



THE SUMMIT

News From and For the Washington GIS Community

NEMAP (Navy Emergency Management Addressing Project)

Using GIS to coordinate addressing across jurisdictions

By: Marvoin Garland, GISP and Amy Hrdlicka, GISP

“Navy 911, what is the location of your emergency?” You will hear this phrase if you need to call 911 from a Navy Installation. If you call 911 off-base, the person answering your 911 call will already know your location, thanks to an accurate address and range system, and their associated GIS and 911 systems which have been designed to alert emergency responders to your specific location. Verifying a caller’s correct location is critical for the Navy Regional Dispatch Center’s (RDC) dispatchers and first responders, but getting it right is not yet as automated as most people would expect for the nation’s DoD (Department of Defense) facilities. The Navy Emergency Response Management System (NERMS) project is the Navy’s solution to this problem. NERMS will allow the Navy to meet the 911 industry standards established by groups such as the National Emergency Number Association (NENA) and recommended by Congress. Effective and rapid 911 Emergency

Response relies on industry standard routing and addressing procedures. Most civilian agencies at local, regional, and state levels have established these procedures and a GIS-based 911 addressing capability, which makes it important for the Navy to adopt their guidelines and incorporate them into the overall 911 canvas. In concurrence and support of NERMS and Emergency Management (EM) programs, the Navy Installations Command (CNIC), Naval Facilities and Engineering’s Anti-Terrorism Force Protection Command (NAVFAC AFTP), and the Naval Space and Warfare Command (SPAWAR Systems Center Pacific) are supporting, funding, providing oversight and executing the Navy Emergency Management Addressing Project (NEMAP).

NEMAP will not only help enhance the 911 response capabilities of the Navy, but the project will have positive ripple effects across the Navy enterprise as well as our local gov-

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President’s Column

By: Heather Glock

Welcome to the fall 2013 issue of *The Summit!* I’d like to use this column to highlight recent WAURISA activities and accomplishments. In my last column I explained the role our committees have in conducting the business of WAURISA on behalf of its members, so I’ll start off by giving an update on what these committees have accomplished in the past three

months.

Technology committee (manages WAURISA’s website and tasks related to running events and workshops). In addition to preparing our website for the 2014 conference, this committee has been working to identify needs for updating WAURISA’s website as well as membership management and communication tools. As a volunteer-based

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Collecting GIS Data Using ArcGIS Online

By: Harkeerat Kang, GISP

How many times have you needed to collect GIS data in the field for a project and hoped for a tool or device that is easy to use? In the past, organizations have used Esri's ArcPad and other proprietary software from Trimble, Magellan and others and now ArcGIS Mobile is available. But these come with a substantial cost, including a steep learning curve.

Esri's ArcGIS Online provides an easy alternative, a way to collect spatial data and then instantly share the data with everyone or just your organization. All you need to start using ArcGIS Online is a personal Esri Public Account. You can sign up for free. If your organization has an ArcGIS Online account, you can become an account member under your organization. Then you can post data and host map services in Esri's cloud like all ArcGIS Online users or take advantage of your own organization's ArcSDE database and ArcGIS for Server resources.

Start with some data

Acquire or create a GIS dataset that you would like to edit. It could be a shapefile, a tab-delimited text file (CSV) with spatial data (for example, latitude and longitude coordinates), a GPS data file (GPX), or a file geodatabase or ArcSDE feature class. Your feature class can have domains, which will ensure consistent data entry, or attachments for collecting photos or other types of documents.

Publish the data to the Esri cloud

Use the Esri cloud to host your data when you don't have access to ArcSDE or ArcGIS for Server, or if you do have access you might want to use cloud hosting for a simple and quick project that won't consume many of your organization's account credits.

1. Log in to ArcGIS Online using your personal or organization account.

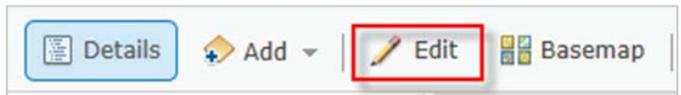
2. Go to My Content and click Create Map.

3. Click the Add button and pick Add Layer from File. Upload a zipped shapefile file, a CSV file or a GPX file by clicking Browse and navigating to your file location, then click Import Layer. This copies the data (in this example, garages) to the Esri cloud and adds as a layer to your map under Contents.

Note: If you use an organization account, other options are available. You can upload a shapefile or CSV file, and then create a hosted feature service for serving the data. The hosted feature service can be shared to your organization, a group within an organization or everyone. See [publish a hosted feature service using a shapefile or CSV file](#) (Esri ArcGIS.com Help).

4. Save your map by clicking the Save button and completing the dialog box entries, such as title and tags (at least one tag is required). A new Web Map is created with the title you provided.

5. Click the small arrow next to the "garages" layer to change a few attributes and set it up for editing. In the context menu click Enable Editing. This will add an Edit button.



6. You can rename the layer, configure a pop-up or change the map feature symbol by going to the context menu. After completing these tasks save your web map again.

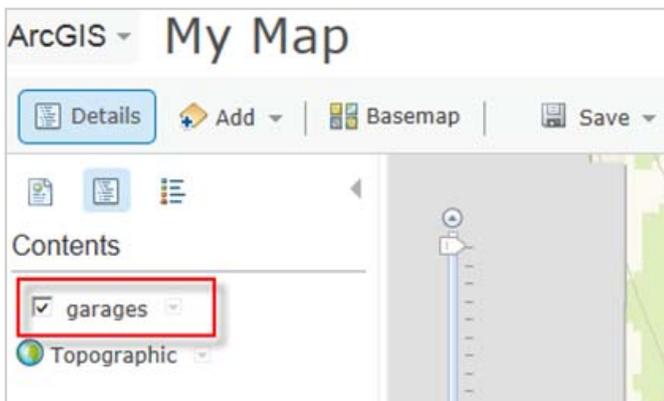
7. Click the Share button. In the Share dialog box, share it with Everyone (public) or with a group.

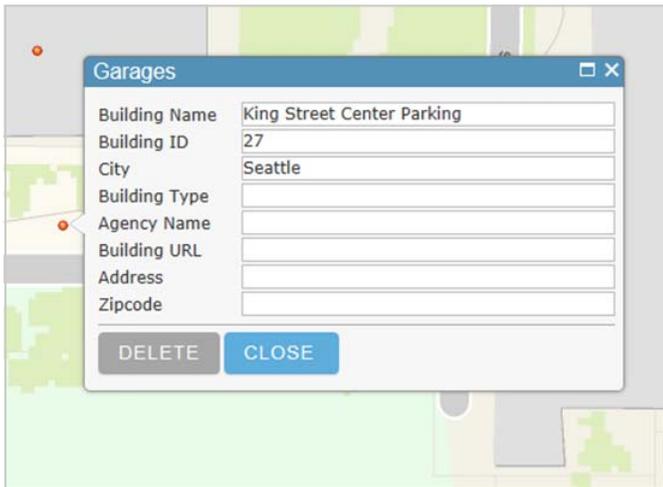
8. Your web map is now ready for editing. Distribute the web map link to groups or individual who may edit the map data.

9. To add a new feature using web map, click the Edit button and then click New Feature in the dialog box. Click on the map where you want to place the feature and add attributes in the form fields. Other editing options are mentioned later in this article under heading Editing Data.

Publish, host, and serve the data within your organization

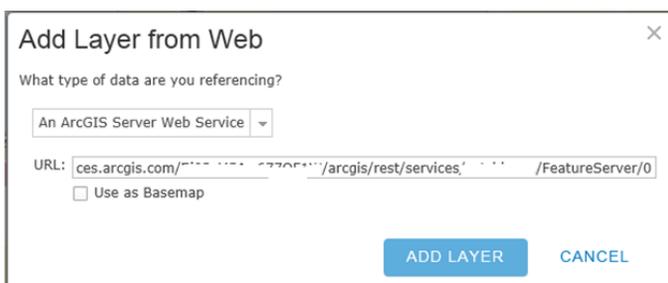
If you do not want to use Esri cloud services and would like to serve the editable map data from your organization's own ArcGIS for Server environment, that's easy too provided that





your server is set up to serve data over the Internet.

1. Save your data as an ArcSDE feature class. Grant permissions on the feature class to a SQL account that has read and write privileges to the data.
2. Open ArcMap and add the feature class using a connection that uses Database Authentication with a read/write SQL account. Save the ArcMap document.
3. From ArcMap, publish the map service on your ArcGIS Server by clicking File -> Share As -> Service. Make sure Feature Access is enabled and the REST endpoint is accessible on the Internet. Close the ArcMap document if you would like. If needed, Register Database in Data Store (ArcGIS for Server 10.1). For more information see [Tutorial: publishing a map service](#).
4. Log in to your organization's ArcGIS Online account (or your personal account).
5. Go to My Content and click Create Map button.
6. Click the Add button and pick Add Layer from Web. In the dialog box enter the REST endpoint URL for the feature layer within your map service. Click Add Layer to close the dialog box.
7. The editable layer is added to your web map. The Edit button is active (because you enabled feature access when you created your map service).
8. Save your map and from here the steps are same as if you had published your data to the Esri cloud.



Collecting/Editing your data

Once you have finished publishing your data as a map service, either to the Esri cloud or your organization's ArcGIS Server environment, and shared your ArcGIS Online web map which displays the data, you are ready for data editing. Different options are available for editing and collecting data.

You can edit data using the ArcGIS Online web map interface. Simply start by clicking the Edit button. In the dialog box click New Feature, place a point on the map and add attributes in the form fields.

You can also use one of Esri's free smart phone apps for editing – ArcGIS or Collector for ArcGIS. Launch one of the apps and locate your web map using the find tool (search by tags or by organization) or use the web map link to open it directly in one of the apps for editing. The appearance of the map viewing and editing interface varies between desktop and mobile device browsers, as well as between Android and iOS smart phones and tablets.

The Collector for ArcGIS app requires a log in and is not available in older versions of Android. Also, an ArcGIS Online organization member account is required for editing data in Collector for ArcGIS.

Export your edited data

1. Open ArcMap.
2. Sign in to ArcGIS Online by clicking File -> ArcGIS Online. In the dialog box click Sign In and enter your account username and password to login.
3. Click My Maps and Data.
4. Click Add button on the Feature Service (not on the Web Map). This will add the feature class in ArcMap's table of contents.
5. Right click the layer in Table of Contents and click Data -> Export Data and save the data locally.

If you created the map service in step 3 under "Publish the data to the Esri cloud" heading, you will have to use a different method to download data.

1. Go to ArcGIS Online and log in to your account.
2. Go to My Contents and click the web map that has the edit layer.
3. Click on the drop down on the Open button under your web map and select Download to ArcGIS 10 for Desktop.
4. This will download an ArcGIS info package (item.pkinfo) to C:\Users\\Documents\ArcGIS\Web Maps\

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NEMAP (Navy Emergency Management Addressing Project)

(Continued from page 1)

ernment partners outside the Navy fence lines. The NEMAP objectives are to adopt and establish the 911 industry standard which includes assigning street names, street ranges and addresses for all applicable facilities and structures. Addressing on DoD installations has, until now, mostly been done by building number and does not take into account a centerline range – which makes routing impossible. Key components of the 911 Response Management System and NERMS are the tabular and geospatial addressing data for the Computer-Aided Dispatch system, which NEMAP has been founded to develop. In addition, information sharing and collaboration for lasting partnerships is key to the effectiveness of NERMS. Therefore, NEMAP aims to put in place mutually beneficial relationships and processes that promote the information flow and data exchange.

Addressing and locational data are important to share amongst many groups such as CNIC’s Division N37; these folks set policy and oversee the execution of emergency management and response for the entire Navy. Another key group to NERMS is the Navy’s GeoReadiness Program as they collect, maintain, and manage GIS data for the shore installations. Other folks within the Navy community who use and help coordinate NERMS data are the military housing providers (public/private ventures with commercial companies), the Real Property and Asset Management staff, and Public Works Departments at each installation.

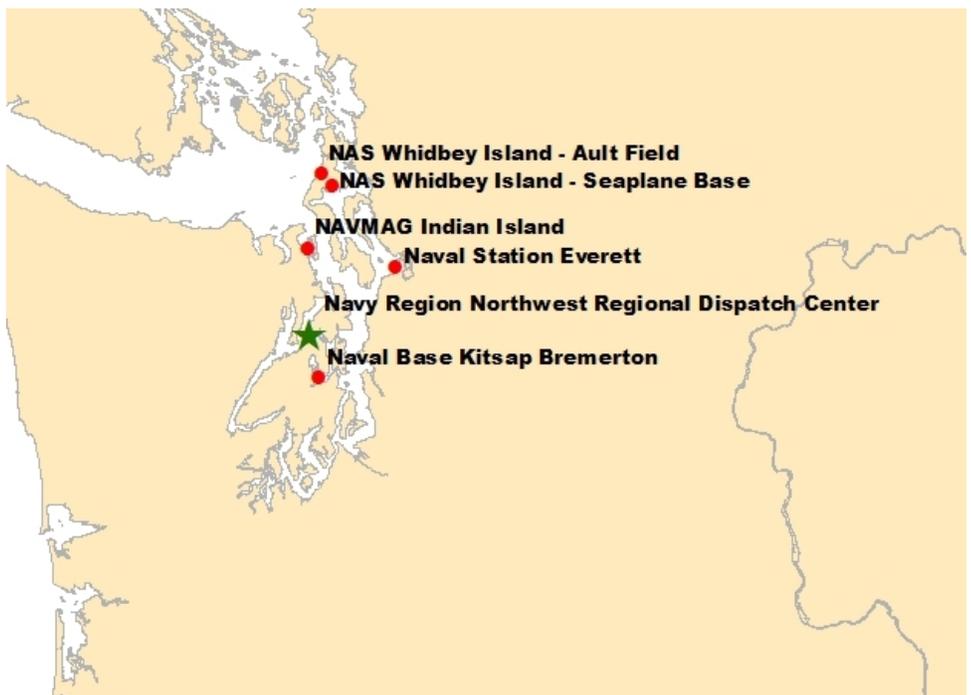
Local governments (cities, counties, and state agencies) must also be kept in the NERMS data loop; seamless emergency response relies on data inside and outside the Navy Installation fence lines. As the authoritative source for addressing, local government entities may include the 911 data or CAD coordinator, addressing office, planning department, state EM office, or any GIS personnel who touches emergency management GIS data. By working together, the multiple tiers of government agencies can accomplish the common goal of having the most timely and accurate life-saving data.

The NEMAP Process and Navy Region Northwest

NERMS is an Enterprise system, which means it contains Navy-wide information and capabilities, and requires coordination for every region, at every installation, and with each local government 911/MSAG/Addressing authority in which the bases are located. Navy Region Northwest has four major bases: Bremerton Naval Shipyard (and Bangor), Whidbey Island, Everett, and Indian Island, as well as a number of special areas. Altogether, there are 450 roads that need to be assigned ranges, and almost 4000 facilities to address. Not a small task.

NEMAP Team members began by working with the Northwest Region’s GeoReadiness Center to acquire current street centerlines, installation boundaries and building/facility data. The data were then scrubbed and processed before initiating an onsite visit to each installation and local government involved, in order to identify any issues that do not conform to NENA standards. These issues may include: roads that are not named, incorrect topology, secured access sites, Navy weapons and munitions storage, and/or privatized housing

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Overview of the Navy Region Northwest bases, with RDC location indicated in green.

Adventures in the Geography Classroom

By: Richard Katz

In many Social Studies classes in our nation's schools, the teaching of Geography is reduced to memorization of place names and major exports. This realization made me want to make a change by teaching Geography to young people as more than just places, names, facts, and figures. Early in my career teaching Geography, I approached the subject by integrating it into broader topics. It was almost all-encompassing, yet at the same time more understandable because of its relationship with big ideas like global warming, or human development. The challenge was to get students to appreciate the big issues, yet look and understand geography at a local level. Really that was the key!

By focusing on important issues, my students are able to understand and have empathy for what is happening not only globally, but right here in our communities. I choose to focus on development issues because they affect every branch of Geography, and they are visible here (if one looks) and certainly abroad quite easily. Through the study of Human Geography each topic is naturally linked to development, and so my goal was to integrate those topics through film, photographs, political cartoons, readings, speakers, and map analysis so my eight grade students at Washington Middle School



Roosevelt High School in Seattle, with cherry tree in bloom.

would understand the challenges facing most people in the world. I looked for parallels right here in our country and if possible in our Pacific Northwest backyard. That is where PNW history came in handy - because there was a time we were not quite the advanced society we are today. My students were able to pick a current development issue somewhere in the world and with the lens of history look for parallels right here in the PNW. This led to amazingly well researched, analyzed compare-and-contrast reviewed studies. The work my eighth-grade students did rivaled much of what I had seen in graduate school.

The challenge was to get students to appreciate the big issues, yet look and understand geography at a local level.

GIS in my classroom was a marvel to behold when I first saw it in the spring of 1997. We were squeezed into the tiny computer lab, sharing computers in pairs. Yet my students were able to grasp that this was new and exciting technology. They saw for the first time that they could actually use the data in a visual way and understand it, as well as explain it to other people because you could see it! The possibilities right there at the end of my first year of teaching were revealed. I was going to integrate GIS into my classes with middle school students! They completed modules on development, urbani-

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Please make your reservations at our contracted hotel, [The Hotel Murano](#). Make sure to mention you are with the Partners in Emergency Preparedness Conference in order to receive the discounted, government per diem (open to ALL PIEPC attendees), room rate of \$106 per night. Make reservations directly [here](#).

International Conference on Coastal GIS Applications

By: Suzanne Shull, GISP (Padilla Bay National Estuarine Research Reserve) and Liz O'Dea (Washington State Department of Ecology)

The [CoastGIS 2013](#) conference “Monitoring and Adapting to Change on the Coast” was held in June at the University of Victoria, British Columbia.

[CoastGIS](#) is an International Symposium on GIS and Computer Mapping for Coastal Zone Management. The CoastGIS series of conferences, supported and endorsed by the [International Geographical Union's Commission on Coastal Systems](#) and the [International Cartographic Association](#), brings together researchers and practitioners who develop and use spatial applications to support coastal zone management. Attendees have the opportunity to present their accomplishments to

their peers, build relationships, and discuss how spatial technology can advance the sustainability of the world's coasts. The CoastGIS symposia have a remarkable track record of scholarship producing several books based upon the papers presented at each conference (adapted from [Conference Program](#) “Welcome!” by Rosaline Canessa and Andrew Sherin).

The CoastGIS 2013 Conference kicked off with a day of hands-on workshops including Interoperable web services for adaptive coastal management, and applying LiDAR data for coastal zone management.

Tools to evaluate risk from sea level rise, fate of marine debris, regional data frameworks, data interpretation, long-term zooplankton observation, eelgrass mapping, and data visualization were featured poster topics. Presentation Session topics included: Coastal Zone Management, Data and Observing Systems, Coastal Vulnerability, Decision-support and Visualization, Marine Spatial Planning and Human Impacts, GIS and New Technologies, Data Infrastructures and sharing, Bathymetry, Habitat and Species, Coastal Atlas, and Conservation GIS.

Attendees...discuss how spatial technology can advance the sustainability of the world's coasts.

The conference was preceded by a two-day [International Coastal Atlas Network \(ICAN\) 6](#) Workshop, “Expanding Participation in Coastal Web Atlas Development and Use”. The mission of ICAN is to “share experiences and to find common solutions to Coastal Web Atlas development (e.g.,

user and developer guides, handbooks and articles on best practices, and information on standards and web services)” (www.icoastalatlans.net). ICAN was recently adopted as a project of the [International Oceanographic Data and Information Exchange \(IODE\)](#) within UNESCO's Intergovernmental

Oceanographic Commission. The Washington Coastal Atlas has been involved in ICAN since 2008, and participants from Oregon, British Columbia, and California are also involved.

Two special journal issues will feature papers on the application of GIS to the coastal environment: *Marine Geodesy - Marine and Coastal GIS* and *Coastal Management Journal - Monitoring and Adapting to Change on the Coast*. Many of the CoastGIS2013 conference presentations have been submitted as expanded peer reviewed articles to these journals. All of the extended abstracts from the conference are now available from [CoastGIS 2013 Proceedings](#).



View of Cadboro Bay, neighboring the conference site in Victoria, British Columbia. Photo by Suzanne Shull.

URISA GIS Capability Maturity Model

Press release from Wendy Nelson, Executive Director of URISA

The GIS Management Institute® has published the URISA GIS Capability Maturity Model, culminating a two-year effort. The GISCMM provides a first-ever framework for assessing not only the capability of an enterprise GIS operation, but also the process maturity of those who manage and operate the GIS.

A capability maturity model is a structured objective mechanism to assess an organization's capability, as well as its management and operational process maturity. The [URISA GIS Capability Maturity Model](#) includes 23 enabling capability assessment components, which include the sorts of assets that a GIS operation acquires. The Model also includes 22 execution ability assessment components, which include the key processes that are required to manage and operate an enterprise GIS.

The URISA GISCMM will help organizations assess the development stage of their GIS and the process maturity level of their operations. This assessment will help them target priority capability enhancements and process improvements. GIS staff responsible for operations and management will be able to use both the GISCMM and the GMCM to assess their

own professional strengths and weakness and to identify training and other professional development priorities.

To help GIS professionals and managers understand and begin using the Model, URISA's GIS Management Institute will present a 90 minute webinar on the topic on [Wednesday, November 6, 2013](#).

An early version of the model, developed by URISA Past-President Greg Babinski, was designated in November 2009 as a URISA Initiative. In 2010, when URISA agreed to develop the [Geospatial Management Competency Model](#), it also agreed to update the GISCMM. The update process began with a daylong GIS Managers task force at the 2011 Washington GIS Conference.

In 2012 refinement of the GIS Capability Maturity Model fell under the responsibility of URISA's new GIS Management Institute® (GMI). In late 2012 and early 2013 the GMI Committee reviewed and revised the GISCMM based on the 2011 GIS Managers task force, and on its own recommendations. In April 2013 the revised GISCMM was published for international peer review. Appropriate peer review comments were incorporated into the Model, which was then unanimously endorsed by the GMI Committee in September.

The GIS Capability Maturity Model is the culmination of the work of the seven-member 2011 Washington GIS Managers Task Force, the 14 members of the GMCM Committee, the 20 active members of the GMI Committee, and the 23 GIS management professionals who responded to the GISCMM peer-review.

For more than 50 years, URISA has been identifying and addressing challenges in the practical application of technology for urban and regional systems. The GISCMM continues that practice. The intellectual capital it represents for the Geospatial Profession will be a key resource for the development of the URISA GIS Management Body of Knowledge (GMBOK).

The Urban and Regional Information Systems Association's (URISA's) qualifications to organize the GISCMM effort include its 50-year history as one of the founding organizations of the GIS profession, its successful organization of the GIS Certification Institute, GISCorps, and the URISA Leadership Academy. It's most recent initiative is development of the [GIS Management Institute®](#).

View the [URISA's GIS Capability Maturity Model](#).



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Fact Sheet: URISA GIS Management Institute



GMI **Goal:** The GIS Management Institute® helps organizations identify and implement enterprise GIS management practice improvements. GIS managers, anywhere in the world, will increase return on investment and maximize the effective use of GIS for their enterprise business goals with GMI products and services.

Need: GIS professionals and practitioners invest considerable time and money for their initial education and continual training, yet recognized professional practice standards and guidelines are lacking in the GIS profession. Public agencies and private entities have invested very large sums of money to develop and operate their enterprise GIS and program specific GIS operations, yet best-practices and investment validation for GIS operations are both lacking. Worldwide, most GIS managers, professionals, and practitioners continue to deliver value to society through the work that they do. But there remains a need for an environment where best practices and professional standards can be developed, validated, and promoted to maximize the value and effectiveness of GIS operations. These are the needs that the GIS Management Institute® will meet.

GMI Core Products and Services: The GIS Management Institute® already has two key products that are central to its core strategy:

The Geospatial Management Competency Model (GMCM) for managers

The GIS Capability Maturity Model. (GISCMM) for GIS organizations

The GIS Management Body of Knowledge (GMBOK) will be a third key product of the GMI. The GMBOK is intended to be a GMI product that generates substantial revenue.

The GISCMM and the GMBOK will also be used to develop an on-line subscription based organizational assessment and accreditation service for enterprise GIS operations anywhere in the world. This will be the primary revenue generating GMI service. Subscribers to the service will populate the GMI database with metrics on their own GIS configuration, maturity assessment, and performance metrics. Their subscription will then provide them access to the GMI database to analyze the effectiveness of individual GIS management best practices and to compare their GIS operations against peer agencies worldwide.

The GISCMM, GMCM, and the GMBOK will also be used to develop a revenue-generating, subscription-based GIS educational program accreditation service. The GMCM and the GMBOK will be used in cooperation with GISCI, to develop a revenue generating GIS Management Certification Program.

GMI Core Strategy: The GMI core strategy is to help those who deploy, operate, and manage GIS organizations enhance their personal competency, and improve the effectiveness and ROI from their investment in GIS. The GMI will mobilize volunteer GIS professionals (to be called GMI Associates) to create the GMBOK, comprised of individual GIS Best Practices. The GMBOK will be developed by starting with frameworks that have already been developed by URISA, such as the GMCM and the GISCMM. Topics for individual GIS Management Best Practices will be developed from the 23 capability and 22 maturity components of the GISCMM. Each topic will include a narrative of the best practice, a policy template, recommended metrics, a description of required professional competencies to support the best practice, and recommended learning objectives to inform the development of a curriculum to teach the best practice.

The URISA GIS Management Institute® is recognized as the worldwide authority for GIS management best practices.

The GMI accredits the maturity and capability of GIS operations and, by association, the professional competence of GIS managers; develops, maintains, and promotes the GIS management body of knowledge; accredits and provides GIS management-related education; and advocates for effective GIS management related policies and funding at the local, state, national, and international level.

For more information about the URISA GIS Management Institute,
see: www.urisa.org/main/gis-management-institute/

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Information Sharing at Cowlitz-Wahkiakum GIS Users Group

By: TJ Keiran, GISP

On September 3, 2013, the Cowlitz-Wahkiakum GIS Users Group hosted and facilitated a meeting of GIS professionals from local governments in Southwest Washington as Esri staff presented ArcGIS Online for Organizations and then WSDOT staff unveiled its new Community Planning Portal. In addition to the two counties involved in the local group, staff from Grays Harbor, Lewis and Pacific counties attended and received information and insights into emerging trends one normally receives in a conference.

This summer there was buzz about ArcGIS Online capabilities becoming part of the ArcGIS 10.2 on-premises platform at about the same time as WSDOT's Community Transportation Planning Office announced its interactive [Community Planning Portal](#). Leaders of the Cowlitz-Wahkiakum GIS Users Group (CWGUG) had questions they knew would be shared by many GIS professionals in the region and Esri Account Manager Heather Glock helped arrange a meeting with Esri staff from Portland and Olympia offices to discuss technical issues and licensing concerns.

Esri Solutions Engineer John Sherrard presented an overview of ArcGIS Online for Organizations and the manner with which Esri is keeping pace with networking systems that are converting to cloud technology. He encouraged attendees to familiarize themselves with survival trends and tactics and be

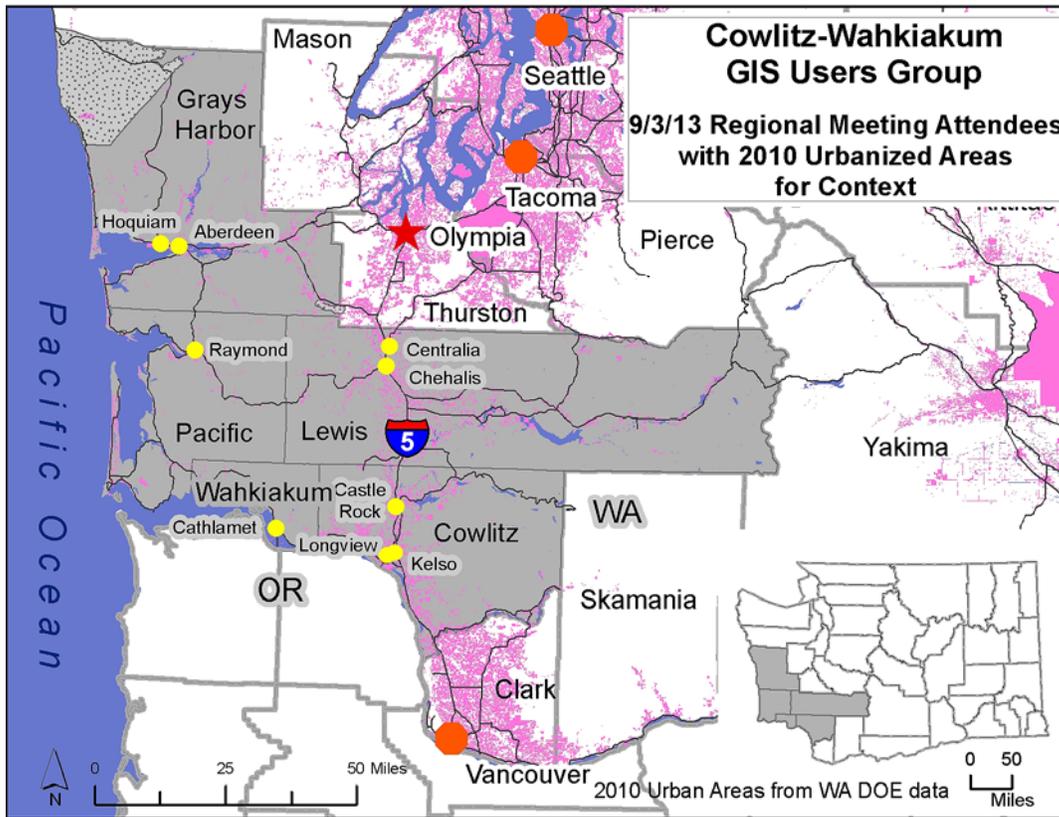
prepared to incorporate better design practices in the organization's workflow. For instance, Chrome and Firefox are the two most popular web browsers with 53% and 28% of all traffic, respectively, because these browsers support Android application technologies. "When designing a web based map, one had better consider how content will appear on these browsers in order to remain relevant," John stated.

John impressed the group when he demonstrated the Data Collector mobile application and the Operations Dashboard for ArcGIS. He emphasized the transformations of the technologies and the expectations for users to be able to collect data and instantly share with real-time mapping tools. John has the ability to talk conceptually at 10,000 feet in the clouds (pun intended) then become engrossed when answering a technical question or theorizing about potential applications of the technology. His presentation was both informative and entertaining and when the techies in the group wanted to know specifics of accessing their accounts and getting started, Esri Sales Associate Sarah Barnes took charge and shared valuable information and resources.

Kyle Miller, a Transportation Planner with WSDOT's Community Transportation Planning Office, presented his agency's Community Planning Portal and demonstrated how WSDOT will use the tool to share its data. The intent of the portal is to foster collaborative planning to achieve common goals, including the provision of a reliable, responsible, and sustainable transportation system for the citizens of Washington State. The portal allows local and regional governments to access interactive online maps and fact sheets customized for their jurisdictions. Agencies can print maps or download data layers from the portal. They can also upload their own data or data from other state and federal agencies that have published content to ArcGIS Online. He has produced a series of quick video tutorials that aid in using the portal's mapping and reporting functionalities and the author found these tutorials quite useful for

Leaders of the CWGUG had questions that would be shared by many GIS professionals in the region.





Map by TJ Keiran.

any new user of ArcGIS Online. The program’s website address is <http://www.wsdot.wa.gov/planning/community/>

Members of the Cowlitz-Wahkiakum GIS Users Group and the other rural counties of Southwest Washington are in a proverbial donut hole when it comes to accessing professional development resources because we’re a bit too far from the Puget Sound or Vancouver/Portland areas and the distances between our own offices deter us from forming a larger regional support group. For that reason we are very appreciative that Esri and WSDOT staff took time to visit with us and we thank them again.

Our group is comprised of GIS professionals from local governments, organizations and special purpose taxing districts, and we are expanding our membership to include private entities. The meetings are held from 3:00 – 5:00 pm on the last Wednesday each month at the Cowlitz-Wahkiakum Council of Governments meeting room, 207 North 4th Ave., Kelso, WA 98626. The meetings are open to the public and drop-in guests are welcome. Please contact TJ Keiran at (360) 577-3041 or tkeiran@cwkog.org with any questions or suggestions.

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The 3D Elevation Program—Summary for Washington

Introduction

Elevation data are essential to a broad range of applications, including forest resources management, wildlife and habitat management, national security, recreation, and many others. For the State of Washington, elevation data are critical for natural resources conservation, agriculture and precision farming, infrastructure and construction management, flood risk management, geologic resource assessment and hazards mitigation, and other business uses. Today, high-quality light detection and ranging (lidar) data are the sources for creating elevation models and other elevation datasets. Federal, State, and local agencies work in partnership to (1) replace data, on a national basis, that are (on average) 30 years old and of lower quality and (2) provide coverage where publicly accessible data do not exist. A joint goal of State and Federal partners is to acquire consistent, statewide coverage to support existing and emerging applications enabled by lidar data. The new 3D Elevation Program (3DEP) initiative (Snyder, 2012a,b), managed by the U.S. Geological Survey (USGS), responds to the growing need for high-quality topographic data and a wide range of other three-dimensional representations of the Nation's natural and constructed features.

3D Elevation Program Benefits for Washington

The top 10 Washington business uses for 3D elevation data, which are based on the estimated annual benefits of the 3DEP initiative, are shown in table 1. The National Enhanced Elevation

3DEP in Washington by the Numbers

Expected annual benefits	\$9.46 million
Estimated total cost	\$22.55 million
Payback	2.4 years
Quality level 1 buy-up estimate	\$14.35 million

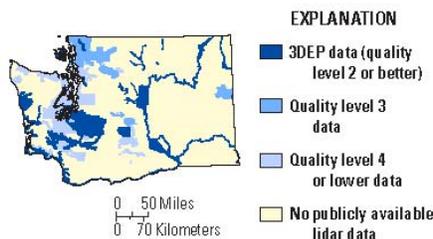


Figure 1. Map of Washington showing the areal extent and quality levels of planned and existing publicly available light detection and ranging (lidar) data in November 2012. See table 2 for quality levels.

Assessment (NEEA; Dewberry, 2011) survey respondents in the State of Washington estimated that the national 3DEP initiative would result in at least \$9.4 million in new benefits annually to the State. The cost for such a program in Washington is approximately \$22.5 million, resulting in a payback period of 2.4 years and a benefit-to-cost ratio of 3.4 to 1 over an 8-year period. Because monetary estimates were not provided for all reported benefits, the total benefits of the 3DEP to Washington are likely much higher. On the basis of the NEEA survey results, all levels of government and many organizations in Washington could benefit from access to statewide high-resolution elevation data.

The NEEA evaluated multiple data collection programs to determine the optimal data quality and data replacement cycle relative to cost to meet the stated needs. For Washington, approximately 69 percent of the total benefits are realized in natural resources conservation, agriculture and precision farming, infrastructure and construction management, and flood risk management uses alone, as shown in table 1. The status of publicly available lidar data in Washington is shown in figure 1. By enhancing coordination between the 3DEP and the various government and private organizations in

3D Elevation Program

3DEP is a national program managed by the USGS to acquire high-resolution elevation data. The initiative is backed by a comprehensive assessment of requirements (Dewberry, 2011) and is in the early stages of implementation. 3DEP will improve data accuracy and provide more current data than is available in the National Elevation Dataset (NED). The goal of this high-priority cooperative program is to be operational by January 2015 and to have complete coverage of the United States by 2022, depending on funding and partnerships. The new program has the potential to generate \$13 billion/year in new benefits through improved government services, reductions in crop and homeowner losses resulting from floods, more efficient routing of vehicles, and a host of other government, corporate, and citizen activities (Dewberry, 2011).

Benefits of a Funded National Program

- Economy of scale—Acquisition of data covering larger areas reduces costs by 25 percent.
- A systematic plan—Acquisition of data at a higher quality level reduces the cost of “buying up” to the highest levels needed by State and local governments.
- Higher quality data and national coverage—Ensure consistency for applications that span State and watershed boundaries and meet more needs, which results in increased benefits to citizens.
- Increase in Federal agency contributions—Reduces State and local partner contributions.
- Acquisition assistance—Provided through readily available contracts and published acquisition specifications.

Washington, it may be possible to meet a higher percentage of the needs.

The following examples highlight how 3DEP data can support business needs in Washington: (1) Enhanced elevation data could enable State, regional, and local governments to more effectively implement natural resources conservation practices while providing additional cost savings to the public. If lidar data were available nationally, public and private organizations would expand their use of lidar for planning and site-level engineering to reduce field work for conservation projects such as grade stabilization, ponds, grassed waterways, pipelines, terracing, and wetland restoration. (2) Lidar data provide high-quality terrain information as input for more accurate and less expensive hydrologic and hydraulic modeling for flood studies, retention dam design, dam breach studies, and stormwater management and engineering; identification of vulnerable properties within a floodplain, facilitating better floodplain-management decisions



and education of the public on true flood risks (fig. 2); and dynamic 3-D models to show the potential impact of flooding.

References Cited

Dewberry, 2011, Final report of the National Enhanced Elevation Assessment (revised 2012): Fairfax, Va., Dewberry, 84 p. plus appendixes, <http://www.dewberry.com/Consultants/GeospatialMapping/FinalReport-NationalEnhancedElevationAssessment>.

Snyder, G.I., 2012a, National Enhanced Elevation Assessment at a glance: U.S. Geological Survey Fact Sheet 2012-3088, 2 p., <http://pubs.usgs.gov/fs/2012/3088/>.

Snyder, G.I., 2012b, The 3D Elevation Program—Summary of program direction: U.S. Geological Survey Fact Sheet 2012-3089, 2 p., <http://pubs.usgs.gov/fs/2012/3089/>.

Figure 2. Flooding across U.S. Interstate 5 near Centralia, Washington (85 miles southwest of Seattle), January 8, 2009. Photograph by Bruce Ely in The Oregonian; used with permission.

Table 1. Conservative benefits for the top 10 business uses of the proposed 3DEP data identified in the National Enhanced Elevation Assessment for Washington (Dewberry, 2011).

Rank	Business use	Annual benefits (millions)
1	Natural resources conservation	\$2.21
2	Agriculture and precision farming	1.52
3	Infrastructure and construction management	1.46
4	Flood risk management	1.33
5	Geologic resource assessment and hazard mitigation	0.73
6	Water supply and quality	0.64
7	Coastal zone management	0.50
8	Sea level rise and subsidence	0.48
9	Forest resources management	0.38
10	Aviation navigation and safety	0.11
	Other	0.10
	Total	9.46

3D Elevation Program—Continued

The USGS and its partners will acquire quality level 2 or better (table 2) three-dimensional lidar data over the conterminous United States, Hawaii, and the U.S. territories. Interferometric synthetic aperture radar (ifsar) data are being collected at quality level 5 (table 2) in Alaska. The data will be acquired over an 8-year period and will be made available to the public. A number of high-quality elevation-data products will be created to serve a wide range of business needs in government and the private sector.

Table 2. Data quality levels used in the National Enhanced Elevation Assessment (Dewberry, 2011).

[≤, less than or equal to]

Quality level	Nominal pulse spacing (meters)	Vertical accuracy (centimeters)
1	0.35	9.25
2	0.7	9.25
3	1–2	≤18.5
4	5	46–139
5	5	93–185

Next Steps for Implementing 3DEP

Accomplishing the 3DEP initiative's goal of national coverage in 8 years depends on the following factors:

- Increased partnerships among Federal, State, and local governments.
- Partnerships that acquire elevation data to the program's specifications across larger project areas.
- Increased communication about and awareness of the program's benefits and goals.
- Support from government and other stakeholders and users.

For Further Information:

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<http://nationalmap.gov/3DEP/>

By William J. Carswell, Jr.

Adventures in the Geography Classroom

(Continued from page 5)

zation, and PNW issues like deforestation with full analysis, and they gave presentations to small focus groups. Years later when I had managed to acquire 16 computers from a grant from the University of Washington Geography Department, I had a mini GIS lab in my classroom and many graduate students were amazed at what these middle schools students were doing. They were staring at their future competition!

Over the last five years at Roosevelt High School in Seattle I have finally gotten all the labs loaded with ArcGIS 10, but it has been a struggle to squeeze GIS into an already crowded curriculum. Slowly I have figured out how to integrate it using Google Earth and ArcGIS as a start. Students could analyze maps and data but the beauty of GIS was the ability to marry the two together for a visual presentation using ArcGIS 10. I even had them do a full GIS unit by hand analyzing photos from three different periods of the same part of south Seattle which was mind-opening for many students. It took them a full week to complete.

Their final project...has opened up my students' eyes to the richness of their city's neighborhoods.

Their final year-end Neighborhood Inquiry Project for the last few years has been a field exercise where they observe a new neighborhood by walking around it and taking notes, talking to people and asking questions. This experience, in combination with a case study of a landmark building or feature of the neighborhood, has opened up my students' eyes to the richness of their city's neighborhoods. They have come back richer for having done the research and for participating in the sharing of it all with their classmates. They have done real geography and been intrigued.

The King County Workshop (see sidebar) was a great opener for me because I was still struggling to upgrade, or so I thought. ArcGIS 9 was never able to work on our computers so I just ignored it. The workshop allowed me to fully understand how to use ArcGIS 10. After all, I had been using

ArcView 3 for so long and I had many modules (although with out of date data) it was almost easy to disregard the new system and still be excited about doing GIS with my students.

For the last few years I had started using Google Earth with my students because there were modules created and it worked on all our computers. The challenge was there, but there was no analysis going on, so off I went to find some way to easily understand ArcGIS 10, and this was it. The opportunity to learn about GIS with professionals teaching it to essentially brand new beginning GIS users was perfect!

I am now ready to use ArcGIS 10 with all my 10th grade stu-

King County GIS Workshop

The One-Day GIS Workshop for Secondary Teachers (Grades 6-12) was held on August 6, 2013 at the King County GIS Center.

This workshop was made possible by a student service-learning grant called "Stormwater Pollution Solutions" which is managed by student leaders from the Tahoma School District and funded by the State Farm Youth Advisory Board.

Developed and taught by GIS analysts who are also Esri Certified trainers from the King County GIS Center, this hands-on workshop covered the basics of how to acquire, explore, symbolize, and analyze GIS data. The introductory skills presented are applicable to any GIS goal, however, the practice theme for this workshop was mapping impervious surfaces at the school-site, neighborhood, and district scales as a means to visualize and communicate community issues related to stormwater management.

Richard Katz attended this workshop and reflects on its impacts on his teaching in his article [Adventures in the Geography Classroom](#).

dents at Roosevelt High School in Seattle throughout the curriculum, including a year-end capstone independent project of four weeks duration. Challenges remain though, including enough time in the computer lab or with the laptops, readjusting the curriculum so as to fully take advantage of what GIS can bring with each chapter of study, and of course time for students to explore their areas of interest. Eventually I would like to combine the year-end Neighborhood Inquiry Project with a GIS component - maybe using smartphones or iPads. Hopefully this will lead to an even more independent and forward-thinking collaborative classroom where students actively look for challenges and try to solve problems they are interested in.

Richard E. Katz has taught Geography in Seattle since 1996, first at Washington Middle School and for the last five years at Roosevelt High School where he is part of a team of five teachers teaching all 10th graders AP Human Geography. He also continues to teach Social Studies Methods at Antioch University in Seattle (since 2005), is active in curriculum development including recently creating the new Geography Curriculum MAP for 8th grade, and is actively helping to re-establish the new state geography alliance (WAGL). His interests include Development, GIS, Blues Music, Photography, and Inquiry Research in Geography.

Many other ideas for teaching geography are on his Google site at <https://sites.google.com/site/katzongeographynow/home>.

He can be reached by e-mail at rekatz@seattleschools.org



A student project from Richard Katz's 10th grade AP Human Geography class:
Roosevelt Neighborhood Environmental Hazards, by Haley Seymour.

NEMAP (Navy Emergency Management Addressing Project)

(Continued from page 4)

with mutual aid agreements. It is critical that the local installation has all streets accounted for and named; there are many as-yet unnamed streets across the Navy enterprise. The data analysts also review any available information from surrounding areas that can help to verify Navy versus local government jurisdiction.

In August, NEMAP representatives visited the Northwest Region and conducted a Site Survey, where participating local governments and Navy officials were briefed and enlisted for help in the addressing process. During a NEMAP Site Survey, local governments are asked to help perform the actual centerline range assignment, so that it matches their Master Street Address Guidelines (MSAG) and current 911 data standards. After an agreement is made, NEMAP provides the scrubbed geospatial centerline files to the local government GIS or addressing authorities according to the respective Navy Installation(s). The local government then incorporates the Navy roads into their street centerline canvas for the entire jurisdiction and assigns them with the appropriate street ranges. This street range assignment will be based on the rules and methodology that has been established by the addressing authority and will help generate the Master Street Addressing Guide (MSAG) for the local government that includes all Navy properties in their jurisdiction. Building a comprehensive MSAG is a critical step in the process.

After the MSAG is finalized, the local government sends the NEMAP team a complete street centerline geospatial file that includes the Navy roads with ranges and the surrounding jurisdiction. Addressing the Navy Installation then begins; the NEMAP Team uses ESRI's ArcMap to assign an address to every building and common facility on the base. The addresses will be built based on knowledge of the installation, access to the buildings/locations, etc. and collaboration with addressing Subject Matter Experts (SME) from both Navy and local government. The NEMAP Team uses imagery and field verification to determine the appropriate street number for each building. Much of this work is the manual creation of addresses within an attribute table, however, the addressing rules are based on NENA processes and standards. The data analysts on the NEMAP team use ESRI's Data Reviewer Extension to QA and QC the addressing and centerline work



Doraliz Rodriguez at a multi-screen dispatch station in the Navy Region Southeast Regional Dispatch Center. Photo by MC1 Greg Johnson.

before they call it complete. The Data Reviewer enables NEMAP to meet NENA, FGDC and USPS data standards.

Once addressing is complete, address point files and tabular data are exported to a portfolio of information that is shared to all stakeholders. In addition, the Data Manager uses ETL (Extract, Transform, and Load) processes to build the NEMAP schema for each region (centerlines, building footprints, address point file, and installation boundary layer), which is delivered to the Regional Dispatch Center. The data will be provided across the Navy, especially the Real Property administrators and telephone providers to incorporate into

the appropriate systems. These 911 compatible addresses need to steadily work their way into all Navy databases and become part of the databases of record for the Navy. Once verified by Navy officials, the Regional Dispatch Centers will provide the data to the respective local governments for streamlined data

integration into the surrounding communities. In addition, the final and most important step is to provide the Local Exchange (Telephone) Carriers with the street ranges and addresses. The LEC will add the Navy street ranges into the telephone system MSAG to complete the data necessary for NERMS to operate effectively.

Due to the precedent-setting nature of NEMAP, future sustainment plans are being developed throughout the project lifecycle. It is essential to the future of 911 Emergency Response that all government agencies work to maintain this

Through NEMAP we are already seeing how the Navy and Local Governments can come together through GIS.

important data and work together to keep life-saving systems running. Through NEMAP we are already seeing how the Navy and Local Governments can come together through GIS to fix these issues and improve 911 emergency response systems. Since the Fort Hood and Navy Yard tragedies, it has become abundantly clear how important this work is for all of us to support. It is no easy feat to standardize our data systems and work together to make our disparate data sources and standards talk to each other, but the NEMAP project has proven that it can be done.

NEMAP Project Model/FYI: The NEMAP model is based on a successful 911 addressing project that took place in Navy Region Southeast. The CNRSE RDC, NAVFAC SE GRC, NASJAX and NS Mayport PWOs worked with the Duval County (Florida) 911 office to create 911/NENA compliant addressing for the installations. The collaboration of teams and successful results of the project were recognized by ESRI and earned the participants an ESRI SAG – Special Achievement in GIS Award in 2012.

For more information on NERMS and the NEMAP initiative, please contact Sanovia Peterson, Project Execution Coordinator for Naval Facilities and Engineering Command’s Anti-Terrorism Force Protection.

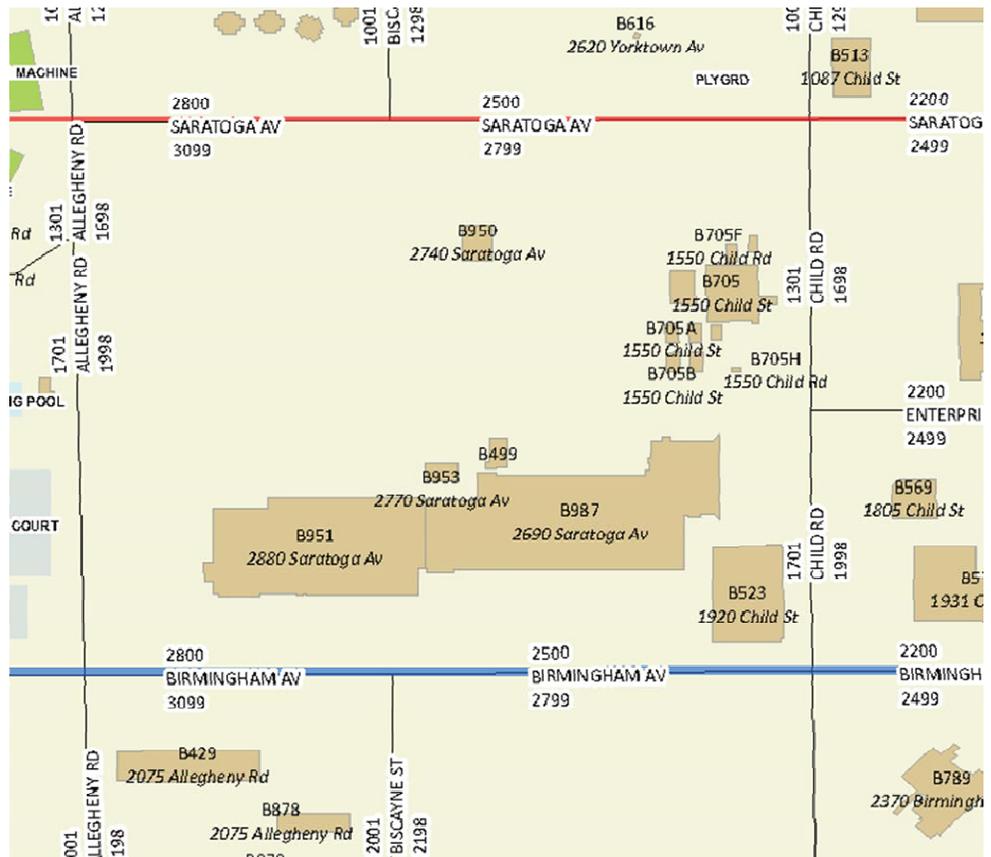
Email: sanovia.peterson@navy.mil

Marvin Garland, GISP is a Geospatial Professional for SERCO-NA Inc. supporting SPAWAR Systems Center Pacific. He serves as the Geospatial/GIS SME and Project Lead for NERMS and NEMAP. He has provided Geospatial support to NERMS for the past 6 years and has over 25 years of GIS experience including state and local government, Telecommunications, Transportation and Emergency Management. He can be reached at marvin.garland@serco-na.com.

Amy Hrdlicka, GISP is a Geospatial Project Manager at Geographic Information Services, Inc. as well as a NEMAP Project Lead. She has provided contract support to the US Navy for over six years with a focus on facilities, asset management, and emergency response GIS solutions. She can be reached at ahrdlicka@gisinc.com.

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 Jacksonville, FL 32212
- **RDC building number/CPN**
 B987
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 Burger King®
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 KFC®
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 NEX
 Exchange
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- **Latitude/Longitude:**
 30.221518 -81.694695



A screenshot of the NERMS computer-aided dispatch GIS screen (with centerlines).

President's Column

(Continued from page 1)

organization, I'm impressed with how much we accomplish using a simple set of tools! As we update we'll aim to keep what we can and enhance only where it makes sense.

Conference committee (organizes the state's annual GIS conference): We have a strong group of volunteers who are busy working on details for next year's conference. This event is one of WAURISA's main opportunities to bring a high level of professional development and networking to our attendees, so we work diligently to identify workshops and speakers that would appeal to Washington's geospatial community.

Education committee (develops workshops offered during the annual conference and as stand-alone events): We're in process of developing an Emergency Management half-day workshop in partnership with NOAA. We hope to set a date in early December for the workshop; however the current Federal Government shut-down may force us to move the workshop into early 2014.

Finance committee (manages WAURISA's fiscal responsibilities): This committee is humming along like a well-written python script. By carefully managing expenses, WAURISA remains financially strong and prepared for the future.

The Summit Newsletter (produces WAURISA's quarterly digital newsletter): Have you noticed the updated look of our newsletter? This fresh look is complemented with a new Summit Newsletter mission statement. The new look and the mission statement will guide the newsletter's direction well into the future.

All of our committee work is about bringing development and networking opportunities to support your professional goals.

Marketing committee (communicates WAURISA news through various channels including our website, email lists, Facebook, LinkedIn, and Twitter): This committee worked diligently over the past three months to update WAURISA's annual

marketing and conference plans. These documents are critical in guiding how WAURISA communicates information to its members and the Washington state geospatial community.

Membership committee (manages records of WAURISA membership information): This committee recently added our current membership list to the WAURISA website. This makes it easier for members to obtain proof of their membership for GISP credentials and other professional development purposes. Here is a link to the updated list: http://www.waurisa.org/Membership/Membership_Records.php

Nominating committee (organizes recruitment of WAURISA board candidates and manages the election process): This committee is dormant for about six months out of the year. Come December or January, this committee will start the process of managing nominees for our board elections and our Summit Award in conjunction with our annual conference.

Outreach committee: We recently held an open discussion to identify ways to revive this dormant committee. As it is seen now, the purpose of this committee will be one of community engagement. Our idea is to focus on providing resources to WAURISA members to enable involvement with education (K-12 and higher ed), industry legislation, and other geospatial organizations. This is no small task, so we're fortunate to have many volunteers interested in making it happen! We look forward to activating this committee in early 2014. Let us know if you want to be involved in shaping this important

(Continued on page 22)


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DATUM MATTERS

Datum Seminar - Oct 25th - Renton Tech - with Dave Doyle

The subject of geospatial datums is widely misunderstood and a lot of mapped data sets can be off many feet as a result... and we might not even realize it. A seminar is being presented by the Washington Geodetic Survey (WGS) about the update/modernization of the National Spatial Reference Framework (NSRS) that should be of interest to any geospatial professionals and technicians. WGS84, NAD83, ITRF, IGS08... these can be cause for confusion, and the planned update of the NSRS by the National Geodetic Survey will have a lot of impact as well as long term benefits.

Dave Doyle, NGS Chief Geodesist (Ret.) and geodesy editor at Professional Surveyor Magazine is making a special ap-

pearance in WA to conduct this seminar and help us understand these concepts and how to deal with the changes to the NSRS.

It is important for GIS managers to understand this fundamental and dramatic change in store for the datums underlying current and future geospatial data sets.

See [this flyer](#) for details. The seminar will be held October 25th, 2013 - 8:30am - 4:00pm, Blencoe Auditorium, Renton technical College, Renton WA. Cost is \$90 (lunch provided). Proceeds to cover expenses and the WGS (a 501c non-profit) 0.6 CEU/PDH hours.

Contact admin@gsow.org if you have questions.



Collecting GIS Data Using ArcGIS Online

(Continued from page 3)

5. Open the folder <web map name> on C drive. The file geodatabase with the feature class is copied here.

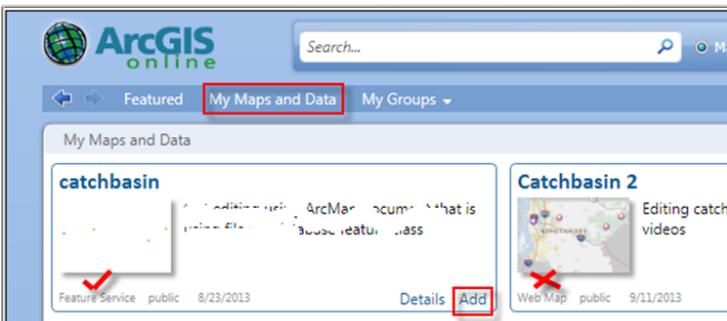
Note: If you use attachments for your feature class and publish it as a hosted map service in the Esri cloud, you will not



be able to import attachments. To retrieve the attachments you should publish a feature access map service on your organization's ArcGIS for Server.

ArcGIS Online has made it possible to collect, edit and share live data among a wide audience. It is a great tool to make data available during emergencies, reporting problems that need immediate attention and much more. Multiple users can edit the data at the same time and no separate devices are needed to launch or collect data. It is a low-cost and easy way to distribute and consume data.

Harkeerat Kang is a GIS Specialist, Senior with the King County Department of Information Technology County. She's worked with the county since 1999 as a GIS professional. Her projects include GIS web based applications using AGS Javascript API, ASP.NET and SQL Server web applications, and ArcGIS Server. Some of her key projects with the county are Groundwater Program application, Flood Photo viewer, Salmon Watcher monitoring site viewer, Transfer Development Rights (TDR) property map, Pesticide Free Public Spaces viewer, Public Benefit Rating System viewer, Weed Watcher application and developing and managing Park Facilities and Properties applications. She has also worked with Snohomish County's NPDES web application.





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Mission Possible

By: Eadie Kaltenbacher, GISP

What is a mission statement? Putting aside all the jargon, a mission statement simply serves to state the purpose of an endeavor. The endeavor could be anything from a professional project to a personal goal. A mission statement is helpful as you start down the path of achieving your goal, because it can be easy to wander off onto tangents or get distracted by other issues that need to be dealt with.

Eight years ago, in the first issue of *The Summit*, Greg Babin-ski stated “Our goal for The Summit is to foster the exchange of news and ideas from and for the entire Washington GIS Community.” However, since *The Summit* has grown substantially (it is now delivered to more than 2000 subscribers!), I have found that a clearer direction is necessary. For example, if an article is written by a local company promoting its GIS-related product, should that be published? What about articles that might cast a negative light on our community? A

mission statement is a tool to help us determine if these articles are appropriate to publish.

I put together a draft proposal and it was reviewed by The Summit’s editorial board. Next, I presented it to the WAURISA board of directors at one of their monthly meetings. Some of the WAURISA board members wanted to discuss it further, so we had a separate meeting. This text was presented to the WAURISA board of directors at their next meeting, and the final text below was approved.

The mission of The Summit is to encourage the development and use of GIS, promote professional and ethical best practices, and advocate for the GIS profession and community in Washington State.

To pursue our mission, we share information about:

- *GIS best practices, principles, technology and techniques*
- *Innovations and other developments within our GIS community*
- *Current activities, including:*
 - *GIS educational opportunities, conferences, and other resources*
 - *Professional work projects*
 - *Student papers*
 - *Volunteer work*

The Summit also supports the activities of WAURISA and of URISA International, promotes communication, and fosters professional, collaborative relationships.

We also had some discussion about the definition of the relationship between The Summit and WAURISA itself. We decided that the details should be formalized within the bylaws of WAURISA. I look forward to helping with that process as well.

I also would like to encourage our readers to make your voice heard. This newsletter is by and for GIS professionals and practitioners in Washington State, and if you consider yourself part of that community, I encourage you to take the next step in your professional development and get involved. Write an article for The Summit, or simply write a letter to the editor. Attend a WAURISA board meeting; the details are in the President’s Column by Heather Glock. Your thoughts and opinions are valuable.

GIS Day: 11/20/2013

Don’t forget to celebrate the most important date on every geo-geek’s calendar! This year, GIS Day falls on Wednesday, November 20th.

According to www.gisday.com, “GIS Day provides an international forum for users of geographic information systems (GIS) technology to demonstrate real-world applications that are making a difference in our society.”

This year’s theme is: Discovering the World Through GIS.

The Summit wants to hear about your event. Please send a brief write-up about your event, along with 1-2 photos, and your story could be published in the Winter Issue.

Summit@waurisa.org

President's Column

(Continued from page 18)

committee.

All of our committee work is about bringing development and networking opportunities to support your professional goals. As a component of this, we want to clearly communicate opportunities (both big and small) to contribute your time and talent to the chapter and to the Washington state geospatial community. If you have ideas or questions about what we're working on, please feel to reach out to our committee chairs. You can find their contact information here:

<http://www.waurisa.org/contact.html>

In addition to the many committee activities taking place, WAURISA Secretary Sarah Myers and I took time to attend URISA's 51st Annual conference in Providence, Rhode Island. As you may know, URISA is working on strengthening its ties with each chapter. Sarah and I participated in many sessions at the conference that helped us to better understand how URISA is organized so we can capitalize on resources available to us as a URISA chapter while continuing to maintain a focus on the unique needs we serve for the Washington state geospatial community.

As always, you are welcome to participate in our monthly Board of Directors' call. It's open for everyone, and other than to announce your presence, you can listen without comment or join the conversation on as many topics as you wish. We welcome everyone and value diverse opinions on the issues we're working on. The meetings are held the second Tuesday of each month from Noon-1:00 p.m. The toll free number is: 1.800.944.8766 access code 20311. You are also welcome to contact any WAURISA board member directly – your input helps us do a better job maintaining an organization that you'll find a valuable component to your professional work for many years to come.

Thank you! I wish you peace, health, and happiness as we head into the holiday season and the New Year.

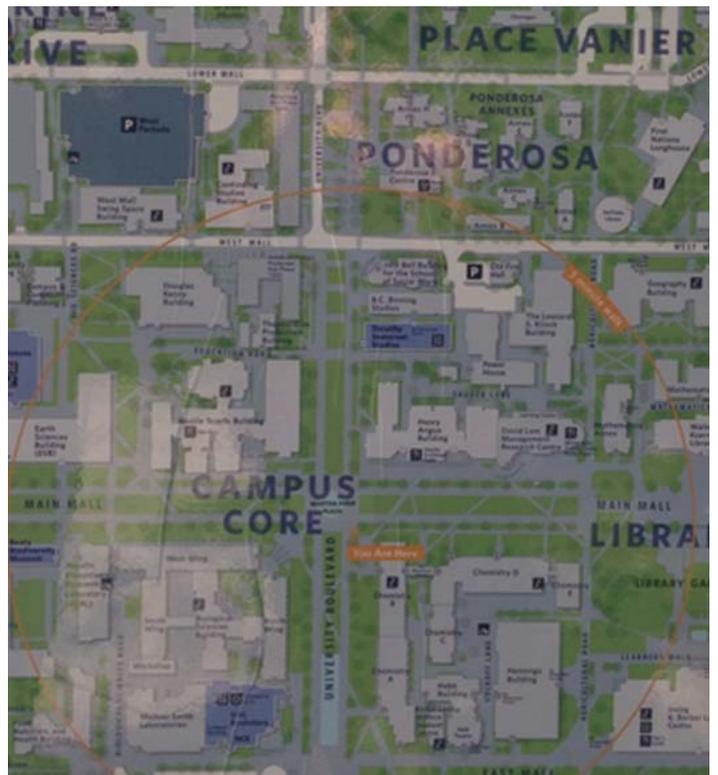
Heather Glock

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Left to right: WAURISA President Heather Glock, Secretary Sarah Myers, and member Greg Babinski at URISA's GIS-Pro 2013 Conference, September 16-19 2013 in Providence, RI.

Public Maps in Washington



International Edition: This map, spotted on the campus of the University of British Columbia in Vancouver, not only shows the viewer's location, but also a 3-minute walking radius.

Editorial

By: Eadie Kaltenbacher, GISP

In a technology-heavy profession like GIS, it is easy to get used to working independently. We all have our own computers and our own software, and can accomplish most of our tasks individually. However, putting together this quarter's issue of *The Summit*, I noticed a different theme. In our lead story, the Navy is partnering with local governments to solve addressing problems. We have another story about a secondary teacher partnering with King County to integrate GIS into the classroom. We also learn about the Cowlitz-Wahkiakum GIS User Group partnering with Esri and WSDOT to share information about developments in GIS technology. Of course, the theme is partnerships. In all of these stories, individuals were able to solve problems more effectively because of the strength that came from partnerships. There is a time and place for independent work, just like there is a time and place for partnerships.

Partnerships are stronger when they have a clear set of ground rules. That's why I am excited about the new mission statement of *The Summit*, and the upcoming effort to expand on WAURISA's bylaws (see *Mission Possible*, Page 21). The

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Summit and WAURISA are strong partners, and I think this mission statement will help us grow together.

I also encourage you to review the GIS Capability Maturity Model published by URISA as a component of the GIS Management Institute (article on Page 8). This model defines the framework for an effective enterprise GIS. According to the model, an effective GIS requires one pillar consisting of technology, data, resources, and related infrastructure – these can all be purchased or developed. However, the second pillar of the model is “execution capability”, or the ability of the staff to use these items. There are 22 components in this second pillar and every single one of them involves partnerships.

With this theme in mind, I encourage you to think about how you can establish new partnerships or strengthen existing ones. One great opportunity is GIS Day, which is just around the corner on November 20th. Holding an open house or simply setting up an information table allows others to pose questions and learn about how GIS can help them. Because ultimately, a partnership will benefit you too.

UPCOMING DEADLINES

Submit articles to *The Summit* for publication by the following dates.

Winter Issue: January 10, 2014

Spring Issue: April 18, 2014

Send your GIS Day photos & stories for the Winter Issue!

Literary Corner

“**I**t seems a great big hole to me,” squeaked Bilbo (who had no experience of dragons and only of hobbit-holes). He was getting excited and interested again, so that he forgot to keep his mouth shut. He loved maps, and in his hall there hung a large one of the Country Round with all his favourite walks marked on it in red ink.

-from *The Hobbit*, by J.R.R. Tolkien

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

Chief Editor: Eadie Kaltenbacher

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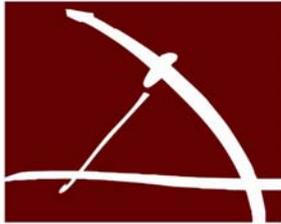


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GIS User Groups in Washington

ACSM – Washington State Section

www.wss-acsm.org

Cascadia Users of Geospatial Open Source

groups.google.com/group/cugos

Contact [Karsten Venneman](#)

Central Puget Sound GIS User Group

Join Listserve [here](#)

Central Washington GIS User Group

Meets the 2nd Wednesday of each month.

Contact [Amanda Taub](#)

Cowlitz-Wahkiakum GIS User Group

Meets the last Wednesday of each month at 3:00 pm at the Cowlitz-Wahkiakum Council of Governments meeting room, 207 North 4th Ave, Kelso WA.

Contact [TJ Keiran](#)

King County GIS User Group

www.kingcounty.gov/operations/GIS/UserGroups.aspx

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

www.wvu.edu/huxley/spatial/nwngis/nwngis_mtg.htm

Southeast Washington/Northwest Oregon GIS User Group

web03.pocketinet.com/~sewa-neor-gis/sewa-neor-gis.org/index.html

Washington Geographic Information Council (WAGIC)

geography.wa.gov/wagic

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Washington Hazus Users Group

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

Contact [Kelly Stone](#)

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

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

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Back issues of *The Summit* are available at:

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