

gis.TODAY

NEWS FROM THE KING COUNTY GIS CENTER · ENTERPRISE & CLIENT SERVICES PROJECTS

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KCGIS Center Spotlight

King County GIS Center Helps Agencies Put GIS to Work

George Horning
Manager, King County GIS Center

Welcome to *King County GIS.Today*. This publication will give you a glimpse at the services the King County GIS Center provides throughout the Puget Sound region and beyond.

The KCGIS Center is a unique local government entity, established by the King County Council as a separate internal service fund, chartered to provide GIS

services not only to county agencies, but also to external customers through our Client Services unit. All of our revenue is obtained directly from the clients we serve, so we know our success depends on satisfied customers, and we are committed to delivering quality GIS solutions.

Why does the KCGIS Center offer its services to external clients? Because GIS data, processes, and applications transcend jurisdictional boundaries, so we have a long-term interest in the success of GIS implementation and development

see KCGIS Center, Page 3

King County GIS Training Express

KCGIS Training Program Continues Growth in 2011

Cheryl Wilder
Training Coordinator, King County GIS Center

GIS Training Express, the KCGIS Center’s multi-faceted training program, has continued to grow in 2011 through new and enhanced certifications, new and updated class offerings, additional training partners, and in the number of students served.

We have continued to tailor our training program to provide cost-effective training options that meet a wide variety of needs. We offer Esri® Certified classes, free brownbag workshops, on-site and one-on-one training, and our week-long GIS Academy which features a catalog of custom classes that cover such key GIS topics as using Structured Query Language (SQL), data editing and analysis, metadata management, and geoprocessing. We also host classes in our modern, on-site training facility that are offered by

see Training, Page 2

Enterprise Data

Developing and Launching the KCGIS Data Portal

George Horning
Manager, King County GIS Center

The term “open government” has become a catch phrase in recent years. Generally it applies to the concept that government at all levels should be transparent and accountable, and that it fully enable public participation. The passage in 1966 of the Freedom of Information Act (FOIA) might be viewed as the modern genesis of the idea of open government. However, it is the near universal adoption of the Internet, a nascent technology of the 1960s that has provided a platform to open the doors of government and engage with the public in a manner never before possible. This technology has created a tipping point where it is assumed, if not mandated, that we will do all we can to make government transparent and accessible.

see Data Portal, Page 8



King County GIS CENTER

We help you put GIS to work



...Training (from Page 1)

Esri and other training partners, such as GeoMobile Innovations and Geospatial Training Services. Plus, we run URISA's Pacific Northwest Education Center, so chances are, if there is a GIS training topic that meets your interest and need, you can find it at the KCGIS Center.

Qualifications: Existing and New

Over the last year, two King County GIS Center training instructors, Mary Ullrich and Cheryl Wilder, have earned CompTIA CTT+ and Esri® Desktop Associate certifications.

CompTIA CTT+ is an international, vendor-neutral certification that covers core instructor skills, including preparation, presentation, communication, facilitation and evaluation in the classroom environment. This certification is recognized worldwide as a trusted indicator of qualified and competent training professionals in the IT industry.

The Esri Desktop Associate certification sets a standard for ArcGIS knowledge and abilities. ArcGIS Desktop Associates are adept at applying basic GIS and ArcGIS concepts and processes to work flows and are skilled at using ArcGIS Desktop to visualize, manage, and analyze geospatial data.

With the CompTIA CTT+ and Esri Desktop Associate certifications, both Mary and Cheryl became Esri® Certified Trainers. Mary and Cheryl had already gained years of experience teaching Esri® Authorized classes. The additional rigorous training and preparation required for the CompTIA CTT+ and ArcGIS Desktop Associate certifications have elevated both to an elite group of training professionals who are qualified and authorized to teach the ArcGIS Desktop 10 series of classes.

"We're very proud of Cheryl and Mary," says George Horning, KCGIS Center Manager. "Their accomplishments demonstrate the level of GIS knowledge and professional expertise that the King County GIS Center stands for."

At the program level, the KCGIS Center is recognized by the Washington State



Department of Personnel as a training provider for state government staff as well as federal, local, and tribal government employees. Further, selected programs of study at the King County GIS Center are approved by the Washington State Workforce Training and Education Coordinating Board's State Approving Agency (WTECB/SAA) for enrollment of veterans and eligible beneficiaries under Title 38 and Title 10, USC, in other words, GI Bill beneficiaries.

King County GIS Academy News

On October 10, 2011, the eighth edition of the King County GIS Academy kicked off another week of its tried-and-true, hands-on classes for working professionals taught by working professionals. At its downtown Seattle training facility, KCGIS Center staff once again presented an integrated curriculum of core GIS topics and process-related skills. The GIS Acad-

KING COUNTY GIS.TODAY

emy instructors worked with students on case-study projects throughout the week to reinforce newly-acquired skills and to build ability and confidence. As always, Academy participants enjoyed small class size, flexibility of choice (they could take just one or any combination of the seven Academy classes), and personal instruction from specialists in each topic

Since its inception, scores of students from more than forty public agencies and private companies throughout the northwest and from farther afield, as well as private individuals, have advanced their professional GIS skills in the King County GIS Academy. Because the Academy classes are taught by GIS professionals who daily use the skills they also teach, the Academy coursework is kept current with advances in GIS technology and practice. For example, this October attendees reaped the experiences of KCGIS Center staff who have been testing, implementing, and using all aspects of Esri's ArcGIS 10. Ultimately, GIS Academy graduates are more productive when they return to their jobs, and the Academy training helps their agencies maximize the benefits of their investment in GIS.

Effective and Cost-Effective Training

The KCGIS Center training program provides a broad mix of learning opportunities for students with differing levels of experience, areas of interest, and need for depth. And our offerings are economical. Our program offers Esri® Certified classes at a significant savings, and our custom GIS Training Express and Academy classes are very affordable. And since we're a training partner for the Washington State Department of Personnel, public employees can save even more.

Perhaps it would be difficult for you to come to Seattle for training. No worries! GIS Training Express instructors will travel to your site so you can realize both cost and time savings, especially for multiple students. KCGIS instructors have taught classes and workshops in several locations around Washington and in Alaska, California, and West Virginia.

Yet another advantage of our program is that students earn GIS Certification Institute educational achievement points for our Esri® Certified classes and KCGIS custom classes.

KCGIS Center training is diverse, effective, and economical. Our students agree:

- *Thank you for the real-world ‘live’ class rather than a canned demo and exercises. I appreciate the opportunity to ask work-related questions.*
- *Small class size is a great idea... having the instructor more available and the pace set individually is so helpful.*
- *Well organized and very useful.*

Our 2012 schedule of classes is now online. To see what’s coming and to learn more about specific class offerings by the KCGIS Center and its training partners, visit our training website, www.kingcounty.gov/gis/training, or contact Cheryl Wilder, KCGIS Center Training Coordinator, 206-263-5220, cheryl.wilder@kingcounty.gov. 📍

... **KCGIS Center** (from Page 1)

throughout the region. Also, we believe that for many types of GIS services, the KCGIS Center provides the best value for public agencies, private businesses and individuals. Unlike other vendors and consultants, the KCGIS Center provides services to the same types of customers as many of our clients. We are especially familiar with the business needs of public agencies, and the expectations placed upon them, because we too are a provider of government services.

Since we operate like a private firm, with close attention paid to the bottom line, we are a good choice for businesses and individuals as well. Our professional staff has hundreds of years of experience in a wide range of GIS services including application development for the desktop and web, publication-quality cartography, project management, needs assessment, and all aspects of GIS data modeling, development, and maintenance. We

even offer an extensive training program ranging from introductory courses for GIS novices to week-long intensives for mid-career professionals.

If you become our client, you can be assured that we will always be open for business, with a permanent interest in the success of your GIS and the services it supports. Our motto is “We put GIS to work for King County and beyond.” Let us help put GIS to work for you. To learn more, visit our website, www.kingcounty.gov/gis, or call or write to me or one of my colleagues:

- George Horning, *Manager, KCGIS Center*, 206-263-4801, george.horning@kingcounty.gov
- Dennis Higgins, *Client Services Manager*, 206-263-4523, dennis.higgins@kingcounty.gov
- Greg Babinski, *Finance and Marketing Manager*, 206-263-3753, greg.babinski@kingcounty.gov. 📍

Web Mapping

King County GIS Center Helps Agencies Deploy Web Mapping

Michael Jenkins

GIS Programmer, King County GIS Center

The King County GIS Center helps many organizations harness the power of GIS by developing and deploying custom web mapping applications for them. This is true for organizations that have limited GIS resources of their own, such as small cities and school districts, as well as some that have robust GIS operations but which benefit from the staffing support and deep application development skills and experience that the KCGIS Center offers.

The most popular web-based GIS map data interfaces that the KCGIS Center has developed and maintained as part of its own mission are Parcel Viewer and iMAP, which together make the KCGIS Center Map Portal (your.kingcounty.gov/gis/map-portal) the second most frequently visited part of the King County website annually

with more than two million user sessions and 140 million map hits.

The business operations of many other county agencies, such as the Department of Development and Environmental Services, and the Department of Natural Resources and Parks, are also served through the Map Portal or assisted in web-mapping application development and maintenance by KCGIS Center staff.

One of the most successful King County applications, which the KCGIS Center and the Road Services Division developed in collaboration, is My Commute which displays live road alert information from Road Services and the State of Washington Department of Transportation. Other county web-mapping applications which the KCGIS Center has helped develop include the Bike Map, Adopt-A-Road, and Park Finder. Mobile versions of My Commute and the Bike Map are currently in development.

An example of web-mapping application development for outside agencies is a

project for the King County city of Newcastle. The project required the development of tools and processes to update the city’s data server, and to deliver city data to the public via standard web browsers.

Another example is a map viewer developed for the Federal Way School District to help city residents determine which schools their children will attend. Users can very simply and quickly determine which elementary, middle, and high schools are assigned to their residence, and see their location along with the school assignment areas on a map.

A future issue of this newsletter will highlight a range of web-mapping application development projects in more detail, but for now, one premier example, My Commute, is featured on the next two pages of this issue.

To learn how the KCGIS Center can help you with your web-mapping, contact Dennis Higgins, KCGIS Client Services Manager, 206-263-4523, dennis.higgins@kingcounty.gov. 📍

King County Road Alerts Mapped Live Online

Tamara Davis

GIS Program Manager, King County Road Services

Michael Jenkins

GIS Programmer, KCGIS Center

Patrick Jankanish

Senior Cartographer, KCGIS Center

Not long ago, the public could view information about closures and other events for roads in unincorporated King County only as a text-based table on the King County Road Services Division website. Citizens often had difficulty understanding the alert descriptions, especially the locations and extents of the alert events. The most frequent public request for improvements to the website was to map the alerts.

Road Services determined that to satisfy the public need for better access to road alert information two applications were needed: a public-facing, interactive web map for the display of road alerts, and a map-based editor that would give Road Services staff the ability to perform data creation and updates, plus real-time data posting for road alert events from internal work sites as well as off-site locations. Since the division did not have GIS developer resources of their own at that time, they turned to the KCGIS Center for help.

Application Development

The new road alert mapping project, which involved a close project-long collaboration between Road Services and KCGIS Center staff, dovetailed with the maturation of Esri's ArcGIS Server web mapping technology which had recently been acquired by

King County GIS. The road alert internal data editor and the public-facing map viewer, which was eventually re-christened "My Commute," would become the first King County ArcGIS Server applications.

Roads Services staff manage road alert data in an ArcSDE feature class (a database-stored map layer). The data are stored as lines rather than points in order to show the full spatial extent of affected roadways. It is important that when a new line is created to represent an alert it snaps to the corresponding road line segments. To achieve this with the editor application, we created it using Esri's "WebADF" API (application programming interface) in the Windows ".NET" programming environment because of the several ArcGIS Server APIs that Esri offered at that time, WebADF was the only one that supported SDE feature editing and snapping.

The editor application is used by a limited number of people. But the map viewer application is what provides access to the road alerts for the public at large. Like the editor, the viewer is a .NET application, but for it we used the Esri JavaScript API which provides high performance and ease of use in web browsers as well as a robust selection of map control and display widgets and effects through its included "Dojo" JavaScript library.

Impacts of the implementation

While My Commute made it easier for the public to visualize road alerts, it presented a new problem. All state- and city-managed roads, which are outside of King County's purview, appeared to be open regardless of their actual condition. For those who noted the lack of road alert information from other jurisdictions, a

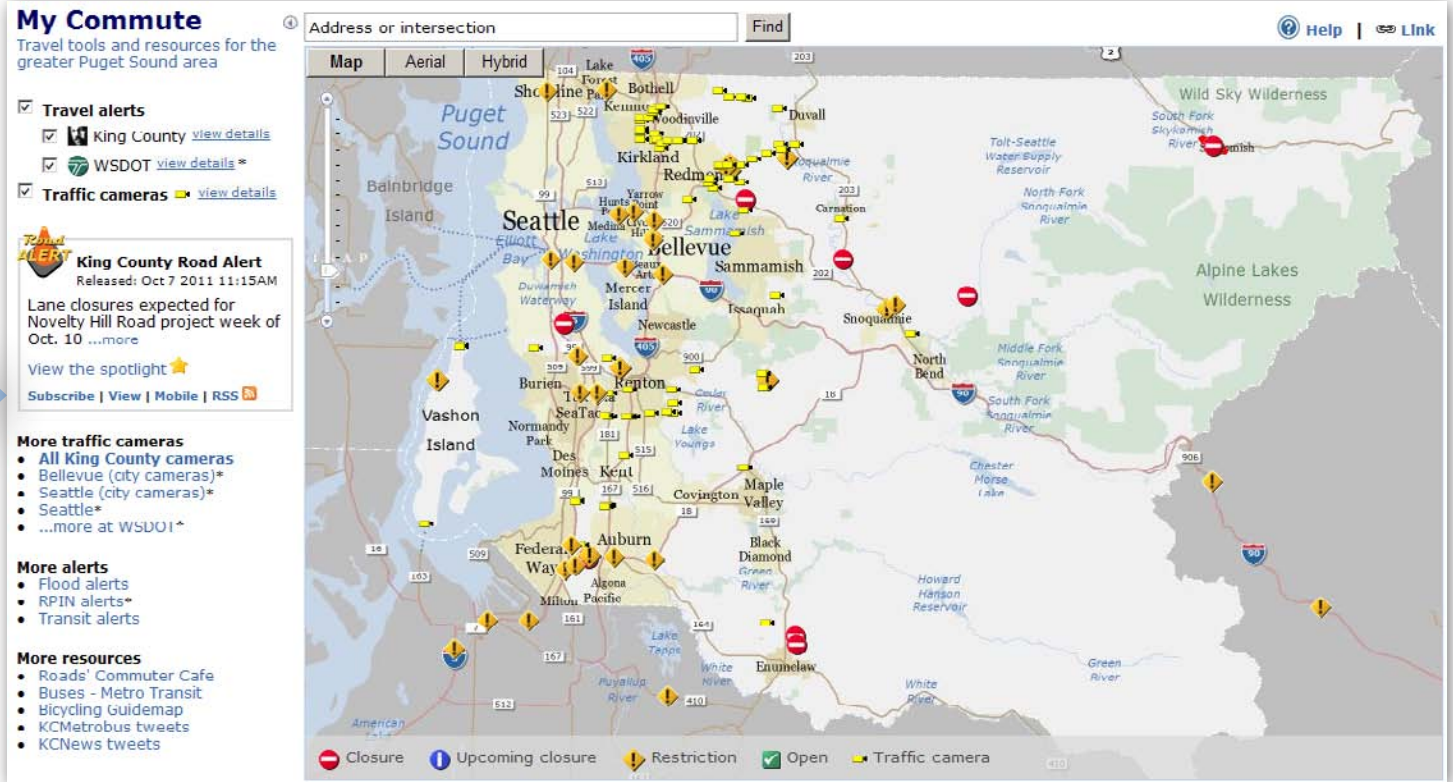
Region	Spotlight	Location	Area/Community	Description	Road Status	Effective Date	Main Div
Northeast	★	1950th Ave NE between NE Union Hill Rd and NE Novelty Hill Rd	Redmond	Construction: Intermittent lane closures, Monday - Friday, 9 a.m. to 2 p.m.	Restricted	Jun 20 2011 7:00AM	1
Northeast	★	NE Novelty Hill Rd between 19500 block to the 19600 block	Redmond	Construction: Intermittent lane closures, Monday - Friday, 9 a.m. to 2 p.m.	Restricted	Sep 19 2011 9:00AM	1
Southeast		SE 416th St west of 278th Way SE	Enumclaw	Bridge Replacement	Closed	Jul 11 2011 7:00AM	4
South		S Peasley Canyon Road at Peasley Canyon Way S	Federal Way	One lane restriction	Restricted	Sep 19 2011 9:00AM	3
South		Peasley Canyon Way S between S 337th St to S Peasley Canyon Rd	Federal Way	Construction	Closed	Sep 19 2011 9:00AM	3
Southeast		240th Ave SE at 15 Mile Creek Bridge	Issaquah	Load restriction on bridge	Restricted	Jan 7 2009 3:00PM	4
Northeast		NE 96th St between 1950th Ave NE and Redmond city limits	Redmond	Week of Oct 10: No work anticipated	Restricted	Jul 18 2011 9:00AM	1
Vashon		SW 148th St in the 12500 block	Vashon	Culvert Replacement - one way traffic	Restricted	Jun 13 2011 7:00AM	3
Southeast		SE David Powell Rd from #36601 to end of road	Fall City	Slide Repair, one lane restriction	Restricted	Jul 19 2011 9:15AM	2
Southeast		SE 424th St Bridge	Enumclaw	Bridge Replacement	Closed	Jun 20 2011 8:00AM	4
Northeast		NE Old Cascade Hwy Between Miller River Rd and 5th St N	Skykomish	Road washed out	Closed	Jan 14 2011 6:30AM	2
Northeast		NE 50th St from SR 202 to Sahalee Way NE	Sammamish	Water over roadway	Closed	Oct 16 2010 11:00AM	2
South		South Park Bridge (16th Ave S) across Tukwila	Tukwila	Safety concern	Closed	Jun 30 2010	3

typical plea was, "Something needs to be done to get ONE source of road closure information for all of King County in ONE place."

The problem was lack of integration between the agencies that manage roads. Drivers see one interconnected road network, while transportation agencies see overlapping but distinctly separate jurisdictions. So King County Road Services returned to the KCGIS Center to request an enhancement to the map viewer—the addition of Washington State Department of Transportation (WSDOT) data.

WSDOT agreed to let us access their own live-data web service which provides a list of statewide road alerts. But their alerts are published in a different format than ours. Theirs are stored as points not lines, and the locations are defined in





latitude/longitude coordinates whereas King County spatial data is stored in a State Plane coordinate system.

In order to add WSDOT road alerts to the map viewer we created a proxy page in .NET that consumes the WSDOT web service, filters out the alerts that are not in the King County extent and vicinity, and then translates the points into the KCGIS map projection and coordinate system using the ArcGIS Server geometry service. The points are then assigned graphic symbology similar to the King County alerts and added to the map viewer as a layer that users can turn on and off.

A well-rounded map viewer

Another major component of the road alert viewer speaks directly to the My Commute theme: a traffic cameras map layer. Roads Services maintains a GIS point file of the locations of traffic cameras that are owned and operated by King County, WSDOT, and several other agencies. These points also store the Internet addresses (URLs) for the traffic camera images which are recorded at regular intervals. We added this point layer to the My Commute viewer and wrote JavaScript code that opens a pop-

up window when a user clicks on a traffic camera symbol. The pop-up displays the most recent camera image and it automatically updates the image if left open. This capability is useful for more than just getting a view on current traffic conditions, as illustrated by the example below captured during a flood event.

One more key element which enables users to get the most out of the map viewer is a good set of base maps on which to overlay the road alert and travel information. The KCGIS Center contributed here

also by designing an integrated series of countywide base maps at thirteen different scales. The base maps are stored as ArcGIS Server map caches. Custom map design, plus ongoing and regular base map updates using the latest King County GIS data, help ensure that My Commute users are seeing accurate, up-to-date, and authoritative data in a highly readable map display. In addition, the availability of these base maps has helped facilitate the rapid development of other applications throughout King County GIS.



Ongoing development

Esri has now incorporated editing and snapping capabilities in their JavaScript API, and they have announced that the WebADF will be retired. We will rewrite the road alert editor for the JavaScript API.

With the success and visibility of My Commute, many other cities have expressed an interest in sharing road alert information which, like the WSDOT data, can be mashed up in a single map viewer.

To Learn More

Contact KCGISC Client Services Manager, Dennis Higgins: dennis.higgins@kingcounty.gov / 206-263-4523.

Custom Cartography

Enhancing Public Recreation and Mobility through Maps A round-up of KCGIS Center Custom Mapping Projects

Patrick Jankanish

Senior Cartographer, King County GIS Center

Regional Trails System Map

One of the most asked-for maps published by King County is “Regional Trails in King County,” a colorful map, text, and photo guide to more than 300 miles of multi-use trails found throughout urban and rural King County.

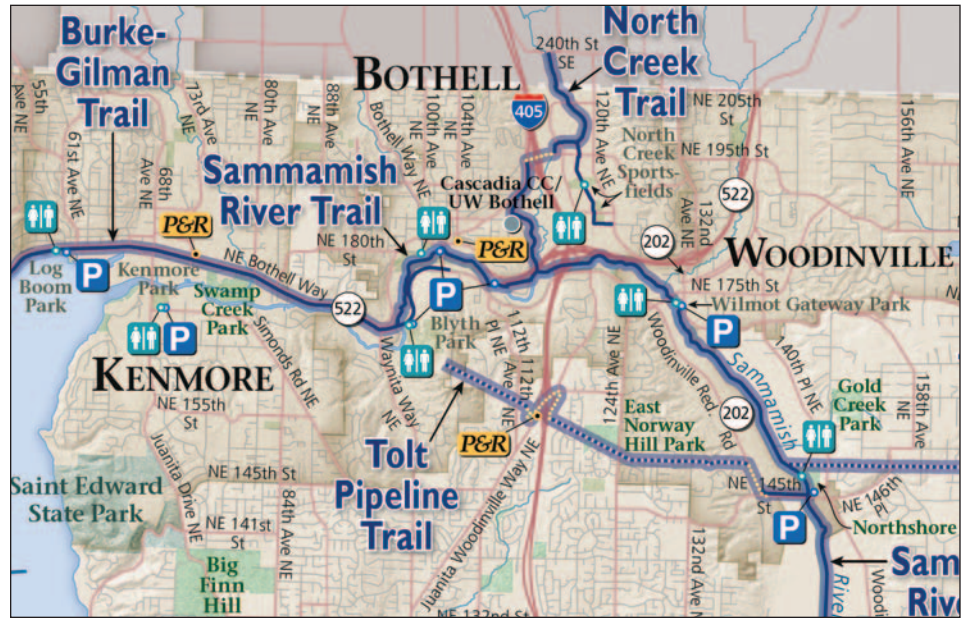
The King County GIS Center contributes in several ways to the ongoing success of this map which King County Parks first published in 2000 and has updated and republished several times since. First, the KCGIS Center provides staff support to Parks for the ongoing development, maintenance, and analysis of trail data. Then when the raw GIS data updates are ready to be turned into a detailed, comprehensive printed map guide, KCGIS Center Client Services staff step in with custom cartography and graphic design skills to produce all aspects of the product.

“Regional Trails in King County” is one of three recreation maps created by the KCGIS Center to have been recognized by the Washington State Parks and Recreation Association in its Spotlight Media Awards Program.

Backcountry Trails Map Series

King County Parks and the KCGIS Center have also teamed up to create a popular series of backcountry trail maps. Comprising more than twenty-five parks, working forests, and natural areas around the county, King County Parks’ backcountry system offers trails with year-round accessibility for hiking, mountain biking, and horseback riding. Each of the maps in the series focuses on a different backcountry location and its recreation features.

KCGIS Center staff work with King County Parks to map trails and related features, and to create a highly accessible,



“Regional Trails in King County”

growing series of recreation maps which are distributed in print and available for viewing, downloading, and printing via the Internet.

“Get Around U-District & North Capitol Hill” Map

In the spring of 2011, the KCGIS Center worked with University of Washington Transportation Services and King County

Metro Transit on a major update and revision to the popular “Get Around” map guide to the neighborhoods near the University of Washington that was first produced and published in 2005. As with the inaugural edition of the map, KCGIS Center Client Services provided data, cartographic design, and map production services to round out the data collection and map development efforts of UW staff and students and Metro staff.

The “U-District & North Capitol Hill” map guide includes such feature categories as bike and bus routes, activity destinations, and neighborhood services and retail options. The content was selected to encourage people to get out and about and take advantage of a broad range of activities without relying on or needing a car. Among several new items in the 2011 edition is a handy list of bus routes to and from the Eastside that cross the Evergreen Point Bridge, which will take on special value for University District/Eastside commuters when bridge tolling goes into effect.

A first among KCGIS Center-created maps for this 2011 edition is a new map publishing and display format: geospatial PDF. A free app for Apple’s iOS from Avenza Systems, Inc., called PDF Maps gives iPhone and iPad users the ability to not only view maps in PDF format (which many other PDF-reading apps

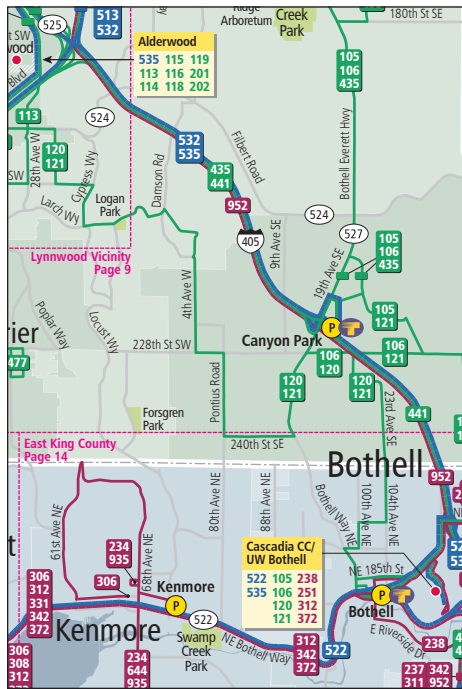


can provide), but users can also find their location on a map dynamically using their device's built-in location features, as well as perform a number of interactive map functions, such as measuring distances and areas and recording and exporting waypoint information.

Public Transit Maps

The next three project descriptions represent a rich variety of client needs and custom cartography solutions in the field of transit mapping.

"Regional Transit Map Book"



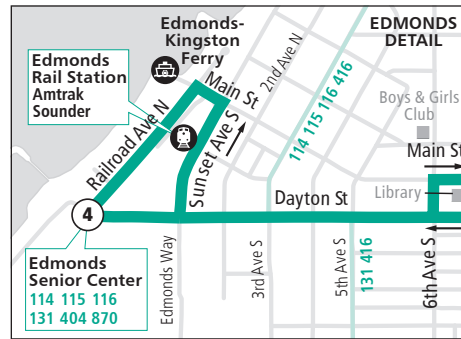
This Sound Transit publication is a 28-page guide which employs maps, tables, text, and photographs to represent public transit options throughout Sound Transit's three-county service area.

The map book required the compilation of GIS data from the five transit agencies within the Sound Transit service area, plus information from other agencies that provide connecting services. Starting with Sound Transit's concept for the map book, the KCGIS Center took the lead on map design, booklet design and layout, and printing coordination. The map book represents not only the challenge of managing and integrating diverse data from multiple providers, but also a close and highly successful collaboration between

the KCGIS Center and Sound Transit's management, design, and technical staff.

The result is a compact and accessible visual and geographic compendium that reveals at a high level the multitude of transit options available throughout the Puget Sound region. The map book uniquely builds awareness among existing and potential ridership that is served by a diverse list of service providers over a broad geographic area.

Community Transit Bus Route Maps

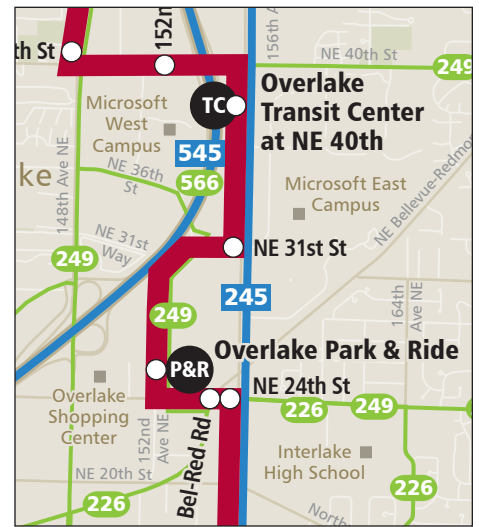


A different set of challenges was presented to KCGIS Center cartographers by Community Transit (CT) of Snohomish County. CT's goal was to update all of the bus route information in its existing map books, while for the first time creating all of the map artwork within an integrated GIS and graphics production environment. This ensured that the new route maps would be spatially accurate, which gives map users a reliable sense of scale. It also facilitated the addition of carefully selected map detail, such as common transit destinations and landmarks, connecting transit routes, and local streets, all of which makes the maps even more useful to riders planning bus trips.

The KCGIS Center compiled and assembled CT's GIS data for its system of more than 60 local and commuter bus routes into a system-wide map that also included streets and other basemap features, developed a map design template, and created the finished maps to fit into CT's existing map book page layouts.

Another goal and successful outcome of the project was a set of digital map files that Community Transit's GIS and graphics staff can and do maintain on their own.

Central Eastside Transit Service Map



In August of 2011, King County Metro Transit turned to the KCGIS Center to help complete a transit map that was conceived to help the agency promote its new RapidRide bus service in communities east of Lake Washington.

The map illustrates a very clear visual hierarchy of service, with the RapidRide B Line forming the Central Eastside backbone. Next is a clearly differentiated network of other bus routes that also provide frequent service in the area throughout the day. Finally, a more subdued network of other all-day bus routes is shown.

By picking up an already mostly built map, refreshing much of the basemap content and design using its well-established GIS-to-graphics work flow, and applying key Metro agency colors and styles, KCGIS Client Services staff very quickly helped Metro turn a diamond in the rough into a polished gem of a map.

The map was well received by a very discriminating population of transit users as soon as it hit the street. The map's success is a testament to the vision and set-up work by Metro and to a successful collaboration between Metro and KCGIS Center staff during the quick-turnaround project completion effort.

To learn how the King County GIS Center can help you with custom cartography projects like these and many, many others, contact Dennis Higgins, KCGIS Client Services Manager, 206-263-4523, dennis.higgins@kingcounty.gov.

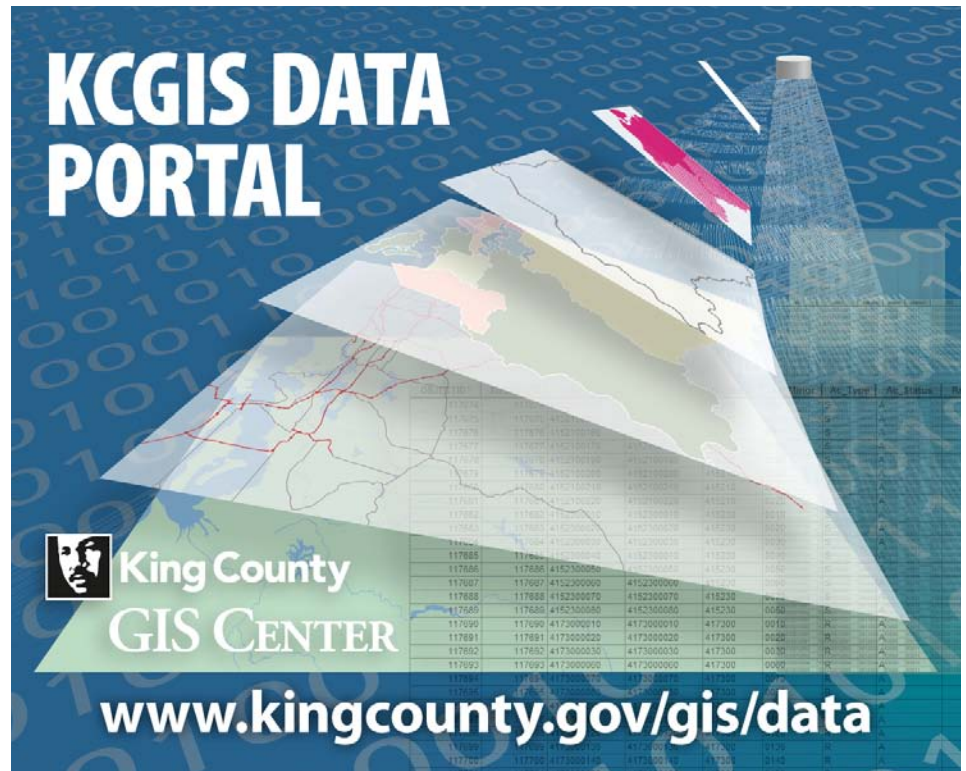
...Data Portal (from Page 1)

Case in point: King County. In early 2010, the Metropolitan King County Council passed an ordinance “relating to establishing a requirement for the county to strive to publish existing, high-value data sets appropriate for public access on a single website.” The expectation expressed in the ordinance is that by providing access to county data it will lead to innovation in how the data are used and in how the public engages with government, resulting in social and economic benefits to the community.

It is natural for GIS to play an important role in open government/open data initiatives. After all, it is often stated that most government data is spatial, and there is no better technology than GIS to facilitate the flow of spatial information and knowledge. It is technology that reduces the friction of converting largely unintelligible raw data that is available to only a few, into information that is useful, understandable, and transmittable to a broad audience.

So how did we at King County GIS approach the open-data mandate presented to us by our council? We gathered a work group of interested parties and began researching the principles and best practices of open data. We assessed the pros and cons of existing government data portals and developed a list of requirements based on our findings. We consulted with GIS data stewards at King County agencies to make decisions about what data could be published for public consumption. Then we harnessed the capabilities of the county’s GIS data coordinator and one of our best web developers to create the King County GIS Data Portal (www.kingcounty.gov/gis/data).

To access data on the King County GIS portal, users must accept our terms and conditions of use, and our data disclaimer. Once these have been accepted the user is presented with three data download options. Users can get all the data in one package, choose data layers grouped into thematic categories, or pick individual



layers from a list. Data format choices include shapefile, file geodatabase, and KML. All downloads are packaged as .ZIP files in 7-Zip format, and include the associated metadata and the use and disclaimer language.

A handy feature of the layer list option is the ability to sort the list in a number of ways, including the date of last refresh for each layer. Sorting by date helps to quickly inform return users as to which data layers may have been updated since their last visit. The layer list also includes links to metadata for each layer, and a mouseover reveals a thumbnail map for the layer.

Elsewhere on the download site are links to free GIS data viewers, as well as other resources for data and metadata.

An automated process runs once a week to query our enterprise spatial data warehouse and repackage data for the portal. There are currently more than 240 layers on the portal with more being added nearly every week.

King County is by no means the first government in the state of Washington to make its GIS data available for download. A number of state agencies, counties, and cities have been doing it for some time. A quick review of Washington counties,

conducted in January 2011, found these which offer some form of free GIS data download capability: Lincoln, Pend Oreille, San Juan, Pacific, Douglas, Kittitas, Franklin, Chelan, Grays Harbor, Island, Cowlitz, Skagit, Whatcom, Kitsap, Spokane, and Snohomish. From this brief survey it appears that at least 17 counties out of 39 (44%) provide GIS data downloads.

The response to the King County GIS Data Portal has been very positive. Cities within the county are especially pleased they can download our data at any time, without having to contact us directly. And we are pleased because we are relieved of the cumbersome business of manual data distribution (although we do continue to fulfill custom data requests on a cost-recovery basis). The deployment of the GIS Data Portal was an important step toward closing the gap between the information available to King County staff and that which is available to the public. We have yet to see a downside to releasing our data in this manner, and we hope the KCGIS Data Portal serves as a good example for the technical implementation of the principles of open government. ☘