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GEOSPATIAL MANAGEMENT OFFICE

I. Purpose

A. The DHS Spatial Data Infrastructure (SDI), a subset of the Enterprise Architecture, consists of geographic information systems software and hardware, geospatial applications, data, standards, policies, programs, and the human resources necessary to acquire, process, analyze, store, maintain, distribute, and otherwise use geospatial data as a strategic asset for the Department of Homeland Security (DHS or Department) and the nation. The basis for an SDI is to identify and organize core capabilities that have common applications and to ensure the transport of data, via compatible formatting, across DHS. Completing and maintaining an SDI with integrated applications and systems will provide the level of geospatial preparedness required to protect the nation's critical infrastructure, strategic assets, the economic base, and America's citizens.

B. This directive establishes the DHS Geospatial Management Office (GMO) within the Office of the Chief Information Officer (CIO). The GMO shall be administered by the Geospatial Information Officer (GIO), who shall work with the CIO and Chief Technology Officer (CTO) to carry out this directive.

II. Scope

This directive applies to all DHS Organizational Elements that use and/or contribute geospatial information. Geospatial information, as used in this publication, includes surveys, maps, charts, remote sensing data and images and aerial photographic services; and technology, including global surveillance, global position system (GPS), geographic information system (GIS), mapping, geo-coding, and remote sensing. Also included are services performed by professionals such as analysts, specialists, surveyors, photogrammetrists, hydrographers, geodesists, cartographers, and other services of an architectural or engineering nature in support of these capabilities.

III. Authorities

This directive is governed by numerous Public Laws, regulations, rules, and other directives, such as:

A. The Homeland Security Act of 2002, Public Law 107-296, November 25, 2002.

- B. 31 U.S.C. 1535, The Economy Act.
- C. 40 U.S.C. 1401, Clinger-Cohen Act of 1996.
- D. Executive Order 12906 dated April 13, 1994, as amended by Executive Order 13286, dated March 5, 2003.
- E. OMB Circular No. A-16, "Coordination of Geographic Information and Related Spatial Data Activities (2002)".
- F. OMB Circular No. A-25, "User Charges (1993)".
- G. OMB Circular No. A-119, "Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities (1998)".
- H. OMB Circular No. A-130, "Management of Federal Information Resources (2003)".
- I. The National Strategy for Homeland Security (July 2002).
- J. DHS Management Directive 0010.1, "Management Directives System and DHS Announcements".
- K. The coordination of geographic information and related spatial data activities consistent with, and in support of, the responsibilities and reporting requirements as defined by the Federal Geographic Data Committee (FGDC), as defined by OMB Circular No. A-16 referenced above.

IV. Definitions

A. ***Federal Geographic Data Committee (FGDC)***: The Federal Geographic Data Committee is a 19-member interagency committee composed of representatives from the Executive Office of the President, Cabinet Agency, and independent agencies. The FGDC is developing the National Spatial Data Infrastructure (NSDI) in cooperation with organizations from state, local, and tribal governments, the academic community, and the private sector. The NSDI encompasses policies, standards, and procedures for organizations to cooperatively produce and share geographic data.

B. ***Geospatial Data***: The term "geospatial data" means information that identifies, depicts, or describes the geographic locations, boundaries, or characteristics of inhabitants and natural or constructed features on the Earth. This information may be derived from, among other things, socio-demographic analysis, economic analysis, land information records and land use information

processing, statistical analysis, survey and observational methodologies, environmental analysis, critical infrastructure protection analysis, satellites, remote sensing, airborne imagery collection, mapping, engineering, construction, global positioning systems, and surveying technologies and activities.

C. **Geographic Information Systems Software and Hardware**: The term “geographic information systems software and hardware” means computer software and hardware required to identify, depict, visualize, analyze, maintain, or otherwise use geospatial data.

D. **Geospatial Applications**: The term “geospatial applications” means computer software and systems that extend the capabilities of geographic information systems software and hardware to identify, depict, visualize, analyze, maintain, or otherwise use geospatial data.

E. **Geospatial Information and Technology Architecture (GITA)**: The term “geospatial information and technology architecture” means the geospatial data, systems, components, standards and processes that implement the DHS Enterprise Architecture.

F. **Geospatial One Stop**: An intergovernmental project managed by the Department of the Interior in support of the President's Initiative for E-government, Geospatial One Stop builds upon its partnership with the Federal Geographic Data Committee (FGDC) to improve the ability of the public and government to use geospatial information to support the business of government and facilitate decision-making.

G. **Geospatial Preparedness**: The term “geospatial preparedness” means the level of overall capability and capacity necessary to enable all levels of the Department to use geospatial data, geographic information systems software and hardware, and geospatial applications to perform essential functions such as prevention, detection, planning, mitigation, response, and recovery in order to minimize loss of life and property from weapons of mass destruction, terrorist threats, major threats, major man-made accidents, and natural disasters.

H. **Standards**: The term “standards” means documented international, national, or industry consensus agreements containing technical specifications or other precise criteria to be used consistently as rules, guidelines, or definitions to ensure that materials, products, processes, or services are proper for their purposes.

V. Responsibilities

A. **The Under Secretary for Management** has overall responsibility for managing the Department's Geospatial program.

B. **The DHS Chief Information Officer(CIO)** shall be responsible for managing the execution of this directive.

C. **The DHS Geospatial Management Office (GMO)** will report to the DHS CIO. The GMO's responsibilities include:

1. Exercise executive leadership in establishing Department geospatial information and technology programs, directives, initiatives, standards, techniques; and ensuring the security of geospatial data, geographic information systems software and hardware and geospatial applications Department-wide. Formulate plans and provides oversight for the integration of geospatial information and technology throughout the Department. Develop and implement a Department geospatial information and technology vision that integrates key national and program goals, priorities and values. Balance geospatial information and technology change and continuity to improve customer service and program performance, and to create a work environment that encourages creative thinking.

2. Direct formulation of geospatial information and technology approaches needed to satisfy Department Geospatial Information & Technology Architecture (GITA) initiatives and priorities. Ensure that the GITA achieves the interconnectivity linkage and interoperability between intra-DHS, inter-USG, state, local, and private sector activities involving geospatial data, information technology and applications in order to optimize cross-OE operations and geospatial resource sharing, and provide the geospatial interoperability foundation to the DHS Enterprise Architecture. Ensure that DHS' GITA policy and direction are in concert with, and supportive of, its mission and priorities. Advance the Department's missions and operations by assisting senior managers in recognizing where geospatial information and technology can add value while transforming or supporting program operations. Identify, analyze, and evaluate major issues and problems faced by DHS managers to determine needed improvements in Department geospatial data, information, applications, and technology components.

3. Guide development of strategic planning for GITA functions. Ensure integration of long-range plans with the Department's planning, programming, budgeting, and management processes. Advise senior managers to ensure that the Department's GITA needs are addressed, and to market innovative uses of geospatial information and technology.

4. Stimulate the use of innovative geospatial information and technology solutions. Shape strategic objectives during program planning processes, by participating as an agent of change, and by producing a supportive strategic geospatial information and technology resources plan

which is fully integrated into the Department's Strategic IT Plan and aligns with the DHS Enterprise Architecture.

5. Advise senior Department officials on cost-efficient and effective use of geospatial information and technology resources. Advise on cross-OE program process improvements, on modification of program processes to take full advantage of geospatial information and technology solutions, and on promotion of a standards-based geospatial information and technology architecture.
6. Provide guidance, direction, and coordination in developing appropriate standards governing DHS GITA functions. Approve standards and direct the evaluation of GITA functions throughout the Department to ensure that standards are uniformly applied and enforced.
7. Direct periodic project assessments for each major DHS geospatial information system investment to determine progress toward completion and realization of benefits. Direct the establishment, monitoring, and evaluation of geospatial information technology performance in support of program accomplishments. Advise senior managers on whether a geospatial information and technology program should be continued, modified, or terminated.
8. Serve as the DHS representative on the Federal Geographic Data Committee Executive Steering Committee and other Federal geospatial executive steering committees. Serve as the DHS representative on the Geospatial One-Stop Board of Directors, and participate in related working group activities to improve the efficiency and effectiveness of DHS' geospatial infrastructure operations.
9. Establish and maintain appropriate working relationships with Federal, state, tribal, local, and private sector organizations on geospatial information and technology matters. Provide leadership and guidance to assure proper coordination of the Department's GITA activities with other Federal agencies, and compliance with all applicable laws and regulations.
10. Exercise executive leadership in establishing a Department acquisition strategy for geospatial data, geographic information systems software and hardware, and geospatial applications. Formulate plans and provide oversight for integrating the acquisition strategy Department-wide.
11. Coordinate with the DHS Position, Navigation, and Timing (PNT) business leaders in areas of natural overlap and mutual interests between PNT and Geospatial issues.

12. Establish, administer, operate, and maintain the DHS Geospatial Working Group (GWG) and Geospatial Executive Steering Committee (GESC).

D. **All DHS personnel, contractors, and consultants** serving in geospatial and geographic information positions (Series 0391/0301/2210, geospatial analysts, GIS analysts, geospatial specialists, GIS specialists, surveyors, photogrammetrists, hydrographers, geodesists, cartographers, and other such services of an architectural or engineering nature) must follow the geospatial information technology guidelines and policies as directed by the DHS GMO.

E. **The DHS Organizational Elements (OEs)** responsibilities include:

1. Exercise executive leadership in establishing Department programs, directives, and initiatives with respect to specific OE mission areas.

2. Gather, capture, and collect mission-based requirements, in conjunction with the GMO, for geospatial data, geographic information systems software and hardware, and geospatial applications.

3. Provide one voting member on the DHS Geospatial Working Group (GWG) and one voting member for the DHS Geospatial Executive Steering Committee (GESC).

4. Perform mission-based analysis using geospatial data, geographic information systems software and hardware, and geospatial applications to perform essential functions to minimize loss of life and property from weapons of mass destruction, terrorist threats, major threats, major man-made accidents, and natural disasters.

F. **The DHS Geospatial Executive Steering Committee (GESC)** responsibilities include:

1. Oversee the GWG to include:

a. Validate the direction, goals, and recommendations of the Working Group.

b. Review the Department's GITA program requirements and plans.

c. Contribute guidance to and validate strategic objectives of the Working Group.

- d. Review and consolidate geospatial programs, plans, or initiatives, including costs and schedules.
 - e. Review proposed GITA procurement strategies for Enterprise products and/or services, as agreed upon by the GWG.
 2. Review and recommend technical criteria brought forward by the GWG, as appropriate for the Department. This includes GWG decisions associated with:
 - a. Technical standards and guidelines for the development, quality assurance, and distribution of geospatial data, including the handling, safeguarding, storage, and dissemination of classified and sensitive but unclassified (SBU) geospatial data and information.
 - b. Information systems design.
 - c. Tools and technology insertion, including assessment of emerging alternative technologies for the future development of the geospatial capabilities in the Department.
 3. Meeting quarterly, when called by the GESC chairperson, or by special request of the GWG chairperson.
 4. Review the GESC charter annually to keep current. Update the GESC charter via addenda, appendices, or attachments.
 5. Each Organization listed below may have multiple representatives on the GESC, but will have only one voting seat. The GESC will generate its own charter. The GESC membership consists of individuals who speak for the mission needs of each of the following organizations:
 - a. Border and Transportation Security (BTS) Directorate.
 - b. Emergency Preparedness and Response (EPR) Directorate.
 - c. Science and Technology (S & T) Directorate.
 - d. Information Analysis and Infrastructure Protection (IAIP) Directorate.
 - e. Management (MGMT) Directorate.
 - f. United States Coast Guard (USCG).

- g. United States Secret Service (USSS).
- h. United States Citizenship and Immigration Services (CIS).
- i. Office of State and Local Government Coordination and Protection (OSLGC).

6. Department OEs requesting to be added as members of the GESC shall make that request in writing to the GESC chairperson. GESC membership may be modified by a majority vote of the GESC voting membership.

7. Ratify the form, function, and membership of the GWG, validating and assuring appropriate representation of each member organization on the GWG.

G. **The GESC Chairperson** will prepare the meeting agenda with input from other committee members, the GIO, and the GWG, and will preside at all GESC meetings, serving as the Committee's facilitator. The chair of the GESC will assure that action items are recorded and distributed to committee members as soon as possible following each meeting. The chairing organization will provide administrative support to the Committee. The Geospatial Management Office will maintain an archive of all GESC meeting documentation.

H. **The DHS Geospatial Working Group (GWG)**.

1. The purpose of the GWG is to provide focus and oversight for DHS geospatial programs. The need to ensure integration of requirements, minimize duplication of programs, and ensure cost effectiveness – across the Department, is central to the work of the GWG. Finally, the Group will act as a strategic planning and “visioning” body to drive requirements for geospatial support – not for state-of-the-market/art, but for “over-the-horizon” technologies that can fundamentally impact Homeland Security. Responsibilities include:

- a. Address technical issues related to the research, production, distribution, and application of geospatial data and information, product specification and standards, and Enterprise geospatial information technology architecture.
- b. Coordinate requirements, develop, and monitor appropriate Enterprise geospatial programs, acquisitions, and funding plans, and address specific program issues.
- c. Review fiscal year Enterprise plans produced by the GWG. Significant technical issues will be presented to the GESC, with

recommendations.

d. Coordinate with the National Cyber Security Division to ensure the security of geospatial data, geographic information systems software and hardware and geospatial applications Department-wide.

2. Each Department OE may have multiple representatives to the GWG, but will have only one voting membership seat. Each OE listed below is authorized one voting membership seat. The GWG will generate its own charter. The GWG membership consists of senior geospatial program managers or senior technical subject matter experts of the following organizations:

a. Border and Transportation Security (BTS) Directorate.

- (1) Customs and Border Protection (CBP).
- (2) Transportation Security Administration (TSA).
- (3) Immigration and Customs Enforcement (ICE).
- (4) Federal Law Enforcement Training Center (FLETC).

b. Emergency Preparedness and Response (EP&R) Directorate.

- (1) US Fire Administration (USFA).
- (2) Response Division.
- (3) Recovery Division.
- (4) Mitigation Division.
- (5) Information Technology Services Division.

c. Information Analysis Infrastructure Protection (IAIP) Directorate.

- (1) Information Analysis (IA).
- (2) Infrastructure Protection (IP).
- (3) Homeland Security Operations Center (HSOC).

- d. Science & Technology (S&T) Directorate.
- e. Management (MGMT) Directorate.
- f. United States Coast Guard (USCG).
 - (1) Civil Engineering/ Systems Logistics.
 - (2) Marine Safety/Environmental Protection.
 - (3) Office of the CIO.
 - (4) Operations.
 - (5) Intelligence.
- g. Citizenship and Immigration Services (CIS).
- h. United States Secret Service (USSS).
- i. Office of State & Local Coordination (OSLC).

I. **The GWG chairperson** will prepare the meeting agenda with input from other working group members and the GIO, and will preside at all GWG meetings, serving as the working group's facilitator. The chair of the GWG will assure that action items are recorded and distributed to working group members as soon as possible following each meeting. The chairing organization will provide administrative support to the working group. GWG meetings will occur on a monthly basis and the committee may seek the input of representatives from commercial entities, the private sector, academic organizations, and various levels of government. The Geospatial Management Office will maintain an archive of all GWG meeting documentation.

VI. Policy & Procedures

A. **Policy.**

1. The primary objective of the GMO is to establish clear and concise policy direction for geospatial information and technology efforts. The desire is that all Department OEs have interoperable geospatial systems(s) to facilitate coordinated support for DHS' missions.
2. The DHS GMO will standardize Geospatial Information Technology policies across the Department to ensure Geospatial IT functional excellence.

B. **Procedures.**

1. To facilitate interoperable geospatial information systems for all Department OEs, the DHS GMO will:
 - a. Establish DHS policy on geospatial information and technology procurement strategy, operations, maintenance, and IT security for all geospatial information systems within DHS and its Organizational Elements.
 - b. Provide complete oversight of all geospatial information systems management, procurement, IT security and interoperability issues at DHS. The DHS GMO will ensure geospatial interoperability for all DHS entities by September 30, 2007.
 - c. Ensure that interoperability efforts for both hardware and software conform to System Development Life Cycle methods including milestones for testing.
 - d. Ensure geospatial information and technology interoperability and IT security between DHS and all other federal agencies.
 - e. Submit a single geospatial information and technology budget for all Department OEs, in accordance with the DHS IT Capital Planning process. (All expenditures for geospatial data, geographic information systems software and hardware, geospatial applications, personnel, equipment, maintenance, and IT security in support of the DHS geospatial information and technology efforts will be coordinated by and submitted through the DHS GMO.)
 - f. Review procurement requests for all geospatial information systems integrated into DHS to ensure compliance with DHS CIO policies and guidance, including IT security.

VII. Questions

Questions or concerns regarding this directive should be addressed to the Office of the DHS CIO, Geospatial Information Officer.

Attachments:

1. DHS Geospatial Executive Steering Committee Charter (TBP).
2. DHS Geospatial Working Group Charter (TBP).