

THE SUMMIT

News From and For The Washington GIS Community

WAURISA

The Washington State Chapter of
The Urban & Regional Information Systems Association



WINTER 2007/2008

WWW.WAURISA.ORG

ISSUE 10

A VIEW OF THE MS GIS PROGRAM AT THE UNIVERSITY OF REDLANDS

Tim Leach, GISP

My view of the University of Redlands MS GIS program will not match any other former student's. In truth, there were days where blank stares would be followed by a question; "What day is this?" Of course, it is very much more pleasant in retrospect.

Why do it?

There are many reasons that I chose to pursue the MS degree in GIS. A lot can be gleaned from the fact that I was a member of only the 10th cohort.

Professional Accreditation

It has been a controversial matter, the beginning of a new profession. Today, it appears that GIS remains ripe to be subsumed by IT or planning departments. What might be surprising is that problems with these approaches have already been identified (e.g. MPLIS the Guidebook, FGDC) in the 1990's but, perhaps not yet discovered by professionals from coveting paradigms. It is curious that the mentioned departments, though seemingly institutionalized are relative newcomers themselves.

It is obvious that the ability to produce maps can be coveted as a valuable asset for extending budgets. I can speculate that those coveting have little problem reducing the true conceptual nature of maps and GIS through logical extension to less rigorous forms of geographical visualization, or presentation graphics. They might ask, "Really, how long does it take to print me out a map? I am in a hurry!"

GIS technology provides powerful tools for those interested in displaying geographical depictions of visions. They can appear as derivative forms of information, perhaps emerged from hybrids of "geographical graphics" via "engineering light". It may seem that there is no need to collect current data registered to land survey when a simple graphic will do, data already exists on the web, and what is there is determined to be good enough or can be sketched in. If you ignore the copyright, Google Earth is all you need – right?

See: Redlands MSGIS Program, page 8

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PRESIDENT'S COLUMN

Happy New Year and Best Wishes for 2008! While the winter months have been rainy and snowy across the state, WAURISA's committees and volunteers have been combating those winter blues by working on many new projects and events for 2008.

WAURISA's technology committee has been re-vamping our website to be bigger and better. We have moved to a new host, which will allow more storage space and faster surfing. We've added more links and information about our upcoming events, and have maintained and even added information about our past events. Many thanks are due to Matt Stull and Heather Spates for their behind the scenes work to ensure that current information is always available to our members.

WAURISA's education committee, led by Don Burdick, has evaluated our fall 2007 member survey to plan two pre-conference workshops for the 2008 Washington GIS Conference. The workshops, which will run concurrently, on Monday, May 5th are "GIS Program Management" and "Open Source GIS". I attended the GIS Program Management workshop last year and know that it provides incredibly valuable information and insights for anyone who manages or aspires to manage a GIS program.

The WAURISA conference committee has kicked into full gear preparing for the Washington GIS Conference at Seattle Center May 5th – 7th. Neil Berry and his conference committee has been working hard to secure speakers, invite presenters and students, assemble a fabulous menu and take care of all the details to ensure that you have a great experience. New for the conference this year is a Monday evening social with our sponsors and exhibitors. Then on Tuesday evening we'll relax and enjoy a Mariners game at nearby Safeco Field. You will receive one game ticket with your registration and can purchase additional tickets for friends and family. Please check out the conference web page for more information: http://www.waurisa.org/conferences/2008_Conference_Index.html/

Remember – the days are getting longer and winter will soon be over. We look forward to seeing you at an upcoming WAURISA event in 2008!

-Angela Johnson, President



NATUREMAPPING: THE DEVELOPMENT OF A GIS MENTORSHIP PROGRAM

Karen Dvornich

The Washington *NatureMapping* Program was featured in the March 2007 issue of *ArcUser*: "Students and Farmers Become Citizen Scientists" (<http://www.esri.com/news/arcuser/0207/horny-toad.html>).

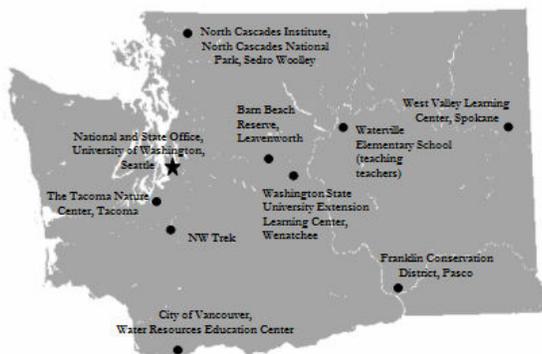
Our article gave an example of 4th graders at Waterville Elementary School in rural central Washington using ArcView to answer 'their' questions using data collected by local farmers. Points to consider for GIS professionals willing to be mentors to schools were discussed, primarily database management and accessibility to answer questions. This paper continues *NatureMapping's* quest to develop a network of GIS Mentors for schools and local communities involved in *NatureMapping*.

The *NatureMapping* Program's vision is citizens of all ages conducting meaningful science for the benefit of their local communities and biodiversity. The Program asks the public "What do you see and where do you see it?" in order to create a state and national public biodiversity database for all to use. *NatureMapping* began partnering with informal science education organizations (i.e., nature centers, zoos, parks, conservation districts, etc.) that qualified as *NatureMapping* Centers in 2006 to provide training and support to citizens, schools, and scientists willing to work together on local research projects. A powerful tool to analyze their data spatially and temporally is GIS. However, these groups do not use GIS on a regular basis, thus there is a high learning and re-learning curve along with plenty of frustration.

NatureMapping Centers

NatureMapping Centers have facilities and staff that also work with the community at large, but schools are the predominate audience. Experience has shown it takes 4+years of field research projects (e.g., baseline inventory and monitoring of wildlife, water quality, restoration monitoring, etc.) to organize, train, find funding for these projects, and bring in new partners as the projects progress. Technological tools such as GPS units and *NatureMapping's* data collection software on handheld devices are utilized as needed for data collection with GIS analysis and maps as products. These Centers are moving their audiences from just educational experiences to real research, thus technological training and support is critical for them. They are being trained in the GIS Baby Steps discussed below. For many Centers, just having a dedicated computer/laptop to manage their data is a challenge.

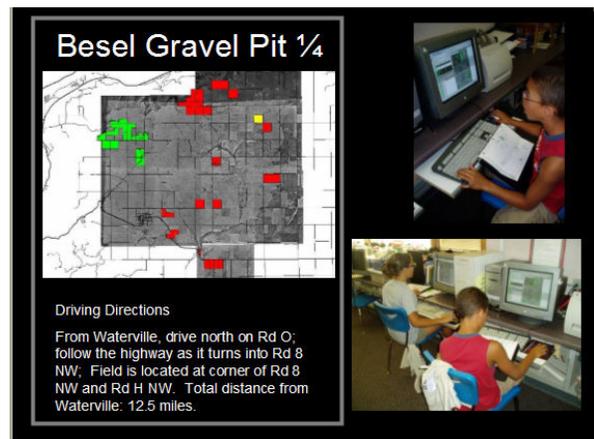
NatureMapping Centers



Schools

The desire to use GIS in a classroom, more often than not, does not align with the reality of what is needed to integrate GIS successfully within a school system and for student learning. In an "ideal world" *NatureMapping* would provide a *NatureMapping* computer to a Center supporting a school with all pertinent data and software loaded - and not allow Center or school "IT" people to touch it! All data would be backed up to a *NatureMapping* server. All datasets would be gathered for the research project with corrected projections and renamed for teachers and students to easily remember. Software and read-only files would be copied onto classroom PC's for students to practice analyses. Metadata would be summarized and understandable for a teacher. Curriculum would be written for teachers to integrate math and geography from their own datasets to meet the grade level expectations for their students. Curriculum wouldn't be written how to use GIS because students quickly understand the mechanics of using GIS. It is learning to understand the meaning of their data that is needed.

In an effort to develop the "ideal world" while addressing the multitude of challenges in schools and Centers, *NatureMapping* has developed a series of GIS Baby Steps. "PowerPoint GIS" - using PowerPoint and Excel as an introduction to GIS helps everyone understand how tables relate to points or polygons. It is a good tool for projects too small for spatial analyses. Elementary students are learning to use PowerPoint. Insert an aerial photo, mark and label points on a series of slides and then create an Excel spreadsheet to contain data that relates to their points is a concept students can learn and understand. Another step is using Terrain Navigator by Maptech. Students learn how to find and mark locations of interest, compare topographic maps to aerials, view in 3D, and print maps. Then they are ready for GIS, and this is when local GIS Mentors are needed.



Waterville School Farm Book

See: *NatureMapping GIS Mentorship Program*, page 3

NATUREMAPPING GIS MENTORSHIP PROGRAM

Continued from page 2

GIS Mentors

Mentors can help in multiple ways. Many schools need help in purchasing and installing the software and, beware - classroom computers undergo a lot of use/abuse. Teachers' primary concern is teaching their students. If loading software, configuring the correct printers, explaining what GIS is and how it should be configured to their "IT" person, and figuring out where to store their data takes away from teaching (and it does), they give up. Center staff that work with a school on a regular basis may be the "go-to" people for a Mentor in the design phase of the projects, but the Mentor still needs to be responsive to the teacher and students.

GIS Mentors should approach a school's network as they do in their businesses, designing the folder structure, and be responsible for maintenance of the research project's data. A couple of "techy" students can be trained as a Mentor's key contacts, but students graduate. In fact, *NatureMapping* teachers learn to be responsible for their data; how their students input, edit, and use their data for basic graphing. Linking and/or merging datasets should be left to the Mentors until a teacher is ready to take on that skill. Mentors only need to teach on a "need-to-know" basis and document the steps, then let the teachers and their students practice. Once a Mentor knows the configuration of the class computers, network server, and project datasets, support can be just a phone call away. Mentors must like to multi-task because students work at different speeds, and a Mentor may receive 5+ phone calls about different projects during a 50-minute classroom session.

Students do not work on GIS every day. In the case of the Adopt-a-Farmer Project, two to four students are trained at the beginning of the school year. They, in turn, train their classmates. After the farmers come in with their data sheets, students input and edit their data and then stop for a few months. The reason is during that time students are learning about math and geography so they can better understand the GIS tasks of making maps for their farmers.

If a GIS Mentor Network can be developed, discussions via newsletters and listserv's would be important vehicles to educate Mentors on the "how-to's" and provide tips for everyone to share. I believe this is the only way we can effectively bring the true power of GIS into classrooms.

For more information about the *NatureMapping* Program, contact

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TEMPORARY DEBRIS STORAGE AND REDUCTION SITES AID SNOHOMISH EMERGENCY OFFICIALS

Jon Greninger, GISP

As a Senior Planner for Snohomish County Public Works—Solid Waste Management Division I generate a variety of GIS products for natural disaster mitigation purposes.

Currently the County is in the process of developing a "Disaster Debris Management Plan." This plan would be activated in response to a mass debris generating event, such as an earthquake, flood, or windstorm. As a part of this plan, I have created several GIS-based maps including a map of temporary debris storage and reduction sites (TDSRS), amounts of potential residential debris, and a map book including both aerial photography and right-of-way index maps for each TDSRS site. The map book will be incorporated into the overall disaster plan so emergency officials will have quick reference for each staging site. Additions to the Disaster Debris Management Plan include development of disaster debris zones, incorporation of liquefaction zones, slope, and fault zone data.



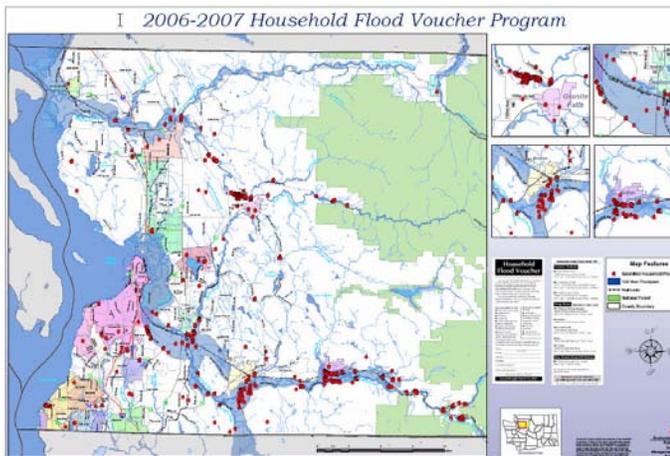
TDSRS Site Map

See: Snohomish Debris Mapping, page 4

SNOHOMISH DEBRIS MAPPING

Continued from page 3

With four major rivers flowing through Snohomish County, flooding is a regular event each winter. Each year, The Solid Waste Division implements a "Household Flood Voucher" program to provide assistance to homeowners with the disposal of flood damaged household items in a declared emergency. A voucher, valid for a garbage tip fee waiver, is distributed to either the Red Cross or local law enforcement and is subsequently handed out to flood victims. Using addresses from each of the 1473 redeemed flood vouchers for the 2006–2007 season, I geocoded each location and plotted them in relationship to the 100-year floodplain and a variety of other data layers. This was the first time department staff were actually able to see the spatial distribution of the program—who is using or not using the program—and where they are located in relationship to the major waterways.



Household Flood Voucher Map

Future natural disaster mitigation projects for Snohomish County Solid Waste include using GPS points collected from each of the fleet vehicles to evaluate route options and plan contingencies for when bridges or roads are no longer passable. In addition, I will be looking at slope and landslide hazards along the County's railways and evaluating potential impacts of rail service disruption and how it relates to refuse exportation.

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Jon Greninger's article originally appeared in GIS Eye, the Newsletter of the GIS Certification Program (www.gisci.org) – used with permission.



GIS AT THE CITY OF OLYMPIA

Whitney K. Bowerman, The Summit

The City of Olympia has been successful in implementing interdepartmental GIS solutions including SunGard's LookingGlass Viewer and Address applications (for viewing, maintaining, and querying spatial data) as well as a GIS based application for the development and analysis of storm water data, for use in the City's Public Works department. Additionally, a GIS Steering Committee consisting of representatives from several departments has been established to provide oversight and guidance to the GIS planning process and supply a forum for communication and sharing throughout the organization. In an effort to build upon these successes the City has launched an enterprise wide GIS approach.

In 2006 the City hired Geographic Technologies Group, Inc. (GTG) to perform an enterprise GIS needs assessment and establish a GIS implementation plan. Through information gathering and interviews conducted with line of business units and departments GTG concluded that it was imperative for the City's GIS efforts to be managed at the enterprise level (the City's GIS work has traditionally been concentrated largely within the Public Works department). Two key components of this were maintaining the GIS Steering Committee and the addition of a GIS Manager, to be located within the City's IT Services Division. Although the implementation plan was written at the enterprise level, IT Services is responsible for many of the operational aspects of the plan. In March of 2007 David Kuhn became the City's GIS Manager.

In order to ensure accurate data development and proper data use and to develop a centralized and interoperable GIS the City had to address a number of questions regarding workflows, coordinate systems, metadata standards and data management processes.

To build upon these successes the City has launched an enterprise wide GIS approach...

The majority of the City's spatial data has traditionally been maintained in AutoCAD. Migrating to an enterprise GIS system required that existing AutoCAD and GIS datasets be brought together into a single geodatabase environment. Approximately 300 data layers were identified, about 80% of which are derived from over 400 AutoCAD drawings. Once the data conversion is complete the City will be able to reduce the number of AutoCAD basemaps maintained from over 400 to 5, relying on GIS as the primary source for many datasets.

The City has historically been on a local coordinate system that is not compatible with other local and regional GIS data. Developing an appropriate transformation from the local coordinate system to State Plane was challenging, however navigating the political and workflow aspects of this migration proved to be the most cumbersome part of the process. The City Survey Division developed a transformation process for their CAD source drawings and starting in December 2007 the City began collecting and post-processing data using State Plane coordinates.

OLYMPIA GIS

Continued from page 4

The City is also in the process of developing digital submission standards in order to streamline land use data processing and ensure community-wide integrity. The Land Application and Site Plan Review process will be automated and integrated with Community Planning and Development's record management system. GIS will be the primary source for Land Use application processing, preliminary plan review, final plan review, and site inspection. Development of other plans include implementing web applications that allow citizens to view land development and Capital Improvement Plan sites throughout the development process, land zoning review, and mobility planning.

At present, GIS data is maintained by the Public Works Technical Services Line of Business. Vince McGowan, Acting Data Management Manager, manages a utility database project that includes establishing geometric networks (i.e. topologically integrated) for water and sewer data sets in addition to storm water and reclaimed water data sets. The City is currently employing GIS in a variety of areas including analysis (sea level rise mapping, septic density, groundwater modeling, risk assessment) and preparing for Census 2010.

Other goals include widening the application of GIS to areas such as police and public safety, sharing data with neighboring communities, and creating a GIS that is accessible to the public. Once the migration from their local coordinate system to State Plane is complete, the City will be able to provide the Thurston County GeoData Center with parcel data through the digital submission process and adoption of the same data model and tools. In addition to GIS applications the City has integrated Google Maps as a simply spatial tool for static Internet mapping. The Parks Department has begun using the Google API for web maps (see: <http://www.ci.olympia.wa.us/cityservices/par/parks/parks-trails-map.htm>).

Changes are afoot in GIS at the City of Olympia as the organization shifts from a workgroup mentality to an enterprise mentality. An enterprise GIS presents a unifying and collaborative solution which the City is excited about moving towards.

To learn more about GIS at the City of Olympia, contact:

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Whitney K. Bowerman is Olympia Area Editor for *The Summit*. This article is based on her interview with David Kuhn and Vince McGowan, December 3, 2007

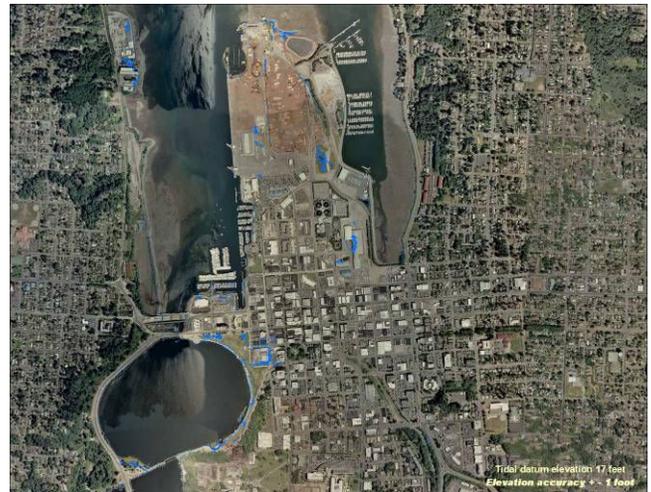


OLYMPIA USES GIS FOR SEA LEVEL RISE ASSESSMENT

Vincent McGowan, GISP

The City of Olympia sits at the southern tip of beautiful Puget Sound. Access to the water has played a key role in this Capitol City's history. The downtown core sits on a peninsula built on dredged fill placed over the last 100 years to provide shipping access and today provides excellent recreational opportunities. Unfortunately, these amenities also make Olympia highly vulnerable to flooding from sea level rise.

Global sea level has been rising since the last ice age. Climate models predict the rate of rise will increase with global warming. I work in Olympia's Public Works Department. We are working to assess the risks and prepare adaptation measures for a rising sea. The first step in the assessment was to define the areas at risk of flooding and GIS proved the perfect tool for the task.



Area in blue shows the current highest high tide elevation in Olympia

The experts currently offer a mid-range prediction of three feet of sea level rise for Olympia over the next 100 years. This includes global average sea level rise, local subsidence due to tectonic processes, and variations in sea level associated with El Nino and La Nina events.

We have highly accurate LiDAR (Light Imaging Distance and Ranging) digital elevation models (DEMs) available from a flight in 2002. I used these to determine land elevations in the City. I then used ArcGIS Spatial Analyst to reconcile our land-based datum with the local tidal datum.

Experts are confident that sea level will rise. The rate and ultimate level of rise are still uncertain so we need a way to consider all possible future sea levels. I used the raster calculator to define areas that would be inundated with sea water at a range of tide levels in one foot increments above current high tides. We can now show areas at risk from the latest predicted rise and begin planning our response using best available data.

See Olympia Sea Level Rise, page 6

OLYMPIA SEA LEVEL RISE

Continued from page 5



Area in blue shows the potential highest high tide elevation in Olympia, WA with a 3 ft. sea level rise

Future work will include another LiDAR flight to obtain a smaller grid-size DEM and verifying subsidence rates and datum relationships. We are also improving our utility network mapping and will explore 3-D visualizations and animation as a means of understanding the risks and communicating the urgency of response.

Vince McGowan's article originally appeared in GISC Eye, the Newsletter of the GIS Certification Program (www.gisci.org) – used with permission.



52 GISPs IN WASHINGTON STATE

The GIS Certification Institute has conferred the GISP designation on 52 GIS professionals in Washington State as of December, 2007. Worldwide 1,920 people have applied for and been awarded the GISP.



www.gisci.org

MEET ANN STARK, GISP

LUMMI NATION GIS MANAGER, BELLINGHAM, WA



I earned my undergraduate degree in biology with minors in environmental studies and geography. I graduated from Oregon State University with a master's degree in geography (a natural resources management emphasis) and a minor in cartography.

I started my career as a GIS coordinator for the National Estuary Project in Tillamook Bay, Oregon, for one year, then as a GIS specialist for the city of Aspen in Pitkin County for four years.

Currently, I am the GIS manager for the Lummi Nation and have been here for nearly four years. I have made presentations at local GIS user group meetings about how the tribe is using GIS. I've also taught several classes about GIS to tribal members to increase the number of folks using GIS as part of their jobs with the tribe.

I entered the field because my master's degree program required a minor. Cartography was the only one that interested me. It turns out I liked it a lot and it was fairly easy to find GIS positions in any part of the country.

I like that GIS is a combination of art and science. Making a beautiful map is really rewarding and doing that to further good science is even better. I also get to work with a diverse group of projects and people because GIS can be used in nearly every department of the tribe.

My biggest challenge in GIS is staying up-to-date with the software changes and programming languages. Additionally, it's quite a challenge to get folks who are creating data to also create metadata!

I have a sense of pride in being a GISP. To me it means someone has validated all of my hard work.

I've been married ten years and have a one-year-old son. I'm an avid gardener and I love to read. I combine the two by listening to books on tape while I garden! Two of my enduring favorite books are *The Earth Abides* by George Stewart and *Prodigal Summer* by Barbara Kingsolver. I recently traveled to France and hope to travel overseas again this year.

Ann Stark's profile was originally published in GISC-EYE (Spring 2007), the newsletter for Certified GIS Professionals. For more information about the GISP, see: <http://www.gisci.org/>.

Editor's Note: This is the second of a series of articles related to GIS and the professional survey community that will appear in future issue of *The Summit*. The first article appeared in Issue 8 (Spring 2007) of *The Summit*

GETTING WHAT YOU NEED FROM LAND SURVEYORS

Karen L. Zollman

As a person widely known for being fluently bi-lingual in both land surveying and mapping, I am often asked by mappers to explain "What's Up" with Land Surveyors. I don't know if I want to tackle that question too broadly, but what I do know is that the practice of Land Surveying is regulated and licensed by the State of Washington. Land Surveyors, like engineers, are intent on remaining licensed and never getting a call from the Board of Registration. They are careful—obsessively, compulsively careful; just what you want from a profession that delineates property boundaries, and lays out bridges, buildings, utilities, and roads. Their maps include the stamp of a licensed Land Surveyor and are recorded with the County Auditor. *Records of Survey* carry the professional liability of the Land Surveyor for their content. **A Land Surveyors first responsibility is to the Public.**

GIS, on the other hand, has its roots in the Planning discipline. Typically, GIS maps are not very spatially accurate, just representative. The focus is on currency and completeness of attribute data; which continues to be a daunting task. Spatial accuracy is at the root of the discord between GIS mappers and Land Surveyors. The advent of orthophotography made GIS mappers look for ways to improve the spatial accuracy of their data. Few of the "solutions" applied have passed muster with the Land Surveying profession.

Some agencies have in-house Land Surveyors using *cadastral* methodology to attain good spatial accuracy for their maps. However, since few agencies have in-house survey departments, survey services are typically acquired by advertising a Request for Proposal (RFP). And sadly, many of these RFPs are filled with GIS jargon that Land Surveyors don't understand. So, when survey firms are interviewed and selected the misunderstandings only deepen.

There are two basic categories of work that Land Surveyors do for GIS mapping—boundary surveys and inventory surveys. I have described them briefly below.

Boundary surveys delineate the geometry of a land parcel or right-of-way (ROW) in relation to the Public Land Survey System (PLSS).

Inventory surveys locate features and describe attributes of those features. These include utility surveys, topographic surveys, vegetation surveys, etc.

To scope a mapping project for either of these categories of surveys, the language must communicate specifications effectively to Land Surveyors. The following guidelines are a good start.

Land Surveyors, like engineers, are intent on remaining licensed and never getting a call from the Board of Registration

Datum

Always include the horizontal and vertical datums for the final deliverable data. Land Surveyors can easily provide information in any datum that you need. If data is collected in one datum and delivered in another, the Land Surveyor should provide both data sets.

For example, a Land Surveyor may be referencing a virtual reference system (VRS), such as the Washington State Reference Network, which collects (non post-processed) data in the North American Datum (NAD) of 1983/91 (adjustment 1998). Your agency's datum may be in NAD 83/91. The Land Surveyor should deliver both data sets.

Accuracy

Specify the horizontal and vertical accuracies that you require. Discuss the methodology and equipment that will be used to achieve the specified accuracies with the Land Surveyor. Accuracy specifications can have a major impact on your project's budget and schedule. The Land Surveyor may suggest creative solutions to meet your specifications without unduly impacting your project's budget and schedule.

Washington Survey Control Database Schema

Survey monuments are one of the most important, but forgotten, municipal assets. Require that all surveys reference at least two established (having a position in the public record) survey monuments. All data describing the survey monuments should be delivered using the Washington Survey Control Database Schema. Your agency can then upload this data to the State's Public Land Survey Office (PLSO) warehouse. (See <http://plso.wadnr.gov/wccsmapi/>)

The more rigorously you require this, the more quickly you will build an inventory of survey monument assets in your jurisdiction. This database is accessible to all Land Surveyors and provides some quality control through redundancy of observation. It also allows Land Surveyors to identify survey monuments that have been disturbed or destroyed.

ROW Monuments

Like other boundary monuments, ROW survey monuments are essential for determining the location of roads, railroads, and transmission lines. Don't even think about doing utility inventories without locating ROW monuments. This specification will allow you to identify utility features outside of the ROW that may require an easement or encroachments by adjoining property owners that need to be addressed. Remember, ROW monuments always represent the offset line to the edge of ROW, but do not always represent the centerline of a ROW.

Vertical Control

Use Land Surveyors to create and densify your vertical control network. It is essential to identify the benchmark stations used by the Land Surveyor to establish the vertical control and datum for a project. A project should reference at least two established (having published values) benchmarks. Encourage each Capital Improvement Project (CIP) to identify at least two permanent benchmarks and document the information about the benchmarks using the WA Survey Control Database Schema.

See What You Need From Surveyors, page 8

WHAT YOU NEED FROM SURVEYORS

Continued from page 7

Set Permanent Survey Control

Many large mapping projects use Global Positioning System (GPS) technology to establish coordinates on existing or new survey monuments. Require that any points surveyed be of a permanent nature and, if possible, that they use or reference existing Public Land Survey System (PLSS) monuments. Again, all data should be documented and delivered using the WA Survey Control Database Schema. A great deal of "throw away" survey control is created for photogrammetry projects because the points set do not use substantial materials (use rebar or concrete). Simple contract language can ensure that all survey control adds to your survey control network without significant cost impacts. Access to nearby, reliable, published survey control translates to significant cost savings.

Inventory Schemas

Define detailed descriptor codes to identify features and their attributes for inventory collection projects. Land Surveyors are accustomed to coding features as they are located, but their coding may identify features differently or less discretely than may be useful to your project. Document feature names and valid values for attributes before work begins, then test them on a pilot project. Consider using pictures to clarify naming conventions.

Records of Survey

If a Land Surveyor is setting property corners, delineating boundary, or establishing large GPS control networks make sure that a ROS is filed with the County Auditor's office. It is important to add this information to the public record.

Section Breakdowns

When establishing a cadastral reference system for your property mapping, make sure that Land Surveyors provide information to substantiate the found or calculated monument positions. For example, when a Land Surveyor provides a grid for a Section in the Public Land Survey System (PLSS) it is based on a survey of the existing cadastral monuments at a density you can afford. Typically, a 1/4-mile grid is surveyed for urban areas, and a 1-mile grid is surveyed for rural areas. The remaining, or missing, monument positions are calculated from historical or record documents using procedures legislated by current and historical agencies (including but not limited to: Bureau of Land Management (BLM), WA State Public Land Survey Office (PLSO), U.S. Army Corps of Engineers (USACE), National Geodetic Survey (NGS), and Government Land Office (GLO)). A Section Breakdown should list the record documents that identify a survey monument as a PLSS corner. For any survey monuments that are calculated, the Section Breakdowns should cite the record documents or method used to determine the coordinate position. Section Breakdowns are invaluable to Land Surveyors, and are easily made available as scanned documents.

Simple contract language can ensure that all survey control adds to your survey control network without significant cost impacts.

In Conclusion

- Ask, don't assume. Working with another discipline requires coherence in the language of the other discipline; make a conscience effort to understand and be understood.
- Familiarize yourself with the deliverables that are normally required by seeking existing schemas for that data, don't create your own.
- Define deliverables and expectations in terms that all parties understand so that data deliverables don't require extensive reformatting or reworking.
- Test procedures and specifications on a pilot area to identify gaps in the data or misunderstandings between you and the Land Surveyor.
- If you need help with specifications, the LIS/GIS chair for the Land Surveyors Association of Washington can advise you. Visit our website www.lsaw.org

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Redlands MSGIS Program

Continued from page 1

An Upgrade

About three years ago, I traversed the process to attain professional status through the GIS Certification Institute. There is no doubt that this helped with my self-esteem, but I still felt a bit out-of-date. My AML tools worked fine, but many were practicing GIS without them which led to many questions:

- Was the ESRI coverage really a thing of the past - somehow surpassed by the inferior yet ubiquitous shapefile or one of the many new forms of geodatabase?
- Did anyone really care about coverage topology, data or maintenance?
- Had GIS changed to become all about creating web applications?
- Did "stove pipe" systems of the past really differ that much from the cobbled web applications of today?
- Had the purpose of GIS and the "GISP" been reduced to providing graphics for planning, engineering and others?
- Did the "IS" in GIS imply a subordinate to IT, a fledgling associated with geography and graphics?
- Was I becoming cynical?

Clearly, an educational upgrade was needed.

See: Redlands MSGIS Program, page 9

Redlands MSGIS Program

Continued from page 8

An aging BA in Geography from the University of Washington had been supplemented with an Associate of Data Processing as well as a Certificate in Software Engineering. All along I had questioned whether continuing education or local college and university courses would be a better supplement to professional, educational needs - particularly where they could be directly applied to work through practice.

At times, I found myself coveting an MIS from Seattle Pacific University. This approach could result in what could be conceived as a more prestigious, academic validation concentrating on the "IS" side of GIS. Sometimes I would catch myself looking at an on-line MS program or fantasizing about a program abroad, for example in Scotland.

Finally, I decided to apply to the program at the University of Redlands, where the connection to GIS was direct. Had I waited too long?

The Degree

The degree is a Masters of Science, suitable for providing a path toward a PhD. It is known as an international master's degree program as students are recruited from all over the world. In our cohort, students originated from as far away as the Falkland Islands and India.

One of the draws of the program is that a traditional two year time frame is condensed into one year. Part-time programs could stretch to three years or more. Of course, it is a full year - with some scheduled breaks (however, even during the breaks you should probably be working on your MIP - more on that later).

Courses that make up the program are listed on the program's web site and may change as time goes by. The courses, instructors, professors and content are constantly being modified, tweaked and improved. Each cohort can provide input to the professors and help them shape the program as it goes along. It is a dynamic atmosphere - so I would not expect that you would learn all that you need from prior students.

The following requirements and courses were gleaned directly from the MS GIS website (<http://www.institute.redlands.edu/msgis>):

Program Requirements

The masters of science degree requires 42 units at the graduate level, which are comprised of 10 units of theory courses, 7 of technology courses, 14 units of project (MIP) courses, 7 units of professional practice courses, and 4 units of elective courses. Elective courses can be taken in the form of regularly offered MS GIS Program electives, topics courses which are offered from time to time by GIS-related faculty, University of Redlands School of Business GIS-focused electives, or by individualized study, the focus of which is determined by MS GIS Program faculty.

Courses:

Theory Courses

- GIS 611 Fundamentals of Geographic Information
- GIS 612 Information Systems Foundations for GIS
- GIS 617 Programming for GIS
- GIS 616 Statistics & Spatial Analysis
- GIS 615 Communicating Geographic Information

Technology Courses:

- GIS 621 Introduction to GI Technology
- GIS 625 Introduction to Image Data
- GIS 622 Creating and Managing Geodatabases
- GIS 623 Working with GIS

Project Courses:

- GIS 691 Project Concept & Scope
- GIS 692 Project Initiation & Planning
- GIS 693 Project Analysis & Design
- GIS 694 Project Execution
- GIS 695 Project Implementation
- GIS 696A Project Completion
- GIS 696B Project Closure

Professional Practice:

- GIS 630 MIS GIS Colloquium
- GIS 640 GIS Software Training
- GIS 650 GIS Workshops

Electives:

- GIS 663 Remote Sensing & Image Processing
- GIS 664 GIS for the Web
- GIS 661 Topics Course(s)
- GIS 671/2/3 Individualized Study

Perhaps the heart of the program is the 690 series project courses. Many of the principles and topics resemble portions of UW's Software Engineering Certificate program (similar text references). James Ciarrocca, MS from ESRI incorporated aspects of project management from practical experience, specific to GIS.

Our cohort was subjected to a variety of core theory content to include staples such as cartography and statistics. Prior coursework in computer programming and statistics would be useful for aspiring students.

I believe US students could benefit from an increased emphasis on local government topics: state plane coordinate systems, parcel mapping, MPLIS and new technologies like LIDAR (through specific workshops). However, the program is comprehensive as it stands and the colloquium series is probably beyond compare.

See: Redlands MSGIS Program, page 10



Redlands MSGIS Program

Continued from page 9

The Program

The program cost was about \$45K, US. Details can be found on the web site. I was given a scholarship from the University (at the discretion of the Director) based on qualifications, which was useful at cutting the overall cost.

The program is primarily located and run from Lewis Hall, a brand new facility with state-of-the-art class rooms. When we were there, room 103 or 104 was assigned to either of the two cohorts. This is where you would live for a good portion of your time (it was a good idea to secure a good seat at the beginning).

During the time of our cohort, there were two full time PhD's advising students: Dr. Mark Kumler (Director) and Dr. Douglas Flewelling. The Program Coordinator, Theresa Ellis managed the office and just about everything else – I say that with much gratitude. Kathy Hubbard managed the Central Avenue Apartments as a resident. The program benefited from dedicated IT staff, including Ruben Ortiz and John Laska. They were accessible, responsive and knowledgeable with ESRI software.

As part of your tuition, you are equipped with a state-of-the-art laptop (your primary workstation). I brought along my own "base computers" as well – for backup – which proved invaluable, though you cannot expect the IT staff to help manage them. Many students purchased ancillary hard drives, docking ports, displays and other peripherals.

The campus is Wi-Fi ready and you have access to just about any ESRI software that you could think of through the program's site licenses. You have an opportunity to meet various professional instructors from ESRI, including Dr. Bryan Baker, Dr. Aileen Buckley, Robert Burke, and Mark Stewart.

The MIP

The professors emphasize that the master's project that makes up the core of your requirements is to be an individual effort (not work by your classmates – managed by you). The acronym "MIP" stands for Major Individual Project. The project is similar to a "thesis" associated with traditional master's programs, but specifically allows for an implementation in GIS – a practical approach.

The project shares elements associated with a traditional "thesis" and contains an annotated scientific paper. Like a formal GIS project, it can contain software, a database and fully described data (metadata). The MIP is done with a client as if the student is a GIS consultant. Clients can be from outside the University for example, JPL (Jet Propulsion Laboratory), US Navy, etc. and generally have a formal representative.

It is wise to choose a project that is focused upon a specific implementation akin to a traditional or classical GIS project – those associated with a "chunk of ground" where spatial analysis can yield insight. My project was about further defining a spatial database and although successfully completed, it was a challenge to bend the coursework to be useful.

Managed well, a student can build the MIP through coursework. Every opportunity is extended to the student to make this successful. From day one, the professors help to keep the students on track. Even with this said, only 6 out of 15 of our students actually finished within the scheduled time – perhaps the sign of a true master's program.

The Cohort

Even with 20 years of experience, I still had to do the homework, take the tests and go through the same trials and tribulations as others in my class – the cohort. Even at 50, I was not the oldest student.

Two cohorts are going at one time. One goes from August to August, and the other from January to January. Class sizes were reasonable.

When you arrive at Redlands, you are welcomed into the Central Avenue Apartments. The apartments appear to be the remnants of an old motel – which are nice in my opinion. Each apartment has a carport and many are detached units.

There is a common area with a small pool and barbeque – which for some is a valuable meeting place. Almost upon arrival, we were met by representatives from the previous cohort who promptly invited us to a barbeque at the pool where our graduate education truly began.

It is good advice to treat your neighbors well, as you will be struggling with them, day and night for 12 months. Theresa Ellis, the Program Coordinator, has reportedly seen a pattern of friendliness, outright disgust, then love as the cohort progresses throughout the year (I think I have that right).

In the Land of ESRI

We were given a "key card" that allowed access to resources at ESRI's main campus, less than a couple of miles away and easy to get to. ESRI professionals were always willing to help the MS GIS students – a great asset for MIP related tasks or research issues.

One of the really neat attributes of the program at the University of Redlands was the relationship with ESRI. The program hosts many instructors from ESRI, where students are able to select from and attend a variety of ESRI training workshops and seminars either at the University or at ESRI. We were able to get ESRI training on the latest versions of software and attend many of the courses (thousands of dollars worth) as part of our experience. Most students focused on training that could be applied directly to MIP related tasks.

It was no secret that well trained MS GIS students were great fodder for ESRI recruitment at the end of the program.

After a while, I began to recognize people at ESRI – you might meet them in town or at the local coffee shops (like Stell's, Fox's, and the Coffee Bean), favorite study alternatives of some from our cohort.

The Colloquium Series

MS students need not be from a classical Geography background however those that are may find the MS GIS Colloquium Series to be of great value. Not only are you treated to cutting edge insight, you can also find yourself amongst a veritable who's who in GIS. At one of the colloquiums I attended, the presenter was Michael Goodchild and in the audience were Clint Brown, Scott Morehouse, and Jack Dangermond.

See: Redlands MSGIS Program, page 11

Redlands MSGIS Program

Continued from page 10

Food & Dining

One of the pleasant surprises about the University of Redlands was how unbelievably good the "Irvine Commons" dining facility was. For those aged people like myself, a healthy lunch could be had during the regular school semesters – for example I could ask for a grilled chicken breast (from the grill) and create a great salad from the salad bar. Another unique feature was a "Farm Fresh" selection of lunch entrees.

There was a delicatessen that could produce some great submarine sandwiches and also carried an assortment of prepackaged salads and other traditional fare (pizza, burgers) for the young people.

In town, I personally found that Trader Joe's, Von's (the California version of Safeway), Stater Bros. and Albertsons to be close and convenient for groceries. I couldn't find a PCC or Whole Foods, but if you're not from Seattle – you might not care.

There were many great places to eat. One of my favorites was Cuca's (use your student card for a discount). I wasn't a sushi eater until my trip to Redlands.

The University and Redlands

A nice thing about the University of Redlands is that it is a small and cozy sort of campus. During the year you may begin to recognize faces of faculty and students that you pass along the walkways. If you so desire, you can take in a football game or check out the University's water polo team. I watched them soundly defeat Harvard – talk about a rough sport.

Redlands is a stop on the way to Palm Springs along I-10 (from LA). Though not as hot, it is a near desert environment with plenty of dry heat and dust. My way of dealing with the heat and MIP exhaustion was a regular swim at the University's pool (Thompson Aquatic Center). It is oxygenated and has great hours during the regular semesters.

I suspect that the entire town occasionally escapes to the Krikorian movie theatre. I would go early. You can get a student discount there as well.

A good study break was "Market Night" – Thursday's from 6:00PM to 9:00PM. From the Central Avenue Apartments, you could walk to State Street downtown in Redlands in about 15 minutes (some people just had to drive). The street was lined with vendors, music and food. It was a great diversion from "Mipping". On occasion, you might see elements of the old ESRI band "Gridlock" performing.

Was it worth it?

Although I can not say my salary doubled (and I haven't started working yet), I feel there are more possibilities. On my way into retirement, teaching or at least coaching might be a good way of passing along tidbits of my experience. The MS in GIS helps solidify qualifications for this role.

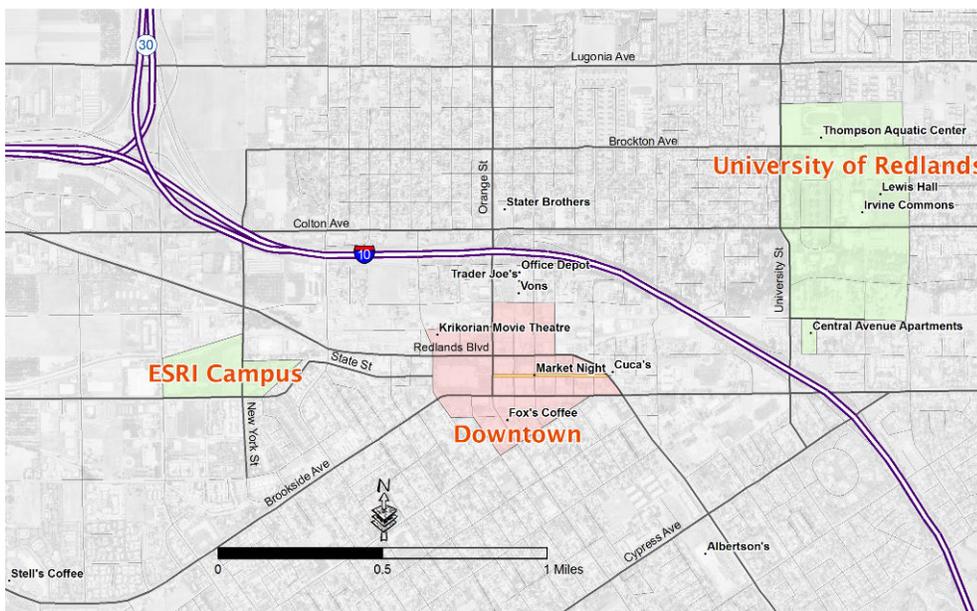
The year was packed full of workshops and training including the latest ESRI software tools. Supplementing this were reviews in classical geography and GIS topics like cartography, projections, and systems analysis. I no longer feel so "out-of-date".

Did I find answers to all of my questions? No. I found clarification. Some of my own overt generalizations are as follows:

- Coverages still exist and the old coverage topology and AML's remain useful.
- GIS should stand on its own and should not be subsumed by other departments.
- The GIS profession should grow. There is a lot to be done.
- There are many free datasets available and most of them aren't very good.
- Web apps are not quite there and do resemble "stove pipe" systems of the past.

At least one MapInfo user from the Northwest tribal GIS community indicated that I may have had an inherent need to travel to Redlands. There's probably some truth to that.

The experience was definitely worth it and to me, priceless.



Redlands vicinity from a former student's perspective.

Contact Tim Leach at:
TimLeach3@comcast.net



WAURISA TECHNOLOGY COMMITTEE NEWS

Matt Stull

Greetings Washington GIS professionals! The Washington URISA Information Technology (IT) Committee has had the pleasure to serve the WAURISA membership and local GIS community for several years now. The IT Committee is responsible for maintenance of the WAURISA website, email and bulletin board. In addition, the committee typically helps with the setup and testing of our online registration system for conferences and workshops. We also provide any other IT needs as they come up.

Migration to new hosting service

Due to the continuing growth of WAURISA, the need arose for the IT committee to find a more robust internet hosting service. Our current hosting service is limited in many areas, most notably disk space, bandwidth and spam protection. They also do not offer other services that are helpful, such as a free domain name. Most of the services they provide are much more limited than the new service we are migrating to. Lastly, the new hosting service is less expensive than the current service.

Due to these limitations we decided it is time to move all our services (website, email and bulletin board) to a new hosting service. The new service we chose will provide us with enough disk space and bandwidth to last well into the future (1.5 TB of disk space and 15 TB of bandwidth). This extra space will allow us to keep a detailed archive of conference information such as map posters, schedules, presentations and more indefinitely. Our internal email will have far less spam due to the free spam filter. We will also get our domain name (waurisa.org) hosted for free rather than having to pay for it.

So in summary, our new hosting service will provide better service for less money and leaves us plenty of room for growth.

WAURISA Web Site Changes

The WAURISA website has had some recent changes and additions, including:

- Aactiva Account Login (Member Account Login)
- Awards page – NEW PAGE
- Committees with the committee contact person is listed on Contact Page
- Summit Newsletter – current and all past issues
- The "About US" page now has the By Laws and the various WAURISA policies
- Fall 2007 Survey Results are now posted
- Conference Pages are being updated with new conference information as it becomes available.
- Historical Conference information is now being kept for reference purposes
- Workshops and Education page has been updated and reorganized.

The Washington GIS Forum

WAURISA also offers members a bulletin board service. The bulletin board, also call "GIS forums" allows members to be many things:

- Ask technical GIS software questions
- Look for job openings and post a resume
- Look up current GIS events, training and Announcements

WAURISA

The Washington State Chapter of
The Urban & Regional Information
Systems Association

«Serving Washington's GIS Community»



WAURISA

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Resources

- [Washington GIS Forums](#)
- [The Summit Newsletter](#)
- [Member Account Login](#)
- [News & Events](#)
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- [Workshops & Education](#)
- [Links](#)

About

The Washington State Chapter of URISA (WAUI) supporting and encouraging professional growth technical development and service to its membership information technologies. It is a non-profit association technology to solve problems in state, regional members use this technology for problem solving environment, emergency services and utilities. Computer Aided Mapping Association (CAMA) : The international parent organization has been supporting the professional growth of its members

Washington URISA is also the premier organization information technology to improve the quality of members are from many disciplines and are dedicated technology in decision making and streamlining

We thank you for visiting our website and hope that you'll consider joining Washington URISA, with one another. Our belief is that the more information variety of fields, the more effective we will all be

- Post messages to various local GIS user groups
- Board members and Conference Committee members use the bulletin board to coordinate and share information.

You can access the bulletin board or forums by clicking the "Washington GIS Forums" link on the main WAURISA website page. If you would like to sign up for the bulletin board please email the IT committee and them know what username you would like (email: webmaster@waurisa.org). Due to spammers registering many illegitimate users the IT committee has had to shut down open registration. The IT committee will register a username for you and email you the details. Once you are registered you will be able to edit your profile information using the "profile" link near the top right of the bulletin board page.

WAURISA Technology Committee Contact Information

Matt Stull, Committee Lead

Heather Spates, Cort Daniel, & Jitka Kotelenska

www.waurisa.org



THE SUMMIT WELCOMES NEW EDITOR

The Summit is pleased to welcome Whitney K. Bowerman as our new Olympia area editor. Whitney is the GIS Map and Data Production Coordinator for the Washington State Department of Transportation. Whitney's first article - *GIS at the City of Olympia* - appears in this issue.

Look for future articles from Whitney about goings on in the State of Washington and other Olympia and South Sound area GIS operations.



The 2008 Washington State GIS Conference, "Integrating GIS Into the Enterprise" will be held Monday through Wednesday, May 5-7 in the Northwest Rooms at Seattle Center. WAURISA - the Washington State Chapter of the Urban & Regional Information Systems Association – is finalizing 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 two concurrent daylong URISA-certified Workshops to choose from. The 2008 workshops we are presenting are "GIS Program Management" and "Open Source GIS." The Workshops offer in-depth training from leading GIS practitioners brought in from across the country. They have become a successful part of the annual Washington GIS Conference.

On Tuesday, the conference kicks into full swing with a keynote address by URISA President Susan Johnson. Susan Johnson began her term as president of URISA in August 2007. She is a nationally recognized leader and highly motivational speaker who will share her vision for the future of GIS in the enterprise.

Following the keynote, the 'GIS Person of the Year' will be announced and speaker sessions will begin. We are planning to have speakers on Tuesday and Wednesday covering a variety of topics including:

- GIS Management
- Utilities & Transportation
- Web Solutions
- Application Development
- Training
- Imagery & Remote Sensing
- 3D Visualization
- Data Conversion & Standards
- Open Source GIS
- Small Government GIS
- CAD/GIS Integration
- Mobile GIS
- Natural Resources
- Tribal Government GIS
- Business Applications
- Enterprise GIS Integration

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.

Keynote Speaker: Susan Johnson



Susan Johnson began her public service career as the first Information Services Director for the city of Raleigh, NC. She currently serves as the CIO for the Charlotte-Mecklenburg School District in Charlotte, NC, where she is responsible for enterprise information technology and communications.

Susan was elected URISA President in 2007.

Earn GISCI Points!

Attend the 2008 Washington GIS Conference and earn GISCI education points for your GISP 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 Events: New this year will be a Monday evening social in the vendor hall following the workshops. This will be an opportunity to meet and mingle. On Tuesday after the Conference sessions we'll be going to Safeco Field to see the Seattle Mariners play the Texas Rangers—your conference registration includes one free ticket! You won't want to miss this fun-filled evening.

Be a presenter at the 2008 Conference. Papers are being solicited for a variety of technical, project, management, and student tracks. Abstracts can be submitted to: abstracts@WAURISA.org

For more information check the WAURISA Web Site: <http://www.waurisa.org/>

WAURISA

The Washington State Chapter of The Urban & Regional Information Systems Association

Serving Washington's GIS Community





2008 Washington GIS Conference

May 5 - 7, 2008 • Seattle, Washington

Call for Papers

WAURISA — the Washington State Chapter of Urban and Regional Information Systems Association — has begun accepting presentation proposals for the 2008 Washington GIS Conference to be held May 5 - 7, 2008 at the Seattle Center. The conference theme for 2008 is **Integrating GIS into the Enterprise**.

WAURISA is seeking potential speakers to provide fresh, dynamic solutions to today's challenges. Presentations are invited that address the broad subjects of interest to GIS practitioners such as:

- Integrating GIS into the Enterprise
- Data Conversion, Acquisition and Standards
- Application Development
- Internet/WWW
- Local, Regional, Tribal, and Federal Government
- Natural Resources and Environment
- 3D Visualizations and Viewshed Analysis
- Open Source GIS
- Mobile GIS Solutions
- GIS Enabled Business Applications
- Utilities and Transportation
- Training
- Imagery and Remote Sensing
- CAD/GIS Integration
- GIS Management Best Practices
- Other GIS Topics

This is an opportunity to share experience, expertise, and knowledge with colleagues and offer solutions for success. Individuals chosen to present will gain recognition by their peers, raise awareness of critical issues and identify current trends in the industry. The Presentations committee will select session presentations to represent a wide range of interests and levels of expertise. Selection will be based on the value of the proposed topic to the audience and the clarity of the abstract.

May 5 - 7, 2008 • Seattle, Washington

[Call for Papers
www.waurisa.org](http://www.waurisa.org)

Presented by
Washington URISA

Deadlines:

Abstract:
March 10, 2008
Speaker Conference
Registration:
April 11, 2008

Email:
abstract@WAURISA.org

Subject:
WAURISA Presentation

Four types of presentations are available:

- Student presentation, allotted 15 minutes — Enter the [Dick Thomas Competition](#)
- Individual presentation, allotted 25 minutes
- Panel discussion, allotted 90 minutes
- Maps and Posters

Abstracts must be limited to no more than 300 words, and must include: presentation title, type of presentation requested, and author information including complete contact information. A clear concise abstract is your best ticket to a logical track placement and a well-attended session.

Presenters at the 2008 Washington GIS Conference will earn 1 GISCI Contribution Point for Conference Presentation or Conference Poster Display in addition to points earned for attending the conference and being a member of WAURISA. **New for 2008: If your paper is chosen for presentation you may attend a full-day Monday workshop for only \$10 in addition to your conference registration.** Electronic submissions are preferred - please email to address at the left by March 10, 2008. See complete presentation guidelines at the [Presentation Guidelines Link](#).

Calling All Students!!

Second Annual Dick Thomas Memorial Prize - Student Presentation Competition at the 2008 Washington GIS Conference

WAURISA, the **Washington State Chapter of the Urban and Regional Information Systems Association**, announces the second annual **Dick Thomas Memorial Award**. This award was established to honor Washington State GIS pioneer and mentor **Richard 'Dick' Thomas**.

The intent of this award is to honor Dick by continuing his work of encouraging students to excel in their studies and transition successfully into careers in the field of GIS.

WAURISA's goal is to inspire students to present their original work related to GIS, geography, or geographic research in Washington State at the annual **Washington GIS Conference**.

Prizes:

First Place:

- Dick Thomas Award Plaque
- \$1000 cash
- One year membership in **WAURISA**
- Free registration to the **2009 Washington GIS Conference**
- Publication of paper in *The Summit* (Washington GIS Newsletter)

Second Place:

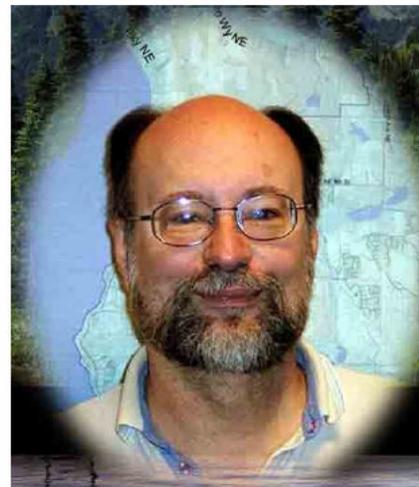
- Dick Thomas Second Place Award Certificate
- \$300 cash
- One year membership in **WAURISA**
- Free registration to **2009 Washington GIS Conference**

Third Place:

- Dick Thomas Third Place Award Certificate
- \$200 cash
- One year membership in **WAURISA**

About the Competition:

The competition has two parts: the first is the selection of four (4) abstracts by the **WAURISA Student Presentation Competition Committee**. These papers will be presented during the Student Presentation Session at the **2008 Washington GIS Conference**. The second part is the judging of the selected student presentations **Conference**. Abstracts are to have a maximum of 250 words describing the proposed presentation. The presentations are limited to 15 – 20 minutes, with a possible additional 5 minutes for questions.



1947 – 2006

Who can enter:

The competition is limited to current students enrolled at least 6 hours in a relevant curriculum at a secondary school, community college, technical school, or university program. Submitters do not need to be **WAURISA** members, but all students are encouraged to become **WAURISA** student members at the special student rate.

For more information about the **Conference**, please visit: www.waurisa.org.

For Complete Dick Thomas Competition Rules and Guidelines, see:
http://www.waurisa.org/conferences/2008/2008_Dick_Thomas.pdf

New ESRI Licensing Program for Small Municipalities and Counties

The ELA Program is open to governments of cities, counties, villages, and towns of the United States with populations of 100,000 or less. Benefits to these organizations include

- ▶ Updated versions of geographic information system (GIS) software to provide a consistent platform
- ▶ Flexible deployments to desktops, servers, and mobile devices
- ▶ Opportunities to consolidate GIS and IT initiatives, establish internal standards, and integrate ESRI business partner solutions
- ▶ Ability to incorporate GIS into mission-critical applications and workflows

The core technology for the ELA is ESRI® ArcGIS® software, which is an open and interoperable technology platform that provides advanced visualization and cartographic capabilities, spatial analysis, geographic data management, and more.

For more information about this program, visit www.esri.com/smallgovela or call Sarah Barnes at ESRI's Olympia office at 360-754-4727, ext. 8934.

Join us at the **ESRI Seattle Open House**
Thursday, February 21, 2008.
Visit www.esri.com/events to register.



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ADVERTISE IN *THE SUMMIT*

Join industry leaders like GITA and ESRI and get your message broadcast to the 2500 people across Washington State who receive each quarterly issue of *The Summit*. How?

Advertising is limited to Mt. Rainier and Mt. Adams level sponsors of the annual Washington GIS Conference. Find out how your company can participate in the 2008 Washington GIS Conference and get your ad in *The Summit* by contacting:

Angela Johnson: president@waurisa.org
Greg Babinski: secretary@waurisa.org
Steve Schunzel: sschunzel@desmoineswa.gov
Rick Lortz: rlortz@lakehaven.org
Neil Berry: neil.berry@seattle.gov

Industry Conference will Begin
to Geospatially Solve a

Only 1
\$1.6
Trillion Dollar Problem

Introducing the Geospatial Infrastructure Solutions Conference, slated for March 9-12, 2008, in Seattle, Washington. If you own, operate, maintain, or protect infrastructure locally or globally, this is your event. You won't want to miss 111 technical sessions, 13 half-day knowledge immersion seminars, and a 100,000 square-foot exhibit floor.

**The Movement Has Begun.
Are You Ready?**



Geospatial Infrastructure Solutions
Conference 31



**Geospatial Dimensions of
Emergency Response Symposium**

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TECHNOLOGY ASSOCIATION®

www.gita.org/gis



UPCOMING URISA EVENTS AND CONFERENCES

URISA's 46th Annual Conference

October 7-10, 2008

Sheraton New Orleans

<http://www.urisa.org/conferences/aboutannual>

Go beyond basic technology and applications and contemplate issues related to designing, managing and applying information technology - at its highest and best use - to improve our urban and regional environments. Join your colleagues, peers, thinkers and doers from around the world at URISA's Annual Conference.

The URISA Annual Conference offers a unique multidisciplinary approach, with sessions led by industry leaders, powerful keynote presentations, panels, roundtable discussions and networking meetings you won't find anywhere else.

This conference is vital to professionals concerned with the effective application of information technology in all state and local government agencies.

URISA Leadership Academy in Chicago

June 16-20, 2008

Ambassador East Hotel

<http://urisa.org/ula>

A Leadership Academy for the GIS Practitioner

- Do you see GIS as much more than "just a map"?
- Do you see GIS potential in every industry/application?
- Do you recognize GIS as a major enabling technology to help achieve most goals?
- Do you want to make a positive difference in the world around you using GIS?
- Do you understand the power of visualizing and spatially analyzing information?
- Are you frustrated by others in your organization that just don't "get" GIS?
- Are you overwhelmed by your management responsibilities?

If you can answer "yes" to two or more of these questions, then the URISA Leadership Academy (ULA) is for you.

URISA/NENA Addressing Conference

(formerly known as the Geospatial Integration for Public Safety Conference)

April 7-10, 2008

Doubletree Hotel, Portland, Oregon

<http://www.urisa.org/conferences/Addressing/Info>

"Hot Apps on a Cool Winters Day"

March 7, 2008

Eugene Oregon

Free daylong event sponsored by the Oregon Chapter of URISA, but space is limited see:

<http://64.177.198.78/phpBB2/viewtopic.php?t=599> for how to RSVP

Integrating GIS & CAMA Conference

Annual Conference for Professionals in Property Assessment, Tax Administration, Mapping and Information Technology

February 25-28, 2008

New Orleans, LA

http://www.urisa.org/gis_cama

And just dreaming.....

URISA Caribbean GIS Conference

August 25-29, 2008

Grand Cayman

<http://www.urisa.org/conferences/caribbean>

OTHER UPCOMING GIS EVENTS:

GITA Annual Conference 2008



March 9-12, 2008

Seattle, WA

<http://gita.org/events/annual/31/index.asp>

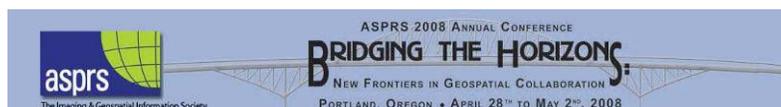


2008 ACSM/LSAW Conference

March 4-8, 2008

Spokane, WA

<http://www.acsm.net/conference.html>



ASPRS 2008 Conference

April 28 - May 2, 2008

Portland, OR

<http://www.asprs.org/portland08/>



2008 NW User Group

October 24-28, 2008

Sun Valley, Idaho

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

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THE SUMMIT - EDITORIAL

NEVER TOO OLD TO LEARN

17 of the top 20 and 54 of the top 100 Universities in the world, as ranked in 2007 by the Institute of Higher Education, Shanghai Jiao Tong University, are located in the United States (<http://ed.sjtu.edu.cn/ranking.htm>). Our own University of Washington is ranked number 16 worldwide.

Of course we in the United States know that a highly educated population is a key success factor for our democracy and for the future of our dynamic economy. The Shanghai Institute's interest in ranking the top 500 universities and their highly regarded ranking methodology reflects the importance placed on education by what will surely be the world's largest economy within our life times.

What does this mean for us as members of the Washington GIS community? Each of us in our own way can look back at our past education and map the choices we made in our major or in individual classes that led us to our current career (or pointed in the direction of the career we aspire to). But is our education complete? The articles that you have read in this issue of *The Summit* suggest an answer to that question.

Karen Dvornich's article on the *NatureMapping* program provides a glimpse into how some of us may have first nurtured an interest in mapping what we observed as a means of understanding the spatial organization of our environment. Ann Stark's profile shows how an undergraduate major (biology in Ann's case) can lead to a career in GIS. But note that Ann identifies 'staying up-to-date' as her biggest challenge in GIS.

In addition to Ann, three of the authors in this issue are GISP's. The first cohort of GISP's will soon face recertification, requiring demonstration of continuing education.

Karen Zollman's article is a practical example of knowledge related to land surveying that each GIS practitioner should have – do you? And Tim Leach's description of his experience going through the University of Redland's MS GIS Program ultimately answers our original question. For us as GIS professionals and practitioners, we have to pursue lifelong learning – just to keep pace with the changes and developments in the field.

Whether we are content to keep pace or aspire to get ahead, we are fortunate in Washington to have many resources to choose from. Vendors offer GIS software training, others offer custom training tailored to specific business needs, and professional organizations like WAURISA offer workshops and seminars that can help meet your educational needs. Open Source GIS and GIS Program Management are two workshops that WAURISA will offer during the Washington GIS Conference. You are never too old to learn and it is likely that you cannot afford not to learn.

The Summit is published by WAURISA, The Washington State Chapter of the Urban & Regional Information Systems Association

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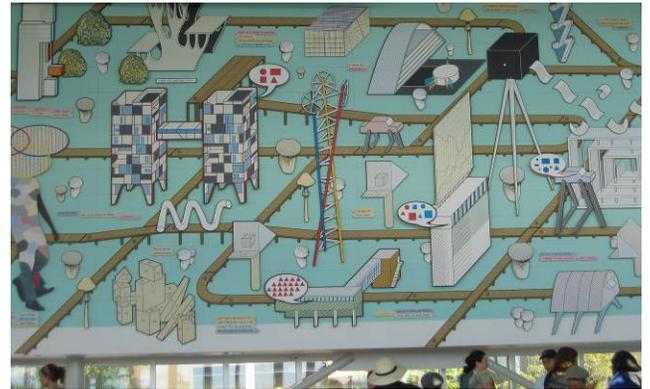
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SummitGISNews@URISA.org

PUBLIC MAPS IN WASHINGTON

Most maps depict the real world, but there are also worlds of the imagination that can be mapped. Those of us who read J.R.R. Tolkien's trilogy know that a map of an imagined world was a key tool in entering into the story that evolved from his imagination.

The Seattle Art Museum's new Olympic Sculpture Park includes an indoor pavilion where the visitor can refresh the body and reflect upon the sculpture arrayed within sight of Puget Sound and the Olympic Range beyond.

A delightful part of the pavilion art collection is Mexican Artist Pedro Reyes' 50 foot wide mural titled 'Evolving City.' Reyes mural of an envisioned world invites us to reflect on our vision of the world, past, present, and future – real and imagined.



'Evolving City' – Wall Mural at Olympic Sculpture Park

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

Many GIS users and professionals work in a municipal environment. For those of us who do, how do we think about our relationship to our city or county – both as an employee and as a citizen? Reflect on ancient Athens:

We will never bring disgrace to this our city by any act of dishonesty or cowardice;

We will fight for the ideal and sacred things of the city, both alone and with many;

We will revere and obey the city's laws and do our best to incite a like respect in those above us who are prone to annul or set them at naught;

We will strive unceasingly to quicken the public's sense of civic duty.

Thus in all these ways, we will transmit this city not only not less, but greater and more beautiful than it was transmitted to us.

-Oath of the Ancient Athenian City State



The Summit would like to hear from you. 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.

GIS USER GROUPS IN WASHINGTON

ACSM – Washington State Section

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

ASPRS Puget Sound Region

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

Central Puget Sound GIS User Group

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

Meetings the 3rd Tuesday of each month from 1:00 to 3:00pm at Mercer Island City Hall. Contact Nora Gierloff at: ngierloff@ci.tukwila.wa.us

Central Washington GIS User Group

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

Meets the 1st Friday of each month at the Super China Buffet in East Wenatchee, WA at 12:00 noon.

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

Spokane Regional GIS User Group

<http://waurisa.org/phpBB2/viewforum.php?f=19>

Contact: Dave Rideout, Spokane County 509-477-7251
drideout@spokanecounty.org

Washington Geographic Information Council (WAGIC)

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

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

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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Back issues of *The Summit* are available at:
<http://waurisa.org/thesummit/>

JOIN THE WASHINGTON GIS COMMUNITY FORUM!

The Summit is not the only communications resource available to members of the Washington GIS Community. Sign up as a member of the Washington GIS Community Forum (<http://waurisa.org/phpBB2/index.php>) and access the latest news about GIS jobs, training, projects, and professional activity in Washington State.

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