



## YEARLY ACTIVITY PLAN (YAP) - FY '08

**Division/Attached Agency: Office of Planning**

**Program Name: Geographic Information System**

**Program ID: G 07 144 B**

### I. PROGRAM PLANNING

**Problem, issue or opportunity statement:** Describe the problem(s), issue(s) and/or opportunity(ies) your program is attempting to respond to. Identify the participants (individuals, companies, industry sectors, etc.) engaged in this problem, issue and/or opportunity.

Government must have access to good, comprehensive, accurate and current data to make informed policy and management decisions. Spatial data are especially critical to government operations because the majority of issues that government addresses have some sort of locational component. For example, what areas are vulnerable to flooding? Where should business districts be located? Where are the most appropriate places for new housing developments? Where are most children in poverty living? These are just a few examples of questions that government agency and elected officials must face and analyze in their decision making. Our vision is to continue to establish a state-of-the-art Statewide Enterprise Geographic Information System (GIS) for the State of Hawaii to facilitate and improve state government decision making. The ultimate goal is to put this spatial data at the finger tips of decision makers. To help facilitate the "discovery" of spatial data, we intend to continue to build a centralized database--a one-stop resource. Existing and future participants in this effort include other State agencies that have an interest in spatial data such as: DOA, DOD, DOE, DHHL, DOH, DLNR, DOT and UH; Federal agencies such as: USFWS, NRCS, USGS, NOAA and NPS; all four County governments; military; PDC and NGO's such as utilities.

**Need and partners:** Specify the need for government intervention. Provide supporting evidence. Identify any partners you will be working with to address the problem, issue and/or opportunity.

In an island setting, land area is especially limited. Therefore, careful planning is essential and it is in the public's interest that land resources are effectively allocated. Sound planning requires high quality data, especially spatial information that can be readily retrieved and analyzed to better predict impacts of land use changes. Let's say a disaster struck Hawaii. Government would be expected to respond, but could we do so effectively? To some degree, yes, but much more data collection, processing and organizing must be done to make valuable information readily available especially in a crisis situation. It is estimated that 80 percent of all data gathered by government agencies include a spatial component (e.g., parcel number, street address, zip code, etc.). GIS facilitates the use and analyses of spatial data sets by allowing the visual display of complex interrelationships among a number of variables. For this reason, government agencies were among the first to embrace GIS technology as a way to improve work flow and efficiency. Government has become a leader in developing geospatial databases that are of interest to governments, businesses and the general public. Other pressing issues facing the State for which GIS has been used as a tool for analysis include affordable housing, invasive species and hazard/disaster planning and mitigation.

Most of the developed data sets are shared with the public, thus it is in the public's interest that these data sets are collected and distributed. Partners in this effort include all the organizations listed above. Once these data sets are developed, they need to be discoverable. There is a need to have an entity to collect

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and maintain these valuable data sets in a central depository to facilitate quick and easy access. This entity should also ensure accuracy, adherence to data standards and development of associated metadata (data about data). This past Legislative session, OP was legislatively mandated to continue performing these functions.

**Desired results (outputs, outcomes and impacts):** Identify desired results, what success will look like, by describing what you expect to achieve near (0-2 years) and long-term (2-6 years).

In order to establish a true Enterprise GIS, the focus over the near term will be to establish an Enterprise License Agreement (ELA) for GIS software. An ELA will enable OP, as the overall GIS coordinating agency, to better understand and coordinate State GIS user needs and activities. As a result, we will be able to identify potential database development efforts by various agencies that could be shared and avoid costly duplication of efforts (i.e., avoid development of multiple versions of the same data set). The ELA will facilitate the continued growth of the State GIS user base by making GIS licenses easier to obtain. More users will translate into a more comprehensive, robust and accurate database. The ultimate test of the value of the Enterprise GIS would be the response to an emergency or disaster and the ability to readily access a comprehensive database of spatial data. The long-term goals are to continue to build more accuracy into the existing database through data updates as well as upgrades, to eventually incorporate GIS as a desktop resource and develop user-friendly applications to facilitate spatial analyses.

**Influential Factors:** List the factors you believe will influence your ability to impact the problem or opportunity. (Things that support success and barriers to success.)

Successful GIS's are expensive, both in terms of dollars and staff resources. Because of this, a critical factor will be obtaining high level administrative support or "champions" to advocate for the needed resources. Continued cooperation with various agencies will be another important factor in order to maximize the dollars spent by each partner through data sharing, collaboration on projects and to avoid duplication of effort. Also, continued advances in technology will be a factor in achieving success. As advances in technology occur, our ability to take advantage of those advances will depend on training opportunities and ability to acquire updated technology. For example, increases in computer processing power will help facilitate spatial analyses because of the volume of data and complexity of analyses that are inherent in spatial data sets. A primary influence in achieving these goals is the availability of resources including funding.

**Strategies:** List the general successful strategies or "best practices" that have helped other programs achieve the kind of results your program promises.

The City and County of Honolulu has a very successful, nationally recognized GIS program in large part because they have had financial resources along with strong support from the mayor and the city council. Open sharing of data is another primary strategy because it prevents redundant development of data sets, which is typically a labor-intensive and expensive process. This involves a conscious effort on the part of data developers to share either by contributing data to a centralized library or making it known what data sets exist. In the latter case, making data discoverable by publishing metadata (data about data) is critical. Establishing formal best data management practices will help lead to higher awareness in the collection of accurate data and subsequent sharing of these resources.

**Assumptions:** State the assumptions behind *how* and *why* the change strategies you have identified will work.

Spatial information is critical to sound decision making. The public also has the right to access this information. It is government's responsibility to distribute public information. As Hawaii's resources become ever more scarce, careful planning to protect those resources while keeping the economy strong and taking care of our citizens will become more and more critical. The use of GIS within State

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government will be an important tool in meeting these competing demands. In addition, it will be important to keep government "lean" by building upon and strengthening GIS partnerships, cooperation and coordination between State agencies and with federal and local government agencies. The ELA will cement these partnerships by encouraging better coordination and data sharing among state agencies. Ultimately, with the development of better data coupled with the use of the Internet and such tools as Google Earth, spatial analyses will become more prevalent and user-friendly with more and more users both within and outside of government discovering how spatial technologies can help them make better, more well-informed decisions.

## II. PROGRAM IMPLEMENTATION

**Resources:** Describe the resources or influential factors available to support your program.

Funding: Supplemental Budget Request for FY 09 - \$200,000

Increase State GIS visibility

Partnerships with federal and county agencies

Partnerships with and support from other State agencies

Up-to-date technology including hardware, software and networking infrastructure

**Activities:** Describe each of the activities you plan to conduct within your program.

Execute a GIS software Enterprise License Agreement (ELA), which would be similar to a master purchase agreement that would enable all current State GIS users to deploy an unlimited number of GIS software products.

Promote the use of GIS through technical assistance and training and user group meetings

Data acquisition, data coordination and distribution

Prepare and submit supplemental budget request for Enterprise License Agreement funding and non-staff operational expenses

Execute MOA's with user agencies to contribute funds to the GIS Special Fund to support activities that benefit multiple agencies such as the ELA, data base development efforts, training and application development

Continue to provide mapping and analysis support to OP, DBEDT and other state agencies as appropriate

Participate in local and national coordinating bodies and activities

Maintain, improve, publicize and add more data to the GIS Web site

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**Outputs:** For each program activity, identify what outputs you aim to produce

Increase State GIS User base by 10%

Acquire Impervious data sets for the Islands of Hawaii, Kauai, Molokai, Lanai, Kahoolawe and Niihau

Update the State Land Use District Boundary data layer by December, 2007

Acquire 100% imagery for the entire State

Secure funding of \$200,000 to initiate the execution of a Statewide ELA for GIS software

Secure supplemental funding from State user agencies to negotiate additional benefits into the ELA

Implement at least one Internet Mapping application

Assist agencies in making sound decisions using the best available data

Continue to maintain and strengthen partnerships with local and national GIS organizations

Increase the use of the state GIS Web site

**Outcomes:** Identify the short-term (0-2 years) and long-term (2-6 years) outcomes you expect to achieve.

Continue development of a one-stop comprehensive, geospatial data library built upon collaboration and coordination among and between State, local, federal and other partners.

Improve coordination and collaboration among State agencies in both data acquisition and development, and other GIS activities and projects

Create easy to use applications to facilitate and enhance data analysis and decision making.

The short-term goal is to continue to build capacity including data resources, and the long-term goal is to make GIS a desktop tool accessible and usable to the highest levels of decision makers, both while reducing duplication of effort in data creation and State agency GIS activities.

**Impact:** Describe the lasting impact you anticipate.

Improvement of the existing system along with easy-to-find and accessible spatial data would result in better efficiency and more informed decisions by policy makers.

### III. PROGRAM EVALUATION

**Focus Area:** From your program logic model, list the components of the most important aspects of your program.

Coordination of state GIS data collection and activities

Distribution of state GIS data on the state GIS file server and on the GIS Web site

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Provide mapping and analysis for improved decision making by state policy makers

Provide technical assistance to state agencies

**Audience:** Identify the key audiences for each focus area. Who has an interest in your program?

State agencies, State administration (e.g., Governor, DB&F), State legislature, federal and local government agencies, businesses, public

**Questions:** For each focus area and audience, list the questions they may have about your program.

State agencies, State legislature, federal and local government agencies, businesses, public:

How accurate is your data? How current? How complete?

State legislature, State administration (e.g., Governor, DB&F):

Is your system duplicative with what the counties and federal agencies are doing? Why are individual state agencies building GIS capacity? Isn't that duplicative?

**Information Use:** For each audience and question you have identified, identify the ways you will use the evaluation information.

Improve the accuracy, currentness and completeness of our data by using emerging technology and data sources

Improve communication to ensure coordination and integration of efforts and to convey the purpose and mission of the state GIS (e.g., statewide / regional vs. local perspective, state interests, collaborative data acquisition and other partnerships, etc.).

Improve communication to educate State decision makers that GIS is becoming a desktop tool available to professionals in their respective fields of expertise, that the State agencies are working together to create a true "enterprise" GIS, and that "the whole is greater than the sum of the parts" - i.e., everyone contributes some data in some areas (DOT roads, DBEDT Census data, DOA prime agricultural lands, etc.), as opposed to the creation of data silos.

**Indicators:** Describe what information can be collected that would convey the status of your program.

15 new GIS software licenses deployed

Acquired 100% of all remaining DOQQ gaps

Added 15 new data layers

Secured funding of \$200,000 for Office of Planning's share of the Statewide ELA for GIS software

Increased the number of hits to GIS Web site by 10%

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**IV. ALIGNMENT**

How is your program linked to DBEDT's six strategic objectives?		
1.	<b>X</b>	Workforce Housing
2.	<b>X</b>	Workforce Development
3.	<b>X</b>	"Energy For Tomorrow"
4.	<b>X</b>	"Global Links/Export of Goods and Services"
5.	<b>X</b>	The Creation Of An "Innovation Infrastructure"
6.	<b>X</b>	Improve Hawaii's Small Business Environment

If your program is not linked to any of the six objectives, explain why it is still important.