2006 GIS Production Operations and Maintenance Plan

(Updated)

Document History

Date	Who	Description
12/13/05	GIS Technical Committee	Document completed and discussed at the GIS Technical Committee meeting.
12/20/05	GIS Technical Committee	GIS Technical Committee consensus vote for submitting document to the GIS Oversight Committee.
12/27/05	Michael Kulish, Chair	Submittal of document to the GIS Oversight Committee.
05/05/06	Michael Berman	Added Airport Chapter Updated Technical Committee Membership Roster

Table of Contents

1 Introduction

This document describes the state of the King County Geographic Information System (KCGIS) program as of December 2005. It represents the culmination of a collaborative effort by personnel throughout the County to delineate the 2006 GIS work programs for participating agencies. GIS is critical to the business of King County, as demonstrated in its use for property appraisal, permit review, emergency services, election services, wastewater facilities planning, natural resource and parks management, waste management, public health, road maintenance, transit services, airport management, crime analysis, policymaking, and growth management. The document provides the details of how GIS supports those and many other business functions.

The year 2006 marks the beginning of the fifth full year of operation of the KCGIS program under its current governance structure. Since the spring of 2001 enterprise GIS functions within King County have been organized under a single point of accountability – the Department of Natural Resources and Parks (DNRP) Director. At that time a coordinated management structure was established to govern enterprise GIS at both a technical and policy oversight level. The result is a streamlined, cost-effective organization for the performance of King County GIS activities.

A key mission of the enterprise GIS function is to generate an annual comprehensive work plan (known as the Production Operations and Maintenance Plan, or O&M Plan). This document is the 2006 edition of that work plan. It builds on the experience of the 2002 -2005 O&M plans. The plan includes information on the five major components of any GIS - hardware, software, data, application and staff. Each of these is addressed in the context of current structures and planned changes for fiscal year 2006. The result is a comprehensive picture that details the King County GIS work program. As in previous years, the 2006 O&M Plan provides lists of data and applications, descriptions of current work tasks, details of agency GIS programs, and information on GIS budgets. This year's plan, a further step in the evolution of the Enterprise GIS, refines the 2005 edition and moves the County closer to the goal of having a dynamic document that serves as both a reference and a tool for strategic technology planning.

A significant change has been made to the format of the document for the 2006 plan. This change will result in a document that is more readable and requires less effort to update in future years. The document is organized in four parts:

- Introduction (this document)
- Organization
- Priority Initiatives
- Agency Work Plans

Four Appendices present supporting information:

- Appendix A – Summary Information
- Appendix B – KCGIS Center Services
- Appendix C – Committees
- Glossary

The Organization section details how GIS efforts are organized within the County. The Priority Initiatives section provides information on the GIS endeavors identified through the work of the governance committees as having significant benefit to the enterprise and hence high priority for accomplishment. Four work tasks covering areas of data coordination and resolving data management issues, GIS software migration, cadastral data modeling, and enhancing our parcel maintenance tools were identified last year. These projects have made good progress and several are near completion. The 2006 O&M Plan will be used in much the same manner to identify and prioritize issues, and address them with

planned actions in 2006 and future years. Specific strengths, weaknesses, challenges and goals lying before the constituent agencies as they implement and manage their GIS programs are identified in the Agency Work Plans section. Appendix A provides a concise and orderly assessment of the agencies' planned changes to staff, budget, licensed software, data, applications, and servers. Appendix B summarizes the KCGIS Center's role and its functions in the enterprise GIS. Descriptive information on the various committees that make up the governance structure is contained in Appendix C – Committees. The Glossary provides a convenient reference for terms (particularly specialized terms) used in the plan.

In January 2006, a list of critical tasks will be distilled from the plan by the Technical Committee and distributed as a separate document. This "2006 O&M Work Task List" will serve as a core working document to identify and track the progress of GIS work program items throughout the year.

KCGIS embodies a rich source of data, a unique set of innovative applications, and a group of highly skilled professionals serving the public's geographic needs. This resource is essential to the diverse business functions of King County, and the 2006 O&M Plan describes it fully. Support from the Executive, management, and staff has provided a solid foundation for KCGIS to continue to grow and provide high-quality, cost-effective, and valued service to the citizens of King County. The annual King County GIS O&M Plan continues to be very much a working document, not a plan to sit on the shelf. The information in this document will be used to continue to refine King County enterprise GIS through cooperation, coordination, communication, and consensus.

Some of the most challenging issues facing the County's enterprise GIS effort include providing GIS support services in the face of budget reductions, coordination of software upgrades to ensure continued inter-department information exchange, the assignment of ownership for ongoing maintenance of core GIS layers, and ensuring that data are maintained to meet the business needs of the County. Facing these concerns directly will only strengthen the County's investment in GIS and the development of the annual O&M Plan serves as a mechanism for proactively addressing these challenges - identifying inter-department coordination issues, potential areas of duplication, and instances where improved communication would enhance the County's GIS investment. We hope that this 2006 plan will serve its users, both in governance and operational roles and hence provide true value to the citizens of King County.

2 Organization

The King County Geographic Information System (KCGIS) is a coordinated program of county agencies working in partnership with the KCGIS Center, the county's provider of enterprise GIS services. The program is organized to be aligned with the County Executive's vision for King County's GIS to be a premier operation in the region.

The Director of the Department of Natural Resources and Parks (DNRP) is the responsible authority designated by the County Executive with accountability for the KCGIS program. Aiding the DNRP director in governance of the program are technical and oversight committees, which include representation from 17 agencies, as well as the KCGIS Center.

The KCGIS program's enterprise operations are housed in the KCGIS Center, which is structured as an internal service fund managed by DNRP. The enterprise operations provided by the KCGIS Center are funded by more than 30 county agencies based on a sophisticated cost allocation model. Details about the funding model can be found at www.metrokc.gov/gis/kb/Content/KCGISCenter_Finances.htm on the KCGIS Center Web site. Business specific GIS services are typically provided by agency GIS units, however when service by an agency GIS unit is not feasible or practical, the KCGIS Center offers GIS client services on a cost reimbursable basis.

The KCGIS program is based on the principle that extensive coordination and collaboration occurs between GIS units in the county. This interaction includes most aspects of GIS from hardware and software, to data and applications, to the analysis and visual representation of information as maps and reports. It is also based on the premise that data are the core asset of the KCGIS program and every effort is made to freely share and systematically improve the county's GIS data.

The sections that follow in this chapter outline the roles and responsibilities of the various participants in the KCGIS program. The chart on the next page provides an illustration of the KCGIS governance structure and relationships of the participants.

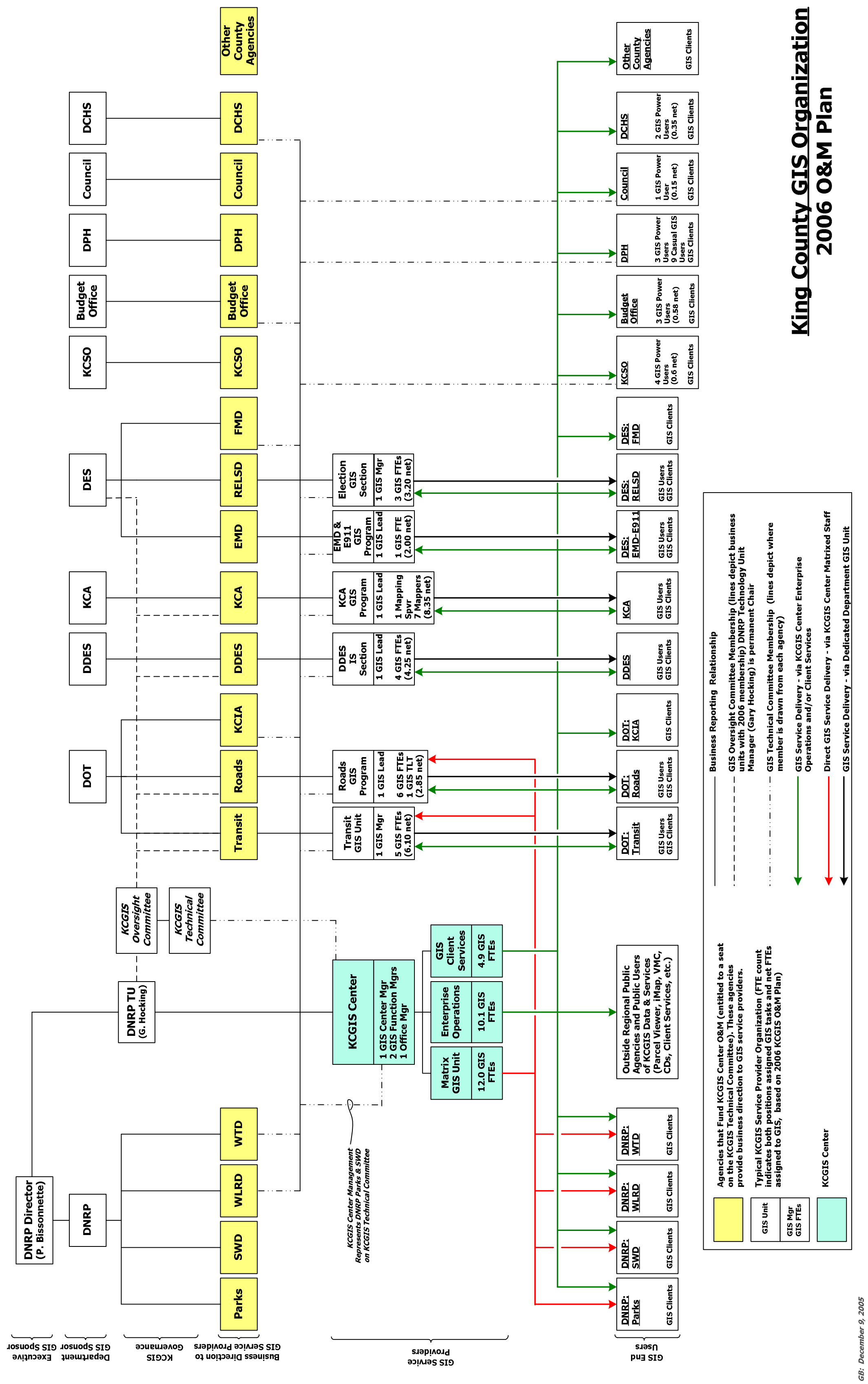
2.1 DNRP Director

The Department of Natural Resources and Parks (DNRP) Director is the executive sponsor of the KCGIS program and is accountable to the County Executive for the overall performance of the program. The DNRP Director has delegated day-to-day oversight of the KCGIS program to the DNRP Technology Unit Manager who also serves as chair of the KCGIS Oversight Committee. The Technology Unit Manager provides regular reports on KCGIS activities and status to the DNRP Director's Office. The DNRP Director has responsibility to decide issues that cannot be resolved by the KCGIS Oversight Committee, to negotiate funding and develop revenues to support the KCGIS program, and to report program progress to the County Executive's Office.

2.2 KCGIS Oversight Committee

The KCGIS Oversight Committee is a chartered committee responsible for setting the direction of the KCGIS program. Committee responsibilities include:

- Review and approve the annual KCGIS Operations and Maintenance Plan.
- Review and approve standards for policy and technical direction as recommended by the KCGIS Technical Committee.
- Address issues regarding enforcement and use of standards and best practices escalated from the KCGIS Technical Committee.
- Provide an annual report on KCGIS work program status to the Technology Management Board.
- Review and approve the annual budget for the KCGIS Center.
- Develop and recommend the cost allocation and funding model for the KCGIS Center.
- Make recommendations to the Technology Management Board as needed.


King County GIS Organization
2006 O&M Plan
Executive GIS Sponsor
Department GIS Sponsor
KCGIS Governance
Business Direction to GIS Service Providers
GIS Service Providers
GIS End Users
DNRP Director (P. Bissonnette)
DNRP
DNRP TU (G. Hocking)
KCGIS Oversight Committee
KCGIS Technical Committee
DOT
DDES
KCA
DES
KCSO
Budget Office
DPH
Council
DCHS
Parks
SWD
WLRD
WTD
Transit
Roads
KCIA
DDES
KCA
EMD
RELSD
FMD
KCSO
Budget Office
DPH
Council
DCHS
Other County Agencies
KCGIS Center Management Represents DNRP Parks & SWD on KCGIS Technical Committee
KCGIS Center
1 GIS Center Mgr
2 GIS Function Mgrs
1 Office Mgr
Matrix GIS Unit
12.0 GIS FTEs
Enterprise Operations
10.1 GIS FTEs
GIS Client Services
4.9 GIS FTEs
Transit GIS Unit
1 GIS Mgr
5 GIS FTEs (6.10 net)
Roads GIS Program
1 GIS Lead
6 GIS FTEs
1 GIS TLT
(2.85 net)
DDES IS Section
1 GIS Lead
4 GIS FTEs (4.25 net)
KCA GIS Program
1 GIS Lead
1 Mapping Spvr
7 Mappers
(8.35 net)
EMD & E911 GIS Program
1 GIS Lead
1 GIS FTE (2.00 net)
Election GIS Section
1 GIS Mgr
3 GIS FTEs (3.20 net)
DNRP: Parks
GIS Clients
DNRP: SWD
GIS Clients
DNRP: WLRD
GIS Clients
DNRP: WTD
GIS Clients
Outside Regional Public Agencies and Public Users of KCGIS Data & Services (Parcel Viewer, iMap, VMC, CDs, Client Services, etc.)
DOT: Transit
GIS Users
GIS Clients
DOT: Roads
GIS Users
GIS Clients
DOT: KCIA
GIS Clients
DDES
GIS Users
GIS Clients
KCA
GIS Users
GIS Clients
DES: EMD-E911
GIS Users
GIS Clients
DES: RELSD
GIS Users
GIS Clients
DES: FMD
GIS Clients
KCSO
4 GIS Power Users (0.6 net)
GIS Clients
Budget Office
3 GIS Power Users (0.58 net)
GIS Clients
DPH
3 GIS Power Users
9 Casual GIS Users
GIS Clients
Council
1 GIS Power User (0.15 net)
GIS Clients
DCHS
2 GIS Power Users (0.35 net)
GIS Clients
Other County Agencies
GIS Clients
Agencies that Fund KCGIS Center O&M (entitled to a seat on the KCGIS Technical Committee). These agencies provide business direction to GIS service providers.
GIS Unit
GIS Mgr
GIS FTEs
Typical KCGIS Service Provider Organization (FTE count indicates both positions assigned GIS tasks and net FTEs assigned to GIS, based on 2006 KCGIS O&M Plan)
KCGIS Center
Business Reporting Relationship
GIS Oversight Committee Membership (lines depict business units with 2006 membership) DNRP Technology Unit Manager (Gary Hocking) is permanent Chair
GIS Technical Committee Membership (lines depict where member is drawn from each agency)
GIS Service Delivery - via KCGIS Center Enterprise Operations and/or Client Services
Direct GIS Service Delivery - via KCGIS Center Matrixed Staff
GIS Service Delivery - via Dedicated Department GIS Unit
GB: December 9, 2005

- Resolve issues escalated from the KCGIS Technical Committee.

KCGIS Oversight Committee membership consists of a single representative from each of the following agencies: Department of Natural Resources and Parks, Department of Transportation – Road Services Division, Department of Transportation – Transit Division, Department of Development and Environmental Services, and Department of Assessments. Members of the KCGIS Oversight Committee representing these agencies have the option to appoint one temporary member for a one-year term from other agencies or programmatic areas that have significant involvement in GIS. For 2006 the KCGIS Oversight Committee has designated the Department of Executive Services to fill the temporary seat. Members of the KCGIS Oversight Committee must have authority for budget approval and policy decisions of GIS programs within their agency. Members of the KCGIS Oversight Committee may not serve on the KCGIS Technical Committee at the same time. The DNRP Technology Unit Manager, serves as the DNRP representative and permanent chair of the KCGIS Oversight Committee. Issues that cannot be resolved by the KCGIS Oversight Committee are escalated to the DNRP Director for a decision. The KCGIS Oversight Committee is required to meet at least once per quarter.

The KCGIS Oversight Committee charter and 2005 and 2006 committee member listings can be found in Appendix C.

2.3 KCGIS Technical Committee

The KCGIS Technical Committee is a chartered committee accountable to the KCGIS Oversight Committee. Responsibilities of the KCGIS Technical Committee include:

- Coordinate KCGIS Center and agency GIS unit work programs and develop an annual KCGIS Operations and Maintenance Plan for review and approval by the KCGIS Oversight Committee.
- Recommend policy for GIS technology to the KCGIS Oversight Committee.
- Monitor the use of approved GIS standards and best practices and escalate enforcement issues to the KCGIS Oversight Committee.
- Inventory existing GIS data and applications and coordinate data and application development efforts.
- Provide a forum for discussion of GIS technical issues and address programmatic issues.
- Educate agencies about the value GIS will add to business practices.Develop and recommend GIS standards and best practices for the KCGIS program to the KCGIS Oversight Committee.
- Prepare quarterly reports on the status of the KCGIS program.

Membership in the KCGIS Technical Committee is based on the presence of a GIS work program within an agency. Presence of a work program is defined as an agency owning at least one license to run desktop GIS software. Each agency with a discrete GIS work program is granted one seat on the committee. This chart lists the 17 agencies eligible for representation on the committee in 2006. One additional seat on the committee is allocated to the KCGIS Center.

Assessments	DES-E911 Program	DOT-Airport
Budget Office	DDES	DOT-Road Services
Council	DNRP-Parks and Recreation	DOT-Transit
DCHS	DNRP-SWD	Public Health
DES-Facilities Management	DNRP-WTD	Sheriff's Office
DES-REALS	DNRP-WLRD	KCGIS Center

The membership of the KCGIS Technical Committee is reviewed and updated annually. A responsible authority within each participant agency appoints the KCGIS Technical Committee member. Committee members may not serve on both the KCGIS Technical Committee and the KCGIS Oversight Committee simultaneously. The KCGIS Technical Committee elects a chair and vice chair annually. Issues that cannot be resolved by the KCGIS Technical Committee are escalated to the KCGIS Oversight Committee. The KCGIS Technical Committee is required to meet at least once per month.

At its discretion the KCGIS Technical Committee may create work groups for detailed analysis of significant organizational and technical issues. The KCGIS Technical Committee currently has three active work groups (GIS Software Migration, which has several sub-groups, Digital Imagery, and Operations and Maintenance). Details about these groups can be found in Appendix C. Participation in work groups is not restricted to members of the KCGIS Technical Committee. The work groups are created to accomplish a set of objectives and the KCGIS Technical Committee reorganizes or disbands the work groups as needed.

The KCGIS Technical Committee charter and the 2005 and 2006 committee membership can be found in Appendix C.

2.4 Agencies

All aspects of the KCGIS program are addressed through the consolidated governance structure of the technical and oversight committees, and are resolved by active agency participation. Agency GIS programs work together formally via the KCGIS Technical Committee, and informally via user groups, work groups, and ad hoc committees. An agency's responsibilities to the KCGIS program include:

- Develop and submit an annual work plan for review and inclusion in the KCGIS Operations and Maintenance Plan.
- Develop and maintain GIS data necessary to support agency business needs, and when compatible, the needs of other data stakeholders.
- Articulate agency GIS business needs to the KCGIS community.
- Comply with GIS standards and best practices approved by the KCGIS Oversight Committee.
- Ensure all agency data appropriate for sharing is integrated into the KCGIS Spatial Data Warehouse (SDW).
- Actively seek opportunities for cross-agency collaboration on data and application projects.
- Ensure data development and data maintenance tasks are quality controlled and are completed on schedule.
- Ensure agency GIS personnel maintain sufficient levels of professional expertise.
- Work cooperatively in support of the regional KCGIS services vision.
- Actively participate on KCGIS committees and work groups.

2.5 KCGIS Center

The KCGIS Center provides enterprise services for the KCGIS program, fee-based client services to internal and external customers, and via a matrixed staffing system delivers agency specific GIS services to DOT, DNRP, and other agencies on request. The KCGIS Center work program is developed under the guidance of the KCGIS governance committees. The mechanism to accomplish this is the annual Operations and Maintenance (O&M) Plan that is developed by the KCGIS Technical Committee and approved by the KCGIS Oversight Committee.

Responsibilities of the KCGIS Center include:

- Provide a single point of contact via the client services manager for access to KCGIS services.
- Manage the KCGIS Spatial Data Warehouse.

- Provide database coordination services to ensure that KCGIS data development and data maintenance activities are rationalized.
- Set up and manage data acquisition and data sharing agreements and coordinate response to external data requests.
- Provide public access to GIS data.
- Facilitate integration of quality controlled agency data into the KCGIS Spatial Data Warehouse.
- Coordinate with agency GIS programs to ensure that data maintenance occurs on schedule.
- Comply with the GIS standards and best practices approved by the KCGIS Oversight Committee.
- Provide tools for developing, maintaining, and accessing KCGIS metadata.
- Actively participate on KCGIS committees.
- Market regional GIS services in coordination with King County agencies.
- Provide contract administration for GIS software and consultant services.
- Provide professional and end-user GIS training services.
- Provide GIS expertise to agencies as requested.
- Report data maintenance problems to the KCGIS Technical Committee.
- Coordinate the evaluation of technical options with agency GIS programs and the KCGIS Technical Committee.
- Implement and maintain the architectural and system standards approved by the KCGIS Oversight Committee.
- Maintain a common application development environment.

2.6 KCGIS Budget and Funding

This section presents two tables that provide an overview of budgets and funding mechanisms for the KCGIS program.

This table outlines the approved 2006 budgeted funding for operation of the KCGIS Center. It shows each agency's contribution to the O&M funding model, as well as each agency's projected budget for fee-based client services. Also included are the allocations to fund the Matrix GIS Staff Unit that provides dedicated KCGIS Center staff to work programs in DNRP and DOT.

KCGIS Center 2006 Budget and Revenue Allocations					
	GIS Center (Cost Center 3181M)			Matrix GIS Staff Unit (Cost Center 3182M)	TOTAL GIS Center Budget (55026)[2]
Agency Name (LowOrg)[1]	O&M Funding Model	Budgeted Client Services	Total GIS Center		
Department of Assessments (1599)	109,812	24,715	134,527		134,527
DAJD: Adult (7217)	21,937	0	21,937		21,937
DAJD: Juvenile (7546)	3,872	0	3,872		3,872
DCHS (6531)	57,489	18,537	76,026		76,026
DDES (3419)	186,319	5,879	192,198		192,198
DES: Administration (1501)	19,404	0	19,404		19,404
DES: EMD: RECC (2991)	4,243	12,359	16,601		16,601

KCGIS Center 2006 Budget and Revenue Allocations					
	GIS Center (Cost Center 3181M)			Matrix GIS Staff Unit (Cost Center 3182M)	TOTAL GIS Center Budget (55026)[2]
Agency Name (LowOrg)[1]	O&M Funding Model	Budgeted Client Services	Total GIS Center		
DES: EMD: E911 (7543)	195,840	11,768	207,608		207,608
DES: Finance (4801)	1,332	0	1,332		1,332
DES: HR (1485)	761	0	761		761
DES: HR: Safety & Claims (7043)	328	0	328		328
DES: HR: Benefits: HRIS (3050M)	83	0	83		83
DES: ITS (2542M)	1,006	5,885	6,891		6,891
DES: I-Net (4901)	0	2,943	2,943		2,943
DES: Records O & M (1440)	1,303	0	1,303		1,303
DES: Records & Elections (7250)	45,555	6,177	51,732		51,732
DES: FMD (1519)	49,918	18,538	68,455		68,455
DES: FMD (Project 377133)	0	133,152	133,152		133,152
DNRP: Director's Office (3110)	19,527	0	19,527		19,527
DNRP: WTD (7200)	144,996	35,310	180,306	442,514	622,820
DNRP: WLRD (3814)	183,864	0	183,864	467,308	651,172
DNRP: Parks Division (8703)	45,936	23,999	69,935	111,193	181,128
DNRP: SWD (1454)	62,144	0	62,144	111,467	173,611
DPH (Dept: 0800; LowOrg: TBD)	63,370	10,918	74,288		74,288
DPH: EMS (1190)	19,804	3,792	23,596		23,596
DOT: Director's Office (5011M)	19,093		19,093		19,093
DOT: Roads (1665)	146,362	0	146,362	121,871	268,233
DOT: Transit (5130M)	177,987	0	177,987	123,772	301,759
DOT: Airport (1765)	37,038	19,181	56,219		56,219
DOT: Fleet (TBD)	19		19		19
Sheriff's Office (1933)	44,303	0	44,303		44,303
County Council (1041)	39,644	15,447	55,091		55,091
Budget Office (1063)	38,884	24,715	63,599		63,599
Prosecuting Attorney's Office (5028)	2,111	18,538	20,694		20,694
Boundary Review Board (1596)	0	9,269	9,269		9,269
Judicial Administration (1565)	1,071	0	1,071		1,071
Superior Court (4041)	1,156	0	1,156		1,156
District Court (1593)	70	0	70		70
Contingent Billing to KC Agencies	0	88,513	88,513		88,513
Billings to Agencies Outside KC	0	144,416	144,416		144,146
Total:	1,746,581	634,049	2,380,631	1,378,125	3,758,755

Table Notes:

1. The LowOrgs, Cost Centers, or projects indicated are those that the Budget Office reported for KCGIS Center funding for 2006 budget expenses.
2. Agency GIS expense budgets are generally found in account 55026.

This table provides a comprehensive view of how GIS services are typically provided to each county agency by the KCGIS Center, the agency GIS units, and by outside vendors, along with the funding mechanisms for obtaining those services.

2006 King County GIS Services Funding Mechanism Summary:					
GIS Service Recipients:	**GIS Service Providers:**				
	KCGIS Center Costs			**Agency GIS Unit[4]**	**Outside Vendors[5]**
	O&M[1]	**Client Service[2]**	**Matrix Staff[3]**		
Department of Assessments	Fixed periodic I/F Transfer	Service specific I/F transfer		Budgeted & paid internally	Billed to fund
DAJD: Adult	Fixed periodic I/F Transfer				Billed to fund
DAJD: Juvenile	Fixed periodic I/F Transfer				Billed to fund
DCHS	Fixed periodic I/F Transfer	Service specific I/F transfer			Billed to fund
DDES	Fixed periodic I/F Transfer	Service specific I/F transfer		Budgeted & paid internally	Billed to fund
DES: Administration	Fixed periodic I/F Transfer				Billed to fund
DES: EMD: RECC	Fixed periodic I/F Transfer	Service specific I/F transfer			Billed to fund
DES: EMD: E911	Fixed periodic I/F Transfer	Service specific I/F transfer		Budgeted & paid internally	Billed to fund
DES: Finance	Fixed periodic I/F Transfer				Billed to fund
DES: HR	Fixed periodic I/F Transfer				Billed to fund
DES: HR: Safety & Claims	Fixed periodic I/F Transfer				Billed to fund
DES: HR: Benefits: HRIS	Fixed periodic I/F Transfer				Billed to fund
DES: ITS	Fixed periodic I/F Transfer	Service specific I/F transfer			Billed to fund
DES: I-Net		Service specific I/F transfer			Billed to fund
DES: Records O & M	Fixed periodic I/F Transfer				Billed to fund
DES: Records & Elections	Fixed periodic I/F Transfer	Service specific I/F transfer		Budgeted & paid internally	Billed to fund
DES: Facilities Management Div	Fixed periodic I/F Transfer	Service specific I/F transfer			Billed to fund

2006 King County GIS Services Funding Mechanism Summary:					
GIS Service Recipients:	**GIS Service Providers:**				
	KCGIS Center Costs			**Agency GIS Unit[4]**	**Outside Vendors[5]**
	O&M[1]	**Client Service[2]**	**Matrix Staff[3]**		
DNRP: Director's Office	Fixed periodic I/F Transfer				Billed to fund
DNRP: WTD	Fixed periodic I/F Transfer	Service specific I/F transfer	Fixed periodic I/F Transfer		Billed to fund
DNRP: WLRD	Fixed periodic I/F Transfer		Fixed periodic I/F Transfer		Billed to fund
DNRP: Parks Division	Fixed periodic I/F Transfer	Service specific I/F transfer	Fixed periodic I/F Transfer		Billed to fund
DNRP: SWD	Fixed periodic I/F Transfer		Fixed periodic I/F Transfer		Billed to fund
DPH	Fixed periodic I/F Transfer	Service specific I/F transfer			Billed to fund
DPH: EMS	Fixed periodic I/F Transfer	Service specific I/F transfer			Billed to fund
DOT: Director's Office	Fixed periodic I/F Transfer				
DOT: Roads	Fixed periodic I/F Transfer		Fixed periodic I/F Transfer	Budgeted & paid internally	Billed to fund
DOT: Transit	Fixed periodic I/F Transfer		Fixed periodic I/F Transfer	Budgeted & paid internally	Billed to fund
DOT: Airport	Fixed periodic I/F Transfer	Service specific I/F transfer			Billed to fund
DOT: Fleet	Fixed periodic I/F Transfer				
Sheriff's Office	Fixed periodic I/F Transfer				Billed to fund
County Council	Fixed periodic I/F Transfer	Service specific I/F transfer			Billed to fund
Budget Office	Fixed periodic I/F Transfer	Service specific I/F transfer			Billed to fund
Prosecuting Attorney's Office	Fixed periodic I/F Transfer	Service specific I/F transfer			Billed to fund
Boundary Review Board		Service specific I/F transfer			Billed to fund
Judicial Administration	Fixed periodic I/F Transfer				Billed to fund
Superior Court	Fixed periodic I/F Transfer				Billed to fund
District Court	Fixed periodic I/F Transfer				Billed to fund
Outside Agencies	Future – TBD	Billed to agency	Future - TBD		

Table Notes:

1. KCGIS Center O&M expenses are 'fixed costs' funded by agencies on a share model basis determined annually. The share model is developed by the KCGIS Center and reviewed and approved by the KCGIS Oversight Committee (subject to normal county budget development procedures). O&M costs are billed via AIRS form to agencies by the KCGIS Center at the beginning of the year and paid automatically on a fixed periodic basis.
2. KCGIS Center Client Services costs are provided on a 'full cost reimbursement basis', billed to agencies as work is completed. Agencies can also prepay for client services to allow budgeted funds to be used in the coming year. Most client services are billed by the hour. KCGIS data disks are sold for a fixed unit price and GIS training is provided on a per seat cost basis for each class. Client services are generally billed to King County agencies via individual interfund transfers. Outside agencies are billed via invoice and pay by check.
3. KCGIS Center Matrix GIS Staff Unit operations are funded on the basis of 'negotiated annual level of service costs' allocated to six divisions in DNRP and DOT that receive services. Matrix GIS staff costs are billed via AIRS form to agencies by the KCGIS Center at the beginning of the year and paid automatically on a fixed periodic basis.
4. Agency GIS Unit costs are budgeted internally for those agencies that maintain their own separate GIS service operations.
5. Costs for outside GIS consultants and vendors are billed directly to the appropriate fund. Such costs may include GIS software and hardware purchase and maintenance, specialized GIS-based applications (e.g. E-911, Sheriff), GIS data acquisition or development, GIS consultant or training services, or custom GIS application development.

3 KCGIS Priority Work Initiatives

In the course of its efforts to formulate the annual GIS O&M plan the KCGIS Technical Committee identifies priority work initiatives to pursue in the upcoming year and beyond. The priority initiatives described here represent both a continuation of efforts begun in earlier years, and new work that has recently become a focus of interest at the KCGIS Technical Committee.

The Technical Committee recognizes the county's budget constraints and concentrates on developing work initiatives that require little or no additional budgetary resources. The bulk of the work on these initiatives is accomplished using existing KCGIS Center O&M staff resources that are dedicated to support the priority work. For 2006 the support level from the KCGIS Center is approximately 3.0 FTE. An important factor in successful completion of the priority work initiatives is contribution from staff in the agency GIS units. As representatives of the agencies Technical Committee members have acknowledged a willingness to provide reasonable levels of staff support to ensure objectives of the priority work initiatives are met.

The work initiatives are managed by the KCGIS Center. Regular and periodic project reporting to the Technical Committee is required. Project status is summarized and provided to the Oversight Committee in a quarterly report.

1. **ArcGIS Software Migration and Implementation**
   Background: 2006 will mark completion of the GIS software migration from legacy ArcInfo 7.x to ArcGIS 9.x for the King County GIS enterprise operation. The software migration plan developed in 2004 is a comprehensive description of software migration issues and outlines key steps for implementation. See the full plan at www.metrokc.gov/gis/kb/Content/SoftMigration.htm on the KCGIS Center website.
   Objective: Software migration work in 2006 will primarily focus on four objectives. One, development of enterprise applications to support GIS data stewards and GIS users in the ArcGIS 9.x environment. Two, migration of legacy coverage data to geodatabase. Three, implementation of training curriculum to support users of ArcGIS. Four, investigation into ESRI software license consolidation and implementation of a recommended solution.

2. **GIS Data Management Issue Resolution**
   GIS Data Layer Issue Resolution
   Background: The GIS data coordination function is an ongoing effort to improve the content and quality of the data held in the KCGIS Spatial Data Warehouse and provides a mechanism for rationalizing data development and maintenance across the KCGIS program. Resolution of specific data layer content and maintenance issues will be pursued as a priority initiative in 2006.
   Objective: GIS data layers to be addressed in 2006 include:

   - ***Hydrography*** – Continue development of new hydrography layers based on LiDAR elevation data and 2002 aerial photography, supplemented by best-available data from other known sources. This project will be completed with staffing from the KCGIS Center and WLRD. Three new data layers will be generated to replace existing layers (WTRBDY – water body boundaries, WTRCRS – stream courses, and DRNBASIN – drainage basin boundaries). These layers will be designed to support important attribute databases developed independently but closely linked to hydrography features. This effort will also include determination of data maintenance rules to reduce the number of redundant water feature layers currently available.
   - ***City Boundary*** – Continue development of a consolidated city boundary layer, which includes delineation of jurisdictional boundaries into adjacent water bodies. This new layer will merge disparate city boundary maintenance regimes into a single design, and will enable law enforcement and other public safety entities to determine jurisdiction over incidents that occur in navigable waters.
   - ***Points of Interest*** – Prototype development of a common data model and layer for all points-of-interest data currently maintained or used in the county. This data model and the

associated workflow will be designed to provide the necessary data currency and integrity that meets multiple agency business needs, and as with the other data projects creates a single multi-purpose layer.

3. **Cadastral Data Redesign**
   Background: Adoption of new GIS data models and database management capabilities by ESRI, and the abandonment by the company of support for their legacy data management tools, provide the requirement and the opportunity for implementation of a new cadastral data model for King County. The current cadastral model (RECDNET) has several design limitations that make data maintenance problematic and hinder the building of reliable topological relationships across data layers, which in turn restricts the types of data analysis that can be performed. The new data model currently under development will be designed to overcome previous limitations and is based on ESRI geodatabase technology.
   Objective: Working in collaboration the KCGIS Center and the Department of Assessments will complete development of a cadastral geodatabase model, and the migration of the coverage (RECDNET) cadastral data to the model by the end of 2006. The redesigned cadastral model will meet the business requirements of Assessments, as well as the data analysis requirements of parcel data users. Testing of the third pilot data set (consisting of the southwest portion of King County) will continue into the first quarter of 2006. Pilot tests will focus on data conversion scenarios, data editing workflows, final adjustments to the cadastral data model, and benchmarking system performance with large databases. Data conversion will commence during the second quarter of 2006 and continue to year end. As geographic portions of the county are converted maintenance will commence in geodatabase and will cease for coverage data for those areas.

4. **Collaborative Cadastral Data Maintenance Feasibility Study**
   Background: Several cities, as well as King County, are actively engaged in maintaining parcel data layers to support many of their core business services. As of now, there is little or no coordination of effort, and there is much duplication of effort to maintain this information. Maintained parcel datasets are discrete, non-standard, and overlap with the county's data or adjacent cities. The result is inefficiencies in developing, maintaining and using these valuable data resources. In addition there is no comprehensive understanding of the parcel mapping activities that are underway. Given the importance of parcel mapping for effective delivery of local government services, there should be consideration of creating a regional model for collaborative maintenance of a single parcel data set.
   Objective: The KCGIS Center will complete a feasibility study for cross jurisdictional collaborative maintenance of parcel data for King County by investigating the current status of cadastral mapping efforts. This will be done through a survey and interview process with the cities currently engaged in parcel mapping activity. From these interviews a set of recommendations for a path leading to collaborative maintenance will be developed. The interview process will be completed in early 2006 and the recommendations reported to the KCGIS Technical Committee during the first quarter.

5. **GIS Application Development Coordination**
   Background: Application development efforts are pursued within the GIS programs of several county agencies at varying intensities. As with jointly maintained data layers, applications would benefit from closer cross-agency coordination facilitating peer review, joint development efforts, coding and technology standards, and sharing of application requirements. Examples include Web mapping applications, ArcView and ArcMap data access and mapping applications, utilities for ArcGIS geocoding, and data maintenance and editing tools.
   Objective: This initiative will put in place the appropriate management oversight structure and technology tools that would facilitate cross-agency application development and collaboration. The KCGIS Center will assist in coordinating the effort and setting up the infrastructure including collaboration tools for developers.

6. **Authoritative Address Layer Creation**
   Background: Several county agencies maintain address information as an important dataset supporting their core business needs. Verifying addresses and keeping up with address changes is a time consuming and error prone task. This task is made more difficult because agencies lack an authoritative reference source for addressing data. The E-911 GPS addressing project, due to be

completed by the end of 2006, will result in the most complete and accurate accounting of addresses in King County to date. This new dataset can provide the building block for creating an authoritative address layer which will serve the needs of multiple county agencies. There is also the opportunity to determine and implement a set of best practices to streamline the update of addressing data, replacing the often archaic processes that are currently used.
Objective: The KCGIS Center in partnership with county agencies will study the needs of agencies maintaining addressing information, develop recommendations, and implement a methodology to create and maintain an authoritative addressing layer.

7. **Cadastral Accuracy Improvements**
Background: The positional accuracy of King County's parcel data varies. Some areas are of obviously poor quality and need improvement to align with more accurate layers collected by GPS or survey methods.
Objective: The KCGIS Center and the Department of Assessments will work together to determine measures for assessing positional accuracy improvements and acceptable outcomes from positional adjustments. A pilot study will be conducted based on the Wastewater Treatment Division's proposal for positional improvements targeted to selected geographic areas to better align parcel data to storm and sewer drainage systems data.

8. **Digital Aerial Imagery Acquisition Strategy**
Background: High resolution digital aerial imagery is widely used by King County agencies. The most recent set of countywide imagery was acquired by the county in 2002. While a Roads Maintenance Division grant proposal to acquire imagery in 2006 is pending with the Department of Homeland Security, the county has no coordinated or long-term strategy to obtain such imagery on a regular, recurring basis.
Objective: The Digital Imagery Working Group will develop a long-term acquisition and coordination strategy for aerial imagery that meets the planning and engineering level requirements of county agencies. The working group will determine future imagery needs, develop a business case to support acquisition, research acquisition solutions, coordinate with internal and external agencies as needed, and recommend a funding mechanism. The working group will generate a final report for the GIS Oversight Committee outlining the acquisition strategy and the proposed funding scheme.

4 Work Plan

Chapter 4 of the 2006 GIS O&M Plan provides details of the GIS work plans for the KCGIS Center and the KCGIS Technical Committee member agencies. Each agency work plan is described separately in this chapter using the same outline progression to standardize the work plan descriptions and to ease comparison across agencies.

Work plan descriptions are introduced with background information to clarify the purpose and objectives of the agency's GIS program, and to broadly describe how GIS activities within the agency are coordinated and managed. This introductory section also includes description of the agency's mission, primary business responsibilities, and GIS business strategy. The discussion provides detail about the strategies employed by the agency to deliver GIS services to various business functions, with an emphasis on the opportunities and challenges related to providing GIS services, cross-agency issues and dependencies, long-range goals and initiatives, and the role of the agency in the wider scope of the KCGIS program. The rest of each agency section is focused on planned activity for the year including projects, data and application development or enhancement, and changes to hardware, software, database, licensing, or staffing.

Each agency program is presented as a separate subsection of this chapter, and programs within the same department occur sequentially. Due to its unique status as the enterprise GIS unit, the KCGIS Center is presented first and is not grouped with the other GIS programs in its parent department (DNRP).

4.1 King County GIS Center

4.1.1 Agency GIS Overview, Priorities, and Goals

- The King County GIS Center's mission is to deliver efficient, high-quality GIS technology solutions to King County agencies, the public, and our regional partners, in order to meet the business needs of King County and the communities we serve. To carry out this mission the KCGIS Center works with the KCGIS governance committees, and King County departments and their GIS programs to provide enterprise GIS services, on-demand GIS client services, and matrix GIS staff services. In delivering these services the KCGIS Center strives to provide information technologies that are accurate, consistent, accessible, affordable, and comprehensive.
- The KCGIS Center is an internal service fund administratively located within the Technology Unit of the Director's Office of the Department of Natural Resources and Parks (DNRP). The DNRP Technology Unit Manager monitors operation of the KCGIS Center and serves as permanent chair of the KCGIS Oversight Committee. The KCGIS Center Manager handles daily operation and strategic direction of the KCGIS Center and is a member of the KCGIS Technical Committee. The KCGIS Center Manager reports to the DNRP Technology Unit Manager.
- The KCGIS Center includes 31 staff positions organized into three business units; Enterprise Operations, Client Services, and Matrix Staff Services. The overall staffing level for 2006 is unchanged from 2005; however the budgeted FTE allocations for each of the three business units change for 2006. For details of these staffing changes see Section 4.1.4 of this document.
- ***Enterprise Operations –*** The Enterprise Operations Unit provides a range of management, administrative, and technical services to support the KCGIS program. These services in 2006 are supported by 12.60 FTEs. Staff members serving the Enterprise Operations Unit are divided into two functional lines of business: administrative and technical. The administrative functions of Enterprise Operations Unit are primarily carried out by the KCGIS Center Manager, the Marketing & Finance Manager, the Enterprise Services Manager, and the Office Manager. Administrative services provided by this group include staff management, program development and planning, budgeting, financial control, marketing, administrative and clerical support, enterprise coordination, contract management, and external data acquisition. The financial services include management of the KCGIS internal service fund, annual budget development in accordance with the KCGIS governance structure, billing for annual cost allocation shares, financial expenditure controls, and financial reporting. The marketing efforts promote the use of KCGIS products and services and further the County Executive's vision of the KCGIS Center as a regional service provider to local municipalities, utilities, and other public and private agencies. The technical functions of the Enterprise Operations Unit are provided by GIS analysts and project managers and cover a broad spectrum including enterprise data coordination, spatial data warehousing, RDBMS administration, Web site management, application development, system administration, and infrastructure management. Other services of this group include administration and publishing of GIS metadata, verification of data posted to the KCGIS Spatial Data Warehouse to ensure compliance with database formats and standards, and data integration and quality control for the cadastral base framework maintenance process. The KCGIS Center Manager oversees day-to-day operation of the Enterprise Operations Unit and directs long-term and strategic planning. The DNRP Technology Unit Manager provides input on strategic and technical direction for the Enterprise Operations Unit and participates in determining work assignments and duties for the system administrator and office manager functions.
- ***Client Services –*** The Client Services Unit offers a full spectrum of on-demand GIS consulting and project services on a cost-reimbursable basis to King County business units and to external customers such as local agencies, cities, and citizens. The Client Services Manager supervises the unit and coordinates service delivery. For 2006 the Client Services Unit has an allocation of 5.65 FTEs. The hourly charge rate in 2006 will be $76 for GIS analyst services, and $64 for technician level services. One of the keys to offering a broad range of client services and to successful management of client services projects is the KCGIS Center's matrix staffing

structure. This structure allows the Client Services Manager to draw upon the highly-specialized skills of staff in the Enterprise Operations Unit and the Matrix Staff Services Unit on an as-needed basis. For additional details on the services provided by the Client Services Unit see Appendix B: KCGIS Center Services.

- ***Matrix Staff Services –*** The Matrix Staff Services Unit has an allocation of 12.75 FTEs in 2006. This unit is operated using a matrix staffing structure and will serve six divisions in two departments. Program managers are assigned to oversee each division's work program. The program managers operate as peers and coordinate support for their programs by pulling from a pool of KCGIS Center staff resources. Matrix Staff Services Unit personnel are generally assigned to a division and work with a specific program manager for most or all of their projects. However, the matrix structure allows program managers to share the pooled resources to optimize response to project demands. Due to the complexity of the GIS programs in certain divisions, separate program managers are assigned for the Wastewater Treatment Division, the Water and Land Resources Division, and the Transit Division. The managers for these three programs are employees of their respective divisions and are not funded as KCGIS Center staff. The KCGIS Center participation in the work programs for the Parks and Recreation Division, the Solid Waste Division, and the Road Services Division are lesser in scale and program managers within the KCGIS Center oversee the matrixed GIS resources for these three divisions. The KCGIS Center Manager operates as administrative manager for the Matrix Staff Services Unit. As such the KCGIS Center Manager is responsible for supplying and maintaining the matrix resource (namely the GIS staff). Specific duties of the administrative manager include establishing the technical and quality standards for the GIS services, ensuring matrix personnel have the necessary training and resources to perform quality work, and balancing staff allocations across the divisions to meet work plan requirements. The GIS program managers from DNRP and DOT have responsibility to develop and execute their respective division work plans, and coordinate with the KCGIS Center Manager to obtain the appropriate GIS staff resources to meet their program objectives.

4.1.2 Planned Project Activity and New Projects

Name	**GIS Software Migration – Project Management**
Description	2006 will see continuation of the software migration from legacy ESRI technologies to the ArcGIS 9.x environment across the King County enterprise. Applications, data, and processes that were developed and are used in the ArcInfo 7.x environment are becoming increasingly obsolete. The software migration plan developed in 2003 is a comprehensive description of the software transition issues including needs and expectations of KCGIS users, experiences of peer agencies, staff training, data migration options, changes to business practices, and migration milestones. Work on migration tasks and issues began in early 2004 and continued through 2005. In 2006 the KCGIS Center will again commit project management resources to oversee the subgroups tasked with implementation and completion of the software migration plan. Projects for these subgroups are detailed below (see Software Migration – Licensing, Software Migration – Training Curriculum, Software Migration – Metadata Enhancement and Update, and Software Migration – ACDC).
Interdependencies	This is an enterprise-wide initiative, and relies heavily on the continued participation of KCGIS agencies in the various subgroups tasked with completing portions of the migration plan.
Status	In progress.
Target	End of 2006 for everything but completion of the training curriculum.

Activity	▪ Oversee task completion for various subgroups and individuals tasked to software migration. ▪ Report project status to KCGIS Technical Committee.

Name	**GIS Software Migration – Licensing**
Description	This is a subproject of the GIS Software Migration, and is handled by the Software Licensing subgroup. Goals of this project include: ▪ Determine the efficacy of pooling ESRI software licenses into a single license manager. ▪ Monitor license usage to measure adequacy of existing licenses to meet needs of agencies in a consolidated license environment. ▪ Determine the most cost-saving and efficient licensing scenario and implement it.
Interdependencies	Consensus of KCGIS agencies to proceed with pooled licensing concept and acceptance of subgroup recommendations. Negotiated arrangements with ESRI regarding redundant license files, evaluation licenses, and ESRI technical support access.
Status	In progress.
Target	Q1 2006
Activity	▪ Identify license manager hardware including failsafe. ▪ Configure master King County license manager and failsafe. ▪ Implement master King County license and failsafe. ▪ Implement regular reporting to Technical Committee on license usage.

Name	**GIS Software Migration – Training Curriculum**
Description	This is a subproject of the GIS Software Migration and is handled by the GIS Training subgroup. Goals of this project include: ▪ Develop training curricula for each of the defined GIS user categories. ▪ Implement the training curriculum by developing the identified custom classes necessary to train data stewards and GIS users for a successful migration to ArcGIS.
Interdependencies	Active participation and commitment by knowledgeable GIS staff with needed expertise to help with course development.
Status	In progress.
Target	Complete development of approximately four classes per quarter through end of 2007.

Activity	▪ Complete annual update of training plan in February and submit to KCGIS Technical Committee. ▪ Wrap up development of first round of four classes and integrate into training calendar. ▪ Begin development of second round of four classes and complete by Q2 2006. ▪ Continue iterations of course development until all courses in curriculum are completed.

Name	**GIS Software Migration – Metadata Enhancement and Update**
Description	This is a subproject of the GIS Software Migration and builds on existing minimum level (Tier 1) metadata which was completed as part of the layer review completed in 2005. Greater levels of metadata detail (referred to as Tier 2 and Tier 3) will be completed in 2006 through joint efforts of the KCGIS Center and the data steward agencies to bring all metadata up to FGDC compliance. This project will result in complete and accurate metadata serving as detailed layer descriptions for data development and enhancement work, internal and external data searches, and effective use of data in analyses and cartographic applications, and will support the migration of existing Spatial Data Catalog (SDC) content to XML format.
Interdependencies	Data steward participation and involvement will be critical to success and timely completion. New application development will be required to host XML-based metadata on the SDC in a revised KCGIS style sheet format. An ongoing process with active steward participation will be required to document new layers as they are added to the Spatial Data Warehouse, and to appropriately maintain the documentation on actively edited layers.
Status	In progress.
Target	Q3 2006 for completed metadata; then on-going maintenance.
Activity	▪ Complete migration of existing DocGen-based content to XML template created for each layer as part of the Software Migration project (to be completed by end of 2005). ▪ Work with steward agencies to review Tier 2 metadata, with initial emphasis on remaining undocumented attributes, followed by completion of enumerated domain documentation. ▪ Review remaining Tier 2 items with a focus on the Data Quality section. Depending on layer, additional items may need to be reviewed. ▪ Use interim AML-based style sheet generator to host SDC pages until sufficient programming resources are available to develop in-line style sheet code to display metadata content directly from XML files.

Name	**KCGIS Data Dictionary Component Development**
Description	Adoption of FGDC metadata standard coded to ArcCatalog compliant XML metadata tags will allow synthesis of attribute and attribute value (enumerated domain) data

	dictionaries without additional metadata capture and maintenance. The data dictionary components will also incorporate several other key metadata summaries, including thematic and place keywords. The backend structure will be flat-file tables amenable to web-based applications for query and review. This project will result in online internal and external access to the full data schema across the entire SDW serving as a query engine and as a portal for data developers to determine occurrence, frequency, and appropriateness of items for new data projects.
Interdependencies	Complete and accurate metadata from Metadata Enhancement project.
Status	In progress.
Target	Beginning of Q3 2006.
Activity	▪ Refine prototype script-based application to provide more effective error-trapping and reporting for metadata element extracts that do not meet required standards. ▪ Develop prototype and then deploy web-based search application to allow browse and query of data dictionary databases (key metadata elements, attribute data dictionary, coded-value domain cross-reference, keyword dictionary, and lineage process look-up). ▪ Revise KCGIS thematic and place keyword options to develop tiered 'required' and 'optional' pick lists. Update metadata documents with this two-tier design. ▪ Develop more robust web-based search tools that focus on theme and place keyword queries, replacing existing inefficient and duplicative full wildcard searches.

4.1.3 Data Enhancement and Development

Name	**Cadastral Data Redesign and Conversion**
Description	The KCGIS Center and Department of Assessments are leading this effort to develop and implement a redesigned cadastral data model that utilizes the next generation of GIS software, meets the business process requirements of the Department of Assessments, as well as the cartographic and data analysis needs for parcel data users throughout the county. The new data model will replace the existing RECDNET model, which is based on the soon to be unsupported ArcInfo 7.x coverage format. The new data design will take advantage of the latest ESRI ArcGIS software and the KCGIS enterprise SDE geodatabase (on SQL Server). The resulting data model will incorporate all current cadastral features and allow for additional features and functionality. Data maintenance under the new model will offer equal or improved efficiency and data integrity. Benefits to maintenance efficiency will come from customized geodatabase topology rule sets and "versioned" multi-user editing within SDE. Throughout the modeling effort, opportunities for future shared geometry maintenance and positional accuracy enhancement will be considered. The Cadastral Data Redesign project has included a pilot geodatabase component that has grown since the first two-tile pilot in late 2004. The pilot cadastral geodatabase, now in its third iteration and encompassing roughly a third of the county, has been the testing platform for data loading, topology rules, versioned editing, and performance measures. Although this pilot was completed in Q4 2005, it

	will continue to be used for testing and edit training in Q1 2006.
Interdependencies	The Cadastral Data Redesign effort is considering opportunities for future geometry sharing and shared maintenance with the City of Seattle and other cities.
Status	In progress.
Target	December 31, 2006
Activity	▪ Final cadastral model revisions to be made in Q1 2006. ▪ ArcGIS/SDE performance testing using Pilot 3 (continued from Q4 2005). ▪ Development of editing workflow standards and QA/QC processes (continued from Q4 2005). ▪ Identify needed data editor interface and functionality enhancements and develop solutions (continued from 2005). ▪ Conduct mapping editor training for Assessments staff using Pilot 3 geodatabase. Two classroom edit training sessions are currently scheduled for Q1 2006. ▪ Complete Phase 1 RECDNET data clean-up of all remaining tiles (1/3 completed in 2005). ▪ Complete RECDNET coverage conversion processing and SDE loading of all tiles.

Name	**Software Migration – ACDC (All but Cadastral Data Conversion)**
Description	Complete migration of all KCGIS Center maintained coverage-based vector layers, excepting cadastral, to the Spatial Data Warehouse (SDW) geodatabase (GDB) format. Coordinate with and assist other KCGIS agencies with migration of their data layers to the GDB. As all KCGIS enterprise data moves to a single GDB structure, existing differences between database libraries will be resolved so that users see the same version of the database whether layers are accessed via web-based or desktop-based applications. This project will result in a single synchronized database with two major 'expressions' (a GDB featureclass library and a shapefile library) that provides all users with accurate and consistent views of database objects. Progress on this project is reported regularly via the Data Digest.
Interdependencies	Coordination and scheduling with All but Cadastral Data Conversion (ACDC) workgroup.
Status	In progress.
Target	Mid 2006 for 90% of SDW layers, with remaining 10% by end of 2006.
Activity	▪ Assemble resources, review layers, and prioritize conversion list. ▪ Optimize layers as necessary, especially reserved word cross-check and other required table schema changes. ▪ Notify and communicate via Data Digest layer changes and migration. ▪ Import layer into GISProd.Maint database from source shapefile, personal GDB, or agency SDE.

	▪ Import metadata from XML template generated from layer review. ▪ Register layer with StewardTool and post using PostRep. ▪ Validate featureclasses and shapefiles.

Name	**Managing Access to Non-Shapefile, Non-KCGIS Data**
Description	Non-KCGIS data (formerly referred to as External Data) obtained from organizations outside of King County government range in delivery format. The migration from coverage-based data to shapefile-only data in the SDW has been completed. As more data sharing arrangements are implemented, we continue to receive data in non-ESRI shapefile format. Almost all of the data formats can be converted to individual shapefiles using existing ArcGIS tools but this requires additional overhead activity and quality assurance. In addition, as more data is delivered via personal GDB, dissembling the databases to individual layers may be detrimental to the overall data design built into the personal GDB. This project will explore options to expand the type of data formats acceptable to the SDW storage design while maintaining database integrity, library control structure, quality assurance, and user access. If implemented the project would result in increased access to more non-KCGIS data for internal users. Currently these data are registered in the GIS Data Locator database, but are only available offline.
Interdependencies	Existing front-end and back-end applications are being migrated to work within a SDE GDB storage design with limited on-going support for legacy shapefile format access. Expanding acceptable data formats to other than GDB featureclasses and file-base shapefiles will require more flexible coding, and/or additional application modules.
Status	In progress.
Target	Mid 2006 to determine frequency of non-standard data deliveries and estimation of work requirements for continuous conversion to shapefile standard. Q3 and Q4 2006 to review modifications necessary in both front-end and back-end applications to handle storage and access to non-standard formats.
Activity	▪ Continue with current standard operating procedure of maintaining inventory of all non-standard formatted data in GIS Data Locator database and application; providing conversion and SDW-loading support on an “on-demand” basis only. ▪ Determine current and estimated scope of data in non-standard format, and user demand for these data. ▪ Determine requirements for the application development necessary for ad-hoc and batch-mode processing to deliver standard format data to the SDW. ▪ Determine requirements for application development necessary for delivering data from the SDW to end clients in non-standard formats.

Name	Raster Data Products
Description	Updates to software and database storage design require enhancements to two existing LiDAR-based raster data products: 1. The current version of the DXF formatted 5-foot contours in the 7500 tiles falls below acceptable quality standards due to data gaps and mismatched contours. A contiguous 5-foot contour database now resides in the SDE GDB which will be used to develop a seamless set of 7500 tiles that is consistent with the ArcToolbox processing options. 2. Bathymetric data has been incorporated into the digital ground model for all major water bodies and a number of larger lakes within the county. Data products derived from this base have been delivered to the SDW shapefile library, but have not been incorporated into the SDE version. Routines to work with only portions of the single, contiguous feature class and to edge-match using the Spatial Adjustment Toolbar need to be developed. Developing Model Builder and/or Python routines to perform these updates will improve the overall quality of the digital ground model database and allow future updates to be performed in a more timely fashion. These steps will also lead the way to the migration of all workstation AML-based grid processing routines to desktop processing.
Interdependencies	None.
Status	On hold.
Target	Q2 or Q3 2006
Activity	▪ Develop Model Builder or Python routine to extract seamless 7500 tiles, in DXF format, from the 5-foot contour database. Mimic, as close as possible, the successful attribute structure currently adopted. ▪ Successfully test a sample of the tiles in a CAD-based system prior to releasing to the public. ▪ Develop Model Builder or Python routine to import updated vector version of the 5-foot contour, township-level tiles, into the GDB. Unselect the same tile from the contiguous 5-foot database. Edge match the new data to the existing adjacent tiles and insert new data into the contiguous database. Update the key index contour layers and the edge matched set of 5-foot contours. ▪ Successfully review seamless database and ensure that no significant differences exist between the SDE database version and the shapefile version stored as township tiles in plibrary3.

Name	Expanded Reference Grid
Description	As proposed in the 2005 work plan, a PLSS base encompassing King and Snohomish counties was developed. Though this layer is not meant to replace the control base underlying the cadastral redevelopment project, it provides a seamless quarter section, section, and township series for the county's extended area of interest for general analysis, orientation and cartography. Work in 2006 would expand the existing layer to include Pierce County and possibly portions of other

	adjacent counties. With the increasing need for seamless, inter-county datasets, building base theme layers such as survey control, hydrography and transportation are paramount. Expanding the PLSS will also help leverage interest in establishing updated county boundary definitions with King County's neighbors.
Interdependencies	Coordination with adjacent county data maintainers, and incorporation of their best-available data into a KC-maintained layer.
Status	On hold.
Target	Q3 2006.
Activity	▪ Evaluate existing Pierce County PLSS layer(s) at sixteenth or quarter section level. ▪ Append the layer to existing KC-maintained PLSS layer making necessary boundary adjustments. ▪ Adjust as necessary Pierce County attribution to match current King-Snohomish data design. ▪ Review final product and send out to Pierce County for evaluation.

Name	**Points of Interest Layer**
Description	Reevaluate the need and common ground for a single points-of-interest layer shared by all KCGIS agencies. Develop a restricted inclusion list for testing, incorporating KCGIS Center layers of this nature (for example FIRESTN, HOSPITAL, and POIPUB) and at least one or two other agency contributions. Prototype two to three tier attribute model to handle different agency business requirements, and model actual location versus parcel or intersection-based location requirements.
Interdependencies	Coordination with key agencies (Transit, Parks, WLRD, and WTD) and sufficient scoping of overall requirements and individual business requirements for both geometry and attribute design.
Status	On hold.
Target	Q2 2006 for pilot; if adopted maintenance of more complete model by year's end.
Activity	▪ Meet with stakeholders to develop overall project plan and to evaluate practicality of meeting different business needs within a single data model. ▪ Develop multi-tiered attribute model to store standard set of required items in first tier with optional agency business values in second level. ▪ Address potential for offset variable or multiple x,y storage to deal with requirements to store location as other than true centroid. ▪ Develop standard operating procedures to address multiple editors, including primary domain assignments, and mechanisms for quality assurance.

Name	Landsat Imagery Library and Associated Landcover Product Development
Description	Develop an ongoing enterprise library of satellite grade imagery to provide a complete, sequential series of scenes for full area of interest coverage, beginning with in-fill of archival data. The data would be analyzed to create a standardized suite of layers representing the state of landuse/landcover at 2 year intervals. This project will provide complete and full landcover analysis at a reasonable-cost for use in natural resource and environmental planning, landuse evaluation, and urban growth monitoring.
Interdependencies	Project go ahead is pending approval by KCGIS Oversight Committee (approval expected at year-end 2005). An initial 2006 outlay of approximately $2,800 from the KCGIS Center O&M budget and commitment of 3.25 work months (0.75-KCGIS Center, 2.5 DNRP/WLRD). Out year budget and labor contributions would be shared among KCGIS agencies but at a lower impact level.
Status	On hold.
Target	Q3 2006
Activity	▪ Research and scene acquisition. ▪ Imagery warehousing and documentation. ▪ Work with stakeholders to develop standardized landcover classification scheme. ▪ Terrain model development and image registration and rectification. ▪ Image processing; including image balancing, change detection analysis, signature site development and testing, classified land cover analysis, accuracy assessment, and limited ground truth checks. ▪ Data product documentation and warehousing.

Name	City Boundary
Description	Coordinate consolidation of current city boundary layers into fewer, if not single, maintenance design. This project will provide law enforcement and other public safety entities a logical geometry-based method of assigning water zones to adjoining jurisdictional areas where not superseded by existing legal code. It will also remove duplicative maintenance efforts and meet a greater range of business needs with a single data layer consistent with best available data.
Interdependencies	KCA and DDES, as well as Elections and other agencies, have business requirements that may not be met by a single data model design, both in terms of geometry and attribute structure. Assignment of water body jurisdiction may be constrained by legal definitions not fully defined or available.
Status	In progress.
Target	Q3 2006
Activity	▪ Resolve inconsistencies in jurisdiction abbreviation coding, and try to develop single coded-value domain for all layers/tables that use or relate to this value.

	Expand coding model to maintain uniqueness across larger tri-county area. ▪ Complete default water body allocation to prototype maintenance design and send out for review. Update model with clearly-defined legal definitions that supersede pure geometrical allocation. Demonstrate repeatability of model with changes in water body boundary and varying legal definitions. Work with DDES to incorporate this into their layer maintenance design. ▪ Complete review of other contributory layers that may affect existing geometry and forward these to DDES. ▪ More fully model the requirements for posting and maintaining annexation geometry and attributes. Consolidate KCA and DDES business requirements into this model. ▪ Reconcile significant geometry inconsistencies between King County adopted versions and data provided by key cities. ▪ Resolve inconsistencies in jurisdiction abbreviation coding, and try to develop single coded-value domain for all layers/tables that use or relate to this value. ▪ Develop and document tri-county coded-valued domain for jurisdictions, integrating requirements from Transit and WLRD (maintainers of CITY_3CO). Use enterprise data dictionary to determine other dependent layers and their impact on code consolidation.

Name	**Hydrography**
Description	Complete development of revised hydrography layer suite encompassing: ▪ Updated WTRCRS, with linear measures. ▪ Updated WTRBDY, with major water bodies conflated to ground-model edge-of-water integration. ▪ DRNBASIN (and derivative WRIA, HYDROBASIN, and WATERSHED) based on LiDAR digital ground model data.
Interdependencies	Primary dependencies include adoption of attribute schema for WTRCRS layer appropriately accommodating external data sets tied to linear measure design, as well as reasonable adoption of State Framework Model structure. Final basin geometry resolution will require resolution of state-mandated WRIA and sub-basin delineations to actual data derived basin modeling. Hydrography redevelopment is highly dependent on availability of committed labor through 2006.
Status	In progress.
Target	WTRCRS and DRNBASIN – WRIA 8 by beginning of Q1 2006; followed by WRIA 9, 7, and 10 by Q3 2006. WTRBDY – End of Q1 2006.
Activity	▪ WTRCRS – Move current editing environment to personal GDB, then to MAINT on SDE GDB. Migrate current SDW WTRCRS to MAINT. Develop workflow process for removing old features and inserting new features. Align and update arc-based attributes. Finalize development of linear measures attribution scheme. Build GDB route system and assign attributes. Develop and perform QC/QA

	routines. Complete metadata. ▪ WTRBDY – Remove feature-type = 111 (wetlands) from current SDW WTRBDY to separate open water theme from wetland theme. Continue geometry capture and attribute update. Create necessary topological relationships where select WTRBDY polygons define edges in DRNBASIN. Update Python wtrbdy.py routine to create SDW feature class for WTRBDY in addition to BIGWATER. Perform final QC on attributes. Complete metadata. ▪ DRNBASIN – Continue development of drainage basins using Model Builder routine which incorporates LiDAR digital ground model terrain data. Conflate attributes from current DRNBASIN to new layer to determine where geometry correction and new assignments may be required. Develop workflow process for removing old features and inserting new features, and for creating three super levels of basin geometry (per current region subclasses): WRIA, WATERSHED, and HYDROBASIN. Append current basin geometry, outside of LiDAR data extent, that will not be modified as part of this project. Complete metadata.

4.1.4 Application Enhancement and Development

Name	**PostRep**
Description	This is a set of modularized back-end utilities which includes routines that handle the following: posting of data to the KCGIS Spatial Data Warehouse, implementation of schema changes to the datasets, and QA/QC processing of posted datasets. PostRep replaces the non-cadastral functions of the current UNIX update and batch process.
Interdependencies	PostRep will only handle data migrated to GDB; non-migrated data will still use the legacy Update cycle.
Status	In progress.
Target	Q1 2006
Activity	▪ Enhance existing PostRep prototype with the following features: connections to remote servers for data ready for posting, automate creation of point layers based on business table coordinates, automate creation of derived layers based on user specifications, and automate batch update as specified by the user.

Name	**LibTool**
Description	LibTool will incorporate the functionality of the current ArcView 3.x extension AVLib (now in two modules: KC Shapefile Library and KC Image Library). LibTool will reflect the major components of its look and feel to assist users in the transition to the ArcGIS 9.x environment. Users will be able to: easily access KCGIS Spatial Data Warehouse layers, imagery, and metadata via an interface that offers “plain English” labeling; retrieve commonly used sets of symbolized views (e.g. “Hydro Basemap”); save and retrieve their own user-defined sets of symbolized views; generate maps using standard layouts; and easily set standard symbology and relates (if user is a data steward).

Interdependencies	Coordinate with agencies to incorporate requirements, functionality and "best of" features from various mapping applications. Use LibTool development as pilot for multi-agency effort to develop and maintain an enterprise tool.
Status	Not started.
Target	Q3 2006
Activity	▪ Use prototype form developed in 2002 as starting point for development. ▪ Identify agency participants and define and coordinate application development team. ▪ Define requirements in coordination with participant agencies. ▪ Build, test, and deploy application.

Name	**ParcelTool**
Description	This module will incorporate the functionality of the current ArcView 3.x extension ParcelTools. Primary functions are: make queries based on PIN or taxpayer name; query for information based on user-defined criteria (for example distance from a selected parcel); view and map cadastral information with minimal user input; and format mailing labels for selected parcels.
Interdependencies	To be developed when programming staff become available after LibTool is completed.
Status	Not started.
Target	Q4 2006
Activity	▪ Build, test, and deploy application.

Name	**iMAP**
Description	iMAP is a robust Web-based map viewer that provides access to map layers and other related information. Continuous enhancement of iMAP is a key goal, with two primary objectives – improve usability and add functionality based on business requirements. In 2006 several enhancements of iMAP are planned. These include improving address search routines; adding search criteria such as city names, S-T-R, and possibly plat names; enhancing hardcopy print options to include three page sizes and two orientations; and creating a new layer list implementation (known as Group TOC) that will allow more flexibility on how layers are presented and controlled by the user. In addition a formal usability study will be conducted on iMAP in order to determine the next set of desired enhancements.
Interdependencies	Stability of King County WAN and Internet services.
Status	iMAP has been deployed for 4 years, individual enhancements and upgrades are in progress.

Target	Hardcopy print option improvements and Group TOC are targeted for deployment by Q1 2006. Other enhancements and upgrades will get target deployment dates later in 2006. Usability study target date is summer 2006.
Activity	▪ Complete deployment of print options enhancements and Group TOC. ▪ Build, test, and deploy improved address search routines. ▪ Build, test, and deploy new search criteria based on city name, S-T-R, etc. ▪ Conduct usability study on iMAP. This study may be conducted in-house or contracted out to a firm specializing in usability studies.

Name	**Parcel Viewer**
Description	Parcel Viewer is a Web-based application targeting property searches. The simple interface allows users to navigate the map and select parcels, or search for properties using address, cross streets, or parcel number as input. The layout of the Parcel Viewer interface will be redesigned in 2006 based in feedback from a usability study conducted in 2004. More space for property information will be provided, and additional search criteria will be added such as city names, S-T-R, and possibly plat names. The address search routines will be improved and the option to display orthophotos will be added.
Interdependencies	Stability of King County WAN and Internet services.
Status	Parcel Viewer has been deployed for 4 years, individual enhancements and upgrades are in progress.
Target	Planned upgrades and enhancements are targeted for deployment in two phases by the end of Q1 and Q2 2006.
Activity	▪ Build, test, and deploy improved address search routines and add orthophoto display option as phase one of planned enhancements. ▪ Build, test, and deploy additional search criteria such as city names, etc., and redesign layout to display more property information as phase two of planned enhancements. ▪ Conduct usability study on Parcel Viewer. This study may be conducted in-house or contracted out to a firm specializing in usability studies.

4.1.5 Hardware, Software, Database, and Licensing Changes

- Consolidation of all ESRI software licenses currently maintained on departmental servers with those maintained on KCGIS Center servers may occur during 2006. The Software Licensing Work Group, a subgroup of the ESRI Software Migration Work Group, has been identifying and assessing technical and institutional issues which would have to be resolved if such a consolidation were to be implemented. Most of the issues which have been identified to date are relatively minor and will be manageable if there is appropriate coordination between the current license holders and the KCGIS Center. Two key issues – access by specific groups of users to specific licenses, and development of a suitable cost-sharing model – remain to be discussed and worked out. It is expected that the Software Licensing Work Group will complete their work and

make a formal recommendation on full license consolidation to the KCGIS Technical Committee before the end Q1 2006. If the recommendation is to proceed with a full consolidation, this will most likely take place during Q2 2006, after the annual maintenance renewals for the county's ESRI software have been processed and paid.

- By the end of 2006, the UNIX server *WILDFIRE* will be taken out of service permanently. When this occurs, the remaining ArcInfo 7.x and extension licenses maintained on *WILDFIRE* will be transferred on an as needed basis to the server *ORCA* and upgraded to ArcGIS 9.x.
- The KCGIS Center production server housing the Spatial Data Warehouse, and the infrastructure supporting the iMAP and Parcel Viewer Internet mapping applications were identified as critical applications by the King County continuity of business study. As a result, these systems must be fully replicated at an alternate data center outside of downtown Seattle. The purchase and installation of these systems must be completed in 2006.
- The network attached storage device that contains DNRP GIS projects (DNRP1) requires an operating system upgrade because Microsoft is dropping patch support for Windows 2000. This device runs a network appliance version of Windows 2000 Server.
- In 2006 desktop PC replacement in the KCGIS Center will continue on a modified four year cycle. Some 4-year old machines may remain in service in order to accommodate new requirements to replicate mission critical server hardware. See next bullet.
- RAM upgrades to 1-GB will be necessary for all of the training facility PC's to accommodate the newest versions of ESRI software. Funds from renting the training facility to ESRI will be used to fully offset the cost of the upgrades.
- In 2007 one of the KCGIS Center plotters will probably have to be replaced.
- It is anticipated that additional data storage capacity may be needed in the KCGIS Center in 2007. If needed, this will be accommodated with the implementation of an iSCSI storage area network rather than adding additional servers. If data storage capacity is increased it will also be necessary to improve data backup capacity.

4.1.6 Staffing Changes

- The KCGIS Center staffing model is developed in coordination with the KCGIS Oversight Committee. For 2006 the overall staffing level remains unchanged from 2005 at 31.0 FTEs. However, the budgeted FTE allocations for each of the three business units change for 2006. See the following bullets.
- **Enterprise Services** – Staffing allocation increased from 10.25 FTE in 2005 to 12.60 FTE in 2006 for a net change of +2.35 FTE. This change is based on 0.35 FTE increase for help desk support, 1.00 FTE for technical support services to the new KingStat program, and 1.00 FTE of additional support for priority initiatives, primarily to aid the Department of Assessments with cadastral data conversion.
- **Matrix Staffing Services** – Staffing allocation increased from 12.35 FTE in 2005 to 12.75 FTE in 2006 for a net change of +0.40 FTE. This change is based on 0.15 FTE increase for management and administration, and 0.25 FTE increase in matrix staffing for the Solid Waste Division. Six divisions are currently supported through Matrix Staff Services at the following levels: DNRP – Parks and Recreation (1.0 FTE); DNRP – Solid Waste (1.0 FTE); DNRP – Wastewater Treatment (4.0); DNRP – Water and Land Resources (4.0); DOT – Road Maintenance (1.0); DOT – Transit (1.0).
- **Client Services** – Staffing allocation decreased from 8.40 FTE in 2005 to 5.65 FTE in 2006 for a next change of -2.75 FTE. This change is based on reallocation of 0.35 FTE for help desk services to the Enterprise Services Unit, 1.00 FTE reallocated to Enterprise Services for the KingStat program, 1.00 FTE reallocated to Enterprise Services to support priority initiatives, and

0.40 FTE reallocated to Matrix Staff Services to support additional management and administration and increased demand for matrix staffing services.

4.1.7 Other Changes

- None to note.

4.2 Department of Assessments

4.2.1 Agency GIS Overview, Priorities, and Goals

- The mission of the Department of Assessments is to serve the citizens of King County by providing fair, equitable and understandable property valuations, forming the basis for funding of public services. The Department of Assessments is responsible for discovering, listing and valuing all taxable real and personal property within King County for preparation of the tax roll. GIS is used in the Department in support of the above stated mission.
- GIS within the Department of Assessments is used in valuing property, defending valuation methods and estimates, maintaining public records including maps, legal descriptions and taxing district boundaries, administering exemptions and calculating levy rates. GIS provides easy access to data that is valuable for performing Assessments business functions. GIS is used in many aspects of the Department's business functions including but not limited to:
    - *Property Appraisal* – Appraisers use GIS maps, applications and data when valuing property. GIS is used for data retrieval and analysis. In addition, GIS is used to update property characteristics.
    - *Map/Property Boundary Maintenance* - GIS is used for discovering and listing taxable real property within the County. Assessment's is responsible, under RCW 84.40.160, for maintenance of property configurations within King County. GIS is being used to fulfill the responsibility. The old quarter section Mylar maps are being retired and being replaced by maps generated from GIS data. Numerous agencies and individuals both within and outside the County access GIS property boundaries maintained by Assessments.
    - *Exemptions* – Assessments administers a portion of The Open Space Act (Chapter 84.34 RCW), which provides for current use assessment of farm and agricultural land, timber land and other open space land. Once land is classified, taxes are based on the current use value of the land rather than its highest and best use. Assessments must maintain both current use value and market value on these properties. GIS provides analysis and mapping of characteristics unique to Current Use Exemption monitoring.
    - *Annexations/Levy* – GIS is used to produce maps and data for internal use specific to the Assessment calendar year. GIS is used to generate the taxing boundaries. From this, maps and lists are generated for State Department of Revenue for apportionment of utility valuations and the state levy.
    - *Appeals* – GIS data and analysis are used as evidence and support for defense of valuation decisions.
    - *Miscellaneous Property Related Analysis/Public Info*. – GIS is used for validation of proposed annexations, property search and information requests, Assessor maps, public notification of neighboring properties and other public agency requests.
- Implementation of GIS is done across the department. The coordination of GIS mapping at Assessments is done through the Accounting division. Accounting is responsible for cross agency coordination, mapping and general department use. This includes training, analysis, data modeling and development and ad hoc map requests. GIS is delivered to the department through various applications; both home grown and ESRI based. GIS has become increasingly integrated into Assessments business practices. The Information Services (IS) group has spatially enabled some of the more popular in-house data retrieval/viewer tools and applications thus allowing everyone in the department to view not only the GIS parcel boundaries but also current orthophotos and a variety of relevant layers. Additionally, these applications have been enhanced so users can generate parcel shapefiles of specific areas that can then be loaded into ArcView or ArcExplorer. Appraisers have been integral to "selling" the use of GIS to fellow staff and serving as a catalyst for ongoing training and application development. Appraisers have

initiated many applications of GIS. Appraisers make use of both the analytical and display properties of GIS to integrate GIS into their business operations.

- Despite the fact that many people use GIS; the Dept of Assessments is understaffed for further implementation of GIS technology. Many opportunities exist to make GIS integral to the business however limited staff resources are available to support these applications. In addition to branching out to new business users, the mapping effort is continually challenged to meet the demands of the number of segregations, mergers and plats.
- Over the next few years Assessments, in conjunction with KCGIS Center, plans to migrate the cadastral data to a department server where it will be completely maintained and administered by Assessment staff.
- Assessments plays an integral part of the County GIS through the maintenance of the cadastral data. Assessments works closely with the KCGIS Center to maintain the countywide cadastral data. Since Assessments does not have a staff of GIS programmers there is a heavy reliance upon the expertise of the KCGIS Center to build, maintain and support applications for maintenance of the countywide cadastral data set. In addition, to ensure the integrity of the cadastral data, Assessments requires daily attention from the KCGIS Center to ensure that data is integrated in a timely manner and fixed when there is a failure in the process. Assessments incorporates applications developed by the KCGIS Center, namely Parcel Viewer into both internal and web-based applications and AVLib for ArcView applications.

4.2.2 Planned Project Activity and New Projects

Name	**Cadastral Data Redesign and Conversion**
Description	Migration of the existing Cadastral data (RECDNET, RECDANNO and PARCEL) from Arc Info coverages to a geodatabase.
Interdependencies	Working with KCGIS on planning and implementation.
Status	Planning in Progress
Target	December 2006
Activity	▪ 2005 Effort o Create Conversion Routines o Determine QA Processes. o Complete 3 Pilots. o Produce Data Model. o Coverage Data clean up o Develop Conversion Schedule o Train Mapping Staff o Develop Wish List for Tools o Develop Editing Process/Procedures. ▪ 2006 Activities o Application Development o Conversion o QA/QC Cleanup o Training o Cutover

Name	Non Cadastral Data Migration
Description	Migration of the non-cadastral data from Arc Info coverages to a geodatabase.
Interdependencies	Cadastral Migration
Status	Planning in Progress
Target	December 2006
Activity	▪ Determine layers for conversion ▪ Determine data models ▪ Determine editing activities ▪ Convert

Name	Archive Scanning
Description	Scan all historic maps stored in Assessments mapping section. Scanned images will serve as both an archive and digital version that can be e-mailed to surveyors and other parties.
Interdependencies	Staff availability.
Status	In progress
Target	Ongoing
Activity	▪ Scan all maps

4.2.3 Data Enhancement and Development

Name	Residential Areas 2007
Description	Redefine boundaries for residential appraisal areas
Interdependencies	None
Status	In Progress
Target	2006
Activity	▪ Update PGDB with new boundaries as defined by Residential Appraisers.

Name	City Layer Consolidation
Description	Replace existing City layers maintained by Assessments and DDES with one consolidated layer that retains functionality of the existing independent layers. The final layer will be maintained jointly by DDES and Assessments
Interdependencies	Assessments, DDES and KCGIS staff time.
Status	In Progress
Target	2006
Activity	▪ Research and document precise incorporation and annexation boundaries adjacent to or including portions of major water bodies. ▪ Reconcile conflicting annexation boundaries between Assessment's and DDES city layers. ▪ Finalize attributes for consolidated layer. ▪ Define and test shared maintenance procedures and protocols.

4.2.4 Application Enhancement and Development

Name	Cadastral Data Maintenance - Geodatabase
Description	Tools/applications required for maintaining the cadastral data.
Interdependencies	Completed data model and tools "wish list", ArcGIS 9.2 and KCGIS programming support.
Status	In Progress
Target	2nd qtr 2006
Activity	▪ Determine needs for additional tools. ▪ Establish procedures for editing cadastral data ▪ Program and test application(s) and tools

Name	RealProperty
Description	Data access tool for Assessments
Interdependencies	IS Staff Availability
Status	In Progress
Target	2006

Activity	▪ Add additional GIS functionality to existing data access tool.

Name	**CommercialBulkUpdate**
Description	Tool for updating commercial data to Assessments server.
Interdependencies	IS Staff Availability
Status	In Progress
Target	2006
Activity	▪ Add GIS functionality to the Commercial bulk update process to provide more real-time access to data.

Name	**Threshold**
Description	Internal application to review and release accounts where values changes exceed or drop 25%.
Interdependencies	IS Staff Availability
Status	In Progress
Target	2006
Activity	▪ Programming

Name	**Field GIS**
Description	Make GIS available to appraisers in the field.
Interdependencies	IS Staff availability
Status	Not started
Target	2006
Activity	▪ Programming

4.2.5 Hardware, Software, Database, and Licensing Changes

- No changes are anticipated for 2006

4.2.6 Staffing Changes

- No changes to current FTE's are anticipated for 2006. Potential for staff retirements in mapping during 2006. Depending on funding and conversion quality there might be a need for interns to perform QA on converted Cadastral data.

4.2.7 Other Changes

- None anticipated

4.3 Department of Development and Environmental Services

4.3.1 Agency GIS Overview, Priorities, and Goals

- The mission of the Department of Development and Environmental Services (DDES) is "to serve, educate and protect the community through the implementation of King County's development and environmental regulations." To carry out this mission the department is responsible for receipt and review of building and land use permits, inspection of building construction and land development, and for administration and enforcement of building, land use, fire, and environmental codes. DDES has jurisdiction in unincorporated King County and has approximately 250 employees organized into three divisions. These divisions are Administrative Services, Building Services and Land Use Services.
- Core business functions of DDES supported by GIS include the following:
    - Permit Receipt (Intake) – Permit technicians use applications and databases developed by the IS Section during permit screening and intake. These tools and data sets are essential to successfully conduct intake review and complete the permit application process. Site location, zoning, development conditions, sensitive areas and other land related factors are identified and confirmed using GIS tools. Permit viability is assessed, permit requirements determined, and permit routing initiated. Customized applications integrated with the department's permitting system provide these functions at the public front counter and in the permit intake center.
    - Permit Review – GIS tools are used in several sections of the department to support permit review. For example, the Site Engineering and Planning Section uses them to generate a series of maps for each project under review. These maps illuminate a range of factors that influence site planning. The Plan Review Services Section uses GIS to determine snow-load and site slope factors, which guide decisions on roof and foundation requirements. The Current Planning Section uses GIS to determine development conditions, historic zoning and planning requirements.
    - Inspection and Enforcement – GIS tools are used by the various inspection and enforcement sections of the department to determine inspection areas, project assignments and to balance inspection and case workloads.
    - Regulatory Review – The Land Use Division uses GIS tools to develop planning proposals for regulatory control. GIS techniques are also used in programs with regulatory impact including Endangered Species Act (ESA) response, comprehensive planning, sub-area planning, critical areas protection and management, and special use studies.
    - Public Information – GIS maps, data, and applications are used extensively in the department for public information and education. Development controls such as zoning, land use, and sensitive areas are depicted using GIS techniques on maps and atlases, and in newsletters and bulletins. Property-based data are disseminated to the public via customized Internet applications including the "Development Conditions Search Engine" and the "Property Information (Planning)" and "Sensitive Areas" map sets of iMAP.
- The IS Section is responsible for carrying out the GIS program plan for the department. The Section Manager reports to the Administrative Services Division Manager. In addition to programming, technical support, network administration, database administration, and addressing staff, four GIS analysts report to the IS Section Manager. The IS Section provides GIS services to meet the primary objectives as follows: to reduce time needed to deliver department services; to enhance permit review; and to support decision-making.
- In addition to more traditional Information Services, the IS section of DDES provides geographic analysis, geographic data development and maintenance, customized end user applications, and map production services to the staff, customers and stakeholders of DDES. GIS Analysts in the

section support a variety of the department's business needs by manipulating and presenting geographic information in the form of maps, graphics, data files and reports. Analysts also develop, integrate and maintain enterprise and agency geographic data sets, and ensure consistency of data between GIS and the Permits Plus system.

- The IS Section provides services to DDES staff, customers and stakeholders. Minor requests for assistance come directly from DDES staff to GIS analysts. Larger requests come more formally through requests to management. After service requests have been evaluated and approved, they are routed by the Lead GIS Analyst to appropriate GIS staff for response. When needed, the IS Section provides subject area expertise or project materials to the other King County Agencies.
- The GIS services are organized around the following categories of work:
    - Application development. Responsibility is shared by the two GIS Analyst/Programmers.
    - Data Development and Maintenance. Responsibility is shared among all four GIS analysts.
    - Analysis. The GIS Analyst/Cartographer is responsible for the coordination of spatial analysis projects. The analysis work is shared among all four GIS analysts.
    - Map Production. The GIS Analyst/Cartographer is responsible for the majority of custom and routine map production.
    - GIS Data Administration. One GIS Analyst/Programmer is responsible for the department's GIS data warehouse, and administrating ArcSDE on the data server,
- The Lead GIS Analyst works with the IS Section Manager to coordinate internal efforts, ensure efficient use of GIS analyst/programmer time, and coordinate GIS data development and maintenance with other agencies.
- The IS section of DDES participates in the successful exchange of data among many King County Departments. Planning and permitting data are provided to other departments through participation in the KCGIS spatial data warehouse. Property data from the Department of Assessments and Environmental Data from the Department of Natural Resources and Parks are acquired through the KCGIS spatial data warehouse and direct data exchanges. IS section GIS Analysts take an active role in facilitating data sharing between DDES and other King County departments.
- DDES GIS staff actively participate in the county-wide GIS program. The Lead GIS Analyst has vice-chaired the KCGIS Technical Committee for the past two years. Each of the analysts participates on at least one sub-group of the KCGIS Technical Committee. DDES has assumed a proactive role in working with the KC GIS Center to help develop procedures and best practices for the Software Migration effort.
- The main opportunities and the largest pitfalls for DDES GIS lay in the continued development of GISMO to replace the aging ArcView 3.x applications currently in use by DDES staff. Successful migration of our data to ArcSDE GeoDatabase format must conclude synchronously with GISMO Phase II in order to achieve the most benefit from both. Completion of GISMO Phase II in 2006 will provide the following benefits.
    - Alleviate the increasing maintenance load of the no-longer ESRI supported ArcView 3.x applications.
    - Provide DDES with the largest possible opportunities for GIS integration with other DDES applications.
    - Bring an end to the prohibition against adding new functionality to existing DDES GIS applications during GISMO development.

4.3.2 Planned Project Activity and New Projects

Name	**Critical Areas Ordinance Support**
Description	The Critical Areas Ordinance was passed in Fall 2004 and took effect January 1st 2005. There still remains data to acquire and develop to support the CAO regulation. The KC Council has mandated monitoring to ensure efficacy of the CAO. CAO designations are currently recorded on sketch maps that are not fully integrated with the GIS. DDES GIS staff will be required to support these new and ongoing aspects of CAO implementation.
Interdependencies	Data to create layers such as Volcanic Hazards and Upper/Lower Tributary Stream Designation are not yet finalized. CAO monitoring analysis will happen in close coordination with KC DNRP WLR staff.
Status	In progress
Target	2006
Activity	▪ When data becomes available add layers to Base2, GISMO, iMAP, and Autoplot. ▪ Work with WLR staff to develop base-line analysis to begin CAO monitoring.

Name	**Software Migration**
Description	To eliminate the increasing difficulty in maintaining the aging Avenue code of the Base2 application, to take advantage of new ESRI technologies for data maintenance, and to coordinate with the KC GIS Center software migration effort, DDES will move all DDES maintained GIS layers from ArcINFO coverages to ArcSDE GeoDatabase layers, both on DDES servers and in the KC GIS Spatial Data Warehouse, and replace AML and Avenue based data maintenance procedures with ArcToolbox and Python automated procedures.
Interdependencies	The pacing of our migration is tied to the pacing of the KCGIS software migration effort.
Status	In progress
Target	2006
Activity	▪ Populate required metadata fields, convert Enterprise layers to ArcSDE GeoDatabase, and post using Steward Tool. ▪ Develop ArcMap editing skills to the point where major layers (e.g. ZONING) can be maintained at ArcSDE GeoDatabase layers. ▪ Develop python scripts to replace current CITYMAST maintenance AMLs. ▪ Upgrade ArcSDE Server to version 9.1

Name	PIES
Description	Permit Integration and Enhancement Strategy. A major goal for the IS section is to provide tighter integration of DDES core business functions including Permits, Project Management, Finance, Time Accounting, and GIS. This integration effort will coincide with the ongoing development of GISMO Phase II & III. This coincidence of timing offers an excellent opportunity to dramatically improve the DDES GIS user experience.
Interdependencies	The PIES effort is tied to the evaluation of a replacement for the DDES permitting database. Progress on PIES is limited in scope until the evaluation is complete, and a replacement plan is selected.
Status	In progress
Target	2008
Activity	▪ Coordinate GISMO Phase I & II user interface with other DDES in house application interfaces (TRS, PRMS, etc.). ▪ Coordinate security and logging modules in GISMO Phase I & II with other DDES in house applications. ▪ Extend GISMO Phase I back-end modules to provide geographic overlay based query responses to other DDES in house applications.

4.3.3 Data Enhancement and Development

Name	Shoreline Management Program Update
Description	Develop new criteria for Shoreline Management Designations, apply designations to shorelines of the state, and replace the existing SHORELINE_MMP layer in the KC GIS Spatial Data Warehouse.
Interdependencies	This effort is a collaboration between KC DNRP and KC DDES, with the lead taken by DNRP. The DNRP WLR Visual Communications Unit GIS staff is leading the analysis effort. DDES GIS staff is aiding with data layer, and analysis expertise and experience.
Status	In progress
Target	2007
Activity	▪ Identify all relevant existing data for data inventory and review. ▪ Provide available metadata for layers provided or located by DDES GIS staff. ▪ Participate in GIS group meetings.

Name	City Layer Consolidation
Description	Replace existing redundant City and annexations layers maintained by Department of Assessments and DDES with one consolidated layer that retains all functionality of the existing independent layer. The new layer will provides superior derived layers for cartographic purposes. The new layer will meet the need of KC Police to identify the jurisdiction of all portions of major water bodies. The final layer will have shared editing by DDES and Assessments.
Interdependencies	This effort is facilitated by the KC GIS Center staff. Progress on this effort is dependant on available staff time of Assessments staff, DDES staff, and GIS Center Staff.
Status	In progress
Target	2006
Activity	▪ Research and document precise incorporation and annexation boundaries adjacent to or including portions of major water bodies. ▪ Reconcile conflicting annexation boundaries between Assessment's and DDES' city layers. ▪ Finalize the set of attributes to be included in the consolidated city layer.

4.3.4 Application Enhancement and Development

Name	GISMO: Phase II
Description	GISMO will provide web services implemented using ArcIMS and VB.NET to replace the functionality of legacy ArcView 3.x applications currently in use at DDES. Phase II will include map display, interactive spatial layer query and map printing. Successful completion of Phase II will allow Base2 to be retired.
Interdependencies	None
Status	Not Started
Target	2006
Activity	▪ Write Functional Specification for GISMO Phase II. ▪ Application Implementation.

4.3.5 Hardware, Software, Database, and Licensing Changes

- Budget has been approved to purchase a replacement for the aging HP Designjet 1055CM inkjet plotter.
- Budget has been approved to purchase a large format scanner, conditional to additional cost/benefit study, to be used in part to raster digitize old zoning and addressing maps for archive and GIS background display.

4.3.6 Staffing Changes

- No staffing changes are expected.

4.3.7 Other Changes

- No other changes are expected

4.4 DES – Emergency Management Division, E-911 Program Office

4.4.1 Agency GIS Overview, Priorities, and Goals

- Emergency Management Division: E-911 Program Office - The mission of the Emergency Management Division, E-911 Program Office (E-911) is to provide leadership and high quality service to improve the safety of the public in King County. The E-911 Program Office is committed to providing public safety solutions and support to 13 Public Safety Answering Points (PSAPs) in King County. PSAP support includes technical, GIS, administrative, and financial funding from the 911 tax. The E-911 Program Office ensures continued effective operation of the E-911 System so that high quality 911 service is provided to the public, regardless of the technology used to call for help.
- The core E-911 GIS activities are to ensure that the GIS based AliTrakker maps are working to display each and every 911 call that comes into the PSAP: That cell tower information coming in from seven different wireless carriers is kept up to date and integrated onto the mapping for display at the PSAPs: That Voice over Internet Protocol (VoIP) calls, are visible on the map when a caller makes a 911 call. To make sure that up-to-date GIS data is uploaded on to AliTrakker map applications: Ensure that as new telecommunications technologies are introduced into the public sector too communicate with E-911 dispatch be geographically locatable on the AliTrakker map application: For the 2005/06 years, continue to work with MicroData GIS mapping vendor, on the E-911GPS address project: Finally, to ensure that call taker staff at PSAPs are trained on how to use the GIS based location identification software primarily the AliTrakker map application.
- The E-911 GIS Mapping Administrator and the E-911 GIS Mapping Analyst work in coordination with each other to provide support to 13 PSAPs of King County 24/7. GIS staff report directly to the E-911 Program Manager.
    - The E-911 GIS Mapping Administrator and the E-911 GIS Mapping Analyst will be required to keep current with updates to GIS layers that have been modified by the KCGIS Center, Transit, and KCEGIS, as well as any other participating GIS agencies from which E-911 acquires GIS data. The E-911 GIS Mapping Administrator and the E-911 GIS Mapping Analyst will report any data discrepancies back to the providing agency when discovered by the E-911 program or PSAP staff. On occasion the E-911 GIS Mapping Administrator or the E-911 GIS Mapping Analyst will field locate residential, business, public, and other geographic entities using GPS to meet a PSAP request for site or street verification. Address field verification on sites that the MicroData field technician was not able to determine the address of will be the primary duty of the E-911 GIS Mapping Analyst. Once the site or street information has been collected and processed through the x9GIS software, the updates will be transmitted to the PSAPs as well as to KCGIS or any other E-911 GIS data source.
- Both GIS professionals responsible for maintenance and management of the GIS data used on the map displays as well as coordinating GIS data information with King County GIS Center staff, the TNET group, and city, county, state, 911 GIS offices. The E-911 GIS Mapping Administrator is responsible for keeping the E-911 GPS Address project on task, notifying PSAP and police agencies about data collection in their jurisdiction, responding to public requests for information about the address project, vendor requests for information and GIS data, and assisting in field data collection outside of the E-911 GPS Address project's scope of work. The E-911 GIS Mapping Analyst is also responsible for GPS field data collection and responding to public requests for information about the E-911 Address project.
- E-911's core customer base is comprised of the 13 Public Safety Answering Points (PSAPs) that handle 911 emergency calls and route requests to appropriate public safety agency staff for response. PSAPs are located throughout King County serving regional populations and or local area confined by city boundaries.

- The GIS business strategy of the E-911 Program Office primarily supports the use of GIS applications and data to locate wireless, wireline and VoIP 911 distress calls. These wireless, wireline, and VoIP distress calls are displayed on the AliTrakker map viewer software installed at each King County supported PSAP. AliTrakker is a specialized GIS based application from MicroData GIS, designed for PSAP use to automatically display caller location and provide discrepancy reports. Each PSAP call taker and or dispatcher phone is attached to an AliTrakker map application that uses KCGIS data necessary to support accurate call location determination.
- The E-911 Program Office also distributes required GIS data to the PSAPs. The primary current location data source is the KCGIS ST_ADDRESS layer. In the future, ST_ADDRESS will be replaced by T-Net data from KC Transit GIS. The E-911 GIS Program processes KCGIS data using a MicroData GIS ArcView based extension called E9GIS. E9GIS converts KCGIS data from the state plane coordinate system into geographic coordinates (latitude and longitude) and performs other data formatting required by AliTrakker to locate wireless, wireline, and VOIP 911 calls. By end of this year E-911 will have purchased a new ARC SDE version of E9GIS called x9GIS. The x9GIS software is an extension onto ArcGIS 9.1. E-911 GIS also provides other data layers, such as coverage areas, cell tower locations, and dispatch zone boundaries. Individual PSAPs may also request custom data, such as specific site or building locations, or integration of local computer aided dispatch (CAD) data. These data are also processed by E-911 GIS using E9GIS software. Once processed, E-911 GIS distributes GIS data via 911-Net, a closed network providing secure access to each PSAP.
- Key strengths of the E-911 GIS program include a fully operational environment that has proven its ability to deliver highly accurate KCGIS data supported by an effective front end application to facilitate the work of PSAP call takers. AliTrakker software provides an effective data management/exception-reporting tool for administration of E-911 GIS data. Staffing limitations in responding to all PSAP GIS data and support requests are mitigated somewhat by the use of County Work-study Program staff. Some specialized data desired by PSAPs is lacking, for example GPS-based location of highway mile markers with digitized site photos
- Opportunities include future coordination with the KCGIS Center to exchange GIS data with city GIS departments. Coordination of site point data exchange and updates between E-911 and KCGIS during and after the E-911 GPS Address project is complete. GIS is also in a good position to communicate key changes to County geography (new streets and facility locations) on a near-live basis to the rest of KCGIS.
- A Key challenge will be to keep up with the new and changed address information after the completion of the E-911 GPS Address project so that the address data base does not fall behind will be challenging for E-911 GIS staff. In order to keep city and county address information that has changed, been updated, and added through new development in King County, the E-911 Program Office GIS and MSAG coordinator staff is currently in the process of a face-to-face meeting with all 39 city addressing contacts. The meetings are set up to introduce the E-911 GPS Address project to the individual cities and their address coordinators so that they are aware of the extensive address data collection effort. The meetings are also to ensure that they continue to provide the E-911 MSAG address coordinator with the most up-to-date address information in their jurisdiction that includes address changes, new addresses, and in some cases future development.
- The key long-term goal of the E-911 Program Office is to keep up to date with changes within the E-911 industry. A major component of the long-term goal is to keep mapping up-to-date at the PSAPs with the latest geographic changes which includes an x, y location of all addressed structures within King County. This mapping system is used to identify the location of wireless 9-1-1 callers on a map at the call answering positions. Currently, caller locations are identified as a latitude/longitude location, and there is no association of the caller's location with an actual street address. It is becoming more important for caller locations to be associated with specific addresses. In order to accomplish the address association in the mapping system, the addresses throughout King County must be GPS located. Wireless 911 distress calls to PSAPs have

increased steadily over the last few years. GIS is an essential tool to help locate wireless 911 distress calls.

- E-911 GIS Program's role within KCGIS is primarily as a data coordinator out to PSAP end users. E-911 GIS is also in a key position to notify KCGIS data maintainers of data update or accuracy enhancement needs and will coordinate the exchange of address information related to the E-911 GPS Address project.

4.4.2 Planned Project Activity and New Projects

Name	**E-911 GPS Location Address Project**
Description	The objectives of this project are to enable the association between wireless and Voice over Internet Protocol (VoIP) 911 caller locations and actual street addresses in the Public Safety Answering Point (PSAP) E-911 maps. This will facilitate the ability of the PSAPs to dispatch police, fire, and emergency medical responders to specific addresses rather than general areas. In order to accomplish the association between the 911 caller latitude/longitude locations and street addresses in the mapping system, the addresses throughout King County must be GPS located. This will be a two-year project to be completed between January, 2005 and December, 2006.
Interdependencies	The E-911 Program intends to contract with the existing E-911 mapping vendor, MicroData GIS to GPS locate all addresses in King County. The vendor has a system that allows addresses to be GPS located, either through the use of existing King County orthophotography or by physically visiting the address. E-911 is also dependent on the DOT-Transit for access to the TNET roads data and the KCGIS Center to provide GIS data updates to MicroData when needed. Further coordination with the KCGIS Center for technical, informational, and advisory support.
Status	In Progress
Target	December 2006
Activity	▪ Work with MicroData Vermont office on E-911 GPS Address Project ▪ Work with GPS filed technicians collecting site data in King County ▪ Meetings with 39 city addressing coordinators of King County ▪ Import of GIS data from Vermont to E-911 Office for testing ▪ Loading and testing of E-911 GIS data at the PSAPs

4.4.3 Data Enhancement and Development

Name	**E-911 GPS Location Address Project**
Description	Keep up-to-date the GPS address locations of addressable site points in King County for the E-911 Map application.
Interdependencies	DOT-Transit Roads

	KCGIS Center Individual city address contacts
Status	Not yet in progress
Target	December 2006
Activity	▪ Using the x9GIS software and GPS field collection software to keep up-to-date address information for King County after the E-911 GPS Address Project is complete.

4.4.4 Application Enhancement and Development

- No activity planned in this area.

4.4.5 Hardware, Software, Database, and Licensing Changes

- E-911 will be upgrade to a new version of x9GIS an extension onto ARC GIS 9.1 in fourth quarter of 2005.
- SDE Server for hosting GPS Address data and E-911 Map data.
- Software that we will be purchasing to support the E-911 GPS Address Project:
    - X9GIS extension
    - Arc Editor
    - ARC SDE
    - Spatial Analyst
    - ArcInfo

4.4.6 Staffing Changes

- E-911 PSAP Mapping Analyst

4.4.7 Other Changes

- None

4.5 DES – Records, Elections, and Licensing Services Division

4.5.1 Agency GIS Overview, Priorities, and Goals

- The mission of the Records, Elections and Licensing Services Division is to provide innovative, responsive and accessible services to residents, communities, businesses, King County departments and private entities to effectively meet our customers' needs.
- The Division's strategic goals are to increase public access to and awareness of services. To promote and facilitate compliance with laws and regulations to ensure voter enfranchisement, public safety and animal welfare. To utilize technology and other means to help provide high quality, responsive customer service at reasonable costs throughout the division. To develop and support a workforce that continues to successfully balance the need to meet increasing service expectations with limited available resources.
- The KCEGIS work unit is physically housed in the King County Records Elections and Licensing Services Division (REALS). The GIS Program Manager reports to the Election Superintendent for operations and maintenance of Election related work programs. The Program Manager also interfaces with the Division Management Team, and/or appropriate department staff for coordination of cross-departmental projects. Customer service for both internal and external clients is reviewed and approved by the Program Manager. This is accomplished by coordinating special projects and requests with the KCGIS Center, to determine which agency should respond to the request. KCEGIS provides client services to support staff efforts in REALS, DES and numerous other internal County agencies.
- In 2006, three FTE GIS analysts and one TLT GIS analyst will report to the Program Manager. These analysts perform duty assignments supporting five basic business areas: political redistricting, minor taxing district boundary maintenance, voter registration, election support, and customer service. Duties and job responsibilities are shared between GIS staff, with the division of labor coordinated and assigned by the Program Manager. Although the workload is distributed evenly between staff members, one GIS analyst is responsible for supporting the ongoing data maintenance needs and requests of the Voter Registration section, one GIS analyst has the primary responsibility for data integration and maintenance to the district themes, and one analyst handles special data requests and all production related issues. The one GIS TLT position will be working on various GIS projects, providing data maintenance, integration, data QC, election specific application development, and assist in client support to offices and agencies within DES. All staff will be working on migration to ARCGIS.
- The services provided by KCEGIS staff include GIS data analysis, census demographics, cartographic production and CD and map sales. These services are also provided to the general public and clients outside the County organizational structure. In 2005, KCEGIS staff provided approximately 75 CDs and $3,722 worth of paper maps displaying spatial data. Eighty seven different map products are produced and maintained and are also available as PDFs on the Elections website.
- The Division is understaffed for implementation of greater GIS technologies. Opportunities exist for new applications but staff resources are limited to maintaining current demands.
- The King County Elections GIS (KCEGIS) work unit has the primary GIS responsibility for the creation, integration and maintenance of geographic boundary data incorporated into the "District" theme of the King County Coordinated GIS (KCGIS) Program. The District data layer is utilized by many agencies within King County and it supports numerous County department business applications. KCEGIS staff support division and department business functions by providing digital map and CD production services, data creation, integration, maintenance and analysis, internet based services of available map products, and the polling place lookup application. GIS is used in many aspects of the Division's business functions including but not limited to:

- *Political Redistricting/ Voting District Maintenance* **-** GIS analysts within the division are responsible for the implementation and integration of data resulting from Federal, State and local redistricting plans *(RCW 29.69B-29.70)* and annual voting district maintenance *(RCW 29.04.040 and RCW 29.04.050).* To support this program, GIS tools applications and spatial data are used by Elections staff to analyze plans and implement district changes.
- *Jurisdiction Boundaries* **-** In King County, the Director of REALS performs the business function of the "County Auditor." Under State law, the "Auditor" is mandated to conduct primary, general and special elections for all political jurisdictions (including cities, towns, and minor taxing districts) within the County and to perform all duties required in order to carry out this function. *(RCW 29.04.020).* In order to do this, the "Auditor" must maintain the latest accurate information describing the geographic boundaries of these jurisdictions, as well as the director, council, or commissioner districts within, and ensure that such information is kept current. *(RCW 29.15.026 and Public Rule Doc. No. ELE 9-4-1).*
- *Election Support* **-** Jurisdictions in King County can conduct as many as seven elections per year. GIS staff, data, and tools are used to support the business of conducting elections. Candidate filing, jurisdiction flagging, ballot layout and design, absentee ballots, voting equipment delivery, routes, troubleshooter zones, petition verification, production of the Local Voters Pamphlet, and polling place location and assignment *(RCW 29.57)*, all rely on spatial data and applications maintained and supported by KCEGIS staff.
- *Voter Registration* **-** The Elections office processes approximately 800,000 voter registration transactions per year. The State law *(RCW 29.07.220)* requires the Auditor's office to maintain a database containing names, address, major political districts, minor taxing districts (jurisdictions) and precinct information for every voter. KCEGIS staff maintains spatial data and supports the applications crucial to this business function.
- *Document Recording* **-** The King County Recorder's Office (Records) processes and records documents related to real estate transactions and collects excise tax and recording fees *(RCW 36.22.010).* The recording procedure relies on accurate up to date city jurisdiction information to process these transactions. KCEGIS data and staff provide support to this business application.
- *Public Information* – GIS maps, data and applications are used to aid in the delivery of public information. District information is depicted using GIS for all the division map series products available hard copy or via the Internet. Polling place data is disseminated to the public via an internet application or over the telephone via an interactive voice response system. This year the division would like to add district themed map sets to the iMAP application.

4.5.2 Planned Project Activity and New Projects

Name	**Disabled Accessible Voting Equipment (DAVE) Project**
Description	Federal and state laws require that all jurisdictions provide certified accessible voting machines that permit voters with disabilities, including visual impairment, to cast a ballot independently and in private. The goal of DAVE Project, which began in 2005, seeks to implement Direct Recorded Election (DRE) devices in King County to comply with the Help America Vote Act [HAVA] of 2002.
Interdependencies	Successful State certification of new vendor hardware and software.

Status	Slightly behind schedule.
Target	Phased implementation throughout the 2006, with a project completion in November 2006.
Activity	▪ GIS staff and resources will be utilized, along with DAVE project staff, to analyze the possibility of reducing the number of precincts and polling locations on king County.

4.5.3 Data Enhancement and Development

- No activity planned in this area.

4.5.4 Application Enhancement and Development

- No activity planned in this area.

4.5.5 Hardware, Software, Database, and Licensing Changes

- The Division will be adding 4-5 ArcGIS licenses in 2006.

4.5.6 Staffing Changes

- The Division will be filling a vacant FTE position in late 2005 or early 2006. There is a need to add a TLT position for migration and other special projects.

4.5.7 Other Changes

- None anticipated

4.6 DES – Facilities Management Division

4.6.1 Agency GIS Overview, Priorities, and Goals

- Agency Mission – The mission of the Department of Executive Services, Facilities Management Division (FMD) is "to manage and operate the County's capital assets by developing and maintaining cost conscious, sustainable, quality facilities and environments". FMD builds, manages, and maintains the land, buildings, and other structures owned, leased, and operated by King County general government agencies.
- FMD is still in the early stages of identifying uses for GIS and adopting the technology. Currently, GIS services are obtained periodically from the KCGIS Center Client Services group. In the future, FMD hopes to develop and deploy GIS internally to help provide effective, economical, and environmentally sound services.
- Facilities Management Division functions for which future GIS support is planned or envisioned include:
    - Managing County Property
    - Long-term Space Planning and Lease Management
    - Parks and General Government CIP
    - Permit Management
- FMD has a designated budget for GIS services from KCGIS Center Client Services.
- During 2005 and 2006, FMD is purchasing KCGIS Center Client Services to design and develop a Real Estate Portfolio Management System (REPMS) that will improve management of the countywide real assets portfolio. The REPMS will be an integrated database to maintain data related to County real property assets. It is expected to have a close degree of integration with existing KCGIS tools and to support asset management, analysis, and decision-making; asset retention versus disposition calculations; and analysis of asset valuation and marketability. It is hoped that REPMS will provide the impetus for accelerated GIS deployment by FMD.
- FMD intends to better prioritize GIS uses in the Real Estate Services section during 2006 and to allocate available GIS Client Services funding to maximize its usefulness to the section, especially in the area of identification of surplus County parcels having potential for development of affordable housing.
- There is no organizational unit responsible for GIS functions within FMD. The division director has designated an FMD representative on the KCGIS Technical Committee, and he provides some internal coordination. FMD staff members have taken GIS training in the past, but their skills will need to be updated in 2006. The division WAN administrator is a potential resource, because of his past GIS experience, but his current work responsibilities do not include GIS. At present, limited GIS services are obtained from the KCGIS Center Client Services group. Types of services obtained include mapping and training. In the future, GIS application development, analysis, and data development may be obtained from Client Services. The long-term goal for FMD is to become trained and proficient in using GIS data and software on their own.
- A variety of real property/asset related spatial data is maintained in tabular form within the Real Estate Services section of FMD. This data is proposed to be consolidated in the REPMS, which may prove useful in future GIS development and operations.
- FMD has a Division Director who is knowledgeable about GIS and who has past experience with GIS business implementation. This is a key strength vis a vis a the division's GIS program.
- Although access to the KCGIS Data Warehouse via the County WAN is adequate, FMD's LAN staff support is minimal (about 0.5 FTE for 25+ staff). FMD computer hardware was upgraded in late 2003 to enable use of current and future GIS software in the Real Estate Services Section, so there is now one dedicated GIS capable PC in that section.

- FMD also has a high quality color office printer available in the Real Estate Services Section, which is capable of producing color 11x17 prints. The Division also has large scale plotter capabilities in the Capital Planning Section, due to the need there for architectural renderings. There is no GIS data server in FMD.
- Unfortunately, FMD has few staff currently trained to use GIS tools and resources. However, FMD hopes to have some staff trained in 2006 to improve internal GIS user capability. If that is achieved, FMD may consider expanded licensing in the future.

4.6.2 Planned Project Activity and New Projects

Name	**Real Estate Portfolio Management System (REPMS) (continued from 2005)**
Description	Database supporting real asset acquisition, leasing, and disposition, including leasing, easements, permits, and surplus of county parcels. Total budget for system development is estimated at $196,840, but may increase slightly due to increased hourly rate for Client Services for 2006 (contingent on Council budget action in Nov. 2005)
Interdependencies	Continued availability of KCGIS staff time for analysis and programming.
Status	Started.
Target	Implementation projected for early August, 2006
Activity	▪ Detailed design and applications specification will be completed in 2005; coding will begin in 2005 and cross into 2006 ▪ Beta testing will occur in 2006, followed by system implementation, including user training and production of system documentation. ▪ It is possible that REPMS may result in new data layers, as use develops.

4.6.3 Data Enhancement and Development

- No activity planned in this area.

4.6.4 Application Enhancement and Development

- No activity planned in this area.

4.6.5 Hardware, Software, Database, and Licensing Changes

- None

4.6.6 Staffing Changes

- None

4.6.7 Other Changes

- None

4.7 DNRP – Wastewater Treatment Division

4.7.1 Agency GIS Overview, Priorities, and Goals

- WTD Background:
    - King County protects water quality and prevents water pollution by providing wastewater treatment to 17 cities and 17 local sewer utilities. The county's Wastewater Treatment Division (WTD) serves about 1.4 million people, including most urban areas of King County and parts of south Snohomish County and northeast Pierce County.
    - The mission of WTD is to protect public health and the environment by conveying and treating the region's wastewater.
    - The WTD GIS team assists in this mandate by developing, interpreting, displaying, maintaining and providing access to spatially oriented data. This service enhances and supports WTD project planning, design, and operation strategies.
- WTD GIS Team Organization:
    - The WTD GIS Team consists of four GIS Analysts who are under the Department of Natural Resources and Parks (DNRP) GIS matrix-management structure so are organizationally located within the King County GIS Center. This structure allows for the administrative management of the analysts coming from the GIS Center Manager while the day-to-day work-load management comes from the lead for the Technical Resources Group within WTD.
    - The WTD GIS analysts are primarily assigned to support large scale and long term WTD projects but also participate in cross-project work when help is needed. In addition, each analyst picks up additional work that falls outside of the primary WTD projects as requested. The main projects are as follows:
        - Conveyance Systems Improvement (CSI)
        - Inflow and Infiltration (I/I)
        - Brightwater
        - Operations and Maintenance/Facilities Inspections
        - Combined Sewer Overflow (CSO)
- WTD GIS Services
    - Cartography: for presentations, reports, and analyses.
    - Analysis: to answer questions regarding the wastewater system infrastructure, capacity and future needs, property, political boundaries, and population changes.
    - Data Development and Maintenance
    - Database and Geodatabase Development and Maintenance
    - Programming/Application Development: applications for individual, division, and county-wide use
    - User Support
- WTD GIS Program Challenges
    - Within the next 5 years the GIS support for the I/I, Brightwater and CSO projects is expected to decrease resulting in up to 2.0 FTE of GIS work available for new WTD projects including a general database administrator role for the division.

- The Asset Management and Planning and Compliance sections in WTD have data sets that they rely on for making decisions and ask the WTD GIS team to manage this data. Many other data sets in these and other sections exist or are being created and need administration. The GIS Team's knowledge of WTD projects and data along with their ability to manage large data sets places them in a position to assume a database management role in the near future.
- Proper training in ArcGIS 9.x capabilities including editing, application development, model building, and geodatabase management must be available to the WTD GIS team in order for it to meet these future goals.

- WTD Cross Agency GIS Issues.
  - Continue to require support from Enterprise GIS section of the GIS Center on I/I Application, IMS and other projects.
  - Continue to work with the Parks and Recreation, Water and Land Resources and Solid Waste Divisions within the Department of Natural Resources. WTD, Parks, WLRD, and Solid Waste share data on their own server.
  - Continue to work with Records and Elections to delineate boundaries to local sewer districts.
  - Continue to work with Public Health to acquire septic system records.
- WTD GIS Strategic Initiatives
  - Cartography - The WTD GIS Team will continue working to expand and improve their current skills in cartographic science and art through the combined use of GIS software, digital illustration, graphic design, and publication tools. It is the group's goal to decrease or eliminate reliance on outside graphic design firms when a map or graphic is needed by developing the cartography and graphic skills including concept development, data collection, cartographic design, and cartographic production.
  - Analysis - Several tools have been developed that allow the casual user to create basic maps and do powerful data queries with relatively little training. The software and data are accessible but neither is being used to its fullest potential. The WTD GIS Team will educate WTD managers about GIS and teach casual users the abilities that they already have but of which they might not be aware. Access to these tools and data, coupled with the knowledge of their existence and usage, will not only save time in the acquisition of project related data but also provide information to the decision-making process that might otherwise be left out.
  - Data Maintenance - The WTD GIS Team currently maintains 16 WTD datasets. The information for three of these datasets is provided by the principal end user; an application allows the end user to update and maintain the data while a GIS layer is automatically created. Two other data sets, Flow Monitor and Rain Gauge, will be transferred to their proper stewards and GIS applications developed so the stewards can manage their data.
  - Dataset Creation – Three data layers need to be created to assist WTD decision-makers in meeting future wastewater capacity issues. One layer will identify the parcels that are currently using septic systems. The next will show which parcels are contributing to the Lower Duwamish combined sewer overflows. And the third layer will identify drinking water conveyance and water districts.
  - Data Quality – Ensuring that the King County sewer line and facilities data sets are up to date and accurate. The FIRS, Sewer Agency and Local Lines layers are datasets constantly in flux which need regular updates. Programming/Application Development - Data maintenance tools that allow the end user to update and add data and automatically create a GIS layer(s), tools to create cartographic products, and IMS (Internet Map

Server) pages will be developed to enable WTD staff to maintain their data and produce simple maps as needed.

- Metadata – ensuring that the metadata on all public and working servers is up to date so WTD staff can access the correct datasets for their projects.
- DBA Role – Numerous scattered data sets used by WTD are not being efficiently utilized in conjunction with other available data. These data are financial, asset management, engineering, inspection, maintenance, or monitoring related. WTD needs a systematic approach to its data maintenance, organization, and development with a single point of administration and a central RDBMS through which all of the division's data can be accessed and leveraged against other data. Since they have the data management skills, the WTD GIS Team will assume the DBA role for this data.

- WTD GIS and KCGIS Relations
  - Much of the data created for the WTD projects mentioned is posted to a county-wide data warehouse. This data is also provided on data disks which are sold to anyone wishing to use the data for their own needs. To adequately support a breadth of application needs the WTD GIS team create data to meet high standards. In this way they not only support WTD, but also the county as a whole. The matrix management approach applied to the WTD analysts is effective in that the analysts support WTD's mission while still supporting county-wide GIS efforts through cross-departmental support, data development, and by sitting on workgroups.

4.7.2 Planned Project Activity and New Projects

Name	**FIRS To GDB**
Description	Transfer Facility Information Retrieval System (FIRS) to a Geodatabase. The FIRS system allows facility inspectors to update their data and add sewer lines and manholes when needed. FIRS transfers this new information to SEWERS and FACILITY on *PLibrary2* every week. Currently, the FIRS system is programmed in Avenue and is temperamental. Transferring FIRS to a GDB will create a more stable product.
Interdependencies	None
Status	50% complete
Target	1/31/06
Activity	▪ Design Geodatabase ▪ Load Data ▪ Transfer update language from Avenue to Python ▪ Implementation

Name	**Non-GIS DB Plan**
Description	Develop a plan to incorporate all WTD databases into one workgroup geodatabase that all WTD staff can access. This will ensure that all staff have access to data they need and eliminate any duplicate data sets.
Interdependencies	None
Status	Started
Target	3/31/06
Activity	▪ Develop Conceptual Database Plan ▪ Invite WTD staff databases to participate ▪ Implementation

Name	**ETS Book**
Description	A hard copy map book of the Effluent Transfer System (ETS) that can assist the South Plant crew in maintenance activities.
Interdependencies	None
Status	Not yet Started
Target	9/30/06
Activity	▪ Transfer GPS readings of manhole locations to ArcMap ▪ Make Maps ▪ Create Book ▪ Deliver Book

Name	**System Book**
Description	A hard copy map book of the King County sewer system, local sewer lines, and local jurisdictions to assist WTD field inspection crews and office staff in planning and maintenance.
Interdependencies	Local Sewer Agencies; Local Political Jurisdictions
Status	Not yet Started
Target	12/31/07
Activity	▪ Collect data ▪ Compile data

	▪ Create Maps ▪ Create Book ▪ Deliver Book

4.7.3 Data Enhancement and Development

Name	**Local Lines Geodatabase**
Description	Transfer local sewer line and manhole shape files to personal geodatabase. This will ensure better management of the local sewer line data.
Interdependencies	Local Sewer Agencies
Status	50% Complete
Target	1/31/06
Activity	▪ Complete verifying topology ▪ Complete geometric network ▪ Implementation

Name	**Site Plan Development**
Description	Create a data layer showing the wastewater treatment plant sites including building foot prints. This will assist the treatment plat staff in maintenance, disaster planning and other activities.
Interdependencies	None
Status	Started
Target	12/31/07
Activity	▪ Research orthophotos and parcel data layer to determine best data source ▪ Extract data ▪ Create site plan data layer

Name	**Waterlines GDB**
Description	Create a geodatabase of water supply lines in the WTD service area. Currently, King County does not have water supply information. This data layer will assist in determining where water is available in case residents lose access to their primary water source during construction activities.
Interdependencies	County water districts

Status	Started
Target	12/31/07
Activity	▪ Contact local water service utilities ▪ Collect water supply line data layers ▪ Compile data into GIS format ▪ Create GDB

Name	**Storm Water GDB**
Description	A geodatabase of all storm water collection systems within the WTD Service Area. Currently King County does not have a comprehensive storm water collection dataset. This information with assist WTD staff in planning, upgrades and maintenance of King County's system.
Interdependencies	Local Storm Water Agencies
Status	Not yet started
Target	12/31/07
Activity	▪ Collect data ▪ Compile data ▪ Create GDB

Name	**GPS System**
Description	Acquire GPS readings for all man holes, pump stations, regulator stations and other facilities with in the WTD sewer system. This will enable the WTD GIS team to create a positionally accurate dataset to assist WTD staff in planning and maintenance of King County sewers.
Interdependencies	None
Status	Started
Target	12/31/07
Activity	▪ Training ▪ Set up Pilot ▪ Complete Readings ▪ Complete positionally accurate sewer system data layer

Name	Onelines to Arc9
Description	Onelines are King County sewer lines that are shown in a map book used by WTD field and office staff for planning and maintenance. The maps for the map book were developed in ArcInfo 7.x and need to be transferred to ArcGIS 9.x so the map book can be kept up to date.
Interdependencies	None
Status	Not yet started
Target	9/30/06
Activity	▪ Transfer maps from ArcInfo to ArcGIS ▪ Create new Onlines Map Book

Name	Water Reuse Layer
Description	Create a sub set of the Parcel dataset showing properties that would be available for reused water from the Brightwater treatment plant.
Interdependencies	None
Status	75% complete
Target	1/31/06
Activity	▪ Review Parcel layer ▪ Select appropriate properties ▪ Transfer to separate Water Reuse Layer

4.7.4 Application Enhancement and Development

Name	I/I Application
Description	ArcGIS tool that allows WTD staff to manipulate Infiltration and Inflow data to see how it affects downstream flows. This will help staff in planning future upgrades to the sewer system.
Interdependencies	None
Status	75% Complete
Target	1/31/06
Activity	▪ Build tables ▪ Identify formulas

	▪ Write code ▪ Create User Interface ▪ Launch Application

Name	**IW Application Maintenance**
Description	Industrial Waste section has a GIS application similar to FIRS that allows the industrial waste staff to update their data and have it transferred into a GIS dataset. It needs to be transferred to ArcGIS 9.x.
Interdependencies	None
Status	Not yet started
Target	12/31/06
Activity	▪ Research application status ▪ Transfer application to ArcGIS 9.x

Name	**Flow Monitor/Rain Gauge IMS (Internet Map Server) Site**
Description	Sewer flow monitors and rain gauges help WTD staff plan for future sewer system upgrades. Having instant access to flow monitor and rain gage data is important in this planning effort.
Interdependencies	None
Status	Not yet started
Target	3/31/06
Activity	▪ Incorporate Flow Monitor and Rain Gauge information into IMS application ▪ Launch IMS Site

Name	**Onelines to Web**
Description	Onelines are King County sewer lines that are shown in a map book used by WTD field and office staff for planning and maintenance. This map book will be transferred to the intranet so staff has easy access to it
Interdependencies	None
Status	Not yet started
Target	1/31/06

Activity	▪ Transfer maps to .PDFs ▪ Post on WTD website

Name	**Flow Monitor Update Application**
Description	Build an application similar to FIRS that allows flow monitor staff to update their data and have a GIS dataset created from it.
Interdependencies	None
Status	Not yet started
Target	6/30/06
Activity	▪ Build Application ▪ Launch Application

Name	**As Built Link**
Description	As Built drawings show King County sewers and facilities as they are built. Scanned drawings are available via the intranet, but they are difficult to search through. This link would allow the user to click on a pipe or facility located on an online map and have the As Built drawing(s) come up.
Interdependencies	None
Status	Not Yet Started
Target	6/30/06
Activity	▪ Create pilot project ▪ Create links for entire system ▪ Launch page

Name	**WTD IMS (Internet Map Server) Page**
Description	This page will allow Public and WTD staff internet access to King County sewers and facilities. The WTD staff will have access to a more detailed intranet page to allow for fast research and making simple maps.
Interdependencies	None
Status	Started
Target	3/31/06

Activity	▪ Create a pilot using Google Map ▪ Link to main WTD Internet ▪ Enhance pilot and apply to WTD Intranet

Name	**Layout Tool**
Description	An ArcGIS tool that allows end users to select data layers and map size and have a map automatically generated.
Interdependencies	GIS Center
Status	Not yet started
Target	12/31/06
Activity	▪ Acquire code from past layout tools ▪ Transfer code to ArcObjects/Python ▪ Launch tool

Name	**Metadata Tool**
Description	An ArcGIS tool that allows end users to easily update metadata.
Interdependencies	GIS Center
Status	Started
Target	6/30/06
Activity	▪ Acquire code for current metadata tool ▪ Simplify code to target just the required information ▪ Launch tool

Name	**Data Search Tool**
Description	An ArcGIS/Arcview tool that allows end users to easily find, select, and load data from the WTD public server into a map based on common names.
Interdependencies	GIS Center
Status	Not yet started
Target	6/30/06

Activity	▪ Acquire code form past data search tool ▪ Update code to see WTD public server ▪ Transfer code to ArcObjects/Python ▪ Launch tool

4.7.5 Hardware, Software, Database, and Licensing Changes

- Incorporate the plotter from the I/I office.

4.7.6 Staffing Changes

- None Planned

4.7.7 Other Changes

- None Planned

4.8 DNRP – Water and Land Resources Division

4.8.1 Agency GIS Overview, Priorities, and Goals

- **WLR mission:**
  - Serve as stewards of safe and clean water resources, healthy habitats, and functioning landscapes throughout King County.
  - Protect and enhance quality of life, public health, and public safety by managing our water and land "infrastructure" (farms, forests, shorelines and marine waters, rivers, lakes, streams, WRIAs and associated watersheds, drainage, groundwater systems throughout the region).
  - Serve as technical experts on King County's regional environmental quality for defining and implementing strategies for resource protection.
- **WLR GIS program Organization:**

  WLR GIS program consists four GIS analysts and is with a unique set up under the Department of Natural Resources and Parks (DNRP) GIS matrix-management structure, and in the same work unit as DNRP/WLR GIS, Visual Communication & Web working jointly with other technical experts to deliver services/ products for WLR work programs and DNRP director's office and other department/division special programs to accomplish the missions of the department and division. These four staff receives project assignments from DNRP/WLR GIS, Visual Communication & Web unit manager based on areas of expertise and project workloads.
- **WLR GIS Services**

  GIS provides data, tools and analytical services to assist in policy analysis, planning and monitoring of the natural environment. Multiple mandates include sustaining healthy watersheds, protecting public health and water & air quality, preserving open space and working farms and forests, ensuring adequate water for people and fish, managing public drainage systems and protecting/restoring habitats. All data sets that are created and maintained by the following programs are available on KCGIS Center's Data Warehouse, PLIBRARY, and/or the DNRP Data Warehouse, DNRPLIB. Specific business functions include:
  - ***Regional Services*** - GIS services for programs including WRIAs/watershed support, groundwater management and hazardous waste. GIS data and analysis are also used to predict and monitor flood hazard zones and provide basin-wide regional analysis.
  - ***Science, Monitoring and Data Management*** - Water quality, hydrologic assessment and analysis. Coordination with various data management and field activities to ensure efficient access to all relevant spatial data.
  - ***Office of Rural and Resource Programs*** - Data development, analysis, and mapping and application development for programs including agriculture, forestry, resource protection incentives, noxious weeds mitigation and natural lands management, basin and lakes stewardship programs.
  - ***Stormwater Services*** - GIS supports service delivery analysis, drainage investigation, and inspection services. Regulation, compliance, and NPDES permit compliance are also supported.
  - ***Capital Projects and Open Space Acquisitions*** - GIS is used to depict and analyze proposed acquisitions, and provide ecological and surface water engineering services.
  - ***The DNRP Director's Office -*** GIS is used for analysis of some regional policies, such as Open Space, Forest, Water, Energy and Air Quality/Climate change.
  - ***WLR Division Director's Office*** - GIS is used for analysis of policy and funding strategies work programs.

4.8.2 Planned Project Activity and New Projects

Name	**King County Software Migration**
Description	The plan and process of converting data and users to the new ArcGIS data formats and software.
Interdependencies	The KC GIS Center is leading this effort.
Status	In Progress
Target	2006/2007
Activity	▪ Participate in the King County Software Migration Workgroup, the All But Cadastral Data Conversion Workgroup, the ArcGIS Editor's Workgroup, and other related workgroups. ▪ Develop portions of the back-end posting scripts necessary for the new data formats as part of the Post Rep Workgroup. ▪ Begin to develop a migration strategy specifically for WLR.

Name	**Shoreline Master Program**
Description	The SMP will result in a draft proposal to characterize and designate King County's shorelines of the state and draft shoreline master program policies.
Interdependencies	This effort is funded by a grant from the Washington Department of Ecology.
Status	In Progress
Target	2006/2007
Activity	▪ Collect and organize existing GIS datasets needed for analyses. ▪ Collate, organize and reconcile databases. ▪ Document data sources. ▪ Assess data quality and identify data gaps. ▪ Conduct analyses as directed by SMP science workgroup. ▪ Create maps as needed. ▪ Develop a "lightweight" ArcIMS web application to report the findings to the public. This application may also include query pages for database searches.

Name	**ArcIMS Developers Workgroup**
Description	The ongoing effort to maintain and improve *iMAP*, King County's ArcIMS Internet application, and other related ArcIMS applications.
Interdependencies	The KC GIS Center is leading this effort.

Status	In Progress
Target	Ongoing
Activity	▪ Participate in the workgroup to set policies and best practices, as well as to share development ideas and expertise. ▪ Develop custom programming for the general *iMAP* interface as assigned by the workgroup ▪ Assist in conducting usability studies or focus groups.

Name	**Green River Normative Flows Study**
Description	Determine instream flows required to support salmon and maintain watershed health
Interdependencies	DNRP/WLRD/Watershed and Ecological Assessment is leading this project
Status	In Progress
Target	2006
Activity	▪ Orthorectify and mosaic aerial photographs of the Middle Green River for various years from 1936 to 1995 ▪ Analysis of channel occupation and vegetation changes ▪ Provide technical support for data collection and database design

4.8.3 Data Enhancement and Development

Name	**City_3co**
Description	This effort will consolidate the several different versions of incorporated boundaries maintained by different agencies into one version shared by all.
Interdependencies	This effort is being lead by the KCGIS Center.
Status	In Progress
Target	2006
Activity	▪ Update the Pierce and Snohomish portions of the data on an annual basis as the data is obtained by the KC GIS Center.

Name	**King County Land Cover**
Description	Classify Landsat or similar satellite imagery for land cover

Interdependencies	KCGIS will acquire and warehouse data
Status	Planned
Target	2006, repeat at intervals to be defined
Activity	▪ Preprocess imagery as required ▪ Define land cover classification schema in consultation with DNRP/WLRD and other interested County staff ▪ Apply land cover classification schema ▪ Accuracy assessment

4.8.4 Application Enhancement and Development

Name	**Groundwater Data Search**
Description	Develop additional search pages in this application to allow users to more fully query the Groundwater Protection Program Database.
Interdependencies	Will require merging new pages in with the existing application. May require additional development or modification of the existing Groundwater Protection Program Database.
Status	Not started
Target	2006
Activity	▪ Add new water level query page ▪ Add new water quality query page ▪ Enable groups of groundwater source selections from iMAP to be sent and processed by the application to return a summary table of available data. ▪ Explore the possibility of a dedicated iMAP tool to connect to the existing application ▪ Update database, resulting GIS layer, and application to conform to KC GIS Center naming standards for reserved words.

Name	**WRIA 9 Projects**
Description	Improve the method to locate the projects in the GIS data layer that is the subject of this *iMAP* map set. Currently projects are located by using PINs, but this is unsatisfactory for many stream related projects. Switch to using coordinate locations as captured either through GPS or *iMAP*.
Interdependencies	Will require the development of a new routine in Python as part of the Post Rep group of scripts which have not yet been completed.
Status	Not started

Target	2006
Activity	▪ Develop Python script to connect to a database table and create a GIS layer using coordinate data in the database table. ▪ Generalize the specific script developed for this particular instance to be functional within the Post Rep routines for particular types of user selected tables.

Name	**Mitigation Reserves**
Description	Create a new application that will assist users in finding receiving sites that meet their sending site characteristics.
Interdependencies	Requires management approval of methodology.
Status	Not started, still in early scoping
Target	2006/2007
Activity	▪ Develop listing of sending and receiving sites and create GIS layer. ▪ Develop user interface to assist in selecting appropriate sites.

4.8.5 Hardware, Software, Database, and Licensing Changes

- None planned.

4.8.6 Staffing Changes

- Not Planed

4.8.7 Other Changes

- Not Planed

4.9 DNRP – Parks and Recreation Division

4.9.1 Agency GIS Overview, Priorities, and Goals

- The mission of the Parks and Recreation Division is to operate and maintain the parks, trails, facilities, and programs which comprise the King County Park System. This encompasses three primary business functions: facility & site maintenance, recreation & event services, and program development & land management. Facility & site maintenance includes maintaining a safe and inviting parks environment and managing open spaces and natural areas. Recreation & event services involves providing primary recreation services for residents in unincorporated areas of King County and providing a year-round facility for hosting entertainment and educational events. Program development & land management takes in long-term planning for parks, open space, natural areas, and trails; development and coordination of the annual Capital Improvement Program and the six-year Capital Improvement Program; and property management oversight.
- The Parks and Recreation Division is comprised of five operational units: the Administrative & Financial Services Section, the Capital Planning and Land Management Section, the Marketing and Economic Development Section, the Parks Resource Section, and the Regional Parks, Pools and Recreation Section. GIS support is provided to all of these units, as well as to the Division Director's Office, by an allocation of 1.0 FTE. Work assignments are shared among three professional GIS analysts, who are part of the group of GIS analysts providing matrixed support to all DNRP divisions. The Parks GIS analysts are also affiliated with the KCGIS Center Client Services staff and Enterprise Services staff, which enables access to their specialized services and expertise when needed for Division projects. The Parks GIS analysts are jointly supervised by the Parks and Recreation Division GIS Program Manager and the KCGIS Center Client Services Manager.
- The Parks and Recreation GIS Program supports the Division's managers, staff, and programs with a full range of products and services. These include data development and maintenance, data interpretation and analysis, map design and production, application development and maintenance, web services, end-user training, and project consulting. The majority of products and services are provided on request to managers and staff of the Division's administrative offices in Seattle. A large number of requests are also handled on behalf of managers and staff working in outlying administrative offices or individual parks, such as Marymoor Park and Cougar Mountain Regional Wildland Park. These include maps and reports used for a variety of planning, management, and maintenance purposes.
- Providing GIS support to the Parks and Recreation Division has become increasingly challenging in recent years, due to reduced Division funding and staffing levels. Ongoing maintenance activities, new projects, and a large volume of requests create a level of demand which typically exceeds the number of hours available with 1.0 FTE. This necessitates close coordination with clients and Division management to ensure that the limited hours available are used as effectively as possible. In some instances, maintenance activities and low-priority projects must be delayed until lulls occur in the volume of other work. At other times, requested projects are referred to the KCGIS Center Client Services Group. Parks GIS staff also work with Division managers and staff to provide them with mapping and analytical tools and training so that they may perform GIS tasks on their own. This facilitates optimal distribution of the overall work load as it enables those whose work requires GIS support to become more knowledgeable about GIS concepts and capabilities and to successfully apply them independently.
- The primary strategic initiative for Parks GIS during 2006 is the conversion of existing enterprise park and trail data layers to the ArcGIS 9.x geodatabase model. Preliminary work on this task was begun during 2005, and this has enabled the Parks GIS analysts to move ahead with this initiative at an accelerated pace during the current year. A second key objective is to continue refining the functionality and operability of the Parks GIS web applications which support online information retrieval and mapping for parks, trails, and facilities.

- As a relatively small program, Parks GIS must conduct its work in the context of two key cross-agency dependencies. The first of these concerns data maintenance. Although the products and services which this program provides often involve numerous data layers, Parks GIS is itself the steward of only a few of these. The accuracy and reliability of its products and services therefore depend upon consistent, timely maintenance of data layers by other County GIS programs. The second key dependency is that of access to the specialized skills and expertise of the KCGIS Center Client Services staff and Enterprise Services staff. As the products and services of Parks GIS demand the use of increasingly advanced tools and techniques, it is essential for the program's GIS analysts to be able to consult with the staff of these two groups. Both Client Services and Enterprise Services have historically been open, approachable, and very supportive of the needs of Parks GIS. The dependency in this case is one of availability to specific staff at specific times, due to the heavy demands which are placed upon the staff of both groups.
- The mission of the Parks and Recreation Division is more narrowly focussed and specialized than that of many of the larger County departments and agencies. As a result, the Parks GIS Program also has a relatively narrow focus and a somewhat limited role in the overall KCGIS enterprise. There is a moderate amount of interaction with the other DNRP divisions, particularly Water and Land Resources, but little involvement in the activities of GIS programs in other departments. Parks GIS diligently maintains the enterprise data layers for which it has responsibility and is an active participant in the work of the DNRP Matrixed Services Unit. It also maintains active representation on the KCGIS Technical Committee and supports the initiatives and operations of that group.

4.9.2 Planned Project Activity and New Projects

Name	**Regional Trail Atlases**
Description	Design and production of a set of comprehensive maps, in atlas format, for all of the regional trails in King County. Each atlas would cover a single long trail or a group of shorter trails. These would be illustrated on standard maps displaying detailed trail alignments and trail-related features and facilities overlaid on recent high-resolution color imagery. Mapping of this type is a long-standing need of the Parks Trail Coordinator and the maintenance coordinators and staff who are responsible for upkeep of the trails. The atlas format would facilitate ease of use in the field, as well as reduce the cost and complexity of future updates.
Interdependencies	Completion of trail and facility data enhancement; Availability of adequate Parks GIS matrix services staff hours; Reliable operation and availability of the KCGIS Spatial Data Warehouse, the DNRP GIS data server, and ArcGIS 9.x software.
Status	On hold, pending completion of trail and facility data enhancement work and assured availability of adequate Parks GIS matrix services staff hours.
Target	2006 – End of 2nd Quarter
Activity	▪ Determine the number of atlases needed for the set and the specific trail(s) to be included in each atlas. ▪ Design the standard presentation format for all maps. ▪ Produce an initial draft of each map sheet and develop these through the editing process to the completion of a final draft for each map sheet. ▪ Print and bind atlases using suitably durable/weatherproof materials.

	▪ Distribute atlases to Parks Trail Coordinator, maintenance coordinators and staff, and others within the Division whose work would benefit from their use. ▪ Coordinate with Parks managers and staff to evaluate the utility and benefits of the atlases, make appropriate changes/improvements as necessary, and evaluate the feasibility of more widespread distribution of the atlases.

4.9.3 Data Enhancement and Development

Name	**Enterprise Data Layer Conversions**
Description	Conversion of existing Parks enterprise data layers PARK, PARK_FAC, and TRAIL from ArcInfo coverages to ArcGIS 9.x geodatabases and publishing of these data in the new format. This conversion will ensure that the data layers which Parks GIS maintain will continue to be fully compatible with other KCGIS spatial data as the County completes its migration to the ArcGIS 9.x environment.
Interdependencies	Reliable operation and availability of the KCGIS Spatial Data Warehouse and ArcGIS 9.x software.
Status	Conversion of the enterprise data layer PARK was partially completed during the second half of 2005. Once this conversion is finished, PARK_FAC and TRAIL will be completed.
Target	2006 – End of 2nd Quarter
Activity	▪ Design, convert, and QC the PARK, PARK_FAC, and TRAIL geodatabases. ▪ Post the new geodatabases to the Spatial Data Warehouse.

Name	**Trail and Facility Data Enhancement**
Description	Modification of Trail and Facility data layer designs to enable the incorporation of detailed new trail alignment and attribute information captured through extensive field GPS data collection during 2005. The redesigned data layers will be updated with the newly collected GPS data, and will be able to accept a wider range of information in future updates. This will directly benefit staff from Parks in their planning and maintenance of the County's recreational trails by providing more accurate and comprehensive information regarding trail location/alignment and trail-related features and facilities.
Interdependencies	Reliable operation and availability of the KCGIS Spatial Data Warehouse, the DNRP GIS data server, and ArcGIS 9.x software.
Status	In progress
Target	2006 – End of 1st Quarter
Activity	▪ Complete design of modifications to Trail and Facility data layers. ▪ Implement modifications to Trail and Facility data layers.

	▪ Update redesigned data layers with newly collected GPS trail alignment and attribute information.

Name	**MASTRAIL - Master Trails Database**
Description	Development of a master trails database which would include all current and proposed trails within King County. Trails data maintained by Parks would be supplemented with data acquired from municipalities, state and federal agencies, and other public and private organizations which maintain recreational trails. A master trails database of this type will support the Division's planning needs by helping to ensure that proposals for new trails and improvements to existing trails are planned with as much knowledge as possible about the overall network of trails in the County.
Interdependencies	Availability of suitable trails data from non-King County jurisdictions and agencies; Availability of adequate Parks GIS matrix services staff hours; Reliable operation and availability of the KCGIS Spatial Data Warehouse, the DNRP GIS data server, and ArcGIS 9.x software
Status	On hold, pending confirmation of availability of suitable trails data from non-King County sources and assured availability of adequate Parks GIS matrix services staff hours.
Target	2006 – End of 4th Quarter
Activity	▪ Develop an initial master trails database template, including all necessary trail characteristics and attributes. ▪ Review and refine this template to create the final database design. ▪ Populate the new database with all King County and non-King County trails data already available and suitable for inclusion. ▪ Contact non-King County jurisdictions and agencies to obtain additional trails data needed to make the database as comprehensive as possible. ▪ Develop and implement a plan for ongoing outreach to non-King County jurisdictions and agencies to obtain updated and expanded trails data as these become available; Integrate these data into the database when they are received.

4.9.4 Application Enhancement and Development

Name	**Web Application Updates**
Description	Modification of the Park Info and Park Locator web applications and the Parks iMap map set to operate using the new PARK, PARK_FAC, and TRAIL geodatabases. These applications are heavily used, both by Parks managers and staff and by the general public. It is essential that these users continue to be able to quickly and reliably access, display, and analyze the most current, comprehensive data for parks, trails, and facilities once these data have been converted to the schema used by the ArcGIS 9.x geodatabase model.
Interdependencies	Completion of the conversion of the enterprise data layers PARK, PARK_FAC, and

	TRAIL from coverages to geodatabases; Reliable operation and availability of the KCGIS Spatial Data Warehouse and ArcGIS 9.x software.
Status	On hold, pending completion of the conversion of the enterprise data layers PARK, PARK_FAC, and TRAIL from coverages to geodatabases.
Target	2006 – End of 3rd Quarter
Activity	▪ Identify needed modifications to Park Info, Park Locator, and the Parks iMap map set, based on differences between the schema used by ArcInfo coverages and the schema used by ArcGIS 9.x geodatabases. ▪ Update each application, including all needed modifications. ▪ Test each modified application using each of the new Parks geodatabases, as well as other enterprise data layers typically accessed by users with these applications. ▪ Activate each newly modified application in its appropriate location on either the Parks and Recreation web site or the KCGIS Center website.

Name	**ParkView Updates**
Description	Modification of the ParkView application to operate using the new PARK, PARK_FAC, and TRAIL geodatabases. This application is used extensively by managers and staff of both Parks and the Facilities Management Division of DES. It is essential to maintain their ability to access and display the most current, comprehensive data for parks, trails, and facilities once these data have been converted to the schema used by the ArcGIS 9.x geodatabase model.
Interdependencies	Completion of the conversion of the enterprise data layers PARK, PARK_FAC, and TRAIL from coverages to geodatabases; Reliable operation and availability of the KCGIS Spatial Data Warehouse and ArcGIS 9.x software.
Status	On hold, pending completion of the conversion of the enterprise data layers PARK, PARK_FAC, and TRAIL from coverages to geodatabases.
Target	2006 – End of 3rd Quarter
Activity	▪ Identify needed modifications to ParkView, based on differences between the schema used by ArcInfo coverages and the schema used by ArcGIS 9.x geodatabases. ▪ Update ParkView, including all needed modifications. ▪ Test the new version of ParkView using each of the new Parks geodatabases, as well as other enterprise data layers typically accessed by ParkView users. ▪ Install the new version of ParkView on individual desktops, and provide any necessary training and technical support to users.

Name	New Map Production Programs
Description	Development of new Visual Basic scripts to replace existing AMLs used for generating standard and custom map products. This is necessary to ensure that these maps, which are frequently requested by staff from Parks and other County agencies, can be generated using programs which are fully compatible with the ArcGIS 9.x software environment.
Interdependencies	Reliable operation and availability of ArcGIS 9.x and Visual Basic software.
Status	On hold, pending completion of higher-priority application enhancement and development projects.
Target	2006 – End of 3rd Quarter
Activity	▪ Identify all existing AMLs for standard and custom map production which need to be replaced with VB scripts. ▪ Write new scripts as necessary to provide equivalent or improved mapping capabilities, making use of all applicable functionality available in VB. ▪ Test all new scripts to ensure consistent reliable operation. ▪ Activate all new scripts on the appropriate server and remove all of the obsolete AMLs from all locations in which they were active.

4.9.5 Hardware, Software, Database, and Licensing Changes

- None planned

4.9.6 Staffing Changes

- None planned

4.9.7 Other Changes

- None planned

4.10 DNRP – Solid Waste Division

4.10.1 Agency GIS Overview, Priorities, and Goals

- The mission of the Solid Waste Division is to provide transfer and disposal services for solid waste materials in King County, using innovative waste reduction and recycling services and programs to reduce the overall amount of material that must be managed. The Division serves residential and non-residential customers, as well as commercial disposal services. Solid Waste maintains ten closed landfills and the Cedar Hills Regional Landfill in Maple Valley, which is the only operational landfill within the County. The Division also operates eight geographically dispersed transfer stations and two rural drop boxes. The primary goal of these activities is to conserve natural and renewable resources by providing customers with readily available services and by promoting public awareness of conservation, recycling, and the benefits of participation in the Division's programs.
- The Solid Waste Division is comprised of six operational units: the Engineering Services Section, the Finance and Administration Section, the Landfill/Shop Operations Section, the Planning Services Unit, the Recycling and Environmental Services Section, and the Transfer/Transport Operations Group. GIS support is provided to all of these units, as well as to the Division Director's Office, by an allocation of 1.0 FTE. Work assignments are shared among two professional GIS analysts, who are part of the group of GIS analysts providing matrixed support to all DNRP divisions. The Solid Waste GIS analysts are also affiliated with the KCGIS Center Client Services staff and Enterprise Services staff, which enables access to their specialized services and expertise when needed for Division projects. The Solid Waste GIS analysts are jointly supervised by the Solid Waste Division GIS Program Manager and the KCGIS Center Client Services Manager.
- The Solid Waste GIS Program supports the Division's managers, staff, and programs with a full range of products and services. These include data development and maintenance, data interpretation and analysis, map design and production, application development and maintenance, web services, end-user training, and project consulting. The majority of products and services are provided on request to managers and staff of the Division's administrative offices in Seattle. A small but growing number of requests are also handled for managers and staff working at outlying Division facilities, including the eight transfer stations and the Cedar Hills Regional Landfill. These include maps and reports used for a variety of planning, management, and maintenance purposes.
- The Solid Waste GIS Program has developed steadily since its inception at the beginning of 2003. Numerous projects are completed each year for a growing clientele, providing them with an increasingly diverse range of products and services. Solid Waste GIS enjoys strong support from Division management and earns consistently high ratings in recurring client satisfaction surveys. Demand for GIS products and services continues to grow within the Division, which has led to a rise in staffing levels from 0.5 FTE to 1.0 FTE in less than two years. GIS staff support is expected to be maintained at this level for the next few years, however, which has the potential to make providing GIS support to the Division increasingly challenging if increases in demand persist, as seems likely. Ongoing coordination with Division management and clients is essential to ensure that the FTE hours available are used as effectively as possible. Solid Waste GIS staff are also working with Division managers and staff to provide them with mapping and analytical tools and training so that they may perform GIS tasks on their own. This enables those whose work requires GIS support to become more knowledgeable about GIS concepts and capabilities and to successfully apply them independently.
- The primary strategic initiative for Solid Waste GIS during 2006 is continued outreach to the Division to ensure awareness of, and access to, GIS support for all staff and programs which can benefit from its use. This outreach effort is particularly focussed on the managers and supervisors at the eight transfer stations and the Cedar Hills Regional Landfill, whose operational environment and project needs differ from those at the Division's administrative offices in Seattle.

A second key objective is to continue expanding the functionality of the GIS web applications which support information retrieval and mapping for Solid Waste's Online Materials Exchange. These services enable citizens and businesses to locate sites which accept unwanted household materials and reusable building materials, as well as to list and search for garage, yard, and estate sales throughout the County.

- As a relatively small program, Solid Waste GIS must conduct its work in the context of two key cross-agency dependencies. The first of these concerns data maintenance. Although the products and services which this program provides often involve numerous data layers, Solid Waste GIS is not currently the steward of any of these. The accuracy and reliability of its products and services therefore depend upon consistent, timely maintenance of data layers by other County GIS programs. The second key dependency is that of access to the specialized skills and expertise of the KCGIS Center Client Services staff and Enterprise Services staff. As the products and services of Solid Waste GIS demand the use of increasingly advanced tools and techniques, it is essential for the program's GIS analysts to be able to consult with the staff of these two groups. Both Client Services and Enterprise Services have historically been open, approachable, and very supportive of the needs of Solid Waste GIS. The dependency in this case is one of availability to specific staff at specific times, due to the heavy demands which are placed upon the staff of both groups.
- The Solid Waste GIS Program is both newer and smaller than most other County GIS programs, and continues to focus primarily on growing its clientele and providing Division managers and staff with effective, high-quality products and services. As a result, it has to date had a somewhat limited role in the overall KCGIS enterprise. There is a moderate amount of interaction with the other DNRP divisions, primarily through the work of the DNRP Matrixed Services Unit, but there is relatively little involvement in the activities of GIS programs in other departments. Solid Waste GIS also maintains active representation on the KCGIS Technical Committee and supports the initiatives and operations of that group.

4.10.2 Planned Project Activity and New Projects

Name	**Cedar Hills Landfill complaint tracking and mapping**
Description	A new application for recording, tracking, and processing odor, noise, vibration, and bird complaints in areas adjacent to the Cedar Hills Landfill. A spatially-referenced complaint database will be designed and tested, along with a set of new data entry screens to ensure consistent recording of complaints. A set of standard maps and reports will also be developed to display information by area, time period, and type of complaint. Additional project activities may include creating automated processes for custom map generation and for analysis of complaint data.
Interdependencies	Reliable operation and availability of the DNRP GIS data server and ArcGIS 9.x software.
Status	On hold, following completion of initial review of data and reporting needs.
Target	2006 – End of 3rd Quarter
Activity	▪ Complete definition of system requirements. ▪ Design, test, refine, and deploy standard complaint data entry screens. ▪ Design, test, refine, and populate complaint tracking database. ▪ Train operators on use of data entry screens and update procedures.

	▪ Develop set of standard maps and reports for data display and analysis.

Name	**Illegal dumping complaint tracking and mapping**
Description	Completion of the development of an automated system for entering and processing illegal dumping complaints in a spatially-referenced database. Planned work includes database expansion and refinement, and automated processes for standard/custom map creation and for standard/custom data analyses.
Interdependencies	Reliable operation and availability of the DNRP GIS data server and ArcGIS 9.x software.
Status	On hold, pending assessment of existing system elements and determination of remaining work necessary to develop missing elements and integrate all of the pieces into a complete system.
Target	2006 – End of 2nd Quarter
Activity	▪ Complete assessment of existing system elements and determination of remaining development and integration work necessary to complete the system. ▪ Design, test, and implement database refinements. ▪ Complete needs assessment and definition of system requirements for automated map creation and data analysis applications. ▪ Design, test, refine, and deploy automated map creation and data analysis applications. ▪ Provide training as necessary to Division staff.

Name	**Abandoned vehicle tracking, mapping, and analysis**
Description	Development of an automated system for entering and processing reports of abandoned vehicles in a spatially-referenced database. Planned work includes database design and development, creation of a standard data entry interface, and automated processes for map creation and data analysis.
Interdependencies	Reliable operation and availability of the DNRP GIS data server and ArcGIS 9.x software.
Status	Not yet started
Target	2006 – End of 3rd Quarter
Activity	▪ Assess requirements for data, mapping, and analysis related to locating and disposing of abandoned vehicles. ▪ Design, test, refine, and implement standard data entry interface. ▪ Design, test, refine, and populate abandoned vehicle database. ▪ Complete needs assessment and definition of system requirements for automated map creation and data analysis applications.

	▪ Design, test, refine, and deploy automated map creation and data analysis applications. ▪ Provide training as necessary to Division staff.

Name	**New transfer station siting analysis and mapping**
Description	Identification, analysis, and mapping of potential candidate sites for new transfer stations east of Lake Washington and in South King County, based on search criteria established by Division and project managers. This will be a new phase of work for a project which was active during 2003 and 2004 but which has since been on hold. The Division's needs for new and additional transfer station capacity have continued to grow to the point that further analysis of potential sites is now necessary. This process will be supported by site analysis and selection, as well as production of maps and reports for the sites chosen.
Interdependencies	Reliable operation and availability of the KCGIS Spatial Data Warehouse, the DNRP GIS data server, and ArcGIS 9.x software.
Status	On hold, pending direction from Division management.
Target	2006 – End of 4th Quarter
Activity	▪ Conduct site analysis and selection, based on criteria established by Division and project managers. ▪ Design and produce maps and reports illustrating and describing suitable candidate sites.

4.10.3 Data Enhancement and Development

Name	**HAZUS-related data development**
Description	Creation, maintenance, and mapping of HAZUS-related data layers for use in SWD disaster response planning. These data will identify: 1) Areas of high, medium, and low risk for large volumes of debris generation from earthquakes, windstorms, and other major disasters; 2) Suitable sites for temporary disposition of disaster-generated debris; and 3) Suitable sites for permanent disposition of disaster-generated debris. Estimated volumes of debris to be expected in different types of areas from various types of disasters will be calculated utilizing HAZUS software from the Federal Emergency Management Agency.
Interdependencies	Availability of adequate, suitably-detailed data for: 1) Risk levels for damage and debris generation; 2) Structure type and density; and 3) Forest species and density; Applicability of HAZUS modelling software to King County's complex urban and rural geography and to the types of disasters most likely to occur in this area; Reliable operation and availability of the KCGIS Spatial Data Warehouse, the DNRP GIS data server, and ArcGIS 9.x software.
Status	Research is under way concerning the adequacy of available data for calculating debris volumes and the utility of the HAZUS modelling software. Further discussions and project planning will take place as the results of this research are compiled.

Target	2006 – End of 4th Quarter
Activity	▪ Complete research into the adequacy of available data for calculating debris volumes and the applicability of the HAZUS modelling software. ▪ Acquire current version of the HAZUS modelling software. ▪ Acquire all suitable available data for: 1) Risk levels for damage and debris generation; 2) Structure type and density; and 3) Forest species and density. ▪ Conduct initial modelling of data for areas of highest anticipated risk of high-volume debris generation; Evaluate validity of results; Determine whether to proceed with additional modelling runs. ▪ Conduct additional modelling as appropriate for all areas for which adequate suitable data have been acquired. ▪ Estimate debris volumes likely to be generated for all areas modelled. ▪ Establish capacity criteria for sites needed for temporary and permanent disposition of disaster-generated debris, using these volume estimates. ▪ Conduct site analysis and selection, based on these capacity criteria. ▪ Design and produce maps and reports illustrating and describing suitable candidate sites.

4.10.4 Application Enhancement and Development

Name	**Garage/Yard Sale online mapping utility**
Description	Complete the evaluation, final revision, and implementation of the mapping utility developed during 2005 for displaying locations of garage, yard, and estate sales on the Division's web site. Identify and complete needed refinements and enhancements, based on feedback obtained during the application's online testing phase. Once these have been completed, transition the mapping utility to ongoing maintenance.
Interdependencies	Reliable operation and availability of the KCGIS Spatial Data Warehouse, the DNRP GIS data server, and ArcGIS 9.x software.
Status	On hold, pending completion of online testing and analysis of user comments and suggestions by project management.
Target	2006 – End of 1st Quarter
Activity	▪ Evaluate user comments and suggestions to identify needed refinements and enhancements. ▪ Revise the mapping utility to incorporate needed refinements and enhancements. ▪ Test the revised application and make any final necessary revisions. ▪ Activate the final version of the mapping utility on the SWD web site.

Name	Web mapping application development
Description	Design, development, and implementation of web-based mapping utilities for reusable material exchange sites and King County transfer stations, to operate on the SWD web site. The new mapping utilities will enable more accurate, detailed online mapping of locations for exchanging reusable building and household materials, as well as locations of King County-operated transfer stations.
Interdependencies	Reliable operation and availability of the KCGIS Spatial Data Warehouse, the DNRP GIS data server, and ArcGIS 9.x software.
Status	On hold, pending completion and satisfactory ongoing operation of the garage/yard sale online mapping utility.
Target	2006 – End of 4th Quarter
Activity	▪ Design new mapping utilities, or modify the garage/yard sale online mapping utility, to meet the needs of mapping reusable material exchange sites and King County-operated transfer stations. ▪ Develop, test, refine, and implement each of the new mapping utilities.

Name	Property owner notification system
Description	Certain SWD actions require notification of neighboring property owners, which in turn requires preparation of mailing labels for all properties subject to the notification. Development of an application for identifying all subject properties for a notification and creating the necessary mailing labels would greatly reduce the time and effort required to prepare and distribute such notifications.
Interdependencies	Reliable operation and availability of the KCGIS Spatial Data Warehouse, the DNRP GIS data server, and ArcGIS 9.x software.
Status	Not yet started
Target	2006 – End of 4th Quarter
Activity	▪ Define system requirements for identifying subject properties, querying spatial and tabular data to extract property owner names and addresses, and formatting the extracted information to print mailing labels for notification documents. ▪ Develop, test, and refine an interface to enable user input of information to define a notification area and initiate the search and retrieval of property owner name and address information. ▪ Develop, test, and refine the data retrieval, data formatting, and label printing components of the new application. ▪ Implement all components of the new application. ▪ Train users on operation of the interface and provide assistance to ensure that it is operating properly and that the needed mailing labels are being generated in an accurate, consistent manner.

4.10.5 Hardware, Software, Database, and Licensing Changes

- None planned

4.10.6 Staffing Changes

- Staff support was increased from 0.75 FTE for 2005 to 1.0 FTE for 2006

4.10.7 Other Changes

- None planned

4.11 Department of Public Health

4.11.1 Agency GIS Overview, Priorities, and Goals

- The mission of the Department of Public Health – Seattle & King County is to achieve and sustain healthy people and healthy communities throughout King County by providing public health services which promote health and prevent disease. Public Health – Seattle & King County provides direct services and education to the residents of King County, Washington, in order to prevent health problems from starting, spreading, or progressing. Public Health helps the entire community, protecting and promoting the health of all residents
- Currently the Department of Public Health does not have a coordinated GIS program. Three divisions are using GIS in support of their business: Environmental Health (EH), Epidemiology, Planning & Evaluation (EPE), and Emergency Medical Services (EMS). The Department also does not have any person with full-time GIS responsibilities. Overall, there are three employees who are using GIS on almost an everyday basis (power users) and another nine people who have ArcGIS or ArcView installed on their desktops.
- Environmental Health (EH) has been using GIS software for several years. In the past, most of the support for GIS in EH was received from DDES GIS in an arrangement between DDES and Public Health. With the move of the KCGIS Center to DNRP, a mandate also came down suspending the arrangement between DDES and EH. All GIS support must currently come from KCGIS Center. Many of the EH stuff that were originally trained by DDES have either left the department, or are only using GIS on an occasional basis. One staff member does the bulk of GIS tasks in EH at this time. Several staff use GIS on an occasional basis, and several more access information via the KCGIS Center Internet mapping site. EH currently owns 4 licenses for ArcView 9.1 and one license for ArcView 3.2 that was awarded by a Livable Cities grant from ESRI Software. These licenses are shared over the local server with staff from EPE, as well as the several occasional EH users. The ArcView 3.2 license is installed locally for the one staff member who uses GIS on a daily basis. There is also a plan to purchase a single floating license of ArcGIS and use it within the Department
- Until recently, EPE has used GIS primarily for creating static thematic maps to display data on health events in King County and Washington State. EPE receives requests for these descriptive maps from other Health Department units that have no GIS capability of their own, and from community, research and health care organizations and the general public. EPE also produces a number of reports each year that include thematic maps on topics such as the distribution of childhood asthma hospitalization rates by zip code in King County. ArcView is now used to geocode large, annually updated data sets such as King County birth and death records. We're looking at additional ways to geocode exception data that have valid street addresses that are not yet included in the underlying street database. EPE is currently exploring possibilities for expanding our GIS capacity and further integrating GIS into its core assessment functions. In particular, we're searching for additional software that could be used in conjunction with ArcView to do spatial statistical analysis on disease distribution and trends, and exposure events. There are also plans to add an interactive mapping function to an analytical software package (VistaPH) that was developed in EPE and is now being used by local and state health jurisdictions throughout Washington. EPE section also would like to coordinate products related to the 2000 Census with King County and Seattle demographers. Each one wants to prepare one or more maps, bulletins with tables, text, and graphs reporting results of the Census. There is also a current discussion of a web page that has been prepared for the White Center community by the GIS Center stuff, with an interactive map and 82 items of Census information. The EPE and King County demographer would like to extend that site to other communities in King County, including breaking up Seattle into neighborhoods - and the Seattle demographer is interested in that too. As part of a data warehouse project, we are evaluating the feasibility of web mapping as a way of distributing community information. In relation to this project, we are considering whether we should switch from ArcView 3.x to ArcGIS 9.X. Currently, there are only two people in EPE using

ArcView; one primary user and one occasional user. One received basic training through a course offered by King County GIS, and the other attended an ESRI class but is largely self-taught. We rely primarily on the King County data library as our source of geospatial data. There is also a plan to purchase a single floating license of ArcGIS and use it within the Department.

- EMS is utilizing GIS capabilities to produce timely thematic maps for the customers (Fire Departments, Paramedic Services) as well as to perform quality control, data analyses and planning. The requests for maps are generated by EMS staff, research organizations, hospitals and, general public. Annual and semi-annual reports with cartographic materials are published and distributed among all Seattle-King County Fire Departments, Paramedic providers, County Council, etc. Currently there is one person in EMS using ArcView 8.2 on a regular basis and another ArcView 3.1 for specific projects. The Division is using GIS Public Library to access geographic data. There is also a plan to purchase a single floating license of ArcGIS and use it within the Department.

4.11.2 Planned Project Activity and New Projects

- No activity planned in this area

4.11.3 Data Enhancement and Development

- No activity planned in this area

4.11.4 Application Enhancement and Development

- No activity planned in this area

4.11.5 Hardware, Software, Database, and Licensing Changes

- EMS will upgrade ArcView 8.2 to 9.1.
- Discussion is planned on purchasing an ArcGIS floating license for the Department.

4.11.6 Staffing Changes

- None

4.11.7 Other Changes

- None

4.12 DOT – Road Services Division

4.12.1 Agency GIS Overview, Priorities, and Goals

- The Road Services Division (RSD) designs, builds, operates, and maintains roads, bridges and pathways in unincorporated areas of King County. The Division strives to make the County's transportation system safe and efficient for all uses and modes of travel. Road Services' GIS activities support this mission in the areas of planning, engineering, construction, maintenance, emergency response, and Traffic Services for unincorporated King County. GIS staff distributed across several Road Services offices provide user support, technical application support, spatial analysis, data collection and management, and map making services.
- The RSD staff has office space and field operations in multiple locations, including two floors of the King Street Center, multiple buildings at the Renton Maintenance Complex, and 12 satellite maintenance offices spread throughout King County. Each unit has unique and specific business needs, while working toward the common Division goal of safe and efficient transportation and mobility. Consequently, staffs utilizing GIS are also spread throughout the Division to better meet these specific business needs.

  The decentralized structure of Road Services' GIS work requires division-wide coordination. The continuing development and implementation of GIS-related activities is a crucial part in improving the Division's efficiency. RSD staff is responsible for data maintenance and development, data analysis, applications support, and internal work requests that can originate outside of their work unit.

  Expertise in transportation and specific RSD programs and business systems enable the RSD transportation professionals in Administration, Traffic Engineering, Maintenance, Engineering Services (including Survey Services), and CIP & Planning Sections to support and efficiently deliver quality GIS products and applications specific to RSD business. Listed below are some of the business functions within the Division that rely on Geographic Information.

  Capital Improvement Program (CIP) – Identifies, programs, roadway projects, bridge projects, intersections and traffic flow improvements, including intelligent transportation systems. Projects are mapped, reported, and analyzed using GIS.

  Concurrency Management Program – The King County Council adopted a Transportation Concurrency Management requirement in Ordinance 11617, effective January 9, 1995, and revised under Ordinance 14375, effective June 28, 2002. The ordinance establishes a concurrency management system that assures adequate transportation facilities are available to meet the requirements of new development in King County. GIS is used to depict the areas of the county that have adequate transportation facilities.

  Cultural Resources Protection – Laws at the federal, state and local level require agencies such as the RSD to consider impacts of their projects on significant cultural resources. Furthermore, discovery of cultural resources during construction can lead to schedule and budget overruns. For these reasons, the RSD and the Historic Preservation Program (HPP) are developing a GIS planning tool that will increase King County's ability to efficiently manage and protect archaeological and other cultural resources. The planning tool includes the collection and maintenance of data housed in a digital library, and an archaeological sensitivity model created and expressed in GIS.

  Emergency Preparedness and Response - Prepare for, and respond to, natural and man-made disaster events affecting the safety and closure of bridges and roadways. Includes snow and ice removal, removal of downed trees, landslide cleanup, flood response activities, and emergency road repair.

  Engineering Technical Support Services – In-house services that support the RSD's CIP include, but are not limited to, field surveying using GPS, materials lab analysis, computer aided drafting design and mapping, and record management and archival support.

Environmental Compliance – The GIS data, tools, and applications necessary for the RSD to achieve environmental compliance require constant update and evaluation by staff with technical expertise in roadway construction, maintenance, and engineering. GIS is a critical tool in complying with federal, state, and local environmental laws, regulations and policies. The federal Endangered Species Act, as well as the Clean Water Act, requires detailed geographical data regarding waterways habitat and storm water. Compliance with other federal environmental regulations, such as Army Corps of Engineer permit requirements, is greatly enhanced with accurate GIS data and applications. At the state level, fish and wildlife code and water quality laws necessitate accurate geographical data in terms of roadways, fish habitat, and storm water. Adherence to the state Growth Management Act is also more easily accomplished with accurate geographic environmental data. King County codes such as the Sensitive Areas Ordinance also require the RSD to use and update accurate GIS information and applications.

Inter-jurisdictional Service Contracts – The Road Services Division provides a significant level of contract service to eleven cities that have incorporated since 1990, or expanded significantly through annexation. The Division also has valued contractual relationships with many additional cities. Services provided by contract include maintenance, engineering, environmental, and transportation planning services.

Road and Bridge Maintenance Operations – Provides regular ongoing maintenance, operations, and repair activities to ensure a safe, quality roadway system in unincorporated King County. GIS tools are used to track facility inventories that are maintained and managed using the Division's Maintenance Management Systems (MMS).

Traffic Operations - Includes the collection and analysis of traffic count and accident data; operation of traffic control systems; design, inventory tracking, installation and maintenance of safety improvements including signals and other traffic control equipment, guardrails, signs, and pavement markings; traffic impact (of development) review; and identification and implementation of neighborhood safety improvements.

Transportation Planning – The Transportation Needs Report (TNR), which represents the transportation improvement projects necessary for the next 20 years, is being revised along with the method used to prioritize projects for funding in the CIP. The GIS is being used as a primary tool to aggregate different types of transportation projects to common corridors. A corridor approach to programming diverse CIP projects will lead to efficiencies to program planning, design, mitigation and construction.

- RSD GIS professionals provide primary technical support to end-users and systems. They are well-trained and highly knowledgeable in GIS and specific Department and Division-level databases, applications and business needs. In addition to supporting existing users, they are responsible for accommodating new users and business systems that require access to geographic information. The GIS professionals also identify potential future users that would benefit from access to such geographic data. GIS professionals are largely responsible for maintenance of agency data layers (e.g., County Road System Inventory), development of customized end user applications, production of sophisticated analysis and map products, and support of out-of-the-box client applications that provide access to data and simple analysis tools. GIS staff provide technical expertise, business expertise, low level training, user support, vendor software installation, and maintenance and business application support. GIS professionals are also end-users themselves, often being called upon for sophisticated data analyses or map products that are beyond the expertise of other end-users.

  The Division's GIS Technical Committee representation is a shared effort, coordinated between the Division's IT Technology Coordinator and the Maintenance Section Technology Unit Supervisor.

  GIS coordination in the RSD is accomplished through committee structures led by the Division IT Technology Coordinator. The Division IT Technology Coordinator is a member of the RSD IT Coordination Team and reports to the Division's Budget and Systems Manager. The Budget and Systems Manager reports to the Division Director. The mission of the IT Coordination Team is to

facilitate Division-wide IT coordination, development, and implementation in the areas of GIS, web development, database management, infrastructure and new technology in order to improve Division efficiency and reduce unnecessary redundancy. A primary work item assigned to the Division IT Technology Coordinator is to administer coordination of the Division's decentralized GIS network.

The RSD GIS committee meets bi-monthly. Coordination activities currently underway include development of the annual division-wide GIS work program, metadata library improvements, data inventory, GIS resource identification, licensing standardization, and equipment standardization. The Roads GIS committee also coordinates hardware purchases, data development, application development resources, software support, software licensing compliance, and hardware support.

Section GIS staff support end-users with GIS software applications, development, and maintenance of GIS, respond to GIS-related work and map requests. Currently there are approximately 30 GIS end-users in the RSD.

Customers and potential customers can obtain GIS services from RSD staff by contacting any RSD GIS support staff. King County customers can request services either by phone, email, in-person or through our GIS request tracking system. Once a request is received, the appropriate staff member reviews the request and either forwards it to the appropriate Section GIS member, or fulfills the request based on their knowledge to complete the task, workload and priority.

New users in the Division that are identified as potential GIS users are added to the Roads ArcView group. Network versions of ArcView are then installed on their desktop. Appropriate section staff provides an overview of available King County data and then ArcView training is set up with the KCGIS center.

Existing users usually require ArcView application assistance, troubleshooting server connections, clarification on data usage, and plotting assistance. Most of these users occasionally use ArcView to accomplish their own unique project related tasks.

Non-GIS users in the Division seldom need access to data or applications, but are often in need of map production or analysis to support requests from the Council, department directors, managers, supervisors, project managers, field and office staff, and the public.

RSD managers are frequently supported by RSD GIS staff. They are usually in need of data analysis and/or project specific location maps. This work is done on a project-by-project basis.

4.12.2 Planned Project Activity and New Projects

Name	**Road Services Division Web Mapping Tool**
Description	This is a project to allow RSD workers to map and retrieve incident locations over the Web.
Interdependencies	Undetermined at this time.
Status	Tentative
Target	Year end 2006
Activity	▪ Planning

4.12.3 Data Enhancement and Development

Name	**Accident Information**
Description	The Accident Information System inventories and compiles statistics on reported accidents in unincorporated King County. New enhancements will be used to consolidate all existing mainframe and Access data into one Microsoft SQL server application with data input, inquiry, and reporting available over the King County intranet.
Interdependencies	Dependent upon availability of Division DBA and programming resources. Dependent upon project/process research and review underway within RSD
Status	On Hold
Target	Tentative – end of 2006
Activity	▪ In 2005, RSD will utilize GIS mapping and query capabilities. ▪ The application will be designed to generate reports in the Traffic Safety Report format and other often used reporting formats. ▪ Ad hoc query capabilities will be provided. ▪ Current Route Order location data functionality will be migrated from mainframe to a Microsoft SQL server platform in order to support GIS mapping of the data by accident locations.

Name	**TNET Centerline Improvements**
Description	RSD has assumed responsibility for maintaining the road centerline geography in unincorporated King County and in cooperation with DOT Transit for those cities that do not actively participate in the TNET consortium. This includes improving the spatial accuracy of existing linework based upon 2002 higher accuracy imagery and adding new linework as new roads are developed.
Interdependencies	Editing is dependent upon network and RDBMS availability, enterprise editing tools and, synchronization tools.
Status	Editing capabilities are currently restricted by necessary TNET database management activities.
Target	This is a long-term improvement program. Principle improvements are expected to be completed about mid 2007 if editing can resume in January 2006 and Division resources remain available.
Activity	▪ Editing and updating the centerlines for unincorporated King County with TNET extension using KC Aerial Imagery acquired in 2002. ▪ Add new roads as they are identified

Name	Aerial Imagery Update
Description	As a member of the Digital Imagery Workgroup, and in conjunction with the KCDOT Homeland Security, RSD is pursuing the possibility of establishing a program for regular updates of high-resolution aerial imagery for the County.
Interdependencies	Dependent upon identification of funds, imagery specifications, and acceptable licensing/re-acquisition schema.
Status	In development. RSD is pursuing funding for a countywide imagery acquisition and renewal program through Homeland Security UASI grants. At the same time the Technical Committee Digital Imagery Workgroup is pursuing development of specifications and potential partnering with other King County agencies.
Target	The aim is to have final ortho-photos available to users by year-end 2006
Activity	▪ Planning

4.12.4 Application Enhancement and Development

- None planned for 2006

4.12.5 Hardware, Software, Database, and Licensing Changes

- No changes for 2006

4.12.6 Staffing Changes

- None for 2006

4.12.7 Other Changes

- None

4.13 DOT – Transit Division

4.13.1 Agency GIS Overview, Priorities, and Goals

- The mission of the Transit Division is to provide the best possible public transit services that get people on the bus and improve regional mobility and quality of life in King County. Within the Division, the Information Technology Section (formerly Management Information and Transit Technology (MITT)) houses Transit GIS. This section is responsible for a set of core Transit functions that ensure the daily operation of business systems necessary to run the transit system and guarantee the integration of technology projects into Transit's business process and operating environment (http://dot.metrokc.gov/mitts/mitthome/default.htm). The workgroups within the section form a comprehensive team for supporting Transit's information systems infrastructure. Within the section, the Transit GIS workgroup is focused on the day-to-day operational needs to provide the County with bus service. These include the ongoing maintenance of GIS data and applications necessary to support Division, Department, and County business needs. The Transit GIS workgroup represents the Transit Division focal point for all spatial services, data, applications, and support requests originating from within and from outside the Division.
- GIS is an *enabling* technology, and Transit GIS' responsibility is to provide GIS users a healthy, functioning system, ensuring that the necessary infrastructure is in place and accessible for staff throughout the Division to incorporate GIS tools and data into their workflows as required. This workgroup has a clear understanding of all Transit business functions, the geographic elements of these functions, and the best delivery mechanisms necessary to support them. These mechanisms include publication of spatial information in Transit corporate databases with other business data; development of specialized extensions to GIS vendor off-the-shelf products; development of whole new applications to support spatial data maintenance, access, and reporting; and advice to project managers on the acquisition of vendor products with geographic components. The Transit Division GIS workgroup also has the responsibility for coordinating data maintenance of a variety of business specific spatial data layers. Both the support services and data maintenance coordination responsibilities are essential to many business functions within the agency.
- GIS Professionals within the workgroup provide technical expertise, transit business expertise, training, transit map / data products, user support, vendor software installation, and application support. These support services are targeted primarily at internal Division clients including Service Planning, Service Development, Service Quality, Service Communication, Safety Program, Security Program, Paratransit Operations, Design and Construction Program, Transit Speed and Reliability, Automatic Passenger Counters, Customer Information, and federally mandated Equity in Transit and Section 15 Reporting. A historical organizational relationship exists between Transit GIS and DOT's Transportation Planning Division, which was absorbed in the Road Services Division and the DOT Director's Office. Transit continues to support these users as well. Also, Transit information systems projects often have geographic components necessitating GIS staff expertise. For the next several years, the highly visible On-board Systems, Radio Replacement, and Regional Fare Card capital projects have priority for the agency, and will continue to require occasional consulting from Transit GIS. Providing excellent support services to existing operations within Transit, these capital projects, and other external clients (see below) will continue to be a challenge given current staffing levels and budget constraints.
- In addition to Transit geographic business needs, new relationships will continue to be forged as the new Transportation Network (TNET) GIS Data Maintenance Initiative is deployed. This program is a consortium of regional cities, county agencies as well as public/private partnerships participating in maintaining a seamless database of transportation related spatial and attribute datasets. These datasets are housed centrally and maintained by transportation planners, city and county engineers, Emergency Response personnel and GIS analysts. This cooperative

arrangement permits the availability of a high-accuracy, up-to-date transportation network suitable for a variety of transportation planning, operations, and related business functions throughout the region. Transit GIS plays three pivotal roles in the TNET program:

- Maintain Transit specific pathways. Transit GIS participates in the TNET Program as other Consortium partners with the responsibility of data maintenance for all features within King County Metro's jurisdiction such as streets at park and rides, bases, transit centers, the transit tunnel, and the E-3 busway. Transit GIS also is responsible for data maintenance of features that extend outside of King County such as freeways, state routes, and roads necessary for routing buses in adjacent counties. Finally, to achieve complete geographic coverage, Transit GIS has assumed the responsibility of maintaining any "unclaimed" geographic areas within King County.
- Support the Master environment and each agency's implementation of TNET infrastructure: The TNET architecture consists of a central master repository that is replicated to each participating agency. Transit GIS is responsible for managing the entire infrastructure of the master repository including the database, the software, developed applications, and hardware (including a separate test/development environment). Support activities include monitoring the TNET system; ensuring access by Consortium members; maintenance and administration of ArcSDE; ensuring the proper functioning of the connectivity infrastructure; server support; application maintenance; database maintenance and software upgrades; as well as operating system maintenance and upgrades. Transit GIS will also provide assistance to all participating agencies in the support of their respective agency environments.
- Coordinate the TNET Consortium. Transit GIS will serve as coordinator for the TNET Consortium. This includes coordinating editing conflicts between agencies; ensuring the proper and consistent implementation of the data maintenance standards; providing informational seminars to technical staff, management, and decision makers as requested; and hosting Consortium meetings as needed.

Transit GIS provides support to TNET Consortium members through a group email monitored by Transit GIS Staff (TNET@metrokc.gov), a GIS Community forum hosted by the Washington chapter of URISA (http://waurisa.org/phpBB2/index.php), and an informational website hosted by the King County GIS Center (http://www.metrokc.gov/gis/Projects/TNET/TNET_main.htm). The King County GIS Center is regularly informed of Transit GIS' TNET Consortium activity so that the enterprise might benefit from those relationships. The new transportation network will not only increase the number of users supported by Transit GIS, but it will add users from non-King County agencies who will be accessing an important and highly-visible system. It will be an ongoing challenge for Transit GIS to prioritize support required by Transportation Network Consortium members and Transit business personnel.

- Members of Transit GIS also participate on a variety of Federal workgroups to develop national standards for the communication of Transit spatial data to public and private agencies. The goal is to both convey King County Metro Transit's requirements and minimize any impacts to the agency in adopting these standards. Also, Transit GIS is involved in the development of a transportation database of location-based transportation data to use in GIS across the state of Washington (http://www.wsdot.wa.gov/mapsdata/TransFramework/default.htm). As part of this framework effort, King County Transit GIS is working closely with Pierce County and Washington State DOT on a pilot advisory team to develop a seamless multimodal transportation network between the two counties. King County will benefit from this project in its alignment of transportation network features along the county boundary supporting 911 service provision and regional transportation planning.

4.13.2 Planned Project Activity and New Projects

Name	**Transit GIS Migration**
Description	Migrate all users, data, and applications off UNIX and on to Wintel platform.
Interdependencies	Migration from UNIX, legacy ArcInfo, and the coverage format necessitates the GIS Center accepts shapefiles or geodatabases for enterprise library. (Resolved)
Status	In Progress – All users and data migrated
Target	2006
Activity	▪ Complete conflation of transit spatial features to new transportation network (TNET). ▪ Complete development and production deployment of all applications. ▪ Retire legacy applications and UNIX server.

Name	**TNET**
Description	Development of a new high-accuracy, multi-modal, current transportation network data layer, data maintenance application, and model for cooperative, distributed data maintenance with county departments and local jurisdictions.
Interdependencies	Will require modifications to the enterprise directory structure, AvMaps, and AvLib applications. Coordination with the GIS Center for inclusion of TNET data on data CDs. Coordination with external transportation network data maintainers will include the KC GIS Center. The Road Services Division, DDES, and E-911 Program Office are expected to be data maintainers.
Status	In Progress
Target	2006
Activity	▪ Develop TNET metadata. ▪ Deploy TNET data for use with Transit information systems. ▪ Deploy TNET data to KC GIS Center enterprise database. ▪ Deploy system (data, maintenance application, and connectivity technology) to consortium members.

4.13.3 Data Enhancement and Development

Name	**Landmarks/Points of Interest**
Description	Develop a single data maintenance procedure and data layer combining the landmarks data layer maintained by Transit and points of interest data layer maintained by the GIS Center.

Interdependencies	Coordination with the GIS Center and any other workgroups interested in these two data layers.
Status	Not Started
Target	2006/2007
Activity	▪ Design data layer structure. ▪ Identify data owners, users, and methodology for data maintenance. ▪ Train data maintainers. ▪ Implement

4.13.4 Application Enhancement and Development

Name	**MoEmitter**
Description	This project will replace an existing application. This application allows Transit staff to manage the location and attributes of vehicle location emitters. This application was developed using MapObjects 1.0 and an early release of Visual Basic. To improve support, it needs to be updated to the latest technology and incorporated as a module of the GIS Toolbox alongside other similar Transit Object maintenance modules.
Interdependencies	None
Status	Not Started
Target	2006
Activity	▪ All project management and application development activity is expected to be completed in 2006.

Name	**Service Quality**
Description	This project will develop a new application. This application will support Transit Service Quality section's spatial business needs. Service Quality's primary responsibility is to provide 24-hour daily support and on-street supervision of Transit services. This includes response to transit emergencies and service disruptions, customer and employee assistance requests, adverse weather service management, short/long term route planning, construction impact mitigation, operator comfort station program (restroom) management, special event planning and response, Metro tunnel service management, and other service-related investigations and activities. Staff within service quality use GIS tools and data to assist in many of these functions.
Interdependencies	None
Status	Started

Target	2006
Activity	▪ Application scoping completed in 2005. All other project management and application development activity is expected to be completed in 2006.

Name	**Service Planning**
Description	This project will develop a new application. This application will support Transit Service Planning section's spatial business needs. Service planning refers to the determination of changes to transit services including types of service, routing, time periods, and frequency of operation. This function is also responsible for developing technical and policy analyses supporting longer-range transit planning efforts. GIS analytical tools and data are used to assist this function and are essential to create proposed alternatives for presentation to elected officials and communities to build consensus and support for proposals to change or add service.
Interdependencies	None
Status	Not Started
Target	2007
Activity	▪ Scoping, requirements development, system design.

Name	**iMap Transportation Map Set**
Description	This project will develop a transportation map set for iMap.
Interdependencies	Coordination with the GIS Center and any other workgroups interested in a transportation map set for iMap.
Status	Not Started
Target	2006/2007
Activity	▪ It is expected that during 2006, we will work with the GIS Center to scope out the functionality for this map set, but that implementation will not start until 2007.

4.13.5 Hardware, Software, Database, and Licensing Changes

- ArcGIS license management was transferred from *KCMTRANSPORT* to *KCMOLYMPUS*. This was facilitated by the installation of a patch that permitted use of the license manager with Windows 2003 Server.
- *KCMMAGI* intended to be used to broker TNET Consortium communications with the TNET Master Database has been retired and replaced with an email solution. The server will be removed/rebuilt as a test bed for a SQL Server database in 2006/2007.
- The GIS UNIX Server *COUGAR* was retired.

4.13.6 Staffing Changes

- Financial resources for interns hired in 2005 were depleted. It is not expected that interns will be hired again in 2006.

4.13.7 Other Changes

- A new relationship will be initiated with the GIS Center to provide on-call backup database services during Transit GIS primary DBA vacations and sick leave. This relationship is expected to be temporary until the section undergoes a reorganization in part intended to provide this function internally.

4.14 DOT – King County International Airport

4.14.1 Agency GIS Overview, Priorities, and Goals

- King County International Airport (KCIA) is operated as a Division of King County's Transportation Department. The mission of KCIA is to support the economic vitality of the county, support the national air transportation system, encourage advanced technology, provide safe and continuous general aviation airport services to King County businesses and residents, and serve as a gateway to the region. The Airport supports commercial, corporate, cargo and military aviation, as well as general aviation and aviation manufacturing. The Airport currently uses the KCGIS Center as its primary provider of GIS services and anticipates continuing to do so in the near future.
- The Airport does not have a stand-alone GIS unit, but in 2006 hired a GIS Coordinator (TLT) to perform GIS tasks and to serve as the Airport's representative to the GIS Technical Committee. The GIS Coordinator performs all GIS related functions and serves as the Division's liaison with KCGIS.
- The Federal Aviation Administration (FAA) implemented its policies and procedures for use of GIS for FAA regulated functions in March 2006. The Airport GIS Coordinator will be attending the American Association of Aviation Executives (AAAE) 9th Annual GIS Systems Conference in June 2006 to become knowledgeable with the FAA GIS regulations.
- Listed below are the business functions within the Division that use or plan to use GIS information:
    - ***Administration, Planning and Property Management*** --The Airport or their consultants use GIS for analysis in plan development, environmental evaluations, program tracking and production of graphic materials. Property Management will use the newly developed Airport Information System (AIS) database for monitoring all leasing activity at the Airport and assisting in facility-based costing. A goal is to integrate AIS and GIS to provide easily accessible data for comprehensive planning and management activities.
    - ***Engineering and Environmental Management*** --This program provides and/or oversees engineering-related planning, design and construction management and assures that the Airport system operates in an environmentally safe, efficient manner. The Airport uses both CAD and GIS to map and coordinate environmental data, design, and construct documents.
    - ***Maintenance*** -- Airport Maintenance maintains and repairs all airport facilities, including runways, taxiways and ramps, utilities, and structures. The Airport recently implemented MAXIMO, a leading maintenance and facility management system. This system can be integrated with the Airport's GIS to provide spatial information for maintenance service of facility, airside, and inventory functions. The integration of the two systems will be analyzed after the basic work order and management functions of MAXIMO are completed.
    - ***Operations and Compliance*** -- This program assures that aircraft and their operators are safe while operating at KCIA including the coordination of emergency response planning for the Airport. This business function also includes Airport Rescue (law enforcement) and Fire Fighting services (ARFF), which is contracted from the King County Sheriff's Office. The Airport uses CAD and GIS to identify and track safety or security related items, including hazardous materials and emergency response information.
    - ***Noise Office and Sound Insulation Program --*** As the Airport's noise mitigation program is implemented starting in 2006, the Airport uses GIS to track and maintain sound insulation program participant data. KCGIS will develop a real-time interactive map based on the program's participant database for internal use as a repository of all

relevant information about every property within KCIA's noise contours of 65 dB and above. In addition, KCGIS will construct a static map illustrating progress toward program implementation on the Airport's website. This information will not contain confidential homeowner information, but rather describe current status and progress of the Sound Insulation Program.

4.14.2 Planned Project Activity and New Projects

- None planned for 2006

4.14.3 Data Enhancement and Development

- None planned for 2006

4.14.4 Application Enhancement and Development

Name	**Airport Information System (AIS)**
Description	The AIS will be used to monitor all leasing activity and assist in facility-based costing. The Airport will work with KCGIS to evaluate and enhance current AIS functions to suit the Airport's business needs.
Interdependencies	KCGIS
Status	In Progress
Target	Phase I - Year End 2006
Activity	▪ Review and evaluate current AIS functions and business needs for final implementation of this system.

Name	**Sound Insulation Program Real-Time Interactive Map**
Description	KCGIS will develop a real-time interactive map based on the program's participant database, on the Airport's intranet website, as a repository of all relevant information about every property within KCIA's noise contours of 65 dB and above.
Interdependencies	KCGIS
Status	In planning phase
Target	Year End 2006
Activity	▪ To be determined with KCGIS

Name	**Sound Insulation Program Static Map**
Description	KCGIS will construct a static map illustrating progress toward program implementation on the Airport's website. This information will not contain confidential homeowner information, but rather describe current status and progress of the Sound Insulation Program.
Interdependencies	KCGIS
Status	In planning phase
Target	Year End 2006
Activity	▪ To be determined with KCGIS

4.14.5 Hardware, Software, Database, and Licensing Changes

- None for 2006

4.14.6 Staffing Changes

- The Division will add a TLT position to perform all GIS related functions as their GIS Coordinator.

4.14.7 Other Changes

- None for 2006

4.15 King County Sheriff's Office

4.15.1 Agency GIS Overview, Priorities, and Goals

- Within the King County Sheriff's Office (KCSO), the Research, Planning & Information Services Unit (RP&IS) of the Technical Services Division has primary responsibility for providing GIS services. RP&IS is a multidisciplinary unit with crime analysis being a key responsibility. RP&IS' GIS program vision, mission, and objectives are:

  Vision - To create a Geographic Information System (GIS) with advanced mapping capabilities to serve the citizens of King County, the King County Sheriff's Office and its contract cities.

  Mission -To work collaboratively with other King County departments and their GIS units to stay aware of GIS standards and to produce and provide data and applications that are as accurate as possible, consistent, accessible, affordable and comprehensive for both internal and external customers, while meeting the unique business needs of the King County Sheriff's Office.

  Objective - To demonstrate to staff and customers that GIS is an important tool for a modern law enforcement agency, by delivering/providing tools/products that are powerful, flexible and relevant to the mission of the King County Sheriff's Office.

- The Research, Planning & Information Services Unit of the KCSO Technical Services Division has no personnel with full-time GIS responsibilities, however, 4.0 RP&IS FTE's are proficient with ArcView 3.2 and use it on a regular basis to support all agency GIS-related requests.
- The RP&IS supervisor coordinates all GIS activity, as well as performing a significant amount of non-GIS related data and information technology business functions. A unique aspect of the RP&IS program is the assignment of GIS support responsibility for a designated geographic region of the county (a precinct) to each of the four ArcView proficient staff. This simplifies communications between field staff (patrol), investigative staff (detectives) and the RP&IS crime analysts. The RP&IS supervisor has specific crime analysis support functions (primarily administrative and major crimes/intelligence-related), performs periodic workload balancing and handles a number of specialized projects.
- Types of GIS services provided to end users include mapping, GIS analysis, data development, and limited data maintenance.

4.15.2 Planned Project Activity and New Projects

- No activity planned in this area

4.15.3 Data Enhancement and Development

- No activity planned in this area

4.15.4 Application Enhancement and Development

- No activity planned in this area

4.15.5 Hardware, Software, Database, and Licensing Changes

- Potential upgrade to ArcView 3.2 licenses (dependant on grant award)

4.15.6 Staffing Changes

- None anticipated

4.15.7 Other Changes

- None anticipated

4.16 Metropolitan King County Council

4.16.1 Agency GIS Overview, Priorities, and Goals

- The 9 member Metropolitan King County Council is the policy determining body of the County and exercises all legislative powers authorized under the King County charter. These include, but are not limited to: the adoption and enactment of ordinances, levying of taxes, appropriation of funds, establishment of compensation levels for County employees, and the organization of administrative offices and executive departments.
- GIS services for the Council are provided by its central staff, a non-partisan group of professionals that support the Council's legislative committees. The central staff uses GIS to support the Council in its policymaking role by manipulating and presenting geographic data in the form of maps, graphics, data files, reports, and spatial analysis. The objective is to provide data and information that will assist Councilmembers in their roles as policymakers in a host of issue areas, including but not limited to: land use, transportation, public health and safety, human services, utilities, technology and the environment.
- The Council does not have a stand-alone GIS unit, but uses a GIS Coordinator to assist the central staff in utilizing GIS. The Coordinator serves as a liaison between central staff and the broader GIS community, and is responsible for coordinating training, procuring data, routing requests, and enlisting the help of other departments on complex projects. The GIS Coordinator also serves as the Council representative to the GIS Technical Committee.
- In 2006, the Council will contract with the King County GIS Center to conduct a GIS Needs Assessment for the Council. The reasons for conducting such an analysis are as follows:
    - The Council's GIS technology platform is out of date. The rest of the County is in the process of migrating from one ESRI software package to another (from Arc/Info 7.x and ArcView 3.x to ArcGIS 9), and in the near future the version the Council is using will no longer be supported.
    - The Council is underutilizing GIS, both as a mapping and analysis tool. The central staff could be better utilizing GIS as a visual communication and analysis tool; the Councilmembers would benefit by having more information at their disposal when making policy decisions. The Councilmembers' personal staff could be utilizing GIS or GIS applications to assist with constituent relations, and as a method of better understanding the geographic, demographic, and other characteristics that define each Council district.
    - The Council contributes a significant amount of money each year to the overhead for the centralized GIS group; when the Council does not participate fully in GIS it does not reap the benefit of this investment, and in effect subsidizes the GIS activities of other departments.
    - A needs assessment will guide the Council's future GIS development in a logical, prioritized, and cost effective manner and will consider how the Council can better utilize GIS in the future.

4.16.2 Planned Project Activity and New Projects

Name	**GIS Needs Assessment & Development Plan**
Description	The KCGIS Center assessment will include a high-level inventory and evaluation of the Council's computer hardware, software, network, business data, database design, applications, staffing, and organization. The purpose of this assessment process is to aid in the development of a GIS conceptual design that maximizes use

	of KCC systems, data, and staff resources already available.
Interdependencies	This effort is facilitated by the KC GIS Center staff. Progress on this effort is dependant on available staff time of Council staff, and GIS Center Staff.
Status	In progress
Target	2006
Activity	▪ Project Management ▪ Assess & Document Current KCC GIS Capability and Business Needs ▪ Develop KCC GIS Assessment and Development Action Plan

4.16.3 Data Enhancement and Development

- None planned at this time. This could change based on recommendations made in the GIS Needs Assessment.

4.16.4 Application Enhancement and Development

- None planned at this time. This could change based on recommendations made in the GIS Needs Assessment.

4.16.5 Hardware, Software, Database, and Licensing Changes

- As recommended by the GIS Needs Assessment and approved by the Council

4.16.6 Staffing Changes

- As recommended by the GIS Needs Assessment and approved by the Council

4.16.7 Other Changes

- As recommended by the GIS Needs Assessment and approved by the Council

4.17 Office of Management and Budget

4.17.1 Agency GIS Overview, Priorities, and Goals

- The Office of Management and Budget (OMB), often referred to as the "Budget Office," is a branch of the King County Executive Office. The Budget Office mission is to develop, administer and monitor the annual operating budget and capital improvement program, and perform related tasks. The Budget Office, with approximately 40 FTEs, provides broad budget-related policy and fiscal direction analysis for King County government. OMB also monitors compliance with the adopted Budget and performs related information functions.
- OMB operations require organizational flexibility to support major countywide priorities during preparation of the County Executive's proposed budget. For example, a key focus of the adopted 2006 budget is the Annexation Initiative to accelerate municipal annexation and incorporation of all defined Potential Annexation Areas (PAA's) within the urban growth area. This initiative will have a potentially profound impact on the future geographic organization of municipal services within King County. OMB has formed a special Governance Transition Team, which will rely on GIS to support this initiative.
- Budget Office GIS activity supports a subset of specialized business functions for which GIS based maps and analysis can improve agency effectiveness. Staff to handle ad-hoc requests for GIS services are concentrated in the Budget Office Growth Information Team, reporting directly to the OMB Director. The Budget Office economist is also a trained GIS user.
- Business functions of the Budget Office include the following:
    - Operating Budget
    - Capital Improvement Program
    - Performance Monitoring
    - Regional Governance
    - Growth Information Team
    - Economic Forecasting
- OMB's GIS work program is integrated into the Growth Information Team (GIT) work plan as support to all on-going OMB activity. GIS is centered in the GIT because of the variety of products (Annual Growth Report, Benchmark Report, Affordable Housing Bulletin) and research/analysis responsibilities (demographics, growth management, buildable lands) of GIT that have a strong geographic analysis/mapping component. None of GIT's 3 FTE's has full time GIS responsibility, although two are trained GIS end users.
- The GIT supervisor is responsible for section activity, but most GIS work goes directly to the GIS Analyst, who prepares ad hoc maps, analysis, or GIS projects upon request by internal OMB staff. Requests for more complex services are referred to the KCGIS Center. OMB also develops PAA profile data and maintains buildable lands data, AGR maps, and residential plat record geocoding.
- OMB's GIS customer base is remarkably broad for an operation of its size. Customers include staff from every agency within King County, as well as from local jurisdictions, business, and the media. Requests are not uncommon from remote jurisdictions, research agencies, and media nationally, and occasionally from overseas. Requests fall into two broad categories: agency decision makers typically request answers to specific questions which can be met with a map or a numerical response; while planners, researchers, and analysts usually want data and map coverages or shapefiles with which to do their own unique analysis.
- The year 2006 will be a difficult one for GIS in OMB. One of our trained GIS analysts is on an extended leave of absence, and temporarily replaced by a non-GIS user. OMB's primary GIS analyst is on maternity leave until April, 2006. Ongoing GIS requirements and requests are simply on hold. Further, there are significant needs for geographic information during 2006 that

the Growth Information Team will not be able to provide. OMB will rely on assistance from the KCGIS Center and other departments to get through the year.

4.17.2 Planned Project Activity and New Projects

Name	**Buildable Lands land supply inventory**
Description	Detailed inventory of vacant and potentially re-developable land in Urban-designated portions of unincorporated King County and possibly some cities.
Interdependencies	Depends on data and participation from DDES, DOT-Roads and the KCGIS Center.
Status	No status. Not specifically budgeted
Target	Need for data by September 2006
Activity	▪ None framed at this time

4.17.3 Data Enhancement and Development

- No activity planned in this area

4.17.4 Application Enhancement and Development

- No activity planned in this area

4.17.5 Hardware, Software, Database, and Licensing Changes

- No changes anticipated in 2006

4.17.6 Staffing Changes

- GIS in OMB is in "survival" mode during 2006. Our primary GIS analyst / GIS coordinator is on maternity leave until April 2006; for the remainder of the year she will proceed with essential GIS products including ad-hoc map requests. Our backup GIS analyst is on an extended leave of absence, with an uncertain return date. No GIS backfill of these positions has been budgeted.

4.17.7 Other Changes

- No other changes are anticipated

4.18 Department of Community and Human Services

4.18.1 Agency GIS Overview, Priorities, and Goals

- Agency Background: The Department of Community and Human Services (DCHS) is one of seven Executive departments within King County, Washington. The mission of DCHS is: "To enhance the quality of life, protect rights, and promote the self-sufficiency of our region's diverse individuals, families, and communities." The current focus of the department is on three primary goals:
    - Eliminate homelessness in King County in 10 years
    - Create alternatives to incarceration for youth and adults
    - Build employment opportunities for low-income people and those with special needs

  To support its mission and its stated goals, the department administers a budget of approximately $241 million (2006 proposed) with funding not only from the County itself, but also from Federal, state, city, foundation, and private sources. The department has more than 350 employees who support designated programs, organized into a number of distinct divisions:
    - Community Services Division (CSD)
    - Development Disabilities Division (DDD)
    - Mental Health, Chemical Abuse and Dependency Services (MHCADS)
    - Office of the Public Defender (OPD)
    - DCHS Administration

  Most of the divisions coordinate across organizational lines to support the department mission and goals described above. In addition, two other groups off the formal DCHS organization chart are significant for its core activities:
    - The King County office of the Washington State University Extension Service (located administratively in DNRP Solid Waste Division)
    - Unincorporated Area Councils
- GIS Program Organization: There is no designated DCHS GIS unit or program. DCHS management has designated the CSD Affordable Housing, Planning & Development Coordinator as the Department's KCGIS Technical Committee representative. The DCHS Technical Committee representative has also coordinated occasional cross-department GIS related planning sessions.

  Within division work programs a few individuals provide part time GIS support on an ad-hoc basis. In some cases they may also coordinate with the KCGIS Center Client Services group for custom mapping or data analysis projects.
- GIS Services: The primary GIS service utilized by DCHS end-users is the production of maps and spatial analysis derived from KCGIS data and agency geographic data. Maps are produced for community presentations, to accompany funding requests, to clarify statistical data in a variety of reports to regulatory agencies, and for department/division management. Spatial data is often used for environmental analysis required for housing development projects.

  DCHS has also become a routine user of web based GIS resources via use of the KCGIS Center's iMap, ParcelViewer, and CensusViewer web mapping applications. In 2004, DCHS staff members used these applications an average of 63 'user sessions' per month, with an average of 65 'map hits' per user session. In 2005 (through September), DCHS staff members used these applications an average of 42 'user sessions' per month, with an average of 76 'map hits' per user session. While records are not available to indicate which specific DCHS staff members are

accessing these applications, the statistics show steady usage of KCGIS data month after month. Note that Census Viewer was partially funded by DCHS, in collaboration with DPH, OMB, and the City of Seattle.

- GIS Program Challenges: The key challenge for the DCHS GIS program is the lack of a comprehensive assessment of the business needs for GIS and an implementation plan to develop priority GIS tools and resources within the department. Another challenge is a relatively low level of awareness on the part of many agency staff of the basics of GIS and of the potential usefulness of GIS technology for typical DCHS business activities. Just a handful of DCHS staff have any experience using GIS derived data and resources for their business purposes, and fewer still have experience and training using GIS software and data themselves.

  To overcome these challenges, there is a small motivated cadre of GIS users and practitioners in DCHS. The department has been able to maintain a modest budget for outside GIS services and training.
- GIS Strategic Initiatives: In 2005 DCHS has commissioned a GIS Business Needs Assessment and Development Plan report from the KCGIS Center. Scheduled for completion in early 2006, this report will educate a much wider base of potential GIS users and layout a GIS implementation plan within the financial and organizational capabilities of the department.
- DCHS GIS Coordination within KCGIS: The department's coordination within KCGIS will likely be limited to continued participation on the GIS Technical Committee, use of KCGIS data and application resources, and possible future cooperative projects similar to the development of CensusViewer.

4.18.2 Planned Project Activity and New Projects

Name	**GIS Business Needs Assessment & Development Plan**
Description	DCHS requested the KCGIS Center to assess its current GIS development and business needs, and to recommend a budget and action plan for logical, incremental development of GIS capability and ongoing operation and business use within the Department.
Interdependencies	Completion of the plan will require continued review and input from a broad cross section of DCHS staff in a series of report review and brainstorming workshops in early 2006.
Status	Interviews were conducted with seven DCHS workgroups. A variety of source documentation is under review and the initial business needs assessment is being drafted.
Target	2006
Activity	▪ Project management ▪ Assess and document current DCHS GIS capability, resources, and priority business needs ▪ Develop DCHS GIS Assessment and Development Action Plan

4.18.3 Data Enhancement and Development

Name	MHCADS Informix Database
Description	Informix Dynamic Server, enterprise class RDBMS – managed by MHCADS Division and utilized by OPD and Directors Office
Interdependencies	Enhancements include potential future data integration project with other DCHS divisions. The goal is to document and integrate data to facilitate more consistent and reliable access for internal management data requests.
Status	Proposed for 2006 budget
Target	Proposed for 2006 completion
Activity	▪ TBD in 2006

4.18.4 Application Enhancement and Development

- None planned at this time. This could change based on recommendations made in the DCHS GIS Needs Assessment.

4.18.5 Hardware, Software, Database, and Licensing Changes

- As recommended by the GIS Needs Assessment and implemented by DCHS

4.18.6 Staffing Changes

- As recommended by the GIS Needs Assessment and implemented by DCHS

4.18.7 Other Changes

- As recommended by the GIS Needs Assessment and implemented by DCHS

5 Appendix A: Summary Information

5.1 Staffing

5.1.1 KCGIS Center

Working Title	Focus	Class	Status	% GIS
KCGIS Center Manager	Staff management and organization, program oversight and direction	IT Enterprise Mgr. II	FTE	100
GIS Finance and Marketing Manager	Budget, financial control, marketing	IT Project Mgr. II	FTE	100
GIS Enterprise Services Manager / PRD and SWD GIS Program Manager	Contracts administration, external data acquisition / GIS program management for PRD and SWD	IT Supervisor I	FTE	100
Office Manager	Administrative and office services	Administrator II	FTE	100
GIS Application Developer	KingStat technical implementation and support	GIS Spec. – Master	FTE	100
GIS Data Coordinator	Data inventory, assessment, and coordination	IT Project Mgr. II	FTE	100
GIS Database Administrator	Database administration Oracle, SQL Server, ArcSDE	GIS Spec. – Senior	FTE	100
System Administrator	System administration, NT and UNIX	LAN Admin. – Master	FTE	100
GIS Application Developer	Front-end applications	GIS Spec. – Master	FTE	100
GIS Application Developer	Back-end applications, Web site management, software migration	GIS Spec. – Master	FTE	100
GIS Programmer/Analyst	Legacy application maintenance	GIS Spec. – Senior	FTE	100
GIS Analyst	Cadastral data coordination	GIS Spec. – Journey	FTE	100
Client Services Manager	Program management	IT Supervisor I	FTE	100
Project Manager	Project coordination	GIS Spec. – Senior	FTE	100
GIS Analyst	To be determined, filled as workload warrants	GIS Spec. – Senior	FTE (Vacant)	100
GIS Training Coordinator	GIS training services	GIS Spec. – Journey	FTE	100
GIS Analyst	Publication cartography, Web site design	GIS Spec. – Senior	FTE	100
GIS Analyst	Client Services project support	GIS Spec. – Journey	FTE	100
GIS Analyst	Matrix support for Transit Division	GIS Spec. – Journey	FTE	100
GIS Analyst	Matrix support for RSD	GIS Spec. – Senior	FTE	100
GIS Analyst	Matrix support for WTD	GIS Spec. – Senior	FTE	100

Working Title	Focus	Class	Status	% GIS
GIS Analyst	Matrix support for WTD	GIS Spec. – Senior	FTE	100
GIS Analyst	Matrix support for WTD	GIS Spec. – Journey	FTE	100
GIS Analyst	Matrix support for WTD	GIS Spec. – Journey	FTE	100
GIS Analyst	Matrix support for WLRD	GIS Spec. – Senior	FTE	100
GIS Programmer	Matrix support for WLRD	GIS Spec. – Senior	FTE	100
GIS Analyst	Matrix support for WLRD	GIS Spec. – Senior	FTE	100
GIS Analyst	Matrix support for WLRD	GIS Spec. – Journey	FTE	100
GIS Analyst	Matrix support for PRD / Client Services project support	GIS Spec. – Journey	FTE	100
GIS Analyst	Matrix support for PRD and SWD	GIS Spec. – Senior	FTE	100
GIS Analyst	Matrix support for PRD and SWD	GIS Spec. – Journey	FTE	100

5.1.2 Department of Assessments

Working Title	Focus	Class	Status	% GIS
GIS Coordinator	Coordination of GIS activities for the department.	GIS Prof. – Senior	FTE	95
Mapping Supervisor	Supervisor for mapping staff	Mapping Supervisor	FTE	75
Cartographer	Cadastral Maintenance	GIS Prof. – Entry	FTE	95
Cartographer	Cadastral Maintenance	GIS Prof. – Entry	FTE	95
Cartographer	Cadastral Maintenance	GIS Prof. – Entry	FTE	95
Cartographer	Cadastral Maintenance	GIS Prof. – Entry	FTE	95
Cartographer	Cadastral Maintenance	GIS Prof. – Entry	FTE	95
Cartographer	Cadastral Maintenance	GIS Prof. – Entry	FTE	95
Cartographer	Cadastral Maintenance	GIS Prof. – Entry	FTE	95
Various – Appraisers, Programmers	Analysis/Application Dev.	Various	FTE	*

*Difficult to quantify

5.1.3 Department of Development and Environmental Services

Working Title	Focus	Class	Status	% GIS
IS Section Manager	Staff supervision, program management, GIS/IS integration	IT Manager	FTE	25
Lead GIS Analyst	Staff Coordination, data development and	GIS Spec. – Master	FTE	100

Working Title	Focus	Class	Status	% GIS
	documentation, county wide GIS coordination, data analysis			
GIS Analyst/Programmer	Application, development, SDE Administration, data maintenance and documentation, data analysis, Map production	GIS Spec. – Senior	FTE	100
GIS Analyst/Programmer	Application design and development, end user education, data analysis, map production	GIS Spec. – Senior	FTE	100
GIS Analyst/Cartographer	Map production, data analysis, data maintenance	GIS Spec. – Senior	FTE	100

5.1.4 DES – Emergency Management Division

Working Title	Focus	Class	Status	% GIS
E-911 PSAP Mapping Administrator	Support GIS Mapping for the E-911 Program Office and 13 PSAPs	GIS Spec. – Senior	1 FTE	100
E-911 PSAP Mapping Analyst	Support the E-911 GIS Mapping Administrator, E-911 Office, and 13 PSAPs.	GIS Spec. – Journey	1 FTE	100

5.1.5 DES – Records, Elections, and Licensing Services Division

Working Title	Focus	Class	Status	% GIS
REALS IT Supervisor	Coordination of GIS and other IT activities for the division.	IT Supervisor I	FTE	50
GIS Analyst	Data Integration, data maintenance, map production and GIS analysis	GIS Spec. – Journey	FTE	90
GIS Analyst	Data integration, data maintenance, map production and GIS analysis	GIS Spec. – Journey	FTE	90
GIS Analyst	Data maintenance, map production and election and voter registration support	GIS Spec. – Entry	FTE	90

5.1.6 DES –Facilities Management Division

- No dedicated GIS staff

5.1.7 DNRP – Wastewater Treatment Division

Working Title	Focus	Class	Status	% GIS
GIS Analyst	Operation and Maintenance/Inspections; Combined Sewer Overflows	ISA II	FTE	100
GIS Analyst	Brightwater	ISA II	FTE	100
GIS Analyst	Infiltration and Inflow; Conveyance System Improvements	ISA II	FTE	100
GIS Analyst	Conveyance System Improvements	ISA II	FTE	100

5.1.8 DNRP – Water and Land Resources Division

Working Title	Focus	Class	Status	% GIS
GIS Analyst	Image processing & analysis, general WLR GIS analysis projects	GIS Prof. – Senior	FTE	100
GIS Analyst	ArcIMS (iMap) and GIS-related web applications, general WLR GIS analysis projects	GIS Prof. – Senior	FTE	100
GIS Analyst	Forestry, agriculture, land ownership, noxious weeds, current use assessment, open space and general WLR GIS analysis projects	GIS Prof. – Senior	FTE	100
GIS Analyst	General WLR GIS cartographic and data editing projects, DNRP GIS intranet site maintenance	GIS Prof. – Journey	FTE	100

5.1.9 DNRP – Parks and Recreation Division

Working Title	Focus	Class	Status	% GIS
GIS Analyst (shared with DNRP SWD 50%)	Parks and Recreation/Solid Waste database maintenance, data analysis, map design and production, web services, and application development	GIS Spec. – Senior	FTE	50
GIS Analyst (shared with KCGIS Center Client Services Unit 25% and DNRP SWD 50%)	Parks and Recreation/Solid Waste database maintenance, data analysis, map design and production	GIS Spec. – Journey	FTE	25
GIS Analyst (shared with KCGIS Center Client	Parks and Recreation database maintenance, data	GIS Spec. – Journey	FTE	25

Working Title	Focus	Class	Status	% GIS
Services Unit 75%)	analysis, map design and production, and application development			

5.1.10 DNRP – Solid Waste Division

Working Title	Focus	Class	Status	% GIS
GIS Analyst (shared with DNRP PRD 50%)	Solid Waste/Parks and Recreation database maintenance, data analysis, map design and production, web services, and application development	GIS Spec. – Senior	FTE	50
GIS Analyst (shared with KCGIS Center Client Services Unit 25%, and DNRP PRD 50%)	Solid Waste/Parks and Recreation database maintenance, data analysis, map design and production	GIS Spec. – Journey	FTE	50

5.1.11 Department of Public Health

- No information submitted

5.1.12 DOT – Roads Services Division

Working Title	Focus	Class	Status	% GIS
Budget and Systems Manager (Administration)	Finance & Administration Manager	Manager	FTE	5
Division IT Technology Coordinator	Managing Information Systems the Division	IT Supervisor I	FTE	15
GIS Technical Support TLT (Administration)	Map production and data analysis	Web Design	TLT	10
Maintenance Section Technology Unit Supervisor	Coordinate Division GIS efforts and Maintenance Section lead	IT Supervisor I	FTE	40
Maintenance Section Data Handling	Maintenance Section production	Engineer 1	FTE	60
Maintenance Section Technology Unit Fieldwork Supervisor	Maintenance Section Data Collection	Engineer 4	FTE	25
**Road Services Division Data Analyst	Map production and data analysis (matrixed from KCGIS Center)	GIS Spec. – Senior		

Working Title	Focus	Class	Status	% GIS
Engineering Section Data Manager (Engineering)	Engineering section lead	Engineer 3	FTE	60
Engineering Section Data Analyst (Engineering)	Map production and data analysis	Engineer 2	FTE	40
Traffic Section Data Manager	Traffic section lead	IT Project Manager I	FTE	30

**Matrixed Maintenance Section Data Analyst Status and %GIS is contained in the KCGIS Centers' staffing table for budgetary purposes.

5.1.13 DOT – Transit Division

Working Title	Focus	Class	Status	% GIS
GIS Program Manager	Team lead, operations coordination, Transit Division liaison, training	IT Project Manager II	1 FTE	95
GIS Database Administrator	INFO, geodatabase, shape, ArcSDE administration, and GIS-to-Oracle interfacing	DBA – Senior	1 FTE	95
GIS Senior Application Developer	Application development and coordination	App Dev. – Senior	1 FTE	95
GIS Application Developer	Application development	App Dev. – Senior	1 FTE	95
GIS Analyst	Data maintenance, map production, data analysis, software installation	GIS Spec. – Journey	1 FTE	95
GIS Analyst – Matrixed position	Data maintenance, map production, data analysis, software installation	GIS Spec. – Journey	1 FTE	95
IT, Infrastructure and Integration Supervisor	GIS Team Supervisor, GIS Oversight Representative	ISP V	1 FTE	15
IT Systems Analyst	Hardware and operating system support (NT, Web)	Sys Eng. – Journey	1 FTE	10
IT Oracle DBA	Oracle Database Administration	DBA – Senior	1 FTE	15

5.1.14 DOT – King County International Airport

Working Title	Focus	Class	Status	% GIS
GIS Coordinator	Map production, data analysis, data maintenance, and GIS coordination.	PPM II	TLT	40

5.1.15 King County Sheriff's Office

Working Title	Focus	Class	Status	% GIS
RP&IS Supervisor	Research/planning, information/data systems planning & management, supervision	Research and Tecnhology Supervisor	FTE	10-15
Crime Analyst	Crime analysis & mapping	Project/Program Manager II	FTE	10-15
Crime Analyst	Crime analysis & mapping	Project/Program Manager II	FTE	10-15
Crime Analyst	Crime analysis & mapping	Project/Program Manager II	FTE	10-15

5.1.16 Metropolitan King County Council

Working Title	Focus	Class	Status	% GIS
GIS Coordinator	Assist staff in utilizing GIS, liaison between Council and broader GIS community, coordinate training, procure needed data, route requests, enlist help of other departments or KCGIS Center as needed	GIS User	FTE	15

5.1.17 Office of Budget

Working Title	Focus	Class	Status	% GIS
Analyst / GIS Coordinator	Data analysis and report project management	PPM II	FTE ¾ of year	50
Benchmark Pgm Coordinator	Report project management	PPM III	On leave	10
Economist	Economic research	Ex Asst	FTE	10

5.1.18 Department of Community and Human Services

Working Title	Focus	Class	Status	% GIS
Affordable Housing, Planning and Development Coordinator	CSD/HCD Support. GIS role is limited to GIS coordination within the CSD/HCD work area, DCHS PM for the GIS Needs Assessment, and representing DCHS on the GIS Technical Committee	Housing Program Tech	1 FTE	5

Working Title	Focus	Class	Status	% GIS
Epidemiologist	MHCADS support	Epidemiologist	1 FTE	5
GIS Specialist	CSD/HCD support	GIS Specialist	.5 FTE	50

5.2 Budget

5.2.1 KCGIS Center

Item	O&M and Client Services	Matrix GIS Staff Unit	Combined KCGIS Center	Comments
Labor Costs (salary + benefits)	$1,841,338	$1,173,451	$3,014,789	
Hardware (acquisition and maintenance)	$59,200	$15,000	$74,200	Includes $30,000 allocated to a dedicated long term equipment replacement fund
Software (acquisition and maintenance)	$80,148	$14,142	$94,290	
Training costs	$25,150	$16,250	$41,400	
Discretionary (consultants, outside services, materials, etc.)	$158,751	$18,859	$177,610	$87,000 represents appropriation authority for cost reimbursable client services expenses

5.2.2 Department of Assessments

Item	Budget	Comments
Labor Costs (salary + benefits)	$711,688	Based on 2005 coordinator and mapping staff labor figures plus 4.66% cola.
Hardware (acquisition and maintenance)	0	
Software (acquisition and maintenance)	$13,000	Based on 2005 figures.
Training costs		
Discretionary (consultants, outside services, materials, etc.)	$24,717	

5.2.3 Department of Development and Environmental Services

Item	Budget	Comments
Labor Costs (salary + benefits)	$425,000	$100,000 average fully loaded FTE cost x 4.25
Hardware (acquisition and maintenance)	$76,000	Based on 1/3 proportion of general IS hardware costs.
Software (acquisition and maintenance)	$26,666	Based on 1/3 proportion of general IS software costs plus GIS specific software.
Training costs	$10,333	Based on 1/3 proportion of IS training budget.
Discretionary (consultants, outside services, materials, etc.)	$5,879	Budgeted Client Services from the KCGIS Center.

5.2.4 DES – Emergency Management Division

Item	Budget	Comments
Labor Costs (salary + benefits)	$162,315.00	One FTE GIS Administrator Position One FTE GIS Analyst Position
Hardware (acquisition and maintenance)	$20,000.00	Server & Software for storage of GPS Address data
Software (acquisition and maintenance)	$52,241.00	Software purchased to support E-911 GPS Address project and PSAP CAD Maps.
Training costs	$3000.00	PSAP employee training for Mapping
Discretionary (consultants, outside services, materials, etc.)	$930,604.00	E-911 GPS Address Project, Vendor MicroData

5.2.5 DES – Records, Elections, and Licensing Services Division

Item	Budget	Comments
Labor Costs (salary + benefits)	$382,000.00	Cost includes 2006 COLA estimate
Hardware (acquisition and maintenance)		No new GIS hardware purchases planned for 2006
Software (acquisition and maintenance)	$6,800.00	
Training costs	$6,233.00	
Discretionary (consultants, outside services, materials, etc.)	$30,902.00	

5.2.6 DES –Facilities Management Division

Item	Budget	Comments
Labor Costs (salary + benefits)		
Hardware (acquisition and maintenance)		
Software (acquisition and maintenance)		
Training costs		
Discretionary (consultants, outside services, materials, etc.)	$18,538	This represents funding for KCGIS Center Client Services. O&M enterprise support is an additional **$49,918** in the FMD budget.

5.2.7 DNRP – Wastewater Treatment Division

Item	Budget	Comments
Labor Costs (salary + benefits)	$373,643	Includes cost for 4.0 FTE plus allocated portion of KCGIS Center management and administration labor costs
Hardware (acquisition and maintenance)	$5,000	
Software (acquisition and maintenance)	$3,417	
Training costs	$5,417	
Discretionary (consultants, outside services, materials, etc.)	$ 41,595	Includes $35,310 for KCGIS Center client services support and $6,285 for misc. supplies and services

5.2.8 DNRP – Water and Land Resources Division

Item	Budget	Comments
Labor Costs (salary + benefits)	$386,215	Includes cost for 4.0 FTE plus allocated portion of KCGIS Center management & administration labor costs
Hardware (acquisition and maintenance)	$5,000	
Software (acquisition and maintenance)	$7,505	
Training costs	$5,417	
Discretionary (consultants, outside services, materials, etc.)	$6,285	

5.2.9 DNRP – Parks and Recreation Division

Item	Budget	Comments
Labor Costs (salary + benefits)	$95,329	Includes cost for 1.0 FTE plus allocated portion of KCGIS Center management & administration labor costs
Hardware (acquisition and maintenance)	$1,250	
Software (acquisition and maintenance)	$ 805	
Training costs	$1,354	
Discretionary (consultants, outside services, materials, etc.)	$25,571	Includes $23,999 for KCGIS Center client services support and $1,572 for misc. supplies and services

5.2.10 DNRP – Solid Waste Division

Item	Budget	Comments
Labor Costs (salary + benefits)	$97,255	Includes cost for 1.0 FTE plus allocated portion of KCGIS Center management & administration labor costs
Hardware (acquisition and maintenance)	$1,250	
Software (acquisition and maintenance)	$ 805	
Training costs	$1,354	
Discretionary (consultants, outside services, materials, etc.)	$1,572	

5.2.11 Department of Public Health

- No information submitted

5.2.12 DOT – Roads Services Division

Item	Budget	Comments
Labor Costs (salary + benefits)	$229,084	Budget and Technology manager salary not included
Hardware (acquisition and maintenance)	$0	None planned for 2006
Software (acquisition and maintenance)	$10,000	
Training costs	$5,000	
Discretionary (consultants, outside services, materials, etc.)	$3,000	

5.2.13 DOT – Transit Division

Item	Budget	Comments
Labor Costs (salary + benefits)	$488,967	Operating (3.95 FTE) and Grant (.45 FTE) only; $39,600 estimated grant reimbursement from FTA
Hardware (acquisition and maintenance)	$0	ITS Hardware charges eliminated in 2005.
Software (acquisition and maintenance)	$18,000	Software maintenance on GIS licensing and license monitoring software
Training costs	$15,000	Includes GIS International and local conferences, and other technical training
Discretionary (consultants, outside services, materials, etc.)	$126,000	Plotter supplies, training manuals, subscriptions, etc. $123,000 for matrixed position from KCGIS Center

5.2.14 DOT – King County International Airport

Item	Budget	Comments
Labor Costs (salary + benefits)	$27,543	Based on 40% of KCIA's PPM II salary + benefits
Hardware (acquisition and maintenance)	$0	
Software (acquisition and maintenance)	$0	
Training costs	$600	AAAE GIS Conference & Exhibition; Basics of SQL; and Exploring KCGIS Data Using Metadata
Discretionary (consultants, outside services, materials, etc.)	$15,200	KC GIS Center Client Services

5.2.15 King County Sheriff's Office

- No information submitted

5.2.16 Metropolitan King County Council

Item	Budget	Comments
Labor Costs (salary + benefits)		Because GIS represents such a small part of the Council's overall budget, resources are not allocated at the line item level. Rather, GIS labor, hardware, software and training costs are funded on an as-needed basis from the Council's overall budget. The exception to this is the dollar amount budgeted for KCGIS Center Client Services.
Hardware (acquisition and maintenance)		
Software (acquisition and maintenance)		
Training costs		
Discretionary (consultants, outside services, materials, etc.)	$12,500	Budgeted Client Services from the KCGIS Center.

5.2.17 Office of Budget

Item	Budget	Comments
Labor Costs (salary + benefits)	$39,000	Based on 50% of GIS analyst salary + benefits
Hardware (acquisition and maintenance)	$0	
Software (acquisition and maintenance)	$0	
Training costs	$900	Half of GIT training budget available to GIS analyst
Discretionary (consultants, outside services, materials, etc.)	$23,000	Discretionary portion of KCGIS client services budget

5.2.18 Department of Community and Human Services

Item	Budget	Comments
Labor Costs (salary + benefits)		Because GIS is not recognized as a distinct function, financial resources for GIS related labor, hardware, software, and training are not allocated separately within DCHS. Labor costs for GIS related activity included in the normal staff functions of the DCHS staff members who do this work. Hardware, software, and training costs are funded on an as-needed basis from individual DCHS work programs. The only exception is the separate GIS services budget for work to be done by KCGIS Center Client Services.
Hardware (acquisition and maintenance)		
Software (acquisition and maintenance)		
Training costs		
Discretionary (consultants, outside services, materials, etc.)	$18,537	Budgeted for client services from the KCGIS Center.

5.3 Licensing

Software	GIS Cntr.	Dof As.	DD ES	DES EMD	DES RecD	DES FMD	DNRP WTD	DNRP WLRD	DNRP PRD	DNRP SWD	Pub. Health	DOT Roads	DOT Tran.	DOT Air	KC Sher.	KC Council	Off. Bud.	DC HS
ArcGIS-ArcView	11	1	-	1	-	1	-	15	-	-	5	1	7	1	-	-	3	-
ArcGIS-ArcEdit	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ArcGIS-ArcInfo	17	9	4	1	-	-	5	4	-	-	-	4	5	-	-	-	-	-
ArcGIS-3D	7	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-
ArcGIS-Spatial	9	-	-	2	-	-	-	-	-	-	-	1	-	-	-	-	1	-
ArcGIS-Network	3	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
ArcGIS-Geostat.	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ArcGIS-Survey	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ArcGIS-Tracking	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ArcGIS-Image	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ArcGIS-COGO	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ArcGIS-Maplex	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ArcGIS-ArcPress	2	-	-	1	1	-	-	4	-	-	-	1	-	-	-	-	-	-
ArcGIS-Publisher	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ArcGIS-Server	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ArcGIS-Engine	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ArcSDE-Server	5	-	1	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-
ArcSDE-Conn.	41	-	-	-	-	-	-	-	-	-	-	-	12	-	-	-	-	-
ArcIMS	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ArcInfo 7.x	14	9	-	1	2	-	1	-	-	-	-	-	-	-	-	-	-	-
ArcInfo 7-COGO	9	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ArcInfo 7-Netwk	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ArcView 3.x	22	22	20	2	4	-	25	55	6	2	7	34	30	-	5	2	2	2
MO-Dev. Kit	1	9	1	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-
MO-Deploy.	20	-	-	-	-	-	-	-	-	-	-	-	40	-	-	-	-	-

Table Column Key:

Abbreviation	Agency Name
GIS Cntr.	GIS Center
D of As.	Department of Assessments
DDES	Department of Development and Environmental Services
DES EMD	Department of Executive Services – Emergency Management Division
DES RecD	Department of Executive Services – Records, Elections and Licensing Services Division
DES FMD	Department of Executive Services – Facilities Management Division
DNRP WTD	Department of Natural Resources and Parks -- Wastewater Treatment Division
DNRP WLRD	Department of Natural Resources and Parks -- Water and Land Resources Division
DNRP PRD	Department of Natural Resources and Parks -- Parks and Recreation Division
DNRP SWD	Department of Natural Resources and Parks -- Solid Waste Division
Pub. Health	Department of Public Health
DOT Roads	Department of Transportation -- Roads Services Division
DOT Tran.	Department of Transportation – Transit Division
DOT Air*	Department of Transportation – King County International Airport
KC Sher.	King County Sheriff's Office
KC Council	Metropolitan King County Council
Off. Bud.	Office of Budget
DCHS	Department of Community and Human Services

5.4 Maintained Data

5.4.1 KCGIS Center

Enterprise

Name	Description	Update Frequency
BIGWATER	An extract of the master water body data set; WTRBDY_MAST. Includes Puget Sound, larger inland water bodies, and major double-banks streams for King County and adjacent areas	Irregular
BIKEMET	Bicycle/non-motorized vehicle paved and unpaved routes	Randomly
BLKGRP00	US Census Bureau Block Groups conflated to RECDNET	Decennially
BLOCKGRP	1990 Census Tract/Blocks with the same hundred level	Randomly
BLOCKNET	1990 Census Blocks developed from Tigerline files	Randomly
BLOCKS00	Census Bureau Blocks conflated to RECDNET	Decennially
CANOPY	Forest canopy	Randomly
CONT100	One hundred foot contour lines created from 10 Meter DEM	Randomly
CONT20	Twenty foot contour lines created from 10 meter DEM	Randomly
CONT50	Fifty foot contour lines created from 10 meter DEM	Randomly
CONTOUR020C	Twenty foot contours selected from 5-foot LiDAR digital ground model base, stored as three separate east-west panels - (N)orth, (C)entral, and (S)outh	Randomly
CONTOUR020N	Twenty foot contours selected from 5-foot LiDAR digital ground model base, stored as three separate east-west panels - (N)orth, (C)entral, and (S)outh	Randomly
CONTOUR020S	Twenty foot contours selected from 5-foot LiDAR digital ground model base, stored as three separate east-west panels - (N)orth, (C)entral, and (S)outh	Randomly
CONTOUR040	Forty foot contours selected from 5-foot LiDAR digital ground model base	Randomly
CONTOUR050	Fifty foot contours selected from 5-foot LiDAR digital ground model base	Randomly
CONTOUR100	One hundred foot contours selected from 5-foot LiDAR digital ground model base	Randomly
E911_ESN	E911 Emergency Service Areas	Annually
FAZ	Population Forecast Analysis Zones for greater Puget Sound	Randomly
FIRESTN	King County fire stations	Randomly
HOSPITALS	Hospitals in King County	Annually
INDEX	Index of RECDNET tiles	Randomly

Name	Description	Update Frequency
INDEX_QT	RECDNET tiles showing only township and quarter township tile boundaries	Randomly
INDEX_TR	RECDNET tiles showing only township boundaries	Randomly
KCP_DIST	King County police patrol districts	Randomly
KCP_LOC	King County police locations	Randomly
KINGCO	King County political boundary	Randomly
KINGSH	King County/Vashon Island shoreline boundary	Randomly
KROLLIDX	Kroll Index for King County	As needed
MTPEAKS	Mountain peaks	Randomly
MUN_WSHD	City of Seattle municipal watershed	Randomly
OPPIPES	Olympic Pipe Line Company right-of-way through King County	Randomly
PLACE	1990 Census Places	Randomly
PLSS	Public Land Survey System	Randomly
PLSS_QTR	Public Land Survey System for King and Snohomish Counties as quarter sections	Randomly
PLSS_TWN	Public Land Survey System for King and Snohomish Counties as townships	Randomly
PLSS_SEC	Public Land Survey System for King and Snohomish Counties as full sections	Randomly
POINOPUB	Points of interest owned or operated by non-public agencies	Randomly
POIPUB	Points of interest owned or operated by public agency	Randomly
REALPROP	Property Services King County owned parcels	Quarterly
REFGRD16	Reference grid (1/16 sections)	Randomly
ROW	Street right of way with PIN	Randomly
SCHSITE	King County school sites and school related facilities	Randomly
ST_ADDRESS	KC streets derived from RECDNET with address ranges	Quarterly
TAZ	1990 Traffic Analysis Zones for Greater Puget Sound	Randomly
TAZ00	Census Bureau TAZ conflated to RECDNET	Randomly
THOM_BROS	The Thomas Guide page index	Randomly
THOM_BROS_RC	The Thomas Guide page index – row/column sub-index	None planned
TRACT	1990 Census Tracts developed from Tigerline files	Randomly
TRACTS00	Census Bureau Tracts for King County	Decennially
WASHCO	Political county boundaries for Washington state. Also as KINGCO for King County only.	Randomly

Name	Description	Update Frequency
WASHSH	Washington county boundaries with shoreline; also as KINGSH for King County only	Randomly
ZIPCODE	King County Zip Code Boundaries	Annually

Agency

- No activity in this area

5.4.2 Department of Assessments

Enterprise

Name	Description	Update Frequency
RECDNET	Countywide Cadastral Data. Includes streets and other features necessary for describing property boundaries. Based on the legal description of the property.	Daily*
RECDANNO	Countywide Cadastral Annotation. Includes street names, lot dimensions and other features necessary for describing property boundaries.	Daily*
PARCEL	Countywide parcel boundaries derived from RECDNET.	Daily*
KCACODE	Levy Code Boundaries.	As needed**

* As segregation/merger activities take place
** To meet statutory requirements for development of the data

Agency

Name	Description	Update Frequency
KCACITY	City boundaries for Assessments purpose	As needed*
COMAREAS	Commercial Area boundaries.	As needed
RESAREAS	Residential Areas boundaries – under construction.	As needed
LOCAT2	QSTR index for mapping	As needed

* To meet the March 31 statutory requirements for deployment of the data

5.4.3 Department of Development and Environmental Services

Enterprise

Name	Description	Update Frequency
AGRPDDST	Polygons representing the Agricultural Production District (APD) as defined by Chapter 3 of the King County Comprehensive Plan.	As needed
CITY	Polygons representing current city boundaries. Layer CITY is a simplified derivative of CITYMAST.	As needed
CITY_KC	Polygons representing current city boundaries, as well as polygons for the unincorporated areas of King County. Layer CITY_KC is a simplified derivative of CITYMAST.	As needed
CITYMAST	Polygons representing city annexation boundaries, including pending annexations. Includes current corporate boundaries and annexation and incorporation activity since mid 1980's. Key attributes include jurisdiction, annexation status and annexation effective date. The layer City is a derivative of CITYMAST.	As needed
CLRESTR	Polygons representing clearing and grading restrictions as defined by Title 16 Building and Construction Standards – 16.82.150 of King County Code.	As needed
COALMINE	Polygons representing Sensitive Area Ordinance coal mine hazards as defined in Title 21A Zoning – 21A.24 of King County Code.	Irregular
COLSITE	This coverage contains identified sites with current and/or grandfathered mineral extraction rights.	Irregular
COMPLU COMPLUXX	Polygons representing King County Comprehensive Plan land use designations for unincorporated King County as well as portions of the County annexed or incorporated since 1993 (King County planned land use is no longer in effect in annexed areas, information is retained for historic purposes only). Archival versions of planned land use are retained on an annual basis (e.g., COMPLU00, COMPLU 99, etc.)	As needed
CPAREA	Polygons representing Community Planning Areas as defined by various planning documents.	None planned
DPA	Polygons representing demonstration project areas as defined by Title 21A Zoning – 21A.55 of King County Code.	As needed
ERODE	Polygons representing Sensitive Area Ordinance erosion hazards as defined in Title 21A Zoning – 21A.24 of King County Code.	Irregular
FORPDDST	Polygons & Lines representing the Forest Production District (FPD) as defined by Chapter 3 of the King County Comprehensive Plan.	As needed
GRWTHPAT	Polygons representing King County generalized land use pattern, which is a simplification and grouping of the Comprehensive Plan land use designations.	As needed
HISTSITE	Points representing officially designated Historic Sites in King County as defined by the King County Historic Resource Inventory.	Irregular
HORSE_COMM	Polygons representing Equestrian Communities as defined by Chapter 3 of the King County Comprehensive Plan.	As needed

Name	Description	Update Frequency
KCADDRGRID	Lines representing King County addressing grid as adopted by Resolution 16622.	None planned
MPS	Polygons representing road mitigation payment system zones, which are derived from Small Area Zones (SAZ).	As needed
PSC	Polygons representing areas with property specific development standards (also known as P-suffix conditions) as defined by Title 21A Zoning – 21A.38 of King County Code.	As needed
SDO	Polygons representing areas with special district overlay designations as defined by Title 21A Zoning – 21A.38 of King County Code.	As needed
SDR	Polygons representing areas with special drainage requirements as previously defined by Title 9 Surface Water Management – 9.04 of King County Code. These requirements have been repealed but the layer is retained for historical purposes.	None planned
SEISM	Polygons representing Sensitive Area Ordinance seismic hazards as defined in Title 21A Zoning – 21A.24 of King County Code.	Irregular
SHORELINEMMP	Polygons representing Shoreline Management Master Program designations as defined by Title 25 Shoreline Management of King County Code.	Irregular
SLIDE	Polygons representing Sensitive Area Ordinance landslide hazards as defined in Title 21A Zoning – 21A.24 of King County Code.	Irregular
TRIBAL_LANDS	Polygons representing lands under native American jurisdiction	As Needed
UAC	Polygons representing Unincorporated Area Councils (UAC).	As needed
UGLINE UGLINEXX	Polygons and Lines representing the King County Urban Growth Area (UGA) boundary. Archival versions of the UGA boundary are retained on an annual basis (e.g. UGLINE00, UGLINE 99, etc.)	As needed
WETLD	Polygons representing Sensitive Area Ordinance wetlands as defined in Title 21A Zoning – 21A.24 of King County Code. Attributes include wetland ID and wetland rating (also known as class). An Access database linked by wetland ID provides detailed wetland inventory data.	Irregular
WILDNET1996	Wildlife Habitat Network as modified in 1996	None planned
ZONING	Polygons representing current zoning designations for unincorporated King County as well as portions of the County annexed or incorporated since 1993 (King County zoning is no longer in effect in annexed areas, information is retained for historic purposes only).	As needed

Agency

Name	Description	Update Frequency
AQUATIC	Polygons representing maximum stream buffers of Aquatic Areas (primarily streams and water bodies) under the King County Critical Areas Ordinance	Irregular
AREASPFC	Polygons representing area specific drainage conditions as defined by the previous version of the Surface Water Design Manual.	Irregular
ARSONSXX	Points representing the locations of fire investigations for the given year. Layer name provides the year (e.g. ARSONS98).	Irregular
BASINCONDITIONS	Polygons representing the drainage basin condition category assigned under the King County Critical Areas Ordinance	Irregular
BLDG_IA	Polygons representing building inspection areas.	Irregular
BOG_DA	Polygons representing bogs as regulated by the Surface Water Design Manual	Irregular
BSNWIDE	Polygons representing basin wide drainage conditions as defined by Surface Water Design Manual.	Irregular
CAO_DESIGNATION	Polygons representing properties with field checked critical area sketch maps on record.	Monthly
CDA	Polygons representing Critical Drainage Areas	None Planned
CDIST96	Polygons representing King County Council Districts. A derivative of Election's KCCDST with additional attributes.	Irregular
CHINOOK	Polygons representing 500-foot buffer from streams identified by Chinook distribution analysis.	As Needed
CHNLMIGR	Polygons representing River Channel Migration Zones	None Planned
CIA	Polygons used as the basis for all the various XXXX_IA layers. When those layers are adjusted the CIA polygons are reallocated.	Irregular
CITYIMP	Polygons representing impact areas (areas of interest) as defined by various cities.	None Planned
CLEAR_IA	Polygons representing clearing inspection areas.	Irregular
CODE_RESTRICT_AREA	Polygons representing areas subject to sections of King County Code that regulate development beyond zoning, and are not P-Suffixes, Special District Overlays, or Demonstration Project Areas	As Needed
CODE_IA	Polygons representing code enforcement areas.	Irregular
COLESITE	Points representing identified sites with current and/or grandfathered mineral extraction rights.	None Planned
CP_CENTER	Polygons and Points representing community centers designated under the KC Comp. Plan	As Needed

Name	Description	Update Frequency
ERS_DA	Polygons representing erosion drainage as regulated by the Surface Water Design Manual.	Irregular
ESA_IA	Polygons representing Environmental Species Act (ESA) inspection areas.	Irregular
ESC_IA	Polygons representing erosion and sediment control inspection areas.	Irregular
GRAD_IA	Polygons representing grading inspection areas.	Irregular
HALEKATE	Points representing observed Bald Eagle Nest Points	None Planned
HALEPAR	Polygons representing parcels containing observed Bald Eagle Nest Points.	None Planned
INTERLOC	Polygons representing DDES interlocal agreements with various cities and agencies.	As Needed
INTRMPAA	Polygons representing interim Potential Annexation Areas (PAA) for cities in King County. Also includes overlaps, and gaps in the Urban designated areas.	As Needed
JPA	Polygons representing joint planning areas as defined by the King County Comprehensive Plan.	Irregular
KINGADDR.MDB	Parcel specific database of situs addresses as recognized by DDES for properties in unincorporated King County.	Continually
LH_DA	Polygons representing landslide hazard drainage areas as regulated by the Surface Water Design Manual.	Irregular
LMP	Polygons representing Lake Management Plans	None Planned
LPS	Polygons representing Lake Protection Standard Areas	None Planned
LU_IA	Polygons representing land use inspection areas.	Irregular
LU_PROJECT_MGR	Polygons representing areas of responsibility for Project Managers	As Needed
LU_XXXXX	A series of polygon layers representing Comprehensive Plan land use changes per various King County ordinances. Each layer shows the before and after planned land use for a given ordinance. Layer name provides ordinance number (e.g. LU_11353).	As Needed
MDPA	Master Drainage Plans Areas as defined and regulated by the Surface Water Design Manual.	Irregular
MINE97	Polygons representing mineral resource sites as defined by Chapter 3 of the King County Comprehensive Plan.	As Needed
MINE_SITES	Points representing mineral resource sites as defined by Chapter 3 of the King County Comprehensive Plan.	As Needed

Name	Description	Update Frequency
MRWATERS	Polygons representing major receiving water bodies as regulated by the Surface Water Design Manual.	Irregular
OPENENF	Points representing open code enforcement cases.	Monthly
OPENLUIS	Points representing open land use inspections.	Monthly
P_XXXXX	A series of region layers representing parcel specific development condition changers per various King County ordinances. Each layer shows the before and after changes to the modified p-suffixes. Layer name provides ordinance number (e.g. P_11353).	As Needed
PARCELS.MDB	Parcel specific database for development conditions information.	As Needed
PERMPAR	Polygons representing parcels associated with DDES permits. Includes historical parcels that no longer exist.	Monthly
PWI	Polygons representing Areas of Potential Wetland Influence (300' buffers of SAO Wetlands with KCAWET and the NWI wetlands) under the King County Critical Areas Ordinance.	As Needed
RED_TAILED_HAWK	Points indicating observed Red-Tailed Hawk nests.	As Needed
RFFA	Polygons representing the KC Comp. Plan designated Rural Forest Focus Areas	As Needed
SANT.MDB	Parcel specific database for Sensitive Area Notice on Title (SANT) information.	Monthly
SC-RSRA	Polygons representing Regionally Significant Resource Areas in the Rural portions of the Soos Creek Basin Plan	None Planned
SNOWLOAD	Polygons representing ground snow load zones.	Irregular
SO_XXXXX	A series of region layers representing special district overlay changers per various King County ordinances. Each layer shows the before and after changes to the modified SDOs. Layer name provides ordinance number (e.g. SO_11353).	As Needed
STREAM	Lines representing the Sensitive Area Ordinance streams as defined in Title 21A Zoning – 21A.24 of King County Code.	Irregular
SUBDIV	Polygons representing each recorded plat. Generated by dissolving tax lots on major number.	Irregular
TDR	Polygons representing parcels receiving or sending Transfer of Development Rights (TDR).	As Needed
URBCENTR	Polygons and Points representing urban centers designated under the KC Comp. Plan	As Needed
WHCA_FLAG	Polygons representing buffer distances around species nests that are designated as Wildlife Habitat Conservation Areas under the KC Critical Areas Ordinance	As Needed
WLRDCPLT	Polygons representing parcels with Citizen Action Requests for drainage problems recorded on them by DRNP/WLRD staff	Bi-annually

Name	Description	Update Frequency
Z_XXXXX	A series of polygon layers representing zoning changes per various King County ordinances. Each layer shows the before and after zoning for a given ordinance. Layer name provides ordinance number (e.g. Z_11353).	As needed

5.4.4 DES – Emergency Management Division

Enterprise

Name	Description	Update Frequency
ESN	Emergency Service Zone Numbers (ESN) boundaries used to route 911 emergency calls.	As Needed
Site Addresses	Addressable building points in King County, including x,y locations	As Needed
Roads	New roads collected during site address verification process	As Needed

Agency

Name	Description	Update Frequency
Cell Towers	Wireless Cell Towers	As Needed
PSAP GIS Data	Specific GIS data related to PSAP map needs, i.e. patrol zones, tow zones, special police reporting districts, CAD Map data.	As Needed

5.4.5 DES – Records, Elections, and Licensing Services Division

Enterprise

Name	Description	Update Frequency
AIRDST	King County Airport District	*
CEMDST	King County Cemetery District	*
CITYDST	Boundaries of incorporated cities and towns	As needed**
CONGDST	Congressional District boundaries in King County	Every 10 years***
DIRDST	Director districts within the Seattle School District	Yearly
DSTCODE	Unique Voting Levy Description Polygons (unique ballot styles)	*
FIRDST	King County Fire Protection Districts	*
HSPDST	King County Hospital Districts	*
JUDDST	King County Court Electoral Districts	Yearly

Name	Description	Update Frequency
KCCDST	Current King County Council Districts	Every 10 years***
LEGDST	Legislative Districts in King County	Every 10 years***
LIBDST	King County Library District	*
MS1DST	Proposed Electoral Districts group 1 (temporary ballot measures or petitions)	As needed****
MS2DST	Proposed Electoral Districts group 2 (temporary ballot measures or petitions)	As needed****
MUNDST	County recognized Municipal Incorporation Districts	As needed****
PRKDST	King County Park Districts / Special Park authorities	*
SCHDST	Public School Districts in King County	******
SWRDST	King County Sewer Districts	*****
VOTDST	Voting Districts (commonly referred to as Precincts)	Yearly
WSDST	Combined Water and Sewer Utility Districts	*****
WTRDST	King County Water Districts	*****

* Following annexation activity
** For election purposes, REET
*** Following the Decennial Census
**** For election purposes
***** Following annexation, or merger activity
****** Following notification of Transfer of Territory

Agency

Name	Description	Update Frequency
STREETSEG	Street centerline master address file (MAF)	Weekly
PRECINCT	Voting precinct assignment	As needed*
LEVY	Minor taxing district assignment	As needed*
COMBO	Unique Ballot style	As needed*
POLLPOINT	Election polling place assignment	As needed*
ROUTE	Election supply delivery routes	As needed*
ZONE	Election day trouble shooter assignments	As needed*

* For election purposes

5.4.6 DES –Facilities Management Division

- No activity in this area: FMD is not responsible for any enterprise GIS data. The division anticipates integrating a variety of internal tabular spatial data sources via the ongoing REPMS project. REPMS will integrate and rationalize various internal databases (based on a variety of legacy software packages) to centralize access and enable future application development.
- Development of the Real Estate Portfolio Management System will enable FMD to perform its business functions more effectively. It will also elevate cross agency data integration problems as well. For instance, FMD lease information is indexed by site address, but not PIN. This problem will receive attention as the REPMS is designed, developed, and implemented.

5.4.7 DNRP – Wastewater Treatment Division

Enterprise

Name	Description	Update Frequency
FACILITY	Manholes, pump stations, regulator stations, treatment plants. The Facility point coverage is generated from coordinate locations in the Facility Information Retrieval System (FIRS). It represents all facilities in the King County Wastewater Treatment System.	Weekly
IWPERMIT	Industrial Waste Permit locations.	Weekly
PLANT_ANNO	Contains regional wastewater treatment plant names.	As needed
PLANT	Regional Wastewater Treatment plants. It contains the location of regional wastewater treatment plants, including King County owned plants and others in King, Pierce, and Snohomish Counties.	As needed
SEWER_ANNO	A geodatabase that contains treatment plant names, pump station names, regulator station names, and sewer trunk names. These names are depicted at several common scales.	As Needed
SEWER	Depicts WTD's conveyance system. It is generated from the FIRS database populated by the WTD Facility Inspection Section. Arc segments represent sections of conveyance pipe between manholes or other facilities (see FACILITY point coverage).	Weekly
SEWER_ANNO	Contains WTD sewer line annotation.	As needed
SITEPLAN	Building footprints of treatment plants or other facilities	As needed
WTDBSN	WTD defined boundaries of sewer infrastructure flow basins with in the King County Wastewater Service Area. This coverage is used for modeling and planning wastewater flows (see WTDSERV).	As needed
WTDFLOW	Depicts the division of wastewater treatment between the treatment plants within the King County Wastewater Service Area.	
WTDSERV	Depicts the King County Wastewater Service Area. Sewer service areas, instead of political boundaries, define it. It represents the area from which local sewer agencies collect wastewater that is eventually conveyed and treated by King County. Additionally, its eastern edge is defined by the Urban Growth Boundary and encompasses potentially sewerable area for planning and flow projections.	As needed

Name	Description	Update Frequency
WTRSAMP	Water Sampling sites. Sampling locations from LIMS database. WTRSAMP is a point coverage representing the location of water quality sampling sites. The coverage is generated weekly from the LIMS oracle database maintained by the King County DNR Environmental Lab. Each point has an attribute identifying its LIMS locator ID.	Weekly

Agency

Name	Description	Update Frequency
CSO	Combined Sewer Overflow discharge locations.	As needed
CSOBSN	Basins used for modeling CSOs and CSO Projects.	As needed
FLOWMNTR	Contains depictions current and historic monitors used in a variety of projects from day to day system flow monitoring to I/I project monitoring.	As needed
LOCALLN	Contains depiction of local sewer pipes with available attribute information	As needed
LOCALMH	Contains depiction of local sewer facilities with available attribute information	As needed
MDLBSN	Basins developed for WTD modelers through the Inflow and Infiltration project based on 2001 data.	As needed
MDLBSN00	Basins developed for WTD modelers through the Inflow and Infiltration project based on 2000 data.	Never
MDLBSN02	Basins developed for WTD modelers through the Inflow and Infiltration project based on 2001 data with the proper depiction of the Redmond area basins.	As needed
MNIBSN00	Basins developed for flow monitoring efforts through the Inflow and Infiltration project based on 2000 data.	Never
MNIBSN01	Basins developed for flow monitoring efforts through the Infiltration and Inflow project based on 2001 data.	As needed
MNIBSN02	Basins developed for flow monitoring efforts through the Infiltration and Inflow project based on 2001 data with the proper depiction of the Redmond Basins.	As needed
RWSPBSN	Basins used by WTD to plan and manage wastewater flow as used in the Regional Wastewater Service Plan and until 2003. This has been superseded by WTDBASIN.	As needed
SERVAREA_DISS	WTD service area boundary.	As needed
SWR_AGEN	A depiction of the sewer agencies that provide flow to WTD. This dataset is for cartographic and planning purposes only and does not show individual service areas or district boundaries. It should not be confused with SEWER_DIST maintained by Records and Elections.	As needed

Name	Description	Update Frequency
SWRLND	Areas of sewered land delineated using local line sewer information, Emerge imagery, and parcel lines based on 2001 data	As needed
SWRLND00	Areas of sewered land delineated using local line sewer information, Emerge imagery, and parcel lines based on 2000 data	Never
WTDBSN	WTD sewer basins- RWSP basins with revised boundaries to match the updated service area boundary.	As needed
RAINGAGE	Contains depictions of WTD and Water and Land Resources rain gages.	As needed
UGACOMBO	Polygon showing Urban Growth Area (UGA) for King County and Snohomish County. Combined 2002 King County UGA data and 2000 Snohomish UGA data.	As needed
WTD_HCP	WTD Habitat Conservation Plan Boundary.	As needed
KCTILE	Parcel tile index extracted from data on *WILDFIRE*.	Never
CED_CON	Contours in 20-foot increments for southwest Snohomish County.	Never
CEDSLOPE	Steep Slopes by southwest Snohomish County contour area.	Never
CESLOPE	Steep Slopes by King County Cedar River contour area.	Never
CWSLOPE	Steep Slopes by King County Lake Washington contour area.	Never
GESLOPE	Steep Slopes by King County Soos Creek contour area.	Never
GWSLOPE	Steep Slopes by King County Duwamish/Green River contour area.	Never
LSKA_CON	Contours in 20-foot increments for northwest Snohomish County.	Never
LSKASLOPE	Steep Slopes by northwest Snohomish County contour area.	Never
NPSLOPE	Steep Slopes by northwest King County contour area.	Never
S1SLOPE	Steep Slopes by King County Duvall contour area.	Never
S2SLOPE	Steep Slopes by King County North Fork Tolt River contour area.	Never
S3SLOPE	Steep Slopes by King County Snoqualmie contour area.	Never
S4SLOPE	Steep Slopes by King County Middle Fork Snoqualmie River contour area.	Never
SASLOPE	Steep Slopes by King County Sammamish contour area.	Never
SC_TOPOINDX	Snohomish County contour layer index.	Never
SLOPE_INDX	Steep slope layer index.	Never
SNBA_CON	Contours in 20-foot increments for central and southeast Snohomish County.	Never
SNBASLOPE	Steep Slopes by central and southeast Snohomish County contour area.	Never
SPSLOPE	Steep Slopes by King County Duwamish River West Bank contour area.	Never

Name	Description	Update Frequency
STILL_CON	Contours in 20-foot increments for Snohomish County Stilliguamish River area.	Never
STILLSLOPE	Steep Slopes by Snohomish County Stilliguamish River contour area.	Never
USKA_CON	Contours in 20-foot increments for Snohomish County Glacier Peak area.	Never
USKASLOPE	Steep Slopes by Snohomish County Glacier Peak contour area.	Never
VASLOPE	Steep Slopes by King County Vashon Island contour area.	Never
WRSLOPE	Steep Slopes by King County White River contour area.	Never

5.4.8 DNRP – Water and Land Resources Division

Enterprise

Name	Description	Update Frequency
ASGWC95	Groundwater Contamination Susceptibility. Areas identified as susceptible to possible groundwater contamination.	As needed
CARA	Critical Acquifer Recharge Areas. The political categories approved by the council – based on ASGWC95 and KC_WHPA	As required due to regulations
CHNLMIGR	River channel migration hazards	As needed
CITY_3CO_AREA	SDE: Incorporated Areas in King, Pierce, and Snohomish Counties	Pierce and Snohomish: Annually, King: As needed
CITY_3CO_LINE	SDE: Incorporated Areas in King, Pierce, and Snohomish Counties	Pierce and Snohomish: Annually, King: As needed
DRNBASIN	DRNBASIN is King County Department of Natural Resources, Water & Land Division's (KC WLR) version of Water Resource Inventory Areas (WRIA) and watersheds in King County. Please note that KC's version differs from the version Washington State Department of Ecology (WA DOE) produces (available on their web site). Most notably, in the KC version, WRIA 9 includes Vashon Island and Elliott Bay basin, and the Rock Creek area is included in WRIA 8, not WRIA 9. For the King County area, drnbasin is generally considered to be more correct than the WA DOE version, and is what WLR uses in all planning efforts.	As needed
DRNSTUDY	SWES Engineering Studies	As needed

Name	Description	Update Frequency
FARMLAND	Farmland preservation properties	As needed
FISH9	Distribution of 7 salmon species in WRIA 9 streams, 5 presence classes. FISH9 contains fish distribution information in Water Resource Inventory Area 9 for seven fish species: chinook *(Oncorhynchus tshawytscha)*, coho *(Oncorhynchus kisutch)*, sockeye *(Oncorhynchus nerka)*, chum *(Oncorhynchus keta)*, pink *(Oncorhynchus gorbuscha)*, steelhead *(Oncorhynchus mykiss)*, & cutthroat trout *(Oncorhynchus clarki)*.	None
FISH9_PT	Point observations of 7 salmon species in WRIA9, 7 observation classes. FISH9_PT contains fish observation information in Water Resource Inventory Area 9 for seven fish species: chinook *(Oncorhynchus tshawytscha)*, coho *(Oncorhynchus kisutch)*, sockeye *(Oncorhynchus nerka)*, chum *(Oncorhynchus keta)*, pink *(Oncorhynchus gorbuscha)*, steelhead *(Oncorhynchus mykiss)*, & cutthroat trout *(Oncorhynchus clarki)*.	None
FISHV	Distribution of 5 salmon species in Vashon streams, 1 presence class. FISHV contains fish distribution information on Vashon Island for five fish species: chinook *(Oncorhynchus tshawytscha)*, coho *(Oncorhynchus kisutch)*, chum *(Oncorhynchus keta)*, steelhead *(Oncorhynchus mykiss)*, & cutthroat trout *(Oncorhynchus clarki)*.	None
FISHV_PT	Point observations of 5 salmon species on Vashon. FISHV_PT contains fish observation information on Vashon Island for five fish species: chinook *(Oncorhynchus tshawytscha)*, coho *(Oncorhynchus kisutch)*, chum *(Oncorhynchus keta)*, steelhead *(Oncorhynchus mykiss)*, & cutthroat trout *(Oncorhynchus clarki)*.	None
FLDPLAIN	A digital representation of the paper FEMA flood maps. This coverage details the locations of 100 year floodplains as defined by the Federal Emergency Management Agency.	As needed
FLOODWAY	A digital representation of the paper FEMA flood maps. This coverage details the locations of floodways as defined by the Federal Emergency Management Agency	As needed
GW_ (Groundwater Database)	A Collection of tables with the GW_ prefix that describe groundwater sources in King County. Provides the source view for the creation of the GWSOURCE data layer	Quarterly
GWMA	Groundwater Management Areas. GWMA depicts the boundaries of areas that have undergone groundwater management planning according to a Washington state program	As needed
GWSOURCE	Locations of groundwater sources	Quarterly
HYDROBASIN	King County Hydrological Basins – a region of DRNBASIN	As needed
HYDROGAUGE_POINT	King County Hydrological Gauges	Weekly

Name	Description	Update Frequency
KC_WHPA	Well Head Protection Areas are designed to show zones where contamination can flow into a well. Delineation of these zones is part of EPA's Source Water Protection Program. “Time-of-travel” zones define how long it would take contamination to reach the well at 6 month, 1 year, 5 year, and 10 year intervals.	As needed
NDA	Neighborhood drainage projects of Stormwater Services Section.	As needed
PUBLIC_LANDS	Publicly owned parcels derived from Assessor’s data and PARCEL	Quarterly
SALMON_WATCHER_POINT	Locations of volunteer salmon monitoring	As needed
SALMONW_BASINS_AREA	Salmon Watcher Program Basins	None
SALMONW_BASINS_LINE	Salmon Watcher Program Basins	None
STORM_FAC	Commercial and residential stormwater facilities.	Weekly
STORMREG	Regional stormwater facilities for the control of stormwater or for water quality improvement	As needed
SWDM_FLOW	2005 Surface Water Design Manual Flow Control Applications	None
SWDM_LH_DA	2005 Surface Water Design Manual Landslide Hazard Drainage Areas	None
SWDM_WQ	2005 Surface Water Design Manual Water Quality Applications	None
SWES_PROJ	WLR SWES Section CIPs and SHRPs	As needed
SWM_DATA	Surface Water Management Data.	Currently once a week
WEEDS_POINT	Noxious Weeds Locations from Surveys	Annually
WRIA	King County Water Resource Inventory Areas – region of DRNBASIN	As needed
WRIA9_PROJECTS_POINT	Locations of WLR projects in WRIA 9	Weekly
WTRBODY	Open Water	As needed
WTRCRS	Streams - topological network. This coverage contains watercourses for King County drainage basins, including some areas in adjoining counties. WTRCRS is designed as a topologically complete network of stream centerlines, with extensive related attribute tables. This data set is integrated from numerous sources, primarily at 1:24,000 scale. WTRCRS cross-references other commonly used hydrographic data inventories, and is also suitable for medium to small-scale map displays and generalized analyses.	As needed
WTR_SERV	Water Service Areas	None

Agency

Name	Description	Update Frequency
JURIS00	Incorporated Cities Year 2000	None
JURIS90	Incorporated Cities Year 1990	None
APD_RIPAR100	APD Riparian Condition Units - 100 ft stream buffers	None
APD_RIPAR25	APD Riparian Condition Units - 25 ft stream buffers	None
APDLU	APD General Landuse	None
BEAR_LOCS	Bear Sighting Locations	None
BUGS_MAA	Benthic Macroinvertebrate Sampling Sites	None
LNDCOV01	King County 2001 Landcover	None
LNDCOV95	King County 1995 Landcover	None
SWDM_BOGS	2005 Surface Water Design Manual Bog Wetlands	None
SWMDATA	Surface Water Management Parcels	None
GREEN_HIST	Historical Green River	None
MAJ_STRM	Major Streams and Rivers, a sub-set of WTRCRS	As needed
RIVER_MI	River Miles derived from WTRCRS	As needed
RIVERFAC	King County River Facilities	As needed
COSTSHARE	Cost-Share Parcels	As needed
CUT_AG	Current Use Taxation Program: Agricultural Properties	As needed
CUT_FOREST	Current Use Taxation Program: Forestry Parcels	As needed
CUT_PBRS_TIM	Public Benefit Rating System and Timber Land Program Parcels	As needed
DAIRIES	Dairies and Commercial Agricultural Operations	As needed
FARMPLAN	Parcels with Farm Plans	As needed
FISH7	Fish distribution in WRIA 7	None
FISH7_PT	Fish distribution in WRIA 7, shapefile points	None
FISH7_SOURCE	Fish Distribution (WRIA 7) Source Table	None
FISH8	Salmon Distribution (WRIA 8)	None
FISH8_PT	Salmon Observation Locations (WRIA 8)	None
FISH8_PT_DAT	Salmon Observations Data Table (WRIA 8)	None
FPP	Farmland Preservation Properties	As needed
FTA	Forestry Technical Assistance	As needed
LIVESTOCK_VFD	Verified Livestock Parcels	As needed
RFFA	Rural Forest Focus Areas (as adopted in 2001 Comp. Plan)	As needed
TAYLOR_STANDS	Forest Stands on Taylor Mountain	As needed

Name	Description	Update Frequency
FCZD	Green River Flood Control Zone	None
GWMA	Ground Water Management Areas	None
MCGARVEY_OS	4:1 Parcels in the Cedar River Basin	As needed
POLYGON_OS	4:1 Parcels in the Cedar River Basin	As needed
RDP_BND	Rural Drainage Program Service Areas	As needed
DRAINAGE_PROP	King-County Owned Drainage Properties	As needed
FLOOD_PROP	Flood Hazard Reduction Section Flood Buyout Parcels	As needed
PARCEL_DATA	Enterprise PARCEL data layer with additional attributes	Quarterly
BATH_TOPO	Puget Sound Bathymetry	None
CONTOUR40	King County Contours - 40'	None
LKSAMBATH	Lake Sammamish Bathymetry	None
PS_BATH10	Puget Sound Bathymetry - 10 Foot Contours	None
PS_BATH20	Puget Sound Bathymetry - 20 Foot Contours	None
PS_BATH5	Puget Sound Bathymetry - 5 Foot Contour	None

5.4.9 DNRP – Parks and Recreation Division

Enterprise

Name	Description	Update Frequency
PARK	Parks within King County, including those which are owned and/or maintained by other agencies and jurisdictions	As Needed
PARK_FAC	King County Park Facilities	As Needed
TRAIL	Trails in King County	As Needed

Agency

Name	Description	Update Frequency
ARMS_SERVICE	Parks Financial Zoning Areas	As Needed
ATLASANNO	Parks Atlas Annotation	As Needed
MAINTDIST	King County Park Maintenance District Boundaries	As Needed
PARK	All King County Parks	As Needed
PARKPLAN	King County Parks Planning Information	As Needed
PARKS_P	All King County Park Properties	As Needed
PROPTRAIL	King County Trails Plan	As Needed

Name	Description	Update Frequency
PSAFI_POINT	King County Park Facilities - points	As Needed
PSAFI_POLY	King County Park Facilities - polygons	As Needed
RESOCOORD	King County Park Resource Coordinator District Boundaries	As Needed
SP_SITES	County-wide Active Sport Sites	As Needed
TRAIL	All King County Trails	As Needed
WTANNOAT	County-wide Water Annotation Coverage	As Needed

5.4.10 DNRP – Solid Waste Division

Enterprise

- No activity in this area

Agency

Name	Description	Update Frequency
BROWNFIELDS_ SITES	Location of sites that are contaminated and may need assessment assistance to improve their marketability or redevelopment potential. These sites are part of the Brownfields Program.	As needed
CEDAR HILLS PROPERTY SALES	Sales of property within the legally-mandated notification zone surrounding the Cedar Hills Regional Landfill, obtained from records of the King County Department of Assessments.	Quarterly
CLCP_SITES	Sites of cleanup events conducted under the Community Litter Cleanup Program.	Quarterly
SW_FACILITIES	Locations of Transfer Stations, Drop Boxes, Landfills (both closed and active), and Recycling Facilities operated by SWD in King County.	As Needed
SW_FACILITIES_ PROP	Parcel-based information for locations of Transfer Stations, Drop Boxes, Landfills, and Recycling Facilities operated by SWD in King County.	As needed

5.4.11 Department of Public Health

Enterprise

- No activity in this area

Agency

Name	Description	Update Frequency
Clinics	King County Public Health Clinics	As Needed

Name	Description	Update Frequency
Medic Units	King County Medic Units	As Needed
Hospitals	King County Trauma Hospitals	As Needed
Geocodes	King County EMS Geocode Grid	As Needed

5.4.12 DOT – Roads Services Division

Enterprise

Name	Description	Update Frequency
MONUMENT	Point shapes representing RSD/Survey Section surveyed monuments.	Annually
REFGRID	Quarter section, section and township reference grid for King County.	None Planned
VERTICAL	Vertical control for ortho photography.	

Agency

Name	Description	Update Frequency
ST_CRIS	Line shapes representing King County's County Road Inventory System (CRIS). Last year the Engineering Services Section completed a major data conversion project in collaboration with KCGIS Center associated with the CRIS.	Daily
KGCO_DS	Soils data for King County. Seamless soils shapefile for entire county.	None planned
SIGNALS	Point shapes representing King County Countywide maintained signals.	Quarterly
STRIPING	Line shapes representing installation and maintenance of Traffic Section maintained roadway marking features.	None planned
HARS	Line shapes representing King County Countywide High Accident Roadways.	Annually
HALS	Point shapes representing King County Countywide High Accident Locations.	Annually
CIPPLINE	Line shapes representing King County Capital Improvement Projects.	Daily
CIPPATH	Line shapes representing King County Capital Improvement Sub-Projects.	Daily
CIPPOINT	Point shapes representing King County Capital Improvement Projects.	Daily

Name	Description	Update Frequency
ADOPT	Line shapes representing the adopted sections of King County roadways countywide.	Annually
PATHWAY	Line shapes representing Countywide School Pathway Projects.	Monthly
LIFELINE	Line shapes representing Lifeline Routes; it is a cooperative venture between the Federal Emergency Management Agency (FEMA) and King, Pierce, Kitsap, and Snohomish Counties. Its goal is the identification and coordination of lifeline routes between and among state, County, and local emergency managers.	Annually
BRIDGE	Point shapes representing King County-maintained Bridges.	Annually
"BY BASIN" MANY THEMES	Point and line shapes that represent King County's drainage inventory National Pollution Discharge Elimination System (NPDES).	Monthly
3P	Line shapes showing King County Countywide proposed pedestrian improvement projects.	Monthly
NEP	Line shapes representing King County Countywide Neighborhood Enhancement Projects.	Monthly
COUNT_DATA	Point shapes representing Countywide year 2000 Historical Count Location w/data attached.	Annually
RD_EIS	Point shapes representing RSD Environmental Unit's impact statements.	Monthly
RD_BA	Point shapes representing RSD Environmental Unit's biological assessments.	Monthly
RD_PROP	Point shapes representing RSD-owned properties.	Monthly
FREIGHT_GOODS	Line shapes representing routes designated by the state as roadways that carry freight and goods.	Annually
GUARDRAIL	Line shapes representing the King County Inventory of Countywide guardrail.	Monthly
COUNT_LOCATIONS	Point shapes representing RSD Traffic Section Historical Count Locations w/o data attached.	Annually
LAASETHNSP	Ethnographic place names for King County.	None planned
PREHIST_ARCH	Recorded prehistoric archaeological sites for King County.	None planned
HIST_ARCH	Recorded historic archaeological sites for King County.	None planned
CLP	Recorded Cultural Resources managed by Seattle Public Utility (SPU)	None planned
BURKEBLUEPOLY	Heretofore unrecorded archaeological sites for King County.	None planned
BURKEGRAYPOLY	Heretofore unrecorded archaeological sites for King County.	None planned

Name	Description	Update Frequency
LANDFORM	Paleo-landscape features (late Pleistocene and Holocene)	None planned
LAASTCPSP	Areas of traditional cultural and religious significance for Native American groups in King County	None planned
GLOETHNOTRAIL	Cultural features digitized from Government Land Office (GLO) maps for use as shape files (feature data sources).	None planned
GLOHISTRD	Cultural features digitized from GLO maps for use as shape files (feature data sources)	None planned
GLOHISTPT	Cultural features digitized from GLO maps for use as shape files (feature data sources)	None planned
GLOETHPOLY	Cultural features digitized from GLO maps for use as shape files (feature data sources)	None planned
GLOHISTPOLY	Cultural features digitized from GLO maps for use as shape files (feature data sources)	None planned
CRREPORTS	Areas of previous cultural resource surveys	None planned

5.4.13 DOT – Transit Division

Enterprise

Name	Description	Update Frequency
BENLINE	Line shapes representing The George Benson Waterfront Streetcar Line derived from REVSERV as an ordered set of timepoint intervals.	As Needed
BENSTNS	Point shapes representing The George Benson Waterfront Streetcar Line Stations.	As Needed
BUSBASE	Point shapes representing bus base locations (also called depots or garages). BUSBASE attributes include name, on street, cross street, and address.	None Planned
BUSSTOP	Point shapes representing Transit bus stops derived from street as a distance from an intersection along a link. BUSSTOP attributes include on street, cross street, stop type, accessibility, authorization, jurisdiction, date activated, date deactivated, bearing, distance from cross street, attributes pertaining to the stop sign and schedule holder and how they are affixed, usage by other transit properties, number of shelters, paint length, ride free area flag, side of the street, length of stop, fare zone, and zip code.	Daily
COLLECTOR	Line shapes representing collector arterials derived from STREET and King County road classification.	Daily
DEADHEAD	Line shapes representing Transit non-revenue service route footprint derived from STREET as an ordered set of links.	Daily

Name	Description	Update Frequency
EMITTER	Point shapes representing Transit radio frequency emitters in support of Automatic Passenger Counter and Automatic Vehicle Location systems. EMITTER attributes include on street, cross street, associated link id, and associated bus stop id.	Daily
FREESTRT	A polygon shape representing the Transit ride-free-area derived from STREET.	Annually
FREEWAY	Line shapes representing freeways derived from STREET and King County road classification.	Daily
LANDMARK	Point shapes representing landmark locations. This layer directly supports Transit's trip planning system. LANDMARK attributes include name, abbreviated name, address, symbolization characteristics, classification, on street, cross street, and address. LANDMARK also has an associated alias table permitting a location to be referenced by multiple names.	Monthly
LOCAL	Line shapes representing local roads derived from STREET and King County road classification.	Daily
MINOR	Line shapes representing minor arterials derived from STREET and King County road classification.	Daily
NHOOD	Polygon shapes representing neighborhoods. This layer directly supports Transit's trip planning system. NHOOD attributes include the name of the neighborhood.	None Planned
NHOODCTR	Point shapes representing the business centers for neighborhoods. This layer directly supports Transit's trip planning system. NHOODCTR attributes include the name of the neighborhood and the address of the business center.	None Planned
PARKRIDE	Point shapes representing park and ride lot locations. PARKRIDE attributes include name, on street, cross street, address, zip code, district, ownership (permanent or leased), and owner.	Monthly
PLANDIST	Polygon shapes representing Transit Planning District as defined by Facility Planners.	As Needed
PRIMARY	Line shapes representing primary arterials derived from STREET and King County road classification.	Daily
REVSERV	Line shapes representing Transit revenue service route footprint derived from STREET as an ordered set of links.	Daily
SIGNAL	Point shapes representing traffic signal locations derived from STREET (nodes) and traffic signal key.	Annually
STREET (edges)	Line shapes representing the Countywide street network, including such related transportation links as selected driveways, transit connections, alleys, pedestrian walkways, etc. The street network is key to the Division's business; however this layer will no longer be maintained once Transit data are conflated over to TNET by early 2006. STREET (line) attributes include name, alias designations, address (theoretical), zip code, King County road classification, HOV, barrier (to pedestrians), grade (> 6%), and trolley wire.	Daily

Name	Description	Update Frequency
STREET (junctions)	Node shapes representing intersections of line shapes. STREET (junction) attributes include transit timepoint key and traffic signal.	Daily
SUBSTATN	Point shapes representing electrical distribution nodes for overhead wire trolley system. SUBSTATN attributes include name, address, type, supplier, label, and kilowatt-hours.	Annually
TIMEPT	Point shapes representing Transit timepoints derived from STREET (nodes) and timepoint key. These are locations where expected bus arrival times are calculated.	Daily
TNET	A geodatabase of line features representing the improved Countywide transportation network including features for vehicular, rail, ferry, pedestrian, and equestrian. This network is in dual maintenance mode with STREET. It is expected to be released to the KCGIS Spatial Data Warehouse in early 2006.	Daily
TRNSAREA	Polygon shapes representing Transit planning districts as defined by Service Planners.	None Planned
TRNSCNTR	Point shapes representing transit center locations. TRNSCNTR attributes include name, on street, cross street, and address.	Annually
TRNSFACL	Point shapes representing transit facilities other than P&R, bus bases, and transit centers. TRNSFACL attributes include name.	None Planned
TROLLEY	Line shapes representing streets that have overhead trolley electrical lines derived from street. TROLLEY attributes include those attributes found on STREET shapes.	Annually
TUNLSTN	Polygon shapes representing transit tunnel stations. TUNLSTN attributes include the name of the tunnel station.	None Planned
TUNNEL	A polygon shape representing the Transit tunnel.	None Planned
WTRTAXI	Line shapes representing the Water Taxi route derived from REVSERV as an ordered set of timepoint intervals.	As Needed

Agency

Name	Description	Update Frequency
ACCIDENT	Point shapes representing transit accident locations. ACCIDENT attributes include date, time, status, reviewed, road conditions, weather, judgment, severity, route and vehicle characteristics, FTA codes, on street, and cross street.	Daily
AIRPORT	Polygon features representing local and regional airports.	Annually
APCEMIT	Point shapes representing Transit radio frequency emitters derived from EMITTER. These points may have a different location from the physical emitter location to facilitate Automatic Passenger Counter system processing.	Daily

Name	Description	Update Frequency
AVLEMIT	Point shapes representing Transit radio frequency emitters derived from EMITTER. These points may have a different location from the physical emitter location to facilitate Automatic Vehicle Location system processing.	Daily
"Bus Stops"	Although current bus stops are distributed to the enterprise, several derivative layers are created for internal business purposes: ▪ ZONES: Point shapes representing all active and inactive Transit bus stops derived from street as a distance from an intersection along a link. ▪ ACTIVESTOPS: Point shapes representing active Transit bus stops derived from street as a distance from an intersection along a link. ▪ INACTIVESTOPS: Point shapes representing inactive Transit bus stops derived from street as a distance from an intersection along a link. ▪ CLOSEDSTOPS: Point shapes representing closed Transit bus stops derived from street as a distance from an intersection along a link. ▪ PENDINGSTOPS: Point shapes representing pending Transit bus stops derived from street as a distance from an intersection along a link. ▪ PLANNEDSTOPS: Point shapes representing planned Transit bus stops derived from street as a distance from an intersection along a link.	Daily
COMFSTN	Point shapes representing transit comfort stations (driver restroom facilities). COMFSTN attributes include owner and contact information, availability during the day, routes that have access on street, cross street, and address.	Monthly
DART	Polygon shapes representing Dial-a-Ride service area for Transit.	Monthly
FAREZONE	Polygon shapes representing Transit fare zones for King County Metro, Community Transit, Pierce County Transit, and Sound Transit.	Annually
INCIDENT	Point shapes representing transit security incidents. INCIDENT attributes include date, route characteristics, on street, cross street, and items describing the incident type.	Daily
METROP_DIST	Polygon features representing King County Metro Police patrol districts.	As Needed

Name	Description	Update Frequency
"Routes"	Although current revenue service and deadhead paths are distributed to the enterprise, several derivative layers are created for internal business purposes: ▪ REVNEXT: Line shapes representing Transit revenue service route footprint for the following (next) transit service change. These shapes are derived from STREET as an ordered set of links. ▪ DEADNEXT: Line shapes representing Transit non-revenue service route footprint for the following (next) transit service change. These shapes are derived from STREET as an ordered set of links. ▪ REVENUE_TPIPATH_ALL: Line shapes representing Transit revenue service route footprint for all historical transit service changes. These shapes are derived from STREET as an ordered set of links. ▪ DEADHEAD_ TPIPATH_ALL: Line shapes representing Transit non-revenue service route footprint for all historical transit service changes. These shapes are derived from STREET as an ordered set of links.	Daily
SERVGRID	Polygon shapes representing a simple Transit service grid used on the Web for users to pick an area of interest. Information about the Transit service in that grid is provided.	As Needed
SERVQUAL	Polygon features representing King County Metro Service Quality dispatch districts.	As Needed
ST_LINK_LIGHT_RAIL	Line features representing Sound Transit Link light rail routes obtained from Sound Transit.	Quarterly
ST_LINK_LIGHT_RAIL_STATIONS	Polygon features representing Sound Transit Link light rail stations obtained from Sound Transit.	Quarterly
ST_REGIONAL_EX_BUS_ROUTES	Line features representing Sound Transit regional express bus routes obtained from Sound Transit.	Quarterly
ST_SOUNDER_COMMUTER_RAIL	Line features representing Sound Transit Sounder commuter rail routes obtained from Sound Transit.	Quarterly
ST_SOUNDER_COMMUTER_RAIL_STATIONS	Point features representing Sound Transit Sounder commuter rail stations obtained from Sound Transit.	Quarterly

5.4.14 DOT – King County International Airport

- No activity in this area

5.4.15 King County Sheriff's Office

- No activity in this area

5.4.16 Metropolitan King County Council

- No activity in this area

5.4.17 Office of Budget

Enterprise

Name	Description	Update Frequency
URB-V&R	Vacant and redevelopable land supply database to be reported under Growth Management Act Buildable Lands amendment. Prepared in coordination with DDES and Assessor database.	Update due in 2006 for reporting 2007
PAA and Major-PAA	Potential annexation areas and ten large areas. Derived from Growth Management Act boundaries and city boundaries files.	As needed
REC-LOTS	Recorded number of formal plats and lots in King County, from Recorder's Office.	Annually

Agency

- No activity in this area

5.4.18 Department of Community and Human Services

Enterprise

- No activity in this area

Agency

Name	Description	Update Frequency
	HCD: HUD related data for proximity of project sites to environmental features	TBD
	HCD: Listing of funded project sites	TBD
	HCD: HUD specially tabulated census data on low to moderate income households	TBD

5.5 Maintained Applications

5.5.1 KCGIS Center

Name	Description	Language
AvLibShp and AVLibImg	The AvLib (ArcView Library) ArcView 3.x extensions provide users with streamlined methods to access and display layers in the KCGIS Spatial Data Warehouse. In 2004 the AvLib application was split into two separate but complimentary extensions in order to make potential future updates easier to distribute. The "KC Shapefile Library" extension enables users to: browse spatial data layers by subject and feature type, with data layers identifiable by alias, filename, or description; add themes to a map view and automatically set various theme properties, such as symbology, which are normally randomly generated by ArcView; link data to metadata via an HTML browser; load a standard view from a library of user defined views; store a map view locally or submit a view to the KCGIS Spatial Data Warehouse so that other users may access it; and generate maps using standard layouts. The "KC Image Library" extension enables access to image data by providing the user with menu choices and tools for one click access to any image data on the system. These extensions are in a maintenance phase and will only by updated in 2006 when it is needed to keep the extensions operable while the data warehouse and back end routines change during Software Migration.	Avenue
KC Parcel Tools	This ArcView 3.x extension provides users with an easy to use interface to selected Assessor's data in the KCGIS Spatial Data Warehouse. There are five main functions of this application, which include: queries based on a known PIN or taxpayer name; information lookups on previously selected parcels; access to the cadastral base framework LIBRARIAN tiles with tools for loading and managing arc and annotation features; generating quarter section maps of cadastral base framework data with minimal user input; and generating formatted mailing labels for selected parcels. This extension is in a maintenance phase, but was updated in 2005 to read tabular data from the SQL Server database and to access all shapefiles from \\gisdw\kclib\plibrary2 instead of \\wildfire. RECDNET tiles (coverage format) are still accessed directly from \\wildfire. This extension will become obsolete once RECDNET is no longer maintained or stored on \\wildfire.	Avenue
iMAP	iMAP is a Web-based map viewer that provides online access to map layers and other related information. This map viewer generally requires a broadband Internet connection. Data are grouped into Map Sets that present data from different subject areas. At the end of 2005 there are 10 map sets. iMAP includes a property search tool that is fully integrated with the basic application and thus accessible in all Map Sets. A variety of other data query tools are also part of the standard iMAP user toolbox, including buffering, geocoding, and more. When a parcel is selected, URL links are presented, which access a variety of tabular information maintained by several King County agencies. A map output function is also included. The URL for iMAP is http://www.metrokc.gov/gis/mapportal/iMAP_main.htm.	ArcIMS, HTML, JavaScript, XML

Name	Description	Language
Parcel Viewer	Parcel Viewer is a Web-based application targeting property searches. This application does not require a fast Internet connection. Users can navigate the map and select parcels, or search for properties using address, cross streets, or parcel number as input. Buffering and map output features are also included. Like iMAP, when a parcel is selected URL links are presented to access a variety of tabular reports. The URL for Parcel Viewer is http://www.metrokc.gov/gis/mapportal/PViewer_main.htm.	ArcIMS, HTML, ASP
Districts and Development Conditions Report	The Districts and Development Conditions Report provides information on a property's characteristics, such as: parcel number, school district, zoning designation, jurisdiction, water district, comprehensive plan designation, ZIP code, sewer district, agricultural production district, county council district, council member, and watershed. Written in ASP and utilizing ArcIMS, it allows anyone with a Web browser to access the page and enter either an address or a parcel number. If a matching record is found, the user is then given a full report of associated data for that property. This page will also take a parcel number as an argument in the URL, so other sites or applications can link into the report. iMAP and the Parcel Viewer provide links to this report.	ArcIMS, ASP, HTML
KC Property Report	KC Property Report is an on-line query tool into the King County Assessor tabular data stored in the KCGIS Oracle RDBMS. Written in ASP, it allows anyone with a Web browser to access the page and enter either an address or a parcel number. If a matching record is found, the user is given a full report of associated Assessor data for that property. This page will also take a parcel number as an argument in the URL, so other sites or applications can link into the report. iMAP and the Parcel Viewer provide links to this report.	ArcIMS, ASP, HTML
Census Viewer	Census Viewer is web-based application using ArcIMS that allows the user to view maps and tables of more than 100 community census data indicators for 77 defined places throughout all of King County. Data is displayed at the tract or block group level within each place. Census Viewer is designed to be a resource for community organizations, government agencies, researchers and community residents working to strengthen families and neighborhoods. It provides easy access to current data about the population and housing characteristics of the various cities, towns, communities, and neighborhoods of King County.	ArcIMS, ASP, HTML, JavaScript
Inview	Inview (INtegration VIEWer) is designed to allow users to view edits applied to the cadastral base framework (RECDNET) and cadastral base framework annotation (RECDANNO). Use of Inview increases the overall efficiency of the submittal and integration procedure by decreasing the time necessary to perform QA checks and replacing the need for QA plots. Inview facilitates communication between agency users and the KCGIS Center integration application maintenance staff by providing a consistent, onscreen, visual checking device to quickly identify and document problems with submittals.	AML
MaintRec	The MaintRec tool provides King County agencies with a set of tools to populate tiled edit coverages with new or updated features. The	AML

Name	Description	Language
	edit coverages provide the KCGIS Center and the KC Assessor with the necessary information to perform their shared duties of maintenance and integration for the RECDNET and RECDANNO layers. MaintRec includes the following interactive tools: extract RECDNET and RECDANNO features by user specified extents; import ArcInfo coverages, and translate DXF files and ArcInfo export files into coverages; display, select, add and edit arc and polygon labels and their associated attributes; display, select, add and edit subclass annotation and their associated symbol markers and leaders; execute quality assurance checks on edits, facilitate error detection and resolution, generate quality assurance check plots and error reports and generate finish plots; submit finalized edits to the proper submittal directory.	
Integrate	The Integrate routines provide multi-user editing capabilities in a LIBRARIAN environment. These routines test and incorporate the updates generated by King County agencies for their layers derived from the cadastral base framework RECDNET and RECDANNO layers. The routines are called from the cron_update script as a part of the nightly database update processing. During integration all RECDNET submittal coverages for each tile are combined into one corresponding coverage. Using the combined coverage all changes are made to a copy of RECDNET. Data integrity checks are made to the new RECDNET coverage and if it passes, it is positioned for the update cycle to post into the KCGIS Spatial Data Warehouse. Coverages that fail the QC checks are “hung” and examined and fixed by the Cadastral Base Coordinator. RECDANNO submittal coverages are also handled in this AML program. Upon integration into the tiled RECDANNO coverage it is placed in the post directory structure for the update cycle to upload it into the KCGIS Spatial Data Warehouse.	AML
Update	The Update routines are varied and perform many functions to update the KCGIS Spatial Data Warehouse. The routines are called from the cron_update script as a part of the nightly database update processing. The routines find submitted keyfiles (tiled and untiled), ArcInfo Export files, and coverages (tiled and untiled) in the posting directories; perform validation tests on the files; and post them as coverages and corresponding shapefiles to the KCGIS Spatial Data Warehouse. Various lookup tables are also updated to reflect the posted changes.	AML, Avenue, UNIX script
PostRep	PostRep is the nightly posting and replication routine for the KCGIS Spatial Data Warehouse. It will replace the current Integrate/Update cycle found on *WILDFIRE*. The general function of this routine is to run quality control tests on all data submitted to the public library by agency data stewards. Upon passing the tests the data is “Posted” to the public library and “Replicated” into an appropriate shapefile format. PostRep is being written in the Python scripting language to take advantage of the robust geoprocessing programming model specifically designed for use with Python by ESRI.	Python
SDE2Shp	SDE2Shp analyzes fail-over status between SDE databases (GISPROD and GISSQLDW) and synchrony with Plibrary2 shapefile derivatives.	

Name	Description	Language
Directory2XLSCrossCheck	Directory2XLSCrossCheck tracks all changes in the Non-KCGIS shapefile library relative to the master control table. Includes analysis of dynamic metadata linkages to maintain uninterrupted access to documentation.	
MenuFindsLib	MenuFindsLib builds menu.dbf to support legacy AvLib ArcView 3.x application for both KC-maintained and Non-KCGIS data. Analyzes table for a range of layer consistency, synchronization and metadata quality issues.	
Plib3Validate	Plib3Validate is customized to review and flag inconsistencies within the raster library of the SDW. Requires future updates to track changes to data across all tiling levels.	
MetaValidate	MetaValidate provides more in-depth analysis of state of layer and raster metadata. High-level issues are evaluated in the routines described above, while this routine standardizes error reporting generated by ArcCatalog metadata parser. An in-progress module will also cross-check item and coded-value domain consistency between a layer and its metadata.	
StewardTool	StewardTool is the application used by data stewards to register new spatial and tabular datasets, update distribution requirements for new and existing layers, create, delete and update staff information, update agency information, and submit a dataset to the KCGIS Spatial Data Warehouse. StewardTool replaces the now-obsolete SiteTool (see http://gisdw/Intranet/apps/StewardTool/).	
ArcSDE scripts	The ArcSDE operating system command line scripts load data into ArcSDE. The parcel and parcel address layers, PARCEL and PIN_ADDRESS respectively, are loaded via ArcSDE scripts as well as spatially enabled views. Spatially enabled views are tabular data joined to vector data to create efficient server-side read only views that can be accessed by ArcGIS clients.	SDE (OS Command Line)
DTS Scripts	Data Transformation Services is a scripting environment embedded in SQL Server for batch data loading. There are currently three DTS services. Assessor Tables – Runs weekly. Assessments' DTS package pushes tabular data to GISPROD.PLIBRARY and the KCGIS Center's DTS package replicates them to GISSQLDW.PLIBRARY and to the file based DBASE tables. Address Tables – Runs Weekly. DTS packages on GISPROD load and merge address data from Assessments and DDES address tables. Parcel Legal Descriptions – Runs monthly. An ASCII extract file from the Recorder's Office mainframe is downloaded to the KCGIS Center file system and then loaded via DTS package onto SQL Server plibrary databases and pushed to the SQL Server database at DDES.	SQL Server DTS

5.5.2 Department of Assessments

Name	Description	Language
QSMap	Produces official Assessor QS map and generates PDF file for web display.	Aml/python
KCAppraiser	ArcView3 tools for accessing GIS data.	Avenue
CodeMap	Generates the LevyCode maps.	Aml
KingView	This application was developed by Assessments' Information Services Division for appraisers to use in valuing property and defending appeals. Additionally, it can be used by other staff as a tool for running quality assurance checks against the spatial and tabular data.	VB/ MapObjects
RealProp	This is the primary data viewing tool used by Assessments. It was developed by Assessments' Information Services Division. It has been spatially enabled by giving users access to shapefile and digital orthophoto data as well a link to ParcelViewer. Users can generate shapefiles using this application.	VB/ MapObjects
ParcelActivity	This application is used to view and query parcel maintenance items and events. It was developed by Assessments' Information Services Division. It has been spatially enabled by giving users access to shapefile and digital orthophoto data as well as providing a means for generating shapefiles.	VB/ MapObjects
VIewControl	This application was designed for the data administrator to set up and control the display of layers available to the KC Appraiser extension. This application was written by the KCGIS Center with Client/Services funding.	Avenue
LotSqft	Used for updating lot size information in the SQL server tables from annotation placed during the cadastral maintenance.	Aml
ModCHoose	Generates a map patch and list of parcels that fall within a particular annexation.	Aml
ResMap, ComMap	Mapping applications based on server data for both commercial and residential appraisal	aml

5.5.3 Department of Development and Environmental Services

Name	Description	Language
GISMO: Phase I	A Front End Application. In Phase I GISMO implements three reports: Parcel Information Report; Permit Information Report; and Legal Information Report. These reports are provided as web services from our Intranet web application server. They are called from within our aging ArcView 3.x application Base2. When Base2 is retired they will be called from the modules that compose Phase II of GISMO. The reports are written using VB.Net and hit against ArcIMS, INFORMIX, and MS SQL Server data to provide reports with the current data are reduce data redundancy.	VB.Net
Base2	A Front End Application. "Base2" is a customized ArcView project used by staff at DDES to locate and determine the characteristics of	Avenue

Name	Description	Language
	a parcel and its vicinity. “Base2” has been the primary tool available to GIS end-users at DDES for the last several years. Lagging performance has always been an issue with “Base2” as response times to queries can be frustratingly slow. To reduce end-users reliance on “Base2” much of its functionality and information content has been ported to quicker browser-based applications such as iMAP. The adoption of ArcSDE for GIS data storage at DDES gives further incentive to replace “Base2” and the underlying ArcView 3.1 software, which can not access data from ArcSDE. This application is planned to be retired after successful implementation of GISMO Phase II.	
Autoplot	A Front End Application. “Autoplot” is a customized ArcView project that provides a quick and easy method for printing a series of maps that are used during field or site plan review. Each map in the series depicts a different set of environmental or regulatory features that may affect site development. While based on the same code as “Base2”, “Autoplot” produces complex maps that would be difficult to implement in ArcIMS. As a result “Autoplot” will be retained longer. This application is planned to be retired after successful implementation of GISMO Phase III.	Avenue
Development Conditions Search Engine	A Front End Application. The “Development Conditions Search Engine” is an Internet application using Cold Fusion and Microsoft Access. It provides parcel specific development condition information for unincorporated King County in tabular format with access to scanned and indexed map images.	Cold Fusion
iMAP Sensitive Areas	A Front End Application. Sensitive Areas is a map set incorporated into iMAP, King County’s ArcIMS Internet application. It is primarily used to obtain information on various types of sensitive areas and environmental layers in unincorporated King County. Because of the large number of layers needed for the Sensitive Areas they have been composed into two subsets, wet themes and dry themes. The map sets are designed to provide DDES staff and its customers with quick and easy access to environmental information. The map set was developed in collaboration with multiple Departments headed by the KCGIS Center.	XML
iMAP Property Information (Planning)	A Front End Application. Property Information (Planning) is a map set incorporated into iMAP, King County’s ArcIMS Internet application. It is primarily used to obtain information on properties, including their zoning classifications and land use designations for unincorporated King County. The map set provides DDES staff and its customers with quick and easy access to this basic planning information. The map set was developed in collaboration with multiple Departments headed by the KCGIS Center.	XML
Districts Report	A Front End Application. Districts Report is a web application linked to iMAP that uses ArcIMS to return a detailed text report for a specific property based on overlay of many GIS layers. It was developed in collaboration with multiple Departments headed by the KCGIS Center.	XML
DDES_FC_and_Ta	A Utility to transfer geographic data from the KC Spatial Data Warehouse to the DDES test SDE instance, and data from the	Python

Name	Description	Language
ble_Update	DDES test SDE instance to the DDES production instance.	
DDESDTS	A Utility to transfer enterprise tabular data from the KC Spatial Data Warehouse to the DDES SQL Server using MS SQL Server 2000 Data Transformation Services (DTS).	Transact SQL

5.5.4 DES – Emergency Management Division

- No activity in this area

5.5.5 DES – Records, Elections, and Licensing Services Division

Name	Description	Language
VOT 262	Derives election districts (jurisdictions) form the DSTCODE superset.	AML

5.5.6 DES – Facilities Management Division

- No activity in this area

5.5.7 DNRP – Wastewater Treatment Division

Name	Description	Language
Facilities Information Retrieval System (FIRS)	FIRS is an application used to create the WTD sewer infrastructure data, which include sewer lines, manholes, treatment plants, pump stations and regulator stations. This application uses Arc View 3.x as the front end and MS Access as the backend. This data support all WTD infrastructure based analysis and products including the Onelines atlas.	Avenue VB
Moss	Moss is a map set incorporated into *iMAP*, King County's ArcIMS Internet application. It offers a view of data collected by King County in support of studies to find the best location for a treated wastewater marine outfall. Unlike the other map set hosted through the KC GIS *Map Portal*, this is a project-specific Map Set that is not based on a Countywide map extent, nor does it contain the parcel search function that is common to the Countywide map sets. It is currently offline awaiting evaluation of its use and need of maintenance.	IMS
IW	IW stands for Industrial Waste and is designed to help identify permit locations within selected sewer/drainage basins. Basins can be selected from a map directly or by tracing the sewer network from a specific node (manhole). This is currently offline awaiting maintenance.	AML
Wtrsamp	Wtrsamp creates sample site locators from the DNRP Environmental Laboratory LIMS (Oracle) database with associated	AML

Name	Description	Language
	water sampling summary information. Updated weekly for access from the corporate library	

5.5.8 DNRP – Water and Land Resources Division

Name	Description	Language
Greenprint for King County	Greenprint for King County is a map set incorporated into a development version of *iMAP*, King County's ArcIMS Internet application, and so is only available on the intranet. The map set shows the result of the GIS analyses conducted to inform an open space and resource lands conservation and acquisition strategy.	XML, Javascript
Groundwater	Groundwater is a map set incorporated into *iMAP*, King County's ArcIMS Internet application. This map set provides information about groundwater and water supply in King County, as maintained by the Groundwater Program of WLR. Example data available includes wells, well head protection areas, groundwater contamination risk areas, and groundwater quality sampling sites	XML, Javascript
Groundwater Data Search	Groundwater Data Search is a database access application. It provides a Web interface for users to search the Groundwater Protection Program's database. The application is closely tied to the Groundwater *iMAP* map set.	ASP.NET (VB.NET)
Hydrographic Information	Hydrographic Information is a map set incorporated into *iMAP*, King County's ArcIMS Internet application. In addition to providing basic Hydrological information such as floodplains, floodways, or channel migration zones, it provides a link to the real time information from the WLR water quality buoys on Lake Washington and Lake Sammamish. It also includes the hydrogauge layer which offers links to the WLR Hydrologic Information Center.	XML, Javascript
Noxious Weeds Locations	Noxious Weeds Locations is a map set incorporated into *iMAP*, King County's ArcIMS Internet application, launched in the spring of 2004. This map set displays information about noxious weed locations as determined by the 2004 Noxious Weeds Survey. In the map set, weeds are loosely classified into 4 habitat categories, and each weed location is linked to the WLR Noxious Weed website with further information about the specific species at that location.	XML, Javascript
Salmon Watcher Program Interactive Map	Salmon Watcher Program Interactive Map is a "lightweight" ArcIMS application. The application provides a method for the volunteers in the program to locate, print maps, and obtain information about their particular salmon monitoring sites.	ASP.NET (VB.NET), XML, Javascript
Stormwater	Stormwater is a map set incorporated into *iMAP*, King County's ArcIMS Internet application. This map set provides information about KC stormwater facilities, studies, and drainage projects managed by WLR's Stormwater Services Section. This section relies heavily on this map set to help respond to citizen requests for information and to report drainage problems.	XML, Javascript
WRIA 9 Habitat Projects	WRIA 9 Habitat Projects is a map set incorporated into *iMAP*, King County's ArcIMS Internet application. This map set depicts the locations of potential and funded salmon habitat restoration and	XML, Javascript,

Name	Description	Language
	protection projects in the Green/Duwamish and Central Puget Sound Watershed. The projects shown on the map are from the WRIA 9 project database which is updated by KC, local jurisdictions, and partners through a Cold Fusion web interface. A routine, developed by the KC GIS Center, pulls selected information from this database, including PINs to locate the projects, and creates a new SDE layer for iMAP on a weekly basis.	Cold Fusion

5.5.9 DNRP – Parks and Recreation Division

Name	Description	Language
iMAP - Parks Map Set	A KCGIS Map Portal map set that provides an overview of the County's park system. A front-end application, maintained on an as-needed basis, intended for use by Parks and Recreation Division staff, other King County staff, and the general public. Training and technical assistance are available upon request.	ArcIMS
Parks Info	A web-based, menu-driven tool for accessing general information on King County parks, trails, and facilities. A front-end application, maintained on an as-needed basis, intended for use by Parks and Recreation Division staff, other King County staff, and the general public. Training and technical assistance are available upon request.	ASP, HTML, SQL Server
Park Locator	A web-based system for locating, mapping, and accessing general information on King County parks, trails, and facilities. A front-end application, maintained on an as-needed basis, intended for use by Parks and Recreation Division staff, other King County staff, and the general public. Training and technical assistance are available upon request.	ArcIMS, ASP, HTML, SQL Server
ParkView	An ArcView-based look-up tool for accessing and mapping general information on King County parks, trails, facilities, and programs. A front-end application, maintained on an as-needed basis, intended for use by Parks and Recreation Division staff and other King County staff, primarily Parks CIP managers within DES - Facilities Management Division. Training and technical assistance are available upon request.	ArcView 3.2a - Avenue

5.5.10 DNRP – Solid Waste Division

Name	Description	Language
Garage/Yard Sale Online Mapping Utility	Internet application which enables internal and external users to list and display locations of garage, yard, and estate sales using interactive maps.	ArcIMS, ASP, HTML, SQL Server
CLCP Data Entry Interface	Data entry interface which enables SWD project staff to enter and update information concerning sites and cleanup events which are administered by the Community Litter Cleanup Program.	Visual Basic, SQL Server, MS Access

Name	Description	Language
Brownfields Data Entry Interface	Data entry interface which enables SWD project staff to enter and update information concerning sites for which assessment and cleanup assistance are provided by the Brownfields Program.	Visual Basic, SQL Server, MS Access

5.5.11 Department of Public Health

- No activity in this area

5.5.12 DOT – Roads Services Division

Name	Description	Language
Streettool	Streettool was a cooperative project between King County Department of Transportation – RSD and KCGIS Center. This application provides an environment for editing, maintaining, quality controlling, and plotting spatial data for the County Road Inventory System (CRIS).	

5.5.13 DOT – Transit Division

Name	Description	Language
Aspmail4	This application is a remote mailing application used to notify clients and support analysts of data issues and nightly process status.	ASP
Avlschedbuild	This application creates transfer files for the interface application used by Automatic Vehicle Location (AVL) Coordinators. These files are necessary for the AVL application to track bus locations on a daily basis.	VB/SQL
Avmaps	This application is an ArcView 3.x extension. It provides all ArcView end-users with a simple easy-to-use menu interface for adding layers to a view from the Transit public library. It also provides end-users with a simple easy-to-use interface for creating a layout with title, north arrow, disclaimer, scale bar, date, legend, and view that adhere to the King County GIS Cartographic Standards.	Avenue
Avtabs	This application is an ArcView 3.x extension. It provides customer information analysts with a simple easy-to-use menu interface for graphically showing bus stop signage installation routes.	Avenue
Btreport	This application provides Customer Information analysts with reports identifying data integrity and missing data issues. These reports are typically reviewed prior to an extract of data from the corporate database to downstream information systems.	ASP
CopyStreetTransitShapesAndBackupLibrary	This application copies shape files for the Transit and Street themes from *COUGAR* to *KCMOLYMPUS*, and creates a backup of the data library on *KCMMATHIAS*. This application will be decommissioned once the Wintel Migration is complete in 2005/2006.	DOS Batch Script

Name	Description	Language
CopyTabs Extract	This application copies data from the TABS server to *KCMOLYMPUS* necessary for the AvTabs application.	DOS Batch Script
CreateMOGeocode Indexes	Creates MapObject geocode indexes to aid field querying	VB
DataConn	This is a COM object that provides a centralized ODBC data connection for use by various applications that connect to the Transit Oracle database.	VB
DataPublication	Copies data for five different Oracle tables from one database to another.	SQL
Dbcompar	This application compares data in GIS with data in the Oracle corporate database and reports on any inconsistencies to Transit GIS staff. This application will be decommissioned once the Wintel Migration is complete in 2005/2006.	AML
EmitterChange	This application compares emitters from the previous day and reports on any changes (inserts, updates or deletes) made by Radio Maintenance staff to APC staff.	VB
EmitterLinks	Creates a table of streets within 250 feet of a transit emitter to support AVL applications	VB
Gis2atis	This application converts data from the GIS production library for use in the Automated Traveler Information System or Trip Planning application by customer information analysts. This application will be replaced in 2005/2006 as part of the Wintel Migration.	AML
Kcsnedit	King County Street Network Editor. This application is the primary tool used by Transit GIS staff for maintaining the street network links, nodes, and attributes. It is scheduled to be replaced in 2005/2006 as part of the transportation network project and as part of the Wintel Migration.	AML
Labelscreate	This application automatically generates street labels for use in the GIS Toolbox. This application will be replaced in 2005/2006 as part of the Wintel Migration.	AML
LicenseManagerRestart	Restarts the ArcGIS License Manager to eliminate hung licenses	DOS Batch Script
MapCutter	This application uses ArcView to create map images (GIFs) for use with the interactive public website Tracker which provides real-time bus information for a specific timepoint or geographic area.	DOS Script, Avenue
MITT_VSS_Analyze	Performs an analyze of the Visual Source Safe (VSS) database to maintain consistent daily database performance levels. The VSS database stores all application source code.	DOS Batch Script
Mnt2prd	This application transfers transit objects and the street network in the maintenance area, which has restricted access, to the production library for access by end-users. The application also creates derived data layers from core data (e.g., freeways from the street network). This application will be replaced in 2005/2006 once TNET and other core data maintenance applications have been deployed as part of the Wintel Migration.	AML

Name	Description	Language
MoEmitter	This application provides Radio Maintenance staff with an easy-to-use menu interface for maintaining vehicle location emitters. These emitters are used within the Automatic Passenger Counter (APC) system and the Automatic Vehicle Location (AVL) system. This application will be integrated into the GIS Toolbox in 2006.	VB
Nbatch	This application combines Toetow and Toeddb into a single application with quality control checks prior to their execution. This application will be replaced in 2006 as part of the Wintel Migration.	AML
Plib2prd	This application transfers data from the KCGIS Spatial Data Warehouse to the Transit GIS library.	VB
PostDW	This application transfers Transit and street network related shape files to the KCGIS Spatial Data Warehouse.	VB
ProcessMonitor	This application reports on the status of nightly batch processes that have been executed within the last 24 hours.	VB
Recnpost_compress	Used to reconcile and post each TNET SDE named version to the parent version then compresses the state tree.	Batch Script
Route Footprint Generator (formerly AS)	This application is an ArcView 3.x extension. It provides Accessible Services staff with a simple easy-to-use menu interface for creating transit fixed route service footprints based on time of day.	Avenue
Safety DMS	This application provides safety and operations staff with a tool for entering accident information, tracking accidents through the legal process and reporting on accidents.	HTML, ASP, VB Script, Java Script
Security DMS	This application provides security and operations staff with a tool for entering security incident information, tracking incidents through the legal process, and reporting on incidents.	HTML, ASP, VB Script, Java Script
SecurityIncidentQuery	This application extracts and displays Security Incidents that occurred during a user specified time period for any combination of user specified incident categories.	Avenue
StopShapeExport	Updates Oracle database tables and creates production shapefiles directly from those tables for stop related data.	VB, ArcObjects
Street_and_TPIPaths_Update	This application is used to convert street data and transit data from legacy structures into new structures. This application will no longer be necessary after the new applications go into production in 2006.	VB
TNET	This application is the primary tool used by Transit GIS to maintain the new transportation network edges and attributes. In addition to the end-user interface tool, it includes GO! Sync software necessary to authenticate users, process those changes against the Master TNET database, and communicate changes between agencies.	VB, ArcObjects
TOE	Transit Object Editor. This application is the primary tool used by customer information analysts for maintaining route paths and time point locations. This application will be integrated into the GIS Toolbox in 2005, but will remain for dual maintenance throughout early 2006.	AML

Name	Description	Language
Toeddb	This application processes inserts, updates, and deletes made using the *TOE* and *Kcsnedit* applications and sends them into the Oracle Transit corporate database for access by other systems. This application will be replaced in 2005/2006 once TNET and other core data maintenance applications have been deployed as part of the Wintel Migration.	AML
Toetow	This application merges transit objects modifications/additions/ deletions from the *TOE* application with street network edits from the *Kcsnedit* application. These applications work on copies of the street network and it is necessary to combine the separate edits onto a single network at the end of the day. This application will be replaced in 2006 once TNET and other core data maintenance applications have been deployed as part of the Wintel Migration.	AML
TPMaps	This application generates a single map for every timepoint in jpg image format for display on the MetroKC website. AVL staff periodically run this application to create and refresh the images.	Avenue
Transit GIS Toolbox	This application provides users an easy-to-use menu interface for accessing the vast array of geographic data available in Transit's GIS and corporate data available in Transit's Oracle distribution database. Together, these databases store the agency's spatial and non-spatial information for future, current, and past service changes. Although designed for all Transit staff, the *Transit GIS Toolbox* has several modules with functionality designed for specific work groups. These include: ▪ Ridership – Calculates Transit ridership at user specified locations. ▪ Stop Information System – Bus stop maintenance tool. ▪ TOE -- Maintaining route paths and time point locations. ▪ Emitter – Maintaining emitter locations (to be implemented in 2006).	VB

5.5.14 DOT – King County International Airport

- No activity in this area

5.5.15 King County Sheriff's Office

- No activity in this area

5.5.16 Metropolitan King County Council

- No activity in this area

5.5.17 Office of Budget

- No activity in this area

5.5.18 Department of Community and Human Services

- No activity in this area

5.6 Servers

5.6.1 KCGIS Center

Name	Make/Model	Operating System	Purpose
WILDFIRE	HP/Compaq/Digital ES/40	Digital Tru64 Unix 5.0a	KCGIS Center legacy database server.
ORCA	Dell PowerEdge 750	Windows Server 2003	KCGIS Center file and print server; ESRI license manager.
HERCULES	Dell PowerEdge 2650	Windows Server 2003	Front end Web server for ArcIMS applications.
GISDW	Dell PowerEdge 2650, Dell Powervault 220S Drive Array	Windows Server 2003	GIS distributed file system root server; Plibrary3 data repository.
GISSQLDW	Dell PowerEdge 2650, Dell Powervault 220S Drive Array	Windows Server 2003	Backend SQL server for GIS applications.
MAPPER1 and *MAPPER2*	Dell PowerEdge 2650	Windows Server 2003	Load balanced spatial servers for ArcIMS application.
WEBTEST	Master Computer	Windows Server 2000	Development Web server.
KCGIS-SS1 and *KCGIS-SS2*	Gateway E4600	Windows Server 2000	Development spatial servers for ArcIMS.
KCGIS-SQLDEV	Gateway 930	Windows Server 2000	KCGIS Center Time Recording System (TRS) application server; also used for some SQL testing.
DNRP1	Dell Powervault 715N	Windows Server 2000, NAS	DNRP matrixed GIS file server.
GISNAS1	Adaptec Snap Server 4100	Snap OS (Linux)	KCGIS Center file storage; projects2 NFS mount to *WILDFIRE.*
GISNAS2	Adaptec Snap Server 12000	Snap OS (Linux)	Provides direct-to-disk backup for *WILDFIRE.*
KCGIS-EOC	Adaptec Snap Server 2200	Snap OS (Linux)	System contains a replication of shapefiles and some imagery to support EOC activation.
GISPROD	Dell PowerEdge 6650, Dell Powervault 220S Drive Arrays (2)	Windows Server 2003	Primary KCGIS Center database server.

Name	Make/Model	Operating System	Purpose
GISIMAGE	Dell PowerEdge 1800, Dell Powervault 220S Drive Arrays (2)	Windows Server 2003	KCGIS Center imagery development workspace.

5.6.2 Department of Assessments

Name	Make/Model	Operating System	Purpose
SHADOW	HP Proliant ML570	Windows 2000	*Image Storage, ArcGIS License Manager, ArcView server, GIS data storage.*

5.6.3 Department of Development and Environmental Services

Name	Make/Model	Operating System	Purpose
DDES707	HP tc3100	Windows 2003	A production data server, it runs, ESRI ArcSDE, and MS SQL Server2000. It provides file based and ArcSDE GeoDatabase GIS data for mapping and analysis projects. It provides ArcSDE GeoDatabase GIS data for ArcIMS applications running on *DDES710*.
DDES-727	HP tc3100	Windows 2003	A development and test server for ESRI ArcSDE and MS SQL Server 2000.
DDES710	HP tc3100	Windows 2003	A production Intranet server, it runs MS IIS and ESRI ArcIMS. It will hosts web based ArcIMS applications such as GISMO Phase I. It also hosts the ArcINFO license manager.
DDES-720	HP tc3100	Windows 2003	A development and test server for MS IIS and ESRI ArcIMS.

5.6.4 DES – Emergency Management Division

- No activity in this area

5.6.5 DES – Records, Elections, and Licensing Services Division

- No activity in this area

5.6.6 DES –Facilities Management Division

- No activity in this area

5.6.7 DNRP – Wastewater Treatment Division

- No activity in this area

5.6.8 DNRP – Water and Land Resources Division

- No activity in this area

5.6.9 DNRP – Parks and Recreation Division

Name	Make/Model	Operating System	Purpose
PARKS-01	Dell PowerEdge 2650	Windows 2003 with SQL Server 2000	Server for ArcView licenses, the Park Site and Facilities database (PSAFI), and several non-GIS Access databases which are used for administrative functions

5.6.10 DNRP – Solid Waste Division

Name	Make/Model	Operating System	Purpose
SW-KSC-016	Custom Build	Windows Server 2003 with SQL Server 2000	SQL database server (MS SQL 2000)
SW-KSC-026	Custom Build	Windows Server 2003	Application server

5.6.11 Department of Public Health

- No activity in this area

5.6.12 DOT – Roads Services Division

Name	Make/Model	Operating System	Purpose
JABBA	ALR 9200	Win2000 Server	Data development and storage server. This server houses the Division's GIS datasets and is a storage area for the Division's GIS-related working data. When data is complete, it is moved up to the KCGIS Center enterprise data server. This server also allows a single place for users to store project files.
BABYLON	Gateway 7250R	Win2000	Data development and storage server. This server houses all data developed, enhanced and maintained as part of the King County Cultural Resources Protection Project. Due to the sensitive nature of the data, this server is only accessible by 4 employees in King County.

5.6.13 DOT – Transit Division

Name	Make/Model	Operating System	Purpose
KCMOLYMPUS	Compaq	Win2003 Server	Production platform for Transit GIS production data and applications, core

Name	Make/Model	Operating System	Purpose
	Proliant 8000		GIS software, license management, data access tools, batch processing applications, and the spatial production data warehouse and TNET database.
KCMMATHIAS	Compaq Proliant 8000	Win2003 Server	Development and test platform for applications and data prior to deployment on *KCMOLYMPUS*.
KCMTRANSPORT	Pentium IV	Win2000 Server	Production platform that serves as the focal point for incoming changes to the transportation network from all TNET clients. These changes are processed in ArcGIS on this server against the master TNET database.
KCMRAINIER	Compaq Proliant DL380 G2	Win2000 Server	Production intranet web application server for two applications; Safety Accident Tracking and the Security Data Management System. (This server is shared with other Transit information systems.)
KCMSTHELENS	Compaq Proliant DL380 G2	Win2000 Server	Development and test platform for applications prior to deployment on *KCMRAINIER*.
ORASERV1	Compaq ES 40	UNIX (5.1A)	Production platform for Transit's corporate data warehouse and the GIS Oracle database including geographic data stored as coordinates. Most information systems publishing data for the Division post to this server, and many of Transit's information systems use these databases, including GIS desktop data access applications querying spatial and non-spatial attribute data.
ORATWO	Compaq ES 40	UNIX (5.1A)	Test platform for Transit's corporate data warehouse and the GIS Oracle database. It is used to test applications against new or changed data structures/content prior to deployment to *ORASERV1*.
PHOENIX	Compaq ES 40	UNIX (5.1A)	Development platform for Transit's corporate data warehouse and the GIS Oracle database. It is used to develop new or changed data structures/content prior to testing on *ORATWO*.

5.6.14 DOT – King County International Airport

- No activity in this area

5.6.15 King County Sheriff's Office

- No activity in this area

5.6.16 Metropolitan King County Council

- No activity in this area

5.6.17 Office of Budget

- No activity in this area

5.6.18 Department of Community and Human Services

- No activity in this area

6 Appendix B: KCGIS Center Services

The KCGIS Center exists to support the county's GIS users and programs. This is accomplished through the centralized services provided by Enterprise Operations, through the on-demand and customized services provided by Client Services, and through the business specific services provided by Matrix Staff Services. This section provides an overview of services provided by Enterprise Operations and Client Services. For examples of services provided by Matrix Staff Services refer to the GIS work programs for the six divisions currently supported by matrix staff.

Enterprise Operations

KCGIS Governance Structure Support – Administrative support to the KCGIS Oversight and Technical committees for their routine activities, as well as administrative and professional support to the committees for occasional special projects. Also included in this service are professional and technical support to help develop and serve as custodian of KCGIS standards and best practices, as well as coordinate drafting and publication of the annual KCGIS O&M Plan.

KCGIS Priority Initiatives – Professional and technical support to priority work initiatives as identified by the KCGIS Technical Committee. The level of staff commitment to priority initiatives is significant and is usually in the range of 2.0 to 3.0 FTE each year. See Section 3 of this document for a detailed discussion of the priority initiatives for 2006 and beyond.

KCGIS Program Coordination – Facilitate coordination and communication across the organizational boundaries of King County agencies. This is in part accomplished by administering and staffing interagency workgroups such as the ArcGIS Editors, the GIS Developers, and ArcIMS Developers. Support is also provided on an ad hoc basis to facilitate discussion and resolution of cross agency GIS issues as they arise.

Regional GIS Coordination – Represent the interests of the KCGIS community at the regional, state, and national level. This includes providing professional support to regional GIS initiatives and collaborations.

Marketing – A program of broad based and targeted communications about the benefits and services of KCGIS. The goal of the marketing program is to increase awareness and use of KCGIS resources and services, in order to enhance the efficiency of government operations, to broaden the financial base supporting KCGIS, and to promote regional GIS collaboration.

Spatial Data Warehouse (SDW) – The core responsibility of the KCGIS Center is to manage all components of the enterprise SDW including; the hardware and software infrastructure that comprise the SDW; the processes that control and monitor the SDW including database administration, data loading, and data access; and the procedures that keep SDW contents logically organized and thoroughly described with accurate and complete metadata.

KCGIS Center Website – Manage all components of the KCGIS Center Internet and intranet websites including the Spatial Data Catalog, the Knowledge Base, and the Map Portal, as well as Web pages describing significant projects, the KCGIS training program, and client services.

GIS Enterprise Applications – Develop and maintain a series of utilities and applications to support the enterprise GIS, agency GIS professionals, and GIS end-users. These services include scripts and programs that perform automatic updates, batch processing, and system integrity checks; applications that support and enable agency GIS data stewards, and Web based and desktop applications that provide access to varying levels of GIS functionality for end-users with GIS skills ranging from novice to advanced.

GIS Data Coordination, Acquisition, and Maintenance – The KCGIS Center has several responsibilities in regards to management of GIS data. Broadly these include: a cross agency data inventory and coordination function to maintain the integrity of the SDW and promote continuous data improvement (this includes support to the King County Assessor to integrate parcel data edits into the county's cadastral base framework); a data acquisition program to obtain (or exchange when possible) and organize GIS

data from local, regional, state, and federal agencies; and a data stewardship program to maintain by agreement with the KCGIS Technical Committee a limited set of data layers as an enterprise service.

Contract Management – Manage vendor contracts for GIS software licensing and maintenance and consultant contracts for GIS services.

GIS Education and Outreach – Provide GIS education and outreach opportunities through briefings, seminars, help desk support to internal and external GIS users, GIS Day, and KCGIS User Group meetings.

Client Services

The KCGIS Center Client Services Unit exists to meet the custom needs of individual clients. Clients may include county staff needing maps or spatial analysis, GIS end-users or professionals who need training or specialized technical assistance, and managers needing skilled staff to help meet project or peak workload demands. KCGIS Center client services are provided on a full cost reimbursable basis. For 2006 the standard KCGIS Center billing rate is $76 per hour. A lower rate of $64 per hour is available for certain production level work. The KCGIS Center Client Services Manager is the point of contact for service requests and customer relationship management. The range of services provided by Client Services is described below.

Ad-Hoc Map Requests – Display maps for meetings and maps that can be inserted into other documents are a specialty of KCGIS Center Client Services. Rapid turn-around times and incorporation of custom data are standard features of this service.

GIS Analysis and Reporting – Combining and analyzing GIS data sets is often called for when generating policies, making critical business decisions, or conducting research or investigations. KCGIS Center Client Services is experienced in performing a wide variety of complex analyses and incorporating the results into reports or presentations.

High-Quality Cartography – Combining the flexibility of GIS with the artistry of graphic design is a unique capability of the Client Services Unit. Several Client Services map products have won national and international awards in recent years. Examples of products created include brochures, booklets, graphics for outdoor signage, and posters.

KCGIS Data Sales – Standard datasets are published four times per year and are available by mail order or through the King County DOT Road Services Map Counter, located in the lobby of the King Street Center. Two CD's comprise the standard datasets. For 2006 the unit cost for a standard data CD is $100. A data DVD containing all datasets on one disc is also available at a cost of $200. Further information about the KCGIS data sales program can be found at www.metrokc.gov/gis/services/sales_main.htm on the Web.

Custom Data Requests – The Client Services Unit can fill custom data requests on an hourly plus materials cost basis. All data requests that include aerial imagery and elevation data are considered custom requests, as the preferred format and spatial extent of each request is almost always unique. The goal of the Client Services Unit is to provide exactly the data needed, in the appropriate format.

GIS Data Development – The Client Services Unit provides a full range of data development services for improving or updating existing GIS data, creating new GIS data, or for integrating non-GIS information into GIS compatible formats.

GIS Application Development – Making GIS information available on the Internet or via a customized desktop interface increases the utility and visibility of that information. KCGIS Center Client Services has created important applications for a variety of clients.

GIS Training – The KCGIS Center Client Services Unit offers a variety of GIS training courses at the King Street Center computer training facility or on-site at a client's facility. Courses are taught by KCGIS Center staff (including a certified ESRI trainer). Tuition varies based on cost factors but is generally extremely cost-effective when compared to software training offered by other vendors. Client Services will be adding to its curriculum in 2006 as new courses are developed by the GIS Training Workgroup. The

training curriculum and calendar are more fully described at www.metrokc.gov/gis/services/training_course_outline.htm on the KCGIS Center website.

GIS Help Desk - Help desk support is available from Client Services, through its Training Coordinator and other support personnel. Free help desk support is provided in reasonable, brief increments to both internal and external GIS users. This service is intended to resolve issues and problems that can be cleared up during a phone conversion, an e-mail exchange, or a brief meeting. More comprehensive support programs that cover ongoing or significant needs can be arranged with the KCGIS Center at the standard Client Services rate.

GIS Services Express –KCGIS Center Client Services has developed a package called "GIS Services Express" which includes eight hours of free consulting time, discounted data and training, and other amenities, in exchange for a commitment to a block of 100 hours of service. This service is available to any agency seeking help with GIS program, and provides a method to receive a package of services as part of a coordinated work program. This is an excellent opportunity for agencies looking to implement their own GIS capabilities, but need guidance and help to get started.

GIS Project Management and Consulting Services – KCGIS Center Client Services offers skilled project management and consulting support. Typical services in this area include GIS needs assessment, GIS implementation, and GIS infrastructure review and design.

7 Appendix C: Committees

7.1 Oversight Committee

Details regarding the roles, responsibilities, and structure of the KCGIS Oversight Committee are provided in Chapter 2 of this document. Presented here are the recent membership histories for the committee and the committee's current charter.

7.1.1 Membership History

2006 GIS Oversight Committee Representatives

Agency	Sub-Agency	Representative	Term
Dept. of Assessments	--	John Sweetman	Jan-Dec
Dept. of Development and Environmental Services	--	Michael Pahl	Jan-Dec
Dept. of Executive Services**	--	Jim Buck	Jan-Dec
Dept. of Natural Resources & Parks	--	Gary Hocking*	Jan-Dec
Dept. of Transportation	Road Services	Greg Scharrer	Jan-Dec
Dept. of Transportation	Transit	Wayne Watanabe	Jan-Dec

* Chair
** Rotating Agency

2005 GIS Oversight Committee Representatives

Agency	Sub-Agency	Representative	Term
Dept. of Assessments	--	John Sweetman	Jan-Dec
Dept. of Development and Environmental Services	--	Jim Schaber Michael Pahl	Jan-Nov Dec
Dept. of Executive Services**	--	Jim Buck	Jan-Dec
Dept. of Natural Resources & Parks	--	Gary Hocking*	Jan-Dec
Dept. of Transportation	Road Services	Greg Scharrer	Jan-Dec
Dept. of Transportation	Transit	Wayne Watanabe	Jan-Dec

* Chair
** Rotating Agency

7.1.2 Charter

King County

GIS STAKEHOLDER/OVERSIGHT COMMITTEE

April 2004

Purpose:

This charter establishes roles, membership, and guidelines for the GIS Oversight Committee

Role:

As the GIS Oversight Committee, the committee will:

- Review and approve GIS related budgets for all agencies;
- Review and approve the countywide GIS Business Plan;
- Review and approve all GIS work programs, including operations and maintenance plans, with associated costs identified;
- Review and approve King County GIS Standards;
- Review and approve technical and policy recommendations from GIS Technical Committee;
- Provide annual report on work program status to the Technology Management Board;
- Recommend cost allocation model for Central GIS services;
- Make recommendations to the Technology Management Board as needed;
- Resolve issues referred to GIS Oversight Committee as needed.

Leadership:

The representative from the Department of Natural Resources and Parks will chair the committee.

Membership:

GIS Oversight Committee membership shall consist of a representative from the following county agencies: DNRP, DOT-Transit, DOT-Road Services, DDES, and Assessments. Members must have authority for: budget approval; GIS programs within their department; representation of customers and end users; and policy decisions. GIS Oversight Committee will appoint at least one rotating member for a one-year term from agencies and programmatic areas that have significant involvement in GIS. Members will not serve on both the GIS Technical Committee and the GIS Oversight simultaneously.

Operating Assumptions and Guidelines:

- Meetings will be held no less than quarterly and more often if necessary.
- Decisions will be made by consensus. If consensus cannot be reached within the GIS Oversight Committee, the issue will be referred to the Director of the Department of Natural Resources and Parks.
- The GIS Oversight Committee will establish ground rules.

7.2 Technical Committee

Details regarding the roles, responsibilities, and structure of the KCGIS Technical Committee are provided in Chapter 2 of this document. Presented here are the recent membership histories for the committee, the committee's current charter, and objectives statements and reports for the committee's work groups.

The KCGIS Technical Committee publishes its agendas, minutes, quarterly reports, and other documents to the Public Folders on the KC WAN, which are available through the county's e-mail system. The path to the KCGIS Technical Committee documents is Public Folders / All Public Folders / Inter-Agency / GIS / GIS Technical Committee.

7.2.1 Membership History

2006 GIS Technical Committee Representatives

Agency	Sub-Agency	Representative	Term
Budget Office	--	Chandler Felt	Jan-Dec
Dept. of Assessments	--	Christie Most	Jan-Dec
Dept. of Community and Human Services	--	Cheryl Markham	Jan-Dec
Dept. of Development and Environmental Services	--	Paul McCombs*	Jan-Dec
Dept. of Executive Services	Office of Emergency Management	Khalid Khan	Jan-Dec
Dept. of Executive Services	Records, Elections and Licensing	Harry Sanders	Jan-Dec
Dept. of Executive Services	Facilities Management	Larry Wright	Jan-Dec
Dept. of Natural Resources & Parks	KCGIS Center	George Horning	Jan-Dec
Dept. of Natural Resources & Parks	Parks	Greg Stought	Jan-Dec
Dept. of Natural Resources & Parks	Solid Waste	Greg Stought	Jan-Dec
Dept. of Natural Resources & Parks	Wastewater	Bob Swarner**	Jan-Dec
Dept. of Natural Resources & Parks	Water and Land Resources	Ruoxi Zhang	Jan-Dec
Dept. of Public Health	--	Dmitry Sharkov	Jan-Dec
Dept. of Transportation	Road Services	Michael Kulish	Jan-Dec
Dept. of Transportation	Transit	Mike Berman	Jan-Dec
Dept. of Transportation	Airport	Vanessa Ng	Jan-Dec
King County Council	--	Lauren Smith Ricardo Bautista	Jan Feb-Dec
Sheriff's Office	--	Jim Hilmar	Jan-Dec

* Chair
** Vice-Chair

2005 GIS Technical Committee Representatives

Agency	Sub-Agency	Representative	Term
Budget Office	--	Chandler Felt	Jan-Dec
Dept. of Assessments	--	Christie Most	Jan-Dec
Dept. of Community and Human Services	--	Cheryl Markham	May-Dec
Dept. of Development and Environmental Services	--	Paul McCombs**	Jan-Dec
Dept. of Executive Services	Office of Emergency Management	Khalid Khan	Jan-Dec
Dept. of Executive Services	Records, Elections and Licensing	Dave Wilson Harry Sanders	Jan-May Jun-Dec
Dept. of Executive Services	Facilities Management	Larry Wright	Jan-Dec
Dept. of Natural Resources & Parks	KCGIS Center	George Horning	Jan-Dec
Dept. of Natural Resources & Parks	Parks	Greg Stought	Jan-Dec
Dept. of Natural Resources & Parks	Solid Waste	Greg Stought	Jan-Dec
Dept. of Natural Resources & Parks	Wastewater	Bob Swarner	Jan-Dec
Dept. of Natural Resources & Parks	Water and Land Resources	Ruoxi Zhang	Jan-Dec
Dept. of Public Health	--	Dmitry Sharkov	Jan-Dec
Dept. of Transportation	Road Services	Michael Kulish*	Jan-Dec
Dept. of Transportation	Transit	Steve Krippner Mike Berman	Jan-Apr May-Dec
Dept. of Transportation	Airport	Rick Renaud Vanessa Ng	Jan-Nov Dec
King County Council	--	Lauren Smith	Jan-Dec
Sheriff's Office	--	Jim Hilmar	Jan-Dec

***** Chair
****** Vice-Chair

7.2.2 Charter

King County

GIS TECHNICAL COMMITTEE

Charter

Revised - 6/8/2004

Purpose:

This charter establishes roles, membership, and guidelines for the GIS Technical Committee.

Role:

As the GIS Technical Committee, the committee will:

- Report to the GIS Oversight Committee;
- Recommend policy for countywide GIS technology to GIS Oversight Committee;
- Develop an annual GIS Business Plan and work program;
- Develop and recommend GIS templates and standards for the countywide GIS program;
- Educate departments about the value GIS will add to business practices;
- Maintain an inventory of countywide GIS data and applications;
- Prepare quarterly reports on the status of the countywide GIS program.

Leadership:

The committee will vote annually for chair and vice-chair positions.

Membership:

Membership will consist of one representative from the following King County GIS user agencies:

Assessments	DES-Facilities Management	DNRP-Water & Land Resources
Budget Office	DES-REALS	Public Health
DCHS	KCGIS Center	Sheriff's Office
County Council	DNRP-Parks and Recreation	DOT-Airport
DDES	DNRP-Solid Waste	DOT-Road Services
DES-E911 Program	DNRP-Wastewater Treatment	DOT-Transit

The list of participating GIS user agencies will be reviewed and updated yearly. Members will not serve on both the GIS Technical Committee and the GIS Oversight Committee simultaneously.

Operating Assumptions and Guidelines:

- Meetings will be held at least monthly, and more often if necessary.
- Decisions will be made by consensus of members or designated alternates present. If consensus cannot be reached within the GIS Technical Committee, the issue will be referred to the GIS Oversight Committee.
- GIS Technical Committee will establish ground rules.

7.2.3 Work Groups

The KCGIS Technical Committee will at its discretion create work groups to address technical and programmatic issues. The KCGIS Technical Committee currently has three active work groups (GIS Software Migration, Digital Imagery, and GIS Operations and Maintenance). Work groups are given clear objectives by the KCGIS Technical Committee, in order to focus and guide the group's efforts.

7.2.3.1 GIS Software Migration

Objectives Statement:

The purpose of the GIS Software Migration Work Group is to implement a successful, coordinated GIS software migration that meets the needs of member agencies and the enterprise.

The GIS Software Migration Work Group currently has four active subgroups. The titles and purposes of these subgroups are:

- Metadata – To deal with issues regarding the migration of metadata including input, output, storage, and standards.
- Licensing – To determine the efficacy of license pooling; to determine agency wide licensing needs based on a user survey; to determine the most cost-saving and efficient licensing scenario and implement it.
- Training Curriculum – To develop training curricula for each of the user categories including courses, tracks, and recommendations.
- ACDC (All but Cadastral Data Conversion) – To create processes, guidelines, and scenarios for data stewards to follow to convert their data and metadata from the coverage edit environment into the geodatabase. To assist stewards in their conversion efforts. To track and monitor the data conversion process and ensure that it moves efficiently.

7.2.3.2 Digital Imagery

Objectives Statement:

The purpose of the Digital Imagery Working Group is to develop and manage a long-term acquisition and coordination strategy for geo-spatial digital imagery that meets planning and engineering-level requirements for all King County Departments.

The group is tasked by the GIS Technical Committee to be knowledgeable of current digital imagery assets and future digital imagery needs, research and recommend acquisition solutions, coordinate with internal and external agencies where appropriate, and explore realistic funding options.

The goals of the working group include:

- Provide a resource to county departments in need of geo-spatial imagery and maximize opportunities for cost reduction and elimination of duplicative efforts within the county
- Develop, in coordination with the KCGIS Center, a catalog of existing geo-spatial imagery products in the county
- Develop an inventory of current imagery products, users, user needs and purposes, current and potential funding sources, and technical requirements - including spatial accuracy, resolution, spectral issues, file access and handling issues, acceptable latency of imagery
- Identify areas of common and unique imagery needs, and classify in the most succinct way possible the various needs into general categories to simplify resolution of potentially conflicting efforts
- Work to develop cooperative ventures with other agencies to minimize and share costs, maximize suitability, and where appropriate eliminate duplicative effort among agencies in acquiring new aerial imagery

- Investigate and make recommendations on potential imagery acquisitions
- Evaluate and report on emerging trends pertinent to King County geo-spatial imagery needs
- Review and edit (as appropriate) metadata for imagery sets in support of KCGIS data coordinator
- Develop guidelines and recommendations for use of the various imagery products in cooperation with the product authors
- Develop training/educational materials to assist county users in maximizing the use of imagery
- Develop or provide assistance in developing contracts and specifications for acquisition and/or processing of geo-spatial imagery

7.2.3.3 GIS Operations and Maintenance

Objectives Statement:

The GIS Operations and Maintenance Workgroup will produce an annual working document which: 1) Outlines the roles and responsibilities for the countywide GIS program; 2) Describes the current status of GIS services, applications, data and hardware; 3) Delineates the coordinated department level work plans for the coming year; and 4) Sets goals for the future technical direction of the countywide GIS program.

With the publishing of this document (the "2006 King County GIS Production Operations and Maintenance Plan") the work group has fulfilled its responsibilities for 2005. In the later half of 2006 the work group will begin efforts to draft the 2007 GIS operations and maintenance plan. See www.metrokc.gov/gis/kb/Content/OandM.htm on the KCGIS Center Web site for the most recently published version of the operations and maintenance plan.

8 Glossary

▪

.NET

Microsoft published set of software technologies used to develop small building-block applications that can connect to each other as well as to other, larger applications over the Internet. Used with various programming languages such as Visual Basic and Active Server Pages. See also listings for VB and ASP.

A

Accuracy

The degree to which data represent the real world whether it regards geographic location or attribute.

Agency Data

Data primarily for internal use by the King County agency being discussed, typically not shared with other agencies and not posted in the KCGIS Spatial Data Warehouse.

AIRS Form

A form required for the processing of monetary inter-fund transfers between King County budget units.

ALI

Automatic Location Identifying

A feature by which information is provided to a public safety answering point identifying the location, the latitude and longitude of a call to a public safety answering point.

AML

Arc Macro Language

AML is an interpreted macro (script) language which translates and executes ESRI Arc/INFO commands.

APC

Automatic Passenger Counting

An information system used by Transit to collect, process, summarize, publish, and manage daily ridership counts.

Arc/INFO or ArcInfo

ESRI published GIS software. Used extensively by GIS programs within King County. Significant changes where introduced between ArcInfo 7.x and ArcInfo 8.x. Versions before 8.0 are sometimes referred to as "workstation". Versions after 7.0 use an entirely new data structure.

Arc8.x or Arc9.x

ESRI published GIS software. See listing for Arc/INFO.

ArcCatalog

ESRI published GIS software that organizes and manages GIS information such as maps, globes, data sets, models, metadata, and services.

ArcExplorer

ESRI published GIS software. A lightweight GIS data viewe.

ArcGIS

ESRI published GIS software. See listing for Arc/INFO.

ArcIMS

Internet Map Service

ESRI published software solution for distributing mapping and GIS data and services on the Web.

ArcObjects

ESRI published collection of software components with GIS functionality and programmable interfaces, based on the COM protocol. Often used with Visual Basic.

See also listing for VB.

ArcSDE

Arc Spatial Data Engine

ESRI published software solution for storing Geographic data in a RDBMS.

ArcView

ESRI published GIS software. Used extensively by GIS programs within King County. Significant changes where introduced between ArcView 7.x and ArcView 8.x.

Versions before 8.0 are a based on a unique code base. Versions after 3.0 are a limited functionality version of ArcInfo 8.x. See listing for ArcInfo.

ASCII

American Standard Code for Information Interchange

The predominant character set encoding of present-day computers.

ASP

Active Server Pages

Microsoft published scripting language used to create web pages. The scripting is stored and executed on the server hardware. See also .NET listing.

Author

Person or organization responsible for collecting and/or encoding data into a GIS readable format.

Avenue

An object oriented scripting language for ArcView 3.x or earlier.

AVL

Automatic Vehicle Location

An information system with an interactive graphic map display used by Transit coordinators to track revenue coaches and manage service in near real time.

B

Back End

The portion of a computing environment dealing with Servers and information system that the End User does not deal with directly.

Bathymetric

Relating to the measurement of depths, especially of depths in bodies of water.

Benthic

The collection of organisms living on or in the sea or lake bottoms.

Best Practices

The best possible way of doing something; it is commonly used in the fields of business management, software engineering, and medicine, and increasingly in government.

Buffer

A type of GIS analysis that calculates the area within a given distance from a set of geographic features.

C

CAD (1)

Computer Aided Drafting

A computer system used to create detailed measured drawings. Used for Architectural, Engineering, and other plans.

CAD (2)

Computer Aided Dispatch

A computer system used to aid in the dispatch of emergency vehicles to respond to incoming calls.

CAO

Critical Areas Ordinance

Ordinance passed in October 2004 to protect Critical Areas in unincorporated King County. Critical Areas include both hazardous areas (such as floodplains and steep slopes) and environmentally sensitive areas (like wetlands and streams). Critical areas also include areas that are important for protecting groundwater.

Cadastral

A public record, survey, or map of the value, extent, and ownership of land as a basis of taxation.

Cadastral Base

Layer depicting the extent and ownership of land parcels.

CARS

Citizen Action Requests

Reports from Citizens in King County regarding drainage problems.

CARTS

Citizen Action Request Tracking System

A computer system used to track CARS.

CASE

Computer Aided System Engineering

See listing for ESRI CASE extension.

CIP

Capital Improvement Program

A portion of the King County budget containing capital construction projects, often including a list of projects to be financed and constructed over a 6-year period. Each project includes one or more of the following elements: acquisition of a site and/or existing structure, program or site master planning, design and environmental analysis, design, construction, major equipment acquisition, reconstruction, demolition or major alteration of a capital asset.

CLASS Database

A centralized database used to track customers, facility rentals and program registration for the Parks Division of KC DNRP.

Client

Any person or organization that is receiving GIS services.

Clustering

Linking together two or more computers to work together on performing functions.

COGO

Coordinate Geometry

COGO is a command structured problem oriented language and computer program for the solution of geometric problems.

COM Object

A software component that conforms to Microsoft's Component Object Model (COM).

Component Object Model (COM)

A component software architecture from Microsoft, which defines a structure for building program routines (objects) that can be called up and executed in a Windows environment.

COMPSTAT

A crime analysis and police management process developed by the New York City Police Department.

Conflation

The process of transferring attributes from one source spatial dataset to another target spatial dataset. Typically the geometry of the target is more complete or more accurate than the source, but it is often missing required attributes that exist in the source.

Coverage

A specific data format used for GIS layers native to Arc/INFO version 7.x and earlier.

CRIS

County Road Inventory System

Cron Job

A cron job is an automated computer process that operates at predefined time intervals.

CRPP

Cultural Resources Protection Project

A countywide integrated system for documenting, assessing and treating cultural resources. Designed to provide a more efficient compliance with federal, state and local cultural resource law, and expedite transportation projects.

CSI

Conveyance System Improvements

CSO

Combined Sewer Overflow

Currency

The degree to which data represent the real world as it exists at the most recent moment in time.

Currentness

See listing for Currency.

Customer

Any person or organization that is receiving GIS services.

CX

Current Expense

The county's Current Expense fund; provides budget for various programs and departments that do not have their own revenue streams.

D

Data Development

Creating a data set from scratch.

Data Maintenance

The process of tending to a data layer as it ages: updating attributes that change; correcting errors that are identified; assuring data integrity; migrating to new data formats as necessary; etc.

Data Modeling

A conceptual representation of the data structures that are required by a database implementation. Data structures include the data objects, the associations between.

data objects, and the rules which govern operations on the objects.

Data Owner

See listing for Data Steward.

Data QC

Data Quality Control

A process for maintenance of standards of quality for data layers.

Data Set

One or more tables or spatial layers together with their metadata.

Data Stakeholder

A client or other party who relies on GIS data for the business functions of their organization.

Data Steward

The person responsible for the maintenance of a data set who controls content, currency, and access to that data set.

Data Stewardship

Maintenance of a data set's content, currency and access permissions.

Data Warehouse

A computer storage system used to make data available to a wide range of users. Often used to refer to the KCGIS Spatial Data Warehouse. See listing for KCGIS Spatial Data Warehouse.

Database Administrator

The person who provides access to data, and moderates content, structure and location of data.

DBA

Database Administrator

See listing for Database Administrator.

DCHS

Department of Community and Human Services

King County Department.

DDES

Department of Development and Environmental Services

King County Department.

DEM

Digital Elevation Model

Digital cartographic/geographic data in raster form, in which the terrain elevations for ground positions are sampled at regularly spaced horizontal intervals.

Derivative

A data set created as a subset or modification of an existing data set.

DES

Department of Executive Services

King County Department.

Digitize

The process of capturing data, as recorded from direct observation or from non-computerized data products, for use with a computer system.

DMS

Data Management System

See listings for SafetyDMS and SecurityDMS.

DMZ

De-Militarized Zone

A network added between a protected network and an external network to provide an additional layer of security.

DNRP

Department of Natural Resources and Parks

King County Department.

DNRP GIS Unit

A functional unit of DNRP that provides GIS services to internal clients.

DOCTOOL

A KCGIS enterprise application used by data stewards for creating and maintaining metadata for enterprise data layers.

DOS Batch Script

In DOS and Windows, a batch file is a text file with a series of commands. When the batch file is run, the shell program (command.com or cmd.exe) reads the file and executes its commands in order. A batch file is equivalent to a shell script under Unix.

DOT

Department of Transportation

King County Department.

DPH

Department of Public Health

Merged Seattle & King County Department.

Dynamic Segmentation

The ability to compute the locations of events at run time of linear features. The segmentation points are not stored in the geometry of the coverage – they are derived when needed.

E

E-3 Busway

The street pathway restricted to Transit-only that extends North-South from the Transit Tunnel's International District Station to Spokane Street between 4th Avenue South and 6th Avenue South.

EH

Environmental Health

A division of the Seattle & King County Public Heath Department.

EMS

Emergency Medical Services

A division of the Seattle & King County Public Heath Department.

End User

See listing for GIS User.

Eng

Engineer

King county employee Classification.

Enterprise Data

Data shared with other agencies, and posted in the KCGIS Spatial Data Warehouse.

Enterprise Library

See listing for KCGIS Spatial Data Warehouse.

EOC

Emergency Operations Center

A facility used to coordinate public services and information during an emergency situation.

EPE

Epidemiology, Planning and Evaluation

A division of the Seattle & King County Public Heath Department.

ESA

Endangered Species Act

A federal statute originally passed in 1973 to provide for the designation and protection of invertebrates, wildlife, fish, and plant species that are in danger of becoming extinct, and conserve the ecosystems on which such species depend.

ESN

Emergency Service Zone Numbers

ESRI

Environmental Systems Research Institute

A vendor of GIS tools and applications used widely by King County GIS staff.

ESRI CASE extension

Computer Aided System Engineering

Computer Aided System Engineering tools, used to assist in application development with ESRI products.

F

FEMA

Federal Emergency Management Agency

US government agency devoted to response to catastrophic emergencies.

FGDC

The Federal Geographic Data Committee

An interagency committee, organized in 1990 that promotes the coordinated use, sharing, and dissemination of geospatial data on a national basis.

FIRS

Facility Information Retrieval System

A computer system used by King County DNRP Wastewater Treatment Division.

Front End

The portion of a computing environment that the End User interacts with directly.

FTE

Full-Time Equivalent

Representing a single full-time employee.

G

GASB

Governmental Accounting Standards Board

Organization whose mission is to establish and improve standards of state and local governmental accounting and financial reporting.

Geocoding

The process of processing addresses in a GIS to provide a corresponding geographic data point.

Geodatabase

A specific data format used for GIS layers native to ArcINFO version8.x and later.

GIS

Geographic Information System

A collection of computer hardware & software tools used to enter, edit, store, manipulate, and display geographically referenced data.

GIS Center

See listing for KCGIS Center.

GIS Oversight Committee

The KCGIS Oversight Committee is responsible for guiding the direction of the KCGIS program. See Oversight Committee section in this document for a detailed discussion.

GIS Power User

An individual who uses GIS at an intensive level but whose main function in the County is not the creation, maintenance, and analysis of GIS data.

GIS Professional

An individual whose main function in the County is the creation, maintenance, and analysis of GIS Data.

GIS Technical Committee

The KCGIS Technical Committee is responsible for developing standards, coordinating work programs, and addressing programmatic issues for the KCGIS program. See Technical Committee section in this document for a detailed discussion.

GIS User

An individual who uses GIS to any degree but whose main function in the County is not the creation, maintenance, and analysis of GIS data.

GLO

Government Land Office

GPS

Global Positioning System

A system of satellites, computers, and receivers that is able to determine the latitude and longitude of a receiver on Earth by calculating the time difference for signals from different satellites to reach the receiver.

GUI

Graphical User Interface

An interface for issuing commands to a computer utilizing a pointing device, such as a mouse, that manipulates and activates graphical images on a monitor.

GWMA

Groundwater Management Areas

Administrative Areas of King County designated by WLRD for the purpose of managing ground water.

H

Hillshade

An image consisting of shadows drawn on a map to depict topographic relief by simulating the effect of the sun's rays over the land.

HPP

Historic Preservation Program

HRI

History Resource Inventory

An ongoing survey of historic resources resulting in an inventory of over 1300 properties.

I

I/I

Inflow and Infiltration

Integrity

The measure of data that indicates its usable condition.

Internal Service Fund

A King County agency that provides services to other King County agencies. The funding for an internal service agency is provided by those other King County agencies.

Intranet

A linked network among King County agencies, that is not available to the larger Internet.

ISA

Information Systems Analyst

A King County Job Classification.

ISP

Information Systems Professional

King county employee Classification.

IT

Information Technology

The development, installation, and implementation of computer systems and applications.

J

Java Script

A user interface scripting language developed by Netscape for Web browsers. While the syntax of the Java Script programming language resembles that of Java, the two languages are actually unrelated. Java Script source code is embedded in HTML documents, and is interpreted by a Web browser.

K

KCEGIS

King County Elections GIS

A functional unit of Records & Elections Division of DES that provides GIS services to accommodate the election process.

KCGIS

King County GIS

See the Organization section of this document for a detailed explanation of the King County GIS program.

KCGIS Center

King County Department of Natural Resources and Parks group that works with the KC department GIS programs to coordinate the KCGIS program, to deliver the GIS services that King County department customers require to support their business needs, and to develop the systems necessary to build the GIS environment needed to attain the County Executive's vision.

KCGIS Oversight Committee

See listing for GIS Oversight Committee.

KCGIS Spatial Data Warehouse

A central repository of GIS data that is maintained by various agencies within King County, as well as other entities, for the purpose of common access.

KCGIS Technical Committee

See listing for GIS Technical Committee.

KCIA

King County International Airport

A functional unit of KC DOT. Also known as Boeing Field.

KCSO

King County Sheriff's Office

King County Department.

KCSORPIS

King County Sheriff Office's Research, Planning and Information Services Unit.

L

LAN

Local Area Network

A system that links together electronic office equipment, such as computers and word processors, and forms a network within an office or building.

Layer

A collection of geographic data objects that represent one particular characteristic for a specific spatial extent.

LIDAR

Light Intensity Detection And Ranging

A method using lasers to measure distances to reflective surfaces. Used with GIS to generate elevation data.

LIMS

Laboratory Information Management System

A large database and access tools for the King County Department of Natural Resources and Parks.

Link

A single feature in a GIS linear data layer. (also arc or line).

M

MapObject

Of or having to do with MapObjects.

MapObjects

Software from ESRI that provide a collection of embeddable mapping and GIS components. Developers can use MapObjects to create applications that include dynamic live maps and GIS capabilities.

Matrix Management structure

A management structure in which two or more supervisors share the responsibilities of management of the same people or groups.

Matrixed

See listing for Matrix Management.

Metadata

Definitional data that provide information about or documentation of other data managed within an application or environment.

MLS

Multiple Listing Service

A means by which real estate agents are informed of the properties offered for sale by other agents.

MMS

Maintenance Management Systems

A computer systems used to assist in the planning, scheduling, and tracking of maintenance work.

Mount Point

An established starting point (path) for directory browsing.

MSAG Coordinator

Master Street Address Guide Coordinator

MS SQL Server

Microsoft Relational Database Management System.

Multispectral Imagery

Images obtained simultaneously in a number of discrete bands (specific section) of the electromagnetic spectrum.

Mylars

Thin strong polyester film used primarily for ink-drawn maps and graphics.

N

NAS

Network Attached Storage

Hard disk storage that is set up with its own network address rather than being attached to the file server.

NIES

A former Western Washington mapping group, now the US office of Triathlon that provides photogrammetry services and digital orthophotography products to many Puget Sound organizations.

NPDES

National Pollutant Discharge Elimination System

Program under the U.S. Environmental Protection Agency that controls water pollution by regulating point sources that discharge pollutants into waters of the United States.

O

O&M Plan

Operations and Maintenance Plan

Describes how the KCGIS program will be administered and operated.

OCR

Office of Cultural Resources

Functional unit of King County government.

ODBC

Open Database Connectivity

A standard method of sharing data between databases and other programs. ODBC drivers use the standard Structured Query Language (SQL) to gain access to data stored in a RDBMS.

OEM

Office of Emergency Management

Functional Unit of DES.

OMB

Office of Management and Budget

King County's budget office.

Oracle

A RDBMS software application.

Originator

See listing for Author.

ORPP

Office of Regional Policy and Planning

King County organization disbanded at the end of 2002, with many functions including GIS distributed into the Budget office.

Orthoimagery

A remotely-sensed digital picture, stored in a raster data format.

Oversight Committee

See listing for GIS Oversight Committee.

P

ParaTransit

A passenger transportation service primarily intended for mobility-impaired, mentally-impaired, and senior citizens (elderly persons). Most vehicles used in paratransit are especially equipped with wheelchair lifts or ramps to facilitate access.

PDF

Portable Document Format

Computer document format that is well suited for distributing documents with complex formatting, used extensively by KCGIS for map distribution.

PIN

Parcel Identification Number

Unique ten digit numeric identifier for real property within King County.

PLSS

Public Land Survey System

A system established in 1785 by the Federal Government, providing for surveying and describing land by reference to principal meridians and base lines. Also called the rectangular or government survey.

POCA

Public Land Survey, Ownership, County, and Administration boundaries

An office of the Washington State Department of Natural Resources.

Poster

The person responsible for the publication of a data set to the data warehouse.

Production data

Data which are as current and accurate as possible and suitable for, use on an enterprise-wide level.

Production Environment

A computing environment available to multiple users, tested and stable for daily use.

Project Data

Data sets created or developed for specific projects which may not be suitable for broader purposes.

PSAFI

Park Site and Facilities Information

PSAP

Public Safety Answering Point

Location where E911 calls are received.

PSRC

Puget Sound Regional Council

An association of cities, towns, counties, ports, and state agencies that serves as a forum for developing policies and making decisions about regional growth and transportation issues in the four-county central Puget Sound region.

P-Suffix

A property-specific zoning or land-use condition that is applied to a parcel or a group of parcels.

Public

Accesses data in the warehouse without authentication and typically has extremely limited privileges.

Public Library

Data housed on a central server that is accessible to all of King County government, the contents of which are accessible according to privileges assigned by data stewards.

Public Server

A computer system that is accessible to all of King County government, the access to which is assigned by the DBA.

Publisher

See listing for Poster.

PUD

Public Utility District

An agency that provides electrical power, water, or other utility services to residents and businesses in defined districts of Washington State.

Q

Qualified Technician

An individual who has been adequately trained in the installation/maintenance of the hardware, software, database, or applications.

R

RAID

Redundant Array of Independent Disks

A strategy for organizing physical disks for a server.

Raster

A type of computer graphics that is specified by a grid of columns and rows of values that are arrayed to form an image.

RCW

Revised Code of Washington

The compilation of all permanent laws now in force in the State of Washington.

RDBMS

Relational Database Management System

A program that allows users to create, update and administer a relational database.

REALS

Records, Elections and Licensing Services

A division of DES.

RECDNET

Record Network

Abbreviation for the King County cadastral base GIS layer.

REPMS

Real Estate Portfolio Management System

RID

Road Improvement District

A method allowed under Washington State Law to pay for the cost of road improvements that provide a special benefit to adjacent property. All the property owners pay for the project, usually over 10 to 20 years.

RP&IS

Research, Planning & Information Services

A functional unit of KCSO.

RSD

Road Services Division

A division of KC DOT.

S

SafetyDMS

Safety Data Management System

An application for recording and tracking bus accidents and transit operator safety records.

SAN

Storage Area Network

A high-speed communications network optimized for storage.

SAO

Sensitive Areas Ordinance

King County ordinance governing the allowed development activities within a significant impact threshold of environmentally sensitive area.

SCSI

Small Computer System Interface

A standard for computer system communication. Generally used by the KCGIS program for server computers to communicate with high performance, high reliability, hard disk drives.

SDC

Spatial Data Catalog

The metadata resource for the KCGIS Spatial Data Warehouse.

SDE

Spatial Database Engine

See listing for ArcSDE.

SDW

Spatial Data Warehouse

See listing for KCGIS Spatial Data Warehouse.

SecurityDMS

Security Data Management System

An application for recording and tracking incidents that occur on or around transit coaches.

SF1 (SF2, SF3...)

Summary File

Summary files available from the US Census Bureau.

Shapefile

A specific data format used for GIS layers native to ArcView version 4.x and earlier.

SIS

Stop Information System

An application that will allow the placing, sequencing, and attribution of bus stops.

SMDM

Science, Monitoring and Data Management

A section of WLRD.

Spatial Data Warehouse

See listing for KCGIS Spatial Data Warehouse.

SQL

Structured Query Language

An industry-standard computer language used for creating, updating and, querying RDBMS.

SQL Server

See listing for MS SQL Server.

Steward

See listing for Data Steward.

Stewardship

See listing for Data Stewardship.

SWD

Solid Waste Division

A division of DNRP.

SWES

Surface Water Engineering Services Unit

A part of WLR Capital Projects and Open Space Acquisitions Section.

T

Technical Committee

See listing for GIS Technical Committee.

Technology Management Board

Part of the King County Technology Governance Structure that oversees technology projects.

Test Environment

A computing environment available for developing and testing of new/revised applications and software.

Testing data

Data being developed that are not ready for enterprise-wide use but will be in the future.

TIFF

Tagged Image File Format

A popular and flexible raster computer graphic file format.

TLT

Term-limited Temporary

A temporary King County employment position with a specified end date.

TNET

Transportation Network

A consortium of regional cities, county agencies as well as public/private partnerships participating in maintaining a seamless database of transportation related spatial and attribute datasets.

TOE

Transit Object Editor

An application for placing and editing Timepoints and TPIs in the Transit GIS network.

Topology

The spatial relationship between geographic features. The term is often used to refer to explicit rules of relationships that are allowed, and the resulting record of those relationships.

Triathlon

Formerly NIES, a Western Washington mapping group, provides photogrammetry services and digital orthophotography products to many Puget Sound organizations.

Two-cluster system

See listing for Clustering.

U

UNIX

A multiuser general-purpose operating system. Generally used by the KCGIS program for GIS software and RDBMS servers.

URL

Uniform Resource Locator

An address that identifies a document or resource on the World Wide Web.

V

VB

Visual Basic

Microsoft programming language, and Integrated Development Environment, supporting graphic user interfaces and used extensively with ESRI GIS software. There are many versions of Visual Basic including VBA (Visual Basic for Applications) and VB.NET. See also listing for .NET.

VBA

Visual Basic for Applications

Vector

A type of computer graphics that is specified by mathematical formula, and consisting of lines and shapes.

VoIP

Voice over Internet Protocol

The predominant character set encoding of present-day computers.

W

WAN

Wide Area Network

A communications network that uses such devices as telephone lines, satellite dishes, or radio waves to span a larger geographic area than can be covered by a LAN.

Warehouse

See listing for Spatial Data Warehouse.

Wintel

Windows/Intel

A technology platform incorporating Microsoft Windows as an operating system and Intel-type chip sets.

WLRD

Water and Land Resources Division

A division of KC DNRP.

WRIA

Water Resource Inventory Areas

Administrative Areas of Washington State designated by Washington State Department of Ecology.

WSDNR

Washington State Department of Natural Resources

Washington State government agency.

WTD

Wastewater Treatment Division

Division of DNRP.

X

XML

Extensible Markup Language

A text markup language for interchange of structured data between various software applications.