



**CITY OF KIRKLAND**  
**Information Technology Department**  
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## MEMORANDUM

**To:** David Ramsay, City Manager

**From:** Brenda Cooper, CIO  
Donna Gaw, Network & Operations Division Manager  
Xiaoning Jiang, GIS Administrator  
Janice Perry, Multimedia and Communications Manager

**Date:** February 23, 2006

**Subject:** Council Technology Study Session

### RECOMMENDATION

Council becomes familiar with the contents of this memo, which outlines the responsibilities and tasks of the Information Technology Department. In general, we will not directly discuss this information in the study session, but it will be background for our discussion. We plan to spend the study session highlighting a few areas of this memo, demonstrating some of our current and recent projects, and most importantly discussing our upcoming strategic plan with you in an interactive format. We would very much like to hear your opinions and ideas.

### POLICY IMPLICATIONS

There are no direct policy implications being brought to you at this time, but our work supports nearly every major effort of the city, is increasingly visible to the public directly, and now represents a significant portion of your budget.

### BACKGROUND DISCUSSION

Information Technology has four divisions. Each manager or supervisor has provided you with further information later in the document, but here is the basic description of each division.

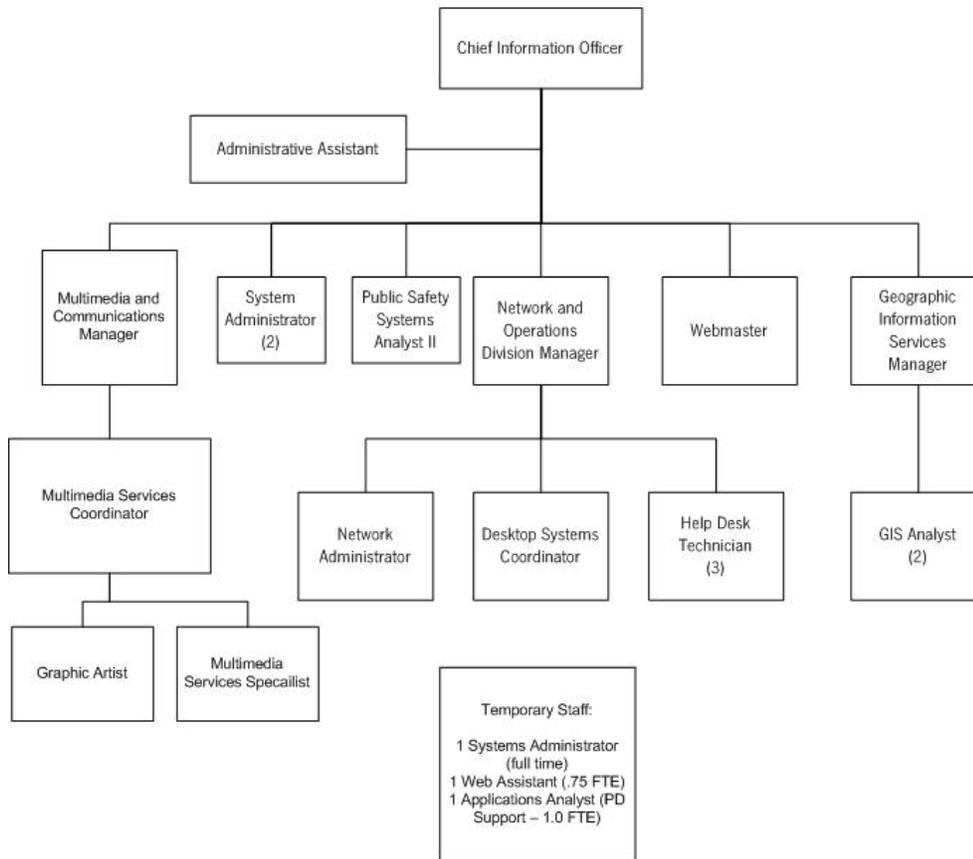
**Network and Operations (Donna Gaw):** Manages infrastructure including local and wide-area networks, servers, desktop and mobile computing, the help desk, phones, print and copy devices and central applications such as email.

**Applications (Brenda Cooper):** Supports applications such as finance, payroll, public safety records, police dispatch and mobile, public works infrastructure management, fleet, our internet and intranet sites, and others.

**Geographical Information Systems (Xiaoning Jiang):** Creates, maintains, and supports data and applications that utilize spatial or map-based analysis.

**Multimedia Services (Janice Perry):** Produces and manages major portions of the graphic look and feel of the city communications. Responsible for most print graphics, for both television stations, and some internet work. Also responsible for telecommunications franchising.

**CITY OF KIRKLAND  
Information Technology Department**



The temporary staff are *in addition* to the ones shown directly on the organization chart, plus we have a broadcast intern that isn't shown here.

We are funded to spend about twenty-five million dollars in the next five years, including operating and capital costs. The breakdown is as follows:

<b>Anticipated IT Budget for 2006-2010</b>						
	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Totals</b>
Capital	\$1,279,900	\$1,618,400	\$1,329,100	\$1,336,500	\$1,164,900	\$6,728,800
Operating	\$3,145,686	\$3,302,970	\$3,468,119	\$3,641,525	\$3,823,601	\$17,381,901
<b>Totals</b>	<b>\$4,425,586</b>	<b>\$4,921,370</b>	<b>\$4,797,219</b>	<b>\$4,978,025</b>	<b>\$4,988,501</b>	<b>\$24,110,701</b>

The capital numbers above are approved in our 2007-2011 CIP, the operating number for 2006 is already-approved budget, and the other years represent an anticipated 5% increase each year. The actual increase will vary some.

## **Network and Operations Division (Donna Gaw)**

### **What We Do:**

Support network connectivity to thirteen city sites, as well as to other local cities such as Medina, Mercer Island, and Bellevue, and to the state

- Keep 390 PC's running on staff desktops and in common areas
- Support configuration, moves, adds, and changes for 445 phones, faxes, and modems
- Maintain fifty-one separate application servers
- Answer Help Desk calls, which range from broken computers to "how to" questions. In 2005, we answered 3,835 calls

### **Direct Council Support:**

The Network and Operations Division supports the Council's Tablet PCs (PC) and Personal Digital Assistants (PDAs) such as Blackberry and Treo devices. We also support your connection to the City's network from your home, as well as at City Hall, which includes downloading the Council Packet and access to the City's e-mail system. We are currently developing a quarterly PC maintenance program for Council members. This program is designed to make sure your PCs software is up-to-date and to assist with any questions or problems you might be having.

We would like to take this opportunity to get feedback from Council on how we are doing with all of this:

- What is working?
- What is not working?
- What can we do for you?

### **Most Interesting Current Projects:**

The Network and Operations Division recently completed a City/School Fiber Project build out in Kirkland. Because of our regional partnerships, and with significant help from the Lake Washington School District, City staff at all locations but two are now able to connect to the City via high speed fiber optics. In the near future, the Cities of Kirkland and Bellevue will be able to use this newly constructed pathway between our respective City Halls to share infrastructure, share joint applications that already exist for fire dispatch and traffic modeling, and to partner more effectively on GIS. Project participants include the Lake Washington School District, Evergreen Hospital, the University of Washington, and the City of Bellevue. Bellevue School District and Overlake hospital are participating through Bellevue.

Our next big project is the Wireless in the Parks pilot. The project will kick off at the end of May this year and is currently scheduled to last through the summer of 2007, covering Marina Park, Peter Kirk Park, and part of downtown. At the end of this pilot project, we will decide whether or not to pursue on-going funding.

## **Applications (Brenda Cooper)**

### **What We Do:**

The Applications Division supports the following primary city applications:

- Finance, including budget and payroll
- Human Resources, including employee online, an internal tool for staff access to HR functions
- Public Works Maintenance, which includes inventory and work orders relating to city infrastructure and is closely tied to GIS
- Permitting and licensing, which is shared by Fire and Building and Public Works and has other users
- Police computer aided dispatch, mobile, records management, jail, and associated programs
- Fire records management
- Fleet Maintenance
- Water meter reading
- Utility Billing
- Parks and Recreation registration, including the online Kirklandparks.net
- Regional eCityGov applications through the eCityGov Alliance, which include mybuildingpermit.com, myparksandrecreation.com, nwproperty.net, and nwmaps.net plus numerous projects in design
- City of Kirkland main website plus various level of support for affiliated websites like explorekirkland.com.
- The city intranet, which is internal web-based tool
- Database creation, maintenance and support
- Multiple other smaller applications

### **Direct Council Support:**

We maintain the City Council intranet portal, which is where you go to retrieve your Council packets. We are also responsible for the technical support of the on-demand website and video streaming of Council meetings.

### **Most Interesting Current Projects:**

We are beginning a multi-year project to implement document and content management, and hope to utilize workflow tools to help streamline processes throughout the city and give staff easier access to documents that they need. This project will also help us with legal compliance around document retention and public disclosure.

We are supporting the regional dispatch planning effort, working on police regional data sharing and exploring making selected applications such as permitting and email available in the field. We also hope to roll out a new version of the City Website soon.

## **Geographic Information Services (Xiaoning Jiang)**

### **What We Do:**

The Geographic Information System (GIS) Division of IT manages and maintains the city's spatial (map-based) data assets, and promotes wide usage of this technology. Our three staff members work diligently to create primary and derived data layers, map products, and desktop tools to meet many business requirements across the organization. We strive to work closely with our many GIS customers to improve data quality, accessibility, and integration with numerous business applications. Notably, Phase I of the GIS implementation, underway for over five years, is now essentially complete and within budget, a significant accomplishment. Attached is a summary of Phase I accomplishments.

We commissioned a consultant study in 2005 to assess where we are relative to our identified business needs, and to lay out specific actions to guide the next five years of GIS development at Kirkland. Our consultant complimented the city on its GIS accomplishments and made many good recommendations about where the city could capitalize on its investment in this technology. These recommendations form the basis for projects comprising the 2006-2007 GIS Work Plan. In general, the GIS Program is transitioning from a data development mode to one of applying the data to as many decision points as possible in the city infrastructure. This is nearly all-encompassing in terms of meeting the needs and expectations surrounding all city services, policies, and goals, and is an exciting prospect.

It is now well understood in the GIS field that most organizations benefit from wide distribution of data and tools to a diverse customer base. This means that GIS specialists must focus on pushing technical solutions – hardware, software, and data – to users capable of materially participating in routine GIS activities: making maps, doing routine spatial queries and analyses, updating data layers at the site level, and so on. Of all the imperatives surrounding a successful municipal GIS, keeping the database current is perhaps the most critical. Our staff take this seriously, and are working on streamlined procedures and tools for data maintenance that will significantly improve our productivity.

### **Direct Council Support:**

Council sees GIS products regularly as part of various Council packets. Also, our regional online applications as NWproperty.net and NWmaps.net are available to Council via the internet.

### **Most Interesting Current Projects:**

This year, we will start to implement our GIS Strategic plan, which was developed and approved last year. A copy of the executive summary has been included as an attachment to this memo, and a full copy of the plan will be made available in the Council office upstairs in City Hall for your use. Some of the major projects we will work on this year include getting more GIS tools out in the field with public works and building staff, and developing and mapping city-owned property.

## **MultiMedia Services (Janice Perry)**

### **What We Do:**

This Division has two primary components. One is to support the communication efforts of the organization. We are a vehicle for designing, writing and broadcasting information generated by the City of Kirkland and City supported activities. Our goal is to provide our community and organization with news, information and access to materials that provides information. Recognizing people have dominate learning styles such as auditory, visual or reading; we try to use all three styles to provide information e.g. print, television and web.

Attached is an outline of the type of support provided through our graphic design and print services. While some products have a higher visibility which you may readily recognize, we do provide services to each department and to some Board and Commissions (i.e. Cultural Council, Design Review).

Another tool we use is cable television. The City of Kirkland has two government access channels. Channel 21 KGOV, is our government channel that airs City Council meetings, Legislative updates from Olympia, Sound Transit Board meetings, Project Impact (emergency preparedness features), Perils for Pedestrians, speaker bureau presentations and information documentaries on a variety of topics such as wetlands and public art. Channel 75, K-Life is our government channel that focuses on local news and activities and events. Regular programs are Currently Kirkland, our monthly news desk, We've Got Issues (programs generated by our Youth Council), Senior Issues (programs initiated by our Senior Council), Wild About Washington, Words that Cook, and Education News Parents Can Use.

Kirkland has 22,871 households of which 16,292 are cable television subscribers. We have the potential of reaching 71% of the Kirkland community via cable television. Based on our 2003 Needs Ascertainment Study (analyzed by Constance Ledoux Book, Ph.D.), we learned that 65% of the sscribers occasionally watch our government channels, 11% watch monthly, 21% weekly and 2% daily. It is a resource that gets used and our goal is to increase the percentage of those who watch on a monthly, weekly and daily basis. Attached are charts that share other information obtained from the Needs Ascertainment Study.

In addition to programs that air directly on our channels, we have an on-demand selection of programs that is available from the City's website. Our on-demand library has City Council meetings beginning with December 14, 2004 to the present, Currently Kirkland episodes, and We've Got Issues episodes. We also have special features available such as Garage Appliance Safety, MyBuildigPermit.com, and Moments in History, to name a few.

It is exciting to see the on-demand being used. We have programs that range anywhere from 1 request to as many as 482 requests. The top five programs consistently requested are Garage Appliance Safety, We've Got Issues – Teen Parties, Currently Kirkland Episodes, City Council Meetings, MyBuildingPermit.com

In addition to providing information to the community, we are also a resource for internal organization video taping, such as taping training sessions. Staff has made this training available on a checkout basis and in some instances it has been made available through on-demand via KirkNet.

Looking toward the future, we would like to air live programs from Marina and Peter Kirk Parks. Ideally we would be able to identify some sponsors who would support the airing of baseball games and other events. There is also an interest in programming that would feature our community neighborhoods, businesses and restaurants.

The second component is telecommunications. This division is the point of contact for telecommunications companies interested in leasing public property and has lead responsibility and coordination for franchise negotiations and agreements. Currently we have seven lease agreements in place and two more under discussion and 11 franchise agreements. Discussions on two franchise agreements for renewal will occur this year (Puget Sound Energy – Gas and Northshore Utility).

**Direct Council Support:**

Multimedia Services is responsible for recording Council meetings and other special events that Council has an interest in. Multimedia Services graphic designs are used to support many Council initiatives.

**Most Interesting Current Project:**

This year, we are focused on improving our television station programming and variety, and working to increase public awareness of the ability to watch our shows online.

**Cross-divisional responsibilities and projects (Brenda Cooper)**

A number of tasks cross multiple divisional boundaries. These include providing 24/7 on-call support, IT disaster recovery, training city staff in computer and application use, and working to improve the communication tools available for the public and making them easier for staff to use.

**Information Technology Strategic Plan**

We approved a strategic plan in 2001, and have completed most of the tasks on that plan. We are now ready to begin our next five-year strategic plan. We have an apparently-successful vendor identified (CH2MHILL) and probably will have a signed contract by the time of the study session. The following is the requested services and deliverables section of the RFP.

We are looking for a consultant to help us create a strategic plan to guide us through the next five years, and also to create a more detailed IT infrastructure plan and design.

We hope to involve all of the primary internal stakeholders in both an analysis of the current program, in idea generation for the future, and in prioritization of projects. We will also expect the consultant to meet with us and external stakeholders which includes other cities, citizens, and businesses.

We do have anticipated income streams for capital and operating funding, and the primary question that we are asking with this strategic plan is “What is the most effective way to spend the resources that we now have available?”

We are looking for an evaluation that will highlight current strengths and weaknesses as well as identify, prioritize, and cost the projects that we should focus on over the next five years. Some of the specific areas that we would like to be sure to include are:

**Portfolio Management:** We would like one outcome of the strategic plan to be a completed technology portfolio and a process for keeping it up to date.

**Applications:** We have a number of new applications slated for purchase in the next five years, including CRM. For each of these applications, we'd like to look at whether they should be regional or Kirkland-centric, and whether or not we are actually working on the right applications.

**Infrastructure:** We're sure our infrastructure is less than optimal. For example, we tend to follow vendor's recommendations for how many separate and individual servers their applications need, which has resulted in an English garden of baby servers. We suspect that some server consolidation would be very helpful, and have been saving capital to help us accomplish this. We have new and significant storage needs and want to look at shared storage options and improved backup/recovery. In addition, we'd like to consider the benefits of moving our key customer-centric applications into a more web-services based infrastructure and examine if and how service oriented architecture ideas might be helpful to us. We did just complete a full external security audit in 2005, and security should continue to be considered critical.

**Disaster Recovery:** We have a reasonably disaster-resistant location, but would have trouble doing any actual recovery should a large-scale natural disaster render our building unusable. The strategic plan should include recommendations to address this void.

**Financial Models:** One of the few recommendations from the 2001 Strategic Plan which we have only made minor progress on was to set aside money to replace large systems. We'd like ideas for how to make another go at that. As a related task, we'd like recommendations to simplify our billing structure.

**Regionalization:** We are doing more and more regional applications, and now that we have a growing intra-city and intra-agency fiber network on the eastside, we would like to explore opportunities to create and manage shared infrastructure and/or applications between the cities. We need help understanding how to effectively balance the power of central internal management of our applications and the cost-saving opportunities of regional applications and hardware infrastructure.

**Help Desk/ITIL:** We'd like to take a closer look at our help desk functions, and see if there are any aspects of ITIL that we should implement.

**GIS:** The five-year strategic GIS plan that we just adopted this year should be integrated. Additionally, we are exploring forming a regional eCityGov Alliance-based GIS program, and that effort needs to be integrated.

**Staff Structure:** The multimedia services function just came into IT in 2005. We have an uneven organization chart, and a number of people that report directly to the CIO. We'd like to take a look at our staff, structure, and organization, and identify areas for structural improvement. While we will entertain suggestions for new staff positions, the city budget is not in a position to add multiple IT positions and we desire a plan that can be implemented. On a related topic, we are interested in developing a current/desired skills inventory so that we can plan for training.

**Project and Task Management and IT Governance Reporting:** We do not have very detailed project management tools or skills except in some specific narrow areas. We do not have good visibility to tasks except in the Help Desk area. We have an IT Steering team that provides high-level governance, and we do a modified form of Balanced Scorecard reporting to that team, but would like input on what we should consider changing.

**Industry Standards:** We would like to know how we compare to industry standards for help desk customer service, staffing, uptime, costs, etc. to the extent that the base information is available.

**Content Management:** We are implementing a content management system for the web, and in the process of selecting a document management vendor. We are interested in a pathway to help us better manage all digital content, including public records.

**Municipal and Public Networking:** We have completed a municipal networking study and are involved in two more detailed tasks related to the outcome of that project. These include a pilot for public wireless in selected parks, and an examination of other options for municipal fiber that can be leased to telecommunications providers and used to help create secure city-owned support networks for city staff purposes such as public safety, field inspections, etc. These efforts should be factored into the plan. An important component of this effort is maintaining a competitive environment for commercial telecommunications providers that fosters their success at offering multiple broadband choices in the community.

**Policies and Service Level Agreement:** We'd like to have our policies and Service Level Agreements looked at, and any necessary policy direction identified.

## ***DELIVERABLES***

The following deliverables are to be provided by the vendor. Additional deliverables may be identified during the initial meetings between the vendor and the City.

A five-year strategic plan addressing the topics listed above and any others identified in the process of stakeholder discussions. This plan should be designed to succeed within our anticipated available budget.

A two-year tactical plan including some of the management tools identified above such as a technology portfolio and balanced scorecard reporting.

An infrastructure design and a specific detailed migration plan to allow us to implement that infrastructure by the end of 2007. This plan should address creating a more flexible and cost-effective hardware infrastructure.

## **Final Comments:**

Please feel free to let me know if there is any area of our work that you would like more information about during or after the study session. We look forward to showing you a few of our accomplishments and discussing our strategic plan directions with you.

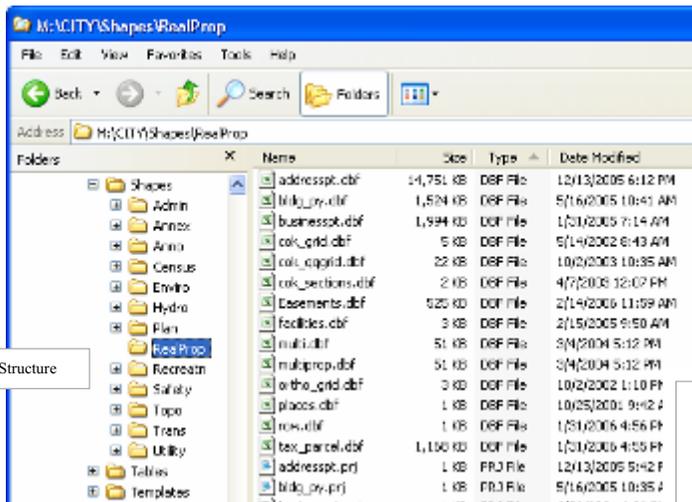


City of Kirkland, Washington  
**A BLUE-RIBBON GEOGRAPHIC INFORMATION SYSTEM**



A SOUND DATA FRAMEWORK ...

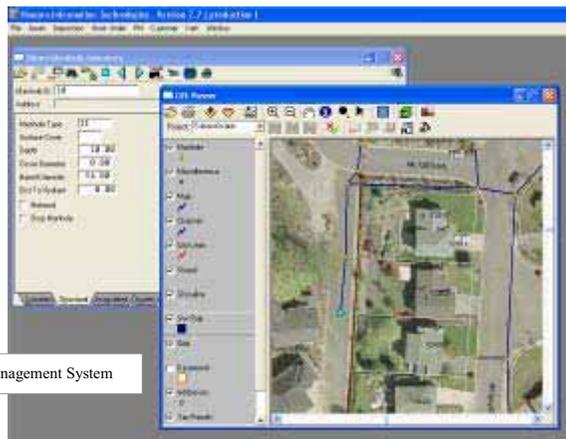
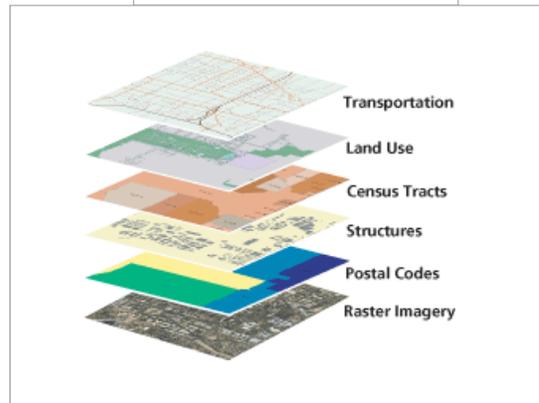
- Phase I, 1998 GIS Plan, is complete
- GIS database contains 14 themes, 85 feature types, >35 GB total
- Projects, procedures, templates are organized for potential re-use
- Staff are streamlining ongoing routine database maintenance
- Robust initiative is underway to synchronize GIS data with business systems



GIS Directory Structure



Street Tree Inventory



Hansen Asset Management System



Kirkland in 3-D From SW

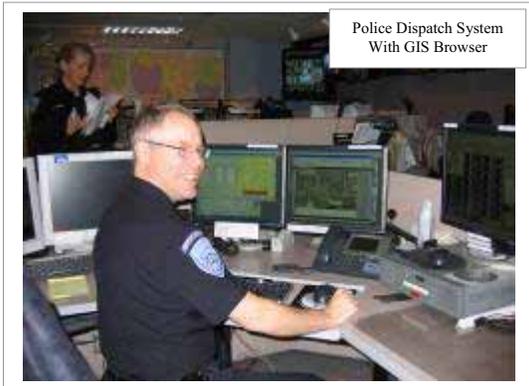


# City of Kirkland, Washington A BLUE-RIBBON GEOGRAPHIC INFORMATION SYSTEM

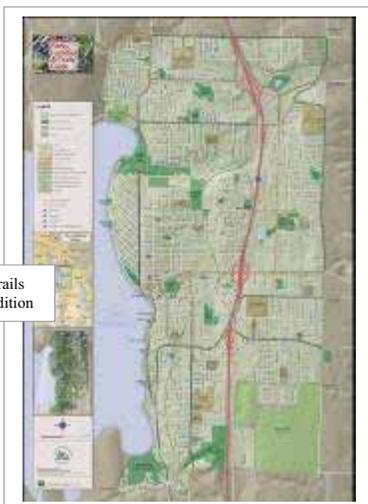


## A PROACTIVE SERVICE MODEL ...

- Program is designed for maximum usage by staff and community
- Customer base includes all departments and most work groups
- *Kirknet* allows GIS access to \_\_\_ users via the *GIS Browser*
- IT-GIS also provides advanced desktop GIS tools, map products, training, technology transfer
- City has also provided valuable GIS data and tools to community groups, businesses, and other government agencies



Police Dispatch System  
With GIS Browser



Parks, Facilities, and Trails  
Guide Now in Second Edition



Staff Utilize GIS Browser  
and/or Advanced GIS Tools



City of Kirkland, Washington  
**A BLUE-RIBBON GEOGRAPHIC INFORMATION SYSTEM**



EFFECTIVE OVERSIGHT AND MANAGEMENT ...

- GIS Program follows annual work plan developed jointly with users
- GIS Steering Team oversight ensures sound business case review
- Peer-level interaction between GIS, other IT staff, benefits all city users of technology
- GIS Program is flexible; responds to changing/unforeseen projects and city priorities
- City GIS embraces *Big Picture* ; participates in “GIS Day,” regional initiatives, and partnerships

The collage features several key elements:

- 2003 Tree Canopy Study:** A large map of Kirkland showing tree canopy density in green.
- GIS Day:** A group of people gathered around a computer monitor, engaged in a discussion.
- Regional GIS Browser:** A screenshot of a web-based GIS application interface.
- GIS Work Request Process:** A flowchart detailing the workflow from request to completion.
 

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      graph TD
      A[GIS Request Received from requestor] --> B{Clear GIS Request?}
      B -- NO --> A
      B -- YES --> C[Create GIS Administrator and Computer Request Form]
      C --> D[GIS Administrator Evaluates Request, consults GIS Head and GIS Administrator with GIS Requestor]
      D --> E{Requester Provides Project or Deliverable?}
      E -- YES --> F[Send GIS Steering Committee Approval]
      E -- NO --> G[Complete Request]
      F --> H[GIS Administrator Evaluates Request, consults GIS Head and GIS Administrator with GIS Requestor]
      H --> I{Requester Provides Project or Deliverable?}
      I -- YES --> J[Send GIS Steering Committee Approval]
      I -- NO --> G
      J --> K[GIS Requestor Provides Project or Deliverable?]
      K -- YES --> L[Complete Request]
      K -- NO --> C
      
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- GIS User Group:** A group of people sitting around a table, participating in a meeting.



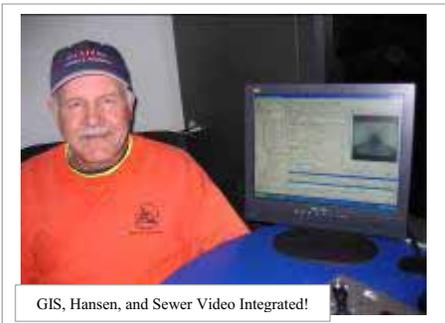
# City of Kirkland, Washington

## A BLUE-RIBBON GEOGRAPHIC INFORMATION SYSTEM



### OUR 2005 GIS REALITY CHECK ...

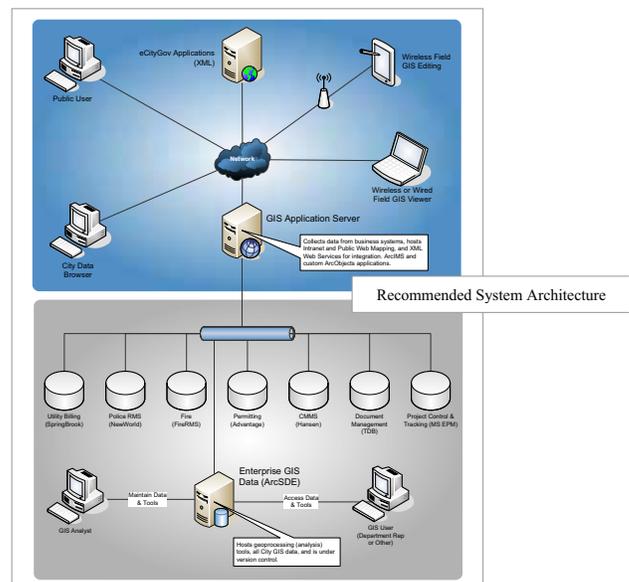
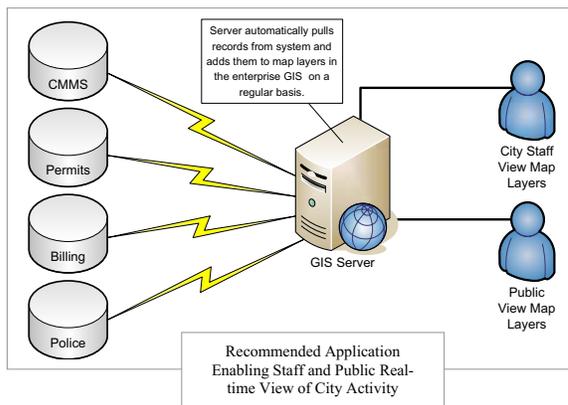
- The conclusion of Phase I was a logical milestone for updating the 1998 Plan
- The city GIS needed a report card for current status as well as growth potential
- The rapidly changing technology landscape, including GIS, must be planned for and managed
- The consultant team praised the city's successful GIS implementation and solid business model; suggested several new directions to maximize benefits
- Focus beginning in 2006 is improved staff decision support, mobile GIS, and enhanced integration of GIS and business systems



GIS, Hansen, and Sewer Video Integrated!



"Decision Support" includes staff, Council, and public



# Final

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# GIS Strategic Plan

City of Kirkland, Washington  
August 2005

Prepared by Woolpert, Inc.  
116 Inverness Drive East, Suite 105  
Englewood, Colorado 80112  
[www.woolpert.com](http://www.woolpert.com)

# EXECUTIVE SUMMARY

## INTRODUCTION

In April 2005, the City of Kirkland engaged Woolpert, Inc., to prepare a GIS Strategic Plan. The Woolpert project manager worked closely with the City GIS Administrator to organize a project kickoff meeting and three sets of on-site interviews. A wide variety of staff were involved in this process, predominantly from departments seen as key stakeholders in the City's GIS program. The information gathering during these interviews was used in conjunction with existing documentation (including *2005-2006 Budget-In-Brief*, *1998 LBIS Plan*, and the *Annual GIS Work Plan*) to formulate this GIS Strategic Plan.

The City of Kirkland wanted a plan that would:

- Provide a roadmap of how to best move forward with the GIS program.
- Help define the applications to protect and leverage their existing investment in GIS data.
- Enable a collaborative approach where different departments can work together on a citywide level, and with the neighboring jurisdictions on a regional level.
- Promote knowledge sharing between consultants and City staff, and cross-training between City departments.
- Identify the projects, budgets, schedules, and resources to successfully implement and maintain the GIS program into the future.

This plan addresses these goals and is broken out into the following sections:

- Existing conditions – The current status of GIS at the City.
- Needs assessment – The six-year vision, and the challenges impacting the achievement of this vision.
- Recommendations – Specific recommendations to help achieve the six-year vision.
- Implementation planning – The recommendations summarized and prioritized by individual tasks, budgets, schedules and resources required to implement the vision.

The details of each step can be found in the remainder of this document, while the highlights are summarized in this executive level summary.

## FINDINGS AND RECOMMENDATIONS

It is apparent from the discovery phase of the planning process that the City has fully embraced GIS as a program and technology. Good funding support has enabled the small yet capable GIS Division staff to create useful and time saving tools and data for City staff. GIS data now supports several key business systems in the City, including maintenance management, permitting, police dispatch, and utility billing. In addition, the GIS Browser is used to share data and tools across the city. The success of the City GIS up to this point can be appreciated by looking at the list of accomplishments in *Error! Reference source not found.* (p.*Error! Bookmark not defined.*).

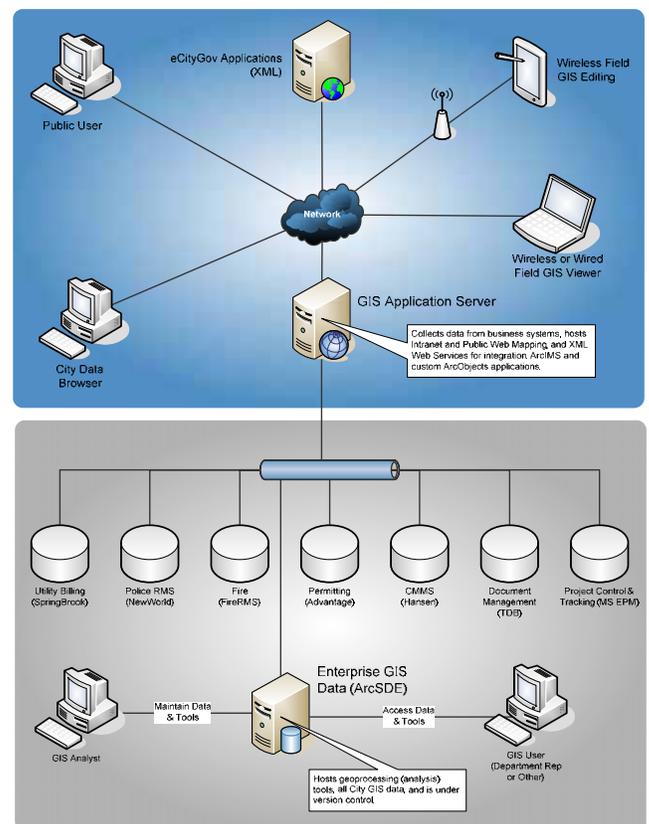
### A Shift in Focus

The City of Kirkland certainly is to be commended for its vision and perseverance in planning and implementing GIS technologies beginning with the 1998 LBIS Plan. The plan itself provided a suggested *enterprise* program framework, a fair amount of technical and project data, and a planning-level budget. More importantly, from this planning process the City's own management team emerged as the dominant driver in implementing the plan's specific recommendations, beginning with the recruitment of a GIS Administrator. Plan implementation as of June, 2005 is nearly complete, and well within the allocated budget.

The 1998 LBIS Plan that established the City GIS was, by design, focused primarily on spatial data development. Good data is a necessary requirement for a successful GIS program, and the City has spent a considerable sum on creating and maintaining key layers like real property, streets, addresses, and utilities.

The focus of Phase II of the City GIS (i.e., this GIS Strategic Plan) is on realizing an **immediate return on investment** for these data sets. While the plan does include additional data development projects, these are specialized supplements to the existing, core data layers. The future of GIS at the City is in decision support through **widespread viewing and analysis** of the data using map-centric tools and browsers.

This vision of GIS at the City of Kirkland is detailed in Section 3 beginning on page p.*Error! Bookmark not defined.* *Error! Reference source not found.* on p.*Error! Bookmark not defined.* shows the systems to support GIS integration across the city, of which the centerpiece is a GIS application server. The role of this server is primarily to support **public and city-only GIS data viewers** that enable viewing of key data like active permits, street maps, public works projects, etc. This is the type of information that citizens and staff alike need to see on a daily basis.



## Key Recommendations

Based on the findings from the discovery phase and the identified GIS vision for the City, Woolpert recommends a conservative, proactive, and technically sound path forward. Details of each specific recommendation can be found in Section 4 beginning on p.**Error! Bookmark not defined.** The recommendations are grouped into four types: organizational and operational, applications, technical GIS, and data. The general statements below summarize these detailed recommendations.

*We recommend that the GIS program be centralized.* This means having all full-time GIS staff in one division, adopting the centralized application model, and consolidating data maintenance. This also includes a GIS service supporting system to make better use of GIS analysts' time, and adding a full-time equivalent (FTE) in the next two years to support public safety GIS. The City will realize cost savings through more effective resource management, and will have an equitable budgeting model to ensure that departments support the GIS program to the extent that they use it.

*We recommend that more effective use of existing data be made via widely distributed and easy-to-use tools.* The Public GIS Browser and Internal GIS Browser are the main tools to accomplish this goal; citizens and staff can quickly look at city activities and run simple tools to get quick answers to common questions. Lower-level, more technically oriented tools augment these core systems, including a centralized addressing system, as well as creating new data layers for work orders, permits, and CIP projects. This will allow the City to offer much better customer service, and make faster, more informed decisions.

*We recommend that the GIS Division adopt key technologies and approaches for data management, maintenance, and analysis.* These recommendations are specific to the daily technical activities of the GIS Division staff. Data maintenance and QC tools will be enhanced or created to reduce the time that analysts spend on this work. Modeling and data management will be scalable and effectively support the enterprise GIS vision through a complete ArcSDE implementation. With the projects related to this recommendation, the City will be well-positioned to benefit from the analytical aspect of GIS, i.e., decision support for CIP planning, advanced reporting, regulatory reporting requirements, public safety, business development, etc..

*We recommend that the City extend the use of GIS data in the field.* The next logical step for map data that was collected in the field is to get the information back into the hands of City staff who work in the field: inspectors, maintenance crews, police officers, fire fighters, etc. A two-phased approach begins by giving view-only maps to field workers, and then giving a select group the ability to also update the GIS data in the field. The City will empower field staff to make better decisions based upon current information, and improve the GIS data at the same time.

*We recommend augmenting the core GIS layers with a small collection of new layers, and extending some existing core layers into new areas.* Support for the Fire and Building Department is a key recommendation, and can only be realized if some existing layers are extended to cover the Fire District 41 area to which Kirkland crews are dispatched. Other general purpose layers *within the city boundaries* needed by multiple departments are City-owned property, easements, survey control, and environmentally sensitive areas. These layers will give the City better planning and development capabilities, will save money in utility construction, and ensure regulatory compliance. (NOTE: the geographic extent of the Fire District 41 mapping is approximately the same as the potential annexation area (unincorporated King County) adjoining the city on the north. This recommendation does not include extending *all* enterprise GIS layers, such as utilities, other street infrastructure, etc. through the annexation area; that work is the subject of a separate citywide study on the total cost of annexation.)

## Cost Summary

Table 1 shows a summary cost by project type (first column) if all of the recommendations, and associated work, are completed. These costs are spread across six plus years, and details of the scheduling and City resources needed to complete each project are in Section 5 of this Plan, including detailed breakdowns by project by year by fund. For each year, there is a breakdown of the total cost of each project type by the funding source, i.e., utility fund or general fund.

You will also note a summary of City staff resources, in hours, necessary in each budget year to complete the tasks in this Plan.

**Table 1 - Budget Summary by Fund by Year**

Project Type	Staff Hours		2006			2007		
	One-Time	Ongoing	Utilities	General	Total	Utilities	General	Total
Organizational & Operational	1,340	564	\$ 50,750	\$ 21,750	<b>\$ 72,500</b>	\$ 36,500	\$ 33,500	<b>\$ 70,000</b>
Data	1,020	700	\$ 79,250	\$ 98,750	<b>\$ 178,000</b>	\$ 58,000	\$ 82,000	<b>\$ 140,000</b>
Application	1,140	260	\$ 45,400	\$ 92,600	<b>\$ 138,000</b>	\$ 26,100	\$ 56,900	<b>\$ 83,000</b>
Replacement	-	-	\$ 13,200	\$ 46,800	<b>\$ 60,000</b>	\$ 15,400	\$ 54,600	<b>\$ 70,000</b>
<b>Total</b>	<b>3,500</b>	<b>1,524</b>	<b>\$ 188,600</b>	<b>\$ 259,900</b>	<b>\$ 448,500</b>	<b>\$ 136,000</b>	<b>\$ 227,000</b>	<b>\$ 363,000</b>

Project Type	2008			2009		
	Utilities	General	Total	Utilities	General	Total
Organizational & Operational	\$ 27,000	\$ 23,000	<b>\$ 50,000</b>	\$ 51,000	\$ 31,000	<b>\$ 82,000</b>
Data	\$ 70,500	\$ 116,500	<b>\$ 187,000</b>	\$ 31,750	\$ 78,250	<b>\$ 110,000</b>
Application	\$ 2,500	\$ 30,500	<b>\$ 33,000</b>	\$ 12,500	\$ 40,500	<b>\$ 53,000</b>
Replacement	\$ -	\$ -	<b>\$ -</b>	\$ 17,600	\$ 62,400	<b>\$ 80,000</b>
<b>Total</b>	<b>\$ 100,000</b>	<b>\$ 170,000</b>	<b>\$ 270,000</b>	<b>\$ 112,850</b>	<b>\$ 212,150</b>	<b>\$ 325,000</b>

Project Type	2010			2011		
	Utilities	General	Total	Utilities	General	Total
Organizational & Operational	\$ 3,000	\$ 7,000	\$ 10,000	\$ 51,000	\$ 44,000	\$ 95,000
Data	\$ 79,900	\$ 122,100	\$ 202,000	\$ 28,000	\$ 42,000	\$ 70,000
Application	\$ 12,500	\$ 37,500	\$ 50,000	\$ 7,500	\$ 22,500	\$ 30,000
Replacement	\$ 15,400	\$ 54,600	\$ 70,000	\$ -	\$ -	\$ -
<b>Total</b>	<b>\$ 110,800</b>	<b>\$ 221,200</b>	<b>\$ 332,000</b>	<b>\$ 86,500</b>	<b>\$ 108,500</b>	<b>\$ 195,000</b>

**Table 2 - Total Plan Budget by Funding Source**

Project Type	Total Plan Budget by Fund		
	Utilities	General	Total
Organizational & Operational	\$219,250	\$160,250	\$379,500
Data	\$347,400	\$539,600	\$887,000
Application	\$106,500	\$280,500	\$387,000
Replacement	\$61,600	\$218,400	\$280,000
<b>Total</b>	<b>\$734,750</b>	<b>\$1,198,750</b>	<b>\$1,933,500</b>

**Table 3 - FTE Cost**

	A New FTE Cost		
	One-Time	On-Going	Salaries & Benefits
GIS Analyst	\$12,704	\$4,208	<b>\$70,580</b>

## CONCLUSION

The City of Kirkland will realize the following benefits from implementing the recommended initiatives in this plan.

- Improved asset management for Public Works, Parks, and Finance by providing simple tools to access critical datasets.
- Improved decision making for all departments with the enhancement of new critical GIS layers.
- Improved customer service by enabling all departments to complete assigned tasks easier and quicker.
- Streamlined data maintenance to protect the city’s investment in developed GIS data layers.
- Growth and development of skill sets for the city GIS staff through a partnering approach.
- Real-time decision making in the field through innovative GIS technologies.

This plan establishes a framework for the next phase of a highly successful GIS program at the City of Kirkland. Further planning is needed on resource allocation, prioritization, and specific assignments within the GIS Work Plan. The city’s GIS vision will be realized with a new focus on value-added service to the community, and a commitment to building upon its impressive GIS accomplishments to date.

# MULTIMEDIA SERVICES



WHILE USING THE PARK, PLEASE OBSERVE THE FOLLOWING:

- Parks are open from dawn to 11 p.m.
- No alcoholic beverages or drugs allowed
- Firearms and explosives including fireworks are not allowed
- Permits are required for special events, call 425.587.3340
- Pets must remain on leash under owner control, owners shall clean up after pets
- Fires are allowed in designated areas only
- No dumping
- No posting signs, posters or notices without written permission
- It is unlawful to remove or destroy plant material, park equipment or property
- Teasing, annoying or injuring animals is prohibited
- It is unlawful to sell refreshments or merchandise without written permission
- No camping
- It is unlawful to practice or play golf, baseball, cricket, polo, lacrosse, archery, hockey, tennis, badminton or other games of like character except at park areas designated for such use
- Riding vehicles or animals over or through any park is prohibited, except along park drive parkways

CHAPTER 11.90 OF THE KIRKLAND MUNICIPAL CODE  
KIRKLAND PARKS AND COMMUNITY SERVICES DEPARTMENT 425.587.3310  
PAC Chapter 11.90 Park Rules  
www.cityofkirkland-wa.us/parks



## LOGO / IDENTITY DESIGN

### EVENT PACKAGES

EVENT PACKAGE DESIGN AND PRODUCTION OF ALL PIECES  
(ALL CITY DINNER, CENTENNIAL EVENTS, FIRE & BUILDING EMPLOYEE BANQUET, ETC)

Invitation

Program

Signage/Posters

Certificates

### PRESENTATION DESIGN

POWERPOINT

MOUNTED SIGNAGE

LARGE FORMAT POSTERS

BANNER DESIGN AND COORDINATION WITH SIGN VENDORS



### FOLDER DESIGN

CUSTOM DIE-CUT DESIGN AND COORDINATION

### BROCHURE LAYOUT

PARKS BROCHURE

NEWSLETTERS (FIRE & BUILDING HOSE N HAMMER)

INFORMATIONAL BROCHURES

RECRUITMENT BROCHURES

MASS MAILINGS



### POSTER LAYOUT

EVENTS (SUMMER CONCERT SERIES, WELLNESS EVENTS, ETC)

COUNCIL PRESENTATIONS

### PHOTOGRAPHY

PHOTO LIBRARY MANAGEMENT

EMPLOYEE ID

CUSTOM PHOTOGRAPHY FOR PROJECTS

DISTRIBUTION OF PHOTOGRAPHS WHEN REQUESTED

### WEB GRAPHICS / DESIGN

FORMAT GRAPHICS FOR WEBMASTER OR

INDIVIDUAL DEPARTMENTS FOR POSTING ON WEB

KIRKNET PAGE DESIGN AND COORDINATION

### ENVIRONMENTAL GRAPHICS

PARK KIOSKS

GENERAL SIGNAGE

VEHICLE GRAPHICS

### BOOKLET / LARGE DOCUMENT FORMATTING

CONVERT LARGE DOCUMENTS FROM WORD TO LAYOUT PROGRAMS FOR FINAL PRODUCTION AND DISTRIBUTION (COMMUNITY PROFILE, EOC MANUAL, DESIGN REVIEW GUIDELINES, ETC)





**MAP DESIGN**

COORDINATION WITH GIS TO PROVIDE CITY INFORMATION MAPS  
(TOURISM RACK CARD, PARKS & TRAILS MAP, MARINA PARK KIOSK)

**CUSTOM SERVICES**

- PRINT BIDDING
- SCANNING
- PRINTING
- OUTPUT FILES TO PDF UPON REQUEST
- PDF FORM CREATION
- PAPER CUTTING SERVICES (HYDRAULIC CUTTER)

**MAILING**

- POSTCARD DESIGN
- COORDINATION WITH POSTAL SERVICE FOR APPROVAL OF MAILING ARTWORK
- ENSURE DESIGN WILL ALLOW FOR LOWEST POSTAGE RATE
- KEEP UP ON POSTAL REGULATION CHANGES PERTAINING TO ARTWORK

**DOCUMENT SUPPORT**

- PROVIDE TECHNICAL ASSISTANCE TO CUSTOMERS IN MICROSOFT OFFICE PROGRAMS
- PROVIDE TECHNICAL ASSISTANCE IN ACROBAT WORD DOCUMENTS
- OFFICIAL CITY DOCUMENTS
- EXCEL
- FORMS CREATION
- RECORDKEEPING OF CITY DOCUMENTS

**TELEVISION**

- TELEVISION GRAPHIC AND SLIDE PRODUCTION
- IDENTITY AND LOGO DESIGN OF BOTH CHANNELS
- SPONSORSHIP BROCHURES
- CUSTOM ANIMATIONS (FLASH / DREAMWEAVER) FOR PROGRAMMING
- COORDINATION OF CONTENTSERVER SYSTEM AND CITY NETWORK

**CITY COUNCIL NEIGHBORHOOD MEETING**  
What do you want to ask your City Council?

Name:	For City Use: #
E-mail:	Phone:
Address:	Zip:
My question / comment is:	



## Information from Cable Franchise Needs Ascertainment

