

1 Interview Summaries

1.1 Portland Water District (PWD)

Interview Type Personal, Utility
Interview Location 255 Douglass Street, Portland
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Interviewer CDM / Michelle Thaler (thalerma@cdm.com)
Interviewed: *Benjamin Ouellette, GIS Analyst (ouellette@pwd.org)
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 Ronald Miller, General Manager (rmiller@pwd.org)
 Peter J Cutrone, Director of Information Services (cutrone@pwd.org)

Staff Size (approx) 184 total, 2 with GIS responsibilities including a GIS analyst who works for the Director of Information Services

Budget (approx) PWD has an annual operating budget of approximately \$29 million. GIS funding comes mainly from the IS department.

URL: <http://www.pwd.org/>

1.1.1 Agency Overview

The Portland Water District provides water and wastewater services to 10 Portland area communities. The Portland Water District is a public organization whose service area covers approximately 140 square miles. Additionally PWD owns and operates the Sebago Lake Water Treatment Facility and operates and maintains 5 wastewater treatment plants.

1.1.2 GIS Initiatives

1.1.2.1 Overview of GIS Utilization

The Portland Water District uses GIS technology to manage its assets from showing pipe locations to watershed protection activities.

PWD currently uses GIS for:

- Watershed area mapping and protection planning
- Sampling and monitoring point mapping as part of sampling and monitoring program
- Service area mapping
- Facilities mapping including distribution system (linked to their Hansen computerized maintenance management system)
- Limited parcel analysis within the watershed

1.1.2.2 GIS Operating Environment and Infrastructure

The PWD currently maintains:

- ArcView 3.2 (planning to move to 8.1)
- ArcInfo 8.1 with SDE
- Oracle 8i

- ArcIMS
- Hansen CMMS software linked to GIS data through a unique identifier on features

1.1.2.3 GIS Data Resources and Requirements

1.1.2.3.1 Spatial Data

The majority of PWDs spatial data has been projected to StatePlane Feet NAD83 and those data sets with vertical datum use NAVD88 or HPGN Datum

Existing data sets include:

Basemap features:

E911 roads

Service area boundary

Analysis layers, including:

Distribution System including:

water mains

valves

manholes

sewer mains including gravity mains

Aerial photos from GPCOG.

Watershed Protection area from OGIS

Phosphorus loading coverage used to model Sebago lake watershed

Landuse/Landcover data developed by Sewell in the early 1990s

Complete USGS contours from DRGs (in UTM Meters NGVD29)

USDA Soils

NWI wetlands

Standish Brook watershed buildings coverage with paved areas

Sampling Points

Monitoring Points

“pockets” of planimetric data from City of Portland

Currently unavailable but desired data sets include:

Better E911 roads

Maine Department of Transportation data including streets and their paving progress

Services (house connections) in the PWD network

Updated data from OGIS including watershed protection areas

Parcel boundaries from towns in service area

Updated parcel data layers with town assessing data linked

Utility locations from other utilities

1.1.2.3.2 Attribute Data

PWD maintains a Computerized Maintenance Management System (CMMS) using Hansen software.

1.1.2.3.3 Data Issues

PWD's use of OGIS data is limited due to the infrequency of OGIS data being updated. PWD would like to see a schedule for data updates. Additionally, most of the town data received from towns in PWD's service area is not updated on a regular basis. This presents a problem when using the data for analysis.

PWD would like to see the E911 data layer updated to provide a better source for geocoding.

The coordinate system is also a data issue. MEGIS maintains data in UTM NAD83 meters; most of PWD data layers for communities are in StatePlane NAD83 feet. PWD projects the data from OGIS and other sources to StatePlane NAD83 feet.

PWD would like to see data from developers in their watershed be made available in AutoCAD format.

1.1.2.4 GIS Applications and Application Requirements

PWD would like to perform network traces and valve isolation traces on their service area data.

Planned future GIS activity and applications:

- Map pressure zones and use elevation data to identify areas where the current network is unable to serve
- Would like to have laptops using CDPD wireless modems but only AT&T provides CDPD service and it is unreliable.
- Meter reading routing
- Leak reporting
- Wastewater tracing
- Flushing program
- Security and emergency planning

1.1.3 Other Relevant Issues

- PWD currently exchanges data with GPCOG and towns in the service area. Most of the data exchange is done via e-mail. PWD would like to see a state run FTP site for entities to exchange GIS data.
- PWD's current data has a +/- 20' relative accuracy. This accuracy is sufficient for PWD's business needs.
- PWD is willing to share some of its GIS data sets but is concerned with privacy issues associated with sharing data from its Customer Information System

1.1.4 Major Benefits and Cost Justification

PWD would like to see a state FTP site for use in the exchange of GIS data throughout the state. This would aid entities in data sharing.

PWD would be willing to share costs with other utilities to develop and maintain accurate data sets. This would help with the cost of data development.

A statewide data maintenance program with regularly scheduled data updates to OGIS data along with Metadata would increase confidence in the OGIS data sets and encourage more agencies to use this data rather than create similar, redundant data set.

The state could also help with education by hosting symposiums on how GIS can be used by municipalities, how GIS technology can save time and help accomplish tasks more efficiently.

PWD would also like to see better state negotiated contracts with hardware and software vendors. This would better enable municipalities and agencies to acquire the needed GIS software and the hardware to run it on.