EXECUTIVE SUMMARY

OBJECTIVE

Provide a centralized GIS infrastructure that all departments would be able to use, facilitating sharing GIS data, support costs, etc. And at the same time reduce the County's GIS infrastructure costs through economies of scale.

CURRENT STATUS

ISD has established, with the leadership of the CGIO, a centralized GIS infrastructure that has provided centralized GIS infrastructure services to a number of departments. This infrastructure includes the following:

- GIS Data
- GIS Infrastructure (e.g., servers, storage, staffing, etc) to support the data

GIS CONSOLIDATION

There has been an effort to identify all GIS costs across the County departments related to GIS and attempt to consolidate them into a single organization. The CGIO has documented this effort in the 'County of Los Angeles Geographic Information Systems Assessment', November 16, 2009.

This assessment lists estimated (i.e., based on department "honesty") GIS application servers, GIS workers, and GIS software in the County. The following issues need to be discussed and a plan of action needs to be agreed to before we can attempt to determine potential costs savings related to consolidating these components.

1. How will the County deal with GIS staffing, since this is where the most potential cost savings will be?
    a. Consolidate – these employees currently support individual department's GIS application development efforts.
        i. In ISD, this is handled by the Customer Application Branch and billed back based on hourly rate. Server support is only a small part of what these people do, and that is only what we have been talking about consolidating.
    b. Allow departments to keep these items – there will be no major cost savings

2. Savings related to GIS application server consolidation.
    a. ISD already provides this service to departments from their virtual server offering, it does not have to be included in the GIS infrastructure.
    b. If these are mapping application servers that really contain data that should be centralized, will the County mandate their consolidation?
    c. If the number of these departmental GIS application servers grow the billing algorithm must take this into consideration. Otherwise the service will not be cost viable.

EGIS RATE MODELS

In a perfect world, there would be a way to objectively tie a billing model or rate model to service utilization. Unfortunately, it appears that no one has been able to crack this issue and objectively measure GIS utilization. Efforts have been made to research this with other California County IT organizations, and with our IT research

vendor, Gartner. It does appear that most organizations either do not attempt to bill for these services and receive direct funding from their agency budget, or use "type of user" and a measure of department size (e.g., budget, budgeted positions, etc.) to bill back for this service.

The CGIO and ISD have come up with the following types of "rate" models for a GIS Infrastructure service (or line of business):

1. "**Type of usage**" with a factor related to size of department (e.g., # of employees or size of organization's budget) – this provides for a variable billing rate based on usage type.
2. **Size of department** with no factor as to usage (CGIO only shows one version based on size of budget, but there could also be one based on number of employees) - this provides only a fixed fee billing rate not tied to usage.
3. "**Type of usage**" without a factor for department size – this provides a fixed fee billing rate based solely on type of usage.
4. "**Type of usage**" based on number of GIS software licenses a department owns or GIS workers a department has. This attempts to provide an "objective" way to identify "type of usage", but it isn't clear if this is accurate (i.e., departments having many licenses but not using all of them, the County does not have a GIS job class specification).

EVALUATION OF RATE MODELS

The following criterion was used to evaluate each model:

1. Fair
2. Simple to administer
3. Simple to understand
4. Consistently applied
5. Full recovery of costs

FAIR

- Option one – not always fair in that some departments do not see the connection between department employee count/budget and their use of GIS. Many high-end users of GIS are smaller sized departments. This has also led to changing the size criteria from department (level 1) to bureau (level 2).
- Option two – same issue as option one.
- Option three and four – fair and somewhat objective.

SIMPLE TO ADMINISTER

Most of the options are simple to administer. The only major issue is the "type of usage" criteria used in options 1 and 3. The criteria for moving from one usage tier to another are somewhat subjective.

SIMPLE TO UNDERSTAND

All are simple to understand, except for the issue related under Fair (i.e., connection between department size and use of GIS).

CONSISTENTLY APPLIED

This has been an issue with option 1. Many departments argued that department size does not really indicate GIS usage and so "options" were brokered with departments, especially the large departments, using the organization

level asking for the GIS service. As long as we apply the "level 1/level 2" across all departments, then all billing models could be consistently applied.

FULL RECOVERY OF COSTS

All billing models will cover costs for the basic GIS infrastructure service. However, all of the models breakdown at some level as we include server consolidation into the "service," since server growth for one department will affect all of the departments billing.

OTHER CONSIDERATIONS

There is one other major consideration to the rate model that can greatly affect the viability of the service. Will it be cost effective for departments to join, e.g., will their GIS costs go down or go up?

It appears that the only model that seems to effectively address this issue is **Rate Model 1** *using the number of employees.* Most existing departments using GIS will either break even or show a decrease in their GIS costs. For new GIS departments, the cost may be higher than they expect, and they may argue the connection between number of employees and their cost to join the service is not fair.

EGIS RATE MODELS

BACKGROUND

GIS Categories

GIS Capabilities require two major categories:

1. **GIS Data** includes the acquisition, management, maintenance, and oversight to ensure that countywide data meets GIS standards. A standard universe of accurate, high quality GIS data is required for any GIS applications and capabilities for any department that wants to leverage GIS capabilities. These costs do not change as more departments use GIS since the amount of GIS data does not change. GIS Data costs are approximately **$1 million**, and include:
    a. GIS Data acquisition, including LAR-IAC, Thomas Brothers, demographic data, and commercial mapping contracts (i.e. Google, Bing). These are $677,500 per year.
    b. GIS Staff to oversee the management and maintenance of this data. We have estimated approximately 1.5 FTEs to oversee this, totaling $322,500
2. **GIS Infrastructure** includes the acquisition and maintenance of servers, software, storage, hosting, and related GIS Infrastructure. These costs increase as more capacity is required to support additional departments that use the GIS systems. GIS infrastructure costs of $**1,063,176** include:
    a. Server hosting and acquisition at Mid Range Computing (including disaster recovery). This totals: $425,000 per year
    b. GIS Server Software licenses: $169,000 per year
    c. GIS and contracts staff, including external maintenance contracts, which ensure the GIS systems are operational and optimized. Total costs for 2 FTE and external contracts: $469,000

GIS Data		GIS Infrastructure			Total
Data	Staff	Servers	Software	Staff	
$ 677,500	$ 322,500	$ 425,000	$ 169,000	$ 469,000	$ 2,063,000

GOAL

The goal for a *rate model* is to recover costs incurred in maintaining the GIS systems in a standard method which equitably distributes costs to participating departments, and provides defined costs for departments that join in the future.

Another goal was to include utilization as part of the *rate model*. Unfortunately, due to the nature of the business and infrastructure, a simple utilization model ('hits') cannot be tracked with enough granularities to establish a single algorithm for a charge back. In other words, not all 'hits' to the environment are directly traceable such as in the case of geocoded work, map services use, and the embedded application of ESRI, demographics, street and imagery tools to applications used by departments for public use or for Countywide use.

Examples are applications created by one department that benefit others such as the Assessor Parcel Search created by the Assessor but used by all County departments. In this case would we charge the County-wide users (all departments) or the Assessor?

SCOPE

The costs of **$2,063,165** *include* support for existing eGIS customer departments along with estimated costs for the consolidation of GIS servers for those departments that maintain GIS systems. The costs *exclude* non-GIS departments. The rate model developed must fund necessary GIS Infrastructure enhancements as those departments utilize GIS capabilities.

Departments targeted for GIS Consolidation and their eGIS status are listed in Table 1, below:

Departments Targeted for GIS Consolidation
Table 1:

Department	eGIS Status
Agricultural Comm./Weights and Measures	In eGIS
Children and Family Services	In eGIS
Community and Senior Services	In eGIS
Community Development Commission	In eGIS
Mental Health Department	In eGIS
Parks & Recreation	In eGIS
Probation	In eGIS
Public Health Administration	In eGIS
Public Library	In eGIS
Public Social Services	In eGIS
Assessor	Joining eGIS FY 10/11
Beaches and Harbors	
Chief Executive Office	Joining eGIS FY 10/11
Fire Department	*Declined*
Health Services	In eGIS
Internal Services Department (Portal)	Joining eGIS FY 10/11
Public Works	Budgeting for eGIS
Regional Planning Department	Joining eGIS FY 10/11
Registrar-Recorder/County Clerk	Joining eGIS FY 10/11
Sheriff	OPS now, budgeting for remainder.

RATE MODEL OPTIONS – DEFINITION OF USAGE TIERS

Some of the rate models that follow allocate costs to departments based upon usage (Startup, Low, Medium, High). These tiers are defined in Appendix A, which also contains a table showing the current tier for each department in the County. These tiers allow for the allocation of costs based upon usage to provide a more equitable distribution of costs for GIS Infrastructure requirements. These classifications are equivalent to the services provided within a tiered structure such as Tier 0, 1, 2, and 3.

As departments increase or reduce their need for services, they move up or down the classifications to match the service level being offered within the tier or category. Close monitoring of equitable distribution of the total cost is required to ensure that all costs for eGIS services are recovered on an annual basis from all participating eGIS members.

RATE MODEL 1: TIERED USAGE CHARGES PER BUDGETED ITEM

Description:

A GIS Program requires the maintenance of GIS Data and GIS Infrastructure as described in the introduction.

GIS Data costs of $1 million were divided by the number of budgeted items in departments using GIS (78,721), as well as all departments except the hospitals (87,748). Costs per department are listed in Column H.

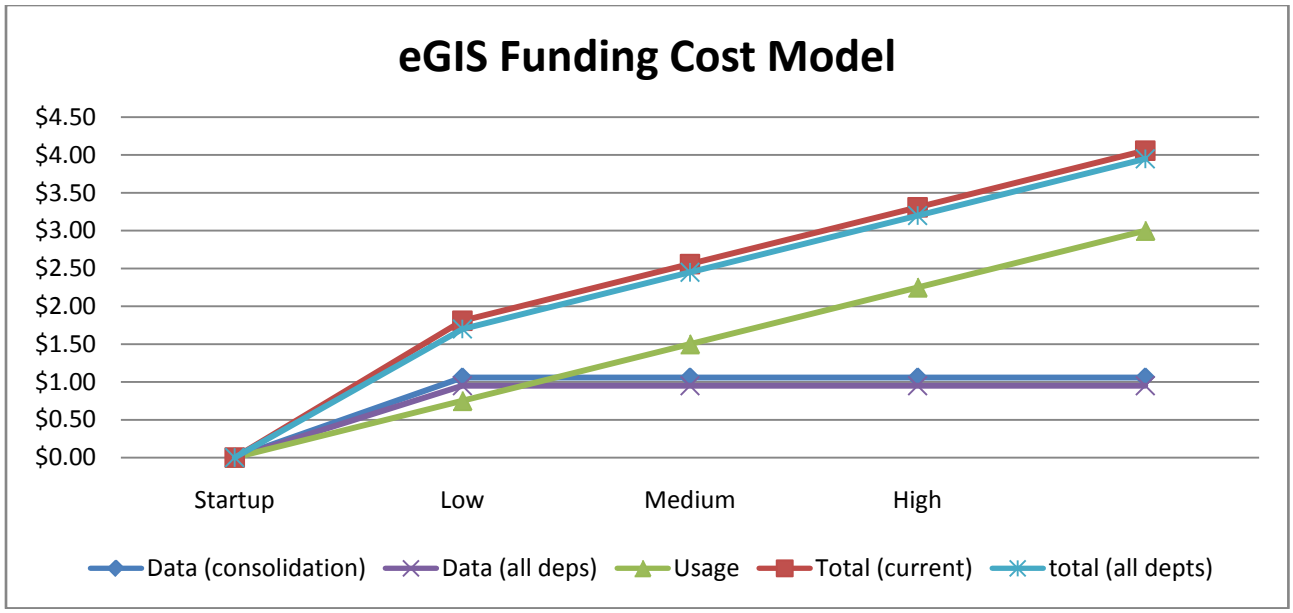
=$1,000000/78,721=$12.70/12=$1.06
=$1,000000/87,748=$11.40/12=$0.95

GIS Infrastructure costs of $1 million were allocated based upon tiered usage in order to reflect the different GIS support requirements for each department. *Departments that do not use GIS do not have costs allocated to them.* As departments develop more applications, or have more users, their allocation increases.

Tier	Data (consolidation)	Usage	Total (current)	Data (all deps)	Total (all depts)
No GIS	$0.00	$0.00	$0.00	$0.00	$0.00
Startup	$1.06	$0.75	$1.81	$0.95	$1.70
Low	$1.06	$1.50	$2.56	$0.95	$2.45
Medium	$1.06	$2.25	$3.31	$0.95	$3.20
High	$1.06	$3.00	$4.06	$0.95	$3.95

Cost per budgeted position per month

Costs *per item* per month reflect the fact that startup departments gain substantial cost savings from existing infrastructure and resources. Cost escalation is a standard $0.75 between each tier (from $0.75 from initial use to $3.00 at the final tier).


eGIS Funding Cost Model
$4.50
$4.00
$3.50
$3.00
$2.50
$2.00
$1.50
$1.00
$0.50
$0.00
Startup
Low
Medium
High
Data (consolidation)
Data (all deps)
Usage
Total (current)
total (all depts)

TIERED BY USAGE BY BUDGETED ITEMS
RATE MODEL 1

Department	GIS Usage	LAR-IAC	FY 09/10	FY 10/11	FY 11/12	Difference
Children and Family Services	Startup		$173,970	$173,970	$ 160,854	($13,116)
Probation	Startup		$100,000	$100,000	$ 133,577	$33,577
Public Social Services (Admin only)	Startup		$203,250	$203,250	$ 301,855	$98,605
Sheriff	Startup		$10,000	$325,000	$ 399,404	$74,404
Beaches and Harbors	Low	$6,000	$8,250	$8,250	$ 7,877	($373)
Community and Senior Services	Low		$13,500	$13,500	$ 15,508	$2,008
Mental Health Department	Low		$115,400	$115,400	$ 123,416	$8,016
Public Health Administration*	Low	$90,000	$100,000	$100,000	$ 123,539	$23,539
Public Library*	Low		$26,160	$26,160	$ 35,293	$9,133
Agricultural Comm./Weights and Measures	Medium	$75,000	$37,060	$37,060	$ 15,987	($21,073)
CEO OEM	Medium	$120,000	$180,000	$180,000	$ 178,962	($1,038)
Chief Executive Office	Medium		$20,000	$20,000	$ 20,601	$601
Chief Information Office	Medium		$780	$780	$ 795	$15
Fire Department	Medium	$141,702			$ 175,065	$175,065
Health Services (Admin, OMC only)	Medium	$90,000	$67,938	$67,938	$ 68,642	$704
Internal Services Department	Medium	$25,000	$77,946	$77,946	$ 91,788	$13,842
Parks & Recreation	Medium	$75,000	$50,190	$50,190	$ 58,739	$8,549
Assessor	High	$176,700		$176,700	$ 72,618	($104,082)
Community Development Commission	High		$25,000	$25,000	$ 27,165	$2,165
Public Works*	High	$166,500	$166,500	$166,500	$ 199,369	$32,869
Regional Planning Department	High	$100,000	$70,000	$70,000	$ 9,169	($60,831)
Registrar-Recorder/County Clerk	High	$87,500	$100,000	$100,000	$ 47,111	($52,889)
Total		$1,153,402	$1,545,944	$2,037,644	$2,267,335	$229,691

Column A Lists County Departments in eGIS
Column B Lists the County Departments' usage classification of GIS
Column C Lists the CIO charges quoted to Departments for LAR-IAC access
Column D-F Lists the ISD/CIO charges quoted to Departments in FY09/10, FY10/11, FY11/12 for eGIS Services
Column G Lists the differences between FY09/10 and FY11/12 for eGIS Services

The table below shows costs per department if all County departments use GIS.

TIERED BY USAGE BY BUDGETED ITEMS – All Departments
RATE MODEL 1

	CURRENT STATUS			TIERED BY USAGE BY BUDGETED ITEMS Cost Model 1a - All Departments			
Department	GIS?	Current Cost	Positions	All Deps Usage	Data2	Use2	Total2
Affirmative Action	N		93	Startup	$ 1,060	$ 837	$ 1,897
Alternate Public Defender	N		292	Startup	$ 3,328	$ 2,628	$ 5,956
Animal Care and Control	N		371	Startup	$ 4,228	$ 3,339	$ 7,567
Auditor-Controller	N		596	Startup	$ 6,792	$ 5,364	$ 12,156
Board of Supervisors, Executive Office	N		330	Startup	$ 3,761	$ 2,970	$ 6,731
Child Support Services Department	N		1,797	Startup	$ 20,479	$ 16,173	$ 36,652
Consumer Affairs	N		54	Startup	$ 615	$ 486	$ 1,101
Coroner	N		209	Startup	$ 2,382	$ 1,881	$ 4,263
County Counsel	N		552	Startup	$ 6,291	$ 4,968	$ 11,259
District Attorney	N		2,163	Startup	$ 24,650	$ 19,467	$ 44,117
Grand Jury	N		5	Startup	$ 57	$ 45	$ 102
Human Resources	N		299	Startup	$ 3,407	$ 2,691	$ 6,098
Military and Veteran Affairs	N		24	Startup	$ 274	$ 216	$ 490
Museum of Art	N		42	Startup	$ 479	$ 378	$ 857
Museum of Natural History	N		26	Startup	$ 296	$ 234	$ 530
Public Defender	N		1,138	Startup	$ 12,969	$ 10,242	$ 23,211
Treasurer and Tax Collector	N		536	Startup	$ 6,108	$ 4,824	$ 10,932
Office of Public Safety	Y	$10,000	666	Startup	$ 7,590	$ 5,994	$ 13,584
Probation	Y	$100,000	6,136	Startup	$ 69,928	$ 55,224	$ 125,152
Public Social Services (Admin only)	Y	$203,250	13,866	Startup	$ 158,021	$ 124,794	$ 282,815
Sheriff	Y	$325,000	18,347	Startup	$ 209,087	$ 165,123	$ 374,210
Beaches and Harbors	Y	$8,250	256	Low	$ 2,917	$ 4,608	$ 7,525
Children and Family Services (Admin only)	Y	$173,970	7,389	Startup	$ 84,207	$ 66,501	$ 150,708
Community and Senior Services (Admin only)	Y	$13,500	504	Low	$ 5,744	$ 9,072	$ 14,816
Mental Health Department	Y	$115,400	4,011	Low	$ 45,710	$ 72,198	$ 117,908
Public Health Administration*	Y	$100,000	4,258	Low	$ 48,525	$ 76,644	$ 125,169
Public Library*	Y	$26,160	1,147	Low	$ 13,072	$ 20,646	$ 33,718
Agricultural Comm./Weights and Measures	Y	$37,060	402	Medium	$ 4,581	$ 10,854	$ 15,435
Chief Executive Office	Y	$20,000	518	Medium	$ 5,903	$ 13,986	$ 19,889
Chief Information Office	Y	$780	20	Medium	$ 228	$ 540	$ 768
Health Services (Admin, OMC only)	Y	$67,938	1,726	Medium	$ 19,670	$ 46,602	$ 66,272
Internal Services Department	Y	$77,946	2,308	Medium	$ 26,303	$ 62,316	$ 88,619
Parks & Recreation	Y	$50,190	1,477	Medium	$ 16,832	$ 39,879	$ 56,711
Assessor	Y	$176,700	1,489	High	$ 16,969	$ 53,604	$ 70,573
CEO OEM	Y	$180,000	4,500	Medium	$ 51,283	$ 121,500	$ 172,783
Community Development Commission*	Y	$25,000	557	High	$ 6,348	$ 20,052	$ 26,400
Fire Department*	Y	$141,702	4,402	Medium	$ 50,166	$ 118,854	$ 169,020
Public Works*	Y	$166,500	4,088	High	$ 46,588	$ 147,168	$ 193,756
Regional Planning Department	Y	$70,000	188	High	$ 2,142	$ 6,768	$ 8,910
Registrar-Recorder/County Clerk	Y	$100,000	966	High	$ 11,009	$ 34,776	$ 45,785
Total		$2,189,346	87,748		$ 1,000,000	$ 1,354,446	$ 2,354,446

Column A Lists all County Departments
Column B Lists the County Departments using GIS
Column C Lists the ISD charges quoted to them in Fiscal Year 09/10 and 10/11. Some of these departments have subscribed to eGIS.
Column D Lists each department's funded positions
Column E Lists departments by usage classification
Column F,G Lists each departments calculated cost for Data and Infrastructure
Column H List the total cost for 'GIS Consolidation' services per department

Benefits:

1. This model distinguishes the fixed costs of GIS data maintenance from the variable costs of GIS infrastructure maintenance. GIS data maintenance costs may be reduced per department as more departments use the GIS resources. This model enables a simple budget calculation for 'budgeted positions' for departments while including the impact of greater usage.

2. This model recognizes department size. Small departments have smaller allocations, large departments have larger allocations.

3. The model recognizes utilization, allowing for the scaling of budgets based upon utilization; allowing departments to "grow" with their GIS needs.

4. Some customers have expressed their need for GIS services are bureau specific.

    - This model allows for departments to specify if they should be billed at Level 1 (Departmentally) or Level 2+ (Bureau) based on their need.

    - It allows departments to start from a Bureau level and grow into full support across the department.

    - This flexibility in allocation has allowed us to bring on board new customers that started out small (one Bureau) which led to an increased need for services in other bureaus (two Bureaus).

For example, when negotiating with DHS they determined that two bureaus and not their 5 hospitals needed GIS services; thus their GIS costs were charged at Level 2. DHS has the following Organizational Funds: 19975 OMC, 19989 OMC/Info systems, 2000 DHS Admin, 20019 HS Capital Projects, 20038 'HSA/Emergency, 20046 'HSA/EMS, 20071 'HSA/Paramedics, 20073, 'HSA EMS, 20115 'HSA Facilities, 20398 HAS-Ambulatory.

Drawbacks:

1. Some departments show a non-equitable allocation of costs. They may fall outside the rate model due to their large number of budgeted items (e.g. DCFS, DPSS), or their high use of GIS data and infrastructure with few employees (Assessor, Regional Planning, RRCC) or countywide responsibilities (CEO OEM and Sheriff EOB).

2. For example, the model does not fully capture the ongoing GIS Data investment of LAR-IAC funded by existing GIS departments. Some departments that funded LAR-IAC data (i.e. Assessor, Regional Planning, Registrar-Recorder) will see much lowered costs than they have paid in the past for this one data product (Columns F and I). In the past, a number of allocations were adjusted to reflect these realities causing an appearance of an inequitable cost distribution.

RATE MODEL 2: TIERED USAGE CHARGES BY BUDGET %

Description:

This model is similar to rate model 1, where costs for GIS Data and GIS Infrastructure are split; costs per month are allocated based *upon a budget percentage.*

GIS Data costs are allocated as 0.0075% of department budgets.

GIS Infrastructure costs are allocated based upon tiered usage in order to reflect the different GIS support requirements for each department. The chart below shows the incremental cost of 0.0050% from startup to High.

	Data	Usage
Startup	0.0075%	0.0025%
Low	0.0075%	0.0075%
Medium	0.0075%	0.0125%
High	0.0075%	0.0175%

TIERED BY USAGE BY BUDGET PERCENT
RATE MODEL 2

TIERED BY USAGE BY BUDGET PERCENT
Cost Model 2

Department	Depts Targeted for Consolidation	Budget (09/10)	Positions	GIS Usage	Charges to LARIAC Custome	Data %	Server %	Total Cost All County Depts2	Depts Targeted for Consolidation 3	+/- Difference from Current eGIS Costs
Affirmative Action		$ 13,455,000	93	Startup		$ 1,009	$336	$1,346		
Alternate Public Defender		$ 53,578,000	292	Startup		$ 4,018	$1,339	$5,358		
Arts Commission		$ 9,618,000		Startup		$ 721	$240	$962		
Auditor-Controller		$ 87,123,000	596	Startup		$ 6,534	$2,178	$8,712		
Child Support Services Department		$ 173,699,000	1,797	Startup		$ 13,027	$4,342	$17,370		
Consumer Affairs		$ 8,174,000	54	Startup		$ 613	$204	$817		
Coroner		$ 28,797,000	209	Startup		$ 2,160	$720	$2,880		
County Counsel		$ 91,272,000	552	Startup		$ 6,845	$2,282	$9,127		
District Attorney		$ 226,600,000	2,163	Startup		$ 16,995	$5,665	$22,660		
Grand Jury		$ 1,716,000	5	Startup		$ 129	$43	$172		
Human Resources		$ 49,646,000	299	Startup		$ 3,723	$1,241	$4,965		
Military and Veteran Affairs		$ 2,350,000	24	Startup		$ 176	$59	$235		
Museum of Art		$ 25,629,000	42	Startup		$ 1,922	$641	$2,563		
Museum of Natural History		$ 15,189,000	26	Startup		$ 1,139	$380	$1,519		
Music Center		$ 21,516,000		Startup		$ 1,614	$538	$2,152		
Office of Public Safety	$10,000	$ 114,565,000	666	Startup		$ 8,592	$2,864	$11,457	$11,457	$1,457
Probation	$100,000	$ 692,808,000	6,136	Startup		$ 51,961	$17,320	$69,281	$69,281	($30,719)
Public Defender		$ 179,418,000	1,138	Startup		$ 13,456	$4,485	$17,942		
Public Social Services (Admin only)	$203,250	$ 1,858,224,000	13,866	Startup		$ 139,367	$46,456	$185,822	$185,822	($17,428)
Sheriff	$325,000	$ 2,555,453,000	18,347	Startup	$146,686	$ 191,659	$63,886	$255,545	$255,545	($69,455)
Treasurer and Tax Collector		$ 71,295,000	536	Startup		$ 5,347	$1,782	$7,130		
Animal Care and Control		$ 32,643,000	371	Low		$ 2,448	$2,448	$4,896		
Beaches and Harbors	$8,250	$ 42,463,000	256	Low	$6,000	$ 3,185	$3,185	$6,369	$6,369	($1,881)
Board of Supervisors, Executive Office		$ 147,627,000	330	Low		$ 11,072	$11,072	$22,144		
Health Services (Admin, OMC only)	$67,938	$ 513,432,000	1,726	Low	$90,000	$ 38,507	$38,507	$77,015	$77,015	$9,077
Public Health Administration*	$100,000	$ 804,189,000	4,258	Low	$90,000	$ 60,314	$60,314	$120,628	$120,628	$20,628
Public Library*	$26,160	$ 161,115,000	1,147	Low		$ 12,084	$12,084	$24,167	$24,167	($1,993)
Agricultural Comm./Weights and Measures	$37,060	$ 43,030,000	402	Medium	$75,000	$ 3,227	$5,379	$8,606	$8,606	($28,454)
Chief Information Office	$780	$ 5,212,000	20	Medium		$ 391	$652	$1,042	$1,042	$262
Children and Family Services (Admin only)	$173,970	$ 907,570,000	7,389	Medium		$ 68,068	$113,446	$181,514	$181,514	$7,544
Community and Senior Services (Admin only)	$13,500	$ 60,652,000	504	Medium		$ 4,549	$7,582	$12,130	$12,130	($1,370)
Internal Services Department	$77,946	$ 478,110,000	2,308	Medium	$25,000	$ 35,858	$59,764	$95,622	$95,622	$17,676
Mental Health Department	$115,400	$ 1,584,061,000	4,011	Medium		$ 118,805	$198,008	$316,812	$316,812	$201,412
Parks & Recreation	$50,190	$ 149,369,000	1,477	Medium	$75,000	$ 11,203	$18,671	$29,874	$29,874	($20,316)
Assessor	$176,700	$ 160,329,000	1,489	High	$176,700	$ 12,025	$28,058	$40,082	$40,082	($136,618)
Chief Executive Office	$200,000	$ 103,883,000	518	High	$120,000	$ 7,791	$18,180	$25,971	$25,971	($174,029)
Community Development Commission*	$25,000	$ 461,493,000	557	High		$ 34,612	$80,761	$115,373	$115,373	$90,373
Fire Department*	$141,702	$ 1,030,071,000	4,402	High	$140,000	$ 77,255	$180,262	$257,518	$257,518	$115,816
Public Works*	$166,500	$ 582,638,000	4,088	High	$166,500	$ 43,698	$101,962	$145,660	$145,660	($20,841)
Regional Planning Department	$70,000	$ 23,993,000	188	High	$100,000	$ 1,799	$4,199	$5,998	$5,998	($64,002)
Registrar-Recorder/County Clerk	$100,000	$ 136,290,000	966	High	$87,500	$ 10,222	$23,851	$34,073	$34,073	($65,928)
Total	$2,189,346	$ 13,708,295,000	83,248		$1,291,700	$ 1,028,122	$ 1,125,386	$ 2,153,508	$ 2,020,560	$ (168,786)
* Combined from multiple lines in the final adopted budget										

Column A-F See Model 1
Column L-N Cost per department for data and infrastructure, based on % of Budget, and Total Cost.
Column O Excludes non-target GIS Consolidation customers; only target-GIS customers and their costs appear
Column P Lists the differences between what eGIS customers were quoted under 'Column B' and what they would pay using this model

Benefits:

This model provides many of the same benefits of Model 1: Tiered usage by *budgeted item*.

Drawbacks:

Here again, some customers experience a substantial increase such as DMH ($201,412) and the Community Development Commission ($90,373), while others that are High GIS users experience a substantial reduction in charges such as the Assessor (-$136,618), Chief Executive Office (-$174,029), Regional Planning (-$64,002) and Registrar-Recorder (-$65,928).

This model does not fully capture the ongoing GIS Data investment of LAR-IAC funded by existing GIS departments. Some departments that funded LAR-IAC data (i.e. Assessor, Regional Planning, Registrar-Recorder) will see much lowered costs than they have paid in the past for this one data product (Columns F and N).

Lastly, this method does not allow for full recovery of all costs. To do so, all County departments must join eGIS or the percentage (%) must be increased to recover all costs.

RATE MODEL 3: FIXED PERCENT OF DEPARTMENTAL BUDGET

Description:

Fund the GIS systems as a fixed percentage (%) of the budget of all departments utilizing centralized GIS resources.

This Fixed Percent model was defined by taking the gross appropriation for each department's adopted budgeted amount for Fiscal Year 09/10 (**Column C)**, for all County departments and Commissions then dividing it by the total target amount *truly* required to support the **Countywide GIS consolidation cost**. The budget figures do not include lines that had no budgeted positions associated with them; totaling $13 billion. The percentage applied to all Departments is **0.01824%** to fully recover GIS Consolidation costs.

Target Amount	$2,500,000 / $13,708,295,000
%	0.01824%

FIXED PERCENT OF DEPARTMENT BUDGET
RATE MODEL 3

	A	B	C	D	E	F	Q	R	S
1							FIXED PERCENT OF DEPARTMENT BUDGET Cost Model 3		
2	Department	Depts Targeted for Consolidation	Budget (09/10)	Positions	GIS Usage	Charges to LARIAC Custome	% Cost	Depts Targeted for Consolidation4	+/- Difference from Current eGIS Costs?
3	Affirmative Action		$ 13,455,000	93	Startup		$ 2,454		
4	Alternate Public Defender		$ 53,578,000	292	Startup		$ 9,771		
5	Arts Commission		$ 9,618,000		Startup		$ 1,754		
6	Auditor-Controller		$ 87,123,000	596	Startup		$ 15,889		
7	Child Support Services Department		$ 173,699,000	1,797	Startup		$ 31,678		
8	Consumer Affairs		$ 8,174,000	54	Startup		$ 1,491		
9	Coroner		$ 28,797,000	209	Startup		$ 5,252		
10	County Counsel		$ 91,272,000	552	Startup		$ 16,645		
11	District Attorney		$ 226,600,000	2,163	Startup		$ 41,325		
12	Grand Jury		$ 1,716,000	5	Startup		$ 313		
13	Human Resources		$ 49,646,000	299	Startup		$ 9,054		
14	Military and Veteran Affairs		$ 2,350,000	24	Startup		$ 429		
15	Museum of Art		$ 25,629,000	42	Startup		$ 4,674		
16	Museum of Natural History		$ 15,189,000	26	Startup		$ 2,770		
17	Music Center		$ 21,516,000		Startup		$ 3,924		
18	Office of Public Safety	$10,000	$ 114,565,000	666	Startup		$ 20,893	$ 20,893	$10,893
19	Probation	$100,000	$ 692,808,000	6,136	Startup		$ 126,348	$ 126,348	$26,348
20	Public Defender		$ 179,418,000	1,138	Startup		$ 32,721		
21	Public Social Services (Admin only)	$203,250	$ 1,858,224,000	13,866	Startup		$ 338,887	$ 338,887	$135,637
22	Sheriff	$325,000	$ 2,555,453,000	18,347	Startup	$146,666	$ 466,041	$ 466,041	$141,041
23	Treasurer and Tax Collector		$ 71,295,000	536	Startup		$ 13,002		
24	Animal Care and Control		$ 32,643,000	371	Low		$ 5,953		
25	Beaches and Harbors	$8,250	$ 42,463,000	256	Low	$6,000	$ 7,744	$ 7,744	($506)
26	Board of Supervisors, Executive Office		$ 147,627,000	330	Low		$ 26,923		
27	Health Services (Admin, OMC only)	$67,938	$ 513,432,000	1,726	Low	$90,000	$ 93,635	$ 93,635	$25,697
28	Public Health Administration*	$100,000	$ 804,189,000	4,258	Low	$90,000	$ 146,661	$ 146,661	$46,661
29	Public Library*	$26,160	$ 161,115,000	1,147	Low		$ 29,383	$ 29,383	$3,223
30	Agricultural Comm./Weights and Measures	$37,060	$ 43,030,000	402	Medium	$75,000	$ 7,847	$ 7,847	($29,213)
31	Chief Information Office	$780	$ 5,212,000	20	Medium		$ 951	$ 951	$171
32	Children and Family Services (Admin only)	$173,970	$ 907,570,000	7,389	Medium		$ 165,515	$ 165,515	($8,455)
33	Community and Senior Services (Admin only)	$13,500	$ 60,652,000	504	Medium		$ 11,061	$ 11,061	($2,439)
34	Internal Services Department	$77,946	$ 478,110,000	2,308	Medium	$25,000	$ 87,194	$ 87,194	$9,248
35	Mental Health Department	$115,400	$ 1,584,061,000	4,011	Medium		$ 288,887	$ 288,887	$173,487
36	Parks & Recreation	$50,190	$ 149,369,000	1,477	Medium	$75,000	$ 27,241	$ 27,241	($22,949)
37	Assessor	$176,700	$ 160,329,000	1,489	High	$176,700	$ 29,239	$ 29,239	($147,461)
38	Chief Executive Office	$200,000	$ 103,883,000	518	High	$120,000	$ 18,945	$ 18,945	($181,055)
39	Community Development Commission*	$25,000	$ 461,493,000	557	High		$ 84,163	$ 84,163	$59,163
40	Fire Department*	$141,702	$ 1,030,071,000	4,402	High	$140,000	$ 187,855	$ 187,855	$46,153
41	Public Works*	$166,500	$ 582,638,000	4,088	High	$166,500	$ 106,256	$ 106,256	($60,244)
42	Regional Planning Department	$70,000	$ 23,993,000	188	High	$100,000	$ 4,376	$ 4,376	($65,624)
43	Registrar-Recorder/County Clerk	$100,000	$ 136,290,000	966	High	$87,500	$ 24,855	$ 24,855	($75,145)
44	Total	$2,189,346	$ 13,708,295,000	83,248		$1,291,700	$2,500,000	$ 2,273,979	$ 84,633
45	* Combined from multiple lines in the final adopted budget								

Column A-F See Model 1
Column Q Cost per department for data and infrastructure, based on Fixed Percentage of Departmental Budet
Column R Excludes non-target GIS Consolidation customers; only target-GIS customers and their costs appear
Column S Lists the differences between what eGIS customers were quoted under 'Column B' and what they would pay using this model

Benefits:

Benefits include a standard distribution of the GIS costs per customer's budget. It is somewhat easily calculated, easily understood, and is a reasonable distribution of costs based upon department size and budget.

Drawbacks:

1) It may be difficult to determine which budget figure should be used (i.e. NCC, gross, etc). I've asked Mike Willis to verify which exact dollar amounts should be included to ensure our figures are correct.

2) This rate model *does not* include a factor for usage.

3) The model *does not* allow for growth funding to match growth-in-demand. Revenues are fixed within a small range, unless all departments agree to a cost increase.

4) Costs will vary from year to year, complicating budgeting. ISD will have to wait for the final adopted budget before its revenues are identified.

5) Costs *are not* equitably distributed according to departments' use. A few examples follow:

    - Departments categorized as Startup (Tier 0) that do not currently use GIS services will experience a rate increase from $0 to as much as $41,325 such in the case of the District Attorney. Another Startup is the Department of Public Social Services that will experience an increase from $203,250 to $466,041; a 44% increase.

    - The Department of Public Health, a Low (Tier 1) user will experience a $46,661 increase.

    - The Department of Mental Health, a Medium (Tier 2) user will experience a doubling of their costs from $115,400 to $288,887; while the Assessor's, a High (Tier 3) user will experience a significant cut in costs from $176,700 to $29,239.

    - The Registrar-Recorder/County Clerk and Regional Planning Department use GIS extensively in support of their departmental systems and release of public information. These departments are categorized as High users, both experiencing significant reductions in their GIS costs. Regional Planning would drop from $70,000 to $4,376, while the RR/CC would drop from $100,000 to $24,855.

RATE MODEL 4: FIXED COST

Description:

Establish a *fixed cost structure for each tier*, where each department pays a pre-specified amount based upon its size or some other criteria.

Benefits:

1. Easily understood cost numbers.
2. Separates billing rate from department sizing.

Drawbacks:

1. Departments with differences in size or utilization usage will see large apparent differences in cost. For example, the Grand Jury, with 5 staff, would have the same startup cost as another department (e.g. Child Support Services) with 1,800 staff.

2. The development of standard pricing is also difficult to manage, since different tiers may have different options available (i.e. startup department would not have access to high resolution imagery). This a la carte menu would drive users to use GIS tools as little as possible to avoid increasing their costs.

Cost per Tier

	Data
Startup	$ 7,000.00
Low	$ 21,000.00
Medium	$ 63,000.00
High	$ 189,000.00

3 factor

FIXED COST BY TIER

RATE MODEL 4

	A	B	C	D	E	F	T	U	V
1							FIXED COST BY TIER Cost Model 4		
2	Department	Depts Targeted for Consolidation	Budget (09/10)	Positions	GIS Usage	Charges to LARIAC Customer	Fixed Cost	Depts Targeted for Consolidation	+/- Difference from Current eGIS
3	Affirmative Action		$ 13,455,000	93	Startup		$ 7,000		
4	Alternate Public Defender		$ 53,578,000	292	Startup		$ 7,000		
5	Arts Commission		$ 9,618,000		Startup		$ 7,000		
6	Auditor-Controller		$ 87,123,000	596	Startup		$ 7,000		
7	Child Support Services Department		$ 173,699,000	1,797	Startup		$ 7,000		
8	Consumer Affairs		$ 8,174,000	54	Startup		$ 7,000		
9	Coroner		$ 28,797,000	209	Startup		$ 7,000		
10	County Counsel		$ 91,272,000	552	Startup		$ 7,000		
11	District Attorney		$ 226,600,000	2,163	Startup		$ 7,000		
12	Grand Jury		$ 1,716,000	5	Startup		$ 7,000		
13	Human Resources		$ 49,646,000	299	Startup		$ 7,000		
14	Military and Veteran Affairs		$ 2,350,000	24	Startup		$ 7,000		
15	Museum of Art		$ 25,629,000	42	Startup		$ 7,000		
16	Museum of Natural History		$ 15,189,000	26	Startup		$ 7,000		
17	Music Center		$ 21,516,000		Startup		$ 7,000		
18	Office of Public Safety	$10,000	$ 114,565,000	666	Startup		$ 7,000	$ 7,000	$ (3,000)
19	Probation	$100,000	$ 692,808,000	6,136	Startup		$ 7,000	$ 7,000	$ (93,000)
20	Public Defender		$ 179,418,000	1,138	Startup		$ 7,000		
21	Public Social Services (Admin only)	$203,250	$ 1,858,224,000	13,866	Startup		$ 7,000	$ 7,000	$ (196,250)
22	Sheriff	$325,000	$ 2,555,453,000	18,347	Startup	$146,666	$ 7,000	$ 7,000	$ (318,000)
23	Treasurer and Tax Collector		$ 71,295,000	536	Startup		$ 7,000		
24	Animal Care and Control		$ 32,643,000	371	Low		$ 21,000		
25	Beaches and Harbors	$8,250	$ 42,463,000	256	Low	$6,000	$ 21,000	$ 21,000	$ 12,750
26	Board of Supervisors, Executive Office		$ 147,627,000	330	Low		$ 21,000		
27	Health Services (Admin, OMC only)	$67,938	$ 513,432,000	1,726	Low	$90,000	$ 21,000	$ 21,000	$ (46,938)
28	Public Health Administration*	$100,000	$ 804,189,000	4,258	Low	$90,000	$ 21,000	$ 21,000	$ (79,000)
29	Public Library*	$26,160	$ 161,115,000	1,147	Low		$ 21,000	$ 21,000	$ (5,160)
30	Agricultural Comm./Weights and Measures	$37,060	$ 43,030,000	402	Medium	$75,000	$ 63,000	$ 63,000	$ 25,940
31	Chief Information Office	$780	$ 5,212,000	20	Medium		$ 63,000	$ 63,000	$ 62,220
32	Children and Family Services (Admin only)	$173,970	$ 907,570,000	7,389	Medium		$ 63,000	$ 63,000	$ (110,970)
33	Community and Senior Services (Admin only)	$13,500	$ 60,652,000	504	Medium		$ 63,000	$ 63,000	$ 49,500
34	Internal Services Department	$77,946	$ 478,110,000	2,308	Medium	$25,000	$ 63,000	$ 63,000	$ (14,946)
35	Mental Health Department	$115,400	$ 1,584,061,000	4,011	Medium		$ 63,000	$ 63,000	$ (52,400)
36	Parks & Recreation	$50,190	$ 149,369,000	1,477	Medium	$75,000	$ 63,000	$ 63,000	$ 12,810
37	Assessor	$176,700	$ 160,329,000	1,489	High	$176,700	$ 189,000	$ 189,000	$ 12,300
38	Chief Executive Office	$200,000	$ 103,883,000	518	High	$120,000	$ 189,000	$ 189,000	$ (11,000)
39	Community Development Commission*	$25,000	$ 461,493,000	557	High		$ 189,000	$ 189,000	$ 164,000
40	Fire Department*	$141,702	$ 1,030,071,000	4,402	High	$140,000	$ 189,000	$ 189,000	$ 47,298
41	Public Works*	$166,500	$ 582,638,000	4,088	High	$166,500	$ 189,000	$ 189,000	$ 22,500
42	Regional Planning Department	$70,000	$ 23,993,000	188	High	$100,000	$ 189,000	$ 189,000	$ 119,000
43	Registrar-Recorder/County Clerk	$100,000	$ 136,290,000	966	High	$87,500	$ 189,000	$ 189,000	$ 89,000
44	Total	$2,189,346	$ 13,708,295,000	83,248		$1,291,700	$ 2,037,000	$ 1,876,000	($313,346)
45	* Combined from multiple lines in the final adopted budget								

Column A-F See Model 1

Column T Cost per department for data and infrastructure, based on a Fixed Price / Cost per Tier

Column U Excludes non-target GIS Consolidation customers; only target-GIS customers and their costs appear

Column V Lists the differences between what eGIS customers were quoted under 'Column B' and what they would pay using this model.

RATE MODEL 5: COST IS % OF GIS LICENSES

Description:

This model establishes a fixed cost structure based solely on the number of GIS licenses purchased by a department. A department is charged according to the *percentage of their share of the GIS licenses*. This percentage is applied to the target amount of funding required to support eGIS services which equates to the amount that the department will be charged for eGIS services.

This model does not have dependencies on budgeted items, departmental funding allocations, nor does it matter if a department is or is not a member of the current eGIS Infrastructure Program.

Benefits:

1. Easily understood cost numbers.
2. Separates billing rate from department sizing.

Drawbacks:

This model excludes departments' actual usage classification of GIS Services.

It escalates departments costs to a level which most will not support. An example of this is Agricultural Weights and Measure (AGWM) was quoted $37,060 for FY10/11 eGIS Services. If we apply their 3.25% (15 of 461 ESRI Licenses) use of licenses to the target amount of $2,037,644, AGWM will be billed $66,300.78; a **56%** increase in costs to a Medium user.

Another example is the Assessor, a High User, whose share is 12.36% of the ESRI Licenses, was quoted $176,700 for FY10/11, will be charged $251,942.97, a **70%** increase.

Interestingly, the only department that would experience a 'wash' while experiencing a $239.84 savings is Community and Senior Services (CSS). They purchase 3 ESRI Licenses, .065% of the 461 licenses, and for FY10/11 they were quoted $13,500. As part of this model, CSS would pay $13,260.16. All other departments basically pay between 2% less to 70% more; making this a very disparate rate model.

FIXED COST BY NUMBER OF DEPARTMENT GIS LICENSES

RATE MODEL 5

Departments	ESRI # of Lic *	% of Total Lic	$	2,037,644.00		FY 10/11		+/- Difference Lic to FY10/11
AGWM	15	3.25%	$	66,300.78	$	37,060	$	29,240.78
ASSR	57	12.36%	$	251,942.97	$	176,700	$	75,242.97
Beaches	4	0.87%	$	17,680.21	$	8,250	$	9,430.21
CDC	2	0.43%	$	8,840.10	$	25,000	$	(16,159.90)
CEO	21	4.56%	$	92,821.09	$	200,000	$	(107,178.91)
CIO	1	0.22%	$	4,420.05	$	780	$	3,640.05
CSS	3	0.65%	$	13,260.16	$	13,500	$	(239.84)
DCFS	5	1.08%	$	22,100.26	$	173,970	$	(151,869.74)
DHS/EMS	29	6.29%	$	128,181.51	$	67,938	$	60,243.51
DMH	9	1.95%	$	39,780.47	$	115,400	$	(75,619.53)
DPH	26	5.64%	$	114,921.35	$	100,000	$	14,921.35
DPSS	0	0.00%	$	-	$	203,250	$	(203,250.00)
DPW	106	22.99%	$	468,525.52	$	166,500	$	302,025.52
DRP	29	6.29%	$	128,181.51	$	70,000	$	58,181.51
FIRE	26	5.64%	$	114,921.35	$	-	$	114,921.35
ISD	25	5.42%	$	110,501.30	$	77,946	$	32,555.30
PARK	6	1.30%	$	26,520.31	$	50,190	$	(23,669.69)
Probation	0	0.00%	$	-	$	100,000	$	(100,000.00)
Public Library	0	0.00%	$	-	$	26,160	$	(26,160.00)
RRCC	30	6.51%	$	132,601.56	$	100,000	$	32,601.56
SHERIFF	67	14.53%	$	296,143.49	$	325,000	$	(28,856.51)
Totals	**461**	**100.00%**	**$**	**2,037,644.00**	$	2,037,644	$	-

* Total Number of Licenses based on GIS Assessment Survey, page 7, Nov 2009

Column A Target GIS Departments
Column B Total number of ESRI Desktop/Server Licenses per department.
Column C Percent, per department, of licenses from the whole
Column D ***Percent applied to target eGIS Cost, to establish cost to department.***
Column E Amount quoted to departments for FY10/11 eGIS Services.
Column F Difference between amount quoted for FY10/11 *and* amount to be charged using this model.

REQUIREMENTS COMPARISON

RATE MODELS SUMMARY:

Jim Jones' Requirements	MODEL 1		MODEL 2		MODEL 3		MODEL 4		MODEL 5	
	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO
Fair	X		X			X		X		X
Simple to Administer & Understand	X		X		X		X		X	
Consistently Applied	X		X		X		X		X	
ISD to Fully Recover Costs	X		X		X		X		X	
Budgeted Positions	X			X		X		X		X
% of Departmental Funding		X	X			X		X		X
Fixed % against of Budget		X		X	X			X		X
Fixed Cost by Tier		X		X		X	X			X
% of Total GIS Licenses Applied to Total eGIS Cost		X		X		X		X	X	
S/Up, L, M, H Usage Based	X		X		X		X			X

APPENDIX A: RATE TIER USAGE DESCRIPTIONS

STARTUP

Geographic information is not used as a business tool. Use is occasional and not part of daily operations. Map requests are rare, and are always handled by external agencies. For large departments, there may be a small section that uses GIS occasionally for one-time projects, but it is not consistent. GIS is not yet used for planning and analysis. May use existing, non-specific, external resources for occasional, individual projects.

Examples:	Financial recording systems, legal and policy support agencies, auditing and non-GIS enabled systems.
GIS Data:	Do not develop geographic data whether through geo-coding, online systems, or any other methods. Do not request high-accuracy GIS data products.
Staff:	No staff with geographic expertise.
Software:	Use of web-based systems only. No desktop software.
Scope:	GIS is not listed as a needed resource.

LOW

Have identified GIS as a business support tool, and are beginning to use geography to benefit certain parts of their business. Small departments have initiated one or two projects targeted specifically at internal users. Large departments may use GIS in some areas of their business operations for planning and analysis, but the use is not widespread, and not seen as a business requirement in any part of the department. These departments have not identified the need for dedicated staff, and generally use external resources for projects and analysis.

Examples:	Annual reports including maps and geographic tables, one-time or occasional map projects, web-based applications that support limited numbers of internal and external users.
GIS Data:	Primarily create GIS data by converting their addresses into dots on a map using geocoding. Other GIS data is generally developed by external agencies. Primarily use applications developed by medium and high-usage departments to complete their tasks.
Staff:	These departments have not identified the need for dedicated staff, but have a number of “power users” who are familiar with GIS capabilities.
Software:	Primarily web-based users, but these web applications provide advanced functionality, with custom mapping and reporting. May have a number of desktop software installations.
Scope:	GIS is recognized as a department benefit, but in limited areas.

MEDIUM

Have identified GIS as a critical part of their business, and have invested in hardware, software, and staff in certain areas. GIS is not used across the department, but many information systems are related to geography. Have one or two dedicated GIS staff providing GIS support to the entire department.

Examples:	Service delivery organizations, logistics and resident communications, client and record management, population and demographic analysis and statistics.
GIS Data:	Create GIS data by converting their addresses into dots on a map using geocoding, and transform and combine externally created data (for example, Census data, parcels, and addresses) to create data for in-house use.
Staff:	Have a small percentage of total staff dedicated to GIS. For small departments this may be one person, increasing slowly with larger departments.
Software:	Will have purchased a few desktop copies of professional level GIS software to support their GIS staff. Generally will not have purchased or deployed server based GIS software, but if so, they are generally not used.
Scope:	GIS is used and recognized at most levels of the organization.

HIGH

Geography is a foundation element for the business. Business decisions are made on the basis of geographic information such as parcels, addresses, and other GIS data. Maintenance of geographic information forms a central part of the day to day operations of a large part of the department. These departments do complex analysis which support essential business functions. Also support other entities in the access to and management of geographic resources.

Examples:	land planning, land management, emergency management and response, hazard mitigation, property recording, assessment, and taxation, dispatching, redistricting, and election management.
GIS Data:	Responsible for developing and maintain widely used geographic data. These departments also have staff to develop and maintain GIS applications used internally and by other entities. Need high-accuracy GIS data products to eliminate discrepancies and avoid business impacts of incorrect information.
Staff:	Departments have defined GIS and mapping groups and associated staff resources whose sole job is to support departmental GIS activities.
Software:	Heavy users of professional level GIS software with many copies across the department. Will acquire and maintain server based GIS software to develop web based applications.
Scope:	All parts of the department require GIS assets to complete their daily operations.

Department	Positions	Rate Tier
Affirmative Action	93	No GIS
Alternate Public Defender	292	No GIS
Animal Care and Control	371	No GIS
Auditor-Controller	596	No GIS
Board of Supervisors, Executive Office	330	No GIS
Child Support Services Department	1,797	No GIS
Consumer Affairs	54	No GIS
Coroner	209	No GIS
County Counsel	552	No GIS
District Attorney	2,163	No GIS
Grand Jury	5	No GIS
Human Resources	299	No GIS
Military and Veteran Affairs	24	No GIS
Museum of Art	42	No GIS
Museum of Natural History	26	No GIS
Public Defender	1,138	No GIS
Treasurer and Tax Collector	536	No GIS
Children and Family Services	7,389	Startup
Probation	6,136	Startup
Public Social Services (Admin only)	13,866	Startup
Sheriff	18,347	Startup
Beaches and Harbors	256	Low
Community and Senior Services	504	Low
Mental Health Department	4,011	Low
Public Health Administration	4,015	Low
Public Library	1,147	Low
Agricultural Comm./Weights and Measures	402	Medium
CEO OEM	4,500	Medium
Chief Executive Office	518	Medium
Chief Information Office	20	Medium
Fire Department	4,402	Medium
Health Services (Admin, OMC only)	1,726	Medium
Internal Services Department	2,308	Medium
Parks & Recreation	1,477	Medium
Assessor	1,489	High
Community Development Commission	**557**	High
Public Works	4,088	High
Regional Planning Department	188	High
Registrar-Recorder/County Clerk	966	High
Total	86,839	