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WAURISA

The Washington State Chapter of
URISA – The Association for GIS Professionals



SPRING 2009

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ISSUE 15

OPEN SOURCE GIS EXPANDS IN WASHINGTON STATE

By Whitney K. Bowerman

Open source (OS) software is hardly unique to GIS – it has been an active development platform since the 1980's and is common across a variety of operating systems and applications. By definition OS software is that for which the source code and other rights typically reserved for copyright holders are provided under a software license. This license must meet the Open Source Definition (<http://opensource.org/docs/osd>) or exist in the public domain. Users are permitted to use, change and improve the software, and to redistribute it in modified or unmodified forms. This means that both proprietary and OS software can be integrated with or built on top of OS software.

The debate between open source and proprietary (or closed source) software is a heated one, with commonly held myths about both. Critics of open source development assert that systems should be designed by as few architects as possible in order to ensure the system's integrity, with clearly identified roles for everyone on the project team. Open source supporters argue that open development encourages better quality, higher reliability, more flexibility and lower cost because it relies on many users and developers.



Contrary to popular belief, open source GIS and proprietary GIS are not mutually exclusive. Because open source software doesn't push a specific format, it can be integrated with other software. OS GIS can run on many operating systems, including Windows, Linux and Mac OS X, and accepts a variety of spatial data input formats.

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PRESIDENT'S COLUMN

Fellow Friends and Colleagues,

As the 2009 Washington GIS Conference fast approaches, I have been reflecting on the time I have served as a volunteer, board member, and President of WAURISA. In the few short years that I have been involved with this great organization, I have watched it grow and mature, and have had the pleasure of learning from and working with many great colleagues in our Washington State GIS community. Together, we have worked hard to revise and approve by-laws, form new committees, fund an educational competition in honor of Dick Thomas, develop an online forum, website and newsletter, grow our conference and plan for our future. I believe that this growth and maturity will continue as we welcome new board members, volunteers, and increase our membership.

The 2009 Washington GIS Conference will be an exciting event this year. We have so many high quality speakers lined up – presenting on topics ranging from Public Safety to Python Scripting. Please take a look at the preliminary agenda which can be accessed on our website: www.waurisa.org. We are excited to hold the conference at Meydenbauer Center in Bellevue, Washington – I hope that you will consider attending. Our attendance is looking very strong, and I'm looking forward to seeing everyone there!

I can't thank all of the volunteers and board members enough for all of the hard work they do. I truly appreciate all of the time that they have given to prepare for the conference, attend meetings, and work to better our organization. Please let me know if you are interested in becoming more involved, or if there are things we can improve for our members. It has truly been an honor to serve you all. Thank you!

-Angela Johnson, WAURISA President



LOSS AND DAMAGE MODELING USING HAZUS-MH AND REORGANIZATION OF THE WASHINGTON STATE HAZUS USER GROUP (WAHUG)

By: Cathy Walker, GIS Analyst; Washington Military Department – GIS Section

HAZUS-MH (Hazards U.S. – Multi-Hazard) is a nationally applicable standardized methodology and software program that allows an emergency manager or GIS professional the ability to estimate potential losses from an earthquake, coastal or riverine flooding event, or hurricane wind event. HAZUS-MH is a no cost software product developed by the Federal Emergency Management Agency (FEMA) under contract with the National Institute of Building Sciences (NIBS). HAZUS-MH operates as an extension within ESRI's (Environmental Systems Research Institute) ArcGIS Desktop software. It allows the user to map and display hazard data and the results of damage and economic loss estimates for buildings and infrastructure. In addition, the software allows users to estimate the impacts of earthquakes, floods, and hurricane winds on populations to include shelter and temporary housing estimates and potential causalities from the modeled hazard event.

HAZUS-MH software allows for three levels of analysis based on the level of expertise, effort, and accuracy needed by the user.

The estimates of potential losses and casualties from the hazard event modeled in HAZUS-MH are essential to decision making at all levels of government. The information obtained from modeling such hazards in HAZUS are essential pieces of information to include when developing hazard mitigation plans and policies, emergency preparedness plans, and during response and recovery planning. FEMA released a new version of HAZUS, version MR3, in September of 2007. Now, the amount of time it takes to run a building analysis within the flood model has been decreased and users are able to import user-supplied flood maps and flood depth grids into their analysis parameters. Additionally, changes to the earthquake model include adjustable population distribution parameters for casualty estimates and the elimination of partial-ignitions for after event fire estimates.

The HAZUS-MH software allows for three levels of analysis based on the level of expertise, effort, and accuracy needed by the user. Users can improve the level of accuracy of loss estimates generated by the HAZUS software by improving the HAZUS supplied data with more detailed information on population, building inventory, and infrastructure data about their specific community.



The following are descriptions and expertise needed for each level of HAZUS-MH analysis:

- **Level 1:** This level generates a basic estimate of earthquake, flood, and hurricane wind losses. This level of analysis is produced using the national databases and expert-based analysis parameters included in the HAZUS-MH software. This level is commonly referred to as the "out-of-the-box" method of loss and damage estimation. A limited amount of user knowledge is needed to perform this level of analysis, with training from FEMA's Basic HAZUS-MH (E313) course or ESRI's Virtual Campus HAZUS courses providing sufficient knowledge and background to perform such an analysis.
- **Level 2:** More accurate loss and damage estimates are produced in this analysis by including detailed information on local hazard conditions and/or by replacing or updating the national default inventories supplied with the HAZUS-MH software. These updates include more accurate local inventories of buildings, essential facilities, and other important infrastructure present in the local community. There is no standard way to perform a Level 2 analysis, but priority should be given to sensitivity studies that can guide the user to the information that will best improve the loss estimates for their specific area of interest. Scientific professionals and emergency managers can play key roles in developing a Level 2 hazard analysis with HAZUS-MH software. Some background in loss estimation and experience in using HAZUS-MH is required for running a Level 2 analysis.
- **Level 3:** This is a state-of-the-art damage and loss estimate that includes all the hazard and inventory improvements in a Level 2 analysis, in addition to expert adjustments of analysis parameters and the use of advanced HAZUS-MH capabilities such as the Advanced Engineering Building Module (AEBM) and the Potable Water System Analysis Model (POWSAM), both of which come with the HAZUS-MH software. A Level 3 analysis requires participation by earth scientists, structural engineers, land use planners, and emergency managers to provide an accurate inventory and assessment of community vulnerability. This level of HAZUS analysis requires a high degree of expertise in HAZUS software and the file structure of the HAZUS databases by the user.

Since 1997, HAZUS User Groups (HUGs) have been formed throughout the nation. The HUGs are led by volunteers and provide a mechanism for creating partnerships between local/county emergency managers and GIS professionals from both public and private sector organizations. These partnerships have become increasingly important in enabling the sharing of resources to determine risk and vulnerabilities to communities using HAZUS-MH software.

See: *Hazus*, page 3

HAZUS

Continued from page 2

Currently, there are 22 active HUGs within the United States, with at least one HAZUS user group in each of FEMA's ten regions. HAZUS User Groups have been formed by university professors, private industry professionals, and emergency managers at both the state and local levels. FEMA provides HUGs with technical assistance through the FEMA website and published materials (Figure 1 and 2), Annual HAZUS Conferences, strategic planning and on-site assistance. The California Valley, Arkansas, and Virginia HAZUS User Groups are the three most recent HUGs to be formed, with personnel from FEMA Region X working to form a HUG chapter in Alaska in the near future.

The Nisqually Earthquake that struck the Puget Sound region at a magnitude 6.8 on February 28, 2001 was one of the largest earthquakes in Washington State history. Shortly after the Nisqually Earthquake, the Washington State Emergency Management Division's (EMD) Science and Technology Section formed the Washington HAZUS User Group (WAHUG). The HAZUS user group was formed by EMD after the Nisqually Earthquake as a way of fostering the use of FEMA's HAZUS-MH software by local and county emergency managers and GIS professionals in order to help determine risk and vulnerability to both earthquakes and floods within Washington communities.

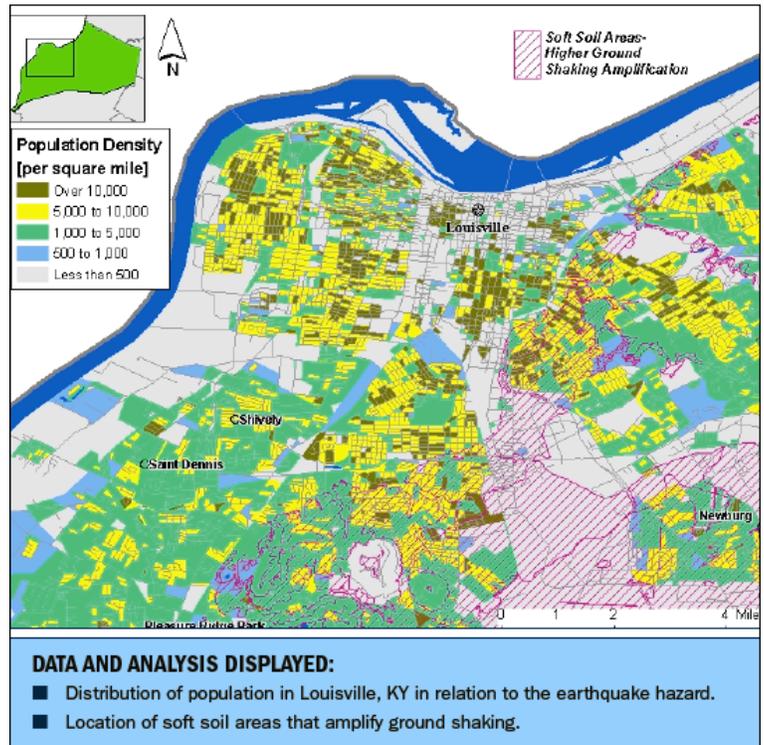


Figure 1. Population Density in Louisville, Kentucky in Relation to the Earthquake Hazard

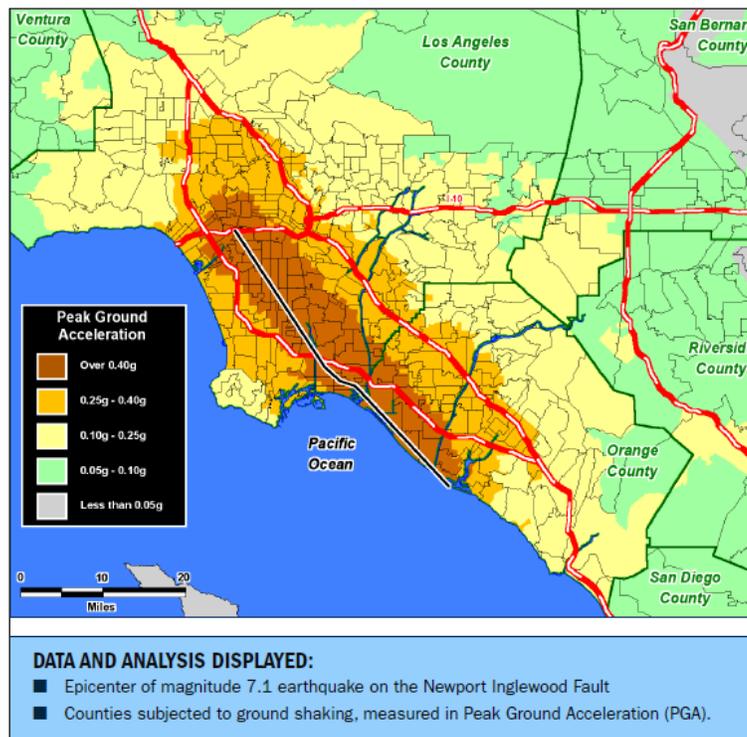


Figure 1. Ground Shaking from a magnitude 7.1 Earthquake on California's Newport-Inglewood Fault

WAHUG operated for a short time after the Nisqually quake providing on-site installation and technical support of the HAZUS-MH software and held user group meetings to share information and analysis successes of HAZUS. About two years after WAHUG was started it was disbanded due to lack of member participation and a sense of disinterest in the use of HAZUS software within the state.

With the recent back-to-back flooding events in western Washington in 2008 and 2009, the interest and use of HAZUS-MH software has grown in the region. In addition, successful uses of [HAZUS during Hurricane Ike](#) and earthquake loss estimation studies such as the one performed in [Salt Lake City's Sugar House Community](#), have shown how useful a tool HAZUS can be for personnel involved in disaster preparedness and mitigation planning. With this increased awareness and interest in HAZUS, the GIS Section within the Washington Military Department's Information Technology Division was contacted by Nick Delmedico, HAZUS Point of Contact, of FEMA Region X in hopes that the Washington HAZUS User Group would be reformed by a member of the GIS Section. Cathy Walker, a GIS Analyst with the Military Department's GIS Section assumed responsibility as the new WAHUG Coordinator and worked with Mr. Delmedico to revitalize the Washington HAZUS User Group.

See: Hazus, page 4

HAZUS

Continued from page 3



Washington HAZUS User Group

The first meeting of WAHUG was held on March 19th at the Washington State Emergency Management building located at the Washington National Guard Headquarters - Camp Murray, just south of Lakewood, WA. Announcements for the first meeting of WAHUG were distributed to GIS user group e-mail lists and to emergency management distribution lists. A total of 24 people attended the WAHUG meeting in person with an additional 6 people attending via conference call and web presentation. The first meeting included distribution of the HAZUS-MH software to meeting attendees, and a presentation of software requirements and recommendations, available training for HAZUS, the new FEMA HAZUS credentialing program, and a discussion on what attendees wanted to get from the HAZUS user group experience. Meeting participants expressed interest in local training classes on HAZUS, the HAZUS credentialing program, and learning more about successful uses of HAZUS for debris management planning and vulnerability and risk assessments. A quarterly meeting schedule was also decided upon by meeting attendees with increased communication among user group members using the new WAHUG website www.usehazus.com/wahug and a Military Department ftp site to distribute meeting handouts, member contact information, and HAZUS success stories. With such a large interest in HAZUS training classes by participants, the requirements for becoming a HAZUS certified trainer are being researched by FEMA GIS and the Military Department GIS Section personnel to be able to provide locally held FEMA certified HAZUS training in the near future.

The next meeting of the Washington HAZUS user group is going to be held during the third or fourth week of May with a definitive date to be determined shortly. This meeting will include a presentation of successful uses of HAZUS and more information on upcoming training classes and the FEMA HAZUS credentialing program. Emergency managers and GIS professionals interested in participating in WAHUG are encouraged to contact Cathy Walker, WAHUG Coordinator, at (253)512-7056 or c.walker@mil.wa.gov for more information. Meeting presentations and dates of future WAHUG meetings will be posted on the WAHUG website.



OPEN SOURCE GIS

Continued from page 1

Another common perception is that Open Source GIS is largely geared towards developers and other do-it-yourselfers. Although true to some extent, this mentality is starting to change. As proprietary GIS software has evolved so has OS GIS, becoming easier to use and in some cases outperforming proprietary software such as ESRI's ArcGIS. Additionally, finding help is becoming easier as numerous companies are starting to offer services and support for OS GIS (listings are available on http://www.osgeo.org/search_profile). Online chat rooms and knowledge basis provide another vehicle for obtaining information and assistance.

The organization spearheading the promotion of open source geospatial technology is the Open Source Geospatial Foundation (OSGeo). The mission of this not-for-profit organization (currently seeking 501 C-3 status) is to support and promote the collaborative development of open geospatial technologies and data. The Cascadia Users of Geospatial Open Source (CUGOS) is the local, informal chapter of OSGeo. The group meets monthly at LizardTech in downtown Seattle to discuss, learn, advocate, and socialize. They have about 120 members, with 10 to 30 people attending each user group meeting.

This year's Washington GIS Conference will have a major open source GIS presence. CUGOS will be organizing one of the Monday workshops, "Introduction to Open Source GIS – A Practical Approach." CUGOS will also have an information table related to OSGeo and local resources for open source GIS. Several presentations will also focus on OS GIS.

Sources and Resources

- Buchanan, Todd R. Comparison of Geographic Information System Software (ArcGIS 9.0 and GRASS 6.0): Implementation and Case Study. N.d. Available at: <http://covenant-tech.com/thesis.pdf>.
- Cascadia Users of Geospatial Open Source <http://www.cugos.org>
- Gerlick, Michael P. OSGeo & LizardTech. CPS Users Group Meeting. Seattle, WA. 18 March 2009. Available at: <http://cugos.googlegroups.com/>.
- Open Source Initiative <http://www.opensource.org>
- Open Source Geospatial Foundation <http://www.osgeo.org>
- Steiniger, Stefan and Erwan Bocher. "An Overview of Current Free and Open Source Desktop GIS Developments." International Journal of Geographical Information Science. Issue 1 (2008). Available at: http://terragis.net/docs/presentations/sstein_foss_desktop_gis_overview.pdf.
- Vennemann, Karsten. Open Source Geospatial Software: A Brief Overview. N.d. Available at: http://terragis.net/docs/presentations/open_source_gis_overview_terragis_2008.pdf.
- Vennemann, Karsten. Implementing Web GIS Solutions Using Open Source Software. N.d. http://terragis.net/docs/presentations/web_gis_open_source_overview_terragis_2008.pdf.

Whitney K. Bowerman is the Olympia Area Editor for The Summit



WAGIS 2009 REGIONAL GIS STRATEGIC PLANNING SESSIONS

WAGIS NEEDS YOUR INPUT!

By Joy Paulus

All people, at all levels, and in all industries are either directly or indirectly impacted by geographic information technology. Please join WAGIS in the 2009 statewide effort to address the geospatial direction for Washington.

Monday, June 8, 2009 from 10:00 - 3:00 - Vancouver

Tuesday, June 9, 2009 from 10:00 - 3:00 - Tri-Cities

Wednesday, June 10, 2009 from 10:00 - 3:00 - Spokane

Thursday, June 11, 2009 from 10:00 - 3:00 - Wenatchee

Monday, June 15, 2009 from 10:00 - 3:00 - Olympia

Tuesday, June 16, 2009 from 10:00 - 3:00 - Seattle

Wednesday, June 17, 2009 from 10:00 - 3:00 - Mt. Vernon

To register for a session contact: Joy Paulus at joyp@dis.wa.gov

Travel assistance is available.

This effort is sponsored and supported by FGDC, USGS and WAGIC members and organization.

Joy Paulus, GIS Coordinator

Department of Information Services

360.902.3447, joyp@dis.wa.gov



WAGIC 2009 MEETING DATES

This calendar lists the bi-monthly WAGIC Council Meetings Please confirm meeting dates, times, and places with the contact person. WAGIC Council Meetings are Video-teleconferenced to sites across the state.

June 18, 2009

- 10:00 a.m. WAGIC Council Meeting - Agenda, Letter from Chair, Presentations, Minutes

August 20, 2009

- 10:00 a.m. - WAGIC Council Meeting - Agenda, Letter from Chair, Presentations, Minutes
- 1:30 p.m. - Framework Management Group - Proposed Agenda

October 15, 2009

- 10:00 a.m. - WAGIC Council Meeting - Agenda, Letter from Chair, Presentations, Minutes
- 1:30 p.m. - Framework Management Group - Proposed Agenda

December 17, 2009

- 10:00 a.m. - WAGIC Council Meeting - Agenda, Letter from Chair, Presentations, Minutes

For more information and videoconference sites visit

<http://wgic.wa.gov>



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2009 WAURISA BOARD OF DIRECTORS ELECTION

Election of WAURISA officers and board members will take place during the 2009 Washington GIS Conference in Bellevue. Officers and board members are elected to two year terms. Current board members with their terms are shown below:

WAURISA Board of Directors		
Position	Name	Term
President	Angela Johnson	2007-2009
Vice President	Dean Tatham	2007-2009
Secretary	Greg Babinski	2007-2009
Treasurer	Steve Schunzel	2007-2009
Past President	Rick Lortz	2007-2009
BOD Member	Don Burdick	2008-2010
BOD Member	Heather Glock	2008-2010
BOD Member	Lurleen Smith	2007-2009
BOD Member	Heather Spates	2007-2009
BOD Member	Amanda Taub	2008-2010
BOD Member	Donna Wendt	2007-2009

Attendance at the Conference includes one-year membership in WAURISA and the right to vote for board members. An official ballot and candidate statements will be included with conference attendee registration packets. Ballots must be cast by 12:00 noon on Wednesday, May 6. Results will be announced during the annual membership meeting on Wednesday afternoon.

In addition to the slate of candidates recommended by the Nominations Committee, write in candidates are also allowed.

President

Don Burdick

Vice President

Greg Babinski

Secretary

Karl Johansen

Treasurer

Tonya Elliott

At-Large Board Members (3 open positions)

- Neal Berry**
- Cort Daniel**
- Whitney K. Bowerman**
- Steve Schunzel**
- Donna Wendt**



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Watch for... **GIS Academy 2009: Beyond the Basics**
for details call **206-263-5220**

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www.kingcounty.gov/gis/training



The 2009 Washington State GIS Conference, "GIS Every Where" will be held May 4-6 at the Meydenbauer Center in Bellevue. WAURISA - the Washington State Chapter of the Urban & Regional Information Systems Association – has finalized a program that includes a day of educational workshops, access to leading GIS vendors, and two days of informative speakers from all corners of the State. The Conference is designed to help you learn from your colleagues, network with your peers, and build a solid GIS foundation for your career, your company, or your agency.

The event begins on Monday with four half day workshops to choose from. The Workshops offer in-depth training from leading GIS practitioners brought in from across the state. They have become a successful part of the annual Washington GIS Conference.

Register Today at: www.waurisa.org/conferences

On Tuesday, the conference kicks into full swing with a keynote address by COGO Chair Cy Smith. Cy is a nationally recognized leader and highly motivational speaker who will share his vision for the future of GIS.

Following the keynote, the Summit Award will be presented to the Washington State GIS Person of the Year.

Some of the educational session themes on Tuesday and Wednesday include:

- GIS Management
- GIS Best Practices
- Asset Management
- The Lone GIS Professional
- Environmental GIS
- Public Safety
- 3D & CAD
- Integrating Imagery
- Mobile GIS
- Application Development
- Open Source GIS
- Transportation

On Tuesday and Wednesday, we will also have the annual poster and map competition to showcase some of the great work being accomplished around the State. Vendors will be on hand to demonstrate their products and answer any questions about services and products that they offer. Your registration also includes lunch and refreshments each day.

The Tuesday Evening Social in the Vendor Hall will be an opportunity to unwind with a Cinco de Mayo celebration and relax with your colleagues in a friendly and fun atmosphere.

Keynote Speaker: Cy Smith



Cy Smith is the GIS Coordinator for the State of Oregon where he developed an innovative and successful approach to supporting local agency GIS on a statewide basis. Cy recently completed a three year term on the URISA Board of Directors. He serves as the Past President of the National States Geographic Information Council (NSGIC) and as the first Chair of the new Coalition of Geospatial Organizations (COGO).

Earn GISCI Points!

Attend the 2009 Washington GIS Conference and earn GISCI education points for your GIS application or future renewal!



The GIS Certification Institute will award 0.2 GISCI education points for attending the Monday workshops and 0.1 points for each day you attend the educational sessions on Tuesday and Wednesday (subject to verification).

For more information about GIS Certification, see: <http://www.gisci.org/>

Social Event: Join us in the vendor hall on Tuesday evening for a Cinco de Mayo celebration. This will be an opportunity to network with your friends and colleagues, meet the vendors in a relaxed atmosphere, and just

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2009 WASHINGTON GIS CONFERENCE PRELIMINARY PROGRAM



Monday				
8:00 am-4:00pm	Registration			
Time	Room 402/403		Room 408/409	
8:00 am-12:00 pm	Introduction to Open Source GIS A Practical Approach		Designing Great Web Maps	
1:00 pm-5:00 pm	Creating Fast Web Mapping Applications with JavaScript		Cartography & Map Production	
Tuesday				
8:00 am-4:00pm	Conference Registration			
8:00am-9:00am	Continental Breakfast Room 405/406			
9:00am - 10:30am	Opening Session - Room 405/406 Welcome & Keynote Address Welcome by City of Bellevue Representative Keynote by Cy Smith , GIS Coordinator: State of Oregon			
Time	Room 401	Room 402/403	Room 407	Room 408/409
10:30am-12:00pm	Environmental GIS	Managing GIS In the Enterprise	GIS Meeting Business Needs	Open Source: Python
	Remote Sensing and GIS for Monitoring Spatiotemporal Heterogeneity of Arid Wetlands by Monika Moskal	A Proposed Municipal GIS Capability Maturity Model by Greg Babinski	Managing Cadastre: The GIS Way by Arnab Bhowmick	QGIS Plugins - Creating Custom Spatial Functions Within the QGIS Application Framework Using Python by Aaron Racicot
	An Integration of ArcGIS Hydrology Modeling and Geoprocessing Tools with Dam Breach Flood Profile Analysis by Guy Hoyle-Dodson	Planning as a Key to Enterprise GIS Success by Kristy Burt	King County TNET by Tim Moore	Scripting High Quality Map Generation Using Mapnik & Python by Dane Springmeyer
	Grappling with Goliath by Craig Hanson	Recipe for Excellent Specification Writing by Linda Gerull	Acencia - Geographic Prioritization for Economic Development and Job Creation by Cecelia Buchanan	Leveraging the Power of Open Source GIS Using Python by Gerry James
12:00pm-1:00pm	Lunch Break Room 405/406			
1:00pm-2:30pm	Support for the Lonely GIS Professional	Enterprise GIS	GIS EveryWHERE: Transportation	Open Source: Webmodeling & Visualization
	Supporting The Lone GIS Professional: What Have We Learned So Far? by David Howes	Redeveloping the Bellingham City IQ Application with ArcGIS Server & Web Services by Don Burdick & Kirk Van Gorkum	WA-Trans, Washington Geospatial Transportation Network: Processes Progress and Interesting Problems by Tami Griffin	Open Source, Web-Based Spatial Decision Support Tool for Tidal Power Placement in Washington State by Aaron Racicot
	Supporting the Lone GIS Professional: A Lone GIS Pro Profile by Gretchen Peterson			The GeoViz Toolkit: Making Geographic Visualization Accessible by Frank Hardisty
	Supporting the Lone GIS Professional: Panel Discussion by Matt Stevenson & Eric Edlund	ArcReader Deployment in a Small City by Lynne Bridges	Developing a Custom Mobile Data Collection System for Roadside Feature Inventory Program (RFIP) by Masao Matsuoka	Building a Low Budget WebGIS for the Obama Campaign Using Mapserver, Post GIS and Openlayers by Karsten Vennemann

2009 WASHINGTON GIS CONFERENCE PRELIMINARY PROGRAM

Wednesday				
8:00 am - 4:00pm	Conference Registration			
10:45am - 12:00pm	Dick Thomas Student Papers	GIS Best Practices	Public Safety	Mobile GIS - EveryWHERE
	University of Washington, Dept. of Anthropology - Building High Resolution Paleoenvironmental and Archaeological Data Sets: Application of GPS and GIS Technology at Cape Krusenstern, Alaska by Adam Freeburg & Shelby Anderson at Cape Krusenstern, Alaska	The Best Way to Do Everything by Starla DeLorey	Disaster Preparedness and GIS: Planning, Implementation and Analysis of the January 2009 Flooding in Snohomish County by Jon Greninger	New Technology for Accurate Data Collection by Ken Shersty
	Green River Community College - GIS Uses in Flood Restoration at Mt. Rainier by Jessica Larson Central Washington University - Are Bull Trout Present in Cowiche Creek, WA? : A Spatial Model Predicting Suitable Habitat by James Lamperth		Tacoma and Lakewood Police Departments Crime Early Warning System by Maria Sevier, Arnie Blaker and Kathy McAlpine	Simple Mobile Solutions Via Smart Technology: The Implementation of Freeance at Pierce County by Angie Venturato
12:00pm - 1:00pm	Lunch Room 405/406			
1:00pm - 2:30pm	Student Track	3D & CAD	Potpourri	Mobile GIS EveryWHERE
	University of Washington, Tacoma - Bicycle Infrastructure in the Puget Sound Region: Filling the Gaps...Connecting the Dots... by Tim Duggan	Tetra Tech's GeoManager: Applied to Transmission Line Projects by Andy Bury	Integrating Pictometry and Non-Spatial Data with ArcGIS Server Web Applications by James van Dyke	How to use GPS and a Digital Camera to Capture and Embed the Photographic Attributes of a Point Feature with ArcPad 8 by Jim Lahm
	University of Washington, Tacoma - Exploring Geology and Predictive Landslide Hazard Mapping in England; Exmouth to Swanage by Heather Gates	Evolution of 3D Urban Modeling by Dan Campbell		Using a Bluetooth - Enabled Laser Rangefinder for Mobile Data Capture by Jim Lahm
	The Evergreen State College - Sea Level Rise at Nuclear Power Plants in the United States by Natalie Kopytko		The King County GIS Center Training Express Program & GIS Academy by Greg Babinski	
	University of Washington, Tacoma - Indigenous Spatial Perceptions and the Distribution of Historic Resources in Olympic National Park, Washington by Frank Malfet	CASE to GIS by Brad Hofman		Sidewalk Inventory for ADA Compliance using a Fully-Loaded Segway with GPS and a Laptop by Zorba Conlen
3:00 pm - 4:00pm	Closing			

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MEYDENBAUER CENTER-BELLEVUE CONVENTION CENTER
 Driving Directions

Meydenbauer Center is conveniently located adjacent to Interstate 405 at N.E. 6th Street and 112th Avenue N.E. in downtown Bellevue—just 10 miles east of downtown Seattle. The most convenient off-ramp from I-405 is at NE 4th Street (Exit 13A). An HOV/Carpool exit at NE 6th Street from I-405 exits directly to our building. Parking is available at Meydenbauer Center and a number of nearby parking garages shown on the map.

Suggested routes to Meydenbauer Center are:

From Seattle via Hwy. 520: Take Hwy 520 east over the Evergreen Point Bridge to I-405 south, go south on I-405 and take Exit 13A west (NE 4th Street westbound) go one block and make a right turn on 112th Ave NE. Go one block north to the next stop light at NE 6th Street, turn left on NE 6th then proceed to Meydenbauer Center's parking garage entrance on the right.

From Seattle via I-90: Take I-90 east over Lake Washington, merge north onto I-405 (exit 10), proceed north on I-405 to Exit 13A west (NE 4th Street westbound) go one block and make a right turn on 112th Ave NE. Go one block north to the stoplight at NE 6th Street, turn left on NE 6th then proceed to Meydenbauer Center's parking garage entrance on the right.

From Everett, Bellingham, Vancouver B.C. and points north: Take I-5 south to Exit 182 merge onto I-405 south toward Bellevue, take Exit 13A west (NE 4th Street westbound) go one block and make a right turn on 112th Ave NE. Go one block north to the stoplight at NE 6th Street, turn left on NE 6th then proceed to Meydenbauer Center's parking garage entrance on the right.

From Tacoma, Olympia and points south: Take I-5 north to Exit 154 onto I-405 north toward Bellevue, take Exit 13A west (left onto NE 4th Street westbound) go one block and make a right turn on 112th Ave NE. Go one block north to the stoplight at NE 6th Street, turn left on NE 6th then proceed to Meydenbauer Center's parking garage entrance on the right.

From points east: Take I-90 west to Exit 10, merge onto I-405 north, then take Exit 13A and take a left onto NE 4th Street westbound, go one block and make a right turn on 112th Ave NE. Go one block north to the stoplight at NE 6th Street, turn left on NE 6th then proceed to Meydenbauer Center's parking garage entrance on the right.



Meydenbauer Center
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GIS: GIVING INVALUABLE SERVICES

By Eadie Kaltenbacher, GISP

Do you ever wonder how some people manage to do it all? They work full-time, care for their families, cook from scratch, pay their bills on time, exercise, have a social life, and maintain an impeccably clean home. Maybe they also spend time on hobbies, attend the kids' soccer games, take classes, or sign up for extra responsibilities in their community or place of worship. The truth is, everybody is given the same 24 hours each day. It's up to each of us how we prioritize our activities in those precious hours. Everybody picks and chooses. This story is about those people who choose to spend some of their time volunteering, and some of the organizations that provide opportunities for them.

Christopher Leyh is a GIS professional who volunteers for the Parks and Recreation Department of Kitsap County. While the Department doesn't have a GIS Analyst on staff, they have access to ESRI software through the County. Christopher is using ArcGIS to create a more accurate inventory of the Department's physical resources. The Department has this information stored in tabular format, but GIS gives them the ability to visualize the location, size, and geographical relationships of their assets. In turn, this capability will ensure that the Department manages their resources in the most efficient manner possible.

Christopher approached Kitsap County looking for volunteer opportunities working with GIS in July of 2008. He had recently returned to Port Orchard, where he grew up, and was looking for work. He decided to volunteer in order to keep up his GIS skills, and to obtain networking opportunities. Christopher has a varied background, including time in the Marine Corps and studies in Japan. He became interested in GIS while he was performing crime analysis work for the City of Redlands, and he obtained a certificate in GIS from UC Riverside. After reviewing his qualifications, the County's Volunteer Coordinator matched him with the Parks Department. Christopher enjoys the challenges of working with new GIS data, and his advice for other potential volunteers is to make your own opportunity. He notes that organizations may not know to approach you or what you can offer, so it is up to the volunteer to take the first step. He also advises that to make volunteering a priority, it is important to organize your schedule and set aside times for it. Christopher is still looking for work, but is considering volunteering even after he is employed.

Christopher's story has some common themes with my own. In 2006, I moved to Oregon, and began to search for work without knowing anyone in the state other than my husband. While I was applying for jobs, I decided to volunteer to broaden my network and keep my GIS skills current. My husband was working for the Oregon State Archives, and he put me in touch with the Archives Volunteer Coordinator. Through her, I volunteered on a project to digitize the locations of historical Donation Land Claims (land given to pioneers settling the Oregon Territory). I also met the Manager of the Archives Records Management Unit, who put me in touch with Cy Smith, Oregon's Statewide GIS Coordinator. I began volunteering with Cy's organization too, working on a GIS analysis to determine the best locations for a new state hospital. While my efforts did not directly result in a job offer, I did receive indirect benefits. I kept up-to-date with GIS technology, and made some contacts that served as references when I moved my job search to Washington. Additionally, my volunteer time counted towards points in the GISP certification process.



An example of Christopher's work with the Parks Department. The parcels with the yellow outlines were from the original GIS dataset. Using tabular data to identify the appropriate parcels, he has since added the three northernmost red-hatched parcels to the inventory.

The Northwest Response Team, based in the Seattle area, organizes volunteers to help provide relief to disaster victims. Glenn Brooks leads this organization, and he listed some of the events the Team has helped with: the Southeast Asia tsunami in 2004, Hurricane Katrina in 2005, and Cyclone Nargis in Myanmar in 2008. Ongoing projects include HIV/AIDS in Kenya, and food distribution in Zimbabwe. The Team's volunteers usually work from a local center that is established for each disaster, although they may choose to deploy abroad if that need is identified. The Team has 178 volunteers, plus 60 that participated in the Cyclone Nargis effort, and has logged over 15,000 hours of volunteer time over the last five years.



A portion of a historical Donation Land Claim map. The project involved digitizing the land claims and linking the claimant to a genealogical database.

See: GIS Service, page 13

GIS SERVICE

Continued from page 12

According to Glenn, most of a volunteer's time is spent working with the data: digitizing, editing, and attributing. For example, more than 20,000 rice paddy boundaries were digitized for the Cyclone Nargis project, in order to determine the difference in food-producing area before and after the disaster. This kind of editing also involves learning about the situation at hand. Specifically, volunteers had to learn about rice paddies as an agricultural system: farmers may plant alternate crops in the paddies at different times of the year, so to identify a paddy from an aerial image, volunteers had to learn these details. Volunteers also spend some of their time performing analysis. After Southeast Asia tsunami hit, volunteers digitized the boundaries of affected shrimp ponds, and used that to calculate a volume estimate of the amount of clean fill needed to re-build the area. Finally, volunteers may work on project planning. World Vision has a large database of HIV/AIDS statistics for Kenya, and GIS is used to visualize this data and help them plan so they can make the most effective use out of their resources.

The benefits that a volunteer provides to an agency like the Northwest Response Team are numerous. They can help the organization deal with technology that would otherwise be under-utilized, they contribute valuable skills to solve problems, and the time they spend has a direct impact on the task at hand. Volunteers may benefit too: students and job-seekers gain experience in a variety of skills and settings. However, Glenn points out that the main benefit is the opportunity to help other people who are in need. Glenn praised local GIS professionals as the "most caring, professional, responsible group I've ever worked with."

In addition to volunteering within your community, there are also opportunities to volunteer abroad. GISCorps, part of URISA, coordinates short-term volunteer GIS projects serving underprivileged communities all over the world. GISCorps will be publicizing their current efforts with brochures to be distributed at the WAURISA conference in May.



With the recent passage of National Volunteer Week (April 19-25), this is a good time to consider volunteering. If you are wondering where you will find the time, consider this statistic from the American Time Use Study conducted by the Bureau of Labor Statistics: on average, volunteers spend about one less hour per day watching television than non-volunteers.

Eadie Kaltenbacher is the volunteer West Sound Area Editor for The Summit



GIS CORPS

...At the heart of volunteerism are the ideals of service and solidarity and the belief that together we can make the world a better place.

...But far away from the spotlight, there are millions of generous individuals who, around the clock and around the world, roll up their sleeves and volunteer to help in any way they can.

...Volunteers do not ask, "why volunteer?", but rather "when?", "where?" and "how?". These dedicated and courageous individuals are important partners in the quest for a better, fairer and safer world.

-Kofi A. Annan: International Volunteer Day, 05.12.2003

Interested in giving back or paying forward the generosity of mentors and teachers? Interested in helping bridge the digital divide that separates communities and hemispheres?

A program of the Urban and Regional Information Systems Association (URISA), GISCorps coordinates short term, volunteer GIS services to underprivileged communities worldwide. Our services support humanitarian relief, community development, local capacity building, health and education.

GISCorps is run by a Core Committee who e-meet monthly but e-communicate daily. Since its inception in October 2003, the Corps has attracted 100's of volunteers from over 67 countries. To date, GISCorps has deployed over 125 volunteers to 44 missions around the globe. These volunteers have contributed over 7,000 working hours towards those missions.

If you want to volunteer with the GISCorps fill out our Volunteer Application Form. If you need services from the GISCorps fill out our Project Application Form.

<http://www.giscorps.org/>

GISCI NEWS



53 New Certified GIS Professionals (GISPs) were announced on March 25, 2009, bringing the total number of GISPs to 4,439, including 138 in Washington State!

<http://www.gisci.org/>

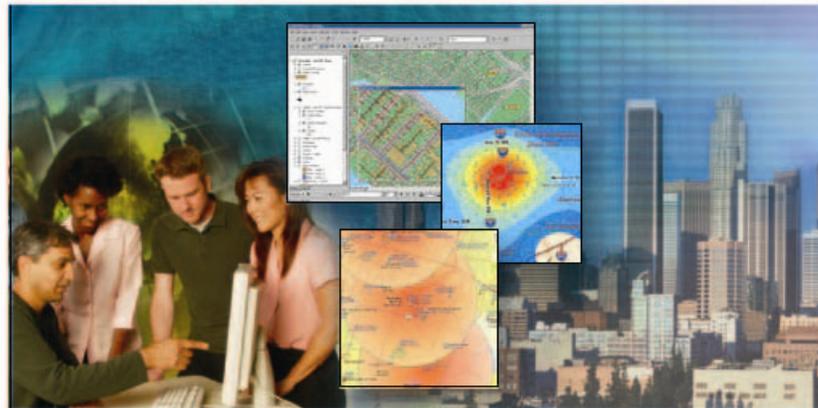
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- Opening Keynote Address - *Dr. Barry Wellar, MCIP, GISP*
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- URISA Quick Hits – *7 minutes maximum - targeted & concise!*
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- Interactive sessions throughout the conference program
- First-Time Attendee Meeting – *helpful hints, introductions*
- Solutions Luncheon – *Why reinvent the wheel? Discuss your greatest challenges to success. Tables will be assigned topics such as "Tailoring data sharing agreements for your needs", "Standard geospatial contract verbiage to ensure proper deliverables," etc. The collective knowledge within the URISA Community will develop working solutions to YOUR challenges.*
- Networking Reception & Events in the URISA Exposition
- Technical Tour
- Conference Social Event – *always memorable, informal and fun!*

Peer Recognition- URISA Awards Breakfast

- 2009 GIS Hall of Fame 2009 Inductees
- URISA Volunteer Award Winners
- Exemplary Systems in Government Award Winners
- Student Paper Competition Winners

URISA CONFERENCES

URISA is dedicated to offering high-quality education and networking opportunities. In addition to the annual conference, URISA presents a number of specialty topic conferences each year, some of which are presented in partnership with other associations. Conference committees, made up of dedicated URISA members, organize the educational program for each conference.

Annual Conference & Exhibition

URISA's Annual Conference and Exhibition features management and policy discussions of IT/GIS issues affecting urban and regional governments. Pre-conference workshops, important keynote and plenary addresses, technical and policy presentations, and networking events are also held at the conference.

[September 29-October 2, 2009: Anaheim, CA](#)

URISA Leadership Academy

New from URISA—a Leadership Academy for the Geographic Information System (GIS) Practitioner.

[December 7-11, 2009: Seattle, WA](#)

GIS in Public Health Conference

A specialty conference that debuted in New Orleans in the May 2007. Because of the very positive reviews, the conference will be presented every two years.

[June 5-8, 2009: Providence, RI](#)

GIS / CAMA Technologies Conference

This annual specialty conference and exhibition is jointly presented by URISA and the [International Association of Assessing Officers](#). This conference is designed to foster collaboration and integration of data, technology, and functionality.

[February 8-11, 2009: Charleston, SC](#) - 2010 Dates Coming Soon!

URISA/NENA Addressing Conference

(formerly GIS in Addressing: Street Smart & Address Savvy)

New specialty conference introduced in 2006, co-sponsored by the National Emergency Number Association. GIPSC brings together GIS professionals, addressing coordinators, 9-1-1 and emergency response specialists to one place for opportunities in networking and learning.

[August 4-6, 2009 - Providence, Rhode Island](#)

GIS in Transit Conference

Beginning in 2009, URISA and the Center for Urban Transit Research are partnering to present the GIS in Transit Conference.



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URISA Leadership Academy - registration and details coming soon!

December 7-11, 2009
Seattle, WA

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- Wendt GIS

THE SUMMIT - EDITORIAL

GIS IS EVERYWHERE

GIS Every Where is the theme of the 2009 Washington GIS Conference, to be held May 4th through the 6th in Bellevue. GIS of course can answer the question 'where is it?' – with the 'it' being anything that can be identified with a location on the earth's surface. For the GIS community that means every feature within Washington is of potential interest and use. GIS has also become ubiquitous. Almost every county in the state has a GIS, as well as many cities, special agencies, and utilities. State and federal government GIS cover Washington and beyond.

What does the concept 'GIS Every Where' mean to us in the community? GIS and web mapping applications have heightened awareness of geography and its importance to society. More and more people are aware that geography matters – for protection of natural resources, to respond to climate change, and to design the transportation networks and communities that will be home to the millions of new citizens who will call Washington home in the future.

GIS Every Where also means awareness that GIS has been integrated into the modern educational system. And not just within geography or GIS programs, but within many academic disciplines that use GIS as an important tool. Examples include public safety, public health, business, science, and marketing. We will see more and more future opportunities for the GIS community to help welcome these newcomers and introduce them to the data resources, applications, and best practices that we have been refining throughout our careers.

Perhaps the greatest potential for future GIS growth is within business. A key challenge for the GIS community will be to facilitate participation by the business sector in the professional development of GIS in a way that shares best practices while protects the competitive advantage that businesses look for with their GIS implementation.

Many of our friends and neighbors use GIS almost every day but don't realize it. The many web mapping applications and GIS based appliances that we use – GPS, cell phones, mashups, and many others – prove that GIS is every where.

Those of us in the GIS community have a great opportunity to be a part of this profound growth of GIS. Whether we are making use of the newest tools, or helping to create awareness of the benefit of GIS based applications, we can all take advantage of the fact that GIS is Every Where.



The Summit is published by WAURISA, The Washington State Chapter of the URISA. To encourage the discussion of issues and ideas of importance to the Washington GIS community we welcome letters to the editor and opinion essays. Letters to the editor should be a maximum of 100 words and essays should be limited to 500 words.

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For subscriptions, content, comments, or suggestions, email:
SummitGISNews@URISA.org

PUBLIC MAPS IN WASHINGTON

The **Coleman Docks** of the Washington State Ferry System see thousands of commuters pass through every day, as well as tourists and travels to and from Kitsap County and the Olympic Peninsula. Large signs along Alaska Way in Seattle direct motorists into the docks and waiting area. But if you look carefully, you will see that the signs are printed on old Puget Sound navigation charts with the ferry routes indicated. Is this use of old maps just recycling, subtle marketing – or both?



Navigation Chart Used for WSF Entrance Sign

Do you know of a public map display in Washington? Send it to *The Summit* and we'll include it in a future issue.

-Editor

THE SUMMIT – LITERARY CORNER

Treasure Island – The Map

'The bundle was sewn together, and the doctor had to get out his instrument-case, and cut the stitches with his medical scissors. It contained two things - a book and a sealed paper.... The paper had been sealed in several places with a thimble by way of seal; the very thimble, perhaps, that I had found in the captain's pocket. The doctor opened the seals with great care, and there fell out the map of an island, with latitude and longitude, soundings, names of hills, and bays and inlets, and every particular that would be needed to bring a ship to a safe anchorage upon its shores. It was about nine miles long and five across, shaped, you might say, like a fat dragon standing up, and had two fine land-locked harbours, and a hill in the center part marked 'The Spy-glass'. There were several additions of a later date; but, above all, three crosses of red ink - two on the north part of the island, one in the south-west, and beside this last, in the same red ink, and in a small, neat hand, very different from the captain's tottery characters, these words: "Bulk of treasure here".

- Robert Louis Stevenson, 1881



GIS USER GROUPS IN WASHINGTON

ACSM – Washington State Section

<http://www.wss-acsm.org/>

ASPRS Puget Sound Region

<http://www.photogrammetry.com/ASPRS-PSR/>

Cascadia Users of Geospatial Open Source

<http://groups.google.com/group/cugos/>

Contact Karsten Venneman at: karsten@terragis.net

Central Puget Sound GIS User Group

<http://waurisa.org/phpBB2/viewforum.php?f=24>

Contact Nora Gierloff at: ngierloff@ci.tukwila.wa.us

Central Washington GIS User Group

Meets the 2nd Wednesday of each month at the Super China Buffet in East Wenatchee, WA at 12:00 noon.

For information contact Amanda Taub at:

ataub@co.douglas.wa.us

King County GIS User Group

http://www.metrokc.gov/gis/KC_Users_Group.htm

Meets 1st Wednesday every other month at 11:00am at the KCGIS Center, 201 S. Jackson Street, Seattle WA, Conf Room 7044/7045.

Northwest Washington GIS User Group

http://www.acadweb.wvu.edu/gis/nwgis_mtg.htm

Washington Geographic Information Council (WAGIC)

<http://wagic.wa.gov/>

Join Listserv at: <http://listserv.wa.gov/archives/wagic.html>

Washington Hazus Users Group

<http://www.usehazus.com/wahug>

Contact Gathy Walker at: c.walker@mil.wa.gov

To have your GIS related group or event listed in future issues of *The Summit*, notify the editor at:

SummitGISNews@URISA.org.

To be added to *The Summit* mailing list, contact:

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<http://waurisa.org/thesummit/>

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Contact Angela Johnson or any Board member listed above.



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