



United States  
Department of Agriculture

# Geospatial Strategic Plan

## Fiscal Year 2025-2030



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## What We Do

USDA provides **leadership** on food, agriculture, natural resources, rural development, nutrition, and related issues based on public policy, **the best available science**, and **effective management**.

We have a vision to provide economic opportunity through **innovation**, helping rural America to thrive; to promote **agriculture production** that better nourishes Americans while also helping feed others throughout the world; and to **preserve our Nation's natural resources** through conservation, restored forests, improved watersheds, and healthy private working lands.

# Enterprise Geospatial Management Office (EGMO)

## Mission

To provide enterprise-wide executive leadership that sets USDA's strategic direction for geospatial capabilities, including geospatial policy, planning, governance, data management, enterprise solutions, and oversight of geospatial data, Geographic Information Systems (GIS), Unmanned Aerial Systems (UAS), and geospatial professional services. This leadership advances USDA's mission through strengthened data interoperability, modernized technology platforms, workforce development, and integrated enterprise geospatial services.

## Vision

A unified geospatial enterprise that strengthens USDA's mission delivery through integrated data, streamlined tools and services, and aligned governance and coordination across the Department.

## Guiding Principles

USDA's geospatial enterprise is grounded in principles that align with the National Spatial Data Infrastructure (NSDI) and the requirements of the Geospatial Data Act (GDA) of 2018. These principles guide USDA in strengthening geospatial governance, advancing integrated data practices, and expanding shared tools and capabilities to better enable effective, data-driven decision-making across all Mission Areas.



Empowering USDA's Future

# Our Strategic Approach



## Introduction

In alignment with the GDA and consistent with the NSDI, USDA presents the **2025–2030 Geospatial Strategic Plan**. This plan builds upon the foundation laid by previous strategic initiatives.

USDA recognizes the **critical role that geospatial data plays** in informed decision-making, resource management, and operational efficiency, and remains committed to delivering modern, reliable, and **mission-critical geospatial services** to better serve the American public.

# Strategic Goals Overview

## The Geospatial Strategic Plan is structured around three strategic goals

### Goal 1. Enhancing Efficiency in Geospatial Data Management and Use

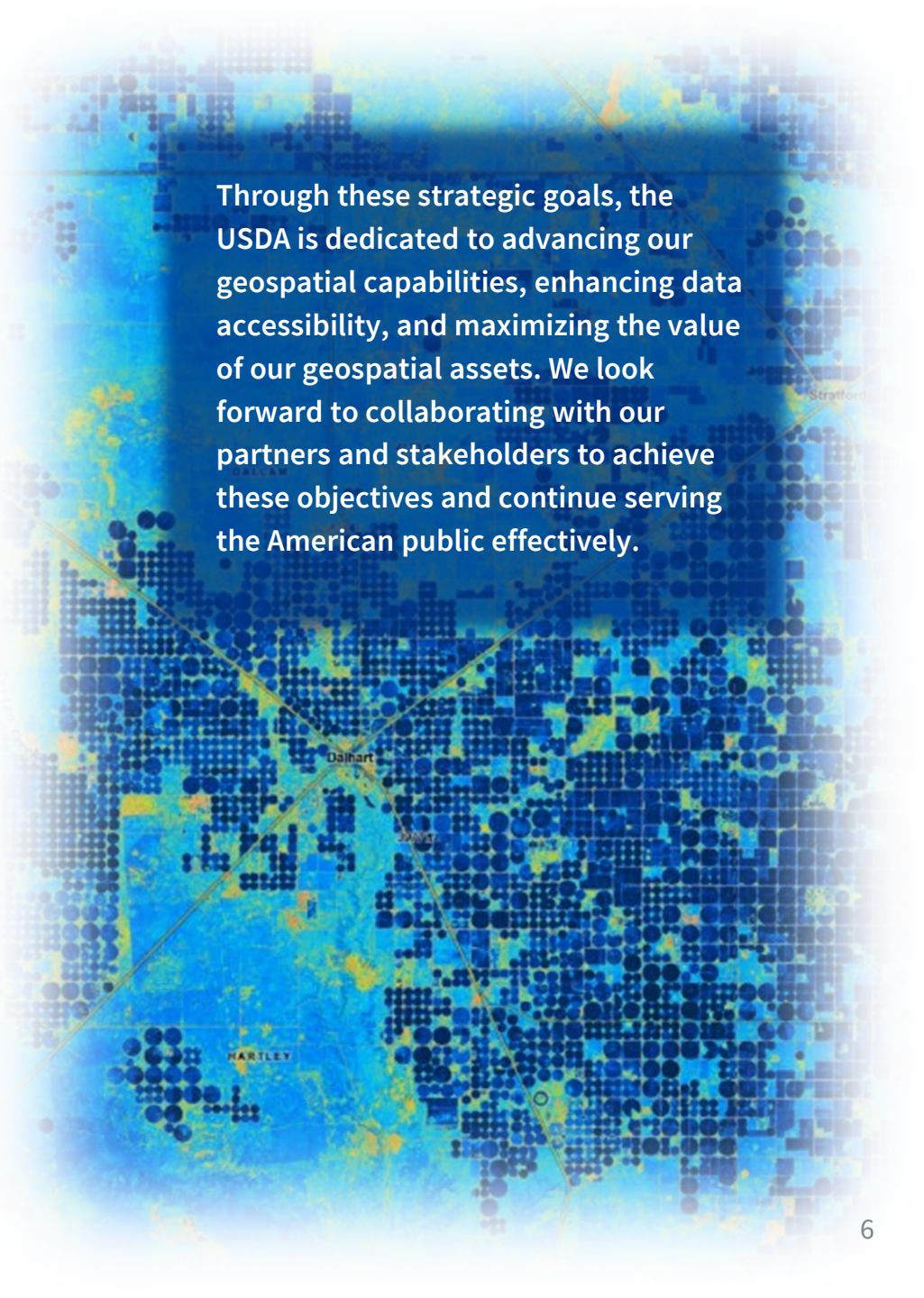
We are committed to strengthening our geospatial data stewardship, eliminating duplication, and increasing access and discoverability while reducing costs. By implementing processes to connect authoritative data sets, moving workflows to the cloud, and exploring partnerships for data collection, we aim to create a more efficient and effective geospatial data management system.

### Goal 2. Digitizing and Publicizing Historical Imagery

USDA holds a vast repository of historical analog film imagery, representing a valuable resource for understanding landscape changes over time. Our goal is to convert this imagery into digital format, ensuring its usability and accessibility for current and future efforts. By leveraging artificial intelligence (AI) for quality assurance, applying metadata and records management, and exploring public/private partnerships, we aim to make this data widely available.

### Goal 3. Maximizing the Value of Geospatial Data for Future Insights

As we move into the age of AI, geospatial data will be the foundation for answering complex questions. Our goal is to leverage metadata standards, advance interagency awareness, increase cloud utilization, and leverage geospatial data for operational activities. This will support the Department and its partners in making informed decisions and driving innovation.



Through these strategic goals, the USDA is dedicated to advancing our geospatial capabilities, enhancing data accessibility, and maximizing the value of our geospatial assets. We look forward to collaborating with our partners and stakeholders to achieve these objectives and continue serving the American public effectively.



## Enhancing Efficiency in Geospatial Data Management and Use

USDA is committed to strengthening geospatial data stewardship, eliminating duplication, and increasing access and discoverability while reducing costs. By implementing processes to connect authoritative data sets, moving workflows to the cloud, and exploring partnerships for data collection, we aim to **create a more efficient and effective geospatial data management system.**

# Goal 1

## Enhancing Efficiency in Geospatial Data Management and Use

Strengthen Department **geospatial data stewardship**, eliminating duplication in geospatial datasets, their storage and hosting, thereby **increasing access and discoverability** while reducing cost.

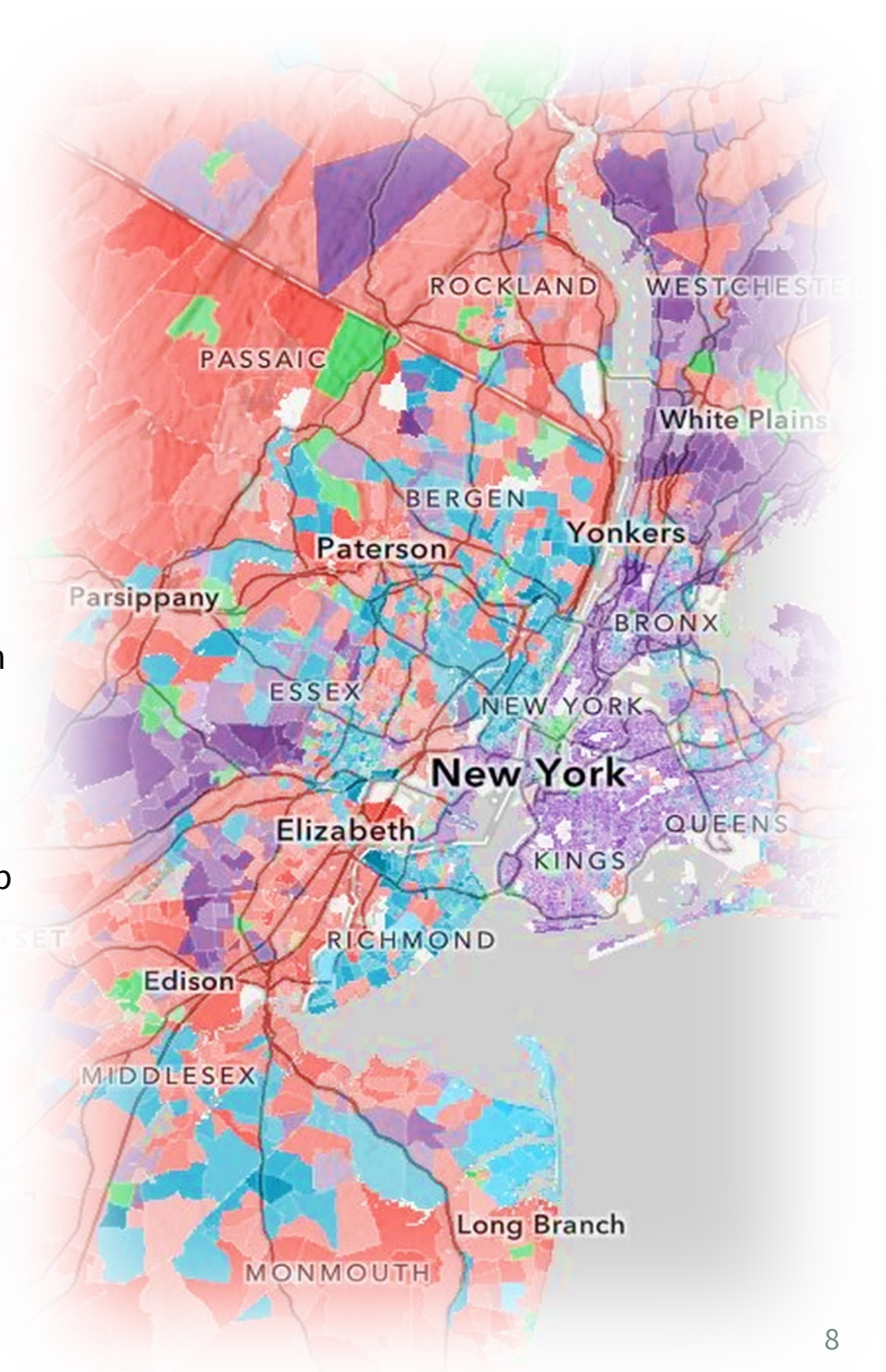
**Objective 1.1.** Implement a process to connect authoritative data sets transparently and consistently in the USDA GIS for Agriculture Geospatial Data Catalog, thereby reducing costs and enhancing data accessibility.

**Objective 1.2.** Move geospatial workflows and data to the cloud reducing costs associated with local hardware and network access challenges, especially in remote locations.

**Objective 1.3.** Explore partnerships with other federal agencies, academic institutions, and the private sector to collect image data (including aerial photography and Light Detection and Ranging (LiDAR) efficiently and effectively, enhancing the value of the data collected.

**Objective 1.4.** Make National Aerial Imagery Program (NAIP) data collection a standard appropriation to ensure timely and consistent data collection and delivery.

**Objective 1.5.** Support the stewardship of National Geospatial Data Assets (NGDA) data themes such as soils, land use-land cover, and imagery, as well as other geospatial authoritative data throughout the Department.



# 1 Goal 1

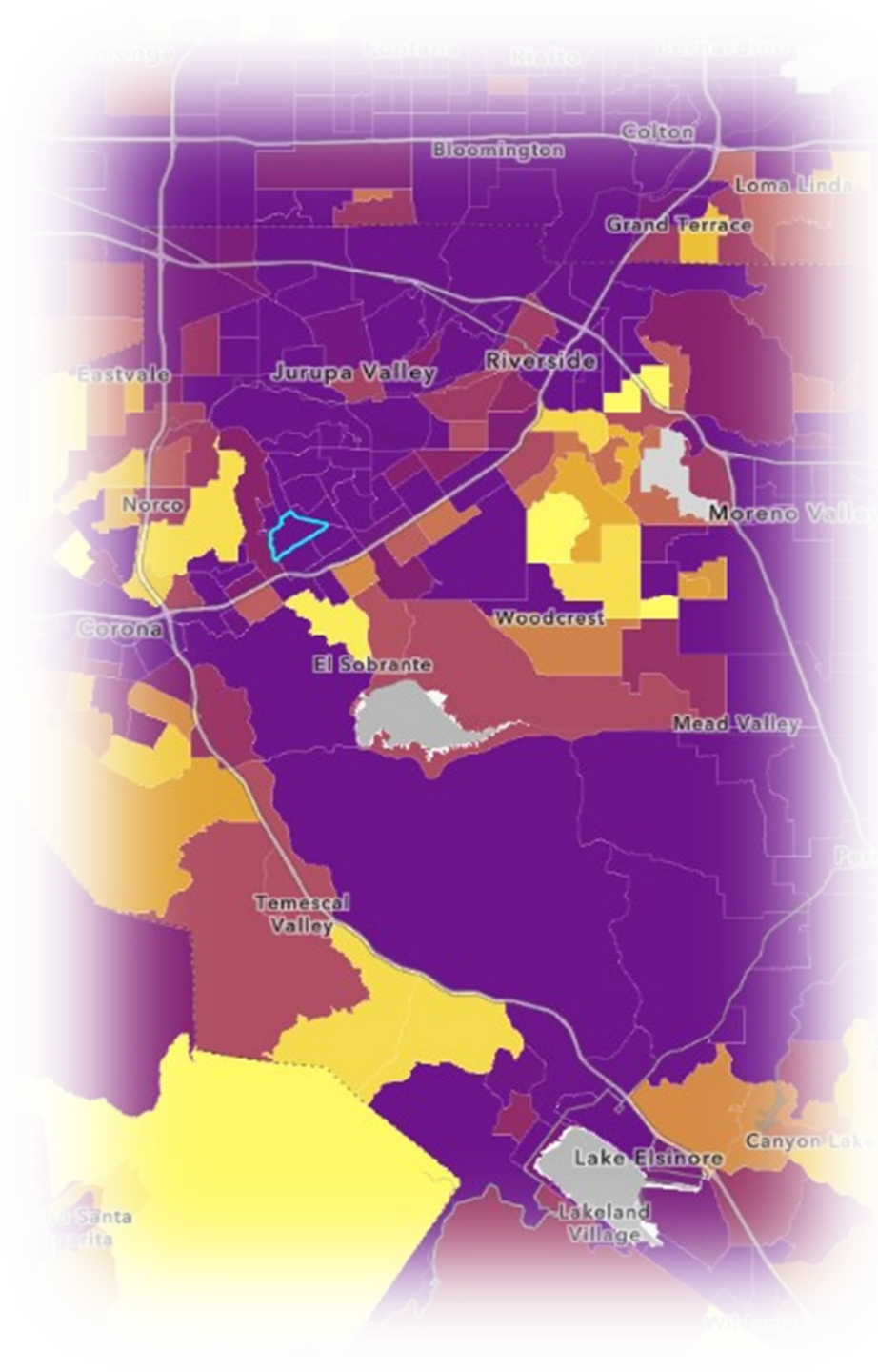
## Enhancing Efficiency in Geospatial Data Management and Use

**Objective 1.6.** Leverage investments in externally acquired data and UAS platforms, with access and training across agency boundaries to share data transparently within the Department.

**Objective 1.7.** Implement standardized metadata frameworks and records schedules such as International Standards Organization (ISO), Federal Geographic Data Committee (FGDC), Spatiotemporal Asset Catalog (STAC), and National Archive and Records Administration (NARA) to enhance user understanding and discovery and increase interoperability of geospatial data.

**Objective 1.8.** Focus on streaming geospatial data in services like the Interdepartmental Imagery Publication Platform (IIPP) for real-time analysis.

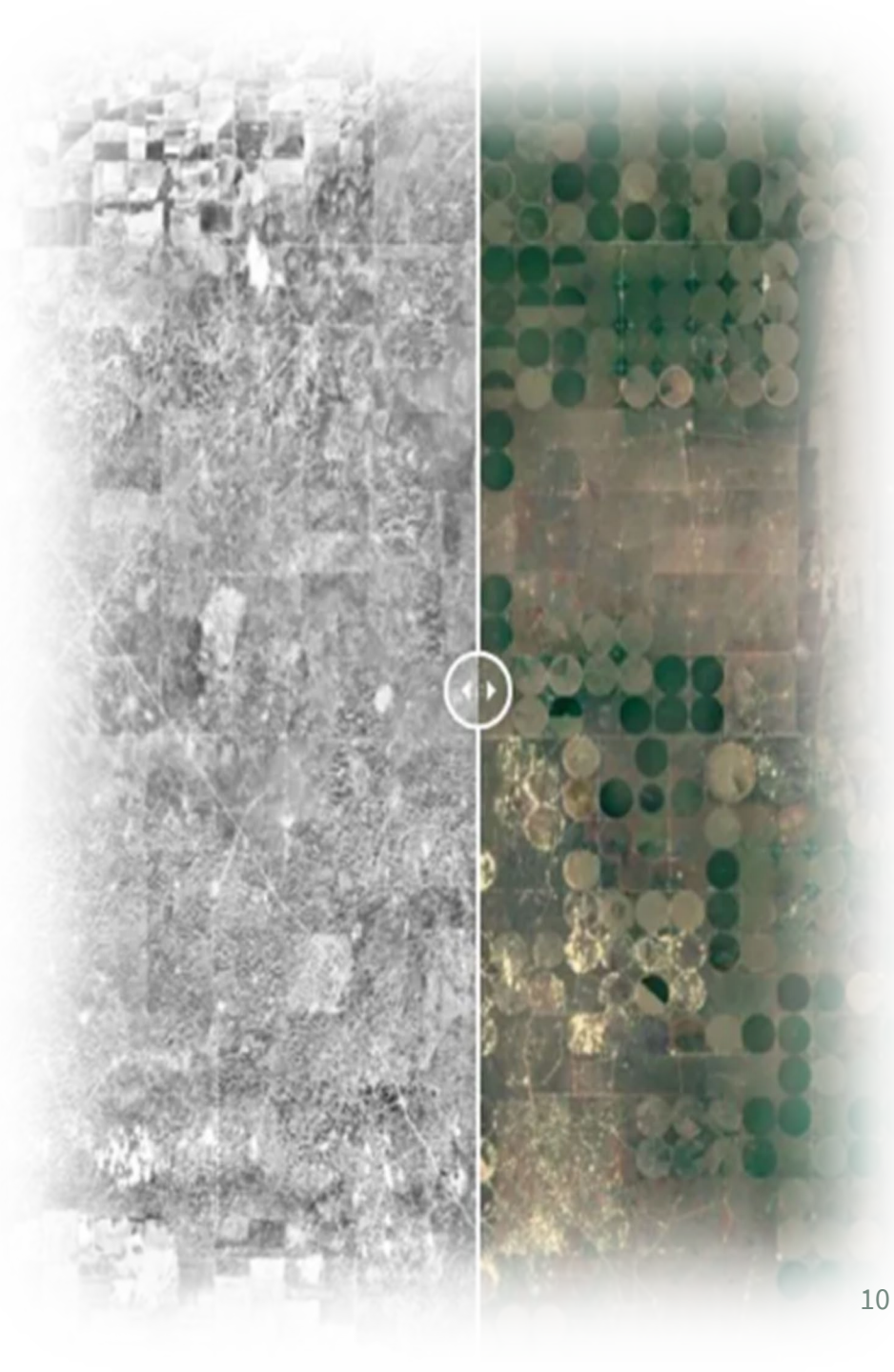
**Objective 1.9.** Drive efficiency in software and data licensing by managing enterprise license agreements and ensuring full utilization of acquired assets.



## Goal 2

# Digitizing and Publicizing Historical Imagery

USDA holds a vast repository of historical analog film imagery, representing a critical resource for understanding **landscape changes over time**. Our goal is to convert this imagery into digital format, **ensuring its usability and accessibility** for current and future efforts. By **leveraging AI** for quality assurance, applying metadata and records management, and exploring public/private partnerships, we aim to make this data widely available.



# Goal 2

## Digitizing and Publicizing Historical Imagery

Prior to the advent of digital photography, USDA used film to collect imagery. Today, more than 50 years' worth of film imagery is locked in a vault, and at risk of loss as film decomposes over time. This goal is a race against time to **digitize the imagery** before the film degrades and becomes unusable.

This imagery represents a gold mine of data for current and future efforts exploring how the landscape has changed over time to **make informed land, resource, and business decisions** based on evidence.

Examples include studying **forest resiliency after a fire to understand recovery patterns**, analyzing how changing migration patterns impact the landscape, **and how overall land use has changed over time**. The ability to look back in time presents an opportunity for analysis and engagement which would otherwise be impossible.



This high-severity burn area starkly reminds us of wildfire's lasting impact. Fire-killed trees stand among alpine grasslands. Despite the devastation, slow regeneration is underway, with resilient plant species returning with time.

## Goal 2

### Digitizing and Publicizing Historical Imagery

This data represents a critical resource. The Department has a responsibility and an obligation to **liberate this data and make it available** to people both within and beyond USDA. To do this we must:

**Objective 2.1.** Expand digitization efforts to convert historical analog film imagery into digital format, spatially enabling (georeference/orthorectify) the data for enhanced usability.

**Objective 2.2.** Leverage AI to perform quality assurance on digitized imagery to ensure compatibility with current imagery.

**Objective 2.3.** Apply metadata and records management to make digitized imagery discoverable and usable.

**Objective 2.4.** Allocate resources for managing and hosting the digitized data, which is expected to be more than 42 petabytes (42 million gigabytes).

**Objective 2.5.** Explore public/private-government partnerships to accelerate the digitization of analog film and make it publicly available.





## Maximizing the Value of Geospatial Data for Future Insights

As we move into the age of AI, **geospatial data will be the foundation** for answering complex questions. Our goal is to leverage metadata standards, advance interagency awareness, increase cloud utilization, and leverage geospatial data for operational activities. This will support the Department and its partners in **making informed decisions** and driving innovation.

# Goal 3

## Maximizing the Value of Geospatial Data for Future Insights

USDA collects, creates, curates, and disseminates geospatial data that support the Department and its partners in other federal agencies, state agencies, local governments, academia, and the private sector. As society moves into the AI age, all data, and **geospatial data in particular**, will be the foundation to **answer complex questions**.

Compliance with the **GDA** and leveraging the **USDA GIS for Agriculture hub** supports agencies with implementing metadata standards, data stewardship best practices, and **making authoritative geospatial data searchable and available** in a single, convenient location.

**Objective 3.1.** Empower agencies to deploy metadata standards, with support from the USDA Geospatial Change Control Board (GCCB) and oversight from EGMO.

**Objective 3.2.** Use AI and other automated workflows to generate metadata for geospatial data sets.



## Maximizing the Value of Geospatial Data for Future Insights

Incubate opportunities, proofs of concept and pilot programs, providing GIS practitioners with the capabilities to **pioneer new AI-driven approaches to develop new insights** from geospatial data.

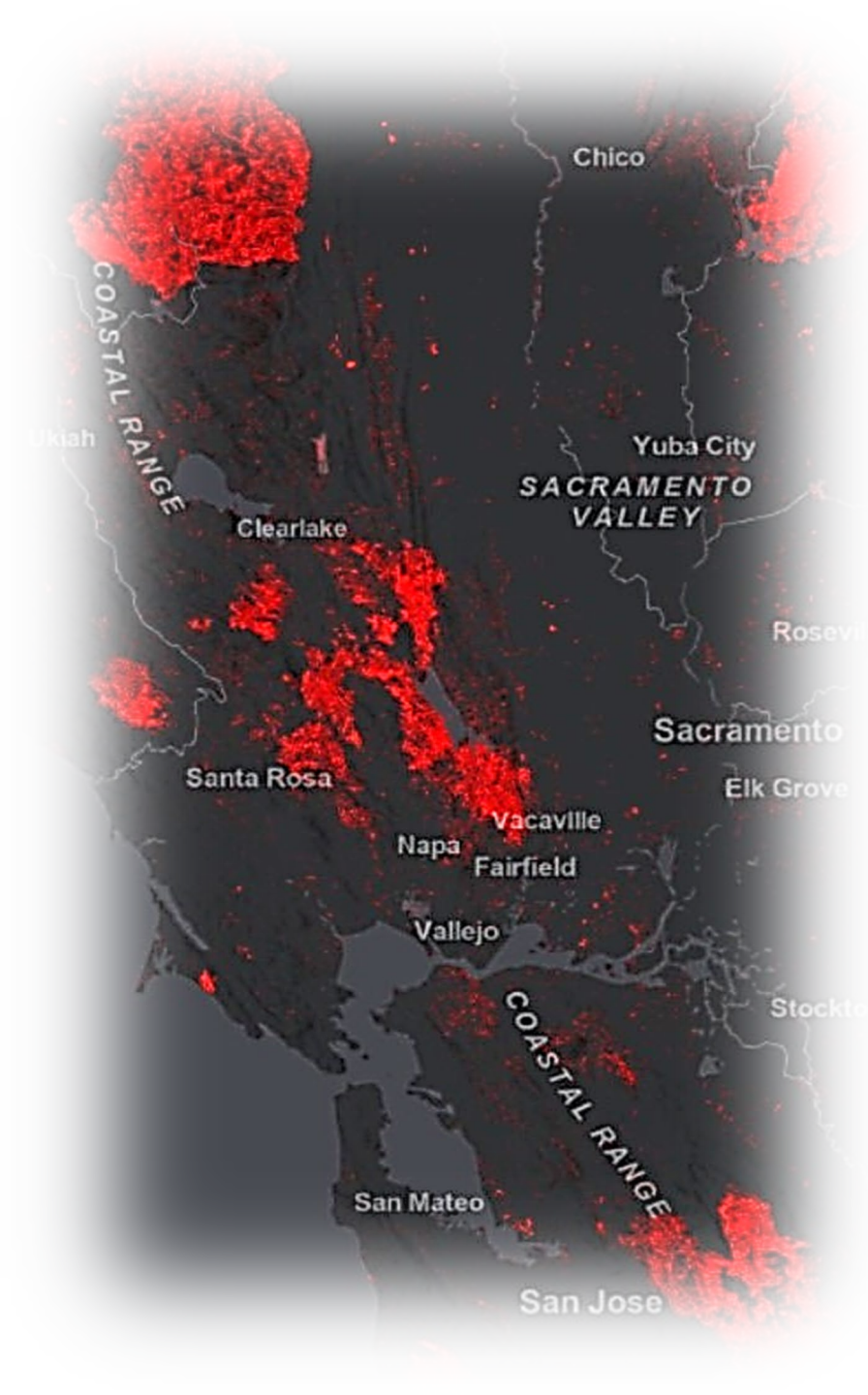
**Objective 3.3.** Advance interagency awareness and adoption of the GeoAI Lab across USDA, showcasing pilot projects and highlighting success stories.

**Objective 3.4.** Increase cloud utilization for data hosting and processing to reduce reliance on the Virtual Desktop Initiative (VDI).

While the Department’s **geospatial capabilities** are most used to support specific program requirements, geospatial data can also be used to **support operational efficiency** within the Department.

**Objective 3.5.** Work with the Chief Data Officer to leverage geospatial data to support operational activities within the Department, such as building capacity, workforce assignments, safety and security, and fleet management.

**Objective 3.6.** Continue to support the geolocation of USDA real estate assets (Cadastre), representing all structures/buildings within the Department.



# USDA's Commitment



USDA's Geospatial Strategic Plan positions the Department to meet national needs with authoritative, findable, accessible, interoperable, and reusable (FAIR) geospatial data. It strengthens geospatial stewardship by improving data quality, advancing data sharing and integration, applying consistent standards, and enhancing records management. The Plan also accelerates the digitization of USDA's historical imagery collection and promotes partnerships that expand efficiency while protecting privacy, and ensuring reliable, science-based information for policy decisions and upholding the Department's obligations under the Geospatial Data Act of 2018.

As agriculture and land stewardship evolve through new technologies, this plan keeps geospatial information central to effective decision-making. By advancing AI, cloud services, and shared capabilities, it enables stronger insights, improved operational readiness, and robust privacy protections. These investments prepare USDA for a future where secure, standardized geospatial data strengthen resilient landscapes, support safe and science-informed trade, expand equitable program access, and reinforce the broader agricultural economy that serves our farmers, ranchers, and the American people.

# Contact Information

For more information or questions regarding this plan, please contact [usdaGeospatial@usda.gov](mailto:usdaGeospatial@usda.gov). Additional copies of this Strategic Plan can be downloaded from USDA's Web site at: [www.usda.gov](http://www.usda.gov).

Persons with disabilities who require alternative means of communication for program information (e.g., Braille, large print, audiotape, American Sign Language, etc.) should contact the responsible Agency or USDA's TARGET Center at **(202) 720-2600** (voice and TTY) or contact USDA through the Federal Relay Service at **(800) 877-8339**.