

## PROGRAM



# CalGIS 2011

Meeting California's Challenges

## 17<sup>th</sup> Annual California GIS Conference— Meeting California's Challenges

**Fresno, California**  
**March 28-31, 2011**  
**Radisson Fresno**

**About CalGIS – Every** year, the four URISA chapters in California, come together to present the CalGIS Conference, now in its 17th year:

Northern California Chapter of URISA – [www.norcalurisa.org](http://www.norcalurisa.org)  
Southern California Chapter of URISA – [www.socalurisa.org](http://www.socalurisa.org)  
Bay Area Automated Mapping Association – [www.baama.org](http://www.baama.org)  
Central California Chapter of URISA – [www.centralcalurisa.org](http://www.centralcalurisa.org)



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Mike Martinez – Esri  
Diane Mastalir – Program Chair  
Bud Rice – City of Taft  
Karen Snow, City of Delano, Delano, CA  
Sonia Theide – Kings River Water Agency  
Linda Wright, GISP, El Dorado County, Placerville, CA

## Guest Speakers

### Tuesday – Opening Session; 8:30–10:00 am

#### Scott Gregory, GIO, State of California

Scott Gregory is the Geographic Information Officer for the State of California. Scott brings over 15 years of GIS experience from a wide variety of County, Federal, Private Sector, and academic roles. Prior to coming to the California Technology Agency, Scott managed the Public Safety/Homeland Security market for the California Regional Office of Esri Inc. Scott's past responsibilities included developing geospatial IT strategies for mission critical systems, and creating viable and sustainable GIS solutions for the Public Safety community in California and Nevada. Scott is also an adjunct professor at American River College where he is a professor of GIS, teaching courses in web based GIS application development. Prior to joining Esri, Scott was the GIS Manager for the US Army Corps of Engineers, Sacramento District, where he oversaw and managed the USACE GIS program for both civil and military clients for the western US. Scott holds a BA in Geography from Sacramento State University, and an MBA in Marketing from Regis University.

#### Mano Marks, Senior Developer Advocate, Google

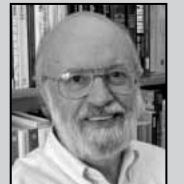
Mano Marks has been on Google's Developer Relations team for the last four years, and is the lead Developer Advocate for Google's Geo APIs. He has travelled the world helping individuals, corporations, governments and aid organizations use Google's mapping technologies to communicate their message to the world. Before Google, Mano had an eclectic career that involved getting a Masters in History, a Masters in Information Management and Systems, and working as a data manager in NGOs for over a decade.



### Thursday Closing General Session ; 9:00 am–12:00 noon

#### Donald Cooke, Community Maps Evangelist, Esri

Don Cooke has worked with digital mapping and geospatial technologies for 43 years, starting as a researcher in the New Haven Census Use Study. Don was a key member of the Use Study team that developed the Dual Independent Map Encoding (DIME) method of encoding street maps. The DIME innovation led directly to the nationwide Census Bureau TIGER files which constitute the most complete public domain street database in the world. In 1980, Don founded Geographic Data Technology, the first private company to produce and license digital maps as a product. GDT was a major contractor to the Census Bureau in creating the TIGER database; in 2004 Tele Atlas bought GDT for \$100,000,000.



At GDT and Tele Atlas, Don served in many roles, most recently that of Chief Scientist. In the 1990s he performed pioneering work on GPS and digital map accuracy and was first to adapt the new Federal Geographic Data Committee (FGDC) map standard, NSSDA (National Standard for Spatial Data Accuracy) to digital street maps. A recent Tele Atlas project determined accuracy of consumer GPS units to prove the viability of crowdsourcing road alignments for personal navigation devices.

Don has written a wide range of publications, ranging from monthly columns in GIS magazines to a book "Fun with GPS", published by ESRI Press. He was a member of the Mapping Science Committee of the National Academy of Science in the early 1990s and currently serves as a member of the NAS Panel to Review the 2010 Census. In 2007 he received the ESRI Lifetime Achievement award to complement URISA's Horwood Award and election to the URISA Hall of Fame. He is a 1967 graduate of Yale and studied Civil Engineering Systems at MIT.

**Monday, March 28, 2011****Preconference Workshops & Tours**

CalGIS 2011 is offering preconference workshops and tours on Monday, March 28. Hopefully you were able to take advantage of these educational opportunities!

- Basics of Python and ArcGIS Geoprocessing Workshop – Salon D3  
*Instructor: Dave Hansen, GISP, GIS Training Mutual, Orangevale, CA*
- From Watershed to Wine – Field Trip
- Forest Service GIS – Field Trip

**1:00–3:00 pm****California GIS Council Meeting – Salon D1**

This quarterly meeting of the Council, which is annually held during CalGIS, will preview new initiatives by the California Technology Agency to coordinate the development of statewide information on parcels, roads and imagery. This meeting will preview some of the software architecture under consideration and some of the coordination efforts under development. All are welcome to attend.

**3:00–5:00 pm****CGIA Open Board Meeting – Salon D1**

The California Geographic Information Association (CGIA) is a non-profit, statewide association formed in 1994 to facilitate coordination, collaboration, and advocacy for California's Geographic Information System (GIS) community. CGIA promotes the creation and maintenance of the best practices in the governance and application of geographic information within the State of California that can become a model for the nation. Each year CGIA's Executive Board holds an open board meeting at CalGIS. All members and anyone interested in CGIA are invited to attend this meeting to learn directly about their state GIS association and its ongoing advocacy for integrative, effective GIS at the state level.

**Tuesday, March 29, 2011****8:30–10:00 am****Welcome & Opening Keynote Address – Salon A**

Hear opening remarks from Jeff Orton, 2011 CalGIS Conference Chair, including not-to-be-missed conference highlights and events. CalGIS is honored to welcome California's Geographic Information Officer, Scott Gregory, who will discuss GIS in the State and future plans.

Then, Mano Marks, Senior Developer Advocate for Google will discuss "What you should be asking us: The future of geography, and the hard - and easy - questions that follow." The last six years have brought a sea change to the way geographic data is collected, accessed, displayed and distributed. Google Maps, Google Earth, and other web based mapping technologies have brought maps out from the GIS shop and into everyone's every day life. The last few years has brought cloud computing to the fore, bringing massive computing power into the hands of every day users. The last year has seen the introduction of new spatial technologies that blur the lines between GIS and simple maps APIs. The rapid pace of change has left many scrambling to catch up. Given the new technologies, many people aren't even sure where to begin, what questions to ask. This session will help you get started thinking about the implications for you and your work.

**10:00–10:30 am****Grand Opening of Exhibits – Break Sponsored by**

**ECORP Consulting, Inc.**  
ENVIRONMENTAL CONSULTANTS

The exhibitors will be available from 10am–6:30 pm today to answer your questions.

**Breakout Sessions — 10:30 am–12:00 noon****General Interest****Managing Social Issues with GIS – Salon D2**

Every agency grapples with how to balance the demands for public data against budgetary and time constraints. This session will focus on how GIS has provided solutions for these challenges.

*Moderator: Vince Zaragoza, AICP GISP, City of Bakersfield, CA*

- Kern GIS Task Force: Public-Private Partnership Developing an Obesity Map Series  
*Avtar Nijjer-Sidhu and Christina Ortiz, Kern County Environmental Health Services, Bakersfield, CA*
- To Bike or Not To Bike: Bicycle Master Planning with GIS  
*Carrie Carsell, Fehr & Peers, Roseville, CA*
- Visualizing High Speed Rail  
*Heather Schuchard, TC Technology, Carlsbad, CA*  
*Troy Hightower, Kern Council of Governments, Bakersfield, CA*

**Local & State Government****The Current State of Smart Growth Initiatives in California – Salon A2**

This 90-minute roundtable discussion explores the current state of Smart Growth Initiatives in the State of California; how local and regional governments are responding to the mandates and how GIS is being utilized in the development and presentation of the smart growth plans. The panel will also discuss the effects of SB 375 on the Smart Growth strategies.

*Moderator & Panelist: Joe Concannon, Sacramento Area Council of Governments, Sacramento, CA*

**Geospatial Technologies****How to Use Esri Flex Viewer and Javascript/API – Salon D3**

The Esri Flex Viewer and Javascript API allow developers to download and use pre-built code snippets to quickly build applications. This session will focus on how to find, download, and add these widgets to your projects.

*Moderator: Dan Henderson, GISP, CFM, PBS&J Atkins, Sacramento, CA*

- Campus GIS: ArcGIS Server and Silverlight for FM  
*Mono Simeone, City College of San Francisco, San Francisco, CA*  
*Shreepad Ranadive, ValueCAD, San Francisco, CA*
- Automating HAZUS Earthquake for CalEMA  
*Dan Henderson, GISP, CFM, PBS&J Atkins, Sacramento, CA*  
*Diane Vaughan, California Emergency Management Agency, Mather, CA*

**5th Geospatial Technologies in Agriculture and Natural Resources Symposium – Salon D1****Opening Session**

The opening session of the Agriculture and Natural Resources Symposium will feature a Welcome Address by Dr. Bruce Roberts, the J.G. Boswell Chair of Agronomy, Department of Plant Science, CSU Fresno. Following this will be a Growers' Roundtable to discuss the present and future use of GIS on the farm, and how to initiate these technologies for farming practices.

- Growers' Roundtable: GIS Best Practices on the Farm

**Water Resources****Assessing Current Conditions for Bay/Delta Resources – Salon G**

This session will focus on issues in the Bay Delta and how agencies are dealing with assessment of conditions.

*Moderator: Sheri Dister, Weston Solutions, Carlsbad, CA*

- Bay Area Aquatic Resources Inventory: Base Map Standards and Applications  
*Marcus Klatt, San Francisco Estuary Institute, Oakland, CA*
- Bay Area Aquatic Resources Inventory: Outreach Tools and Web Applications  
*Jamie Kass, San Francisco Estuary Institute, Oakland, CA*

- Past, Current & Future Elevation Activities in the Sacramento-San Joaquin Delta  
*Joel Dudas, California Department of Water Resources, Sacramento, CA*

12:00noon–1:30pm Lunch on own & Dedicated Exhibit Hours  
Grab a lunch at any of the outlets in the hotel and head back to the exhibit hall to learn as much as you can about the products and services being offered.

### Breakout Sessions — 1:30–3:00 pm

#### Geospatial Technologies

##### Using GPS and LIDAR in the Real World – Salon D2

GPS and LIDAR are valuable sources of data which can be used to increase productivity while acquiring the high precision data required in today's GIS environment. This session will focus on the use of these data.

*Moderator: Bud Rice, City of Taft, CA*

- Point Clouds and Derived Surfaces Above and Below the Waterline  
*Todd Mitchell, Fugro, Ventura, CA*
- Using Laser Rangefinders To Increase Your Field Productivity  
*Shaun Minton, Electronic Data Solutions, Sacramento, CA*
- Fusion of Aerial and Mobile LiDAR Technologies  
*Malcolm Adkins, GISP, Michael Baker Jr Inc, Oakland, CA*

#### Local & State Government

##### GIS Professional Certifications Panel Discussion - Salon D3

This panel will give brief overviews of two major professional/technical certifications available for GIS professionals, the GIS Certification Institute's GISP Professional Certification and Esri's Technical Certification.

Roundtable Panelists to Include:

- Moderator - Mike Martinez, Esri, Redlands, CA
- David Hansen, GISP, GIS Training Mutual, Orangevale, CA



#### Gold Sponsor Session –

##### Esri: Redistricting Software and Templates and APIs - Salon A2

*Presenters: Harry Moore & Jennifer Hughey*

The first half of this session will examine Esri's online Redistricting Solution. This solution allows you to easily create districts from many different levels of geography, share districts amongst groups, and collaborate with each other. Districts can be shared using ArcGIS Online and viewed as a web map or using ArcGIS Explorer Online.

The second half of this presentation will demonstrate the use of Esri templates and APIs to help you build your own web maps. These templates provide common GIS functionality, such as map viewing, geocoding, querying, and editing, in a user friendly interface. This session is for the nondeveloper and will show you step by step how to implement templates and apply them to your own data.

#### Agriculture

##### The Changing Picture of Agriculture in California – Salon D1

The agricultural landscape changes every year. This session offers three mapping strategies to document these changes.

*Moderator: Kris Lynn-Patterson, University of California - Kearny Ag Center, Parlier, CA*

- Using GIS Web Maps to tell the Changing Ag Land Use Story  
*Jerry Schmierer, University of California, Colusa, CA*
- Irrigation and Landscape Change in the San Joaquin Valley of California  
*Scott Phillips, California State University, Fresno, CA*
- Mapping Agriculture's Changing Landscape with Pesticide Use Reports

*Kris Lynn-Patterson, James Langille, and Robert Johnson, University of California - Kearny Ag Center, Parlier, CA*

#### Water Resources

##### Applications for GIS in Vegetation and Water Resources Mapping – Salon G

GIS has led to significant advances in ecological analysis. Hear about how aerial imagery is being collected and used in order to enhance our knowledge.

*Moderator: Pamela Kountz, GISP, City of Fresno, CA*

- Humboldt Bay Vegetation Mapping  
*Mark Meade, Photo Science Inc, Lexington, KY*  
*Devin Kelley, HJW Photo Science, Oakland, CA*
- Taking Inventory: 80 Years of Aerial Imagery Over Mono Lake & Owens Valley  
*Thomas Loecherbach and Peter Ashley, Tetra Tech, Lafayette, CA*

### 3:00-3:30 pm

#### Break in Exhibit Hall - Sponsored by



### Breakout Sessions — 3:30–5:00 pm

#### Geospatial Technologies

##### Mobile GIS – Salon D2

Mobile data collection has become an essential part of any GIS. This session will focus on how to optimize your use of mobile GIS.

*Moderator: Karen Snow, City of Delano, CA*

- Integrating Digital Photographs with your GPS Field Data Collection and GIS Data  
*Brent Wimmer, California Survey & Drafting Supply, Sacramento, CA*
- Measuring Renewable Energy Intelligence  
*Heather Schuchard, TC Technology, Carlsbad, CA*  
*Troy Hightower, Kern Council of Governments, Bakersfield, CA*
- Mobile GIS: Everything, Everywhere, Anytime  
*David Matson, City of Palo Alto, Palo Alto, CA*  
*Chip Eitzel, Geodesy, San Francisco, CA*

#### Local & State Government

##### Regional Collaboration Among Regional, State, Federal and Tribal Activities – Salon D3

Regional Collaboratives serve as a conduit to connect locally maintained GIS data to Regional, State, Federal and Tribal activities. They are an important part of the GIS community's efforts to foster collaboration throughout the state. This roundtable explores successes in regional collaboration and identifies areas where greater collaborative efforts may be possible.

*Moderator & Panelist: Mike Martinez, Esri, Redlands, CA*

Additional panelists to include:

- Joe Concannon, Sacramento Area Council of Governments, Sacramento, CA
- Carol Ostergren, US Geological Survey, Sacramento, CA
- Rachel Rodriguez, Yurok Tribe, Hoopa, CA

#### Geospatial Technologies

##### Using OpenLayers to Build Rich, Web-based GIS Applications – Salon A2

OpenLayers is an open source Javascript library that is becoming a commonly used platform for building rich web-based GIS applications. This session will provide examples of its use, along with mechanisms to show your GIS data on Google and Bing Maps, very fast commercial basemaps.

*Moderator: Christine Bush, GIS Developer, Mountain View, CA*

- Developing an Open Web Mapping Application  
*Jill Bernhard, Santa Clara Valley Water District, San Jose, CA*
- MarineMap: A Technology Update and Focus on Marine Spatial Planning  
*Colin Ebert, University of California – Santa Barbara, Santa Barbara, CA*
- Hybrid GIS: Combining GIS Software to Expand Functionality & Decrease Cost  
*Matt Lamborn, Pacific Geodata, LLC, Yountville, CA*

## Agriculture

### Managing the Farm with Geospatial Tools: What's Available? – Salon D1

Find out about the latest geospatial approaches to farming: imagery and in-field data collection from three savvy data and service providers.

*Moderator: Kris Lynn-Patterson, University of California - Kearny Ag Center, Parlier, CA*

- Monsanto's Precision Farming Program  
*Jack Paris, Paris Geospatial LLC, Clovis, CA*
- ScanControl's GIS Services  
*Rob Wood, ScanControl, Pleasanton, CA*
- GeoG2 Imagery and Information Products  
*Kevin Spry, GeoG2, Los Altos, CA*

### Networking Reception 5:00–6:30 pm

Spend some time with CalGIS 2011 Sponsors and fellow attendees in the Exhibit Hall. Great conversation and refreshments!

## Wednesday, March 30, 2011

### Breakout Sessions — 8:30–10:00 am

#### Local & State Government

##### Redistricting – Salon A1

With the completion of the 2010 Census, the reapportionment and redistricting process for the state and many local government entities is under way. This panel will discuss the process of redistricting and understand how the available GIS based solutions can help in the public process of redrawing the various districts throughout the state.

*Moderator: Mike Martinez, Esri, Redlands, CA*

Participants:

- Harry Moore, Esri, Redlands, CA
- Timothy McMonagle, US Census Bureau, Northridge, CA

#### General Interest

##### Improving the National Hydrography Dataset – Salon D2

The National Hydrography Dataset provides a comprehensive representation of the surface water of the United States. This session will discuss how the NHD will be improved by incorporating engineered diversion features, which significantly alter the flow of water in some areas.

*Moderator: Darrin Farmer, Weston Solutions, Roseville, CA*

- Improving the National Hydrography Dataset in California with Diversion Networks  
*Kristiana Elite and Jeff Simley, US Geological Survey, Denver, CO*

#### Geospatial Technologies

##### Using Microsoft's Silverlight and ESRI's ArcGIS Server Technologies – Salon A2

In September 2009, the City of Modesto created a Rich Internet Application using Microsoft's Silverlight and ESRI's ArcGIS Server technologies. This session will demonstrate, with detailed discussion of the steps involved, how this was accomplished.

*Moderator: Linda Wright, GISP, El Dorado County, Placerville, CA*

- Modesto's Leap Forward: Our Move to a Rich Internet GIS Application  
*Patrick Brooke and Robert Beckler, City of Modesto, Modesto, CA*

#### Water Resources

##### GIS Applications for Water Districts - Part One – Salon D3

GIS is a tool that can meet many needs for water districts. Many larger districts have seen the value of GIS in their work and have moved into the use of these tools. For other districts, GIS is something that has either never been considered or is considered too complex to try. This session will explore what GIS is and what it can do for your district. Speakers will also discuss who is using GIS and what value they are realizing. Most of these examples will focus on rural and agricultural districts with presenters coming from the San Joaquin Valley.

*Moderator: Jeff Orton, Paramount Citrus, Delano, CA*

- What is GIS and How Can it Benefit my Water District?  
*Tom Haslebacher, PG, CHg, Kern County Water Agency, Bakersfield, CA*  
*Sonja Thiede, GISP, Kings River Conservation District, Fresno, CA*

##### Networking Break and Poster Session in the Exhibit Hall

**10:00–11:00 am**

Join your fellow attendees in the Exhibit Hall to discuss poster session entries and visit with conference sponsors. Participants include:

##### Geo-Spatial Yield Monitoring Technology for Mechanized Almond Harvest

*Balaji Sethuramasamyraja and Sunny Sehgal, Dept of Industrial Technology, California State University, Fresno, CA*

*Jim Yager, Impact Ag and Strategic Farming, Fresno, CA*

Yield monitoring is critical for almond growers to garner profitability through application of geospatial technology and site specific crop management in almond production. Almond growers could optimize water and application of inputs based on soil thematic layer of the field that has a strong correlation to yield besides management practices. In this research a commercially deployable yield monitor was developed for almonds with sensing, global positioning system (GPS) and geographic information systems (GIS) technology (Digi-Star® Yield Monitor). Yield maps were developed for production almond fields. The yield data was validated using sampling datasets which were in turn correlated to soil thematic layer developed using soil electrical conductivity (Veris® 3100 EC Mapper). The sampling from multiple soil zones representing a soil texture were correlated to the almond turn out ratio. Also, the effect of navel orange worm (NOW) on almond meat turn out ratio was reported.

##### Using Suitability Analysis for Locating Wi-Fi Towers During A Natural Disaster

*Fred Dominguez, MD, MPH Assistant Professor, Charles Drew Univ. of Medicine and Science*

During a natural disaster such as a flood there may be a need to construct communication links such as WiFi towers. A strategy is where the best location to construct the towers in optimizing their function, may prove useful in saving lives. Using GIS tools such as Suitability Modeling may assist in developing this strategy. This model utilizes hypothetical criteria in deciding on where WiFi towers should be located.

##### Utilizing Geographic Information Systems in Mapping Air Quality in the San Joaquin Valley

*Yong Choi, California State University, Bakersfield, Bakersfield, CA*

Air quality is a serious issue in major metropolitan areas in California, particularly in the major metropolitan area of Bakersfield in Kern County and other areas of the San Joaquin Valley. With conditions worsening in summer time, many residents, particularly asthmatics or those with chronic respiratory illnesses

are dependent on an accurate mapping and updating of local air quality levels. Geographic information systems act as a powerful tool for environmentalists and city planners to more accurately monitor and map changing air quality levels, as well as determine whether or not efforts to curb bad air quality have been successful. This paper strives to show how such a method is feasible via the creation of a GIS to highlight air quality levels for the San Joaquin Valley, one of the most polluted areas in California.

### **Remote Sensing and GIS Applications in Agriculture: A Case Study in Wadi Aldoasr, Saudi Arabia**

*Ali Aldosari, King Saud University, Saudi Arabia*

Agricultural production in Saudi Arabia is limited by water resources and availabilities of agricultural lands. Through the last 30 years, the agricultural areas have increased and decreased at different levels of change due to government policy. Wadi Aldoasr City is a major area of agricultural production (ex. wheat, alfalfa, vegetable) which is affected and influenced noticeably by the agriculture policy in Saudi Arabia. Normalized Difference Vegetation Index (NDVI) maps allow comparisons of the spatial and temporal variability in the amount and condition of agricultural lands. In this study, multi-temporal NDVI features derived mainly from Landsat images dating from 1975 to 2010 were used to assess the status of agricultural lands in Wadi Aldoasr area. The main objects include monitoring and analyzing the changes of agricultural lands and its pattern in Wadi Aldoasr.

### **Using SLEUTH to Conceptualize Growth Scenarios in the Humboldt Bay Area**

*Jess Morrison, Humboldt State University, Arcata, CA*

Analysis of growth patterns in the Humboldt County communities of McKinleyville, Arcata, Eureka, and Fortuna using the SLEUTH Urban Growth Model. Three potential scenarios are projected 50 and 100 years into the future.

### **Seasonal Thermal Habitat Selection by Pacific Fisher in the Southern Sierra Nevada**

*Jim Garner, Humboldt State University, Arcata, CA*

Pacific fisher (*Martes pennanti*) in the southern Sierra Nevada lives within relatively narrow environmental constraints. This leads to our hypothesis that fisher will show seasonal selection of thermally moderate habitat in relation to the landscape. Here we report findings of microclimate selection by fisher in relation to seasonally averaged thermal habitat relative to the landscape based on land surface temperature estimates derived from Landsat Thematic Mapper images.

### **Mapping Homeless Encampments in the Arcata Community Forest**

*Daniel Jones, Humboldt State University, Arcata, CA*

The City of Arcata, California, is concerned with the impacts on the water quality of salmonid supporting streams caused by homeless encampments in the Arcata Community Forest. My objective was to map the locations of these encampments and attempt to produce a multivariate predictive model.

### **Cut-Fill Analysis: How Much and Where**

*Kevin Ernst, ARCADIS, San Francisco, CA*

Currently, when calculating the volume of material removed (cut) or added (filled) following grading activity GIS users typically have one option: the cut-fill function available in 3d Analyst or Spatial Analyst. While this function allows for quick and easy analysis across a site (the spatial extent of data being fed in to the tool), it lacks the capability for calculating changes in volumes of material at more granular sub-site levels.

Being able to determine soil volume changes at the sub-site level (i.e. according to a regularized grid, IR Site, property boundary, etc.) has significant cost and/or liability implications- particularly in large-scale remediation projects. Although meeting this challenge can be accomplished by subdividing input data, the process can get complex, and is prone to user-error especially with more sub-sites, or frequent iterations. I have developed a simple process that hinges on the integerize raster function [Int(SA)] that enables users to divide cut-fill results using polygon features of their choice.

### **Geographic Analyses Help Hospitals Identify Community Needs**

*Chris Ringewald, Advancement Project/Healthy City, Los Angeles, CA*

Healthy City helps Kaiser Permanente create effective community needs assessments that prioritize health needs, promote health planning, and meet California statutory requirements.

### **Assessing Neighborhood Completeness in Eureka, California**

*Christopher Escarcega, Humboldt State University, Arcata, CA*

This raster-based GIS analysis measures neighborhood completeness (including accessibility and mobility) through identification of relevant indicators and the proximity between those indicators. Identification of neighborhoods with high accessibility and mobility, in combination with neighborhood need, will provide a basis for more robust analysis that could inform economic, land use, and transportation planning for the City of Eureka.

## **Breakout Sessions — 11:00 am–12:00 noon**

### **General Interest**

#### **WebGIS for Social Change – Salon A1**

HealthyCity.org provides users with the ability to map socioeconomic data, services and deficits for all of California, including uploading their own data to augment their research on the site.

*Moderator: Dave Hansen, GISP, GIS Training Mutual, Orangevale, CA*

- HealthyCity.org: Web GIS for Social Change  
*Chris Ringewald, Advancement Project, Los Angeles, CA*

### **Local & State Government**

#### **GIS in Health Roundtable – Salon D2**

The role of GIS is quickly growing in the health agencies of local government. With the emergence of Healthy Communities, Health Information Exchange, and Public Health Preventative Practices, the use of GIS as an analytical and reporting tool will continue to grow. This panel will discuss the expanded role of GIS in Health as well as the management and analysis of health related data using GIS.

*Moderator: Mike Martinez, ESRI, Redlands, CA*

*Participants to include:*

- Dr. Avtar Nijjer-Sidhu, Kern County Environmental Health, Bakersfield, CA
- Christina Ortiz, Kern County Environmental Health, Bakersfield, CA

### **Geospatial Technologies**

#### **Internet GIS Applications – Salon A2**

Technology has had a profound impact on the mapping arena over the last several years. This session focuses on the technology available to today's mapping professionals and, more importantly, how the benefits of this technology impact the GIS community.

*Moderator: Linda Wright, GISP, El Dorado County, Placerville, CA*

- Technology and the Mapping Profession  
*Mark Meade, Photo Science Inc, Lexington, KY*  
*Devin Kelley, HJW Photo Science, Oakland, CA*

**Agriculture****Multispectral Imagery for Agriculture – Salon D1**

This panel discussion will focus on the uses of imagery to improve agricultural practices.

*Moderator: Kevin Spry, GeoG2, Los Altos, CA*

- Multispectral Imagery for California Ag: Who, What, Where, When, How Fast, and How Much?  
*Jack Paris, Paris Geospatial LLC, Clovis, CA*

**Water Resources****GIS Applications for Water Districts - Part Two – Salon D3**

GIS doesn't have to be difficult and expensive to get started. GIS data is more plentiful than ever, many of your colleagues are willing to help, commercial software options abound and even free GIS tools are getting better all of the time. This session explores how to get started and where to find data, tools and assistance to help you realize the benefits of GIS and minimize your risks.

*Moderator: Malcolm Adkins, GISP, Michael Baker Jr Inc, Oakland, CA*

- So I See That GIS Might be Useful for My Water District – How Do I Get Started?  
*Tom Haslebacher, PG, CHG, Kern County Water Agency, Bakersfield, CA*  
*Sonja Thiede, GISP, Kings River Conservation District, Fresno, CA*

**Box Lunch & Dedicated Exhibit Time — 12:00–1:30 pm**

Exchange your luncheon ticket for a boxed lunch in the Lower Atrium and head to the table which is assigned to a topic of most interest to you.

The list of topics was included with your registration materials.

It's a great way to meet new people who share similar interests and challenges. Build your California GIS Network!

**Breakout Sessions — 1:30–3:00 pm****General Interest****Government GIS Data – Salon A1**

Government data is one of the most valuable resources available to a GIS user. This session will discuss some of the current advances being planned for these data.

*Moderator: Blanca Quintero, Sweetwater Authority, Chula Vista, CA*

- The US Topo – Topographic Maps for the Nation  
*Drew Decker, US Geological Survey, San Diego, CA*
- The Implementation of the California Spatial Data Infrastructure  
*Carol Ostergren, US Geological Survey, Sacramento, CA*
- Census Bureau Data Products - 2010 Census and American Community Survey / The Geographic Support System (GSS) Initiative- The Future  
*Timothy McMonagle, US Census Bureau, Northridge, CA*

**Local & State Government****GIS Web Mapping and Application Development – Salon A2**

This panel will explore the various tools available for GIS mapping and application development on the web. The discussion will share what considerations are used in choosing a platform as well as the development cycle and supporting applications.

*Moderator & Participant: Mike Martinez, Esri, Redlands, CA*

*Additional Panelists:*

- Robert Beckler, City of Modesto, Modesto, CA
- Patrick Brooke, City of Modesto, Modesto, CA
- Shreepad Ranadive, ValueCAD, San Francisco, CA

**Geospatial Technologies****Web GIS – Salon D2**

One of the most important charges of GIS is public communication. This session demonstrates how the web can be leveraged as a tool to enable and enhance this task.

*Moderator: Lisa Lubeley, GISP, Dudek, Encinitas, CA*

- Introduction to ESRI's Flexviewer  
*Kimberly Clark, Southern California Association of Governments, Los Angeles, CA*
- San Francisco Estuary Institute Geospatial Library  
*Kristen Cayce, San Francisco Estuary Institute, Oakland, CA*
- Web-based GIS: Helping Democratize Redistricting in 2011  
*Chris Ringewald, Advancement Project, Los Angeles, CA*

**Agriculture****Managing California's Water Resources – Salon D1**

Water is managed using geospatial technologies. This session explores how one water district and one research project use geospatial techniques to improve water-use planning.

*Moderator: Kris Lynn-Patterson, University of California - Kearny Ag Center, Parlier, CA*

- GIS at KRCD: GIS Role in Groundwater and Surface Water Program Compliance  
*Sonja Thiede, GISP, Kings River Conservation District, Fresno, CA*
- What Trout do When No One is Looking: GIS and The Trout Fishery on The Kings River  
*Sonja Thiede, GISP, Kings River Conservation District, Fresno, CA*
- Refined Crop Coefficients to Improve Water Resources Planning and Management  
*Robert Johnson and Kris Lynn-Patterson, University of California Kearney Ag Center, Parlier, CA*

**Water Resources****Applications in GIS Water Resources – Salon D3**

Whether in times of flood or drought, water management is a critical issue for California. This session will focus on water demand and modeling.

*Moderator: Sheri Dister, Weston Solutions, Carlsbad, CA*

- Estimating Watershed Yield from Satellite Images within Antelope Valley  
*Anna Reimer, West Yost Associates, Davis, CA*
- Satellite Mapping of Irrigation Demand in the San Joaquin Valley  
*Lee Johnson, California State University, Monterey Bay, Moffett Field, CA*
- Visualizing H&H Modeling Results in GIS  
*Sheng Tan, GISP, Wood Rodgers, Sacramento, CA*

**Break in Exhibit Hall — 3:00–3:30 pm**

Last chance to check out demos and get answers to any remaining questions you have. The Exhibitors pack up after this break!

**Breakout Sessions — 3:30–5:00 pm****General Interest****GIS Logistical and Legal Issues – Salon D2**

The core of GIS is access to data. This session will focus on how people are working to increase and improve our access to effective data.

*Moderator: Zacharias Hunt, Santa Barbara County, Santa Barbara, CA*

- Public Access to County GIS Basemap Data: The Struggle Continues  
*Bruce Joffe, GISP, GIS Consultants, Oakland, CA*
- GIS based Land Use and Transportation Models for Climate Change Law SB375  
*Troy Hightower, Kern Council of Governments, Bakersfield, CA*
- Geodetic Control Framework Layer  
*Marti Ikehara, National Geodetic Survey/NOAA, Sacramento, CA*

**Local & State Government****GIS Program Development – Salon A1**

Successfully implementing and growing GIS program, regardless of organizational size, has a number of challenges. Not all challenges are the same. This roundtable discussion will explore the development and maturation of GIS programs in various sized local governments.

*Roundtable Participants:**Moderator - RuthAnne Harbison, City of Merced, Merced, CA*

- Karen Snow, City of Delano, Delano, CA
- Robert Beckler, City of Modesto, Modesto, CA
- Mark Greninger, Los Angeles County, Los Angeles, CA

**Agriculture****Geospatial Applications in Agricultural Research – Salon D1**

University-level research applications of geospatial techniques are discussed in this session.

*Moderator: Kris Lynn-Patterson, University of California - Kearny Ag Center, Parlier, CA*

- Using the Internet to Manage Pests and Disease  
*Kris Lynn-Patterson, University of California - Kearny Ag Center, Parlier, CA*
- Managing Research with GIS at Lindcove Research Station  
*James Langille, University of California - Kearny Ag Center, Parlier, CA*
- Robert Johnson, University of California - Kearny Ag Center, Parlier, CA  
*Beth Grafton-Cardwell*
- Greg Montez, University of California - Kearney Ag Center, Parlier, CA
- Changes in Ground Water Depth Through Time  
*Michael Hickey, Tulare County, Visalia, CA*

**Water Resources****GIS and Levee Databases – Salon D3**

This session will focus on levees with emphasis on the national levee database and California critical levee projects.

*Moderator: Dan Henderson, GISP, PBS&J Atkins, Sacramento, CA*

- Using the USACE National Levee Database Model in California  
*Dan Henderson, GISP, PBS&J Atkins, Sacramento, CA*
- A National Levee Database  
*Malcolm Adkins, GISP, Michael Baker Jr Inc, Oakland, CA*
- Challenges of GIS Implementation on Critical Levee Projects  
*Ian Mc Govern, Kleinfelder, Inc, Sacramento, CA*

**CalGIS HAPPY HOUR! 5:30pm – 6:30pm**

Join our happy hour sponsors, PBS&J Atkins and the Northern and Central California URISA Chapters, in the Lobby Bar for hospitality, games and prizes.

**Thursday, March 31, 2011****9:00 am – 12:00 noon****Conference Breakfast, CGIA Awards, & Closing Plenary Session – Salon A2**

Each year, the California Geographic Information Association (CGIA) recognizes outstanding achievements in various aspects of GIS within California through its awards program. Find out the distinguished individuals and organizations that are being recognized with 2011 CGIA Awards in the following categories:

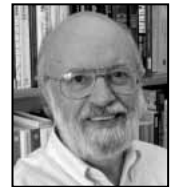
- **Chairman's Award:** Granted to honor a person who has made outstanding

contributions in the promotion, innovation, and/or use of GIS technology.

- **Exemplary Systems Award:** Granted for outstanding application of GIS technology representing innovative, elegant, or creative techniques.
- **Advancement of Collaboration Award:** Granted for outstanding inter-organization collaborative efforts in GIS.
- **Outstanding Internet Presentation Award:** Granted to the outstanding integration of GIS and web technologies demonstrating excellence in aesthetic presentation, functionality, ease of use, and overall user experience.
- **Excellence in Education Award:** Granted to the educational institution that displays extraordinary approach, contribution, development or commitment to GIS education in California.

**Congratulations to all who are recognized!****CalGIS is honored to welcome Don Cooke as our Closing Keynote Speaker.**

Donald Cooke is Community Maps Evangelist at Esri. He has worked with digital mapping and geospatial technologies for 43 years, starting as a researcher in the New Haven Census Use Study. Don was a key member of the Use Study team that developed the Dual Independent Map Encoding (DIME) method of encoding street maps. The DIME innovation led directly to the nationwide Census Bureau TIGER files which constitute the most complete public domain street database in the world. In 1980, Don founded Geographic Data Technology, the first private company to produce and license digital maps as a product. GDT was a major contractor to the Census Bureau in creating the TIGER database; in 2004 Tele Atlas bought GDT for \$100,000,000.



At GDT and Tele Atlas, Don served in many roles, most recently that of Chief Scientist. In the 1990s he performed pioneering work on GPS and digital map accuracy and was first to adapt the new Federal Geographic Data Committee (FGDC) map standard, NSSDA (National Standard for Spatial Data Accuracy) to digital street maps. A recent Tele Atlas project determined accuracy of consumer GPS units to prove the viability of crowdsourcing road alignments for personal navigation devices.

Don has written a wide range of publications, ranging from monthly columns in GIS magazines to a book "Fun with GPS", published by ESRI Press. He was a member of the Mapping Science Committee of the National Academy of Science in the early 1990s and currently serves as a member of the NAS Panel to Review the 2010 Census. In 2007 he received the ESRI Lifetime Achievement award to complement URISA's Horwood award and election to the URISA Hall of Fame. He is a 1967 graduate of Yale and studied Civil Engineering Systems at MIT.

**Closing Keynote Presentation:**

Volunteered Geographic Information (VGI) is embodied in operations ranging from the Open Street Map to user feedback channels for Google Maps and personal navigation devices. The biggest challenge for VGI is turning a large number of citizen reports into the kind of authoritative data that we've grown to expect from maps. Esri's new Community Maps program takes a unique slant on VGI by empowering authoritative stewards of spatial data to contribute to a global map at scales down to 1:1000. Don will present a history and examples of VGI applications with emphasis on Esri's "Maps and Apps" program.

## SPONSORS

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The CalGIS Conference would not be possible without the support of our sponsors. Be sure to spend time learning more about their solutions in the exhibit hall.

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#### Esri [www.esri.com](http://www.esri.com)

**Booth # 200/204**

Since 1969, Esri has given customers around the world the power to think, plan and act geographically. The market leader in GIS, Esri software is used in successful organizations worldwide including the largest cities and counties in the United States, most national governments, tribal nations, and in our colleges and universities nationwide. ArcGIS is a complete system for designing and managing solutions through the application of geographic knowledge. The Esri system runs on desktops, mobile, web, and enterprise servers, providing the backbone for data management, planning and analysis, operational awareness, mobile enablement and citizen engagement. To learn more, visit <http://www.esri.com>.

### SILVER SPONSORS

#### Allen Instruments and Supplies [www.alleninst.com](http://www.alleninst.com)

**Booth # 103**

Allen Instruments and Supplies offer innovative solutions in the fields of GIS and Surveying to business, government and educational institutions. The company has been built on personal integrity, knowledge and strong manufacturing and distribution relationships. Allen Instruments and Supplies provide customers with reliable and leading edge products and technologies from the most reputable manufacturers. Our company sets itself apart by the value added services provided before and after your investment.

#### DUDEK [www.dudek.com](http://www.dudek.com)

**Booth # 203**

Dudek provides a full-range of geospatial services for public and private clients. Our GIS specialists provide: data management and cartographic services; GPS field data collection; data analysis and modeling; risk assessment; remote-sensing; desktop, web-based and mobile application development; program and project management; emergency preparedness and Homeland Security support; utilities modeling and asset management; and as-needed and extension of staff services. Headquartered in Encinitas, Dudek's 200 employees work in seven offices throughout California. We can be contacted at [www.dudek.com](http://www.dudek.com) or [info@dudek.com](mailto:info@dudek.com).

#### Pictometry [www.pictometry.com](http://www.pictometry.com)

**Booth # 305**

Pictometry International Corp. is a recognized world leader in geo-referenced aerial imaging and software. Using our patented image capture process we have developed a revolutionary portfolio of products used by government professionals across the country. We are a trusted source for critical visual information with Federal, State, County and Government agencies.

#### Valtus Imagery Services [www.valtus.com](http://www.valtus.com)

**Booth # 301**

Valtus Imagery Services specializes in the storage and distribution of large imagery and elevation datasets through web delivery systems. Views: Spatial Data Access Subscription provides 'real-time' streaming access to multiple imagery and elevation layers within a WMS enabled GIS application, while the Spatial Data Store allows customers to select data on a transactional basis, from the imagery and/or LiDAR libraries. Through Vault: Spatial Data Hosting Service, customers are also able to securely integrate their proprietary data.

### BRONZE SPONSORS

#### California Surveying & Drafting Supply [www.csdsinc.com](http://www.csdsinc.com)

**Booth # 100**

Established in 1986, California Surveying & Drafting Supply is an authorized distributor for the complete line of Trimble Mapping & GIS Systems, as well as HP Designjet Printers. We offer sales, service, rentals and certified Trimble training. Visit us at: [www.csdsinc.com](http://www.csdsinc.com)

#### CRW Systems Inc [www.crw.com](http://www.crw.com)

**Booth # 104**

CRW Systems, Inc is a professional engineering and consulting firm headquartered in San Diego, California. We have been providing information management solutions for over 135 municipal agencies throughout the United States since 1991. Our service includes application development and implementation of systems for local and state agencies.

#### Electronic Data Solutions [www.elecdata.com](http://www.elecdata.com)

**Booth # 304**

Electronic Data Solutions offers Trimble GPS mapping systems, Esri GIS Software, Juniper Systems field computers and LTI range finders for specific applications and expert guidance to help you to efficiently capture field data, [www.elecdata.com](http://www.elecdata.com).

#### EnerGov Solutions [www.energov.com](http://www.energov.com)

**Booth # 211**

EnerGov Solutions is a leading and global provider of innovative Land, License and Asset Management software solutions designed specifically for enterprising government agencies. Enterprise software solutions offered by EnerGov include GIS-centric process automation of land use planning & review, permitting, enforcement management, inspections, licensing, work orders and service requests.

#### Fugro-EarthData [www.earthdata.com](http://www.earthdata.com)

**Booth # 302**

Combining cutting-edge mapping and surveying technology with the power of GIS, Fugro delivers complete, end-to-end solutions related to the acquisition, interpretation, management and dissemination of geospatial information. We have the resources, technology, and operational experience to provide the right geospatial solution to public and private sector customers, anywhere in the world.

#### Geocortex by Latitude Geographics [www.geocortex.com](http://www.geocortex.com)

**Booth # 303**

Geocortex software by Latitude Geographics, transforms how people design, build and maintain Esri ArcGIS Server applications. By taking advantage of off-the-shelf components and a supportable infrastructure you will be able to do more – faster,

cheaper and better than otherwise possible. In fact, that is what hundreds of organizations around the world have done in choosing Geocortex when seeking powerful, intuitive web-based mapping solutions. In 2010, Latitude Geographics was named one of Esri's first Platinum Business Partners as well as 2010 Partner of the Year.

**Geodesy**  
**www.geodesy.net**

**Booth # 212**

Geodesy creates Geographic Information Systems (GIS) solutions for local, state, and federal government agencies and the built environment industries.

**GeoG2 Solutions Inc**  
**www.geog2.com**

**Booth # 105**

GeoG2 Solutions, Inc. provides digital aerial imagery data and analysis solutions for managing agricultural and forestry production in the Western US. We offer growers high resolution multi-spectral imagery, geo-referencing, image processing, and image analysis. The company also serves real estate, resource management, urban, use planning and other geography-intense industries.

**Intermap Technologies**  
**www.intermap.com**

**Booth #306**

Intermap Technologies, a worldwide digital mapping and geospatial solutions company, provides seamless wide-area 3D maps and images. Its NEXTMap countrywide database enables countless geospatial applications within the water resource and floodplain management, wireless telecommunications, traditional and alternative energies, engineering, automotive fuel efficiency and safety, and insurance risk management markets.

**LizardTech**  
**www.lizardtech.com**

**Booth # 102**

LizardTech creates state-of-the-art software products and solutions that enable governments and businesses to manage and distribute massive, high-resolution geospatial data such as satellite imagery and LiDAR data. LizardTech pioneered MrSID®, a powerful wavelet-based image encoder, viewer, and file format, and sits on the Technical Committee of the Open Geospatial Consortium.

**Microdesk Inc**  
**www.microdesk.com**

**Booth # 210**

Microdesk is a design technology consultancy with 11 offices nationwide that provides the AECO and Manufacturing industries with premiere consulting, implementation, support, and training solutions using today's leading technology products from Autodesk, Google, Oracle, Adobe, ESRI, and Microsoft. For more information, visit [www.microdesk.com](http://www.microdesk.com).

**Photo Science**  
**www.photoscience.com**

**Booth # 107**

Founded in 1974, Photo Science is a full-service Geospatial Solutions firm, specializing in aerial imaging and data collection and processing, LiDAR acquisition and processing, mobile mapping, photogrammetric mapping, GIS, system integration, remote sensing, and surveying services. Our 190 professional and technical staff is devoted exclusively to providing geospatial services to private sector customers, as well as federal, state, and local agencies. The company employs qualified professionals and support personnel in nine offices located in California, Colorado, Florida, Georgia, Kentucky, Maryland, Michigan, and Pennsylvania.

**Pixxures Inc**  
**www.pixxures.com**

**Booth # 208**

Pixxures, Inc. provides custom aerial photography solutions to fulfill our clients' needs for geospatial information. A member of XeDAR's Geospatial Division, Pixxures performs projects that include aerial photographic mapping, direct-digital color and near-infrared orthophotography, planimetric and topographic mapping, vector alignment, LiDAR, DEM/DTM compilation and other GIS products and services.

**US Geological Survey**  
**www.usgs.gov**

**Booth # 209**

As an unbiased science agency for the US Department of the Interior, the USGS is dedicated to the timely and relevant study of the landscape, our natural resources, and natural hazards.

**VESTRA Resources**  
**www.vestra.com**

**Booth # 213**

VESTRA Resources, Inc. is a leader in geospatial and information technologies. VESTRA proudly presents the GeoSystems Monitor™, providing intimate real-time knowledge of your Enterprise GIS, as well as the Pest Management & Vector Control Mobile Operations System (MOS), a smart, intuitive, GIS-based system centered on business intelligence practices.

**Weston Solutions Inc**  
**www.westonsolutions.com**

**Booth # 206**

Weston Solutions, Inc. (WESTON®) is a full-service information management, environmental consulting, and redevelopment firm. Our 150 plus IT professionals provide expertise in asset management, computerized maintenance management systems (CMMS), geographic information systems (GIS), application development, decision support, and system integration to state, city, municipal, and federal, industrial and commercial clients. Our 1,800 employee owners work from 60 offices around the globe to build strong stakeholder relationships and produce solutions that work. WESTON has been responding to our clients' toughest problems for more than 50 years.

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**California Land Surveyors Association**  
**www.californiasurveyors.org**

**Booth # 205**

CLSA advances the interests of the profession of Land Surveying to maintain the highest possible standards of professional ethics and practice to encourage uniformity of practices and procedures, and foster public faith in and understanding of Land Surveyors and their work.

CLSA represents Land Surveyors, in public or private practice whether they are employees or proprietors.

**UC Riverside Extension**  
**www.extension.ucr.edu/gis**

**Booth # 207**

UC Riverside Extension is the non-profit branch of the University serving professionals throughout the Inland Empire, the country and world. The award-winning Certificate in GIS was established in 1993 and is a recognized leader in GIS education. The comprehensive program provides innovative and practical GIS education for those entering or advancing in the GIS field.

## 2011 California GIS Conference At-A-Glance Fresno – March 28-31, 2011

### Monday, March 28, 2011

8:30 AM-5:00 PM <b>Workshop 1 - Basics of Python and ArcGIS Geoprocessing</b> Salon D3	8:30 AM-5:00 PM <b>Workshop 2 - Introduction to Open Source GIS</b> Salon G	11:00 AM-6:00 PM <b>Field Trip 1 - From Watershed to Wine</b>	1:30 -5:00 PM <b>Field Trip 2- Forest Service GIS</b>	1- 3 PM: <b>California GIS Council</b> 3- 5 PM : <b>CGIA Open Board Meeting</b> Salon D1
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### Tuesday, March 29, 2011

8:30-10:00AM	<b>Conference Opening Session &amp; Keynote Speakers:</b> <ul style="list-style-type: none"> <li>• Scott Gregory , California Geographic Information Officer</li> <li>• Mano Marks, Geo Developer Advocate, Google</li> </ul> Salon A1/A2				
10-10:30 AM	Coffee Break in Exhibit Hall – sponsored by ECORP Consulting, Inc. <i>Exhibit Hours 10:00 AM – 6:30 PM</i>				
10:30AM - 12:00 Noon	<b>Managing Social Issues with GIS</b> Salon D2	<b>The Current State of Smart Growth Initiatives in California</b> Salon A2	<b>How to Use Esri Flex Viewer and Javascript/API</b> Salon D3	<b>5th Geospatial Technologies in Agriculture and Natural Resources Symposium - Opening Session</b> Salon D1	<b>Assessing Current Conditions for Bay/Delta Resources</b> Salon G
12:00-1:30 PM	Lunch on own & Exhibit Hours				
1:30-3:00 PM	<b>Using GPS and LIDAR in the Real World</b> Salon D2	<b>GOLD SPONSOR SESSION - Esri</b> Salon A2	<b>GIS Professional Certifications Panel Discussion</b> Salon D3	<b>The Changing Picture of Agriculture in California</b> Salon D1	<b>Applications for GIS in Vegetation and Water Resources Mapping</b> Salon G
3:00 – 3:30 PM	Refreshment Break in Exhibit Hall – sponsored by Allen Instruments & Supplies				
3:30-5:00PM	<b>Mobile GIS</b> Salon D2	<b>Regional Collaboration Among Regional, State, Federal and Tribal Activities</b> Salon D3	<b>Using OpenLayers to Build Rich, Web-based GIS Applications</b> Salon A2	<b>Managing the Farm with Geospatial Tools</b> Salon D1	
5:00-6:30PM	Exhibit Hall Networking Reception				

### Wednesday, March 30, 2011

8:30-10:00AM	<b>Redistricting Roundtable Discussion</b> Salon A1	<b>Improving the National Hydrography Dataset</b> Salon D2	<b>Using Microsoft's Silverlight and ESRI's ArcGIS Server Technologies</b> Salon A2	<b>GIS Applications for Water Districts – Part I</b> Salon D3	
10-11 AM	Networking Break and Poster Session in the Exhibit Hall <i>Exhibit Hours 10:00 AM – 3:30 PM</i>				
11 AM – 12:00	<b>WebGIS for Social Change</b> Salon A1	<b>GIS in Health</b> Salon D2	<b>Internet GIS Applications</b> Salon A2	<b>Multispectral Imagery for Agriculture</b> Salon D1	<b>GIS Applications for Water Districts – Part II</b> Salon D3
12:00-1:30 pm	Box Lunch (Lobby Atrium) & Dedicated Exhibit Time				
1:30-3:00	<b>Government GIS Data</b> Salon A1	<b>GIS Web Mapping and Application Development</b> Salon A2	<b>Web GIS</b> Salon D2	<b>Managing California's Water Resources</b> Salon D1	<b>Application in GIS Water Resources</b> Salon D3
3:00 – 3:30 PM	Refreshment Break in Exhibit Hall <i>Exhibits Close after this Break!</i>				
3:30-5:00	<b>GIS Logistical and Legal Issues</b> Salon D2	<b>GIS Program Development</b> Salon A1	<b>Geospatial Applications in Agricultural Research</b> Salon D1	<b>GIS and Levee Databases</b> Salon D3	
5:30-6:30 PM	<b>CalGIS Happy Hour in the Lobby Bar – sponsored by PBS&amp;J and the Northern &amp; Central California Chapters of URISA</b>				

### Thursday, March 31, 2011

9:00 AM-12:00 Noon – Salon A2 - <b>Breakfast, CGIA Awards, &amp; Closing Plenary Session: Don Cooke, Esri</b>
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