

# **State of Alaska FY2005 Governor's Operating Budget**

## **Department of Natural Resources Information Resource Management Component Budget Summary**

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## Component: Information Resource Management

### Contribution to Department's Mission

To provide information technology services and graphic land records to the Department of Natural Resources, and to assure public access to information.

### Core Services

The Information Resource Management (IRM) component provides several primary services for the public, the department, other government agencies, and the private sector:

1. This component creates the state graphic land record - Status Plat Map.
  - Maps are used to make decisions on land ownership, authorizations, permit approvals, resource issues
  - Public access at <http://dnr.state.ak.us/landrecords>
  - Shows current status and location of state lands: ~ 100,000,000 acres
  - Public access to information on land sales, leases, mining claims, permits etc.
  - Annual updates range from 10,000-30,000 depending on activity levels; ~ 20,000 map inventory
  - State plats portray state land ownership, classification, disposals, right-of-ways, trust lands, and disposition of property rights.
  - Federal lands information are available from a shared web site – key customer service, saves staff time.
  
2. The IRM Component creates and maintains the department's resource transaction and revenue receipting system; the Land Administration System (LAS).
  - This system is the primary means for DNR to track the status of an individual case-file through the adjudication process, and for assuring timely management of billing, receipting, and distribution of DNR revenues.
  - DNR customer base is highly diverse: over 20,000 customers have active case files; ~ 91% are individuals, primarily Alaskans; 8% are corporations and companies; and ~1% represents other government.
  - DNR information systems support tens of thousands of additional customers as reflected by >150,000 revenue receipts for Recording, UCC filing, State Parks Cabin Rentals, over-the-counter permits and purchases.
  - Major industry groups are Oil and Gas; Mining; Title Companies; and Recreation Services.
  - IRM supports the computer system used by the State Recorder's Office to index and image public property records and uniform commercial code documents. About 280,000 documents were recorded in 2003.
  
3. The IRM Component provides state leadership for Geographic Information Systems, or GIS.
  - GIS manages the <http://mapper.landrecords.info> site, providing DNR, state employees, and the public with desktop access to the state parcel database and the DNR GIS database: Answers questions like: Is this state land? Is this use allowed? Can I stake a mining claim? Etc.
  - The GIS Unit is working with other state agencies to create a multi-department Internet GIS. AOGCC publication of oil and gas geo-technical data will offer GIS interface developed in partnership with DNR.
  - The GIS Unit supports department wide GIS user projects, especially Mining; Geological Survey; History & Archeology, and Forestry. See <http://geology.info> as an example that promotes investment.
  - The GIS Unit is responsible for the computer system that operates the automated Status Plat System used by Status Graphics Staff. This system has been integrated with federal systems. See: <http://landrecords.info>
  - GIS Unit has the lead role for developing a statewide Cadastral Database of land ownership information. Knowledge of land ownership is essential for resource management. Joint project w/ federal, state, local government and native corporation participants. <http://cadastral.info>
  - Redesigning the archeological review process at the direction of the Division of Parks, History and Archeology Section. Will help streamline permitting and provide better protection of historic sites.
  - A Cooperative Agreement with USGS and the University of Alaska is being signed with plans to create on-line "Alaska Map" site leveraging strengths of the three organizations in mapping services.
  
4. The Computer Information Center (CIC) provides computer support, local area networking, data storage, security, server administration, and help desk services to DNR.
  - Support over 35 DNR offices from Ketchikan to Nome; two new offices were added in FY04

- High ratio of total devices supported to number of staff ~ 130 devices / CIC staff member
- Computer and network services costs are budgeted under the Interdepartmental Information Technology Chargeback Component.

End Results	Strategies to Achieve Results
<p><b>(1) Maximum productivity for DNR Staff.</b></p> <p><u>Target:</u> Raise productivity of DNR staff via business info system upgrades or replacements.  <u>Measure:</u> Value of labor saving business software applications deployed into production per year.</p> <p><u>Target:</u> 99.9% availability of DNR information systems at any time of day or day of the year, excluding scheduled downtime for maintenance.  <u>Measure:</u> % of time internal network devices fully operational</p> <p><b>(2) Self Help Services Available to the Public On-line, low DNR support costs.</b></p> <p><u>Target:</u> Create Web based standards to accelerate system deployment  <u>Measure:</u> Growth in usage of DNR Web sites based on average monthly user sessions per day.</p> <p><b>(3) New technologies rapidly adopted to reduce DNR operating costs.</b></p> <p><u>Target:</u> Effectively write, manage, and deploy contracts to advance IT Goals.  <u>Measure:</u> Ratio of completed DNR contracts that put systems into production over total IT contracts completed.</p> <p><b>(4) Current and Accurate State Graphic Land Record.</b></p> <p><u>Target:</u> Real time updates to platting database with a 48 hour turnaround time for Quality Control.  <u>Measure:</u> Dec 31 Backlog of pending action requests needing processing by Status Graphics Unit compared to past years.</p> <p><b>(5) DNR staff have access to excellent technical PC and software support at lowest cost.</b></p> <p><u>Target:</u> Meet or exceed IT goals and standards established by the Statewide IT Plan and the DNR IT Plan  <u>Measure:</u> Cost of network and desktop support staff as a percent of the total DNR staff cost.</p> <p><b>(6) Customer Centric Information Systems.</b></p> <p><u>Target:</u> Build business and IT systems that focus on common customer needs vs. agency specific needs.  <u>Measure:</u> Number and value of multi-agency capital</p>	<p><b>(1) Utilize IT Systems to raise staff productivity.</b></p> <p><b>(2) Utilize web based solutions to improve customer service, build inter-operable systems.</b></p> <p><b>(3) Utilize Mix of Public and Private Sector IT Skills to Advance DNR Business Goals</b></p> <p><b>(4) Automate State Graphic Land Record Update and Control Processes.</b></p> <p><b>(5) Assure best business practices for providing essential network and office productivity technical support.</b></p> <p><b>(6) Leverage IT GF funding to secure essential federal funding.</b></p>

End Results	Strategies to Achieve Results
projects that create common customer applications.	

Major Activities to Advance Strategies	
<ul style="list-style-type: none"> <li>• Strategic planning for IT projects for DNR as the enterprise</li> <li>• Leveraging staff and technology across projects</li> <li>• Collaboration with other State, Federal, Local Government, and Native groups</li> <li>• Position DNR as the leader in GIS applications as the most basic layer is land ownership</li> </ul>	<ul style="list-style-type: none"> <li>• Provide central desktop support through use of standards and remote software applications</li> <li>• Provide business applications through WEB based technologies</li> <li>• Set standards for classifications and legends for Status Plats</li> <li>• Provide data base management and reduction of duplication</li> </ul>

FY2005 Resources Allocated to Achieve Results							
<p><b>FY2005 Component Budget: \$2,673,200</b></p>	<p><b>Personnel:</b></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding-left: 20px;">Full time</td> <td style="text-align: right;">29</td> </tr> <tr> <td style="padding-left: 20px;">Part time</td> <td style="text-align: right;">0</td> </tr> <tr> <td style="padding-left: 20px;"><b>Total</b></td> <td style="text-align: right; border-top: 1px solid black;"><b>29</b></td> </tr> </table>	Full time	29	Part time	0	<b>Total</b>	<b>29</b>
Full time	29						
Part time	0						
<b>Total</b>	<b>29</b>						

**Performance Measure Detail**

**(1) Result: Maximum productivity for DNR Staff.**

**Target:** Raise productivity of DNR staff via business info system upgrades or replacements.  
**Measure:** Value of labor saving business software applications deployed into production per year.

**Target:** 99.9% availability of DNR information systems at any time of day or day of the year, excluding scheduled downtime for maintenance.  
**Measure:** % of time internal network devices fully operational

**ESTIMATED HOURS OF SYSTEM UPTIME**

Year	HRS UPTIME	% UPTIME	HRS DOWN	DAYS UP	YTD Total
2000	8,640	98.6%	120	360	
2001	8,660	98.6%	100	361	
2002	8,680	99.9%	80	361	
2003	8,680	99.8%	80	361	

**(2) Result: Self Help Services Available to the Public On-line, low DNR support costs.**

**Target:** Create Web based standards to accelerate system deployment  
**Measure:** Growth in usage of DNR Web sites based on average monthly user sessions per day.

## DNR WEBSITE USAGE FROM 1999-2003

Year	Daily Users				YTD Total
1999	1025				
2000	1707				
2001	2405				
2002	3257				
2003	5456				

**(3) Result: New technologies rapidly adopted to reduce DNR operating costs.**

**Target:** Effectively write, manage, and deploy contracts to advance IT Goals.

**Measure:** Ratio of completed DNR contracts that put systems into production over total IT contracts completed.

**(4) Result: Current and Accurate State Graphic Land Record.**

**Target:** Real time updates to platting database with a 48 hour turnaround time for Quality Control.

**Measure:** Dec 31 Backlog of pending action requests needing processing by Status Graphics Unit compared to past years.

**(5) Result: DNR staff have access to excellent technical PC and software support at lowest cost.**

**Target:** Meet or exceed IT goals and standards established by the Statewide IT Plan and the DNR IT Plan

**Measure:** Cost of network and desktop support staff as a percent of the total DNR staff cost.

**(6) Result: Customer Centric Information Systems.**

**Target:** Build business and IT systems that focus on common customer needs vs. agency specific needs.

**Measure:** Number and value of multi-agency capital projects that create common customer applications.

**(1) Strategy: Utilize IT Systems to raise staff productivity.****(2) Strategy: Utilize web based solutions to improve customer service, build inter-operable systems.****(3) Strategy: Utilize Mix of Public and Private Sector IT Skills to Advance DNR Business Goals****(4) Strategy: Automate State Graphic Land Record Update and Control Processes.****(5) Strategy: Assure best business practices for providing essential network and office productivity technical support.****(6) Strategy: Leverage IT GF funding to secure essential federal funding.**

## Key Component Challenges

### Information Resource Management System Obsolescence Issues

The department has identified several software applications that are at the end of their life cycle. Some progress has been made replacing major systems. For others, little or no progress has been made. Size Ranking: <\$100k=small; \$100k-\$1,000k=med; > \$1 Million=Large.

Application	Replacement Progress	New System	Relative Size
Recorder's Office System	<b>Done:</b> New data entry system 2000, new Imaging-Web delivery 2001	2001	Med
Status Plat – State Land Ownership Mapping	Replacement System fully in production by May 2004, LAS Mapper Nov 2003	2003-04	Large
Uniform Commercial Code	Web replacement System planned for January 2004	2004	Med
File Based GIS Mapping System	Replacement scheduled 2005, migrate to Oracle Spatial-Web; multi department	2004	Med
Forestry Fire Reporting System	Web-based replacement	2004	Small
Parks: Cabin Reservations	Need ability to book cabin rentals on-line.	2004	Small
Parks: History & Archeology	New business process designed, new IT system '05	2004-05	Med
Land Administration System:	Goal of complete rewrite, Early stages.	2004-07	Large
Oil and Gas Royalty Accounting	Early stage of analysis	2005	Medium
Coastal Zone Management (ACMP)	Delayed	2005	Large
Revenue and Billing System	Will need to replace or upgrade w/ AKSAS and LAS changes	open	Medium
Habitat Title 41 Permit Application	Replacement or update need identified, low priority	open	Small

Other Issues Include:

Issue 1: Sharing of Federal, Borough, Municipal Information. The Alaska Cadastral Project will simplify land records research. DNR systems must be able to easily share information with our major public land management partners: the federal government, local municipalities, boroughs and native organizations. This project will provide private property village training program on land records and land recordation. This effort includes work with native communities on land information systems and communicating the role of the Recorder's Office in private and public land transfers.

Issue 2: Defining Shared Application Development Environments at the Enterprise Level

The multi-department IT planning effort will need to offer a shared development environment that multiple departments and their contractors can utilize and contribute to. This approach can lead to faster development cycles for products, and lower total costs for building and maintaining applications. Areas identified for DNR to participate include automated mapping/Spatial Analysis (GIS), document management, real property management, E-government, and permit management (see pg. 3-23 of PTI strategic plan).

Issue 3: Deliver the Oil and Gas US Energy Dept. Grant. The State of Alaska was awarded \$1.4 million for a multi-year project to provide three key products. First, the state will provide access to oil and gas well log information via the internet to promote exploration by small and moderate sized firms. The second deliverable is to upgrade the permitting process for oil and gas activity as they relate to coastal management issues. The third target is to build a shared geographic information system (GIS) that can be used to support public access queries and the permit process. Key partners with DNR are the Alaska Oil and Gas Conservation Commission, the Office of Alaska Coastal Zone Management, and the Alaska Department of Fish and Game, who received funding to help complete a digital atlas of the arctic region fishery inventory.

Issue 4: Mining Support. This component will build a multi-agency information portal for a wide collection of mineral, geologic, and mining property rights sources; demonstrate opportunities in Alaska to attract exploration investments.

## Significant Changes in Results to be Delivered in FY2005

1. Special Project for the Office of History & Archeology. Project supports permit reviews for historical and archeological resources which aim to speed up development as the developer will know where the historical sites are up front.
2. In FY04, IRM funds were reduced by 60% for oil spill response mapping duties supporting ADEC via annual inter-agency contract. This will compromise the state's ability to support spill response with mapping services.
3. In FY04, a Cartographer Position was laid off in Status Graphics as a result of budget shortfalls. This action negatively impacts our ability to maintain a current state land record. We are working to increase productivity of the remaining cartographers via automation and process streamlining.

## Major Component Accomplishments in 2003

### *Status Graphics Accomplishments*

- Final Townships Digitized! The last of the ink-on-mylar plats were digitized. Quality control work will be completed in FY04. 64 townships were rapidly converted – a direct payoff from the federally funded Alaska-Minerals-Information-At-Risk (CoreGIS) Capital Project. This means that all state land ownership records are contained in a single database.
- Land Records Updates ~14,000 pending actions were noted, with some slippage in the backlog. One cartographer position was eliminated in FY04; increasing the backlog. We are looking to the Core GIS project to increase plat accuracy and timeliness through new procedures, standards, and more automation.
- Statewide Land Status updated. These are the big picture maps. There were 7 maps involved, 1 statewide and 6 regional maps, incorporated data from BLM and LAS. Land Status maps depict state, native, & federal lands; parks, forests, etc. A version showing historic trails with mining claims and prospecting sites is available.

### *GIS Project Accomplishments*

- Core GIS – is projected to reinvent the state graphic record system; fundamentally changes the way DNR staff and the public can access and view land status information.
- Internet mapping system for State Lands: “LAS Mapper” put into production Nov 17, 2003. Lets customers access maps of state land location, oil and gas lease information, mining information, right-of ways, municipal land transfers, permits land leases, and other DNR activities. Combined with the base map of river and roads, cities and survey information, this system lays a foundation for building a multi-department GIS system. This is one of the products of Core GIS.
- Trans-Alaska-Pipeline Title Reporting System is a joint site shared site with BLM and used to monitor land status information over the course of the entire 800 mile right-of-way. Integration of scanned documents with plats and surveys. See: <http://www.dnr.state.ak.us/taps>. A similar site was completed for the gas line right-of-way.
- Oil & Gas Electronic Permitting Proposal advanced the goals of offering geo-technical and mapping information over the Internet. Working with Alaska Oil and Gas Conservation Commission. Permit support component put on hold as part of redesign of Alaska Coastal Management Program.
- Mining Claims Information System upgraded the first week of November at the annual conference, includes information on State and Federal claims. See <http://akmining.info>
- Tideland Mapping Site upgraded for DEC for spill response. Useful for DNR coastal land managers.
- AKGEOLOGY.INFO Website created with DGGS, USGS, BLM and USFS. This web site is the central portal to a wide selection of minerals information. The goal is to increase exploration and discovery in Alaska.

- Cadastral Project successfully advanced with BLM. Multi-agency federally funded capital project working to create a unified view of land ownership in Alaska. Many boroughs and Native Corporations participating. See <http://cadastral.info>

#### *Business Programming Unit Accomplishments*

- New Burn Permit System on the Internet – saves Forestry staff time, full payback in two seasons of use.
- Mining Claim & mineral property documents available on the WEB via Recorder's Office
- Recorder's Office: updated web based search applications – plats available on-line for most districts; highest volume DNR web site, +400,000 hits/month. See <http://www.dnr.state.ak.us/recorders/search>
- Support Existing Systems – Kept existing systems operational. Completed many user requests; provided direct support for department wide business applications.
- Land Sale Web Site – Created bidding and purchasing web sites for land auctions and over the counter land sales. Successful implementation helped Mining, Land and Water to expand the state land sale program and increase land sale receipts.
- Water Resources Web Site – Worked with Mining, Land and Water to meet the requirements of HB421 to make water resource information available to the public via the Internet.
- Revenue Reporting Project - Finalized the revenue reporting project for Mining, Land and Water. Report shows fiscal year to date revenues by program.
- Report Cash Payments – Provide online edits and batch reporting to identify cash transactions in excess of \$10,000 or smaller sums of cash paid over time that will exceed \$10,000 from one individual or for one parcel. This is a federal IRS reporting requirement.
- Expanded DNR Web Platform – Created a web development environment with production, development and R&D servers. Developed guidelines for using development and production web servers. Provided web master support and guidance throughout the department.
- LAS Administration Support – Provided LAS training on a recurring schedule, stayed current on LAS change requests for setting up new case types to document adjudication of resource programs, and provided support and guidance throughout the department.
- Data Quality Initiative had success by consolidating Status Codes (consistency, simplicity); eliminate duplication of data (LAS now drives plat updates); automatically load missing information, and redesign the LAS data warehouse to simply user access to the information.

#### *Computer Information Center Accomplishments (also reported in the IT Chargeback Component)*

- Maintaining Desktop Computers in over 35 geographic locations: CIC processed several thousand *Technical Help Requests* this calendar year. The top five divisions are Mining, Land, & Water, Forestry, Parks, and Recorder's Office. Smooth running computers makes for more productive DNR staff.
- Deployed new mass storage system for managing increased DNR data volumes. Network-Attached-Storage Capacity at 4 terabytes.
- IT plans and inventory information was completed and is maintained on-line. Staff resources and hardware and software are tallied. State standards were published and DNR standards generally align well.
- Maintained fully functional Recorder's Offices throughout the state.
- Aggressively responded to the "worm attacks" against PC's, work closely with DOA Security, initiated automatic PC upgrades to operating systems saving hundreds of hours of staff time. SUN E3000 converted, upgraded, and turned over to the GIS section as production machine.
- Two new application mapping servers were deployed, and a new Oracle server for DNR production environment was deployed. DNR has good quality and stable serving environment. Looking to leverage this effort within an enterprise context.

## **Statutory and Regulatory Authority**

This component operates under Alaska Statutes, 38.05.020; 38.05.035; 38.04.065; 41.08.030; 38.05.030; 09.25.115; 41.08.020; 40.21.060; 37.14.425; 09.25.120; 41.08.035; and Alaska Administrative Codes, 6AAC Chapter 96; 11AAC 05.010.

Contact Information
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**Information Resource Management  
Component Financial Summary**

*All dollars shown in thousands*

	FY2003 Actuals	FY2004 Authorized	FY2005 Governor
<b>Non-Formula Program:</b>			
<b>Component Expenditures:</b>			
71000 Personal Services	2,313.5	2,280.0	2,389.1
72000 Travel	8.4	6.0	6.0
73000 Contractual	268.6	198.7	198.7
74000 Supplies	119.9	79.4	79.4
75000 Equipment	163.0	0.0	0.0
76000 Land/Buildings	0.0	0.0	0.0
77000 Grants, Claims	0.0	0.0	0.0
78000 Miscellaneous	0.0	0.0	0.0
<b>Expenditure Totals</b>	<b>2,873.4</b>	<b>2,564.1</b>	<b>2,673.2</b>
<b>Funding Sources:</b>			
1002 Federal Receipts	617.2	111.4	116.2
1004 General Fund Receipts	1,625.5	1,602.2	1,602.2
1005 General Fund/Program Receipts	6.0	0.0	0.0
1007 Inter-Agency Receipts	74.5	100.3	182.6
1055 Inter-agency/Oil & Hazardous Waste	29.4	31.6	16.0
1061 Capital Improvement Project Receipts	520.8	718.6	746.2
1108 Statutory Designated Program Receipts	0.0	0.0	10.0
<b>Funding Totals</b>	<b>2,873.4</b>	<b>2,564.1</b>	<b>2,673.2</b>

**Estimated Revenue Collections**

Description	Master Revenue Account	FY2003 Actuals	FY2004 Authorized	FY2005 Governor
<b>Unrestricted Revenues</b>				
None.		0.0	0.0	0.0
<b>Unrestricted Total</b>		<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Restricted Revenues</b>				
Federal Receipts	51010	617.2	111.4	116.2
Interagency Receipts	51015	74.5	100.3	182.6
General Fund Program Receipts	51060	6.0	0.0	0.0
Statutory Designated Program Receipts	51063	0.0	0.0	10.0
Capital Improvement Project Receipts	51200	520.8	718.6	746.2
Interagency Recs./Oil & Hazardous Waste	51395	29.4	31.6	16.0
<b>Restricted Total</b>		<b>1,247.9</b>	<b>961.9</b>	<b>1,071.0</b>
<b>Total Estimated Revenues</b>		<b>1,247.9</b>	<b>961.9</b>	<b>1,071.0</b>

**Summary of Component Budget Changes  
From FY2004 Authorized to FY2005 Governor**

*All dollars shown in thousands*

	<u>General Funds</u>	<u>Federal Funds</u>	<u>Other Funds</u>	<u>Total Funds</u>
<b>FY2004 Authorized</b>	<b>1,602.2</b>	<b>111.4</b>	<b>850.5</b>	<b>2,564.1</b>
<b>Adjustments which will continue current level of service:</b>				
-Changes to Retirement and Other Personal Services Rates	0.0	4.8	31.2	36.0
<b>Proposed budget decreases:</b>				
-Reduce Interagency/Oil & Haz Receipts Funding for Spill Response Mapping Project	0.0	0.0	-16.9	-16.9
<b>Proposed budget increases:</b>				
-Interagency Receipts for Office of History & Archaeology Special Projects	0.0	0.0	80.0	80.0
-Statutory Designated Program Receipts for Private Sector Project Requests	0.0	0.0	10.0	10.0
<b>FY2005 Governor</b>	<b>1,602.2</b>	<b>116.2</b>	<b>954.8</b>	<b>2,673.2</b>

Information Resource Management Personal Services Information				
Authorized Positions			Personal Services Costs	
	<u>FY2004</u> <u>Authorized</u>	<u>FY2005</u> <u>Governor</u>		
Full-time	29	29	Annual Salaries	1,760,951
Part-time	0	0	Premium Pay	0
Nonpermanent	3	3	Annual Benefits	691,444
			<i>Less 2.58% Vacancy Factor</i>	(63,295)
			Lump Sum Premium Pay	0
<b>Totals</b>	<b>32</b>	<b>32</b>	<b>Total Personal Services</b>	<b>2,389,100</b>

Position Classification Summary					
Job Class Title	Anchorage	Fairbanks	Juneau	Others	Total
Administrative Clerk III	1	0	0	0	1
Administrative Manager I	1	0	0	0	1
Analyst/Programmer I	1	0	0	0	1
Analyst/Programmer III	3	0	0	0	3
Analyst/Programmer IV	11	0	0	0	11
Analyst/Programmer V	3	0	0	0	3
Cartographer I	1	0	0	0	1
Cartographer II	7	0	0	0	7
College Intern III	1	0	0	0	1
Data Processing Mgr III	1	0	0	0	1
Natural Resource Mgr II	1	0	0	0	1
Natural Resource Spec III	1	0	0	0	1
<b>Totals</b>	<b>32</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>32</b>