

# Department of the Interior Departmental Manual

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**Effective Date:** 11/29/88

**Series:** Special Programs

**Part 757:** Surveying and Mapping

**Chapter 3:** Mapping

**Originating Office:** U.S. Geological Survey

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This chapter has been given a new release number.* No text changes were made.
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## 757 DM 3

**3.1 Purpose.** This chapter prescribes policy, responsibility, coordinating arrangements, and procedures for Departmental administration of mapping activities.

**3.2 The National Mapping Program.** In response to the findings and recommendations of the Federal Mapping Task Force cited in 757 DM 1, the Department has modified, extended, and renamed its National Topographic Program to serve better the basic cartographic data needs of the country. This new program, the National Mapping Program, includes those activities necessary to make available basic map data and a family of general-purpose maps. Certain of these map data categories (such as roads, structures, topography, streams, lakes, and shorelines) are identified as base map data categories. Other map data of public value may also be incorporated into the National Mapping Program and will be identified as non-base categories. The non-base categories will be developed and maintained by the responsible agencies and will be made available under cooperative agreement for the preparation of maps and other forms of cartographic display through the National Mapping Program's coordination and dissemination arrangements.

## 3.3 Definitions.

A. Cartography. The art and science of expressing graphically or digitally by the use of maps, charts, or other displays, the known physical features of the Earth or extraterrestrial bodies, usually including the works of man and his varied activities.

B. Map. A spatial representation, usually on a plane surface, at scale, of a part or a whole of the Earth's physical features (natural, artificial, or both), by the use of signs, symbols, or numeric representation. Also, a similar representation of an extraterrestrial body.

C. Mapping. The process of collecting and preparing data on spatially relatable features for presentation in graphical or digital form.

D. Base Map. A map showing selected fundamental information for multipurpose use; a general-purpose map.

E. Digital Map Data. Numerical data representing spatially-relatable physical features (natural, artificial, or both) that can be used in computations, statistical analysis, and graphical output.

F. Geographic Information System. A computer hardware and software system designed to collect, manage, analyze, and display spatially referenced data.

G. Base Map Data Category. A set of map data, at scale and of a prescribed level of content, that is normally produced in preparation of general-purpose maps. This set of basic map data can be available as individual features such as roads, streams, contours, etc., or in combinations. Base map data categories are:

- (1) Reference systems B geographic and other coordinate systems except the public land survey network.
- (2) Hypsography - contours, slopes, and elevations.
- (3) Hydrography B streams and rivers, lakes and ponds, wetlands, reservoirs, and shorelines.
- (4) Surface cover B woodland, orchards, vineyards, etc. (general categories only).
- (5) Non-vegetative features B surface features normally designated by names or special symbols other than contour lines, such as playas, dunes, and barren waste areas.
- (6) Boundaries B portrayal of political jurisdictions, national parks and forests, military reservations, etc. This category shows the boundaries as established by the various concerned agencies and jurisdictions and does not definitively set forth land ownership or land use.
- (7) Transportation systems - roads, railroads, trails, canals, pipelines, transmission lines, bridges, tunnels, etc.
- (8) Significant manmade structures such as buildings, airports, dams, and other landmark structures or objects.
- (9) Identification and portrayal of geodetic control, survey monuments, and other survey markers.
- (10) Geographic names.
- (11) Orthophotographic imagery.

H. Non-base Map Data Category. A set of map data in graphical or digital form on specific themes or topics (such as land use or land ownership) that has general public value. These are generally combined with one or more of the base map data categories.

**3.4 Coverage.** The provisions of this chapter apply to all base maps and base map data categories and to those non-base map data categories that have general use and can be developed economically under cooperative agreement with the responsible agency. The provisions of this Chapter may not apply to those maps (such as recreational maps and statistical maps) that are essentially pictorial or schematic.

**3.5 Policy.** The base mapping activities of the bureaus will be part of the National Mapping Program through partnership arrangements with the Geological Survey. To avoid duplication of effort, and assure compatibility of data, mapping and map production processes will be adapted when practical to use the categories available under the National Mapping Programs. Bureaus will not independently develop such categories.

### **3.6 Responsibilities.**

A. Lead Agency. The Geological Survey is the lead agency for the administration of the National Mapping Program. This includes coordinating, planning, managing, compiling, defining, and approving the National Mapping Program categories, and assuring the availability of the resulting map data and materials to users.

B. Base Map Data Categories. The Geological Survey is responsible for defining and maintaining the base map categories of the National Mapping Program and will make these data available in forms that contribute to their timely and effective use. In cases where the base map category data is not available, the Geological Survey and the requiring bureau or office shall determine the developmental actions to be taken so that data will be available and also incorporated into the basic files of the National Mapping Program.

C. Non-base Map Data Categories. The agency which is responsible for a data system that produces spatial data not included in the base categories will generally develop and maintain these non-base category data. Agencies will evaluate their data collection systems in cooperation with the Geological Survey to review the overall need for cartographic data that is or can be derived from the agency data systems. When sufficient general need is determined the category should be incorporated into the National Mapping Program. Should the non-base category become a requirement of the National Digital Cartographic Data Base, the agency maintaining the non-base cartographic data is responsible for modifying its processes for the data for compatibility with the National Mapping Program standards. The responsible agency will also establish, by agreement with the Geological Survey, the arrangements for making the non-base category information available through the National Mapping Program.

D. Map Printing. Each agency is responsible for the efficient and economical printing of the maps it produces. In exercising this responsibility the bureau or office will consider the map reproduction capabilities of the Geological Survey and use them where appropriate.

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