GIS Advisory Council Meeting

CT GIS Office

Date: June 26th, 2025

Data & Policy Analytics

Connecticut GIS Office

CONNECTICUT Policy and Management

Agenda

- Introductions/Attendance
- Council Administration
- 2025 Legislative Session Update
- GISO Priority Topics and Working Group updates:
  - Inter-agency working groups' new activity
  - Imagery and LiDAR Data Updates
  - Annual Update of the Strategic Plan
  - Parcel and CAMA Updates
  - Statewide Addressing Updates
  - Geodata Portal Publishing Guidelines
- Geospatial Clearinghouse Working Group Recommendations
- Public Comment
- Closing Remarks
- Adjourn

Introductions and Attendance

GIS Advisory Council

Appointing Authority	Appointee
OPM	Alfredo Herrera
OPM	Scott Gaul
DEEP	Stuart DeLand
ConnDOT	Elizabeth Congo
DESPP	Dan Czaja
DPH	Gary Archambault
CTCOG	Erik Snowden
CTCOG	Mark Hoover
CCM	John Guszkowski
CCM	Tracy DeGrazia
UConn	Emily Wilson
PURA	Peter Sampiere
GA	Meghan McGaffin
GA	Vacant

Council Administration

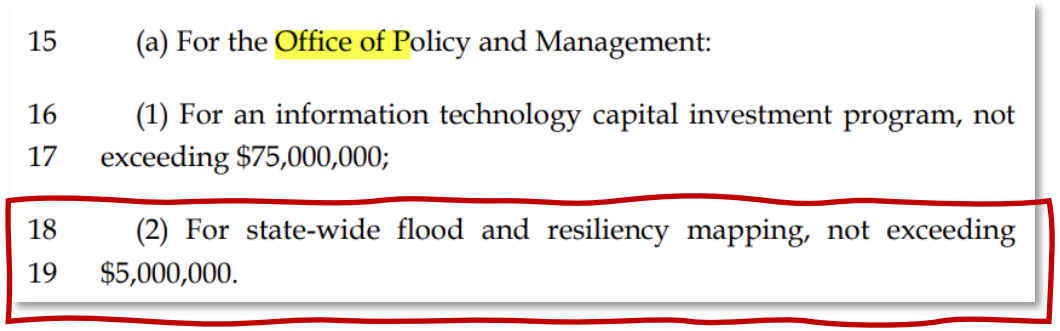
Quick summary of legislative changes

Status	Topic	Impact
Passed	**GIS**	Towns annually submit data on bridges and culverts to OPM
		Update to state plane and coordinate system
		$5M for "Statewide flood and resiliency mapping" in FY26
	Higher Ed	Public colleges and universities and workforce boards submit data annually to P20 WIN; other changes to statutory basis
		Public IHEs included with general OpenCT transparency resources
	Other	No more annual 'legal issues' report
		Requires CDO (w/ DAS, CHRO) to create "database of available contractors" for disparity study
Did not Pass	**GIS**	Change in collection date for parcels
	AI	No changes to state AI policies or creation of new resources
	Transparency	No changes to transparency for municipal finances, grant reporting, energy data; new agencies not required to add agency data officers this year
	Privacy	No expansion of CTDPA, no changes for state gender data collection
	Disconnected youth	No changes to annual report on disconnected youth

GISO Priority Topics and Working Group Updates

Interagency Working Groups : Water Resources

- HB 7288
- AN ACT AUTHORIZING AND ADJUSTING BONDS OF THE STATE AND CONCERNING GRANT PROGRAMS, STATE GRANT COMMITMENTS FOR SCHOOL BUILDING PROJECTS, REVISIONS TO THE SCHOOL BUILDING PROJECTS STATUTES AND VARIOUS PROVISIONS REVISING AND IMPLEMENTING THE BUDGET FOR THE BIENNIUM ENDING JUNE 30, 2027.



(a) For the Office of Policy and Management:

(1) For an information technology capital investment program, not exceeding $75,000,000;

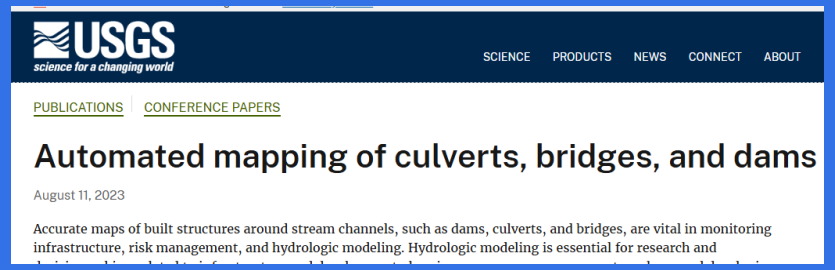
(2) For state-wide flood and resiliency mapping, not exceeding $5,000,000.

- Water Resources Working Group
  - DeAva Lambert (Principal Hydrography Data Steward) and Carl Zimmerman (CT GIS Office) have been conducting planning
  - Interagency meeting kickoff in July 2025
    - Focus on water resources and climate resiliency data development

Interagency Working Group: Emergency Management

- Emergency Management Data Work Group
  - Kick-off meeting on July 9th, 2025
  - Initial goal is to conduct a needs assessment of emergency management data sets for **rapid access**
  - Long-term goal: Fostering interagency cooperation, planning, and unaddressed data and access issues

Future Discussions: Culverts and Bridges



USGS science for a changing world

SCIENCE PRODUCTS NEWS CONNECT ABOUT

PUBLICATIONS | CONFERENCE PAPERS

Automated mapping of culverts, bridges, and dams

August 11, 2023

Accurate maps of built structures around stream channels, such as dams, culverts, and bridges, are vital in monitoring infrastructure, risk management, and hydrologic modeling. Hydrologic modeling is essential for research and

- Public Act No. 25-33
- AN ACT CONCERNING THE ENVIRONMENT, CLIMATE AND SUSTAINABLE MUNICIPAL AND STATE PLANNING, AND THE USE OF NEONICOTINOIDS AND SECOND-GENERATION ANTICOAGULANT RODENTICIDES
- Some existing data framework / schemas such as CT DOT and BLM

Sec. 8. (NEW) (*Effective July 1, 2025*) On or before May 1, 2028, and annually thereafter, each municipality shall submit a geospatial data file of each culvert and bridge within the control and boundaries of such municipality to the regional council of governments of which it is a member in a form and manner prescribed by the Office of Policy and Management, in consultation with the Departments of Transportation and Energy and Environmental Protection. Such geospatial data shall be produced and provided in the plane coordinate system, as described in section 13a-255 of the general statutes. Such data file shall include, but need not be limited to, geospatial data pertaining to each culvert and bridge, the locational coordinates of each culvert and bridge, the age and dimensions of each culvert and bridge and any additional information deemed necessary by the Office of Policy and Management, in

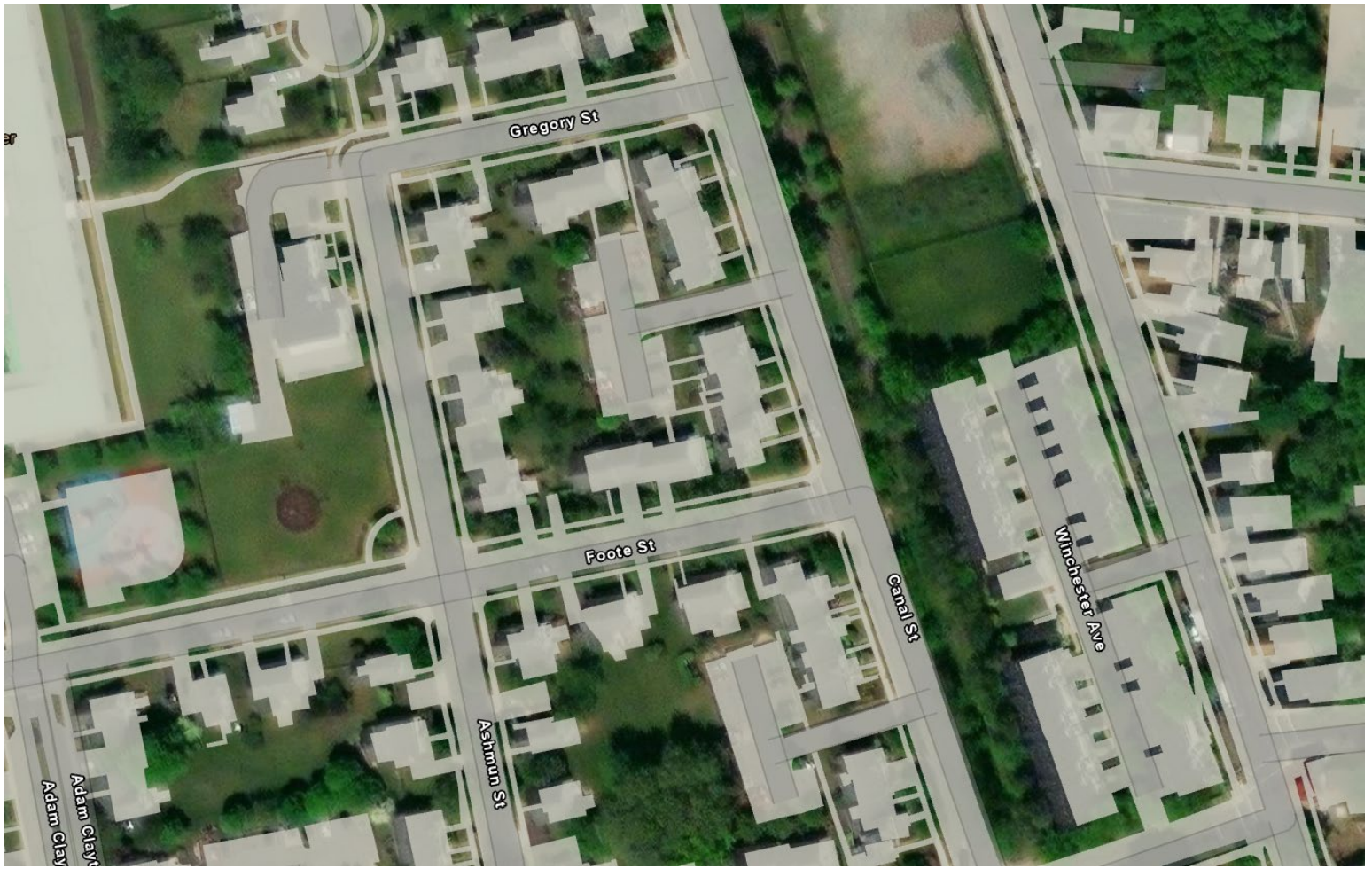
Imagery and LiDAR Update

- IC work status
- Contours available
- Vegetation rasters
- Derivative products

IC Status

- Ecopia making progress on lidar derivative products (IC)
- Slight delay because of reclassification of pavement in golf courses
- Initial pilot delivery expected by end of July
- Two groups of deliverables
  - Impervious cover
    - Driveways, roads, sidewalks, etc.
    - Buildings being compared against Dewberry's
  - Pavement/Transportation markings
- Operational goals
  - Complete QA/QC
  - Place IC components in web services based on priority/importance

Early Pilot Example to Show Level of Detail



Vegetation Rasters

- Received (2m pixels) from Durga Joshi, intern from UCONN (student of Prof. Chandi Witharana)

CHM (Canopy Height Model)

- Canopy Height Model (CHM) is the height / distance between the ground and the treetops above the ground

FHD (Foliage Height Diversity)

- A metric that quantifies the vertical distribution of plant structure in the forest canopy
- Reflects the number of canopy layers and how evenly foliage is spread among them.
- Tracks structural changes over time

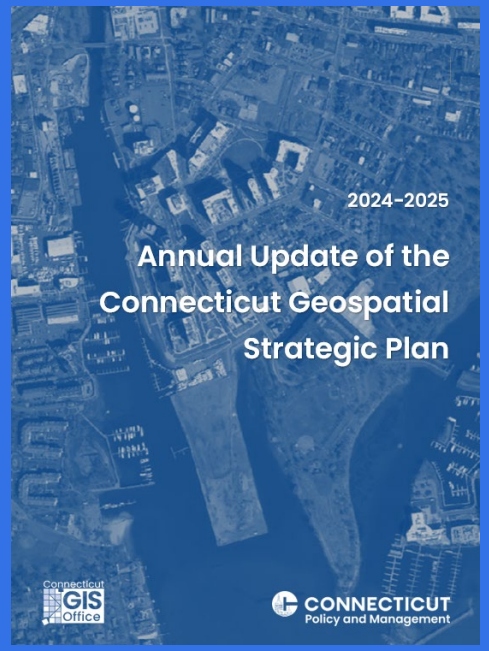
PAI (Plant Area Index)

- Green leaf area and other plant parts area per unit of ground area
- PAI is used to estimate when plants change seasonal growth stages and how

Planning for Next Imagery and Lidar Capture

- Kickoff meeting is scheduled for late Sept
- Flight in early Spring of 2026

Annual Update of Strategic Plan



- Updated memo and draft sent on June 20th, 2025
- Draft previously reviewed by GAC members
- Members sent comments
- Revisions incorporated into significantly update doc

To: Members of the GIS Advisory Council (GAC)

From: Carl Zimmerman, PhD, GIS Coordinator

Re: Annual Update of Geospatial Strategic Plan

Date: 06.20.2025

Dear GAC members:

The first draft of the Annual Update of the Geospatial Strategic Plan was reviewed by GAC members in the spring. Comments focused on making the Annual Update a progress/update report and less focused on being a stand-alone document about the CT GIS system. In addition, several members wanted to see a closer relationship between the Annual achievements and the specific objectives and goals from last year's Geospatial Strategic Plan.

The attached updated document (##v5) reflects those and other comments from members to make it more closely aligned with the Geospatial Strategic Plan. The most important part of the document is Tables 1-5, which provide specificity about progress for each objective. Summary information is provided in the executive summary and text. Additional details about the approaches are found in the Appendices.

I have attached the updated document for your review and will briefly discuss the status at the GAC's meeting next week. The expectation is that a vote on the approval of the document will be at the next meeting in August. Please contact me if you have comments or questions.

Document Adjustments

Summary of internal review

The GISO staff conducted a detailed internal evaluation of where we stand on our progress toward the five-year goals, objectives, activities, and outputs for the Geospatial Strategic Plan. Progress has been achieved on most objectives. Of the 44 outputs listed in the Geospatial Strategic Plan, 16 were completed, 14 were more than 50% complete, and 12 had some work completed. We rate ourselves as having achieved an overall score of **"B"** on our current progress towards the goals of the five-year plan. The aggregated ranking[5] of the five goals are:

1. Goal 5 (engagement): **A-**
2. Goal 3 (access): **B+**
3. Goal 2(funding): **B-**
4. Goal 1 (governance): **C+**
5. Goal 4 (support Agencies): **C+**

The objectives with the greatest progress are:

- Communication and outreach (obj 2.2, obj 5.1)
- Data acquisition, access, development and acquisition (obj 3.1, 3.2)
- Improvements in the parcel and CAMA data system / operations (obj 1.2)

The objectives with the least progress include:

- Providing wider access to GIS software for state agencies (obj 4.5)
- Giving access to automation tools and solution to stakeholders (obj 1.2)
- Planning and development of a data architecture for addressing (obj 1.2)
- Creation of an intake process for projects (obj 4.2)

Goal 1

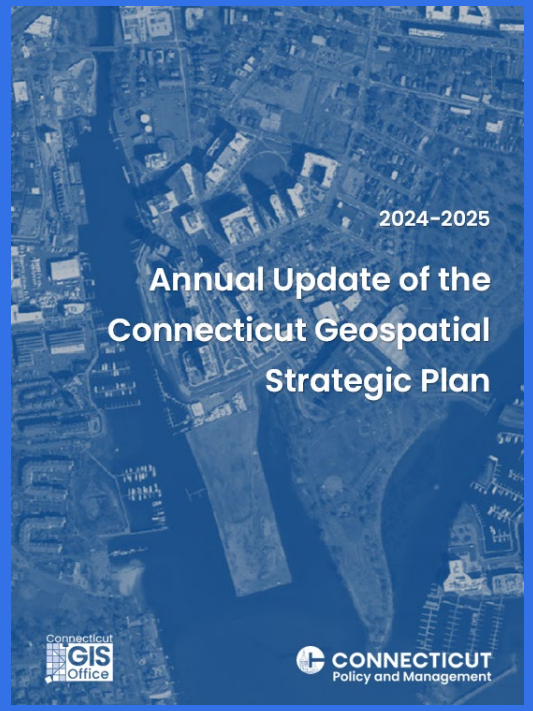
Use effective governance, policies, and standards to manage geospatial data.

***Overall Grade*: C+**

Table 1: Progress and objectives for Goal 1

Objective	Grade	Progress	Progress	Incomplete and Unfinished Objectives
Obj (1.1) Implement and strengthen data standards and governance to facilitate reliable access to authoritative versions of the Spatial Data Infrastructure (SDI) core data sets	B-	**Parcel Grant Improvement Program** provides one-time grant support for towns and COGs to improve cadastral data quality. Program underway for COGs. Regular meetings with COGs to discuss grant and policies.	The GISO and CT DEEP collaborated with four other New England states to submit **a joint USGS 3D Hydrography Program (3DHP) Data Collaboration Announcement (DCA) grant application.**	Continue working on parcel creation guidelines document. Partially finished draft. Limited progress on other standards and guidelines through prioritization and stakeholder outreach.
Obj (1.2) Develop data management and analytic capacities including automated data checks and validation within the GIS Office	B-	Staff attend 2024 ESRI development conference and regional conferences to learn about latest software technologies and relevant geospatial topics. Publish standardized parcel geometry and assessment data for all 169 towns of CT. **Created Parcel upload and tracking hub site.**	Staff using Python and R to automate pull of data from external sources for applications.	GitHub site for making processing scripts available to stakeholders is being built. Reviewing addressing automation solutions, either internal or external for addressing and geocoding.
Obj (1.3) Maintain an	D	Surveyed stakeholders		Not currently

Annual Update Document

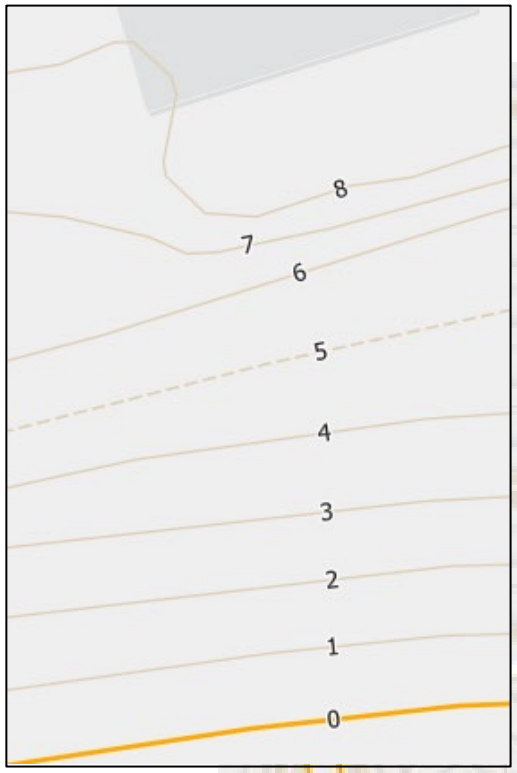


- Updated draft sent on June 20th, 2025
- Please provide any final comments by July 10th, 2025.
- Vote to approve at next meeting
  - (Aug 28th, 2025)
- Questions about document or changes from previous version?

Contours – Vector Tiles and more…?

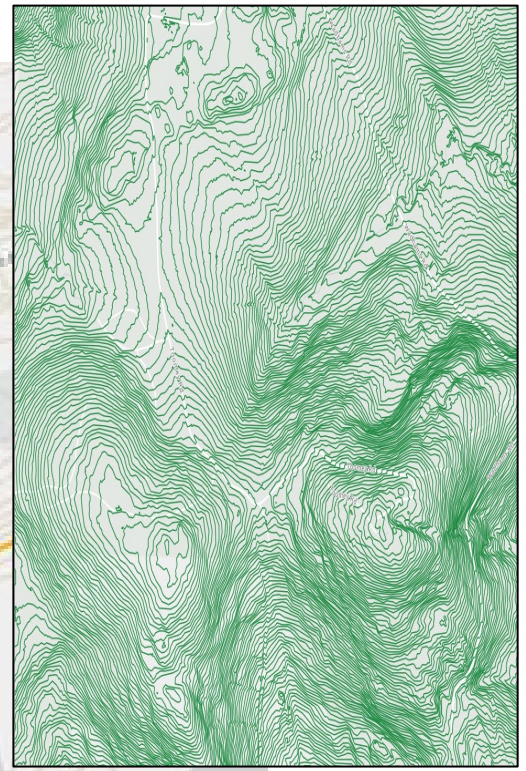
- Vector tiles
  - Dataset with 19,119,025 features
  - Vector tiles provided scalable rendering, and (much)faster performance
- Challenges
  - Significant time preparing and optimizing data for publishing
  - 1-ft vs. 5-ft
- Current Status
  - Vector tiles are now successfully published to ArcGIS Online and shared via the Geodata Portal. 5-foot contours (beta) are also available as a feature class for preliminary testing and use.

Contours



1’ Contours

5’ Contours



Parcel and CAMA Updates

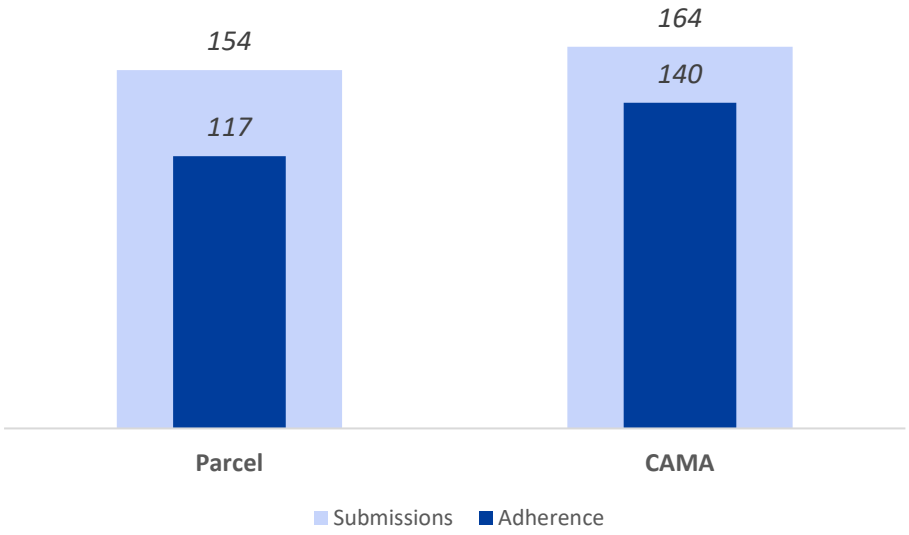
Parcel and CAMA Collection

Initial Processing

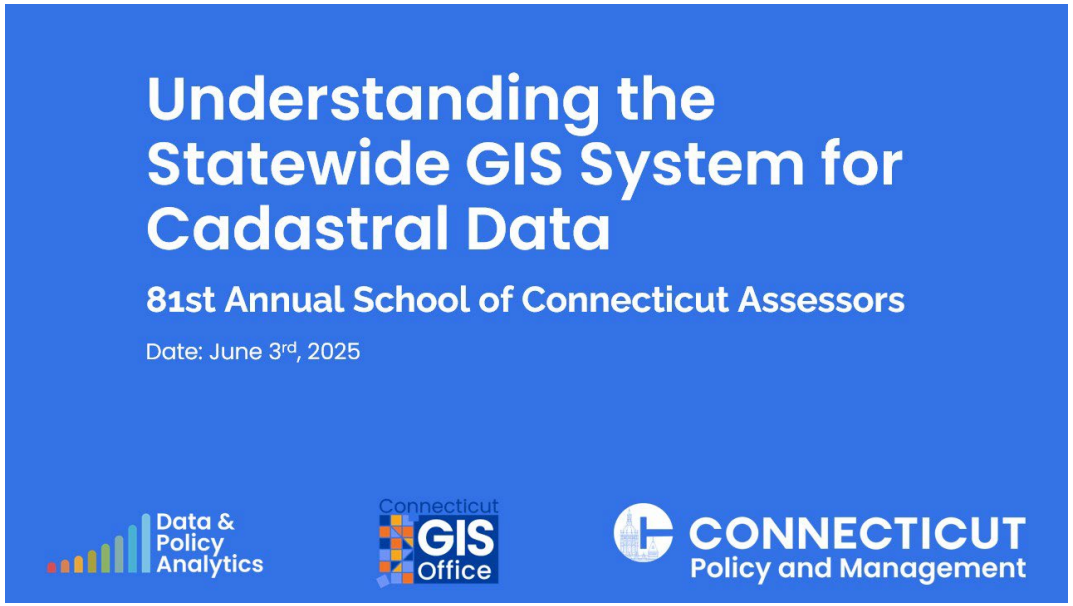
- 8 of 9 COGs processed.
- Once processed, the GISO will work on the consolidation of the complete 2025 Parcel dataset.

Metadata

- 154 towns submitted Parcels
  - 117 adhered to the parcel standard
- 164 towns submitted CAMA
  - 140 complied with Suppression
  - 24 out of compliance



GIS Office + CLEAR



- History and Establishment of the CT GIS Office
- GIS Office Overview
- CT GIS Strategic Plan and Planning Process
- Superpowers of GIS
- Data Analysis Examples
- State Parcel and CAMA Program
- Geodata Portal and Data Sources
  - Imagery and Elevation Download Tool
  - Imagery Hub
  - Statewide Parcel Viewer
- Resources
- Wrap-up and Look Forward

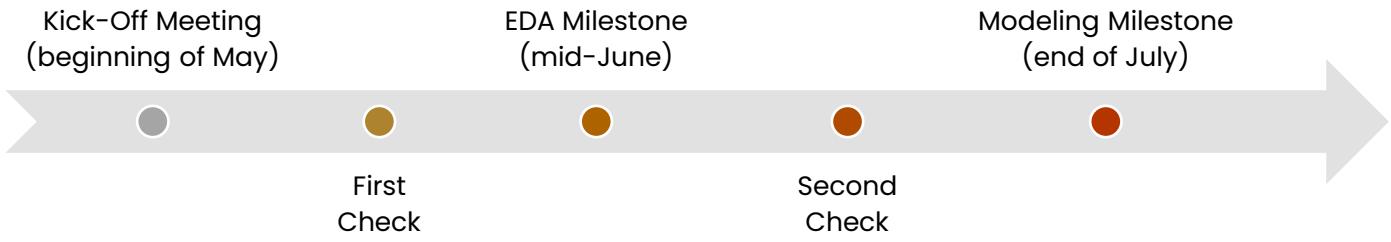
Statewide Addressing Updates

UConn's M.S. Data Science Applied Capstone

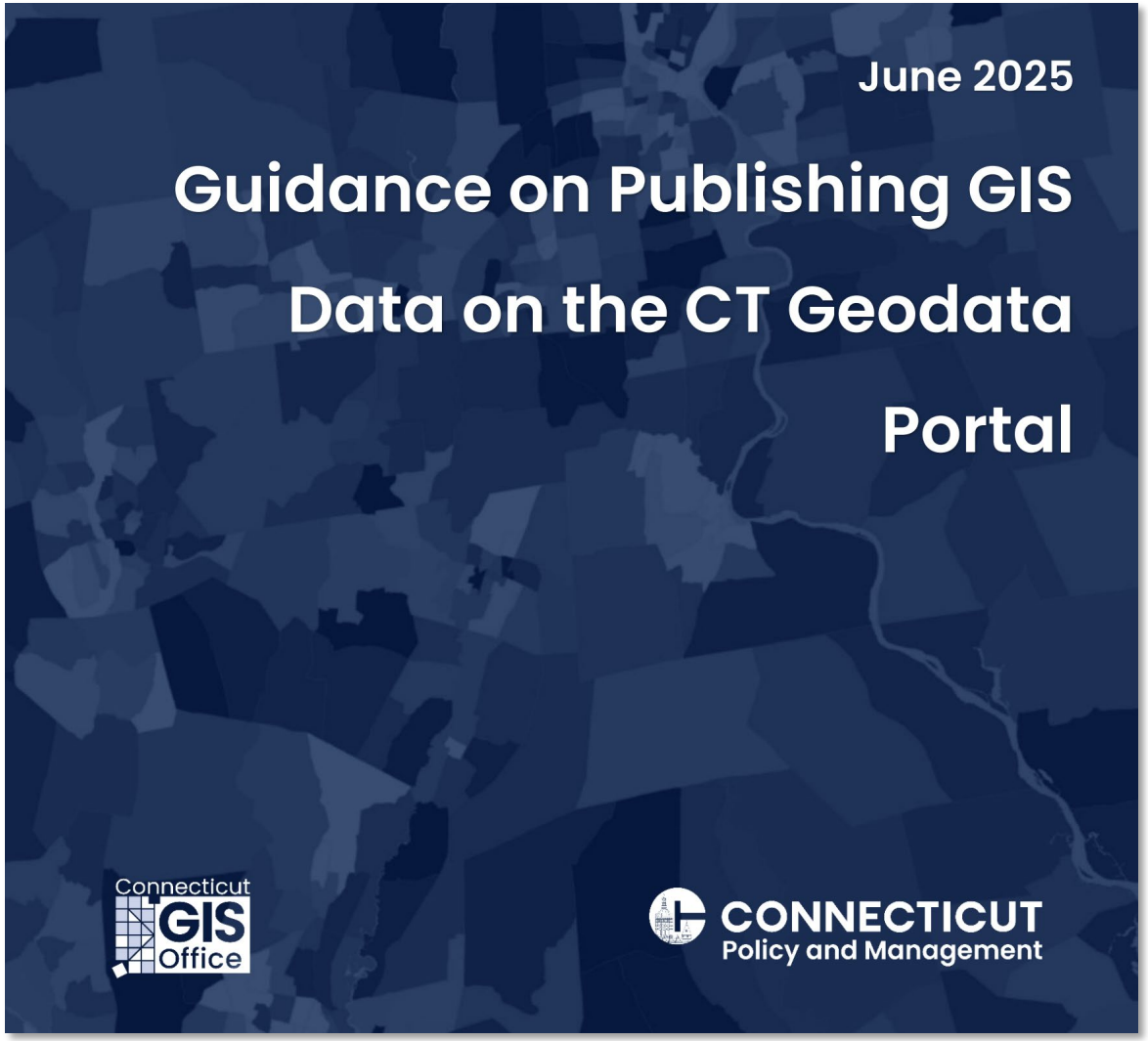
Two teams of students working towards designing and testing a methodology to support the maintenance of a master address dataset derived from different sources.

Targets:

- Weighting system
- Confidence intervals
- Classification (*valid, needs review, invalid*).



Geodata Portal Publishing Guidelines



Final draft is published here:
CT GIS Office Guidance Documents

Geospatial Clearinghouse Working Group Recommendations

The Document is now with the working group for review, and we will share it with the council ahead of the August Meeting.

Acceptance/Adoption of the document will be slated to occur at the October meeting.

Recommendations Topic Summary

- Dataset Extent
- Platform
- Data Download and Services
- Data Interaction
- Organization and Categorization
- Branding
- Website
- Accessibility
- Communication and Outreach

Thank You

Connecticut GIS Office