

NARUC Staff Subcommittee on Computers  
Washington Utilities and Transportation Commission  
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## **Solid Waste Regulation GIS Project**

### **Introduction**

The Washington Commission recently completed the first phase of an introduction of geographic information system (GIS) technology into the agency. This was intended to solve a specific business problem and to lay the groundwork for solving other business problems through the use of GIS technologies.

The Washington Commission has a history of managing certain data, especially that pertaining to solid waste certificate authorities, in a geographic format. During the seventies, the commission employed a cartographer to maintain maps of solid waste certificate areas. For the past twenty years, however, these data was maintained in text, as descriptions of metes and bounds. Over time, these descriptions became unmanageable. Several efforts to begin using computer technology to solve this problem made little progress.

In late 1998, a combination of management will, available funds, and technological advances in the GIS field created the conditions to allow a further attempt to spawn a project to make a recommendation for consideration.

### **The Study**

A cross-sectional team of staff, including Information Services personnel, studied the geographically-oriented business problems and the geographic analysis technology available to help solve them. The team released its report in April, 1999. In it, the team recommended:

- that the agency make a commitment to GIS technology;
- a strategy for introducing GIS technology into the agency through a focus on the solid waste certificates;
- initiation of a project to convert solid waste certificates into GIS format;
- that the agency pursue business process changes and certificate administration reforms to ensure that geographic data becomes a part of the regulatory record, ensuring that it is effectively maintained; and
- adoption of ArcView as the particular GIS product to use, as most other state agencies using GIS used this product and local consulting and support services are available.

Solid waste certificates were chosen because the program had the funds to commit to the development of the electronic maps and because the study team identified specific business problems that GIS could effectively solve. Staff couldn't:

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- identify overlapping authorities (although the Commission is obligated by its rules to notify certificate holders of overlapping authorities);
- answer, in some cases, a consumer's simple question: Here's my address, what is my garbage company?
- identify municipal annexations (which remove territory from a certificate's area);
- identify areas not being served; and
- track additions, deletion, or transfers of authorities between companies.

The study teams recommendations were designed to solve these problems and to set the agency on the road to a GIS implementation that will solve other problems in regulating other industries.

### **The Project**

The GIS project continued into the active, solid waste phase, with the hiring of a GIS-experienced intern in the solid waste section. The activities of the project focused there, with coordination with Information Services as issues arose or resources were required.

The GIS intern developed a plan for completing the project, which was approved by agency management in mid-1999. The plan called for purchase and setup of ArcView software and a networked, PC workstation on which to run it and to hire a contractor to:

- put certificate authority areas into GIS format;
- run quality assurance checks on the resulting areas; and
- develop specialized analytical tools to use on that data.

Marshall and Associates ([www.marshallgis.com](http://www.marshallgis.com)) was hired as the contractor for this work. The maximum value of the contract was set at \$56,000. The contract was signed on December 8, 1999 and the initial products were delivered on February 8, 2000. In addition to the above requirements, the contractor also provided several layers of additional, mostly free, data (e.g., counties, cities, legislative boundaries, major roads, water, etc.) to provide analytical context for the solid waste certificates.

The work remaining to the agency includes identifying issues with the boundaries between the certificates, resolving those issues, and changing the maps to correspond to the changes.

## **Future Steps**

For simple changes, the agency has the tools and expertise, now, to make them itself. As long as the authorities do not change shape, but only change hands between companies, the agency can be self-sufficient with its GIS expertise. As this is the usual situation, the agency can go some way on what it has accomplished with this project. In order to completely integrate solid waste tariff proceedings and GIS data, more equipment and expertise will be necessary, including the purchase of ArcInfo software and hiring the expertise to operate it.

In addition to solid waste regulation, the agency has an opportunity to act as a state repository for GIS information about interstate gas transmission pipelines for the federal Office of Pipeline Safety (USDOT, Research and Special Projects Administration). Also, the state legislature is considering a requirement that the agency develop a GIS system to include gas pipeline information for intrastate transmission and distribution.

Other sections in the agency have expressed interest in benefitting from the work already done to develop GIS capability and in adding value to that effort by working in other uses for GIS technology and expertise. Among these are:

- consumer complaint analysis;
- rail accident analysis – operational and crossing;
- transportation routes (the Commission regulates some busses and private ferries);
- telephone exchange area mappings; and
- other service area identification.

## **Conclusion**

The Washington Utilities and Transportation Commission recently completed a project to introduce geographic information system technology into the agency and solve a specific business problem in the regulation of solid waste certificate areas. This project was successful in completing both of those objectives. The agency now has in-house expertise that it can leverage to extend the reach of this useful technology to other problems that it faces and to meet the demands of its authorizing environment (including the legislature), the companies it regulates, and the consumers it supports.

For further information about this project, contact the GIS intern, Deborah Reynolds at 360-664-1255 or dreynold@wutc.wa.gov or the Information Services Manager, Mike Kretzler at 360-664-1181 or mkretzle@wutc.wa.gov.