFEU is an ecological classification system that divides landscapes into ecologically significant regions at multiple scales. Ecological types are classified and units are mapped based on the associations of biotic and environmental factors which include climate, physiography, water, soils, air, hydrology, and potential natural communities.

#### *Purpose:*

In Wisconsin, Land Type Associations and other levels of the NHFEU have been delineated and are being used as large-scale ecological units for resource assessment and planning projects. Wisconsin delineated the finer "landscape" scale LTA layer of the NHFEU. The development of this layer of information supplies a spatially oriented, ecological classification tool that is available to a variety of landowners, land managers, and resource interest groups in Wisconsin and the Great Lake States.

*Supplemental\_Information:*

Land Type Association (LTA) information depicts subregional and landscape ecological units developed according to the classification scheme of the NHFEU (Avers et al., 1994). The LTAs were developed, mapped and described in participation with a variety of agencies, organizations, and individuals. Development of ecological units is an iterative process which will progress as additional information becomes available, and from peer review and comments by users of this information. This data is reviewed annually.

Agencies that participated on the Wisconsin LTA Project Team include the Wisconsin Department of Natural Resources, the Natural Resources Conservation Service, the USDA Forest Service (State and Private Forestry and National Forests), the Wisconsin County Forest Association, the University of Wisconsin (at Madison and Stevens Point), Menominee Tribal Enterprise, and the Wisconsin Geological and Natural History Survey.

The LTA delineations in the NHFEU dataset are presented as an ArcInfo Region feature class ("region.lta"). For a detailed explanation of the contents of the LTA dataset, processing steps used in its development, and guidelines for use of the LTA dataset information, refer to the following documentation, available upon request from the Wisconsin DNR (see contact information): "LTA Data Dictionary"; "LTA Processing Procedure"; "LTA User's Guide".

*Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1999

*Ending\_Date:* 2003

*Currentness\_Reference:* publication date

*Status:*

*Progress:* Complete

*Maintenance\_and\_Update\_Frequency:* As needed

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:* -92.964436

*East\_Bounding\_Coordinate:* -86.666230

*North\_Bounding\_Coordinate:* 47.083195

*South\_Bounding\_Coordinate:* 42.456931

*Keywords:*

*Theme:*

*Theme\_Keyword\_Thesaurus:* None

*Theme\_Keyword:* biota.

*Theme\_Keyword:* environment

*Theme\_Keyword:* ecological units

*Theme\_Keyword:* NHFEU

*Theme\_Keyword:* Land Type Associations

*Theme\_Keyword:* LTAs

*Theme\_Keyword:* ecological classification

*Theme\_Keyword:* Wisconsin LTA Project Team

*Theme\_Keyword:* ECOMAP Team

*Place:*

*Place\_Keyword\_Thesaurus:* None

*Place\_Keyword:* Wisconsin

*Access\_Constraints:* None.

*Use\_Constraints:* None; see recommendations and guidelines for use.

*Point\_of\_Contact:*

*Contact\_Information:*

*Contact\_Organization\_Primary:*

*Contact\_Organization:* Wisconsin Department of Natural Resources (DNR)

*Contact\_Position:* GIS Project Lead

*Contact\_Address:*

*Address\_Type:* mailing address

*Address:* P.O. Box 7921

*City:* Madison

*State\_or\_Province:* WI

*Postal\_Code:* 53707-7921

*Country:* USA

*Contact\_Voice\_Telephone:* (608) 261-6417

*Contact\_Facsimile\_Telephone:* (608) 266-0870

*Contact\_Electronic\_Mail\_Address:* Mitch.Moline@dnr.state.wi.us

*Native\_Data\_Set\_Environment:*

Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 1; ESRI ArcCatalog 9.1.0.722

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*Data\_Quality\_Information:*

*Attribute\_Accuracy:*

*Attribute\_Accuracy\_Report:*

The Wisconsin LTA Project Team has reviewed and edited all information

contained in the LTA dataset.

*Logical\_Consistency\_Report:*

The Wisconsin LTA Project Team has a process of peer review for the LTA dataset information, including linework and attribute information.

For the digital creation of LTA lines, a process was developed with standard data capture and QA/QC procedures. Complete detailed information can be reviewed in the "LTA Processing" documentation (see Supplemental Information).

*Completeness\_Report:* All data are reviewed by the Wisconsin LTA Project Team.

*Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy\_Report:*

The source data was geometrically compiled on USGS 1:250,000-scale topographic quadrangle maps. Accuracy standards were on the order of RMS error no greater than 0.003.

*Lineage:*

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* US Geological Survey (USGS)

*Publication\_Date:* Various

*Title:* USGS 1:250,000-scale Topographic Quadrangles

*Geospatial\_Data\_Presentation\_Form:* map

*Other\_Citation\_Details:*

Land Type Associations compiled by the work of the Wisconsin LTA Project Team: Joe Kovach, Darrell Zastro, Bob Goldman, Mitch Moline, Mike Beaufeaux, Chuck Adams, Mark Heyde, Paul Westegaard, Scott Mueller, David Hvizdak, Tim Meyer, Lenny Kempf, Dave Hoppe, Jim Jordan, Dr. John Attig, Dr. John Kotar, Mark Krupinski.

*Online\_Linkage:* <<http://www.dnr.state.wi.us/maps/gis/geolibrary.html>>

*Source\_Scale\_Denominator:* 250000

*Type\_of\_Source\_Media:* Paper maps

*Source\_Contribution:* Line geometry and attribution.

*Process\_Step:*

*Process\_Description:*

Linework was digitized from base maps (USGS 1:250,000-scale quadrangles), data base and attributes were obtained from existing GIS datasets through geoprocessing of spatial overlays of dBase files created by the Wisconsin LTA Project Team. See also the "LTA Processing" documentation.

Periodically the ArcInfo feature class "region.lta" is converted to polygon shapefile format distribution and use.

*Process\_Date:* 1994-2003

*Process\_Contact:*

*Contact\_Information:*

*Contact\_Organization\_Primary:*

*Contact\_Organization:* Wisconsin DNR

*Contact\_Position:* GIS Project Lead

*Contact\_Address:*

*Address\_Type:* mailing address

*Address:* P.O. Box 7921

*City:* Madison

*State\_or\_Province:* WI

*Postal\_Code:* 53707-7921

*Country:* USA

*Contact\_Voice\_Telephone:* (608) 261-6417

*Contact\_Facsimile\_Telephone:* (608) 266-0870

*Contact\_Electronic\_Mail\_Address:* Mitch.Moline@dnr.state.wi.us

*Process\_Step:*

*Process\_Description:* Dataset copied.

*Source\_Used\_Citation\_Abbreviation:* K:\dvgislib\wi\_tile\eco\_bnd\feunw92d  
\feurlta

*Process\_Step:*

*Process\_Description:* Metadata imported.

*Source\_Used\_Citation\_Abbreviation:*

C:\geodata\projects\ready\_to\_zip\Land\_Type\_Associations  
\land\_type\_assoc.shp.xml

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*Spatial\_Data\_Organization\_Information:*

*Direct\_Spatial\_Reference\_Method:* Vector

*Point\_and\_Vector\_Object\_Information:*

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* G-polygon

*Point\_and\_Vector\_Object\_Count:* 291

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*Spatial\_Reference\_Information:*

*Horizontal\_Coordinate\_System\_Definition:*

*Planar:*

*Map\_Projection:*

*Map\_Projection\_Name:* Transverse Mercator

*Transverse\_Mercator:*

*Scale\_Factor\_at\_Central\_Meridian:* 0.999600

*Longitude\_of\_Central\_Meridian:* -90.000000

*Latitude\_of\_Projection\_Origin:* 0.000000

*False\_Easting:* 520000.000000

*False\_Northing:* -4480000.000000

*Planar\_Coordinate\_Information:*

*Planar\_Coordinate\_Encoding\_Method:* coordinate pair

*Coordinate\_Representation:*

*Abcissa\_Resolution:* 0.001024

*Ordinate\_Resolution:* 0.001024

*Planar\_Distance\_Units:* meters

*Geodetic\_Model:*

*Horizontal\_Datum\_Name:* D\_North\_American\_1983\_HARN

*Ellipsoid\_Name:* Geodetic Reference System 80

*Semi-major\_Axis:* 6378137.000000

*Denominator\_of\_Flattening\_Ratio:* 298.257222

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*Entity\_and\_Attribute\_Information:*

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* feurlta

*Attribute:*

*Attribute\_Label:* FID

*Attribute\_Definition:* Internal feature number.

*Attribute\_Definition\_Source:* ESRI

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Sequential unique whole numbers that are automatically generated.

*Attribute:*

*Attribute\_Label:* Shape

*Attribute\_Definition:* Feature geometry.

*Attribute\_Definition\_Source:* ESRI

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Coordinates defining the features.

*Attribute:*

*Attribute\_Label:* AREA

*Attribute:*

*Attribute\_Label:* PERIMETER

*Attribute:*

*Attribute\_Label:* LTA\_

*Attribute:*

*Attribute\_Label:* LTA\_ID

*Attribute:*

*Attribute\_Label:* LTA

*Attribute:*

*Attribute\_Label:* DESCRIPTIO

*Attribute:*

*Attribute\_Label:* NAME

*Attribute:*

*Attribute\_Label:* SQ\_MILES

*Attribute:*

*Attribute\_Label:* ACRES

*Overview\_Description:*

*Entity\_and\_Attribute\_Overview:*

Each polygon within the Land Type Association dataset has a 12-bit value which corresponds to the NHFEU. The NHFEU is a hierarchical ecological scheme as described by the ECOMAP Team (Avers et al. - 1994). This 12-bit code is the basis for the creation of the ArcInfo Regions representing the levels within the NHFEU to which each polygon belongs.

*Entity\_and\_Attribute\_Detail\_Citation:*

For a complete explanation of the LTA dataset and data model, refer to documents cited in the Supplemental Information Section.

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*Distribution\_Information:*

*Distributor:*

*Contact\_Information:*

*Contact\_Organization\_Primary:*

*Contact\_Organization:* Wisconsin DNR, Bureau of Technology Services

*Contact\_Position:* GIS Data Specialist

*Contact\_Address:*

*Address\_Type:* mailing address

*Address:* P.O. Box 7921

*City:* Madison

*State\_or\_Province:* WI

*Postal\_Code:* 53707-7921

*Country:* USA

*Contact\_Voice\_Telephone:* 608.264.8914

*Contact\_Facsimile\_Telephone:* 608.266.0870

*Contact\_Electronic\_Mail\_Address:* geodata@dnr.state.wi.us

*Resource\_Description:* Downloadable data

*Distribution\_Liability:*

Refer to <<http://www.dnr.state.wi.us/org/legal/WebSiteLegalInformation.html>>

*Standard\_Order\_Process:*

*Digital\_Form:*

*Digital\_Transfer\_Information:*

*Transfer\_Size:* 11.690

*Digital\_Transfer\_Option:*

*Online\_Option:*

*Computer\_Contact\_Information:*

*Network\_Address:*

*Network\_Resource\_Name:*

<[ftp://gomapout.dnr.state.wi.us/geodata/LTAs/Land\\_Type\\_Associations.zip](ftp://gomapout.dnr.state.wi.us/geodata/LTAs/Land_Type_Associations.zip)>

*Access\_Instructions:* Download from DNR ftp site.

*Offline\_Option:*

*Offline\_Media:* CD-ROM

*Compatibility\_Information:*

ISO 9660 format allows the CDROM to be read by most computer operating systems.

*Ordering\_Instructions:*

Refer to the DNR GIS website: <<http://www.dnr.state.wi.us/maps/gis/geolibrary.html>>

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*Metadata\_Reference\_Information:*

*Metadata\_Date:* 20040309, 20060630

*Metadata\_Review\_Date:* 20060630

*Metadata\_Contact:*

*Contact\_Information:*

*Contact\_Organization\_Primary:*

*Contact\_Organization:* Wisconsin DNR, Bureau of Technology Services

*Contact\_Position:* GIS Data Specialist

*Contact\_Address:*

*Address\_Type:* mailing address

*Address:* P.O. Box 7921

*City:* Madison

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*Postal\_Code:* 53707-7921

*Country:* USA

*Contact\_Voice\_Telephone:* 608.264.8914

*Contact\_Facsimile\_Telephone:* 608.266.0870

*Contact\_Electronic\_Mail\_Address:* geodata@dnr.state.wi.us

*Metadata\_Standard\_Name:* FGDC Content Standards for Digital Geospatial Metadata

*Metadata\_Standard\_Version:* FGDC-STD-001-1998

*Metadata\_Time\_Convention:* local time

*Metadata\_Extensions:*

*Online\_Linkage:* <<http://www.esri.com/metadata/esriprof80.html>>

*Profile\_Name:* ESRI Metadata Profile

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