

State Geospatial Data Coordination Procedure

California

Table of Contents

Table of Contents	1
Purpose of the Procedure.....	1
Default Flood Hazard Base Map for the State.....	2
Geospatial Data Coverage	2
Major State Holdings	3
Orthophotos	3
Transportation (roads, railroads, and airports)	3
Hydrography (rivers, streams, lakes, and shorelines).....	3
Political boundaries (county, municipal).....	4
Publicly owned lands (national, state, and local parks, forests, etc).....	4
Public land survey system (PLSS) (township and section lines).....	4
Cadastral (parcels).....	5
Extraterritorial jurisdiction (ETJ) boundaries.....	5
Terrain (elevation).....	5
Data Distribution Process for State Data.....	5
Federal Nationwide Geospatial Data Holdings.....	6
Finding and Accessing Other Existing Geospatial Data	6
Clearinghouses and Inventories for the State.....	6
National Digital Orthophoto Program (NDOP) and National Digital Elevation Program (NDEP) Tracking Systems	7
TED Query Tool	7
Geospatial One-Stop	7
Working with People.....	7
Useful State and Federal Contacts	7
Involving the State’s Geospatial Coordinator in Flood Studies.....	8
State Coordination Process for Building Geospatial Partnerships.....	8
Finding Local Geospatial Contacts	8
Provide Feedback on This Procedure	9
Other Useful Information	9

Purpose of the Procedure

Flood insurance studies search for geospatial data during pre-scoping and scoping tasks. If needed data are not available, studies might fund the collection of new data and would like to know about other organizations that might share in these costs. Detailed information about the role geospatial data coordination plays in studies is in the

State Geospatial Data Coordination Procedure

Geospatial Data Coordination Implementation Guide, which is available at <https://hazards.fema.gov/femaportal/docs/GeoDataImplem.pdf>, and in *Scoping Guidelines: Pre-scoping and the Scoping Meeting*, which is available through the Regional Management Center (RMC).

Resources developed through FEMA's geospatial data coordination activities provide information about data and contacts for organizations that have geospatial data that cover large areas (like states) in which many studies are interested. Studies can avoid wasting time with dead-end searches and cold calls by starting with these proven sources of information.

One resource is this Geospatial Data Coordination Procedure. It outlines sources of geospatial data and contact information, preferences for base map data and state geospatial participation in studies, and other useful information for the State.

If you have questions about this procedure or other geospatial data coordination resources, contact the geospatial data coordination lead in your Regional Management Center:

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We appreciate the help of those who reviewed this document, in particular

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Default Flood Hazard Base Map for the State

The default base map for flood hazard maps for the State is recent, black/white, county-wide orthophotography data provided by local government to FEMA as public domain data. The resolution must be 1-meter resolution or better. If not available, locally provided vector basemap data or 2005 USDA National Agriculture Imagery Program (NAIP) imagery are used.

Geospatial Data Coverage

Find below information about and links to statewide (and Federal agencies' national) geospatial datasets. The list is provided to save time during pre-scoping and scoping

State Geospatial Data Coordination Procedure

activities when building a list of candidate geospatial datasets available for the study; it is not a prescription of datasets that must be used in a flood insurance study.

Major State Holdings

Orthophotos

Dataset name: National Agriculture Imagery Program (NAIP) Image

Data currentness: 2005

Accuracy/Scale: 1:12,000

Ground sample resolution: 1 meter

Horizontal datum: NAD 83

Fee associated? No

Available for redistribution? Yes

Dataset source: http://new.casil.ucdavis.edu/casil/remote_sensing/naip_2005/

Dataset contact: Quinn Hart, UC Davis, (530) 752-7857, qjhart@ucdavis.edu

Notes: NAIP imagery has many uses, and many states participate in NAIP. NAIP is leaf-on imagery and is not cloud-free, and so the ground might be obscured. So, while NAIP (and other such imagery) can be used as a base maps, the imagery must be checked to ensure that it provides a clear view of important features on the ground for areas of significance for flooding (see Appendix C of the Geospatial Data Coordination Implementation Guide for more discussion). Also see the “Federal Mapping Program Factsheets” available through “Tools & Links” on the MIP web site.

Transportation (roads, railroads, and airports)

Dataset name: US Census Topologically Integrated Geographic Encoding and Referencing (TIGER)/Line files

Data currentness: 2000

Accuracy/Scale: 1:100,000

Horizontal datum: NAD 83

Fee associated? No

Available for redistribution? Yes

Are road names part of the dataset? Yes

Dataset source: <http://www.census.gov/geo/www/tiger/index.html>

Dataset contact: N/A

Notes: The US Census is in the process of realigning TIGER/Line files to improve positional accuracy. New data are published every six months. Beginning in 2007 or 2008, the Census will introduce the Master Address File (MAF)/TIGER system, which will incorporate an Oracle relational database. Also see the “Federal Mapping Program Factsheets” available through “Tools & Links” on the MIP web site.

Hydrography (rivers, streams, lakes, and shorelines)

Dataset name: USGS-maintained National Hydrography Data set (NHD) for CA

Data currentness: 2005

Accuracy/Scale: 1:24,000

Horizontal datum: NAD 83

Fee associated? No

State Geospatial Data Coordination Procedure

Available for redistribution? Yes

Are hydrography names part of the dataset? Yes

Dataset source: <http://nhd.usgs.gov/>

Dataset contact: NHD@usgs.gov

Notes: Also see the “Federal Mapping Program Factsheets” available through “Tools & Links” on the MIP web site.

Political boundaries (county, municipal)

Dataset name: US Census Topologically Integrated Geographic Encoding and Referencing (TIGER)/Line files (Designated Places)

Data currentness: 2000

Accuracy/Scale: 1:100,000

Horizontal datum: NAD 83

Fee associated? No

Available for redistribution? Yes

Dataset source: <http://www.census.gov/geo/www/tiger/index.html>

Dataset contact: N/A

Notes: The US Census is in the process of realigning TIGER/Line files to improve positional accuracy. New data are published every six months. Beginning in 2007 or 2008, the Census will introduce the Master Address File (MAF)/TIGER system, which will incorporate an Oracle relational database. Also see the “Federal Mapping Program Factsheets” available through “Tools & Links” on the MIP web site.

Publicly owned lands (national, state, and local parks, forests, etc)

Dataset name: Public, Conservation and Trust Lands

Data currentness: 2005

Accuracy/Scale: 1:100,000

Horizontal datum: NAD 83

Fee associated? No

Available for redistribution? Yes

Dataset source: http://gis.ca.gov/casil/natural_resources/land_ownership

Dataset contact: N/A

Notes: Developed for the California Resources Agency's Legacy Project, this dataset depicts ownership features as submitted by major public, trust, and non-profit groups in the state. PCTL05_2 is an update to the Legacy Project's PCTL04 geographic dataset, which was built upon a prior effort by the CalFed Bay-Delta Program and USBR to map public lands. Contributors to past datasets were contacted with requests for any updated lands.

Public land survey system (PLSS) (township and section lines)

Dataset name: Public Land Survey System maintained by Geographic Coordinate Database (GCDB)

Data currentness: 2000

Accuracy/Scale: The Public Land Survey system data are available at a scale of 1:24,000, which is typically used for local analysis and has a horizontal accuracy of +/- 40 feet.

Horizontal datum: NAD 83

Fee associated? No

State Geospatial Data Coordination Procedure

Available for redistribution? Yes

Dataset source: : <http://www.geocommunicator.gov/>

Dataset contact: Bill Twenhofel, GCDB Manager, (916) 978-4343

Notes: A description of the GCDB will be added to the “Federal Mapping Program Factsheets” available through “Tools & Links” on the MIP web site later in 2007.

Cadastral (parcels)

No statewide coverage available

Notes: There is currently no complete and publicly-available cadastral data set for California. Cadastral data are maintained by city and county governments. The California Department of Transportation (Caltrans) has been participating in the California GIS Council (CGC) and is currently leading an effort to develop a statewide parcel database. The statewide parcel database is an essential component to the future of transportation planning, land use planning, economic development modeling (as well as many other State, federal and local government business needs). All are essential components of the Governor’s Strategic Growth Plan.

Extraterritorial jurisdiction (ETJ) boundaries

No statewide coverage available.

Terrain (elevation)

Dataset name: USGS DEM

Data currentness: Varies

Accuracy/Scale: 1:24K for most of the State

Vertical datum: NGVD 29

Fee associated? No

Available for redistribution? Yes

Dataset source: <http://data.geocomm.com/dem/demdownload.html>

Dataset contact: N/A

Notes: USGS Digital Elevation Models (DEM) are the only seamless elevation data covering all of California available in public domain. The most current USGS elevation data are maintained in the National Elevation Dataset; see <http://ned.usgs.gov>; also see the “Federal Mapping Program Factsheets” available through “Tools & Links” on the MIP web site. Many cities and counties have LiDAR or other higher-quality data for specific areas, but these data are not all produced with consistent standards or made publicly available.

Data Distribution Process for State Data

One example of a State agency policy for cataloging environmental data is the Resources Agency Data Cataloging and Sharing Policy posted at

http://ceres.ca.gov/Environ_Data_BIOS_MC_2005-06-06.pdf.

State Geospatial Data Coordination Procedure

Federal Nationwide Geospatial Data Holdings

Information about nationwide holdings and programs of Federal agencies is available from the Mapping Information Platform web site at <https://hazards.fema.gov/femaportal/docs/ProgFacts.pdf>.

Finding and Accessing Other Existing Geospatial Data

Find below information about and links to ways of searching for additional geospatial data available for the State. These capabilities can be useful for finding geospatial data other than the statewide and Federal data listed above, including those of special governments, counties and parishes, municipalities, tribes, universities, and other organizations.

Clearinghouses and Inventories for the State

California Environmental Information Catalog: <http://gis.ca.gov/catalog/>: The California Resources Agency maintains a statewide metadata clearinghouse for geospatial data. This resource is called the California Environmental Information Catalog (CEIC) and is accessible at <http://gis.ca.gov/catalog/>. The online directory is used for reporting and discovery of information resources for California. Participants include cities, counties, utilities, state and federal agencies, private businesses and academic institutions that have spatial and other types of data resources. The Catalog has been developed through a collaborative effort with the California Geographic Information Association, California Environmental Resources Evaluation System (CERES) Program, and the Federal Geographic Data Committee.

CERES GeoFinder: <http://casil.ucdavis.edu/cgi-bin/gb/geofinder>: GeoFinder is a tool that helps find and retrieve geographic and environmental data from the California Resources Agency, its constituent departments, and other partner organizations. GeoFinder lets users drill down through a map of California using predefined geographies like zip code, watershed, bioregion, county, urban area or by place name. Once an area of interest is identified, the user can easily locate and retrieve digital orthophoto quads and scanned USGS map sheets for the area. A user can also ask for a list (by quad only) of rare species and natural communities inventoried by Fish and Game's Natural Diversity Data Base. GeoFinder also lets users easily crosswalk between these geographies.

California Spatial Information Library (CaSIL): <http://gis.ca.gov/index.epl>: The Data Collections portion of CaSIL (<http://gis.ca.gov/data.epl>) contains links for downloading Frequently Accessed Data Layers, Digital Orthophoto Quarter Quads (DOQQs), California Digital Raster Graphics (DRGs), California Landsat Images, and California SPOT Imagery (not public domain). The categories of data available for download in the Frequently Accessed Data Layers section include Administrative Divisions & Political

State Geospatial Data Coordination Procedure

Districts; Cultural Geography; Facilities, Structures & Buildings; Imagery; Physical Geography; Transportation Networks & Models and Other data.

Inventory for Planned Imagery Acquisitions: The CaSIL site contains a catalog of planned and proposed data to encourage collaboration and cost-sharing by all levels of government and the private sector in the development/capture of digital spatial data including (but not limited to) aerial photography, remote sensed imagery, rivers and streams, elevation, administrative boundaries, government ownership, transportation features, and land use/land. The purpose is to encourage data sharing/acquisition partnerships, reduce the overall cost of data development (due to economies of scale and by avoiding duplication where possible), and allow data that has already been developed to be discovered more quickly.

National Digital Orthophoto Program (NDOP) and National Digital Elevation Program (NDEP) Tracking Systems

These systems allow the search of orthophoto and elevation project information entered by federal and other organizations. To access the NDOP system, go to the NDOP web site at <<http://www.ndop.gov>> and follow the link “Project Tracking.” For the NDEP system, go to the NDEP web site at <<http://www.ndep.gov>> and follow the link “Project Tracking.”

TED Query Tool

This tool provides access to information about Federal, state, and local government agency and private sector data holdings gathered by the Census Bureau. It is available through the geospatial data coordination lead at the Regional Management Center.

Geospatial One-Stop

Geospatial One-Stop, available at <<http://www.geodata.gov>>, provides access to geospatial data from many sources. Two parts of the site that should be investigated are the “data categories” for existing data and the “marketplace” for data that are planned or in-work and for potential partners for new data collection activities.

Working with People

Useful State and Federal Contacts

The main contacts for the State’s geospatial activities and Federal agencies’ representatives in State are available on the Mapping Information Platform web site at <https://hazards.fema.gov/contacts/statecontacts/contacts.asp?page=CA>

State Geospatial Data Coordination Procedure

Involving the State's Geospatial Coordinator in Flood Studies

The GIS staff in the California Resources Agency has a working relationship with the State Department of Water Resources (DWR) - DWR is a Resources Agency constituent department, which is the agency responsible for floodplain management activities in the state. DWR staff has participated in the CMCC, as documented below.

DWR has prepared a Five Year Floodplain Management Plan (draft dated 5/25/05), a State Business Plan (final dated May, 2004) and a Map Modernization Plan for the State of California (dated August, 2002) to provide input to FEMA Region IX.

DWR coordinates with FEMA Region IX, the Sacramento District of the US Army Corps of Engineers and local floodplain administrators on NFIP mapping and floodplain management issues.

State Coordination Process for Building Geospatial Partnerships

California GIS Council: <http://gis.ca.gov/council/>: The California GIS Council (CGC), made up of representatives from local, tribal, state and federal government agencies and the private sector, was formed to collaborate on the planning, implementation and maintenance of a California GIS infrastructure. The term infrastructure is used to encompass systems, organizational programs, policy, standards, procedures, and any other factors that affect the ability of member organizations to jointly develop or acquire, share and maintain spatial data adequate to their needs.

A key element of the CGC is the formation and participation of local collaboratives (e.g., Regional GIS Councils). Composed of representatives of county, city and tribal governments, resource conservation and other special districts, private and public utilities, local colleges and universities and private sector organizations, these regional collaboratives are essential to council success.

Finding Local Geospatial Contacts

Local contacts, including those from special government districts (for example, a regional planning commission); counties, parishes, or equivalent governments; tribes, municipal governments; and other organizations (for example, local universities) also have geospatial data that can help a flood insurance study. Contact information is available from the FEMA archive and web searches at government link portals such as <http://www.statelocalgov.net>.

State Geospatial Data Coordination Procedure

County GIS Contacts: There are many sources for identifying the primary GIS contact for a specific county in California. These include:

- County Web Sites. Most counties that utilize GIS have the contact information for the primary GIS POC posted on the county web site.
- Regional GIS Councils/Collaboratives. In California, there are several Regional GIS Councils and/or Regional GIS collaborative groups that have formed to coordinate data sharing and partnerships. When a mapping partner initiates a FEMA study/mapping project in a new County, they could contact the Regional GIS Council or collaborative group for that County to get the “lay of the land” and the current GIS contact. A listing of Regional GIS collaboratives and contact information is provided at <http://gis.ca.gov/council/regional.epl>.
- A listing of GIS contacts in the San Francisco Bay Area is available at http://www.baama.org/survey/survey_contacts.pdf
- County GIS contacts can be provided by contacting either the State GIS contacts provided below or the FEMA Regional Management Center 9 contact provided at <https://hazards.fema.gov/contacts/statecontacts/contacts.asp?page=CA>.

Provide Feedback on This Procedure

When you find information in this Procedure or in other FEMA or State resources that are outdated, please tell the geospatial data coordination lead in the Regional Management Center what was wrong and the correct information (if you know it). Use the contact information for the lead listed in the section Purpose of the Procedure.

Other Useful Information

Additional mapping and GIS resources in the State of CA include:

California Department of Water Resources, Awareness Floodplain Mapping Program
http://www.fpm.water.ca.gov/mapping/awareness_mapping.cfm: DWR prepares "Awareness Floodplains" on a county-basis that identifies flood hazard areas using approximate assessment procedures. These floodplains are mapped as flood prone areas without specific depth and other flood hazard data. Communities participating in the NFIP are encouraged to ask FEMA to include these “Awareness Zones” on their FIRMs. To view and download "Awareness Floodplains" maps, go to http://www.fpm.water.ca.gov/mapping/awareness_mapping.cfm.

California Geospatial Information Office: <http://gis.ca.gov/>: The mission of the California Geospatial Information Office is to lead and coordinate the development, licensing and sharing of geospatial data by state government agencies. The GIO will work with the California GIS Council to sponsor an integrated State Geospatial Data Service

State Geospatial Data Coordination Procedure

that will define the data architecture, systems, standards, and processes and coordinate the availability of geospatial data used by state agencies.

California Mapping Coordinating Committee (CMCC): <http://gis.ca.gov/cmcc.epl>: The California Mapping Coordinating Committee (CMCC) is comprised of both management and technical representatives from various boards, departments, offices, conservancies, and commissions (BDOCCs) throughout California State government that use geographic information system (GIS) technology. The Resources Agency resurrected the CMCC in 1999 after several years of inactivity, and increased participation by reaching out to other agencies. It is the intent of the CMCC to continue to reach out to other State agencies and foster collaboration within and outside of State government, on the development and use of geographic data, services and technologies in pursuit of better public service.

The following California agencies have participated on the CMCC recently:

- Office of the Chief Information Officer
- California Environmental Protection Agency
- Dept. of Forestry and Fire Protection
- Governor's Office of Emergency Services
- State Water Resources Control Board
- Dept. of Fish & Game
- Resources Agency
- Health and Human Services Agency
- Coastal Commission
- Energy Commission
- Integrated Waste Mgmt. Board
- Dept. of Transportation
- State Board of Equalization
- Dept. of Conservation
- Dept. of Pesticide Regulation
- Governor's Office of Planning & Research
- Dept. of Water Resources
- Air Resources Board
- Department of General Services
- Department of Food and Agriculture
- State Library
- Dept. of Parks and Recreation
- Office of Statewide Health Planning & Development
- State Lands Commission
- Dept. of Toxic Substance Control

State Geospatial Data Coordination Procedure

- Children and Families Commission