

AP/AL: Appropriation

Project Type: Health and Safety

Category: Public Protection

Location: Statewide

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House District: Statewide (HD 1-40)

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Estimated Project Dates: 07/01/2008 - 06/30/2011

Brief Summary and Statement of Need:

This project develops a digital elevation model (DEM) and an ortho-image map for the entire State of Alaska. This project is a collaborative effort between the Department of Natural Resources, the Department of Military and Veterans Affairs, and the University of Alaska. A quality base map provides the foundation for state organizations to build location-based services with their core business applications; and assists agencies in field operations by providing current and accurately positioned geographic information. The Public Access Component was established in year one (FY07) and is presently on-line serving Alaskans at <http://alaskamapped.org>

Funding:	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	Total
Fed Rcpts	\$2,000,000	\$2,000,000	\$2,000,000				\$6,000,000
Gen Fund	\$2,000,000	\$2,000,000	\$2,000,000				\$6,000,000
Total:	\$4,000,000	\$4,000,000	\$4,000,000	\$0	\$0	\$0	\$12,000,000

<input type="checkbox"/> State Match Required	<input type="checkbox"/> One-Time Project	<input type="checkbox"/> Phased - new	<input type="checkbox"/> Phased - underway	<input checked="" type="checkbox"/> On-Going
0% = Minimum State Match % Required		<input type="checkbox"/> Amendment	<input type="checkbox"/> Mental Health Bill	

Operating & Maintenance Costs:

	<u>Amount</u>	<u>Staff</u>
Project Development:	0	0
Ongoing Operating:	50,000	1
One-Time Startup:	0	
Totals:	50,000	1

Additional Information / Prior Funding History:

Status of Existing Projects

SLA06/CH82 \$ 2,000,000 GF / \$4,000,000. Fed On-going

SLA07/CH30 \$ 2,000,000 GF / \$8,325,000. Fed On-going, contract issued

Project Description/Justification:

Currently, the US Geological Survey (USGS) topographic maps of Alaska are over 40 years old, inaccuracies of up to a quarter mile or more are commonplace and these maps do not meet National Map Accuracy Standards (NMAS). Modern mapping methods require satellite imagery and a digital elevation model (DEM), which are processed into a highly accurate terrain model. The required satellite imagery and DEMs, which are needed to create the base map, have limited coverage in Alaska.

A reliable base map is critical to control in-coming layers of geographic information systems (GIS) used across all disciplines both public and private. None of the modern disaster preparedness and emergency management systems being deployed elsewhere in the nation will work in Alaska until the need for an accurate base map is resolved. Geospatial information is spread across many levels of government, but lacks means for organization. As a result the economic benefits, disaster recovery initiatives, and governmental efficiencies go largely unrealized.

Alaska is the only known state in the United States that has not been digitally mapped on a detailed statewide basis. Most states have completed or are refreshing their existing data. Alaska is lagging behind other states which are in some cases 20 years ahead of Alaska

Current priorities for mapping include:

- aviation safety
- coastal resources and Alaska Coastal Management Program and spill response shore zone mapping
- emergency response
- fire hazard mapping for critical and high value protection areas
- forest resource mapping in southeast, northern, and south central regions.
- gas line route: routing and permit support; public hearings
- global warming studies and response planning
- land cover and terrain for major state parks
- land planning; corridor analysis and statewide land sales program
- land use permit authorizations with commercial recreation permits
- large mining projects and prospects:
- oil and gas infrastructure management and monitoring

Deliverables to Date; FY08 Objectives:

To advance the goal the following actions have been taken:

- 1) The Memorandum of Agreement (MOA) was renewed between the University of Alaska, the Department of Natural Resources (DNR) and the Department of Military and Veteran's Affairs (DMVA). The Executive Committee directs a Technical Committee of three members to help execute the annual operations plan.
- 2) A commitment to public access was demonstrated by gathering existing ortho-imagery and DEM data sets identified through the Alaska Geographic Data Committee and making these data available via the University hosted web-site (<http://alaskamapped.org>).
- 3) Public access expanded via the DNR web sites of land status, mining claims, and other [interactive mapping sites](#) that directly use the basemaps served from the University. Partnerships with local boroughs and municipalities are being established to leverage existing programs.
- 4) A planning contract for ~\$300.0 was signed with HDR Inc, and a major sub-contractor, I-Cubed. HDR will lead the planning and communications effort on the project by delivering on seven tasks, including needs analysis, vendor inventory, data acquisition with quality control, data loading, control recommendations, planning documentation, and geo-spatial governance model recommendation for state agencies. I-Cubed will provide technical support and expanded access to data resources. The project executive committee oversees the planning products and priority setting process.
- 5) A primary goal of the planning contract is to meet with end users to identify priorities areas, minimum level of detail on images, accuracy requirements, and preferred frequency of updates. The FY08 plan will also inventory existing vendor archives to align high priorities with available data. Specifications for ortho-imagery and elevation models will be delivered as part of the planning effort; with cost and product alternatives presented for satellite based acquisitions and aerial based acquisitions.
- 6) Initial federal funding requested in FY06 led by the DMVA relationship with the National Aeronautics and Space Administration (NASA) fell through, and new efforts to establish federal funding partnerships are being created.

Focus of FY09 Funding: Data acquisition will be the focus of project funding, and the FY09 funds will be directed to the priority areas identified via the planning process.

STAKEHOLDER RELATIONS: Stakeholder Project goals include:

- Identify and attract stakeholders to the process while acquiring their input and endorsement through surveys, public forums and the creation of a stakeholder advisory board maintaining a balanced representation of the stakeholder community.
- Seek stakeholder support in the form of funding alliances and make recommendations to improve funding initiatives utilizing stakeholder support. Several successes already in this area, the largest being the \$2.0 million Kenai Elevation Modeling Project.

Why is this Project Needed Now?

The state has not undertaken a base map project in over 25 years. In the 1980s the state teamed up with USGS and NASA to deliver statewide aerial photos at 1:60,000. These images receive little use today because of their age, limited accessibility (need to check out through USGS or a local firm for a fee); and lack of ability to integrate with existing databases such as land ownership. Alaska needs an accurate basemap to meet the fundamental requirements of government.

Specific Spending Detail:

LINE ITEM	DOLLAR AMOUNT	DESCRIPTION (text)
Personal Services	\$ 650,000	UAF, DNR, and DMVA technical staff support, user-training, and project management.
Travel	\$ 8,000	Trips between Juneau, Anchorage, and Fairbanks. Outside travel if approved by Executive Committee.
Services	\$ 3,200,000	Satellite data acquisition; aerial data acquisition with post processing support and quality control from independent contractors.
Commodities	\$ 142,000	Hardware and software needed to support public access and product use. Tech training for IT staff.

Project Support:

Other state Agencies to benefit include the Departments of Transportation, Public Safety, Fish and Game, Environmental Conservation, Commerce, Community, and Economic Development, Labor, Health and Social Services, and any other department using location based services to meet its mission. Local governments from all boroughs covered by the imagery support this effort; many have data to provide in partnership with the state (Kenai, Mat-Su, Fairbanks as examples). Federal government collaboration includes USGS, BLM, other Department of Interior, US Forest Service, Natural Resources Conservation Service, other US Dept of Agriculture, National Oceanic and Atmospheric Administration, and NASA.

Project Opposition:

None Known.