

# SOLANO COUNTY REGIS

## Meeting Agenda



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<sup>1</sup> 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.<sup>2</sup>

## 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.<sup>3</sup>

## 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>

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<sup>1</sup> <https://www.sanborn.com/aerial-lidar/>

<sup>2</sup> <https://oceanservice.noaa.gov/facts/lidar.html>

<sup>3</sup> <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 decks:

**LIDAR APPLICATIONS AND PRODUCTS TO SUPPORT THE MANAGEMENT AND RESTORATION OF FOREST ECOSYSTEMS WITHIN THE KLAMATH BASIN**

California Natural Resources Agency – Online Workshop  
“Forest and Shrubland LiDAR Derived Products”  
March 17<sup>th</sup>, 2022

David (DJ) Bandrowski P.E. and Cort Pryor  
Yurok Tribe Fisheries Department

Logos: AECOM, GMA HYDROLOGY, U.S. Forest Service, NOAA

**Lidar for Resource Management and Resiliency**

MARK TUKMAN, DYLAN LOUDON, KASS GREEN

Logos: Tukman Geospatial, Boreal Systems

This session will be recorded.

California Department of Conservation

**Operational LiDAR  
Derived Products**  
For Forest and Shrublands

Nathaniel (Nate) Roth  
nathaniel.roth@conservation.ca.gov

Please feel free to put your name and affiliation into the meeting chat.



# SOLANO COUNTY REGIS MEETING

Meeting Minutes – May 18, 2022

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Jasmin called to order the regular meeting at 9:05 am on May 18, 2022 via MS Teams.

## I. Introductions

The following persons were present: Nellie Dimalanta, Stewart Bruce, Jasmin Acuna, Bao Nguyen, Jordan Santos, Chris Ambrose, Alex Lacson, Kathrina Gregana, Travis Kroger, Rowland Roberts, Savita Chaudhary, Matthew Hardy, David Thompson (guest).

## II. Approval of Meeting Minutes and New Business

- A. May Meeting Minutes – Stew moved the motion to approve the minutes, seconded by Jasmin.
- B. Stew – asked who are attending the ESRI conference in July in person, Daniel and Buffy with Solano County GIS are attending, he will attend virtually, Jasmin and Jorge are attending as well. It is a great conference especially for first timers! Agencies with an ESRI maintenance agreement (verify status via MyESRI) have complimentary seats available to them.

## III. Discussion:

- A. Dave Thompson with KCI – GWSS Data Collection and Management Solution ([recording](#)). This was a very informative presentation of their work with Solano County Agriculture Dept, developed a custom mobile GIS-based solution to track Glassy-winged Sharpshooter bugs, which has been a big problem in the winemaking industry. This application is mainly for tracking and documenting the GWSS but can certainly be expanded into other workflows utilizing field inspection methodologies.
- B. Broadband connectivity in Solano County – the County will be hiring a consultant to assist with several action-based studies and investigate grants to support this multi-year project. The focus will be in the unincorporated areas in SC (see attached map) where internet speed may be substandard, or residents are unable to afford the cost of digital services, etc... digital equity. The County is looking into partnering with cities to develop municipal area networks. The cities of Vallejo, Vacaville and Fairfield have implemented/currently implementing broadband strategic plans.
- C. Lidar Workgroup – Stew is working hard to obtain additional funding (grant possibilities in October) that will support acquiring high quality Lidar data for the entire County in 2023. Aside from the base Lidar data (elevation data - Digital Terrain Model, Digital Surface Model), there are other derivative Lidar byproducts that can be used for vegetation analysis - identifying certain crops that are prone to wildfires, urban infrastructure, hydrographic data

models showing waterflow, etc. This is a fantastic collaborative opportunity to brainstorm ReGIS needs assessment for Lidar data. The invite is not exclusively for ReGIS members but potential SC 'external partners' as well. Jasmin mentioned that data consumers who do not attend ReGIS regularly may not be aware of the benefits of Lidar byproducts. Stew will prepare a write up for Nellie to share with the group. If interested in participating in the workgroup, please contact Stew for the first meeting in June.

**D. Executive Team**

1. Nellie received feedback about ReGIS membership updates.
2. Stew shared that from hereon, vendor attendance shall be by invitation only. Meeting minutes are made public and if a vendor would like to attend, they will have to reach out to them. Understood and no comments by group.

**IV. Action Items**

- A. ReGIS members – review the Data Theme Index.xlsx and contact Stew for comments, see last month's meeting minutes.
- B. ReGIS members – volunteer to participate in the Lidar Workgroup and/or forward the information to coworkers.
- C. ReGIS members – volunteer to participate in the GIS Training workgroup.



**V. Adjournment**

***Thank you, Dave for sharing KCI's work with Solano County Ag Dept!***

Meeting was adjourned by Jasmin at 9:55am. Next meeting will be Wednesday 9:00am June 15, 2022.

# Solano County Broadband Study Regions

Region Name	Address Count
Allendale-Hartley	979
Benicia-Cordelia	131
Cherry Glen - Blue Mountain	32
Dixon Rural	1003
Elmira	249
English Hills	468
Gibson Canyon	293
Green Valley	801
Jameson Canyon	48
NorthEast Vacaville Uninc	346
Olive School	208
Pleasants Valley	554
Rio Vista Rural	447
Ryer Island	359
South Winters Uninc	525
Suisun Marsh	138
Suisun Valley	881
Tolenas	199
Vallejo Uninc	1020

