

**NSDI Cooperative Agreements Program
Metadata Training & Outreach Project
Final Project Report**

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Project Narrative:

The Maine Office of Geographic Information Systems (MEGIS) has proposed to guide and assist the creation of FGDC compliant metadata for eighteen statewide data layers assisting six public sector entities with metadata outreach and training.

All geospatial data and metadata contributed to the Maine GeoLibrary is stored and served by MEGIS using ArcSDE and a State of Maine Oracle production environment administered cooperatively with the Maine's Bureau of Information Services. MEGIS uses Intergraph's Spatial Metadata Management System (SMMS) software for metadata creation and management. The SMMS tool outputs FGDC compliant .txt, .html, .sgml, and .xml formats to a variety of data and metadata distribution points. Platform independent SMMS is database supported and provides FGDC compliant metadata to: users of Maine's wide area network through ArcSDE ArcCatalog metadata tools; for search, evaluation, location, data association, and distribution through the Maine GIS Internet Data Catalog <http://megis.maine.gov/catalog/> ; to the Z39.50 registered FGDC National Spatial Data clearinghouse at <http://clearinghouse3.fgdc.gov/> ; to internet map services using Metadata Explorer and ArcIMS <http://megisims.state.me.us/website/orthomap/> ; and for harvest, in .XML format, by OpenGIS Web Map Services (WMS 1.1.1) <http://megisims.state.me.us/wmsconnector/com.esri.wms.Esrimap/WMSFramework?request=getcapabilities&service=WMS&version=1.1.1> .

Contributors to the Maine GeoLibrary use a variety of software products to work with geospatial data and to create FGDC compliant metadata: SMMS, those available through ArcGIS ArcCatalog, as well as free metadata tools like Corpsmet95 for ArcView 3.x users. Cooperating agencies are both formally and informally organized through Service Level Agreement and through the Maine Library of Geographic Information (GeoLibrary) <http://www.maine.gov/geolib/> to sustain activities for publication and documentation of geospatial data with FGDC metadata.

Metadata training and outreach assistance:

MEGIS staff is available for on-site demonstrations, assistance and hands-on training in content development of FGDC metadata. MEGIS also makes available, to participating agencies, in-house work stations with SMMS licenses. MEGIS staff is on hand for technical assistance with metadata creation and works with each contributor to complete and publish geospatial data and metadata.

An article on the 2004 FGDC Cap Grant was published in the Maine Information Systems Technology (MIST) newsletter

http://www.maine.gov/newsletter/jan_feb_2005/jan_feb_2005.htm and on the Maine GIS Users (MEGUG) website <http://www.megug.org/MEGUG/fyi.html> . The article provides basic information about FGDC metadata, describes MEGIS role in outreach and training, and extends an invitation to Maine GIS users to contact MEGIS for assistance with FGDC metadata.

Maine GIS has adopted FGDC metadata as documentation standard. Information on the Maine GIS FGDC initiative, including links to FGDC, other resources, free tools, the CSDGM workbook, citation, source, thesauri and keyword information has been published at <http://megis.maine.gov/standards/megisfgdc/megisfgdc.htm> .

6 out of 6 agencies listed in the grant proposal have participated in metadata outreach and training:

- Maine GeoLibrary
- Maine State Planning Office
- Maine Public Utilities Commission
- Maine Department of Labor
- Maine Secretary of State
- Maine Department of Inland Fisheries and Wildlife

15 agencies assisted

9 other agencies have been assisted:

- Maine GIS Executive Council
- Maine Department of Conservation
- Maine Department of Environment Protection
- Maine Department of Marine Resources
- Maine Department of Health and Human Services
- Maine State Archives
- University of Maine
- Natural Resources Conservation Service
- National Oceanographic and Atmospheric Administration

All but 4 data layers listed in the grant proposal have been documented with FGDC. The layers are: high resolution orthoimagery, 10 meter digital elevation models, conservation lands, labor market areas, Maine house districts, Maine senate districts, flood insurance rate maps, telephone service areas, electric service areas, cell phone towers, school districts, impoundments, parcels, municipal growth zones, and land use/.

15 layers documented

Maine Department of Inland Fisheries and Wildlife does not plan to make BIOLOGICAL CONSERVATION DATA, DEER WINTERING AREAS, TIDAL WATERFOWL HABITAT, COASTAL BUFFERS available for distribution outside the WAN and further assistance with FGDC metadata documentation for these specific layers will not be required.

MEGIS finds the use of metadata for search, evaluation, cataloging, and data management has strongly supported its collaboration with Maine GIS users and developers to share geospatial data, and to contribute to the Maine GeoLibrary and the National Spatial Data Infrastructure. MEGIS will continue to assist all Maine GIS users who contact MEGIS for technical support in metadata creation, content development, and geospatial data sharing.

Work needs to continue at MEGIS to make the process of metadata creation, update, publication and maintenance more enterprise oriented. Efforts to make a common environment available, add a data dictionary, share data sources, citations, thesauri, and keyword information, must build on the base of knowledge established and supported by the FGDC CAP Grant 2004 Metadata Training and Outreach Assistance. Development of technical skills for the implementation of an enterprise approach to metadata would benefit everyone. Metadata must continue to accurately represent geospatial data content over time to protect the value of our investments in data and in metadata outreach and training.

20 other new data layers have been documented or updated with FGDC metadata

- INDEX_1F
- INDEX_2F
- INDEX_FF

CNGRSS03
MEDOQINDEX
DIRSHED
BROADBND
WIFI
DOQQ
CONTOURS
METWP24
MEDOTPUB
E911RDS
HYD24
EHEAGLE
EHPLVTRN
EHRTERN
WELLS
WELLSBUF
WRIJMODS

GIS specialists in agencies contributing data to the Maine GeoLibrary have, become familiar with the tools for creation and content development of FGDC metadata. Participants appreciate the value added by metadata to their geospatial data development efforts and are able to work independently to document data, producing and publishing FGDC compliant metadata.

Two presentations of FGDC metadata were made to the GeoArchives project of the Maine State Archives, <http://www.maine.gov/geoarch/index.htm>. The uses of metadata in documentation, preservation, and geospatial data sharing are of particular import to this project that will document, archive and distribute archival geospatial data over the long term. A follow-up presentation provided information on the SMMS and ArcGIS metadata tools in use at MEGIS, access to metadata tools and an environment for metadata creation, edit, view, and distribution.

Status of Metadata Service:

<http://clearinghouse3.fgdc.gov/>
<http://www.geodata.gov/gos>
<http://megis.maine.gov/catalog/>
<http://megis.maine.gov/website/orthomap/>

This year an ISO Keyword Thesaurus, and ISO keywords have been added to all Maine GIS (MEGIS) metadata; all metadata has been proofed and refreshed to ensure bounding coordinates information return data on query from NSDI/FGDC clearinghouses; all metadata has been available for search, view and download through the Maine GIS Internet Data Catalog; all metadata has been updated with Distribution Information to reflect the shapefile format now available in the Catalog; distribution information was added to 16 Maine GIS FGDC metadata documents for data layers now available to GIS users through the OpenGIS Consortium, Web Map Service 1.1.1

All contributors to the Maine GeoLibrary will continue their collaboration with MEGIS to document geospatial data with FGDC metadata, publishing data and metadata for State of Maine WAN users, and to the users of clearinghouse and web map services nationwide.

MEGIS will continue to provide technical support to the Maine State Archives, GeoArchives and other projects for FGDC metadata content and documentation of archival geospatial.

Feedback on Cooperative Agreements Program:

State budget constraints and a blanket out-of-state travel ban prevented MEGIS staff from attending the 2004 FGDC CAP grant kickoff in Denver, Colorado. Participation in this event would have been a great benefit to us. Both David Painter and Sharon Shin offered their assistance directly for

which we are grateful. Publications at
<http://www.fgdc.gov/metadata/metadata.html> and
<http://www.fgdc.gov/funding/funding.html> have also been very helpful to our
efforts. Thanks!