

Army Regulation 115–13

**Climatic, Hydrological, and
Topographic Services**

Installation Geospatial Information and Services

**Headquarters
Department of the Army
Washington, DC
24 March 2017**

UNCLASSIFIED

SUMMARY of CHANGE

AR 115–13

Installation Geospatial Information and Services

This major revision, dated 24 March 2017—

- o Updates Installation Geospatial Information and Services program information (chap 1).
- o Updates responsibilities (chap 2).
- o Updates information on the following: data layer proponency, governance committee, data requirements, and training and reporting requirements (chap 3).

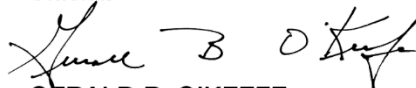
Effective 24 April 2017

**Climatic, Hydrological, and Topographic Services
Installation Geospatial Information and Services**

By Order of the Secretary of the Army:

MARK A. MILLEY
General, United States Army
Chief of Staff

Official:



GERALD B. O'KEEFE
Administrative Assistant to the
Secretary of the Army

Army accountable organizations listed or not. Specifically, this regulation is concerned with the acquisition, collection, management, storage, development, fielding, sustainment, training, production, visualization, and dissemination of geospatially-referenced installation information. For overarching Army policies, responsibilities, and procedures for an Army Geospatial Enterprise and for Geospatial Information and Services, see AR 115–11.

policy proponent. Refer to AR 25–30 for specific guidance.

Army internal control process. This regulation contains internal control provisions in accordance with AR 11–2 and identifies key internal controls that must be evaluated (see appendix B).

Supplementation. Supplementation of this regulation and establishment of command and local forms are prohibited without prior approval from the Assistant Chief of Staff for Installation Management (DAIM–OD), 600 Army Pentagon, Washington, DC 20310–0600.

Suggested improvements. Users are invited to send comments or suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to Office of the Assistant Chief of Staff for Installation Management (DAIM–OD), 600 Army Pentagon, Washington, DC 20310–0600.

Distribution. This publication is available in electronic media only and is intended for command levels A, B, C, D, and E for the Active Army, the Army National Guard/Army National Guard of the United States, the U.S. Army Reserve.

Proponent and exception authority. The proponent of this regulation is the Assistant Chief of Staff for Installation Management. The proponent has the authority to approve exceptions or waivers to this regulation that are consistent with controlling law and regulations. The proponent may delegate this approval authority, in writing, to a division chief within the proponent agency or its direct reporting unit or field operating agency, in the rank of colonel or the civilian equivalent. Activities may request a waiver to this regulation by providing justification that includes a full analysis of the expected benefits and must include formal review by the activity's senior legal officer. All waiver requests will be endorsed by the commander or senior leader of the requesting activity and forwarded through their higher headquarters to the

History. This publication is a major revision.

Summary. This regulation provides policies, responsibilities, and guidance for the Installation Geospatial Information and Services program within the Department of the Army. Statutory authority for this regulation is derived from Executive Order 12906, Office of Management and Budget Circular A–16, and DODI 8130.01.

Applicability. This regulation applies to the Active Army, the Army National Guard/Army National Guard of the United States, and the U.S. Army Reserve, unless otherwise stated. It also applies to the U.S. Army Corps of Engineers and all U.S.

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Glossary

Chapter 1 Introduction

1–1. Purpose

This regulation provides policies and procedures for creating, maintaining, managing, and delivering geospatial information and services in support of the installations, energy and environment (IE&E) domain. This regulation applies to all accountable organizations, whether or not they are listed below. The purpose of this regulation is to provide a standardized approach to installation geospatial information collection, creation, management, and distribution and to strengthen the reliability, accountability, and security of that data. The Army Installation Geospatial Information and Services (IGI&S) program, as part of the Office of the Assistant Secretary of Defense for Energy, Installations, and Environment (ASD (EI&E)), Defense Installation Spatial Data Infrastructure, must establish processes for geospatial information quality control, reporting, and distribution.

1–2. References

See appendix A.

1–3. Explanation of abbreviations and terms

See the glossary.

1–4. Responsibilities

See chapter 2 for responsibilities.

1–5. Installation Geospatial Information and Services program

a. The Army IGI&S program provides a unified approach for the creation, maintenance, management, and delivery of installation geospatial data, and was established to consolidate and focus Army efforts in utilizing that information, including its associated systems and resources, to improve accountability and increase the level of credibility of geospatial information and its originating sources. The Army IGI&S program constitutes the IE&E domain of the Army Geospatial Enterprise (AGE).

b. Situational awareness of the installation is critical in supporting the Army installation management mission. Factors such as day-to-day installation management operations, transformation initiatives, base realignment and closure, homeland security, and mission support mandate that the Army has access to the best possible contextual information about an installation's sites and their surroundings. Geospatial information—globally referenced digital representations of installation features, including road networks, building footprints, as-built drawings, utilities, cultural and natural resources and constraints, and surrounding areas—must be readily available in standardized formats and consolidated in an authoritative data source (ADS). This information is utilized by echelons up to Headquarters, Department of the Army (HQDA) offices to support installation management business processes, inform force protection, respond to encroachment issues, meet regulatory requirements, enable optimum use of facilities, and enhance installation, energy, and environmental management in order to support mission needs.

c. Usage of both Geographic Information System (GIS) and computer aided design (CAD) technologies are widespread across the Army and are heavily relied upon throughout the various Army IE&E and Deputy Chief of Staff (DCS), G–3/5/7 management activities. Geospatial information shows the precise relationship between the installation (for example, the natural, cultural, administrative, and infrastructure characteristics of an installation's sites and their surrounding area) and management activities. Installations use GIS and geospatially-enabled CAD for integrated planning, command and control, operations and management, emergency management and operations, emergency preparedness planning, analysis and mapping support, communications and briefing support, dig permitting, military training, land navigation training, the daily maintenance of infrastructure, as well as integration with business (tabular data) systems. HQDA uses GIS and geospatially-enabled CAD for re-stationing, asset life cycle management, mapping analysis and support, integration efforts with business systems, and impact analysis of policies. With the HQDA geospatial data repository, commanders, civilians, or any person with a common access card can view select installation GIS data, answer questions and solve practical problems.

d. The geospatial data created, edited, and maintained by those within the Army IE&E community can and will be made available to HQDA offices and departments outside the Army IE&E domain. Other stakeholders are beginning to utilize geospatially-enabled data to assist in reporting on the spatial complexity of their interests. All Army geospatial data should be considered Armywide and even Defense-wide asset. Specific geospatial data created, edited, and maintained by those

outside the Army IE&E community is often fundamental to fulfilling the Army IE&E mission, regardless of ownership or stewardship. Geospatial data created by other HQDA offices may or may not be governed by spatial data standards for facilities, infrastructure and environment (SDSFIE) or another data standard, but can and should be used to the benefit of the greater Army GIS community. The rebuilding or recreation of existing datasets originating from other Department of Defense (DOD) offices should be discouraged.

e. The HQDA geospatial data repository provides access to geospatial information, conforms to Office of the Secretary of Defense Business Enterprise Architecture (BEA) standards, integrates other ADSs such as the Army Installation Status Report (ISR) program, the Army Stationing and Installation Plan, the Real Property Planning and Analysis System, the Headquarters Installation Information System, the Headquarters Army Environmental System, and the Real Estate Management Information System for a visual representation of tabular data to allow the Office of the Assistant Chief of Staff for Installation Management (OACSIM) to meet the requirements of the DOD Network-Centric Data Strategy.

f. The HQDA geospatial data repository shall be certified with the Army Data Board as the Army's ADS for Army installation geospatial information within the IE&E domain.

Chapter 2 Responsibilities

2-1. Chief, National Guard Bureau

The Chief, National Guard Bureau, directly or by delegation to the Director, Army National Guard (ARNG), will—

- a.* Appoint an ARNG IGI&S program lead.
- b.* Resource an IGI&S capability for ARNG.
- c.* Enforce ARNG compliance to Federal and DOD standards related to information technology (IT), information assurance (IA), information security (IS), and GIS as applicable in the mixed state and Federal National Guard environment.
- d.* Maintain system compliance (GIS-NG) to Federal and DOD standards related to IT, IA, IS, and GIS as applicable in the mixed State and Federal National Guard environment.
- e.* Direct the IGI&S program lead, ARNG to—
 - (1) Represent ARNG on the IGI&S Functional Coordination Committee (FCC).
 - (2) Lead ARNG execution of IGI&S and provide coordination support to all ARNG installations.
 - (3) Respond to and implement OACSIM IGI&S policy and guidance.
 - (4) Reconcile ARNG GIS and IGI&S programmatic activities with the IGI&S program.
 - (5) Develop and submit the ARNG IGI&S program objective memorandum (POM).
 - (6) Develop training programs and standard operating procedure (SOP) documentation for geospatial data collection and map production.
 - (7) Recommend policy and standards to the OACSIM IGI&S program manager.
 - (8) Ensure IGI&S program measures are reported on a quarterly basis via the ISR-Services (Service 425) data input module.
 - (9) Serve as command proponent for ARNG geospatial data.
 - (10) Consolidate and deliver all SDSFIE Army adaptation geospatial data quarterly as directed in the annual Geospatial Data Collection, Development, and Management Memoranda for upload to the HQDA geospatial data repository.
 - (11) Procure imagery, GIS support, and other activities in accordance with IGI&S program strategy.
 - (12) Verify IGI&S investments are reported by IGI&S managers to the Army Portfolio Management Solution (APMS) quarterly.
 - (13) Establish, maintain, and manage ARNG IGI&S guidance and program initiatives.
- f.* Coordinate with the State and/or Territory Adjutant Generals, ARNG to—
 - (1) Appoint an IGI&S manager for each state and/or territory.
 - (2) Ensure state's directorates implement Army IGI&S policy, standards, and guidance.
 - (3) Establish protocols for handling their respective geospatial information and ensuring the appropriate protection of installation geospatial information to best satisfy their assigned mission in accordance with this regulation. At a minimum, the protocols established will comply with the IGI&S data security and classification guidance.
 - (4) Ensure IGI&S data is reconciled with the real property inventory (RPI).

2-2. Deputy Chief of Staff, G-3/5/7

The DCS, G-3/5/7 will ensure the DCS, G-37/TR Training Simulations Division—

- a.* Appoints a sustainable range program (SRP) GIS program lead.
- b.* Resources a SRP GIS capability for DCS G-37/TR.
- c.* Enforces DCS G-37/TR compliance to Federal and DOD standards related to IT, IA, IS, and GIS.

- d.* Directs the SRP GIS lead, DCS G-37/TR Training Simulations Division to—
- (1) Represent DCS G-37/TR on the IGI&S FCC.
 - (2) Lead the DCS G-37/TR Training Simulations Division's execution of IGI&S and provide coordination support to all SRP activities.
 - (3) Respond to and implement OACSIM IGI&S policy and guidance.
 - (4) Reconcile SRP GIS and IGI&S programmatic activities with the IGI&S program.
 - (5) Develop and execute the DCS G-37/TR Training Simulations Division SRP GIS POM.
 - (6) Develop training programs and SOP documentation for geospatial data collection and map production.
 - (7) Recommend policy and standards to the OACSIM IGI&S program manager.
 - (8) Ensure IGI&S program measures are reported on a quarterly basis via the ISR-Services (Service 903) data input module.
 - (9) Serve as command proponent for SRP GIS data geospatial data.
 - (10) Serve as data layer proponent lead for military training and range geospatial data layers or delegate to an appropriate DCS, G-37/TR program manager to identify program execution priorities, program, validate, and defend resources in the planning, programming, budgeting, and execution process in support of the military range and training geospatial data layers.
 - (11) Consolidate and deliver all SDSFIE Army adaptation geospatial data quarterly as directed in the annual Geospatial Data Collection, Development, and Management Memoranda for upload to the HQDA geospatial data repository.
 - (12) Procure imagery, GIS support, and other activities in accordance with IGI&S program strategy.
 - (13) Report DCS G-37/TR Training Simulations Division SRP GIS investments to the APMS quarterly.
 - (14) Manage SRP GIS program requirements as stated in AR 350-19.

2-3. Chief, Army Reserve

The Chief, Army Reserve will—

- a.* Appoint a U.S. Army Reserve (USAR) IGI&S program lead.
- b.* Resource an IGI&S capability for USAR.
- c.* Enforce USAR compliance to Federal and DOD standards related to IT, IA, IS, and GIS.
- d.* Direct the IGI&S program lead, USAR to—
 - (1) Represent USAR on the IGI&S FCC.
 - (2) Lead USAR execution of IGI&S and provide coordination support to all USAR installations.
 - (3) Respond to and implement OACSIM IGI&S policy and guidance.
 - (4) Reconcile USAR GIS and IGI&S programmatic activities with the IGI&S program.
 - (5) Develop and submit the USAR IGI&S POM.
 - (6) Develop training programs and SOP documentation for geospatial data collection and map production.
 - (7) Recommend policy and standards to the OACSIM IGI&S program manager.
 - (8) Ensure IGI&S program measures are reported on a quarterly basis via the ISR-Services (Service 425) data input module.
 - (9) Serve as command proponent for USAR geospatial data.
 - (10) Consolidate and deliver all SDSFIE Army adaptation geospatial data quarterly as directed in the annual Geospatial Data Collection, Development, and Management Memoranda for upload to the HQDA geospatial data repository.
 - (11) Procure imagery, GIS support, and other activities in accordance with IGI&S program strategy.
 - (12) Verify IGI&S investments are reported by IGI&S managers to the APMS quarterly.
- e.* Direct the commanders of USAR Regional Support Commands and USAR Garrisons to—
 - (1) Appoint an IGI&S manager at each installation.
 - (2) Ensure installation directorates execute Army IGI&S policy, standards, and guidance.
 - (3) Establish protocols for handling their respective geospatial information and ensuring the appropriate protection of installation geospatial information to best satisfy their assigned mission in accordance with this regulation. At a minimum, the protocols established will comply with the IGI&S data security and classification guidance.
 - (4) Ensure IGI&S data is reconciled with the RPI.
 - (5) Ensure all applicable Army Common Installation Picture (CIP) geospatial data is available in the HQDA geospatial data repository.

2-4. Chief of Engineers

The COE, as the Commanding General (CG), U.S. Army Corps of Engineers (USACE)—

- a.* Appoints a USACE IGI&S program lead.

- b. Enforces USACE compliance of geospatially referenced installation information to Federal and DOD standards related to IT, IA, IS, CAD, Building Information and Modeling, and GIS.
- c. Directs the IGI&S program lead, USACE to—
 - (1) Represent USACE on the IGI&S FCC.
 - (2) Execute IGI&S support to installations in accordance with the OACSIM IGI&S policy and guidance.
 - (3) Develop and execute the USACE IGI&S POM.
 - (4) Develop training programs and SOP documentation for geospatial data collection and map production.
 - (5) Recommend policy and standards to the OACSIM IGI&S program manager.
 - (6) Serve as command proponent for USACE geospatial data.
 - (7) Serve as data layer proponent lead for applicable geospatial data layers or delegate to an appropriate program manager to identify program execution priorities, program, validate, and defend resources in the planning, programming, budgeting, and execution process in support of applicable geospatial data layers.
 - (8) Deliver data for all geospatial data layers of USACE proponentcy.
 - (9) Procure imagery, GIS support, and other activities in accordance with IGI&S program strategy.
 - (10) Support OACSIM IGI&S program remote sensing and imagery requests for installations through USACE's Army Geospatial Center Imagery Office.
 - (11) Ensure USACE IGI&S systems and applications are compliant with OACSIM IGI&S program policy.

2–5. Assistant Chief of Staff for Installation Management

The Assistant Chief of Staff for Installation Management (ACSIM) will serve as the Army proponent for IGI&S polices, programs, and requirements. The ACSIM will provide general guidance for creation, maintenance, and management of geospatial information and services to support installation management. The ACSIM will comply with or delegate all roles and responsibilities outlined in AR 115–11.

a. *Deputy Assistant Chief of Staff for Installation Management.* The DACSIM serves as the Army proponent for the IGI&S program policies and requirements, on behalf of the ACSIM. The DACSIM will—

- (1) Appoint a program manager for the OACSIM IGI&S program.
- (2) Resource the Army IGI&S program.
- (3) Enforce the compliance of Federal and DOD standards related to IT, cybersecurity, IS, and GIS.
- (4) Serve as the designated approving authority for the HQDA geospatial data repository.
- (5) Appoint data layer proponent leads for operations and installation services geospatial data layers.

b. *Director, Operations, Office of the Assistant Chief of Staff for Installation Management.* The Director, Operations, OACSIM will—

- (1) Support IGI&S operations requirements including, but not limited to, facilities, planning, operations, and construction.
- (2) Serve as the HQDA proponent for IGI&S responsible for specifying the HQDA geospatial data repository functional and technical requirements, execution, and overall facilitation.
- (3) Serve as data layer proponent lead for operations geospatial data layers or delegate to an appropriate OACSIM Operation Directorate program manager.

c. *Installation Geospatial Information and Services program manager, Office of the Assistant Chief of Staff for Installation Management.* The OACSIM IGI&S program manager will—

- (1) Develop Army IGI&S program policy and guidance documentation.
- (2) Manage Army IGI&S program initiatives.
- (3) Develop and maintain the Army IGI&S strategic guidance.
- (4) Establish and chair the IGI&S FCC.
- (5) Participate in enterprise governance forums including, but not limited to, the AGE Configuration Control Board; the Real Property and Installation Life cycle Management Investment Review Board; the Army Installations, Energy and Environment Domain Governance Board; and the IGI&S Governance Group.
- (6) Ensure IGI&S program integration with the AGE in coordination with the Army Geospatial Information Officer.
- (7) Identify processes and procedures for exchanging installation geospatial information with other Services or Army components under a memorandum of agreement, memorandum of understanding, or inter-Service, interdepartmental, and system interface agreement.
- (8) Enforce the compliance of Federal and DOD standards related to IGI&S IT, IA, information security (IS), and GIS.
- (9) Serve as the Army office of primary responsibility for IE&E geospatial IS policy.
- (10) Facilitate communication between data layer proponent organizations and IGI&S technical personnel on geospatial data representation, security, and usage issues.

(11) Define the IGI&S data layer proponentcy, which outlines responsibility for individual geospatial data layers, in conjunction with the IGI&S FCC.

(12) Serve as data layer proponent lead for operations geospatial data layers in identifying program execution priorities, program, validate, and defend resources in the planning, programming, budgeting and execution process, oversee and allocate program resources to commands and support agencies in support of the operations geospatial data layers.

(13) Analyze current IGI&S applications and functions, collect and consolidate functional and technical requirements from stakeholders, and determine possible overlaps, data, and cost-sharing opportunities.

(14) Develop and maintain the list of Army CIP geospatial data layers in collaboration with the IGI&S FCC.

(15) Establish and review, in conjunction with the IGI&S FCC, IGI&S data standards and metrics annually with change requirements being identified, prioritized, reviewed, adopted, and then incorporated into the ISR–Services data collection program.

(16) Establish and maintain system requirements specification and SOP documentation for the HQDA geospatial data repository.

(17) Integrate other ADS as required by stakeholders and data layer proponent organizations.

(18) Develop and submit the Army’s IGI&S POM.

(19) Procure centralized commercial off-the-shelf GIS and CAD software for implementation with the HQDA geospatial data repository and for utilization by the Army IE&E domain.

(20) Develop and maintain an imagery acquisition plan to reconcile existing inventory and imagery requirements.

(21) Develop and maintain annual Geospatial Data Collection, Development, and Management Memoranda.

(22) Act as the focal point for distribution of Army installation data to DOD and non-governmental agencies.

(23) Share IE&E geospatial data when requested for multiple installations in accordance with published guidance and applicable state and Federal laws except where subject to a Freedom of Information Act (FOIA) exemption.

(24) Develop a centralized IGI&S programmatic training plan (for example, IGI&S Training and Workshop) and ensure training is coordinated by IGI&S program leads annually.

(25) Ensure IGI&S program internal controls are being coordinated, reviewed, and published annually.

(26) Establish and maintain a governance process for the management of the HQDA geospatial data repository.

(27) Ensure IGI&S data in the HQDA geospatial data repository is available for use by accredited, authorized users within Army elements at all levels of the organization and its components.

(28) Serve as the APMS IGI&S portfolio manager and the point of contact for the HQDA geospatial data repository.

d. Director, Information Technology, Office of the Assistant Chief of Staff for Installation Management. The Director, Information Technology, OACSIM will—

(1) Support IGI&S IT requirements.

(2) Support compliance with Federal and DOD standards related to IT, IA, IS, and GIS.

e. Director, Installation Services, Office of the Assistant Chief of Staff for Installation Management. The Director, Installation Services, OACSIM will—

(1) Support IGI&S installation services’ requirements for environmental clean-up, compliance, and conservation concerns, and also in support of the Defense Environmental Programs Annual Report to Congress, and environmental liabilities.

(2) Serve as data layer proponent lead for installation services geospatial data layers or delegate to an appropriate OACSIM Installation Services Directorate program manager to identify program execution priorities, program, validate, and defend resources in the planning, programming, budgeting and execution process in support of the installation services, including environmental, geospatial data layers.

f. Data layer proponent leads. The data layer proponent lead is HQDA level and is identified by the data layer proponent organization. Data layer proponent leads are responsible for ensuring compliance with IGI&S program and respective organization strategies. These include establishing clear guidelines to fund data acquisition, adhering to standards that ensure interoperability, and requiring data to be available in the HQDA geospatial data repository. Data layer proponent leads will—

(1) Develop and maintain respective quality assurance plans (QAPs) on a yearly basis for their designated geospatial data layers including participation in the QAP annual review process.

(2) Develop policies and guidelines associated with their designated geospatial data layers in conjunction with the OACSIM IGI&S program manager.

(3) Identify and develop restriction level guidance for each of their designated geospatial data layers.

(4) Determine geospatial data collection priorities.

(5) Develop, annually update, and obtain approval from the IGI&S FCC a strategy for geospatial data collection, development, management, and maintenance.

2–6. Commanding General, U.S. Army Installation Management Command

The CG, IMCOM will—

- a.* Appoint an IMCOM IGI&S program lead.
- b.* Resource an IGI&S capability for IMCOM.
- c.* Enforce IMCOM compliance to Federal and DOD standards related to IT, IA, IS, and GIS.
- d.* Direct the IGI&S program lead, IMCOM to—
 - (1) Represent IMCOM on the IGI&S FCC.
 - (2) Lead IMCOM execution of IGI&S and provide coordination support to all IMCOM installations.
 - (3) Respond to and implement OACSIM IGI&S policy and guidance.
 - (4) Reconcile IMCOM GIS and IGI&S programmatic activities with the IGI&S program.
 - (5) Develop and submit the IMCOM IGI&S POM.
 - (6) Develop training programs and SOP documentation for geospatial data collection and map production.
 - (7) Recommend policy and standards to the OACSIM IGI&S program manager.
 - (8) Ensure IGI&S program measures are reported on a quarterly basis via the ISR–Services (Service 425) data input module.
 - (9) Serve as command proponent for IMCOM geospatial data.
 - (10) Consolidate and deliver all SDSFIE Army adaptation geospatial data quarterly as directed in the annual Geospatial Data Collection, Development, and Management Memoranda for upload to the HQDA geospatial data repository.
 - (11) Procure imagery, GIS support, and other activities in accordance with IGI&S program strategy.
 - (12) Verify IGI&S investments are reported by IGI&S managers to the APMS quarterly.

2–7. Commanding General, U.S. Army Materiel Command

The CG, AMC will—

- a.* Appoint a AMC IGI&S program lead.
- b.* Resource an IGI&S capability for AMC.
- c.* Enforce AMC compliance to Federal and DOD standards related to IT, IA, IS, and GIS.
- d.* Direct the IGI&S program lead, AMC to—
 - (1) Represent AMC on the IGI&S FCC.
 - (2) Lead AMC execution of IGI&S and provide coordination support to all AMC installations.
 - (3) Respond to and implement OACSIM IGI&S policy and guidance.
 - (4) Reconcile AMC GIS and IGI&S programmatic activities with the IGI&S program.
 - (5) Develop and submit the AMC IGI&S POM.
 - (6) Develop training programs and SOP documentation for geospatial data collection and map production.
 - (7) Recommend policy and standards to the OACSIM IGI&S program manager.
 - (8) Ensure IGI&S program measures are reported on a quarterly basis via the ISR–Services (Service 425) data input module.
 - (9) Serve as command proponent for AMC geospatial data.
 - (10) Consolidate and deliver all SDSFIE Army adaptation geospatial data quarterly as directed in the annual Geospatial Data Collection, Development, and Management Memoranda for upload to the HQDA geospatial data repository.
 - (11) Procure imagery, GIS support, and other activities in accordance with IGI&S program strategy.
 - (12) Verify IGI&S investments are reported by IGI&S managers to the APMS quarterly.

2–8. Commanders of Army commands, Army service component commands, and direct reporting units

The commanders of Army commands, Army service component commands, and direct reporting units will provide oversight of the IGI&S activities at their respective installation and will—

- a.* Appoint an IGI&S manager at each installation. IGI&S managers shall be Government employees or shall be an appointed Government contractor.
- b.* Ensure installation directorates execute Army IGI&S policy, standards, and guidance.
- c.* Establish protocols for handling their respective geospatial information and ensuring the appropriate protection of installation geospatial information to best satisfy their assigned mission in accordance with this regulation. At a minimum, the protocols established will comply with the IGI&S data security and classification guidance.
- d.* Ensure IGI&S data is reconciled with the RPI.
- e.* Direct IGI&S managers to—
 - (1) Comply with Federal and DOD standards related to IT, IA, IS, and GIS.
 - (2) Develop and maintain all applicable SDSFIE Army adaptation geospatial data and metadata for their installation.

(3) Document Army CIP geospatial data layers by working with respective functional subject matter experts (SMEs), and those that have institutional knowledge of ground conditions, to verify the applicability of the Army CIP for their installation.

(4) Ensure all geospatial data layers are comprehensive, spatially accurate, and compliant with QAPs.

(5) Deliver all SDSFIE Army adaptation installation geospatial data and associated metadata to the HQDA geospatial data repository in compliance with applicable IGI&S program lead guidance.

(6) Ensure installation geospatial IT investments are updated quarterly in APMS in accordance with AR 25–1, Appendix B, Army Portfolio Management Solution Registration Business Rules.

(7) Share respective installation geospatial data in accordance with published guidance and applicable State and Federal laws except where subject to a FOIA exemption.

(8) Train IGI&S staff at their locations on QAP compliance, data management standards, attribution standards and GIS data security, and/or restriction measures.

(9) Recommend policy and standards to the IGI&S FCC through their appropriate IGI&S program lead.

(10) Report imagery acquisition requirements to OACSIM IGI&S in order to promote cost-sharing across directorates.

(11) Report IGI&S program measures on a quarterly basis via the ISR–Services (Service 425) data input module.

f. Direct Data Stewards to—

(1) Validate geospatial data layers for compliance with the respective temporal representation guidance in the QAPs.

(2) Complete quality control of each geospatial data layer and associated metadata.

(3) Submit the data to the functional SME for review of completeness and accuracy.

(4) Submit the data to the IGI&S manager for review.

(5) Conduct reviews of QAPs for geospatial data layers under the data steward’s responsibility.

Chapter 3

Installation Geospatial Information and Services

Section I

General

3–1. Installation Geospatial Information and Services requirement

IGI&S is a core capability to support the business functions of the IE&E domain. IGI&S is critical to providing effective installation management, improving stewardship of natural and cultural resources, protecting the environment and supporting the training of operating forces. Geospatial information must be readily available to support the Army mission. As such, geospatial information must be collected, standardized, managed as an asset, and made available in an effective and efficient manner to support functional missions.

3–2. Proponency

a. IGI&S geospatial data must be maintained in accordance with acceptance criteria defined by the data layer proponents in approved QAPs.

b. The Army IGI&S data layer proponency designates a responsible data layer proponent organization for each geospatial data layer.

c. Disputes between data layer proponents leads will be resolved by the IGI&S FCC.

Section II

Governance

3–3. Governance

The IGI&S FCC serves as the senior leadership authority for the collaborative oversight of IGI&S program initiatives in support of the Army IE&E domain, in accordance with existing law, statute, and policy. The IGI&S FCC provides an effective governance structure for setting priorities, coordinating geospatial efforts/initiatives, and communicating how geospatial data and technologies are used to meet the installation management mission. The IGI&S FCC will—

a. Identify, prioritize, reconcile, and provide proponent representation across IE&E business areas and directly related stakeholder communities and customers.

b. Provide programmatic oversight for the identification, prioritization, execution, and coordination of IGI&S initiatives.

- c. Recommend IGI&S applications, tools, data, and other requirements, including cost-sharing opportunities, for each business community.
- d. Recommend, develop, and promote quality assurance standards and methods for the creation, use, and sharing of IGI&S data.
- e. Coordinate and recommend data development resourcing and implementation strategies.
- f. Review and approve data layer proponent lead strategies for geospatial data collection, development, management, and maintenance.
- g. Assist with the development and maintenance of a set of geospatial data layers that define the SDSFIE Army adaptation.
- h. Refine existing Army and DOD guidance and propose new guidance where existing policy is insufficient or new requirements emerge.
- i. Provide feedback and input about the implementation of IGI&S in each respective organization and report on behalf of the organization to the IGI&S program.

3–4. Funding

- a. The OACSIM IGI&S program manager utilizes the Army POM programming process to develop and submit resource requirements annually to meet HQDA IGI&S program requirements.
- b. Data layer proponents identify program execution priorities; program, validate, and defend resources in the planning, programming, budgeting, and execution process; and oversee and allocate program resources to commands and support agencies in support of applicable geospatial data layers.
- c. Each IGI&S program lead, where applicable, develops and submits an IGI&S POM for their respective command organization.

3–5. Policy

Each IGI&S program lead will undertake a yearly review of existing policy, guidance, and ARs and report comments and recommendations to the OACSIM IGI&S program manager to ensure policy is kept current and relevant.

3–6. Authoritative data source

In the IGI&S community, authoritative data providers are the data stewards at all levels who are responsible for collecting and maintaining information in support of Army installation management. Army IGI&S data must be validated for quality and accuracy by data stewards and functional SMEs. IGI&S managers must ensure that their respective installation geospatial data is compliant with standards set forth in QAPs.

- a. The HQDA geospatial data repository shall be certified with the Army Data Board as the Army’s ADS for Army installation geospatial information within the IE&E domain.
- b. The HQDA geospatial data repository will serve as the Army’s geospatial data library and as a portal for dissemination of Army IGI&S information.
- c. The unique, authoritative data for each geospatial data item (feature) is geospatial location (for example, latitude and longitude).
- d. Where applicable, feature level attribution must be properly obtained from its appropriate ADS (for example, Headquarters Installation Information System).

Section III

Data Requirements

3–7. Data availability

As stated in DODI 8130.01, each Military Service will provide for the creation, maintenance, storage, and secure sharing of CIP data. All SDSFIE Army adaptation geospatial data will be made available to the HQDA geospatial data repository in one of the following ways at the discretion of the IGI&S program lead:

- a. Installations manage and maintain their geospatial data locally and submit data to their IGI&S program lead quarterly.
- b. Installations manage and maintain their geospatial data locally and upload data to the HQDA geospatial data repository quarterly.
- c. IGI&S program leads will consolidate and deliver all SDSFIE Army adaptation geospatial data quarterly as directed in the annual Geospatial Data Collection, Development, and Management Memoranda for upload to the HQDA geospatial data repository.

3–8. Data standards

The SDSFIE is the set of DOD standards for installation geospatial data. It is a broad set of standards that cover business mission areas across the IE&E domain.

- a.* The SDSFIE Army adaptation serves as the overall geospatial database standard for the Army IE&E domain.
- b.* The SDSFIE Army adaptation allows for the creation of subordinate adaptations to meet the requirements of Army IGI&S stakeholder organizations. Subordinate adaptations must comply with Army and DOD adaptation rules.
- c.* To ensure interoperability across the IE&E domain, the IGI&S program will submit the SDSFIE Army adaptation to the Defense Installations Spatial Data Infrastructure program for approval as directed by DODI 8130.01.
- d.* Proposed changes to the SDSFIE Army adaptation will be submitted through the appropriate IGI&S program lead for coordination with the OACSIM IGI&S program manager.
- e.* The applicable version of the SDSFIE Army adaptation will be based on IGI&S program guidance, as required.

3–9. Data quality

- a.* All IGI&S geospatial data layers will be created and maintained to a standard defined by the appropriate data layer proponent organization and documented in a QAP to ensure the data is consistent, accurate, credible, and useful for installation management and mission support.
- b.* IGI&S geospatial data may be created and maintained to specific requirements defined at the installation or site level as long as criteria defined in the respective QAP are met.
- c.* QAPs identify the appropriate ADS to link geospatial features with Army business systems.
- d.* IGI&S geospatial data may be collected outside of the installation's site boundary or the boundary of land held by the installation if required according to mission requirements.

3–10. Data sources and data source selection

- a.* Acceptable data sources are documented in each geospatial data layer's QAP.
- b.* Functional SMEs at installations are responsible for identifying the most appropriate data sources. The organizations holding the most appropriate data source(s) may vary by geospatial data layer, command, and installation.

3–11. Imagery

- a.* Installation imagery represents ground conditions of the installation and will be refreshed every five years at a minimum.
- b.* Installations that have a higher imagery refresh frequency requirement as a result of specific changes to ground conditions may request targeted imagery updates through their IGI&S program lead.
- c.* The IGI&S program will establish and maintain an imagery refresh plan to reconcile existing inventory and imagery requirements.
- d.* New imagery will be acquired in accordance with the Army IGI&S Program Imagery Refresh Plan.
- e.* Installations may also require light detection and ranging, multi-spectral or other types of remotely sensed data. These requirements should be coordinated with the respective IGI&S program lead.

3–12. Metadata

- a.* All Army IGI&S program metadata requirements are outlined in the Army IGI&S program metadata guidance and the Army IGI&S program QAP general guidance.
- b.* All quarterly submitted geospatial data will be accompanied by corresponding up-to-date metadata.
- c.* All metadata will be compliant with the Army IGI&S program metadata requirements.

3–13. Data sharing

- a.* Geospatial information will be shared across DOD functional and organizational lines and with other Federal, state, and local governments in accordance with applicable Federal and state laws, except where subject to a FOIA exemption.
- b.* In accordance with the National Spatial Data Infrastructure, installations will ensure all geospatial (GIS and geospatially-enabled CAD) data is network accessible and available for use by all installation functions to avoid wasteful duplication and promote effective and economical management of resources, see Executive Order 12906.
- c.* All installation and virtual installation geospatial information is Army data (see DA Pam 25–403).
- d.* Geospatial information used in installation management business processes is Army record material. All IE&E geospatial information outside of the HQDA geospatial data repository is designated as a non-record copy. A quarterly snapshot of the HQDA geospatial data repository serves as the official record copy for Army IE&E domain geospatial information (see DA Pam 25–403).

e. The leveraged use of geospatial information facilitates the streamlining of business operations in line with Army Knowledge Management and DOD BEA directives and corresponds with the DOD Information Sharing Strategy.

f. Release of installation geospatial information will be accompanied by a non-disclosure statement or agreement to ensure the receiving party understands and abides by the limitation and use of the specific geospatial information.

g. Access to installation geospatial information at the installation level, exclusive of the SDSFIE Army adaptation geospatial data layers held in the HQDA geospatial data repository, shall be managed by the respective installation IGI&S manager. Data layer proponent leads will recommend restriction level guidance for each of their designated geospatial data layers. IGI&S managers will use that guidance in combination with input from the IGI&S FCC and installation level functional SMEs to determine installation user access in accordance with DOD and Army geospatial data sharing policies.

h. Access to installation geospatial information at the headquarters level, exclusive of the Army CIP geospatial data layers held in the HQDA geospatial data repository, shall be managed by the OACSIM IGI&S program manager. Data layer proponent leads will recommend restriction level guidance for each of their designated geospatial data layers. The OACSIM IGI&S program manager will use that guidance in combination with input from the IGI&S FCC and headquarters level functional SMEs to determine user access.

3–14. Data security

Geospatial information must be protected using the Principle of Least Privilege to actively guard geospatial information from compromise, unauthorized use or access, and manipulation. The Principle of Least Privilege requires a user be given no more privilege than necessary to perform a job (see AR 25–2). The need to protect sensitive geospatial information from inappropriate disclosure must be carefully considered, on a case-by-case basis, together with the benefits that result from the efficient exchange of that information.

a. The HQDA geospatial data repository data will be readily accessible, available, and secure for all authorized users. Authorized users are people, processes, and systems that have privileges based on a demonstrated need-to-know.

b. The IGI&S program utilizes the Army Information Assurance program (see AR 25–2) guidance to protect information stored, processed, accessed, or transmitted by the HQDA geospatial data repository, and is established to increase the level of trust of this information and of its originating sources.

c. Release determinations regarding IGI&S geospatial information must be in accordance with the FOIA. The HQDA geospatial data repository is intended to be unclassified and houses data which is unclassified and/or for official use only (FOUO). Unclassified information may be exempt from public disclosure in accordance with the FOIA.

d. Installation geospatial information in the HQDA geospatial data repository is designated and will be marked FOUO.

e. All IGI&S stakeholders must be trusted agents of the Army who have agreed to use Army computers, systems, and networks responsibly when they signed the Computer User Agreement that gave them access to Army information systems. Refer to the Army FOIA program (see AR 25–55).

Section IV

Training and Reporting

3–15. Installation Geospatial Information and Services programmatic training

The OACSIM will establish basic IGI&S programmatic training requirements.

a. The OACSIM IGI&S program manager will establish an IGI&S training plan. The IGI&S training plan will include opportunities for Web-based and/or annual classroom training.

b. All IGI&S managers and data stewards must complete an IGI&S course of instruction equal to the duties assigned to them.

c. Army funding may be authorized to support government civilian travel and related expenses to IGI&S training and workshops.

d. Army funding may be authorized for contractors to participate in IGI&S training and workshops in accordance with the terms of their contracts.

3–16. Program measures

The purpose of ISR–Services is to evaluate the cost and quality of service delivery performance for installation support services provided at each Army installation. These components assess cost, quantity, and quality of services provided to organizations and individuals associated with Army sites (see AR 210–14).

a. The IGI&S program established measures to assess the status of IGI&S data, assets, and management functions at installations, and to evaluate support to installation management business objectives.

b. Installations are required to collect, compile, and report IGI&S program measures on a quarterly basis via the ISR–Services (Service 425) data input module. Compiled IGI&S measures will be used to identify installation IGI&S capability shortfalls and to support the allocation of IGI&S investment resources.

c. Government-owned contractor lead Army sites that do not report metrics in ISR will manually respond to the IGI&S program measures in accordance with AMC IGI&S lead guidance.

3–17. Geographic Information System information technology investments

Geospatial investments must support the Army’s strategic goals, mission, and transformation strategies.

a. All planned geospatial IT investments in any year using non-IT programmed funds that exceed dollar thresholds stated in AR 25–1 and DA Pam 25–1–1 require a chief information officer waiver.

b. Geospatial IT investments that are to be reported include the following:

(1) Hardware and software purchases, including life cycle hardware and/or software upgrades, replacement, and maintenance.

(2) Contracted IT support including system development and operations and maintenance.

(3) If a contractor provides any IT support services as part of a larger contract, only the percentage of costs associated with performing these functions need to be reported as a geospatial IT investment.

c. Investments that are not considered geospatial IT investments and are not to be reported include the following:

(1) Civilian salaries regardless of the work performed related to geospatial IT.

(2) Geospatial data collection or data maintenance costs supported by contracted or civilian staff.

(3) Geospatial data purchases or data licensing fees of any kind, such as commercial airborne, satellite imagery or commercially-developed imagery, Lidar, raster or vector geospatial data.

(4) Geospatial data collection and/or processing software obtained by contracted or civilian staff that is provided by the Army IGI&S program or an Army command.

(5) Geospatial devices such as topographic survey or global positioning hand-held receivers and equipment.

(6) The acquisition, maintenance, and use of unmanned aerial aircraft and associated peripherals for imagery acquisition.

(7) Labor costs to run applications, perform analysis, and/or augment data sets.

Appendix A

References

Section I

Required Publications

Executive Order 12906

Coordinating Geographic Data Acquisition and Access: The National Spatial Data Infrastructure (Cited on title page.)

Section II

Related Publications

AR 5–22

The Army Force Modernization Proponent System

AR 10–87

Army Commands, Army Service Component Commands, and Direct Reporting Units

AR 11–2

Managers' Internal Control Program

AR 25–1

Information Management Army Information Technology

AR 25–2

Information Assurance

AR 25–30

Army Publishing Program

AR 25–55

The Department of the Army Freedom of Information Act Program

AR 115–11

Geospatial Information and Services

AR 200–1

Environmental Protection and Enhancement

AR 210–14

Installation Status Report Program

AR 210–20

Real Property Master Planning for Army Installations

AR 350–19

The Army Sustainable Range Program

AR 380–5

Department of the Army Information Security Program

AR 525–26

Infrastructure Risk Management (Army)

DA Pam 25–1–1

Army Information Technology Implementation Instructions

DA Pam 25–403

Guide to Recordkeeping in the Army

DOD Memorandum

DOD Information Sharing Strategy, dated 4 May 2007 (Available at <http://dodcio.defense.gov/>.)

DOD 5500.07–R

The Joint Ethics Regulation (JER)

DODD 3020.40

Mission Assurance (MA)

DODD 3200.15

Sustaining Access to the Live Training and Test Domain

DODD 4715.11

Environmental and Explosives Safety Management on Operational Ranges Within the United States

DODD 4715.12

Environmental and Explosives Safety Management on Operational Ranges Outside the United States

DODD 5105.60

National Geospatial-Intelligence Agency (NGA)

DODD 8115.01

Information Technology Portfolio Management

DODI 3305.10

Geospatial-Intelligence (GEOINT) Training

DODI 4165.14

Real Property Inventory (RPI) and Forecasting

DODI 5000.56

Programming Geospatial-Intelligence (GEOINT), Geospatial Information and Services (GI&S), and Geodesy Requirements for Developing Systems

DODI 5030.59

National Geospatial-Intelligence Agency (NGA) Limited Distribution Geospatial Intelligence (GEOINT)

DODI 5210.83

DOD Unclassified Controlled Nuclear Information (UCNI)

DODI 8130.01

Installation Geospatial Information and Services (IGI&S)

DODI 8320.02

Sharing Data, Information, and Technology (IT) Services in the Department of Defense

DODI 8320.03

Unique Identification (UID) Standards for Supporting DOD Net-Centric Operations

FGDC-STD-001-1998

Content Standard for Digital Geospatial Metadata (version 2.0) (Available at <https://www.fgdc.gov/>.)

FGDC-STD-007.3-1998

Geospatial Positioning Accuracy Standards, Part 3: National Standard for Spatial Data Accuracy (Available at <https://www.fgdc.gov/>.)

JP 1-02

Department of Defense Dictionary of Military and Associated Terms (Available at <http://www.dtic.mil/>.)

JP 2-03

Geospatial Intelligence Support in Joint Operations (Available at <http://www.dtic.mil/>.)

OMB Circular A-16

Coordination of Geographic Information and Related Spatial Data Activities (Available at <https://www.fgdc.gov/>.)

5 USC 552

The Freedom of Information Act

6 USC 482

Homeland Security Act of 2002

10 USC 2222

Defense business systems: business process reengineering; enterprise architecture; management

Section III

Prescribed Forms

This section contains no entries.

Section IV

Referenced Forms

DA Forms are available on the Army Publishing Directorate Web site (<http://www.apd.army.mil>).

DA Form 11-2

Internal Control Evaluation Certification

DA Form 2028

Recommended Changes to Publications and Blank Forms

Appendix B

Internal Control Evaluation

B-1. Function

The function covered by this checklist is the Army IGI&S program.

B-2. Purpose

The checklist used when evaluating the key internal controls listed below. It is not intended to cover all controls.

B-3. Instruction

Answers must be based on the actual testing of key internal controls (for example, document analysis, direct observation, sampling, simulation). Answers that indicate deficiencies must be explained and corrective action indicated in supporting documentation. These key internal controls must be formally evaluated at least once every five years. Certification that this evaluation has been conducted must be accomplished on DA Form 11-2 (Internal Control Evaluation Certification).

B-4. Test questions

Questions for key internal controls are as follows:

- a.* Are the processes and procedures of ISR data provided to other systems identified under memorandums of agreement, memorandums of understanding, or interservice, interdepartmental, and interagency support agreements?
- b.* Is the ISR-S 425 updated quarterly for each quarter?
- c.* Are the review of QAPs conducted annually with changes being identified, prioritized, reviewed, and incorporated into the QAP program?
- d.* Is training in support of the overall IGI&S program held annually?
- e.* Has the IGI&S FCC met quarterly?
- f.* Is installation geospatial data reported to the OACSIM IGI&S program manager quarterly?
- g.* Is AR 115-13 reviewed annually and updated at a minimum of every five years?

B-5. Comments

Submit comments to the Office of the Assistant Chief of Staff for Installation Management (DAIM-ODR), 600 Army Pentagon, Washington DC 20310-0600.

Glossary

Section I

Abbreviations

ACSIM

Assistant Chief of Staff for Installation Management

ADS

authoritative data source

AGE

Army Geospatial Enterprise

AMC

U.S. Army Materiel Command

APMS

Army Portfolio Management Solution

AR

Army regulation

ARNG

Army National Guard

ASD (EI&E)

Assistant Secretary of Defense for Energy, Installations, and Environment

BEA

Business Enterprise Architecture

CAD

computer aided design

CG

Commanding General

CIP

Common Installation Picture

DA Pam

Department of the Army pamphlet

DACSIM

Deputy Assistant Chief of Staff for Installation Management

DCS

Deputy Chief of Staff

DOD

Department of Defense

DODI

Department of Defense instruction

FCC

Functional Coordination Committee

FGDC

Federal Geographic Data Committee

FOIA

Freedom of Information Act

FOUO

for official use only

GIS

Geographic Information System

HQDA

Headquarters, Department of the Army

IA

information assurance

IE&E

installations, energy and environment

IGI&S

Installation Geospatial Information and Services

IMCOM

U.S. Army Installation Management Command

IS

information security

ISR

Installation Status Report

IT

information technology

Lidar

Light detection and ranging

OACSIM

Office of the Assistant Chief of Staff for Installation Management

OMB

Office of Management and Budget

POM

program objective memorandum

QAP

quality assurance plan

RPI

real property inventory

SDSFIE

spatial data standards for facilities, infrastructure and environment

SME

subject matter expert

SOP

standard operating procedure

SRP

sustainable range program

USACE

U.S. Army Corps of Engineers

USAR

U.S. Army Reserve

Section II

Terms

Adaptation

A formalized (approved) alteration of the SDSFIE logical data model resulting in another logical data model which is tailored to the particular business requirements of an implementing organization. An adaptation consists of a specific Profile and/or all the Extensions that are required to meet specific user requirements.

Army adaptation

The Army adaptation is the complete set of geospatial features based on the latest published Army service-level SDSFIE physical data model. The Army CIP and the Army non-CIP are subsets of geospatial features derived from the Army adaptation. The Army adaptation includes all CIP, Army CIP, and Army non-CIP geospatial features.

Army Common Installation Picture (Army CIP)

The Army CIP is the distinct set of geospatial features and imagery required to be maintained for all Army sites. The Army CIP includes all CIP geospatial features.

Army non-Common Installation Picture (Army non-CIP)

The Army non-CIP is the set of geospatial features not categorized as CIP or Army CIP that comprises the rest of the Army adaptation.

Army Portfolio Management Solution (APMS)

APMS is the Army's single authoritative registry for geospatial IT investments, capabilities, and systems. Geospatial IT investments, for which the Army is a funding source, must be registered in accordance with APMS (see AR 25-1).

Authoritative Data Source (ADS)

A recognized or official data production source with a designated mission statement or source/product to publish reliable and accurate data for subsequent use by customers. An authoritative data source may be the functional combination of multiple, separate data sources. (DODI 8320.03)

Command Proponent

A Command Proponent is the IGI&S program command lead who is responsible for planning, collecting, and maintaining geospatial data in accordance with IGI&S program guidance. This includes supporting Data Layer Proponent Organizations strategies.

Common Installation Picture (CIP)

As stated in DOD Instruction (DODI) 8130.01, the CIP is the distinct, minimum set of geospatial features and imagery necessary to provide a foundational map depicting DOD installations and sites as defined in DODI 4165.14. The purpose of the CIP is to provide a readily available, standardized map background to serve as the basis for planning and execution of Assistant Secretary of Defense (Energy, Installations, and Environment) (ASD (EI&E)) responsibilities and functions. The CIP is fundamentally an ASD (EI&E) term and is a requirement for all Military Services to maintain.

Computer aided design (CAD)

CAD is a type of computer application that enables trained users to make quick and accurate digital drawing in two or three dimensions. CAD uses levels or layers for feature types and can be geo-referenced to produce GIS products.

Context

The organizational, functional, and operational circumstances in which data is created and/or received and used.

Coordinate System

A reference system used to measure horizontal and vertical distances on a planimetric map. A coordinate system is usually defined by a map projection, a spheroid of reference, a datum, one or more standard parallels, a central meridian, and possible shifts in the x- and y-directions to locate x,y positions of point, line, and area features.

Data

A representation of facts, concepts, or instructions in a formalized manner suitable for communication, interpretation, or processing by humans or by automatic means.

Data layer proponent lead

A data layer proponent lead is HQDA level and is identified by the data layer proponent organization and is responsible for ensuring compliance with IGI&S program and respective organization strategies. These include establishing clear guidelines to fund data acquisition, adhering to standards that ensure interoperability, and requiring data to be available in the HQDA geospatial data repository.

Data layer proponent organization

A data layer proponent organization is the HQDA organization responsible for developing strategy, recommending policy and guidance, planning, programming, and budgeting for program requirements.

Data steward

A data steward is the person(s) at the installation or organization responsible for the collection and maintenance of authoritative geospatial data. The data steward is responsible for ensuring geospatial data layer meet the requirements outlined in the QAP. The data steward's office or organization is described in the QAP. Upon completion and successful quality assurance and/or quality control of each geospatial data layer and associated metadata, the data steward will submit the data to the functional SME for review of completeness and accuracy.

Database

A logical collection of interrelated information managed and stored as a unit. A geospatial database includes data about the geospatial location and shape of geographic features recorded as points, lines, areas, pixels, grid cells, or tiles, as well as their attributes.

Datum

A datum provides a frame of reference for measuring locations on the surface of the Earth. It defines the origin and orientation of latitude and longitude lines.

Element

Any individual item of the SDSFIE logical data model including feature types, feature geometries, attributes, enumeration or domain values, and associations or relationships.

Feature

A group of spatial elements which together represent a real-world entity or administrative entity, such as a boundary. A complex feature is made up of more than one group of spatial elements, for example, a set of line elements with the common theme of roads representing a road network.

Geographic Information System (GIS)

An organized, computer-based set of tools for collecting, processing, storing, managing, analyzing, and presenting geographic data as well as related hardware, geospatial information, and standardized schemas to facilitate interoperability and trained personnel to maintain and operate the system. A geospatial system is any information system that is used to store, edit, reference, or analyze data in a geospatial context. A geospatial system can also include advanced capabilities in IT, such as servers and software used to host, distribute, and publish and consume web map services. External data sources may be linked from other business systems.

Geospatial Data

Information that identifies the geographic location and characteristics of natural or constructed features and boundaries on the Earth, including: statistical data and information derived from, among other things, remote sensing, mapping, and surveying technologies; and mapping, charting, geodetic data and related products. (Joint Publication 1-02, DOD Dictionary of Military and Associated Terms).

Geospatial Data Layer Quality Assurance Plan (QAP)

Geospatial data layer QAPs are documents stating required specifications for creating and managing geospatial data features. QAPs define geospatial and metadata content specifications, validation methodology, acceptable data sources, internal handling controls and how GIS data is aligned with Army business systems. A Data Layer Proponent Organization and Data Layer Proponent Lead must be identified for each geospatial data layer QAP.

Geospatial Information

Geospatial information is data that is made by or received by any agency of the Army in connection with any geospatial activity that deals with the business of installation management or other related IE&E domain business function. This applies to Army organizations that collect, use, disseminate geospatial information, and/ or perform related geospatial activities, or do so through stakeholders, contracts, or grants. Geospatial information consists of, but is not limited to, digital vector data with associated tabular attributes, raster data, hard copy maps, aerial photographs, and other information that represents real world features accurately referenced to a precise location on the Earth's surface.

Geospatial Information and Services

The collection, information extraction, storage, dissemination, and exploitation of geodetic, geomagnetic, imagery (both commercial and national source), gravimetric, aeronautical, topographic, hydrographic, littoral, cultural, and toponymic data accurately referenced to a precise location on the Earth's surface. Geospatial services include tools that enable users

to access and manipulate data, and also include instruction, training, laboratory support, and guidance for the use of geospatial data (see JP 1–02).

Installation

An installation is an aggregation of real property holdings led by a centrally-selected commander or civilian manager. Installations represent management organizations. An installation may be comprised of one or more sites. Two types of virtual installations exist within the Army: ARNG virtual installations, identified by state and commanded by The Adjutant General, under which are Readiness Centers or sites; Army Reserve Regional Support Commands, defined as virtual installations under which Reserve Centers are identified as sites.

Installation Geospatial Information

Installation geospatial information is geospatial data that represents features that are within or coincident with the boundary of an installation, virtual installation, or other Army site as well as non-Army owned areas in the immediate vicinity adjacent to these boundaries.

Installation Geospatial Information and Services (IGI&S)

IGI&S is the concept for collection, information extraction, storage, dissemination, and exploitation of geodetic, imagery, environmental, facility, topographic, hydrographic, littoral, and cultural data accurately referenced to a precise location on the Earth's surface. This data is utilized for installation, energy, and environmental management, mission support, critical infrastructure protection, force protection, homeland security, and training operations.

Real Property

Real property consists of lands, buildings, utilities, and structures, including improvements and additions.

Site

A site is a physically defined location that can be supported by a legal boundary survey which closes a polygon. It can be owned, leased, or otherwise possessed or used. A site is the sum of all real property at a specific location.

Vector

A coordinate-based data structure commonly used to represent linear geographic features. Each linear feature is represented as an ordered list of vertices.

UNCLASSIFIED

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