Updates to Louisiana's Statewide Topographic Mapping Program

March 26, 2025

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Agenda

### Overview Statewide Topographic Mapping Program

- Introduction
- Brief Description of the Statute
- Goals and Objectives of the Program
- Role and Composition of the Statewide Topographic Mapping Advisory Committee
- Major Program Activities, Milestones and Achievements since 2017
- Different Uses
- Questions

Introduction

- Jeremy Penton, EI, MGIS, GISP, Part 107 Pilot
- GIS Specialist, under Todd Stevens (Director of Enterprise Support Services)
- Been with agency for 6 years
- Bachelor of Science in Industrial Engineering and Masters in Geographic Information Systems

- Act 409 of the 2012 Legislative Session amended R.S. 48:36-Topographic Mapping, mandating, in part, that the DOTD "develop and maintain a statewide digital geospatial database for topographic mapping with the assistance of other state agencies or departments."
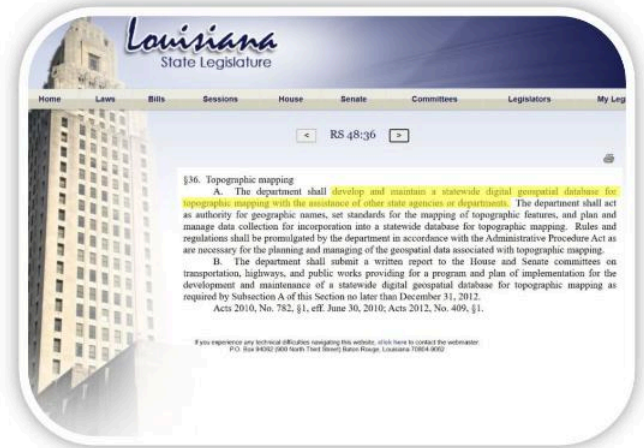
Brief Description of the Statute

- Provide high quality, authoritative, and easy to access data to state, local, and federal partners as well as the public
- Refresh data collection on a recurring basis
- Comply with applicable standards for data
- Stay up-to-date with current technologies
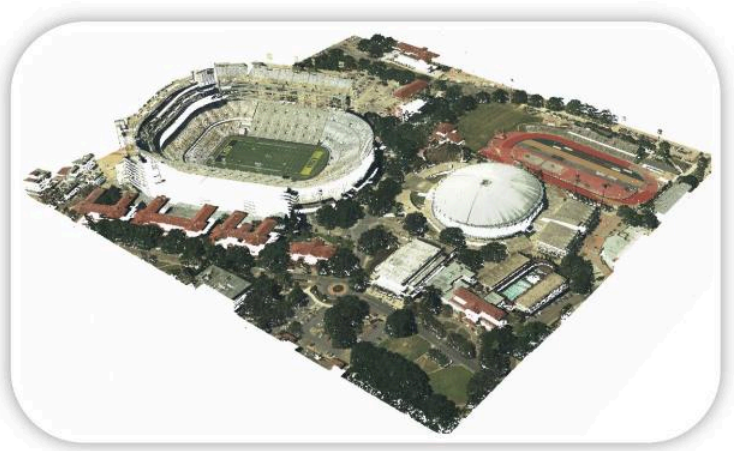
Goals and Objectives of the Program

- Composed of
    - State team members from multiple agencies
    - Federal government team members
    - Local government team members
    - Industry leading consultants
- Meet bi-annually for status updates on collection, processing and distribution of data
- Provide insights to priority areas needing collection
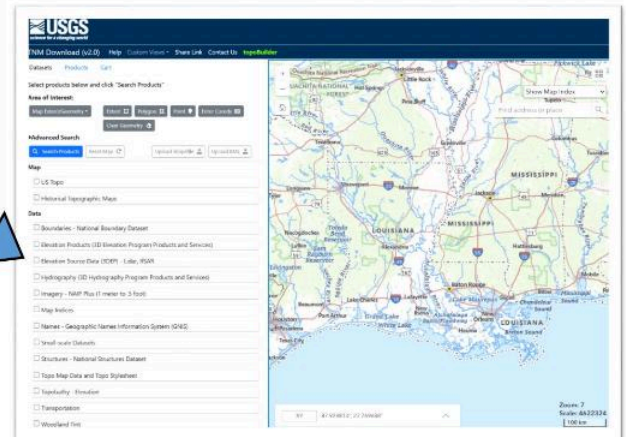- Provide feedback on data use and/or issues with data

Statewide Topographic Mapping Advisory Committee Meeting

January 29, 2024

Role and Composition of the Statewide Topographic Mapping Advisory Committee
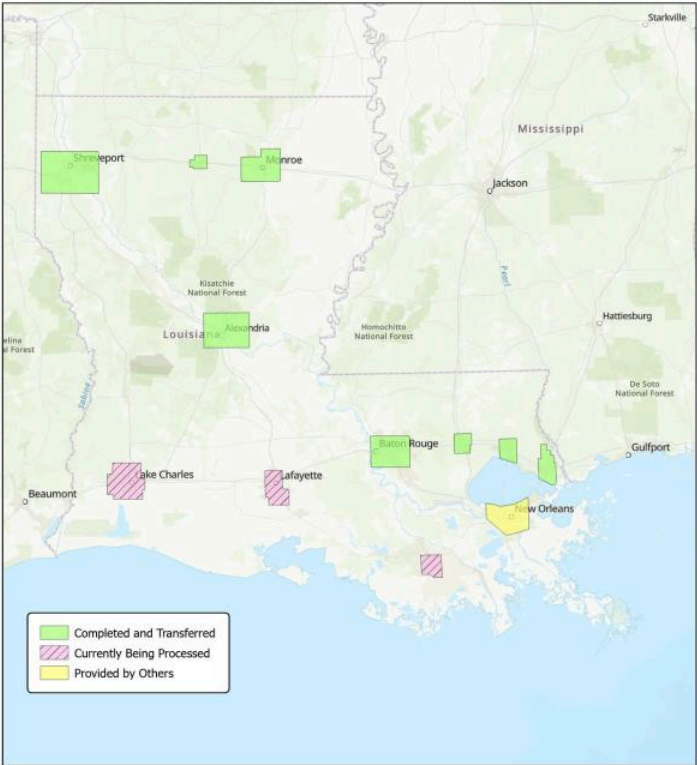
- The entire state of Louisiana has been collected at QL1
- Green areas are currently hosted on The National Map
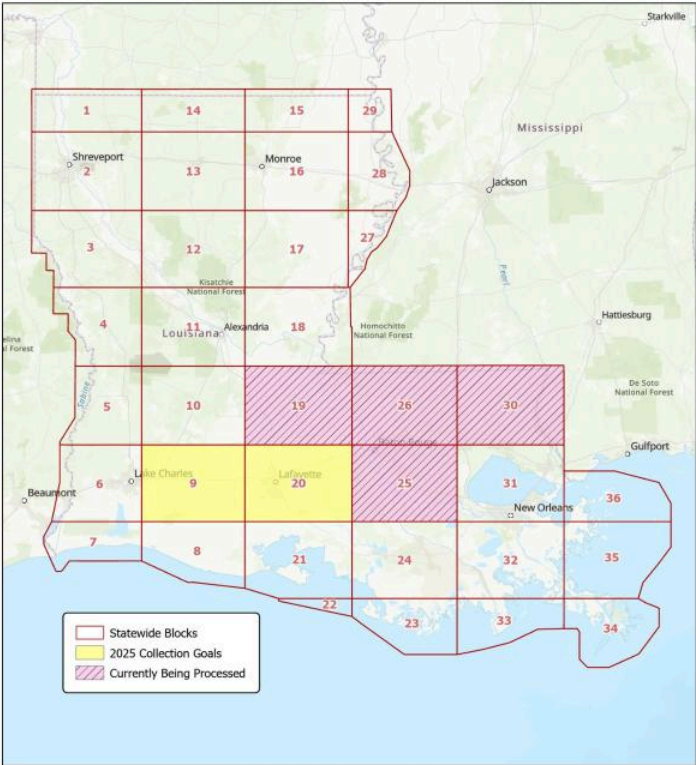- Yellow areas are in the QC process and will be hosted in the near future
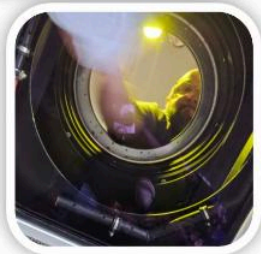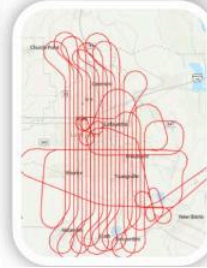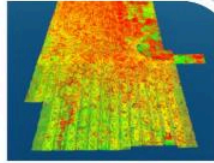

Lidar Status

Imagery Updates
March 2025

Municipalities

Blocks

Completed and Transferred
Currently Being Processed
Provided by Others

Statewide Blocks
2025 Collection Goals
Currently Being Processed

Photogrammetry Status
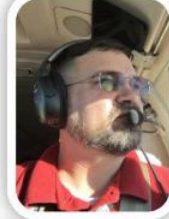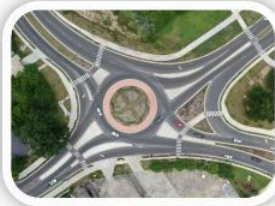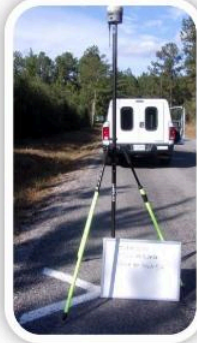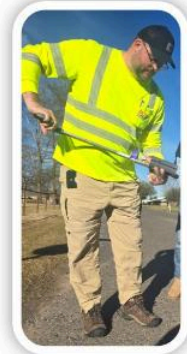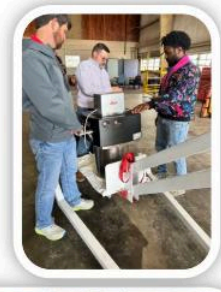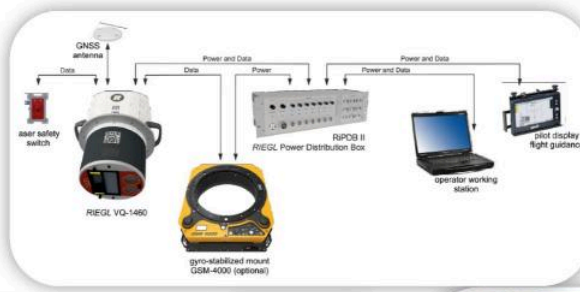
Major Program Activities since 2017
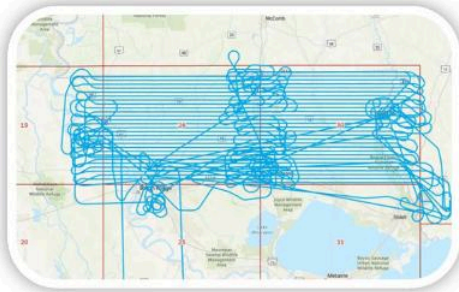
· The Program is proud to have collected both high quality (i.e. QL1), wide-area Lidar and high resolution imagery (3-6 inches) data across the approximate 52,000 square miles within Louisiana's borders

· Fostered great relationships with our federal, state and local partners

· Staff has honed in their skillset of the use of our in-house sensors (Leica DMC III and Reigl VQ 1460) and processing softwares

· Performed first flight with new Reigl VQ 1460 of the city of Lafayette, LA

· We have over 100 data sets related to topographic categories such as Transportation, Boundaries, Public Land Survey, and many others that are currently available to the public via the Open Data Portal

· Continuing to coordinate efforts statewide to capture data for current and future needs
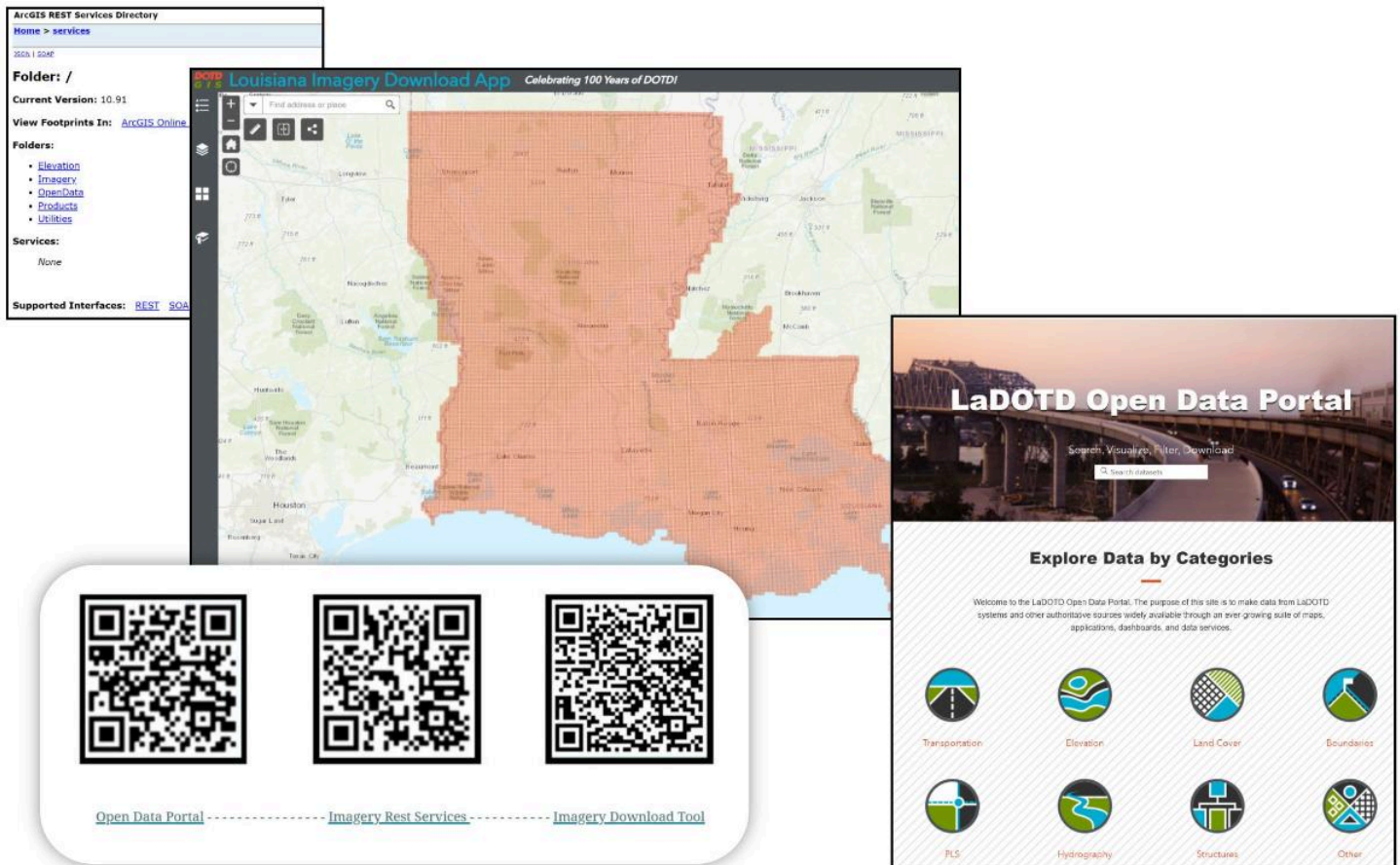
Links

- Drainage map example
- 3DEP data to supplement our hi-res drone data

Drainage Area = 1314 acres
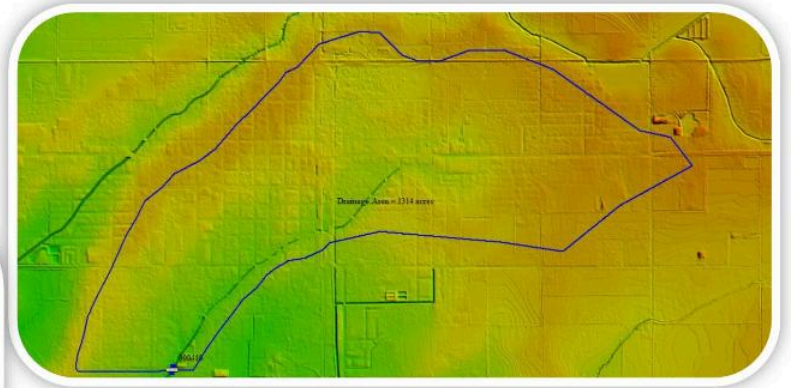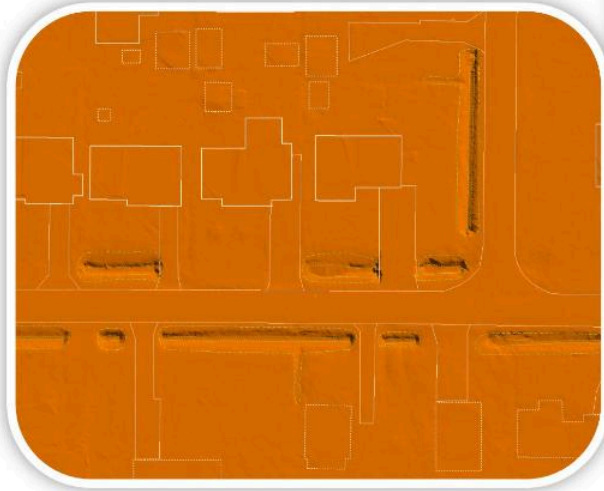
Engineering Projects

The widespread disaster caused by the Great Floods of 2016 revealed how susceptible Louisiana's landscape is to flooding. Due to the 28 declared flood- and hurricane-related disasters the state has experienced over the past two decades, the state has received almost $20 billion in Community Development Block Grant Disaster Recovery funds. State and local leaders realized it was time to reevaluate our approach to flood mitigation. In 2018, the state launched the Louisiana Watershed Initiative, introducing a new watershed-based approach to reducing flood risk in Louisiana, guided by the following principles:
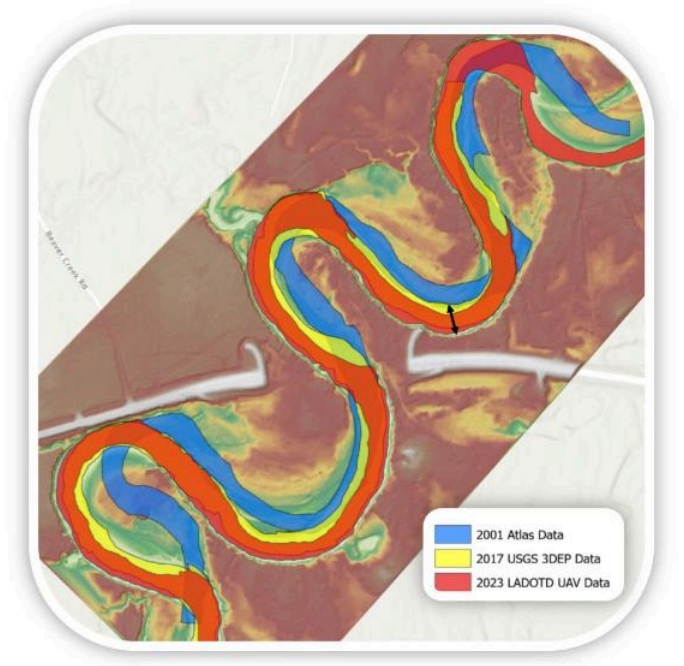
| Using scientific tools and data | Enabling transparent, objective decision-making | Maximizing the natural function of floodplains |

Louisiana Watershed Initiative

- River has slowly been inching towards bridge
- Flew lidar in 2023 with drone to make comparison
- Easy to see where erosion has taken place

Change Detection

- Mounds on LSU's campus
- Printed at the local library
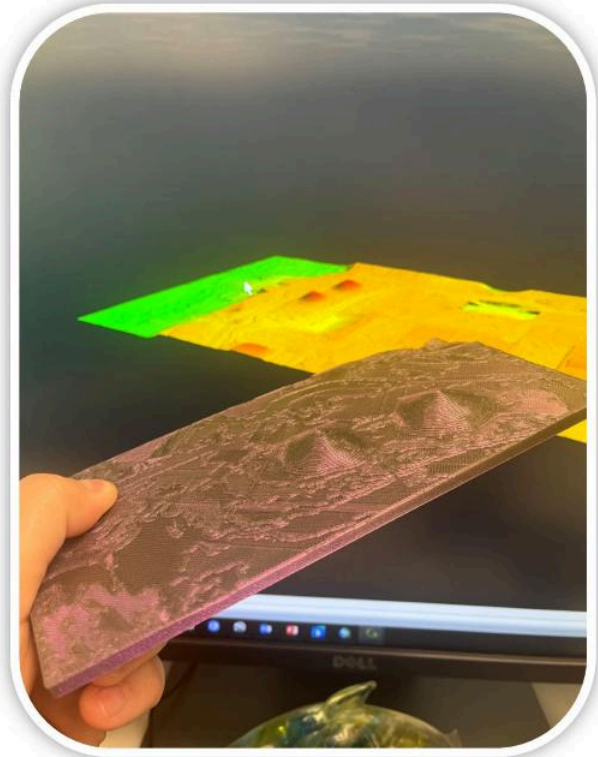
3D Printing

- Visit area schools
- Host Bring Your Kids to Work days
- Explain what data we collect and what are some of the uses
- Perform drone demonstrations

Community Outreach

- Thanks for your time
- Questions?

Q&A Session