

# Everything is Spatial: How the IGIS Service Center Can Help You and Your Research



Shane Feirer, Robert Johnson, Maggi Kelly,  
Sean Hogan, Andy Lyons

## Introduction

"Everything is Spatial"... Within UCANR almost everything we do has a spatial component, whether it is the location of our research sites, clientele, or offices. The ANR IGIS Service Center can help you discover new insights with your data. We provide services in GIS, mapping, web maps, and spatial tool development to researchers and programs across the ANR network. If you have a spatial problem, we can help! Our projects range from helping make beautiful and useful maps, GIS and spatial analysis, web mapping, mobile application development, drone data collection, and GIS consultation. In this poster we show examples of projects and applications that we have developed with UCANR researchers and programs. Come by and we can discuss how we could collaborate with you to help you and your programs think spatially, because everything is spatial!

## Request IGIS Service Center Help?

The process of having the IGIS Service Center assist with your project begins when you complete our Service Center Request Form ([http://igis.ucanr.edu/Service\\_Request\\_Form/](http://igis.ucanr.edu/Service_Request_Form/)). Within 1 business day of receiving the request, we will conduct a review to determine the feasibility of assisting with your project.

If the project is accepted, we will contact you to discuss the project details and to define the roles, requirements, expectations and timelines anticipated to fulfill the project goals. We will also request all materials needed to complete the project.

Once all materials have been assembled, we will provide a schedule. An Agreement of Work to be Performed will be provided detailing the resources, expectations and timeline for the completion of the project.

Upon completion of the project, we will send you a post project assessment to determine the effectiveness of the request and resources applied to the success of the project.

## IGIS Service Center Projects (Who, What, Where)

IGIS is somewhat unique among ANR's eight statewide programs in that we are primarily an inward facing program. We advance ANR's mission for the people of California through our support to ANR Advisors, Specialists, Statewide Programs, and Institutes. Accordingly, we provide research and GIS services to the UCANR network.

The map to the right shows the spatial distribution of service center projects and the two graphs illustrate the types of clientele and projects that IGIS has completed within the past 5 years.



## Services

### Service Descriptions

**Cartography**  
IGIS can work with you to create cartographic products (maps) that can be distributed to clients, added to reports and/or presentations

### Typical Project

Creation of maps for presentations and reports

### Cases Studies

IGIS developed a new wall map of UCANR locations for UCANR. This map includes Cooperative Extension Offices, Faculty Campuses, and Research Extension Centers.

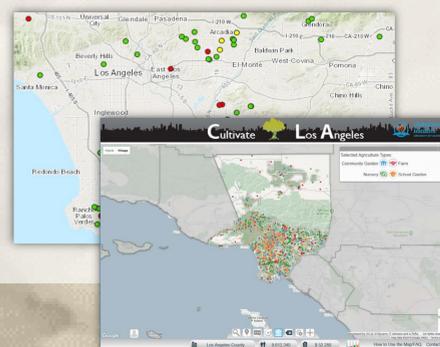


### Web Mapping / Application Development

IGIS can help you create custom web mapping applications to highlight your research, create interactive maps in your area of interest, or to reach out to your clientele to get their input.

Creation of interactive maps using a set of addresses overlaid on other data related to your topic of interest.

IGIS helped create the CoyoteCacher website with Niamh Quinn to track coyote encounters in Southern California. We also helped Rachael Surls with her Cultivate Los Angeles website.

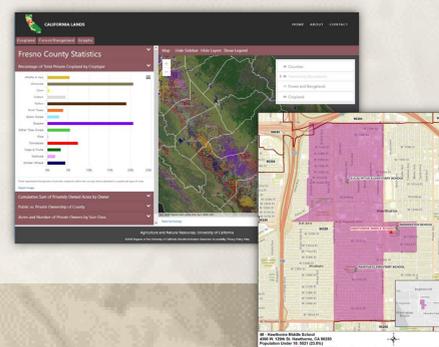


### Spatial Analysis and Statistics

IGIS can help you analyze your spatial and non-spatial data using GIS and other techniques including that statistics language R.

Summarizing geospatial data within polygons (Counties or parcels) and reporting descriptive statistics for further analysis.

IGIS worked with Luke Macaulay and Van Butsic to create the Callands website that allows users to get various statistics in each county in California. We also helped the NPI to analyze areas around over 100 schools in California.

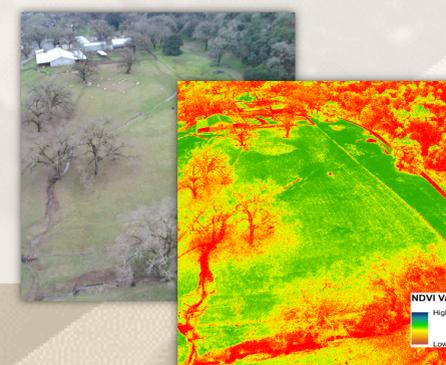


### Drone Imagery Acquisition and Processing

IGIS can help you gather drone imagery using a small fleet of drone platforms with different sensors including color, near infra-red, and thermal. From these images we can generate high-res mosaics and elevation models.

Creation of high resolution mosaic imagery and high resolution elevation models.

IGIS used a drone and a color and near-infrared camera at UC Hopland Research and Extension Center (RGB image - left, normalized difference vegetation index - right).



### Software and Technical Support

IGIS administers several geospatial software tools that can be used by members of the UCANR network. These tools include ENVI, Pix4d, ArcGIS Desktop, ArcGIS Online, and ArcGIS Pro.

These tools can be used for advanced remote sensing (ENVI), drone imagery processing (Pix4d), GIS data analysis and cartography (ArcGIS Desktop and Pro), interactive web mapping and analysis.

To access Pix4d or Envi please contact IGIS at [igis@ucanr.edu](mailto:igis@ucanr.edu). We will work with you to get these software. To get access to any of the GIS software please visit our <https://goo.gl/MrXMPZ> and complete the form.

