# SOLANO COUNTY REGIS

**Meeting Agenda**

Solano Regional GIS Consortium

Location: Virtual Microsoft Teams Meeting
Click here to join the meeting

Date: June 15, 2022
Time: 9:00am ~ 10:00am PST
Facilitator: _____

1. Introductions (5 mins)

2. Approval of May 18 meeting minutes, and New Business (10 mins)
   a. Open floor

3. Discussion (40 mins)
   a. EOS News – Daniel (10 mins)
   b. Lidar Workgroup – request for volunteers (5 mins)
   c. GIS Training Workgroup (5 mins)
   d. Broadband update (5 mins)
   e. Executive Team (5 mins)
      i. Solano County GIS Day (5 mins)
      ii. Lightning Topic volunteer or vendor presentation (5 mins)

4. Action Items (5 min)
   a.
   b.
   c.

**Principal Organization Contact:**

| | | | | |
|---|---|---|---|---|
| Sandy Ayala | Benicia | | Stewart Bruce | Solano County |
| Jordan Santos | Dixon | | Kathrina Gregana | STA |
| Jasmin Acuna | Fairfield | | Rowland Roberts | Suisun City |
| Nellie Dimalanta | FSSD | | Dan Mattheis | Travis AFB |
| Jeffrey Lum | LAFCO | | Curt Corbett | Vacaville |
| Robin Borre | Rio Vista | | Alex Lacson | Vallejo |
| Justin Pascual | SCWA | | Mariah Henderson | VFWD |
| Bao Nguyen | SID | | | |

# Lidar in Solano County

Written by Daniel Machado
Last updated 06/09/22

REGIS has partnered with the Sanborn Map Company[1] to fly Lidar for Solano County. This document may address a few common questions:

## What is Light Detection and Ranging (Lidar)?

Lidar is a remote sensing method that uses laser detection to measure ranges (variable distances) to the surface of the Earth. These light pulses—combined with other data recorded by the system in flight "scanning" the surface of the earth — generate precise, three-dimensional information about the shape of the Earth and its surface characteristics.[2]

## What does Lidar data look like and where do I get it?

Lidar data is a translation of the travel time of light being reflected or scattered back between the laser scanner and the ground with other data. That data is collected as a "point cloud." Individual points reflect from everything on the surface, including structures and vegetation.

There are a variety of for-profit companies that sell Lidar data and what is often referred to as "derivative product(s)" of Lidar data. The term derivative product refers to the fact that it is created from Lidar data. In addition to the for-profit companies, there are national agencies that collect and maintain Lidar data available to the public.[3]

## What is the use of Lidar?

Lidar point cloud data requires extensive processing to create derivative products which are incredibly useful outputs that can provide context for land, vegetation, structures and the use of land for a given area! Some examples of Lidar derived products include:

- Aspect (orientation of slope)
- Hillshade – rendered surfaces of the earth including structures and vegetation
- DEM (Digital Elevation Model) – the earth's surface without structures of vegetation
- DSM (Digital Surface Models) – the earth's "top" surface including structures and vegetation
- nDSM (Normalized Digital Surface Model) – the difference (calculated) between the DSM and DEM models, identifying the height of features.

These products can help inform decision-makers on topics ranging from agriculture, emergency planning, flood and hazard mitigation, to solar and wind energy suitability, planning, and infrastructure considerations.

The University of Vermont has a Center for Geographic Information which provides images and context for more details on Lidar including visible examples: https://vcgi.vermont.gov/data-and-programs/lidar-program

[1] https://www.sanborn.com/aerial-lidar/
[2] https://oceanservice.noaa.gov/facts/lidar.html
[3] https://www.usgs.gov/faqs/what-lidar-data-and-where-can-i-download-it

# Forest and Shrubland LiDAR Derived Products Workshop

Hosted by the CA Dept of Conservation and CA Natural Resources Agency

[Recording of the Meeting]

A few presentation slide desks: