

## Case Study:

A World Class Destination Selects Geographic Technologies Group to Develop a GIS Strategic Plan that enables Public Safety, Hazard Mitigation, Homeland Security and Public Works  
City of Valdez, Alaska

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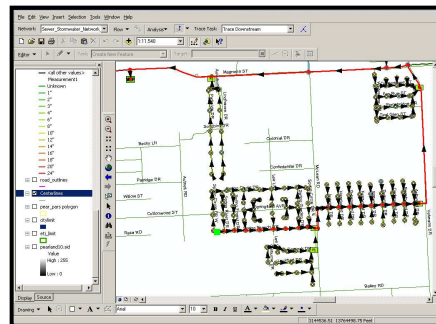
It's impossible to appreciate the complexity of developing a GIS program in Valdez, Alaska without looking at photographs of the area ([www.valdezalaska.org](http://www.valdezalaska.org)).

But all it takes is a single glance, and then you get it.

The spectacular natural and manmade features that make Valdez a world-class destination for travelers from every continent also present world-class challenges for the City's GIS planners.

Geographically, Valdez has it all. The City of 4,200 is nestled at the head of a deep, Stillwater fjord in the northeast section of Prince William Sound. Its home to five glaciers and is surrounded by the Chugach Mountains, which get between 600 and 900 inches of snow every year. It's also on the path of the Trans-Alaska Oil Pipeline, and the oil from the pipeline is stored and loaded into tankers in the Valdez Terminal, just across the bay. When City leaders decided to bring their GIS program up to state-of-the-art standards, IT Director Chris Farmer and his colleagues knew it would not be easy.

"When we issued an RFP for a strategic GIS plan in 2005, the system we had was very outdated. We had developed some solutions internally, but we needed new capabilities for our public safety agencies, our tax systems, and our financial departments. We needed to update our address information and bring our mapping up to the next level. And beyond all of the specific functions we needed, we wanted our GIS program to be enterprise-wide, with shared data and widespread accessibility," Farmer said.



Farmer and two others—the City's directors of Public Works and Community Development—serve as the GIS Steering Committee. They developed the RFP, evaluated the proposals received and selected Geographic Technologies Group.

"We knew this was going to be a difficult undertaking and we all felt that GTG gave us the best chance of success. We never felt like we were just another client with them. They invested the time necessary to understand our problems, and they continue to be responsive and accessible as we put the plan into action," he said.

One aspect of the initiative that has not been difficult is garnering internal support for GIS. "It took a lot of educating and a lot of presentations, but we have a great City Council that's very open to new ideas, and when we talked about GIS with our department directors, they instantly understood what a difference the technology could make to them."

Because of the City's strategic location and the need for disaster preparedness, the GIS plan received partial funding from the Department of Homeland Security.

Now in its early stages of implementation, the GIS Strategic Plan is addressing Public Safety concerns.

City officials have already begun gathering information that will facilitate mapping tsunami flood zones in the area.

"Mother Nature tends to wreak havoc on our area from time to time," Farmer said. "We had an earthquake in 1964 that registered 9.2 on the Richter Scale and lasted five

minutes. The City had to be relocated four miles away after that because it was pretty much destroyed. By looking at previous avalanche zones, we can make better decisions about where to locate development and avoid a repeat of that disaster.”

Community Development will be a major beneficiary of GIS data. Staff is currently updating the streets layer and adding address points and will soon work on layers showing the entire Public Works and Public Safety infrastructure, including water lines, sewer lines, and hydrants. All of this information will help the City decide where to locate new residential and business areas.

“We have tons of land here, but very little of it is developable,” Farmer said. “Now we’ll be able to begin making zoning decisions based on where houses would be safest, where there are available water and sewer services, and in locations away from flood zones and avalanche zones. Before, people were building in areas prone to disaster, but without GIS it was impossible to know.”

One of the first tasks completed was the collection of new aerial photography, a job complicated by Alaska’s extreme weather.

“Our land is typically covered by 34 feet of snow for eight to nine months of the year. We have about a two-week period between the time the leaves fall off the trees and the first snow falls to get aerial photos,” Farmer said.

“We contracted with GTG to do the aerial photography and they really shined. They had a crew ready to go at the first sign of hospitable weather, which happened to be a weekend, and they got the whole project done. We have great imagery to work with now.” Farmer said even before the aerial photos were back from GTG, they helped Valdez act quickly in an emergency to minimize damage.

“We had a small fuel leak and we called GTG to see if they could help. They went to work immediately, sent us some PDF maps that we were able to give the Department of Environmental Conservation and they were able to repair the pipe quickly. You don’t get that kind of service from just any company.”



Department managers throughout the City are eagerly looking forward to the day they have all of the tools of GIS at their disposal.

Public Safety officials can’t wait until they can better pinpoint the locations of residents and visitors needing help. Tourists flock to Valdez in the summer to explore the wilderness but sometimes they get lost or injured and call for help on their cell phones. “When we’ve reached Phase II compliance

and have all of our GIS data current, it’ll be easier to figure out where the lost hikers are and then direct them back to safety,” Farmer said.

“And think about our Public Works crews trying to fix a broken water pipe through 34 feet of snow. You want them to be able to drill through the ice one time and get the right location. When we have our infrastructure mapped, they’ll be able to do that. Now they have to depend on marker flags, which can be blown away or otherwise displaced. It’s a primitive way to mark critical infrastructure.

“We can’t wait to have a better way; GIS is giving us that.”

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