

DEPARTMENT OF PUBLIC WORKS

SCADA System

Improving Efficiency and Cost Effectiveness through Automation

Monitoring a wastewater collection system and a water treatment and distribution system throughout a large service area can be a difficult and complex task. Operating a system without knowing what is happening at remote sites, can lead to inefficiency, higher operating costs and potential environmental issues.

In the early 1980's, plagued by a number of sewage spills from pump stations and water reclamation facilities, the Bureau of Utility Operations sought a new system to replace its old remote monitoring system. The Utility sought a system that would allow information from the remote facilities to be processed, analyzed and displayed through SCADA (Supervisory Control and Data Acquisition System). Utility Operations proceeded to develop, design, and implement a SCADA system customized to meet the unique needs of Anne Arundel County's Wastewater Collection and Water Distribution systems.

SCADA systematically and continuously monitors 286 remote sites using multiple radio frequencies, telephone lines and repeaters located on top of three water storage facilities. SCADA monitors 241 sewage pumping stations, seven (7) water reclamation facilities, 29 water storage facilities, 8 water treatment plants, 10 water booster stations and four (4) self-contained wells as well as 20 alarms at the Millersville Landfill and Leachate Treatment Facility. Each site has multiple alarms totaling 13,700 alarms throughout the County.

A complete renovation of the Emergency Services Dispatch area, which services as the "Central Command" of SCADA occurred in conjunction with the development of the automated system. The renovation included new operator consoles, computer monitoring equipment and a mapboard displaying system alarms.

Not only does the system monitor the wastewater collection system and water distribution system, it also allows Water Plant Operators to monitor and actually operate and control the system both at the facility level, local and remote, and at the system level from either a Central Control Center or another facility within the system.

The early warning SCADA system has been invaluable in light of Utility's goal of zero sewer spills. The SCADA system has allowed the Utility to use staff more efficiently and has thereby contributed, along with the EXCEL program to

cost savings for customers.

The Role of Public Service Dispatchers

The first line of defense for public utility customers is the dispatchers of the Emergency Services Division who answer customer calls 24 hours a day, 365 days a year, regarding public water and wastewater issues, and all emergency calls for Public Works after normal working hours. These talented and well trained employees, who handle about 55,000 calls annually, evaluate calls, generate service orders, send out emergency crews to analyze situations in the field and call in work crews when necessary.

In addition, dispatchers monitor the SCADA system. Activated alarms are transmitted to the dispatchers who are then responsible for determining the validity of the alarm, and deciding whether or not a plant operator needs to respond to the plant. Without the quick response of these dispatchers to incoming alarms, failures at pump stations could lead to sewage spills in the county's creeks and rivers, a drained water storage tank or an overflowing one. Likewise, the quick response and evaluation by emergency crews, repair crews and plant operators minimizes operational and maintenance needs, lessens costs, and helps protect the environment.



The Emergency Services Dispatch Center, the "Central Command" of SCADA operations, is used as the control center for the Bureau of Utility Operations during Hurricane Isabel.

For Customer Convenience use the World Wide Web...



Pay your utility bill on line!



Visit our new web page on the county site!

Did you know that you can pay your utility bill on line? Since August 2002 this service has been available to customers through the County's web site. Credit cards that can be used are: American Express, Mastercard, Discover and Visa. First, enter the County's web site (www.aacounty.org) and then go into e.Anne.Arundel (Electronic Services). Then simply follow the instructions. Information that will be needed to process payment on line includes:

- First Name, Last Name
- Street Address, City, State, Zip Code
- Daytime Telephone Number
- Credit Card Type
- Credit Card Number
- Expiration Date (mm/yy)

Anne Arundel County has partnered with OPC (Official Payments Corporation) to provide this service. OPC does assess a fee for the service. Anne Arundel County receives no money from the convenience fee. A schedule of these fees is available on the web site.

If your service has been turned off for non-payment, you may pay by credit card, but you must notify Customer Service at 410-222-1144 during normal business hours or Emergency Services 410-222-8400 after normal business hours.

The on-line service is real-time information that immediately reflects payments and adjustments on accounts. Through the

Protect your property through sewer back up insurance...

It probably will never happen at your home, but if it should, you need to be prepared. Many customers are unaware that under Maryland liability law, utilities are rarely held liable for damage caused by sewer back-ups, water main breaks, service leaks and other unfortunate occurrences related to the utility business. These unpredictable and unpreventable happenings can result in significant property damage and cost to the homeowner. And, this type of coverage is usually excluded in standard homeowner policies in Maryland. To protect your property, talk to your homeowner's insurance agent. Ask your insurance agent how you can become protected against damage to both real and personal property.

web site you can view, pay and print out information resulting in quick and easy access for customers.

DPW's new web page...

Our web site is currently being moved from www.aadpw.org to a web page within the main Anne Arundel County site. The address for the new Public Works' web page will be www.aacounty.org/dpw/. While the information may be organized differently and it may take a few minutes to become oriented to the new site, we assure you the same useful information will be available about all of the your Department of Public Works' delivered services. Thank you for your patience during this transition period.

**Helpful Telephone Numbers for
The Department of Public Works**

24-hour EMERGENCY service for water and wastewater; solid waste (after 3:30 p.m.) ...

	410-222-8400
South County...	410-451-4118

After 3:30 p.m., weekends and holiday EMERGENCY Service for stormdrains, roads, traffic lights/signs...


410-222-6120

For weekday EMERGENCIES (between 7:00 a.m. and 3:30 p.m.) involving stormdrains, roads, or traffic lights/signs, please call the appropriate district office. If you do not know what district to call, please call any of these Customer Relations numbers...

Customer Relations...	410-222-7582
General Information...	410-222-7500
Billing Information...	410-222-1144
Bulk Item Trash Service, Recycling Information, Trash Collection...	410-222-6100
Northern Roads District...	410-222-6120
Southern Roads District...	410-222-1933
Central Roads District...	
Crownsville Yard...	410-222-7940
Central Roads District...	
Odenton Yard...	410-222-6126

During snow emergencies (4" or more) customers in all roads districts please call...

410-222-4040
 Anne Arundel County
 Department of Public Works
 2662 Riva Road
 Annapolis, Md. 21401-7374
www.aacounty.org/dpw/



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