WATERFORD TOWNSHIP
DEPARTMENT OF PUBLIC WORKS
2007 ANNUAL OPERATIONS REPORT

Respectfully Submitted to the Honorable Charter Township of Waterford Board of Trustees March 10, 2008

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Executive Summary:

The purpose of this annual report is to provide an overview of operational data related to the Waterford Township Department of Public Works (DPW). While the annual financial report prepared by the Township's auditors in conjunction with management provides the financial picture of the DPW, the goal of this report is to highlight the projects and operations underway by the DPW's various divisions and branches. This is an exciting and challenging time in the field of Public Works with many new technological advances, increasingly stringent monitoring requirements and homeland security. In addition, the DPW is currently constructing the capital projects contained within the SRF and DWRF loans totaling approximately $13,000,000.

Background:

The DPW has multiple technical and administrative divisions involved in providing quality water and sanitary sewer services and facilities operations to Township customers. The DPW maintains an estimated 360 miles of water and 360 miles of sewer lines respectfully. The water system was implemented in the second half of the 20th century and followed housing growth in the Township. In 1992 and 1994, iron filtration plants were constructed, which dramatically improved the quality of water provided to customers. The sanitary sewer system was primarily implemented in the late 1960's and 1970's, and continues to grow as residential and business development continues. The DPW currently has over 24,000 water accounts and 25,000 sewer accounts, which are billed quarterly. The system is estimated to serve a population of approximately 62,000 customers within the 36 square-mile Township service area. Operation and maintenance challenges continue to require more investment as infrastructure continues to age. The DPW continues to reinvest in the system and leverage new technology to aid in the effective and efficient administration its' responsibilities.

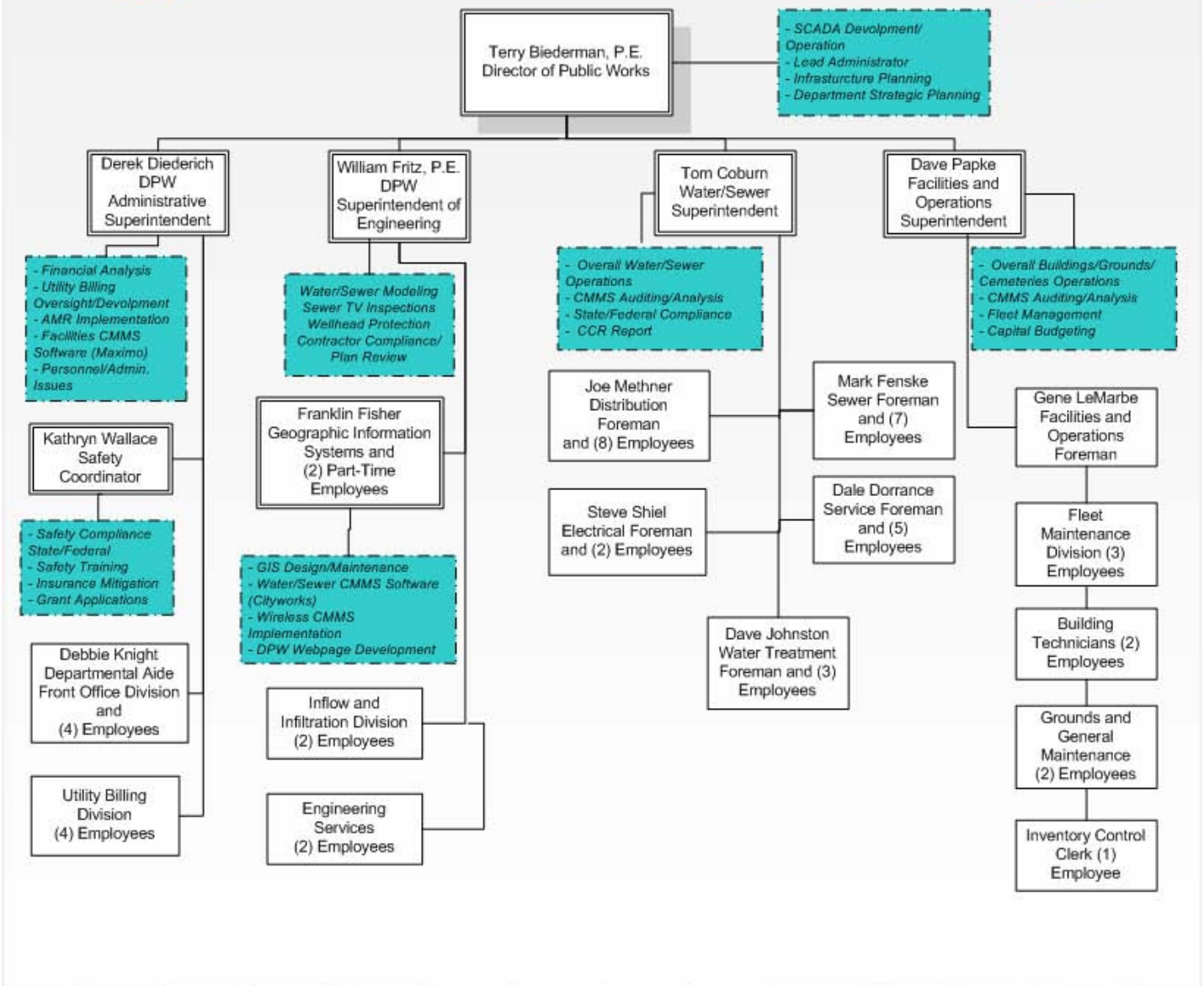
The DPW is almost unique in Southeast Michigan in that it solely provides drinking water to the Township independent of the Detroit Water and Sewerage Department (DWSD). On an average annual day, the DPW distributes 8,000,000 gallons of safe potable drinking water to customers. Peak summer day demands can exceed 21,000,000 gallons per day. The source of water is from fifteen active wells, located within the Township, which feed the iron treatment plants for processing and distribution to customers.

The Township is a member of the Clinton-Oakland Sanitary Sewer System, which transports sewage to DWSD for processing. This system is a regional waste water collection system that involves the partnership of Oakland County and DWSD.

The Facilities and Operations Division (F&O) also falls under the direction of the DPW. It works in the background of the Township's operating groups to ensure that all buildings, buildings systems, equipment, cemeteries, bike paths and vehicle fleet are effectively and efficiently maintained. These responsibilities specifically include the operation and maintenance of 281,600 square feet, or 6.5 acres, of Township building floor space, 54 acres of Township owned grounds, 41 miles of bike path, 5 Township Cemeteries, 10 acre compost site and a vehicle fleet of over 250 vehicles.

The following chart outlines the DPW organization:

Waterford Township Department of Public Works



Honors and Awards

In 2007, the DPW was recognized by several professional organizations for its achievements and was the topic of several national trade publications. The following outlines the 2007 awards received by the DPW:

ESRI SAG AWARD

The Environmental Systems Research Institute (ESRI) is the world leader in GIS (Geographic Information System) modeling and mapping software and technology. Their annual conference is attended by over 14,000 people from over 120 countries. At the conference, ESRI recognizes organizations that have made extraordinary contributions to our global society and set new precedents throughout the GIS community with the Special Achievement in GIS (SAG) award. Waterford Township was one of the recipients of this award in 2007.

INTERNATIONAL AWWA EXEMPLARY SOURCE WATER PROTECTION AWARD

The American Water Works Association (AWWA) is the authoritative resource on safe water and the largest and oldest organization of water professionals in the world, whose members include more than 4,600 utilities that supply water to over 180 million people in North America. Waterford Township received AWWA's 2007 Exemplary Source Water Protection for Medium Systems award at the organization's annual conference and exposition held last June in Toronto, Canada.

AWWA-MI RESEARCH AND TECHNICAL PRACTICES AWARD

The American Water Works Association's Michigan Section recognizes one water supplier per year at its annual conference as the leader in leveraging technology to improve utility operation. In 2007 Waterford Township received this award for improvements made in utility locating services by integrating GIS, Dig-Smart, and Cityworks Computerized Maintenance Management System (CMMS) into an automated Miss-Dig ticket management software application. This was the second time in three years that Waterford Township has won this award, having previously received it in 2005 for its integration of GIS and CMMS.

Administrative Branch

The mission of the Administrative Services Branch is to provide professional billing and customer service to both internal and external customers. Employees are called upon to leverage the latest in computing technologies, utilizing a variety of software packages and hardware to achieve quality information flow. Employees in this branch support every division within the DPW as well as interact and provide services to customers and contractors.

The Administrative Services Branch is headed by the Administrative Superintendent of DPW and is comprised of eight full-time employees. The positions and a brief description of their typical duties are listed below:

- DPW Administrative Superintendent
  Conducts the planning, research and evaluation necessary to keep the DPW's Utility Billing and Receivable Systems in good standing. Performs specific project management as related to the DPW's meter reading systems, Computerized Maintenance Management Systems (CMMS), creates and analyzes data to look for efficiencies. Creates and analyzes specialized reports. Performs the personnel and accounting functions of the DPW as required.

- Departmental Aide
  Serves as the office manager for the DPW's Administrative personnel and is responsible for the day to day functioning of the office. Oversees the DPW's daily payroll and accounts payable systems. Utilizes the DPW's CMMS package to ensure work orders and service requests are properly recorded. Prepares reports and oversees the DPW EFT-Auto-Debit payment program.

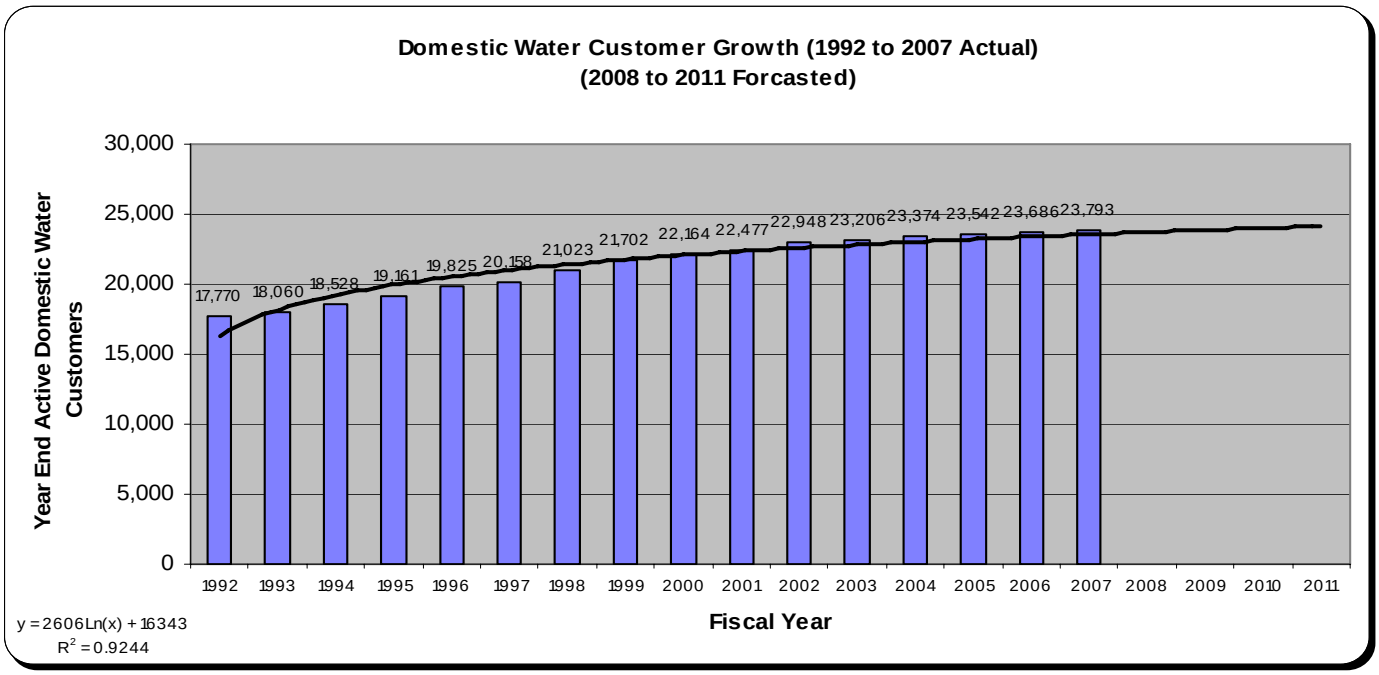
- Account Clerk II
  Responsible for DPW Accounts Payable and Payroll System. Also called upon to render customer service to both internal and external customers. Utilizes a variety of software programs to provide quality data to customers and employees.

- Utility Billing Account Clerk (4)
  Responsible for rendering 108,000 water-sewer bills annually to the Township's 24,000 customers on a prescribed schedule. Process the DPW's automated lock box system and utilizes the DPW's meter reading systems to interface with the Utility Billing System. Employees are called upon to utilize a variety of software applications.

- Account Clerk I (2)
  Responsible for Point of Sale (POS) Register and customer service. Processes a variety of customer payments and requests for service. Employees utilize the Computerized Maintenance Management System (CMMS) to record work orders.

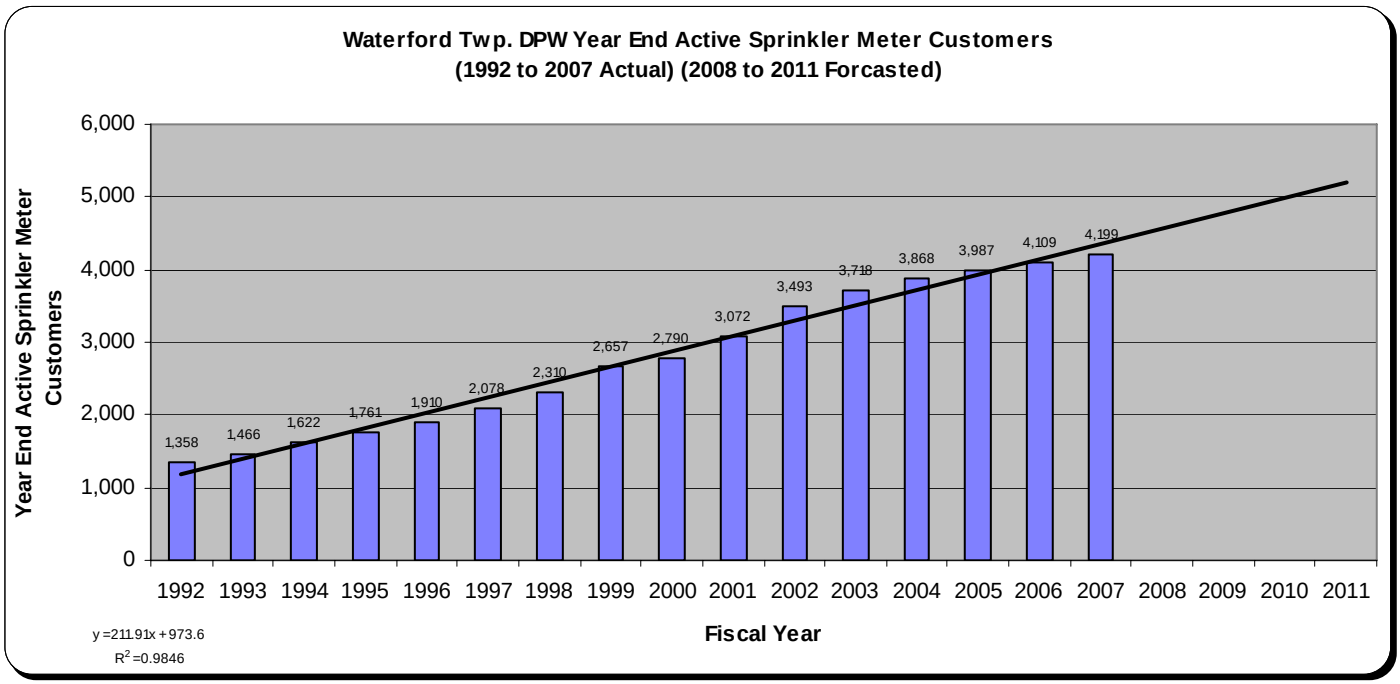
Water Customer Growth

Since 1992, the DPW has added an average of 407 water customers annually. In recent years that growth has steadily slowed. Since 2003 the DPW has added less than 200 new water customers annually. The projection model below indicates similar trends in the short term future. The graph below does not include sprinkler meters.



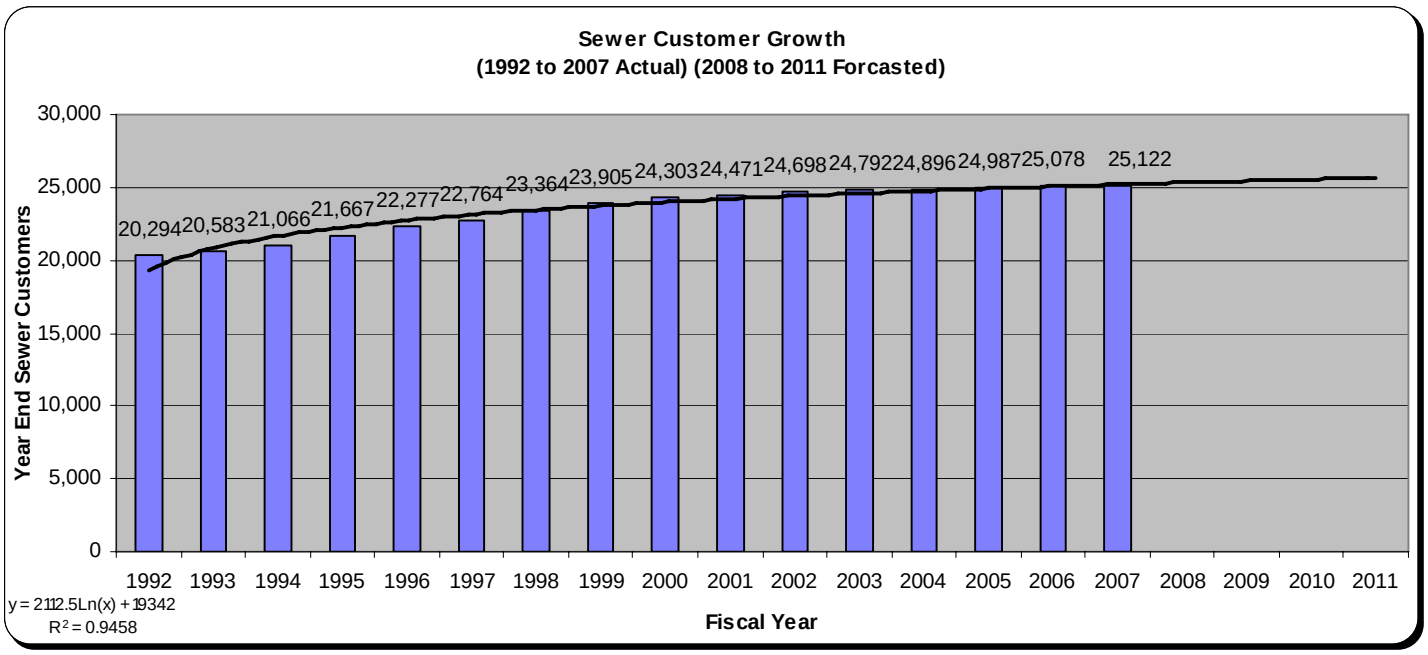
Sprinkler/Irrigation Meters

The DPW offers water customers the option of a separate water meter for outside watering and irrigation. The benefit to the customer is that sewer fees are not imposed on the secondary sprinkler meter. From 1992 to 2007 the DPW has installed an average of 162 sprinkler meters annually.



Sewer Customer Growth

Since 1992, the DPW has added an average of 334 sewer customers annually. In recent years that growth has steadily slowed. Since 2003 the DPW has added less than 150 new sewer customers annually. The projection model below indicates similar trends in the short term future.



The following table illustrates the method in which a customer sewer bill is generated in the DPW:

Waterford Township Sewer Bill Breakdown Diagram:

The Sanitary Sewer Network involves (3) Agencies in Waterford, each with their own respective charges. Example is based on average residential connection and 2007 empirical customer demand data.

Sanitary Sewer System 2007 Financial Breakdown

As of October 1, 2007 the Sewer Rates for Waterford Sewer Customers with water were $38.16 'Ready to Serve Charge'. Then, $1.40 per 100 Cubic Feet thereafter.

Sanitary Sewer System Characteristics and facts

Waterford Twp. Currently has approximately 360 miles of Sanitary Sewer lines. These lines are maintained by Waterford DPW.

The average residential customer in 2007 used 2,300 C.F. of sewer per quarter. This resulted in a $70.36 average quarterly sewer bill. Of the average sewer bill Waterford Twp. retained $39.61 or 56.0%. The balance of $30.75 was distributed to Oakland County and Detroit Water and Sewer Dept. Waterford was charged at $13.37 per MCF or 1,000 C.F. based on the County's and City's Rate Systems.

Waterford Twp. has 25,830 Total Sewer Customers as of 2-29-08. Waterford was charged $13.37 per MCF by Oakland County Drain Office and the Detroit Water and Sewerage Dept.

56.0% of the Average 2007 Residential Sewer Bill Payment Retained by Waterford

Agency 1
Waterford Twp. DPW

Waterford Twp. Currently has 63 Sewer Lift Stations. These lift stations contain pumps and other Electro-Mechanical Devices that are maintained by Waterford DPW.

Waterford Twp. Sewer Lift Stations like the one pictured to the left (5025 Highland Rd. the Clinton River Sewer Station) convey wastewater to the Oakland County Sewer Interceptor.

Waterford Township Michigan

Sanitary Sewer System Financial Breakdown

Of the average $70.36 Quarterly Average Sewer Bill Waterford Customers paid, Oakland County received $4.05 or 6.0% of the total customer payment based on the average customer consumption of 2,300 C.F. and current OCDC and DWSD charge of $13.37 per 1,000 Cubic Feet or (MCF).

Waterford belongs to the Clinton-Oakland Sewer System. This is a contract between the Township and Oakland County. Waterford pays quarterly invoices to the County, who in turn sends an allotment to the City of Detroit (D.W.S.D.).

Agency 2
Oakland County (O.C.D.C.)

6.0% of Average Quarterly Waterford Residential Sewer Bill Payment Retained by Oakland County

Agency 3
Detroit Water and Sewer Dept. (D.W.S.D.)

38% of Average 2007 Sewer Bill Payment Retained by Detroit (D.W.S.D.)

Sanitary Sewer System Financial Breakdown

Of the $70.36 average quarterly sewer bill Waterford Customers paid in 2007, Detroit (D.W.S.D.) received the balance of $26.70 or 38% of the average residential individual sewer customer payment based on 2,300 C.F. of consumption.

The Detroit River is the final discharge point for all of Waterford's Sanitary Sewer System after much conveyance, treatment and the diligence of the (3) agencies involved.

Sanitary Sewer System Characteristics and facts

Oakland County Michigan

All of Waterford's wastewater is received by the Oakland County Interceptor. The lift station (at the corner of Elizabeth Lake Rd. and M-59 in Waterford Twp.) contains large sewer pumps and other Electro-Mechanical Devices that are maintained by the Oakland County Drain Office (O.C.D.C.).

After receiving the wastewater from one of Waterford's Lift Stations, Oakland County pumps all of Waterford's Wastewater onto the City of Detroit.

Detroit Water and Sewerage Department

Sanitary Sewer System Characteristics and facts

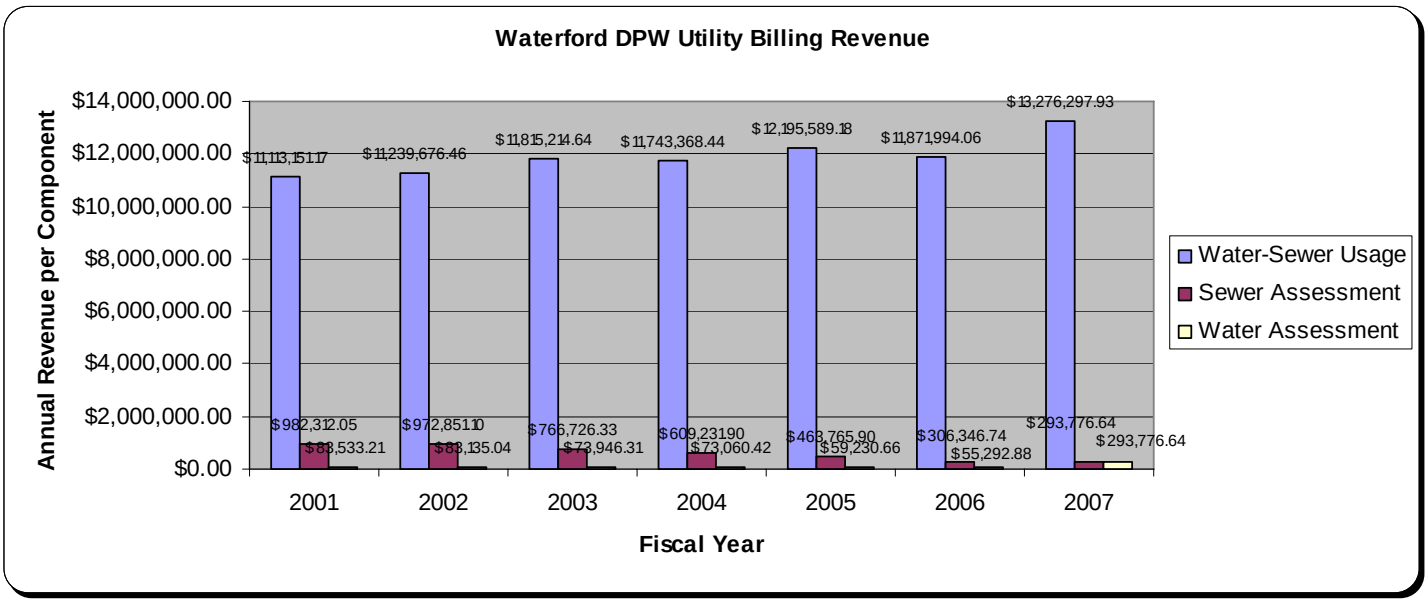
All of Waterford's Wastewater is ultimately received by the City of Detroit for treatment and is ultimately returned to the environment in the Detroit River. Detroit's Wastewater Treatment Plant at 9300 W. Jefferson Avenue is the single largest Wastewater Treatment Plant in the United States. This plant is estimated to serve 35% of Michigan's population. (According to the D.W.S.D. Website).

Utility Billing Revenue

The DPW's Water-Sewer Fund has three main sources of revenue. These sources of revenue are generated from water-sewer usage billing (largest category), water assessment revenue and sewer assessment revenue. The assessment revenue is generated from customers whom have elected to defer their connection charges over a set number of years. Assessment revenue has been on the decline as the Township continues to age and nears build-out. This has had the affect of putting more fiscal importance on the water-sewer usage revenue component of the operation. Traditionally, every summer DWSD raises user sewer rates. Since the Township belongs to the Clinton-Oakland Sewer System, cost increases have been traditionally passed through to the sewer customer base.

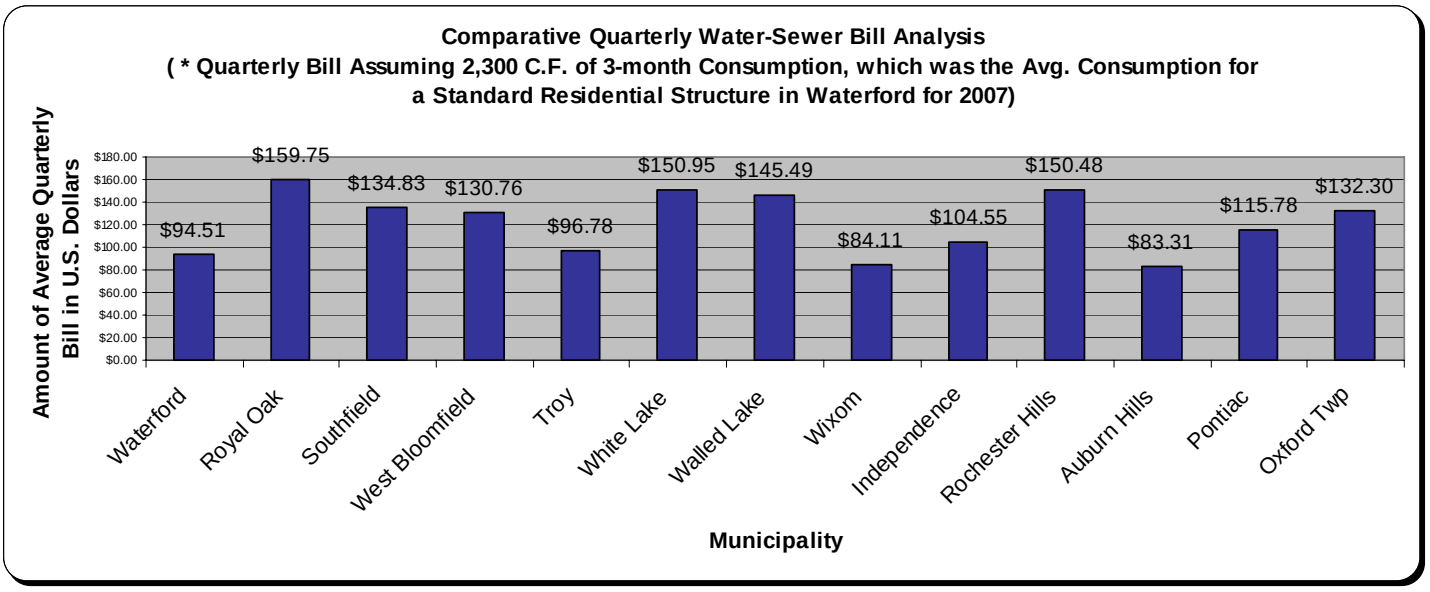
No water rate increases were issued in 2007 for Township water customers. However, their were sewer rate increases based on a number of factors. First, by virtue of the DPW applying for and being approved for the State Revolving Fund (SRF) Low Interest Loan program through the State of Michigan, the DPW was required to change its billing methodology. Sewer customers are now charged a 'Ready to Serve Charge' with no base volume included as in the past. They are then charged for "Usage" per every 100 C.F. of sewer discharged. This methodology change was implemented in May of 2007. In addition, a sewer rate change was implemented in July of 2007 that increased the sewer volume charge from $1.18 per 100 C.F. to $1.37 C.F. This change was implemented due to the fact that Oakland County changed their billing methodology from the traditional Residential Equivalency Units (REU's) to an actual sewer meter flow based approach. Analysis deemed that the Township benefited in years past from the REU approach and a rate adjustment was needed to keep the sewer fund healthy. Finally, a sewer rate increase was implemented in October of 2007. This changed the sewer volume rate from $1.37 per 100 C.F. to $1.40 per 100 C.F. to pay principal and interest on the SRF low interest loan.

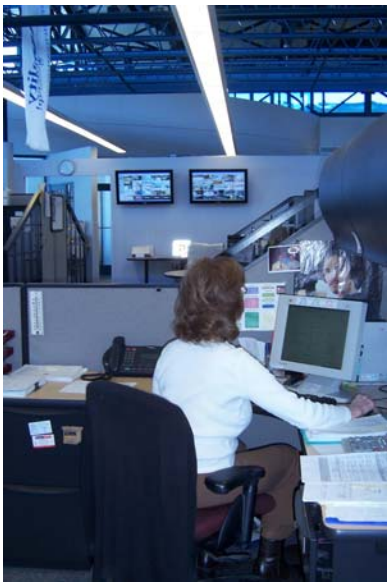
The graph below shows the water-sewer division revenue stream since 2001. Assessment revenue is expected to continue to decline in the coming years. It should also be noted that the climate and weather conditions have an impact on water-sewer usage billing. This is to say, an extremely wet and/or cool summer would result in less water consumption and consequently less water/sewer sales revenue.



Water-Sewer Rate Comparison

Many factors influence the utility rate structure within a given community. The age of the system and need for capital improvements, a rate structure that encourages conservation and rate structures of supporting agencies that help provide the service are all factors. The following graph depicts what an average residential water-sewer customer in 2007, with an average consumption of 2,300 C.F. per quarter, would pay in surrounding communities for the same services. As a whole, the Township is positioned very competitively with one of the lowest rate structures compared to surrounding communities.

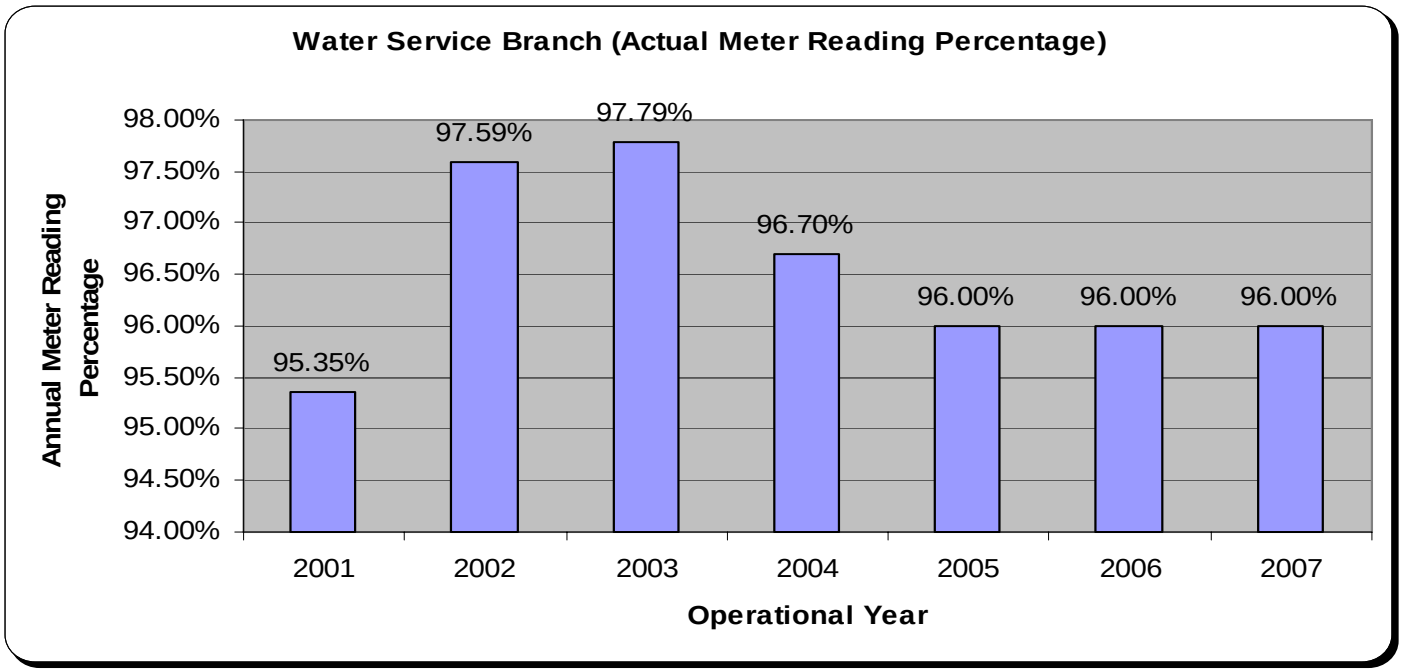




DPW Billing Branch Employee Helen Warren working in the Billing Branch. This branch is called upon to use a variety of software and technology systems.

Meter Reading

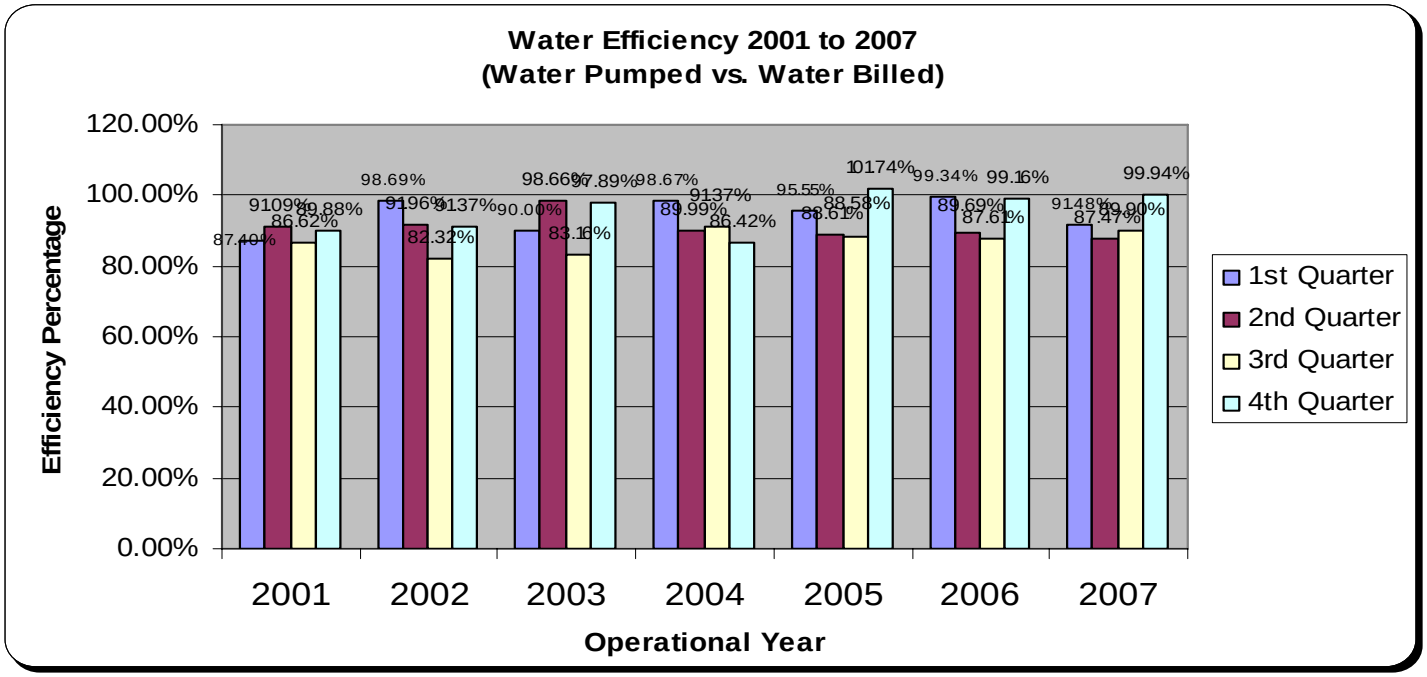
Meter reading is a vital part of the DPW operation and is referred to as the "cash box" component. This is because meter readings are ultimately imported into the electronic billing system to create utility bills and the revenue they generate. The DPW strives to collect as many actual reads as possible because they permit maximum billable services. Actual reads are also important to customers for accurate and timely billing. The Utility Billing and the Water Service Branches work hand in hand to achieve a high actual meter reading percentage. Historically, the DPW has done comparatively well in this activity. The slight drop off in meter reading percentages in 2005 and 2006 was due to a manufacturing issue with some of the reading devices, which is being addressed. The graph below indicates the actual meter reading percentage achieved annually since 2001.



DPW Employee Julie Griffin reading a conventional Meter Reading Interface Unit. The Handheld Device is later Downloaded and Interfaced the DPW's Meter Reading and Billing Software

Water Efficiency

An important benchmarking statistic of any water utility is Water Efficiency, which measures the ratio of water produced to water sold. Meter readings are collected at the Water Treatment Facilities and compared against the customer account reads. In addition, other factors for water loss are taken into account including water used by the fire department, sewer jetting, hydrant flushing and tank maintenance. Other factors affecting water efficiency include the age of the distribution system, water main breaks, and composition of the pipe installed in the distribution system. With 100% accounted for water as the goal, the DPW strives for the highest efficiency possible. Efforts have continued to improve with advanced SCADA monitoring, water modeling, and water main rehabilitation to identify and correct system deficiencies. The graph below depicts the water efficiency benchmarking statistics by quarter since 2001. It must be noted that anything over 90% is considered superior in the water industry. In 2007, the DPW realized very good water efficiency results.



Auto-Debit Payment Option:

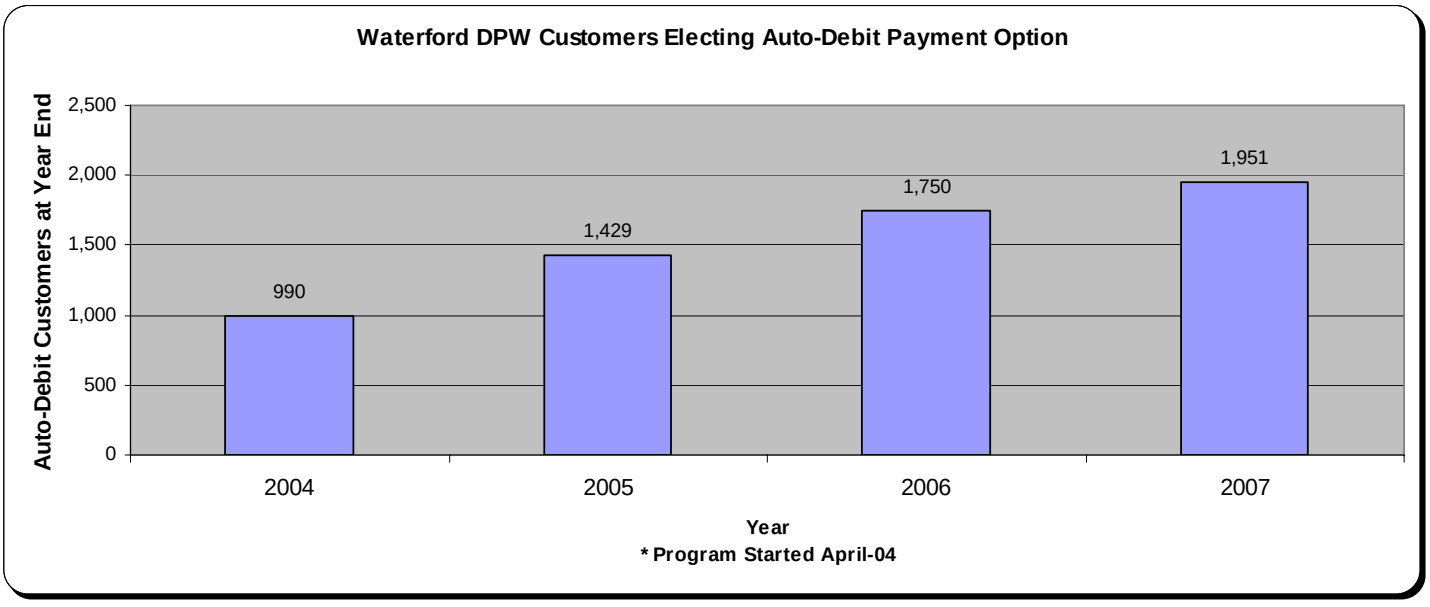
Starting in April of 2004, the DPW began offering an Auto-Debit payment option for water-sewer customers. This service allows customers to have their water-sewer bill automatically deducted from a checking or savings account of their choice without the need to write a paper check, or send a payment via the mail. Customers still receive a paper invoice for their records. Since April of 2004, 1,951 customers or 7.41% of the customer base has elected this payment option. Last year at this same time the number of electing this payment option was 1,750. So, 2007 saw an 11.00% increase in customers electing the auto-debit payment option. This growth percentage is expected to remain strong in the coming years. Customers who travel for work, go south for the winter, or have a busy lifestyle are finding this payment option convenient. The DPW advertises this service in the utility bills mailed to customers and maintains a posting on the Township web site to inform customers of the programs availability.

Lockbox Payment Processing:

The bulk of the customer base continues to mail-in their payments, which are processed in an automated fashion by the Township's financial depository. An electronic file is then transferred daily to the DPW and updated automatically into the utility billing/accounts receivable system. This lockbox processing collection service has saved the DPW many labor hours and thousands of dollars in manual payment processing and resulted in extra interest revenue from a decreased payment float time. Float time is the time it takes for the depository institution to receive the actual funds and commence interest earning.

On-Line Account Inquires and Payment Options:

In 2007, the DPW began offering customer data inquires and payment options via the Township web site. Customers can access their water-sewer account 24 hours a day at their convenience. On-line and on site credit card transactions were accepted starting in June of 2007. From June 2007 to the end of the year the DPW saw 421 credit card transactions from water-sewer customers on-line. The DPW continues to stay abreast of new mechanisms and technology to make customer records more accessible and enhance customer service.



Fixed Network Meter Reading System:

The DPW was the first community in Michigan to begin implementation of a Fixed Network Meter reading system to collect and analyze customer meter reads automatically via radio to collectors, which are connected to the Township's broadband wireless network. This process allows for automatic daily meter read updates and real-time feedback of reverse flows and other diagnostic information. It also eliminates the need for service personnel to manually collect meter reads from customer addresses, which increases employee safety, reduces liability exposure and saves money.

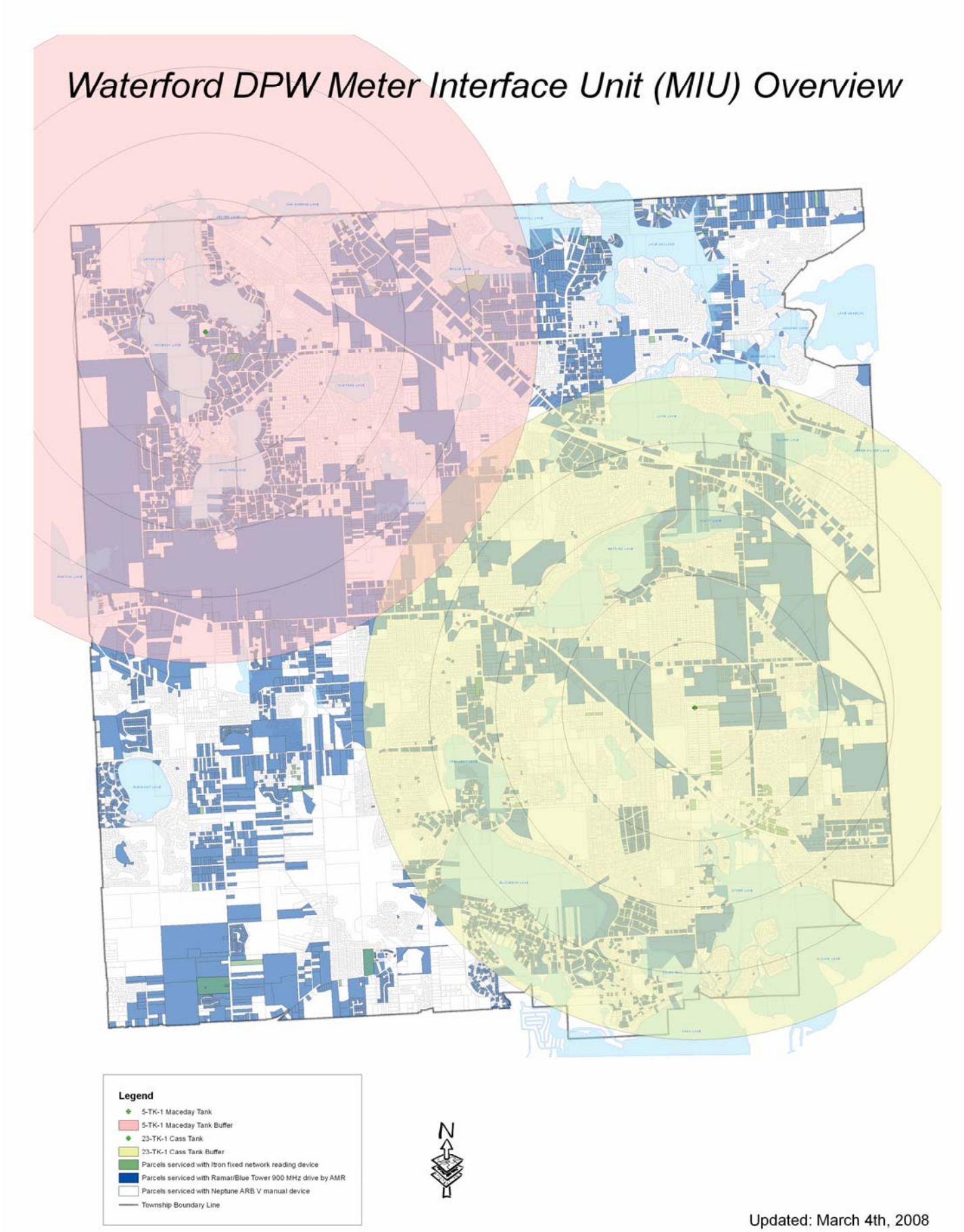
This technology allows service personnel to channel their efforts into more productive activities of the operation, such as preventative system maintenance, and increasing meter reading efficiency. The system also provides DPW customer service staff enhanced ability to more effectively and accurately address customer questions when they arise because they are able to collect a particular read while on the phone with the customer. DPW staff can analyze trends and patterns to isolate consumption and other issues before they become problems. It also allows for daily consumption trending so that potential water leaks can be quickly identified as well as meter tampering and reverse flow.

The picture on the next page portrays the existing drive-by (900 MHZ) Automatic Meter Reading (AMR) units deployed in **blue**, as well as the radio coverage range of the two (2) Itron Fixed Network collectors. The AMR units that communicate with these collectors are identified in **green** on the following map. In 2006, the first collector was deployed at the Cass Water Tank and, in 2007, a second collector was deployed at the Maceday Ground Storage Tank. The light colored circles on the map indicate the observed range, which is upwards of 3.5 miles in some cases. The DPW has been very pleased with the range of the system and believes the water industry will continue to move and advance in the area of Fixed Network and Automatic Meter Reading (AMR).

In addition, the DPW Director was approached in 2006 by the Neptune Meter company to assist in their development of the next generation Fixed Network meter reading system and the effort has resulted in deployment of a no charge beta Neptune Fixed Network that should provide the basis of the reading system for the future.

Itron 1.4 GHZ Fixed Network Meter Reading Collector Cass Water Tank Waterford Twp. MI

Itron 200-W Fixed Network Meter Reading Units. Endpoint Programmer device depicted in middle


Waterford DPW Meter Interface Unit (MIU) Overview
Legend
5-TK-1 Maceday Tank
5-TK-1 Maceday Tank Buffer
23-TK-1 Cass Tank
23-TK-1 Cass Tank Buffer
Parcels serviced with Itron fixed network reading device
Parcels serviced with Ramar/Blue Tower 900 MHz drive by AMR
Parcels serviced with Neptune ARB V manual device
Township Boundary Line
N
Updated: March 4th, 2008

Engineering Services Branch

The mission of the Engineering Services Branch is to provide professional engineering support for the DPW and to assist other Township Departments such as Building and Engineering as necessary. By utilizing the latest computer programming, software applications and field equipment, the branch is able to provide highly accurate information in the areas of water/sewer modeling, sewer main televising, utility staking and project coordination.

The branch is headed by the Superintendent of DPW Engineering Services and is comprised of seven full-time employees and a variable number (1-3) of part-time employees. The positions and a brief description of their typical duties are listed below:

- Superintendent of DPW Engineering Services
  Performs planning, project evaluation, design and specification preparation, budgeting and construction management. Gathers, assembles, and analyzes data and statistics; creates computer models, databases and prepares technical reports. Supervises Branch staff in daily operations.
- DPW Information Systems Administrator (formerly GIS Technician)
  Assists in creating, updating and maintaining all hardware and software necessary to operate the DPW's Information Management and Telecommunication Systems. This position was created in 2007 in order to update the types of tasks that the former GIS Technician had began to take ownership of over time.
- Field Engineer
  Assists in the design and preparation of engineering plans. Performs construction inspection, testing and surveying on capital projects and oversees installation, repair and maintenance of underground utilities on private development projects.
- Civil Engineering Technician
  Assists in the design and preparation of engineering plans and specifications. Performs plan reviews and maintains engineering files and records. Conducts testing, inspections and prepares pay estimates on capital projects.
- Utility Coordinator
  Locates and marks all underground utilities owned by the Township in advance of construction as requested by contractors and outside agencies. Makes and updates the corrections to existing utility records as needed.
- Infiltration – Inflow Operator
  Performs television inspections of underground utilities. Operates and maintains closed-circuit television inspection truck and equipment.
- Collection System Maintenance Tech – Grade IV
  Performs a variety of routine and manual duties related to general sewer and pump station operation.
- Information Systems Aide (1-2 part-time employees)
  Performs data entry, document scanning and indexing, field data collection, operating Global Positioning Systems (GPS) hardware and software.
- Engineering Aide (1 part-time employee)
  Performs same duties as Information Systems Aide plus assists Utility Coordinator with locating and marking underground utilities and assists the Field Engineer and Civil Engineering Technician with construction inspections.

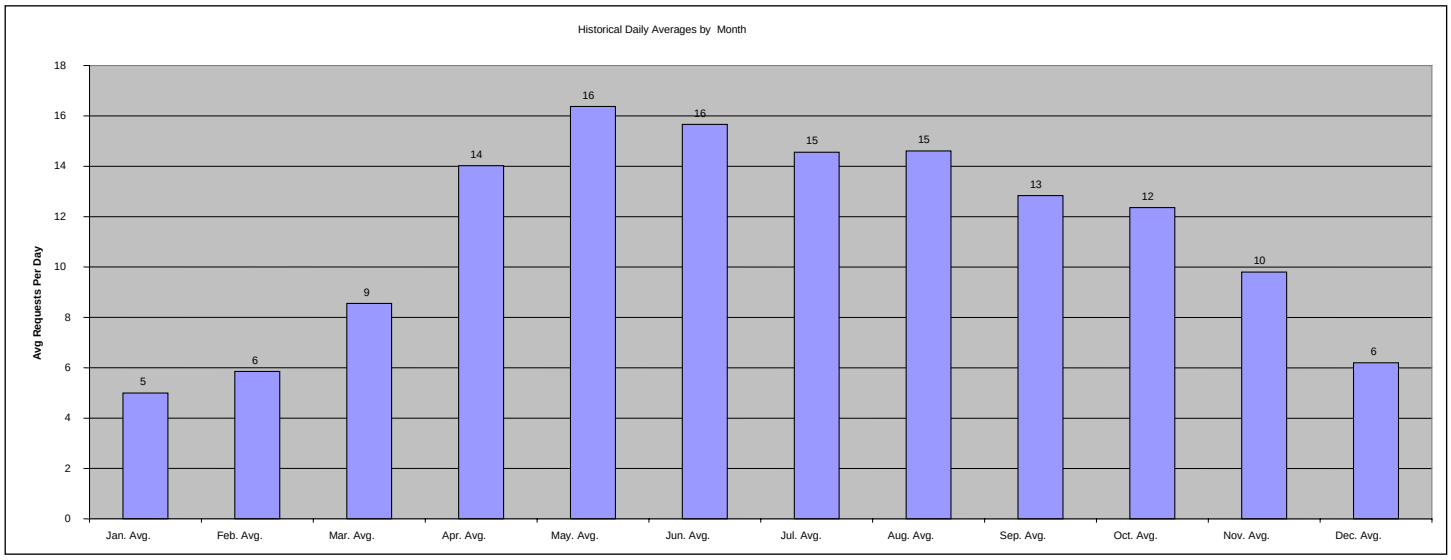
The activities of the Engineering Services Branch can be broadly broken down into five categories:

1. Utility Coordination
2. Private Development
3. Infiltration – Inflow
4. Capital Improvement
5. Wellhead Protection

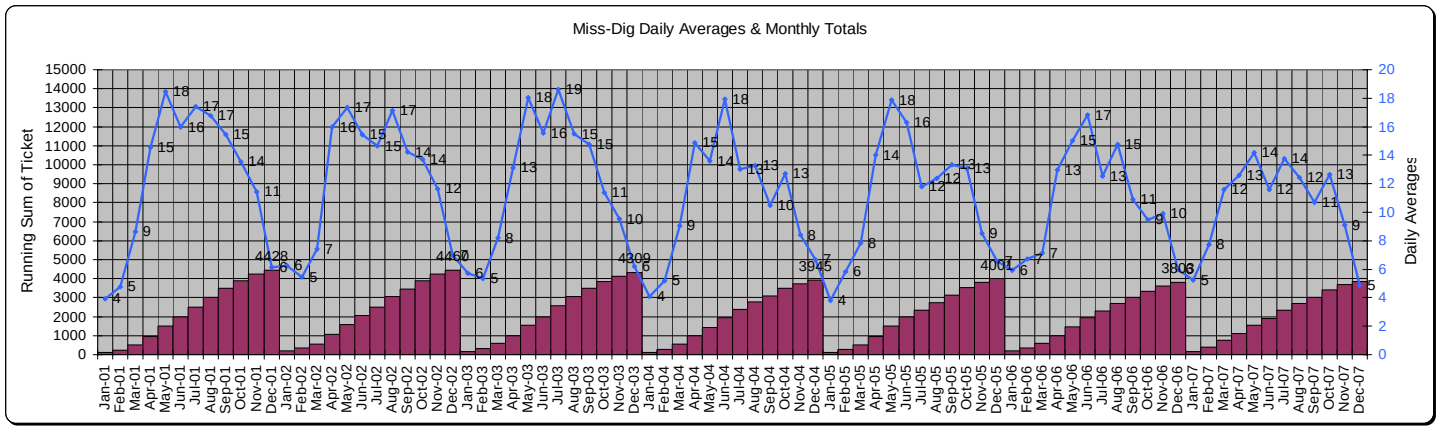
Utility Coordination

The Township participates in the Michigan Miss-Dig program where contractors and others anticipating underground utility work contact the Miss-Dig agency and report the location of the proposed work. Miss-Dig in turn broadcasts a message to participating utility companies notifying them of the imminent work and to provide staking if necessary. The utility companies then have three working days to respond to the request.

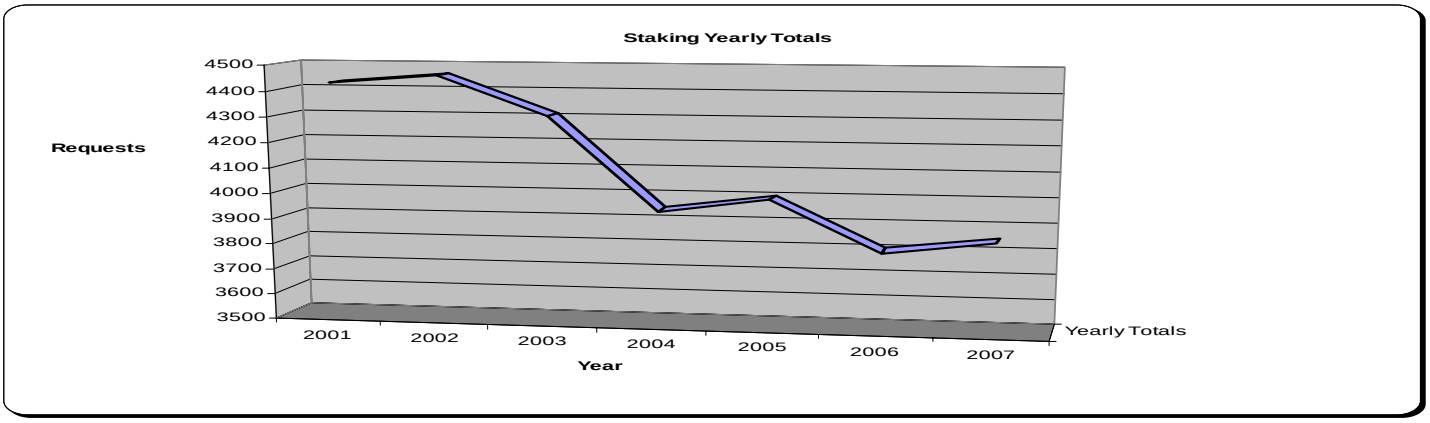
As can be seen from the figure below, requests are more numerous during the summer months than during the winter months. Historically, May is the busiest month with, on-average, 16 location requests received per day. The slowest month is January, averaging 5 location requests per pay.



The actual daily averages for each month and the running total of location requests for each year are given below.



The total number of staking requests for 2007 was 3,850, slightly higher than the 3,803 requests received in 2006. The 2007 total reversed the declining trend of total number of requests, but not enough to signal a reversal of the overall decline. The overall historical decline is a reflection of the slowing pace of building and construction in Waterford.



The following graph and data are a direct output of Utility Locating Service Work Orders captured by the DPW Cityworks CMMS. The amount of requests follows the expected monthly pattern mentioned above.

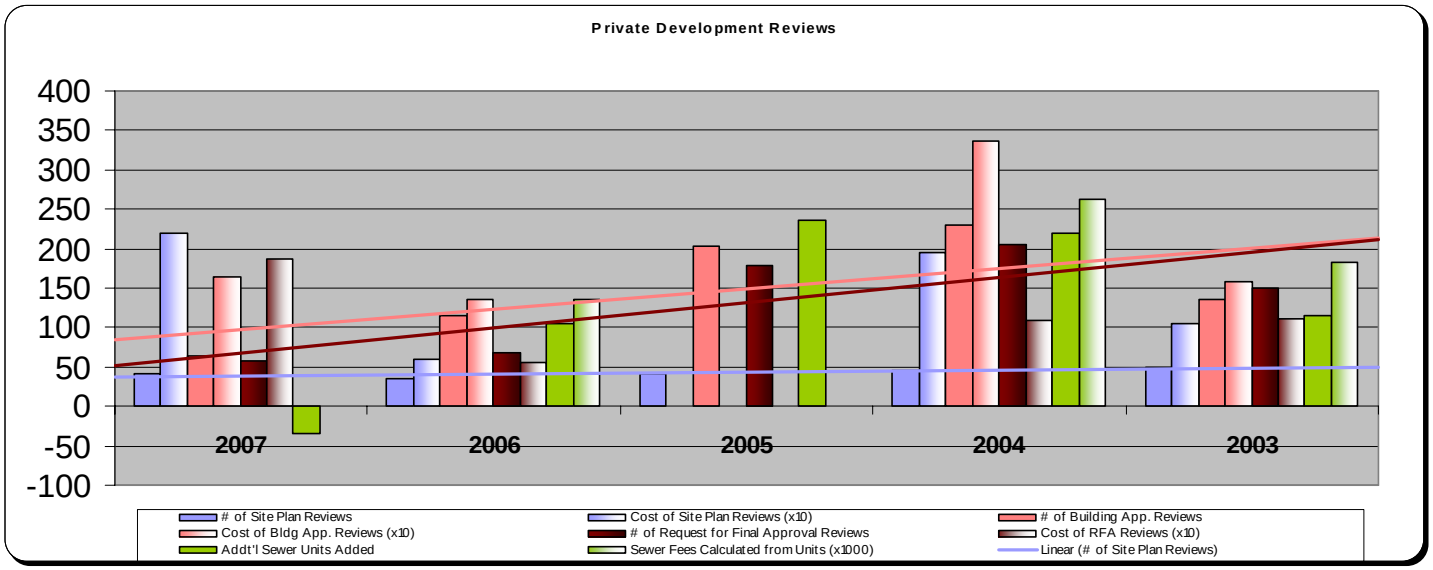
A review of the data recorded within the CMMS shows that approximately 3,130 employee-hrs (or almost exactly 1.5 employees) were required to handle the work load. $200,950 was spent on utility locating in 2007. The increase from previous years can be attributed to more accurate reporting.

Private Development

Private Development is defined as all planning and construction activities that are for the primary benefit of private business owners. Examples include new subdivisions, condominiums, apartment complexes or other residential units, offices, commercial and retail buildings.

The first step in new development is the planning and design stage. In 2007, 42 plans were reviewed, which was slightly higher than the 36 reviewed in 2006.

Once the plans are approved, the next step is construction. This can be quantified in the number of building permits and the number of request-for-final-approval applications (RFA in Figure below) reviewed. Both of these indicators were lower in 2007 than in 2006. There were 63 building applications and 58 requests-for-final reviewed in 2007.



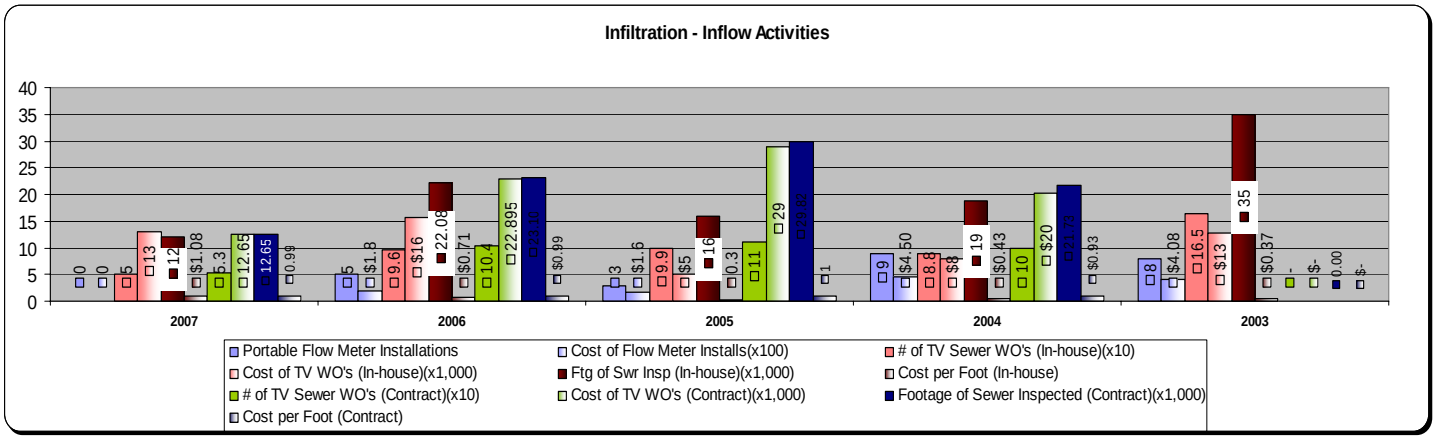
Some private development projects require the installation of new water and/or sewer utilities. This includes water and sanitary sewer mains, sewer manholes, water valves, hydrants, and other categories. At the time of report preparation, the 2007 data was not available.

Infiltration-Inflow

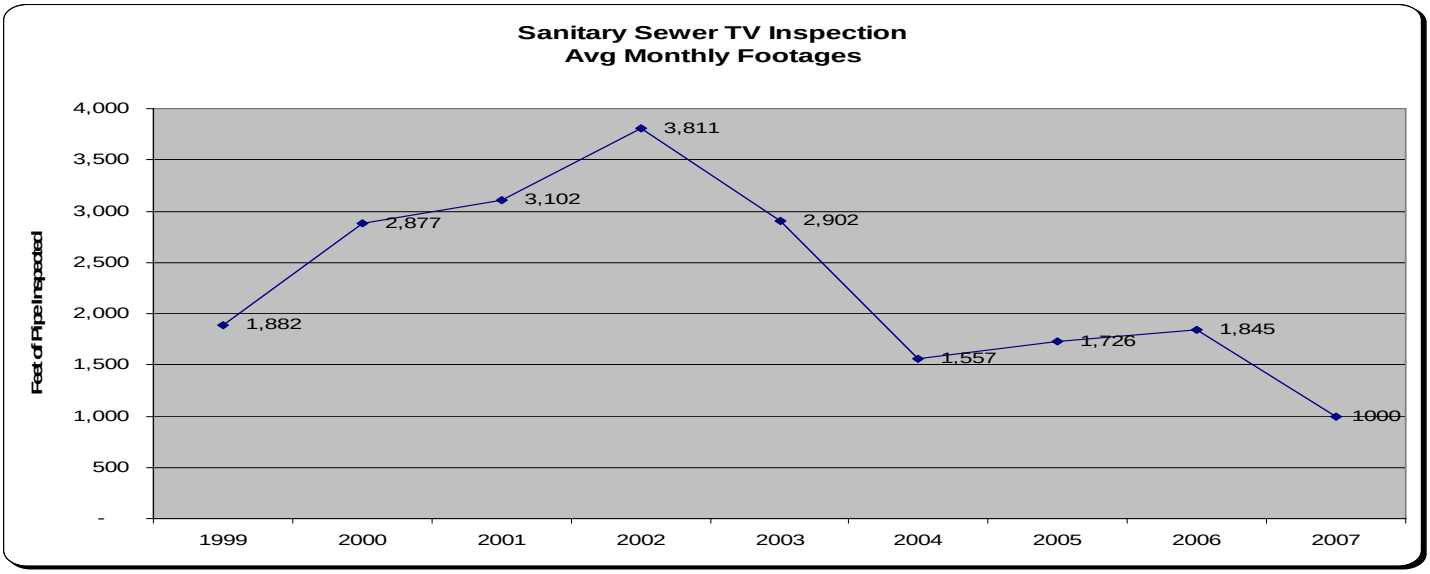
The Township is a separated sewer collection system in that it is designed to convey wastewater only. However, inherent limitations in construction materials and technology and the aging of the collection system allow for ground water and storm water runoff to infiltrate into the system. In addition, illegal connections exist that introduce direct storm water runoff and other non-wastewater inflows into the collection system. Problems such as surcharging and overflows can develop in the collection system during heavy and prolonged rain events.

The DPW is required by the Michigan Department of Environmental Quality (MDEQ) and also committed to continuously improving the performance of the collection system to prevent these types of problems. The infiltration and inflow program is aimed at achieving this goal by locating and eliminating defects and illegal connections in the collection system.

The activities staff performed in 2007 are illustrated in the figure below. Television inspection equipment was introduced into the collection system and the condition of the pipes cataloged and recorded in digital video format and included in the CMMS for direct retrieval through the GIS system. .



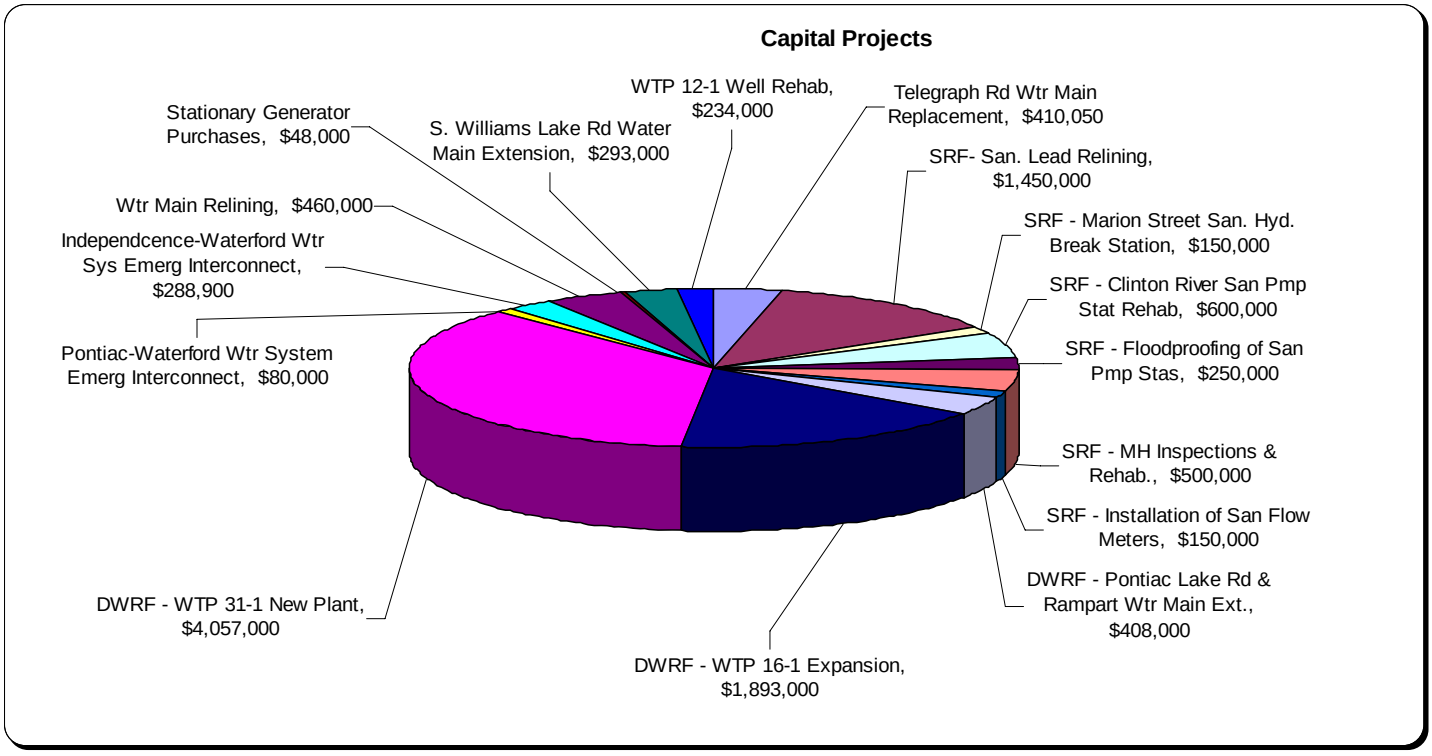
Since the start of the sewer televising program in 1999, 2,300 feet of pipe have been inspected per month. In 2003, information collection of the actual slope of the pipe began, which essentially doubled the amount of time it took to televise a section of pipe. As a result, monthly averages of pipe surveyed plummeted. In 2005, continuous improvements in operating techniques reversed this trend and increased survey efficiency. Equipment failures plagued the operation in 2007, resulting in lowered totals of completed inspections. Funds have been budgeted in the 2008 budget to replace the ten (10) year old inspection equipment.



Capital Improvements

This category includes projects that Waterford Township DPW participates in financially. The bulk of the projects include projects for which the DPW contracted the work directly. It also includes projects completed in conjunction with other agencies.

The graph below illustrates the scale of each capital project's budget in relation to all capital projects. The combined total value of active capital improvement projects in 2007 was $ 11,271,950. The graph shows projects, which saw activity in 2007. Some were started prior to 2007 and have been carried over, some have and finished in 2007 and some were started in 2007 but have not been completed.

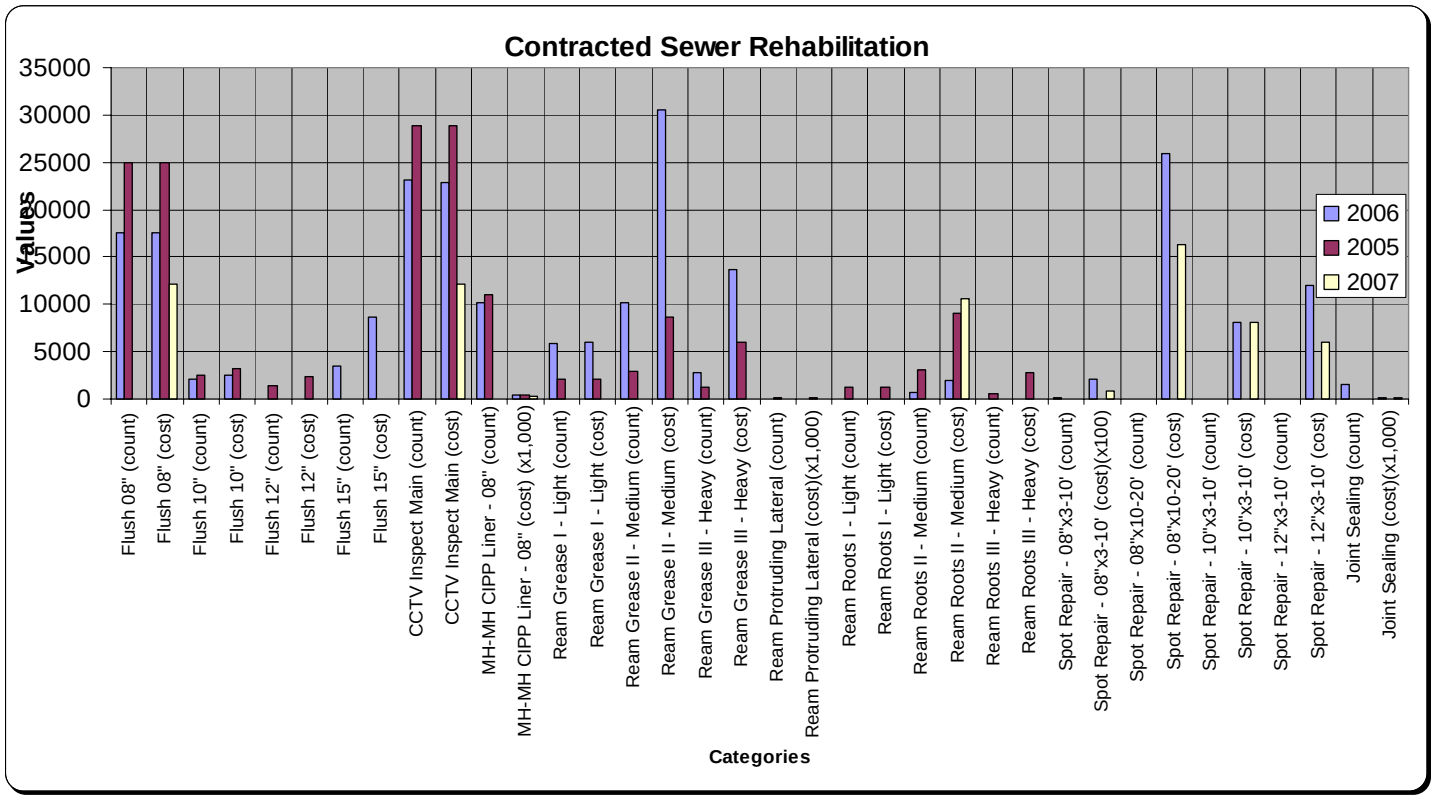


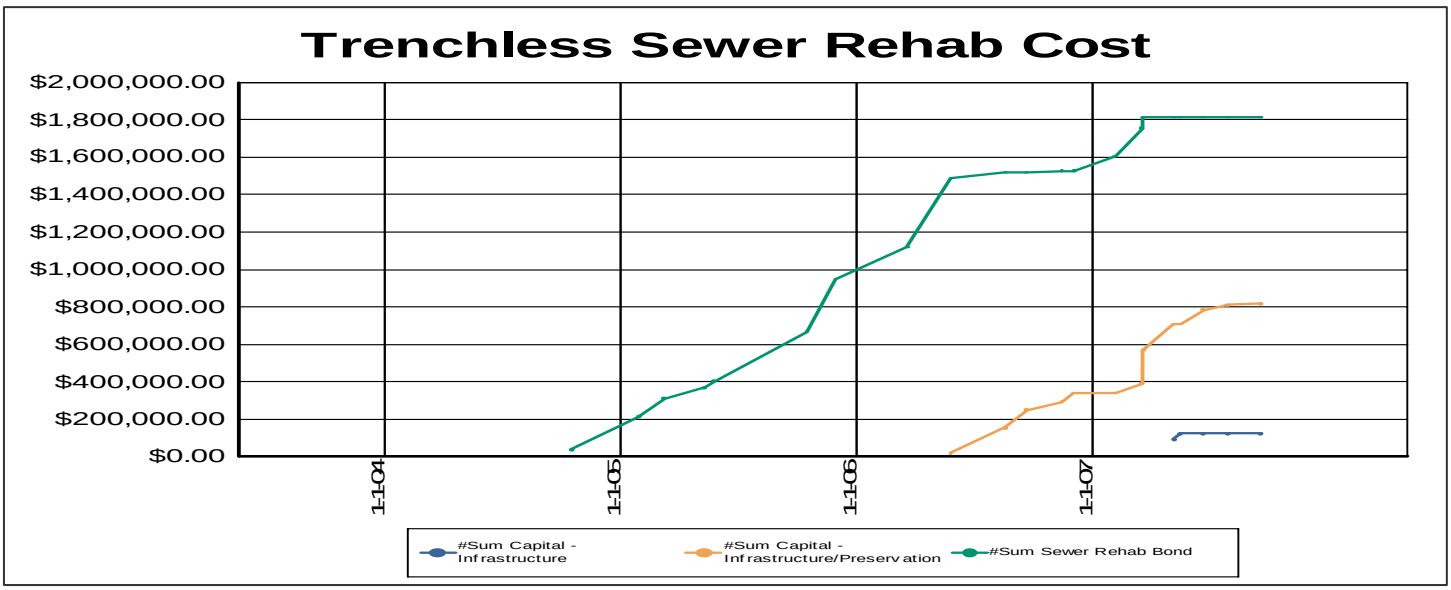
The table on the following page is a more detailed breakdown of the projects show in the above graph. In addition to title and budget, the table also lists lead agency and a description of each project.

2007 CAPITAL IMPROVEMENT PROJECTS

Project	Lead Agency	Description	Project Cost
Telegraph Road Water Main Replacement	Michigan Dept of Transportation	Replace approx. 3,900 feet of old cast iron water main as part of road reconstruction project	$ 410,100
SRF- Sanitary House Lead Relining	Oakland County Drain Commission	Install clean-out at right-of-way line and install cured-in-place liners in approx. 480 sanitary house leads	$ 1,450,000
SRF - Marion Street Sanitary Hydraulic Break Station	Waterford Township	Install duck-bill valve at connection point to COIS	$ 150,000
SRF - Clinton River Sanitary Pump Station Rehabilitation	Waterford Township	Replace pumps, install sluice gate and rehabilitate wet well	$ 600,000
SRF - Flood proofing of Sanitary Pump Stations	Waterford Township	Raise wet well access hatch at seven sanitary pumping stations	$ 250,000
SRF - MH Inspections & Rehabilitation	Waterford Township	rehabilitate approximately 140 manholes	$ 500,000
SRF - Installation of Sanitary Flow Meters	Waterford Township	place meters at three connection points to COIS	$ 150,000
DWRF - Pontiac Lake Road & Rampart Water Main Extension	Waterford Township	Install approx. 3,100 feet of water main to complete water looping	$ 408,000
DWRF - WTP 16-1 Expansion	Waterford Township	Replace well and add new pressure filter treatment plant	$ 1,893,000
DWRF - WTP 31-1 New Plant	Waterford Township	Construct three new wells and new water treatment plant	$ 4,057,000
Pontiac-Waterford Water System Emergency Interconnection	Waterford Township	Install meter pit to allow water to pass from one water system to the other	$ 80,000
Independence-Waterford Water System Emergency Interconnections	Independence Twp	Install three meter pits to allow water to pass from one water system to the other	$ 288,900
Water Main Relining	Waterford Township	Reline approx. 3,000 feet of water main with cured-in-place liner without excavating	$ 460,000
Stationary Generator Purchases	Waterford Township	Install stationary generator at two sanitary pumping stations	$ 48,000
WTP 12-1 Well Rehabilitation	Waterford Township	Redrill under-performing well at existing water treatment plant	$ 234,000
Williams Lake Road Water Main Extension	Road Commission for Oakland County	Install 2,200 feet of 12-inch water main	$ 293,000

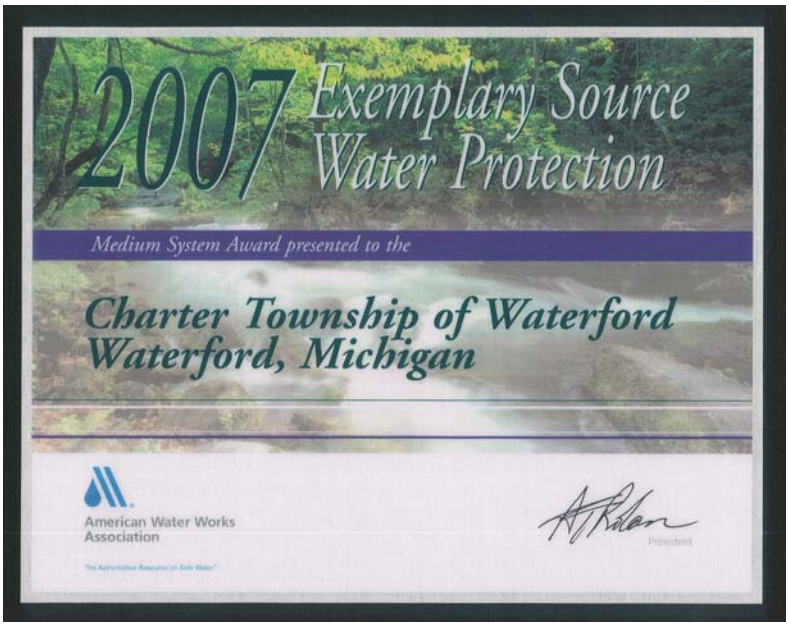
In 2007, Liquiforce Services continued to perform trenchless sewer rehabilitation in portions of the Township with old poor performing sanitary sewers. The rehabilitation ranged from simple flushing to installation of manhole-to-manhole cured-in-place liners. The following table and graph summarize these activities. Funds to pay for these activities came from the 2003 Capital Bond sale and SRF low interest loan.





Wellhead Protection

In 2007, the DPW was honored by the American Water Works Association as the recipient of Exemplary Source Water Protection Award for Medium Systems. The award was announced at the AWWA 2007 Annual Conference and Exposition in Toronto, Canada. This conference is the preeminent event for water treatment and distribution professionals in North America and was attended by 15,000 people.



The success of Waterford Township's Wellhead Protection Program is due, in large part, to its' emphasis on educating the public about the importance of source water protection. Each year, the DPW performs demonstrations for elementary, middle and high school classes, as well as community organizations, reaching nearly 2,000 people. The hands-on demonstrations and distribution of give-away items such as tee shirts, squish-balls, cup holders, etc. help to reinforce the experience into the student's lives.

A ten minute educational video was produced in 2007 that will be shown on Waterford Township's public access cable network.

A sister program to Wellhead Protection called the Abandoned Well Management Program (AWM) was ended in 2007 due to budget constraints at the MDEQ. The goal of the program was to properly abandon old and unused wells in order to further safeguard the Township's groundwater source water.

Upon completion of the program, 360 sites had been visited and inspected and 263 wells had been plugged. The DPW's AWM was so successful that only ours and one other community's programs were extended for several months after all other programs in Michigan had been halted.

Water Distribution Branch

The mission of the Water Distribution Branch is to provide maintenance services for the safe and efficient distribution of the Township's public water supply. The employees in this branch utilize a wide array of specialized equipment for underground excavation and other maintenance activities.

The branch is headed by the Water/Sewer Superintendent and is comprised of nine full-time employees. The positions and a brief description of their typical duties are listed below:

- Water/Sewer Superintendent
  Provides overall administrative duties for the Water Distribution Branch. Provides research and analysis of the water distribution system and suggests areas of improvement. Provides budgeting support and technical assistance to employees as needed. Analyzes the DPW's CMMS.

- Distribution Foreman
  Serves as the general day to day supervisor for field employees in the distribution branch. Assures that water taps and related activities are prioritorized and scheduled properly. Ensures that the branch has materials and supplies.

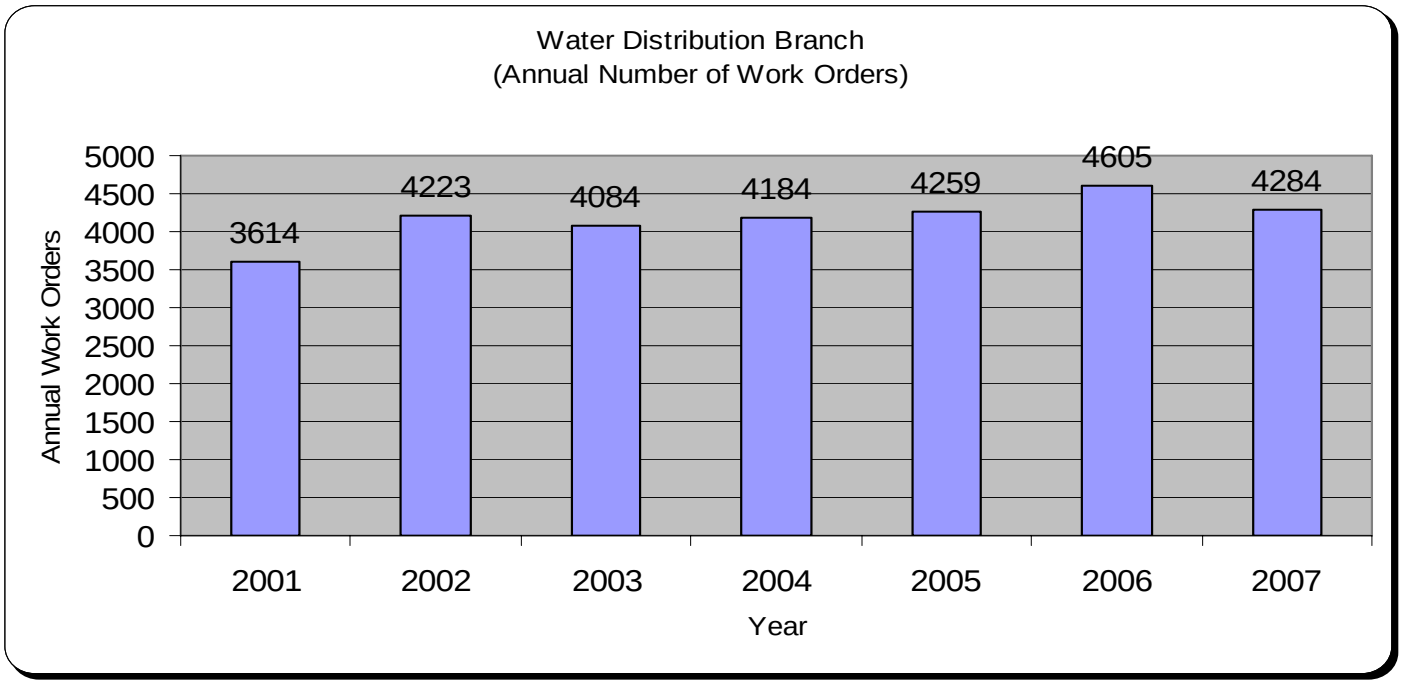
- Assistant Forman
  Serves as the main assistant to the Distribution Foreman and also provides direction and oversight to field employees in the distribution branch. Responsible for helping to meet scheduled deadlines, as well as ordering supplies. This individual also works extensively with the DPW's CMMS System to ensure all field work orders are updated and closed properly.

- Crew Leaders (2)
  These individuals serve as the lead employees on the job site. They ensure that proper safety procedures and work routines are followed.

- Distribution Service Workers (5)
  Employees in this classification serve primarily as general laborers and utilize heavy excavation equipment to conduct water main taps, curb box repairs, fire hydrant repairs, and sewer repairs.

Water Distribution Branch Annual Work Orders

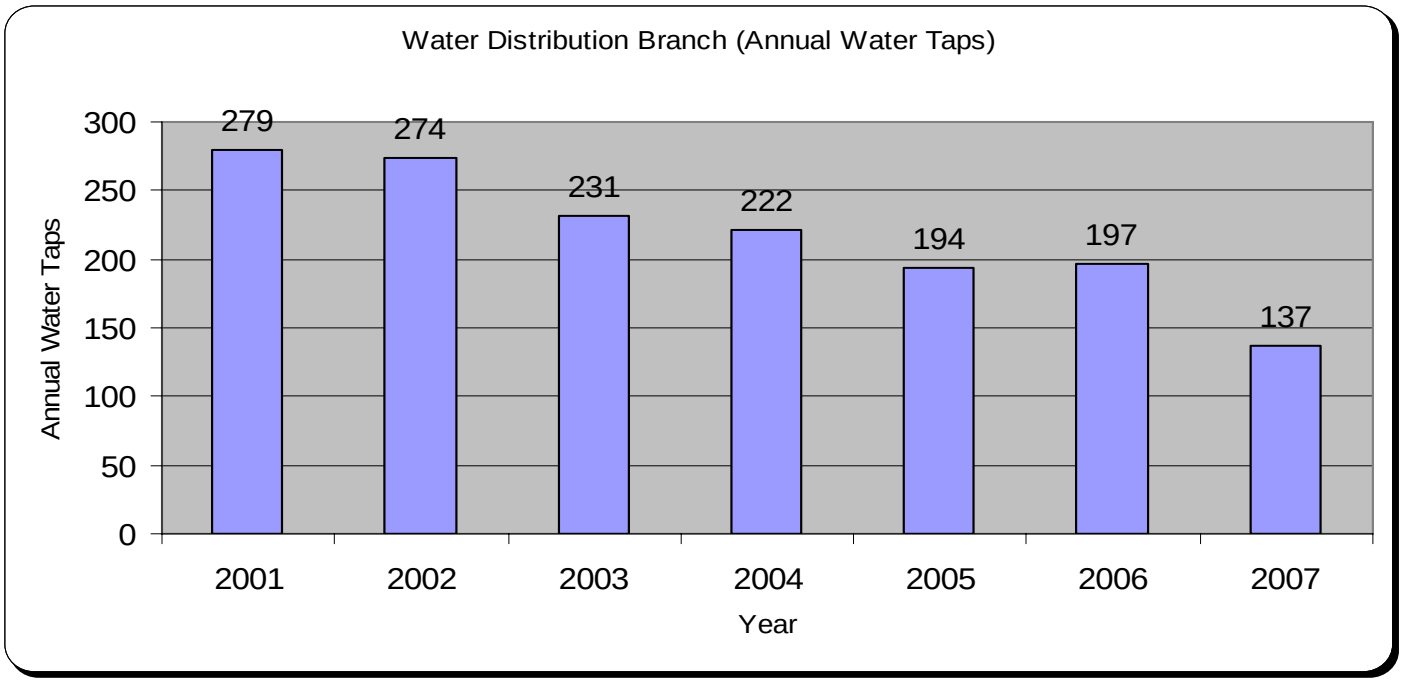
This Branch is responsible for all water main taps, water main break repairs, fire hydrant repairs and sewer main repairs. The graph below shows the aggregate annual number of the activities performed in this branch. Current work includes raising sewer manhole rims to grade or sealing them to prevent leaking. The branch also pumps down and winterizes over 3,400 hydrants per year to ensure reliable operation during the winter. Similar work activity is expected to continue with additional sewer work and valve preventative maintenance work increasing.



DPW Distribution Branch Employees repairing a water main. Waterford Township has 360 miles of water main of various age and composition.

Water Taps

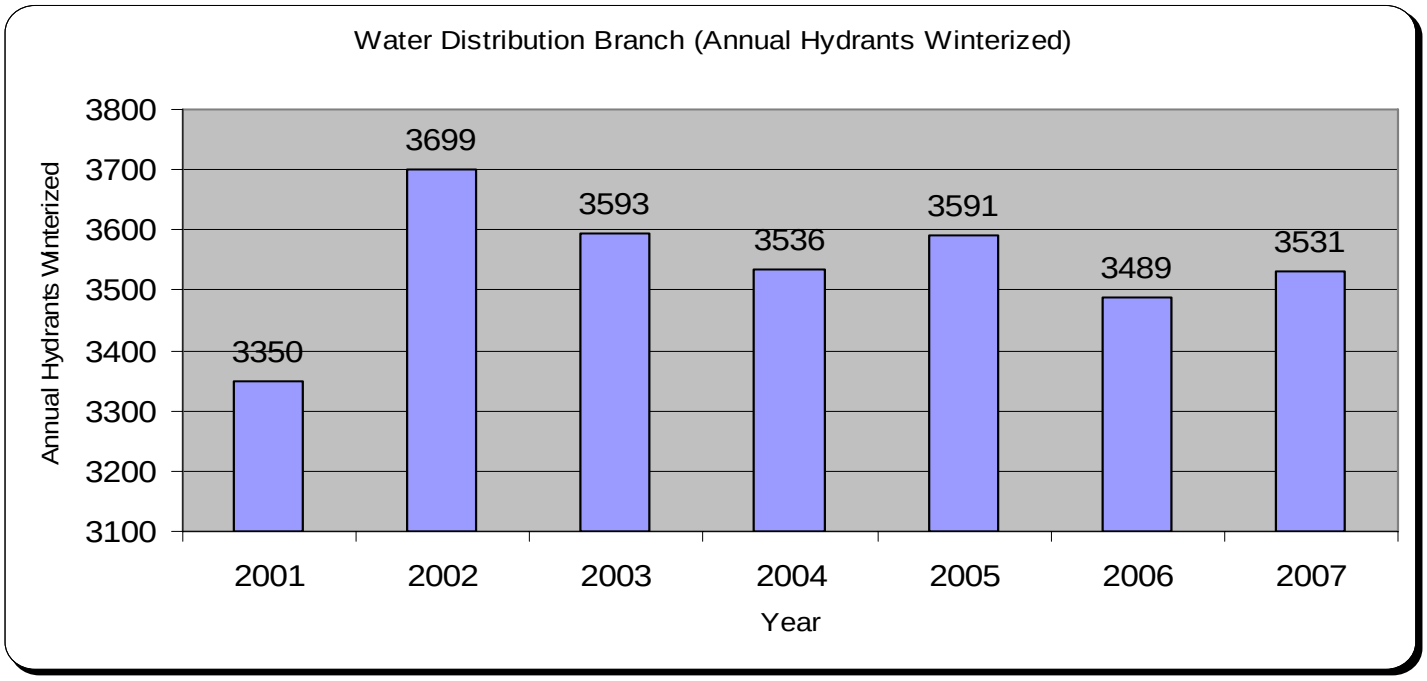
Water taps involve connecting new water customers to the water distribution system or reconnecting old worn out connections. Trends in recent years indicate a decline in new taps. This downward trend is expected to continue as the Township continues toward build-out. The graph below shows the annual water taps since 2001.



DPW Distribution Branch Crew placing a 'Trench Box' in place prior to water main repair. Trench boxes are used as a safety measure to prevent cave ins when working near unstable or non reliable soil conditions.

Hydrant Winterizing

The Township has nearly 3,600 fire hydrants. These hydrants are a vital part of the water distribution system and an important health and safety asset of the Township. To ensure proper functioning of these vital assets, every fall the hydrants are pumped down, inspected and repaired. The graph below depicts the annual number of these activities since 2001. These trends will remain at the same levels because they are conducted on every hydrant every fall.



Water Treatment and Supply Branch

The mission of the Water Treatment and Supply branch is to ensure safe potable water is delivered to the customers of the Township. Responsibilities include maintenance of the Township's 11 water treatment plants, 2 elevated and 1 ground storage tank totaling 8.25 million gallons of storage. The branch is also responsible for the daily testing of water in the distribution system as well as ensuring compliance with the Safe Drinking Water Act.

The annual Consumer Confidence Report (CCR) is also compiled from operational data collected and maintained by the branch. This report serves as an annual audit detailing regulatory requirements of the water supply system and the results of the various tests conducted by the branch.

The branch is headed by the Water/Sewer Superintendent and is comprised of four full-time and one part-time employee. The positions and a brief description of their typical duties are listed below:

- Water/Sewer Superintendent
  Provides overall administrative duties for the Water Treatment Branch. Provides research and analysis of the water treatment system and suggests areas of improvement. Provides budgeting support and technical assistance to employees as needed. Analyzes DPW's Computerized Maintenance Management System to look for system and branch improvements.

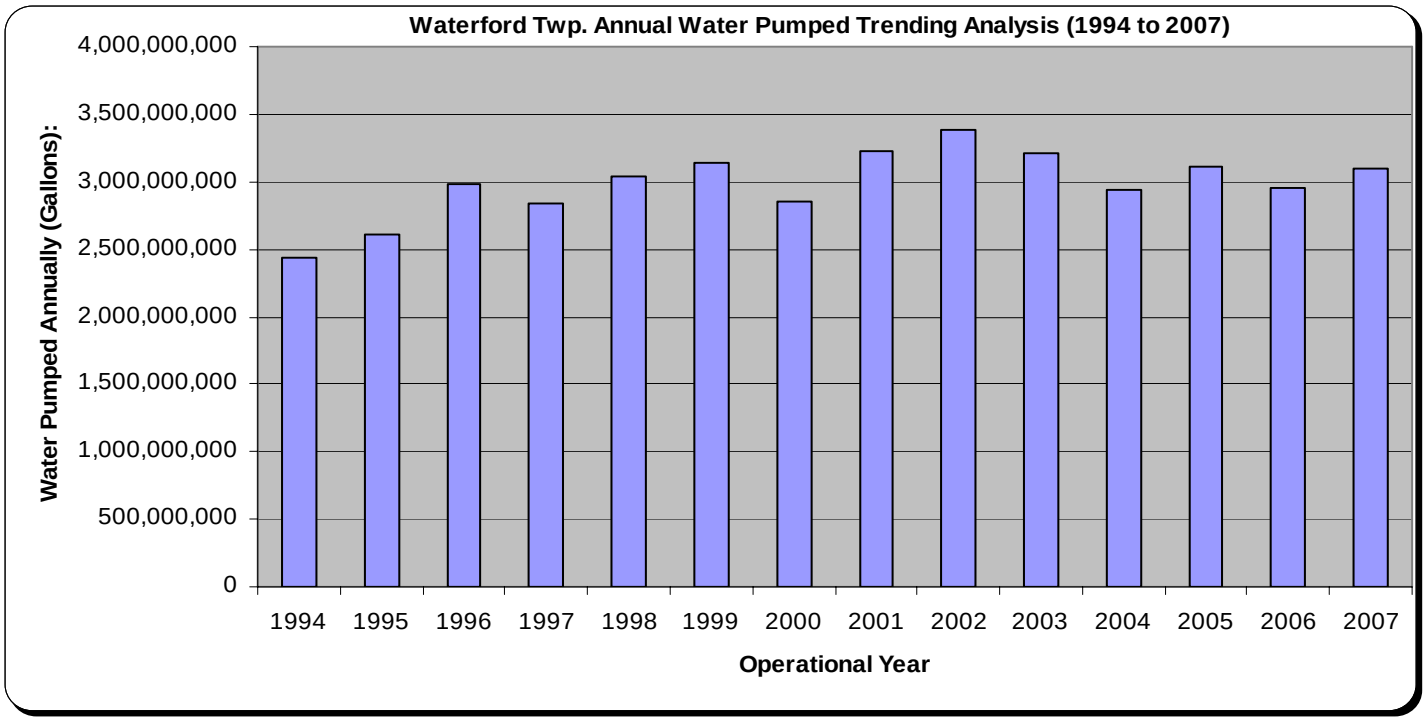
- Water Supply Foreman
  Schedules all work performed at the 11 Water Treatment Plants and oversee Monitoring Schedules required by the DEQ. Oversees Work Order completion and assists as needed in the field to provide support with tasks on everyday maintenance.

- Assistant Water Supply Foreman
  Assists the Foreman with all reporting to the DEQ on a monthly basis. Fills in for the Foreman as needed. Performs Treatment calculations and dosages on a day to day basis to meet monitoring requirements set by the DEQ at all of the Treatment Plants.

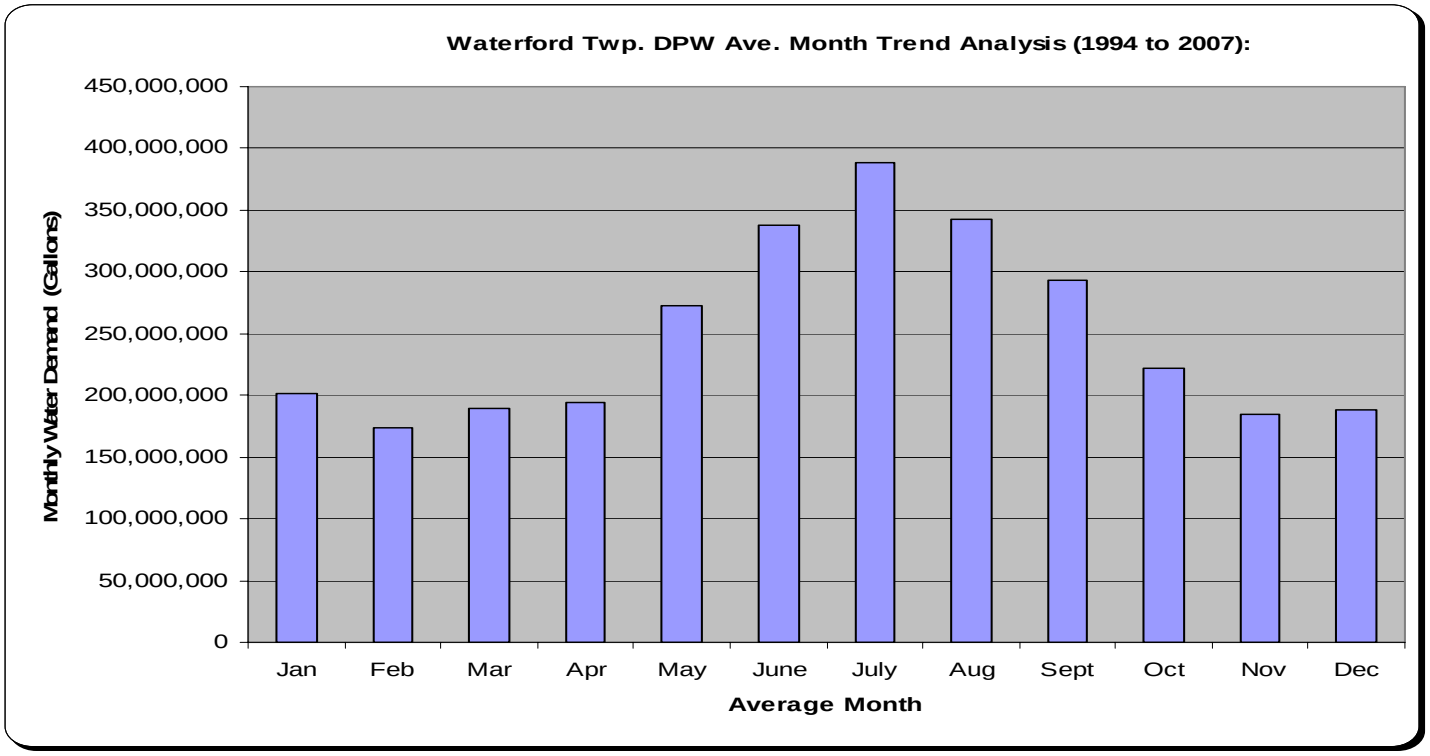
- Water Supply Operator IV (2)
  Performs daily maintenance and records field data information at all Treatment Plants, Tanks and related facilities. Performs and maintains records for monthly reporting to the DEQ. Completes work orders as assigned by the Foreman.

Water Treatment Branch – Water Pumped Analysis

The volume of water treated and distributed to Township customers is an important component of operations. Many factors contribute to this number such as growth and development, weather, and fluctuating demand. Continuous monitoring of operational conditions and performance is performed via staff aided by the Supervisory Control and Data Acquisition (SCADA) system and hydraulic modeling. The graphs below show the monthly and annual water demand patterns since 1994.

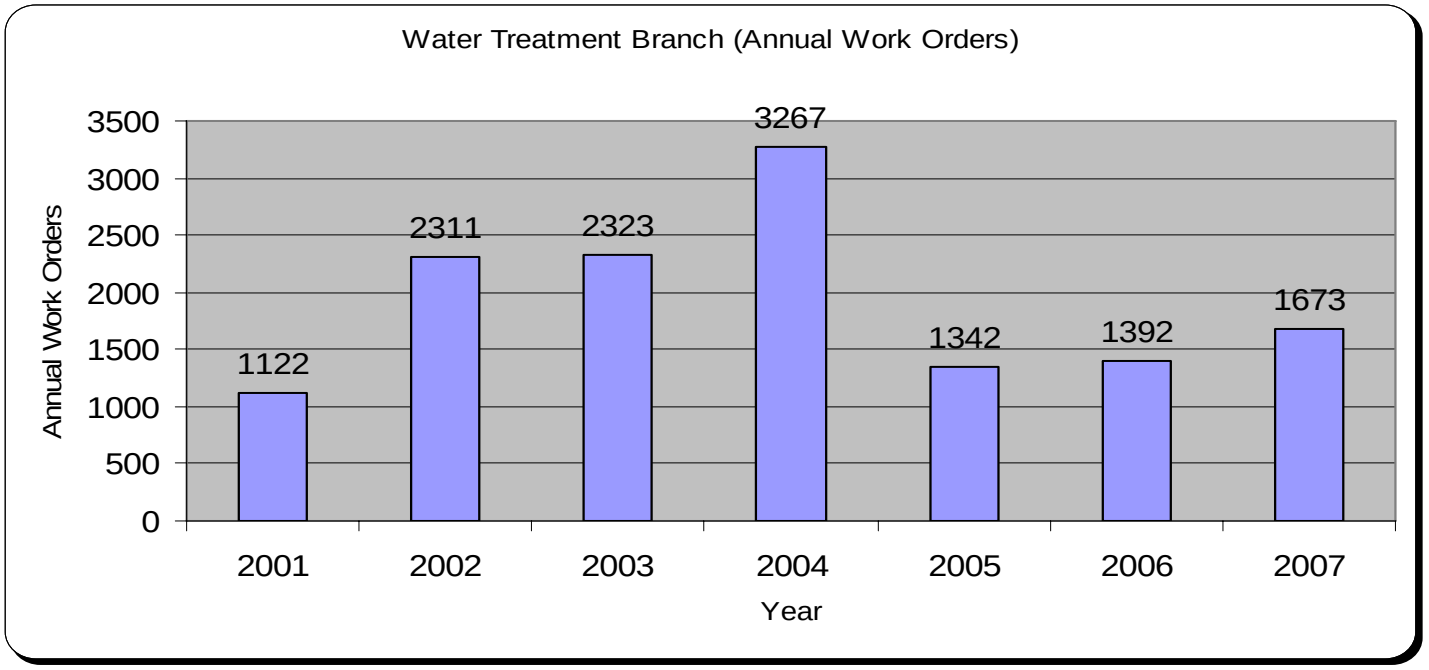


DPW Employee Aaron Potter performing maintenance at a Water Treatment Plant. The Treatment Branch takes over 800 water samples per year in order to comply with Michigan Department of Environmental Quality (MDEQ) standards.



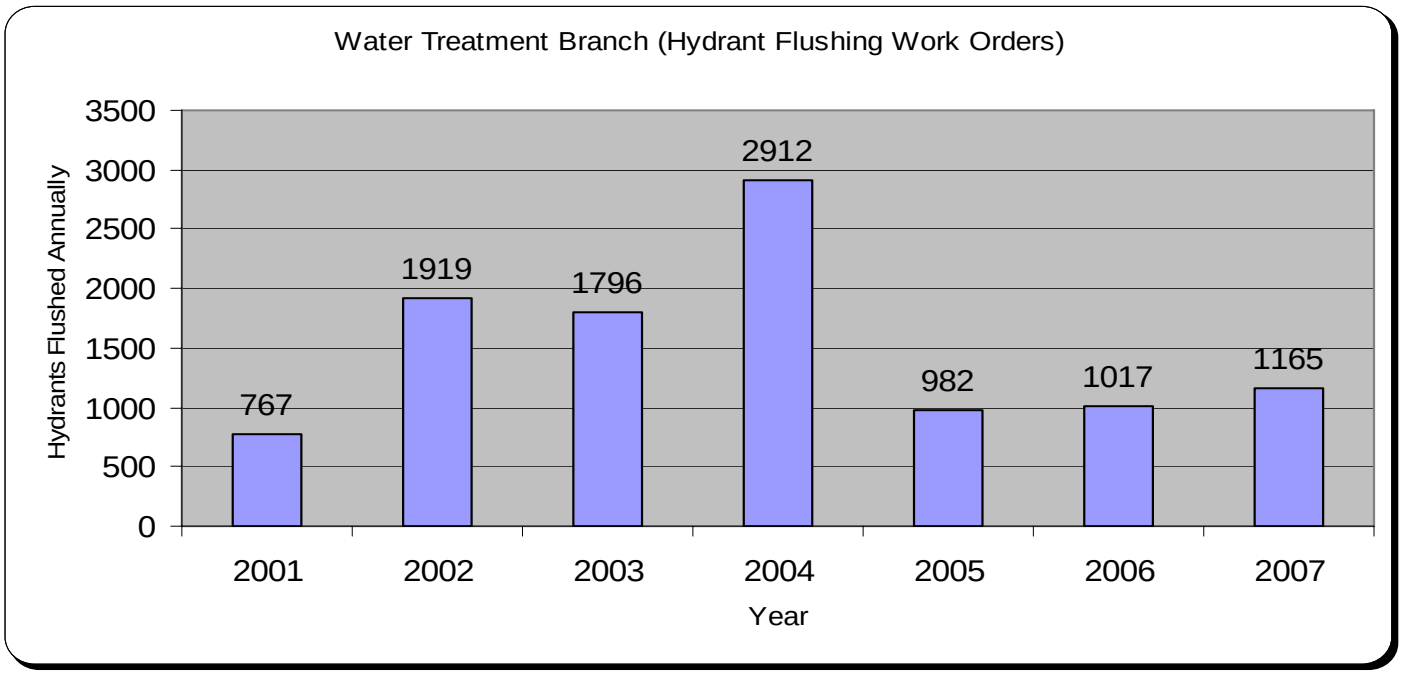
Water Treatment Branch Annual Work Orders

The graph below shows the aggregate annual number of the activities for this branch. Activities will continue to fluctuate as system components age, operational and capital modifications are made, drinking water regulations become more stringent and demands dictate. The overall decrease in 2005 total work orders is due to a full fall hydrant flushing program not being scheduled.



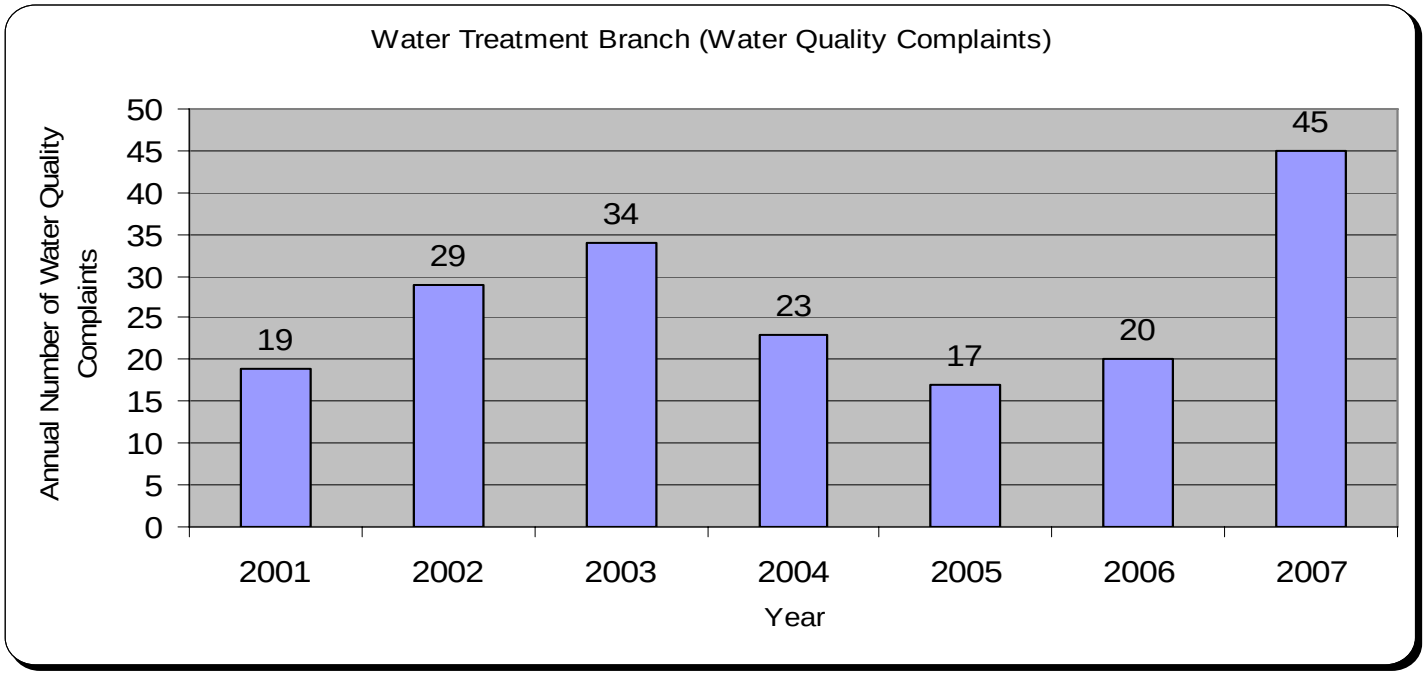
Hydrant Flushing

The Township has approximately 3,600 fire hydrants, which are a vital part of the water distribution system and an important safety asset. To improve and maintain the quality of the water in the system, hydrants are flushed periodically. The graph below depicts the annual number of these activities since 2001. The amount of hydrant flushing is dependent on observed and tested water quality parameters, but generally performed in the spring and fall of each year. As mentioned above, a full flushing of the hydrants was not warranted in 2007. This resulted in only "dead-end" hydrants being flushed.



Water Quality Complaints

In general, water quality complaints are handled by the Treatment Branch, and can range from taste to odor issues. Examples of complaints range from water softeners, reverse osmosis filters or other items malfunctioning or needing replacement in homes or businesses to red water. However, these types of calls are relatively infrequent given the customer service population of the Township. The graph below depicts the annual frequency of water quality complaint calls since 2001. The Iron Removal Plants that were brought on-line back in the mid 1990's, along with continually monitoring the effectiveness of the process through SCADA and analysis has had a very positive affect on the quality of the Township water.



Water Quality Report – Public Outreach

The branch also compiles water analytical data, as well as general information about the water that is treated and distributed to customers in the form of an Annual Water Quality Report, which is referred to as the Consumer Confidence Report (CCR). This report provides a wealth of information about the public water system water quality parameters in the reporting operational year. The reports are mailed to ever water customer with their utility bill as an effort to educate and inform the public about their public water supply system. The DPW also maintains the current and past reports on the Township's web site in an effort to educate and inform customers about the Township's water supply.

Water Service Branch

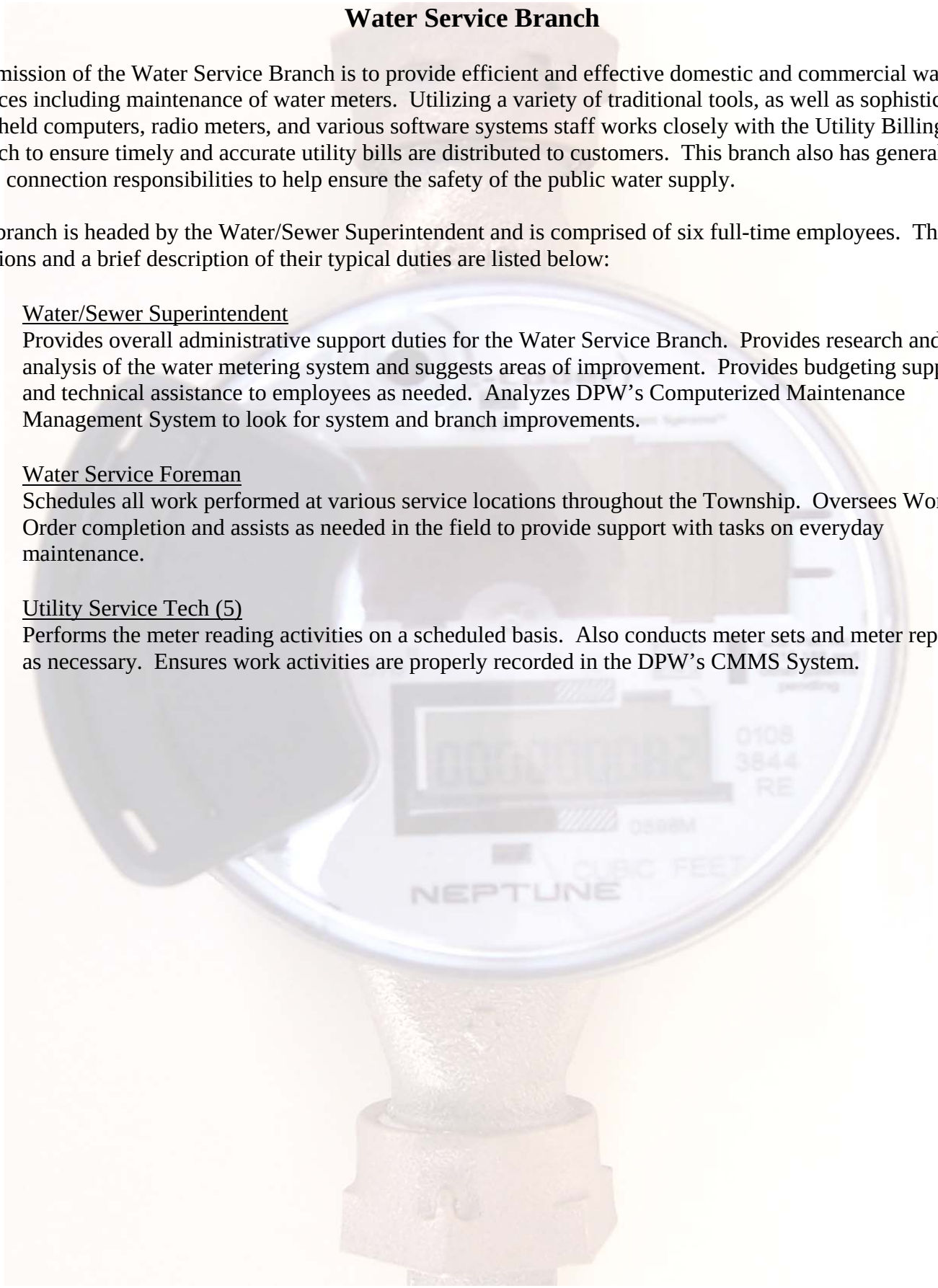
The mission of the Water Service Branch is to provide efficient and effective domestic and commercial water services including maintenance of water meters. Utilizing a variety of traditional tools, as well as sophisticated handheld computers, radio meters, and various software systems staff works closely with the Utility Billing Branch to ensure timely and accurate utility bills are distributed to customers. This branch also has general cross connection responsibilities to help ensure the safety of the public water supply.

The branch is headed by the Water/Sewer Superintendent and is comprised of six full-time employees. The positions and a brief description of their typical duties are listed below:

- Water/Sewer Superintendent
  Provides overall administrative support duties for the Water Service Branch. Provides research and analysis of the water metering system and suggests areas of improvement. Provides budgeting support and technical assistance to employees as needed. Analyzes DPW's Computerized Maintenance Management System to look for system and branch improvements.

- Water Service Foreman
  Schedules all work performed at various service locations throughout the Township. Oversees Work Order completion and assists as needed in the field to provide support with tasks on everyday maintenance.

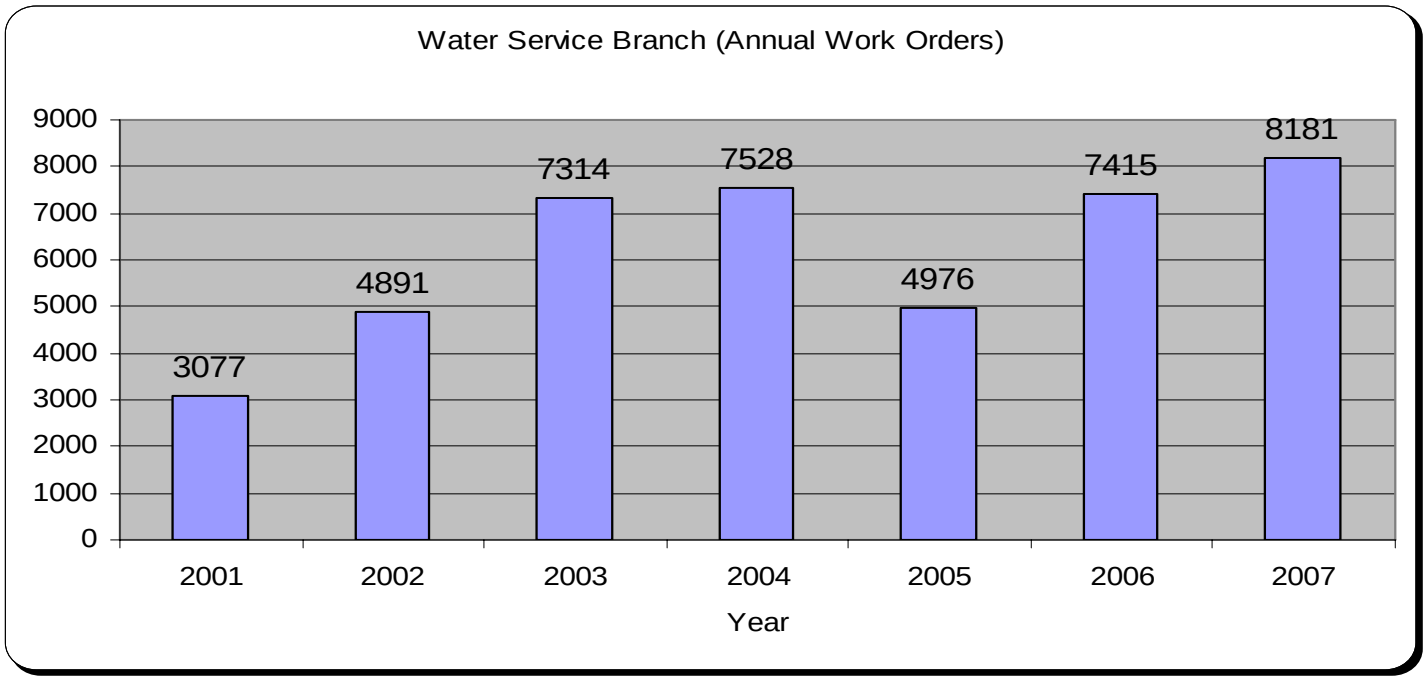
- Utility Service Tech (5)
  Performs the meter reading activities on a scheduled basis. Also conducts meter sets and meter repairs as necessary. Ensures work activities are properly recorded in the DPW's CMMS System.



Water Service Branch Annual Work Orders

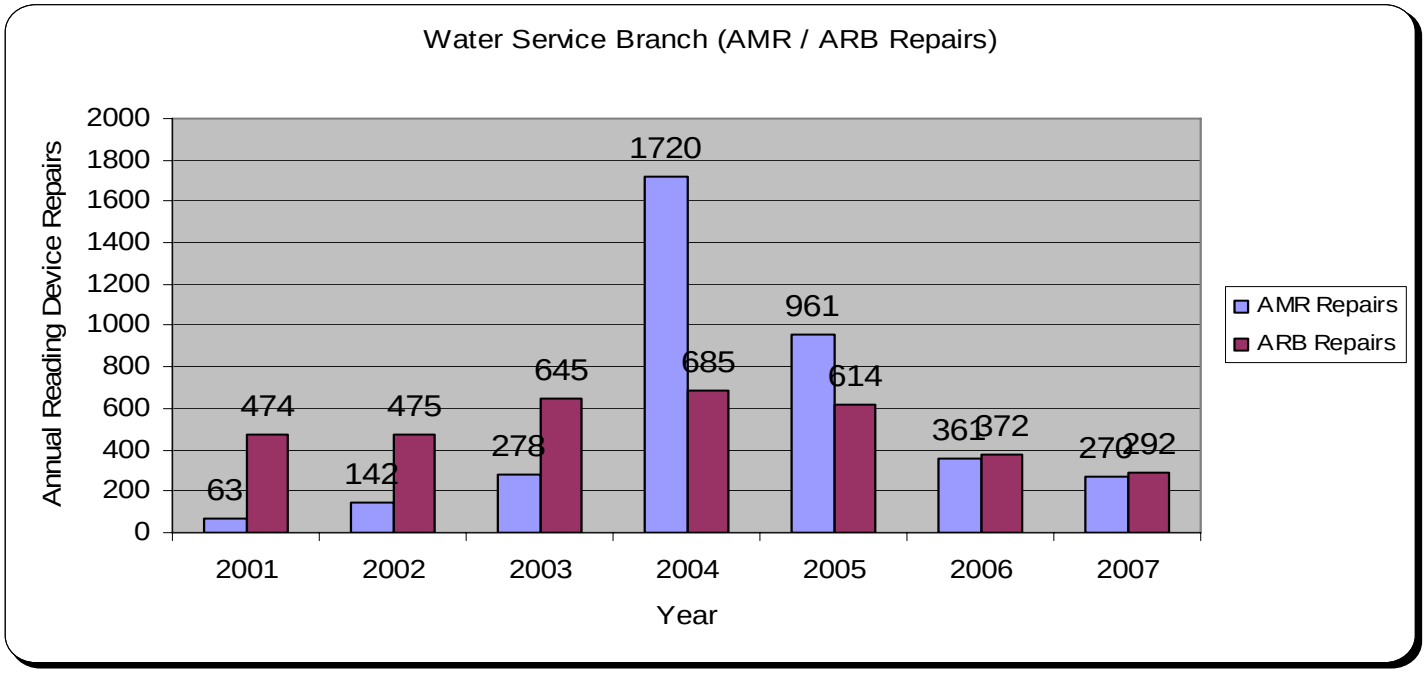
This branch is responsible for all new meter sets for new homes after taps have been made as well as repairs to existing meters and their components at existing homes and businesses to ensure accurate meter reads for billing. The branch is also responsible for retrieving all meter reads for the scheduled billing cycles.

The graph below depicts the annual number of work orders conducted by the branch. The higher numbers in recent years represent increased activity primarily due to installing new Automated Meter Reading (AMR) devices to read water meters via radio transmission, which eliminates staff from having to enter property to get readings. With AMR service personnel can drive by the property and receive the meter reading which has eliminated hundreds of meter reading hours and reduced Township liability. In 2006, work began to install the AMR units at customer locations allowing for the meter readings to be directly transmitted to a Fixed Collector as discussed earlier. The collector then downloads the meter readings directly into the Township broadband wireless network, which will send the readings directly to the office for use. Installation will continue in 2007 to install these devices.



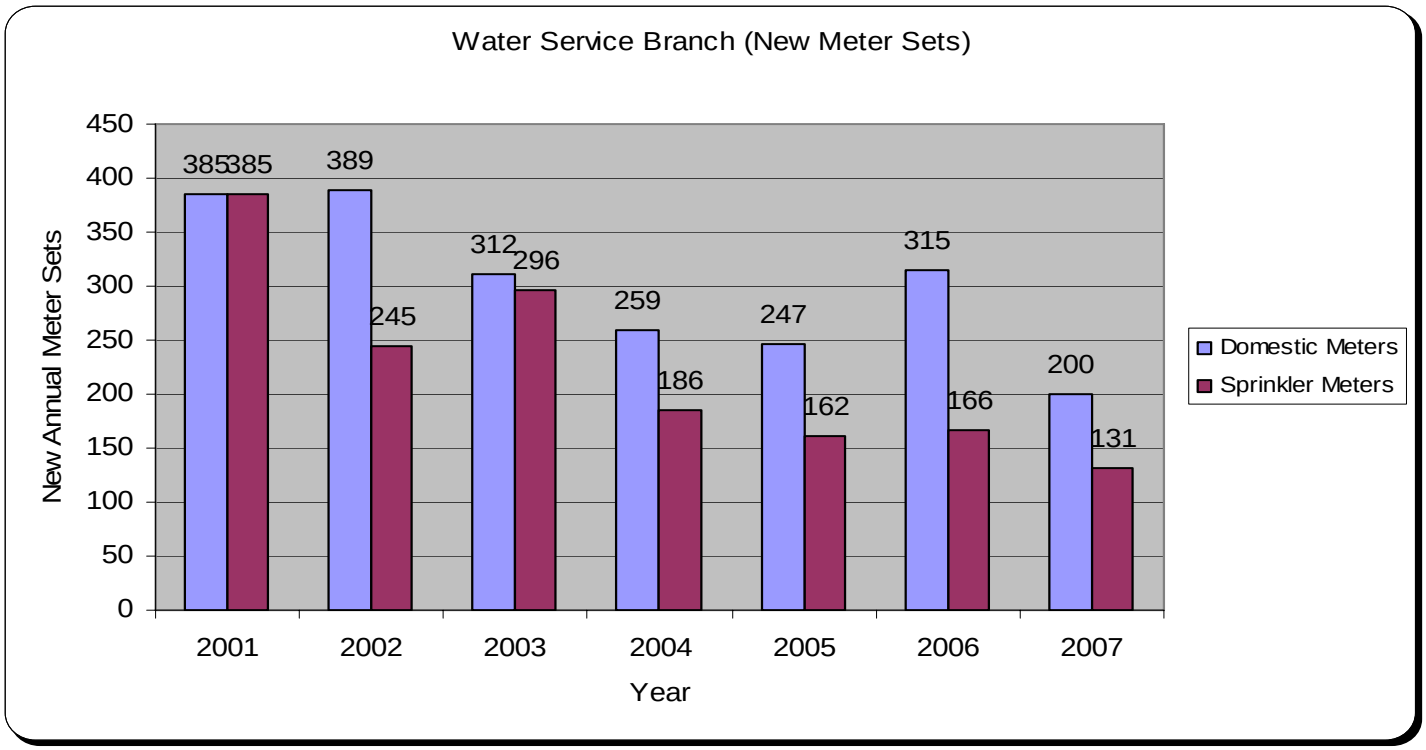
Repair AMR/ARB Annual Work Orders

One of the largest segments of work performed by the branch is the repair and maintenance of the meter reading component of the water system. The graph below depicts the annual number of repair activities conducted on AMR and ARB reading devices since 2001. The spike in AMR devices in 2004 was due to quality control issues related to the manufacturer. These have since been addressed.



New Domestic Meters and Sprinkler Meter Sets

Domestic meters measure the water consumed inside a home or small business. The DPW also permits a separate sprinkler meter that only measures outside water that does not drain into the public sewer system. The sprinkler meter benefit is that additional sewerage charges will be eliminated saving the customer money. New domestic meter installations are expected to steadily decline as the Township approaches build-out. However, the rate of sprinkler meter installations is likely to remain constant, if not grow, in the coming years as more customers take advantage of the cost savings opportunity presented.



DPW Employee Bill Collier installing a water meter. The water meter has a set of wires connected to an outside meter reading device.

Sewer Branch

The mission of the Sewer Branch is to operate and maintain 62 sewer pumping stations, 8,450 manholes and over 330 miles of sanitary sewer main in the Township. Operations are significantly enhanced with the utilization of a state-of-the-art SCADA system to operate and monitor all sewer pumping stations and a Computer Maintenance Management System (CMMS) to initiate and track all work orders.

The branch is headed by the Water/Sewer Superintendent and is comprised of eight full-time and one part time employee. The positions and a brief description of their typical duties are listed below:

- Water/Sewer Superintendent
  Provides overall administrative support duties for the Sewer Branch. Provides research and analysis of the sanitary sewer system and suggests areas of improvement. Provides budgeting support and technical assistance to employees as needed. Analyzes the CMMS to look for system and branch improvements.

- Sewer Foreman
  Reviews SCADA data and assigns crews as needed to perform routine maintenance of the Sanitary Sewer Stations and oversees all work orders generated by the DPW's CMMS program. Also responsible for scheduling of sewer main and sanitary sewer pumping station cleaning crews.

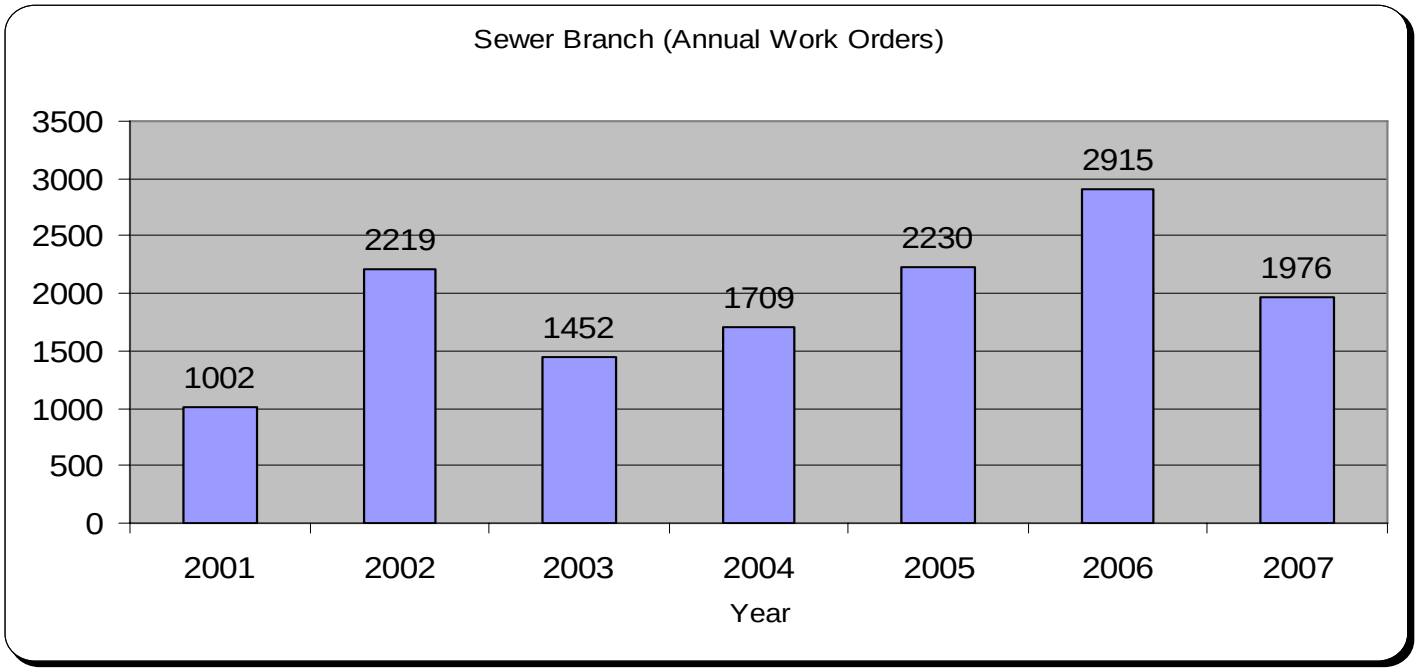
- Assistant Sewer Foreman
  Assists the Foreman with planning and evaluation of day-to-day tasks, monitoring SCADA, scheduling routine maintenance, or troubleshooting with the Sewer Pump Stations. Also oversees Jetting maintenance and cleaning of sanitary sewer main on a day-to-day basis.

- Collection System Maintenance Tech I (6)
  Performs maintenance on all sanitary sewer pumping stations and sanitary sewer mains in the Township as scheduled by the Foreman and Assistant Foreman. Completes work orders per Foreman's directions. Collects data and keeps records of daily activities for the Foreman's review.

- Part-time (1)
  Performs painting and cleaning of sanitary sewer pumping stations as weather and operations permit.

Sewer Branch Annual Work Orders

The branch is responsible for 62 sewer pumping stations throughout the Township including over 330 miles of sanitary sewer mains. Various maintenance activities are conducted at the sanitary sewer pumping stations and on the sewer mains to ensure proper operation. The graph below indicates the annual number of work orders conducted since 2001.



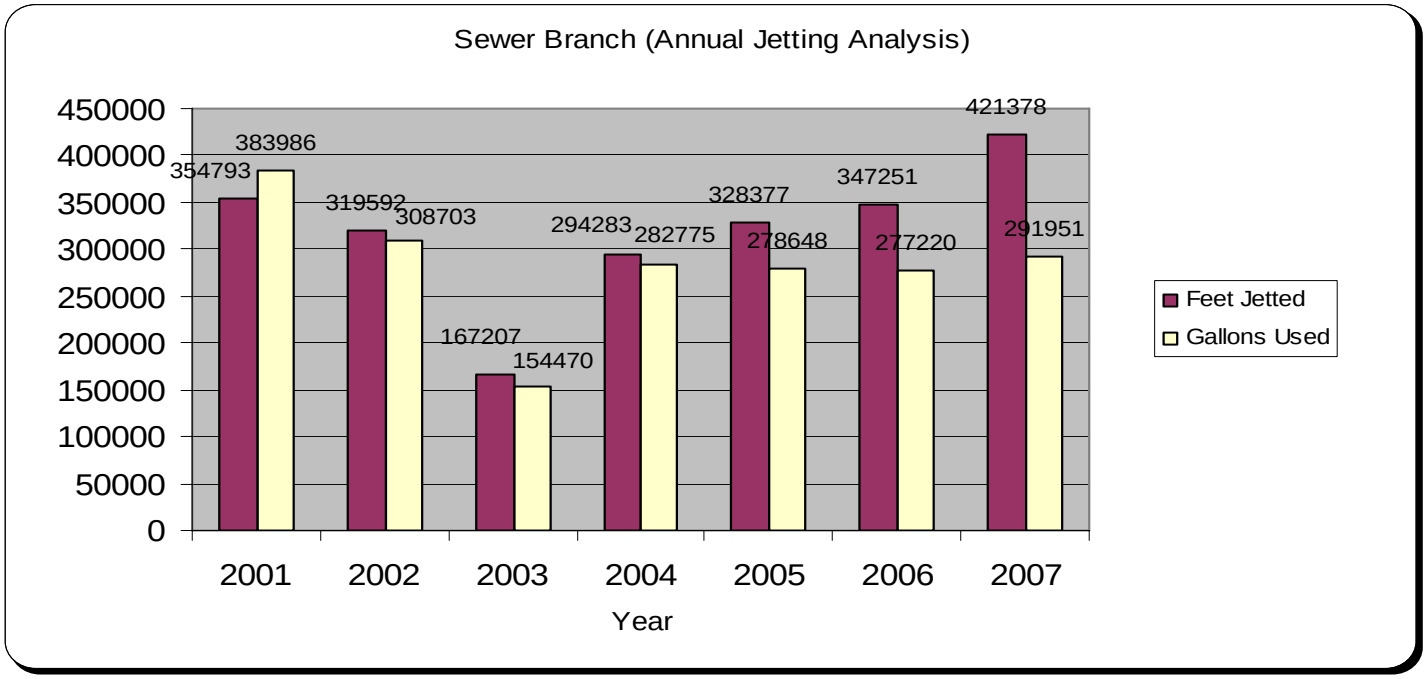
Sewer Backups

The DPW continued to process sewer claims internally in 2007. There were 26 Sewer Backup Claims submitted to the DPW. Claim settlements are influenced by many factors including meeting ACT 222 requirements and whether or not it was caused by a 3rd party such as a contractor or property owner. The DPW paid $16,967.14 in 2007 for claim settlements.

Utilization of the CMMS provides the ability to analyze data for trends in sewer backup histories, abnormalities in the piping systems and the need for supplementary maintenance to minimize sewer backup occurrences. However, the sanitary sewer system is subject to debris being introduced into it and other types of failure at any given time that could result in a sewage backup or sanitary sewer overflow (SSO).

Jetting of Sewer Mains

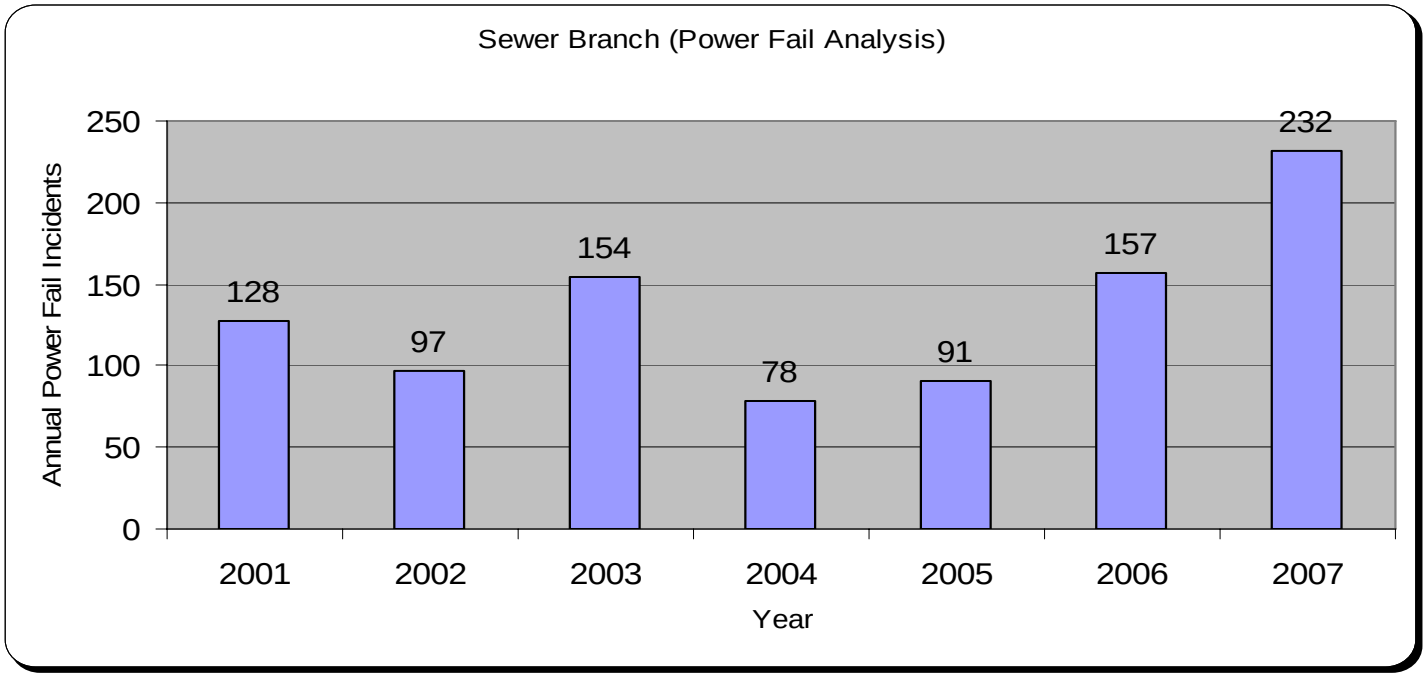
Jetting and vacuuming of the sanitary sewer main is one of the most effective preventative maintenance activities conducted by the branch to help ensure the mains are clear of debris and other blockages. The DPW has two sewer vactor trucks that perform this function. Cleaning schedules are organized through the CMMS and include data on the specific type of work conducted, the equipment used and all labor involved to provide a complete cost of the activity. The graph below indicates the annual feet of sanitary sewer main cleaned since 2001 as well as the number of gallons of water used to complete the work.



DPW Sewer Branch Employees Jim Cassidy (left) and Scott McGrady (right) working with one of the DPW's two sewer vactor trucks. These trucks and crews are responsible for cleaning 360 miles of Sanitary Sewer within the Township.

Sewer Power Fail Events

One of the most critical parameters monitored by the branch is sanitary sewer pumping station power failures through the SCADA system. Loss of power to a station is considered an emergency situation that needs to be addressed right away either through the initiation of temporary or permanent generator power. Depending on the length of power failure and the incoming flow to the station, the branch can have as few as 20 minutes to respond before backups and or Sanitary Sewer Overflows (SSO's) may occur. The DPW continued meetings in 2007 with Detroit Edison to discuss their capital and operational implementation plans to address the continued power problems in the Township. The graph below indicates the annual number of power fail events experienced since 2001.

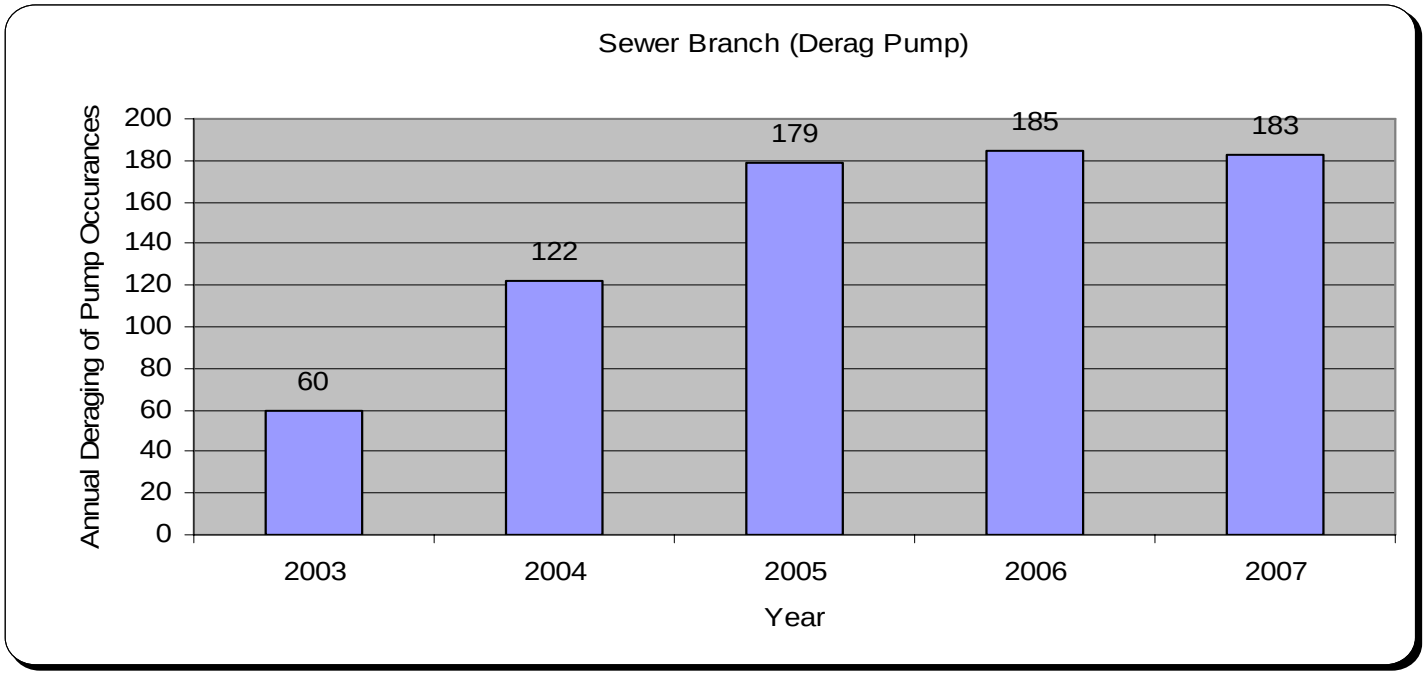


One of the DPW's portable power generators. If a sewer site looses power, DPW crews spring into action and run the station on generator power to avoid service disruptions or potential sewer back ups.

Stationary power generator at one of the Township's 63 sewer pumping stations. If a station looses power the DPW's SCADA control system will notify DPW personnel and generator power will be employed.

Deragging of Pumps

Each morning the SCADA system is analyzed with respect to sewer pump starts and run times to identify potential problems with sewer pumps at various sewer pumping stations. If station pump runtime data indicates long run times on a given pump in relation to normal, the pumps are inspected for ragging and/or other problems to return them to normal pumping ability before a problem occurs. Ragging means the pump volute housing and impeller are plugged with debris, which impedes the pump's ability to pump water. This situation can cause premature failure due to wear and tear on the pump and can snap shafts resulting in a total loss of the pump. When this condition is suspected, work orders are created and tracked in the CMMS. A general response would consist of two employees and a hoist truck being dispatched to pull the pump, clear it of debris, inspect it and return it back to service. The following graph indicates the number of times this activity has occurred since 2003.



Electrical Branch

The mission of the Electrical Branch is to provide electrical service for the DPW. Staff in this branch includes two Master Electricians and one Apprentice. They are skilled in all facets of electrical work including motor controls and the SCADA system.

The positions and a brief description of branch staff duties are as follows:

- Water/Sewer Superintendent
  Provides overall administrative support duties for the Electrical Branch. Provides research and analysis of the water/sewer plant electrical systems and suggest areas of improvement. Provides budgeting support and technical assistance to employees as needed. Analyzes the DPW's CMMS to look for system and branch improvements.

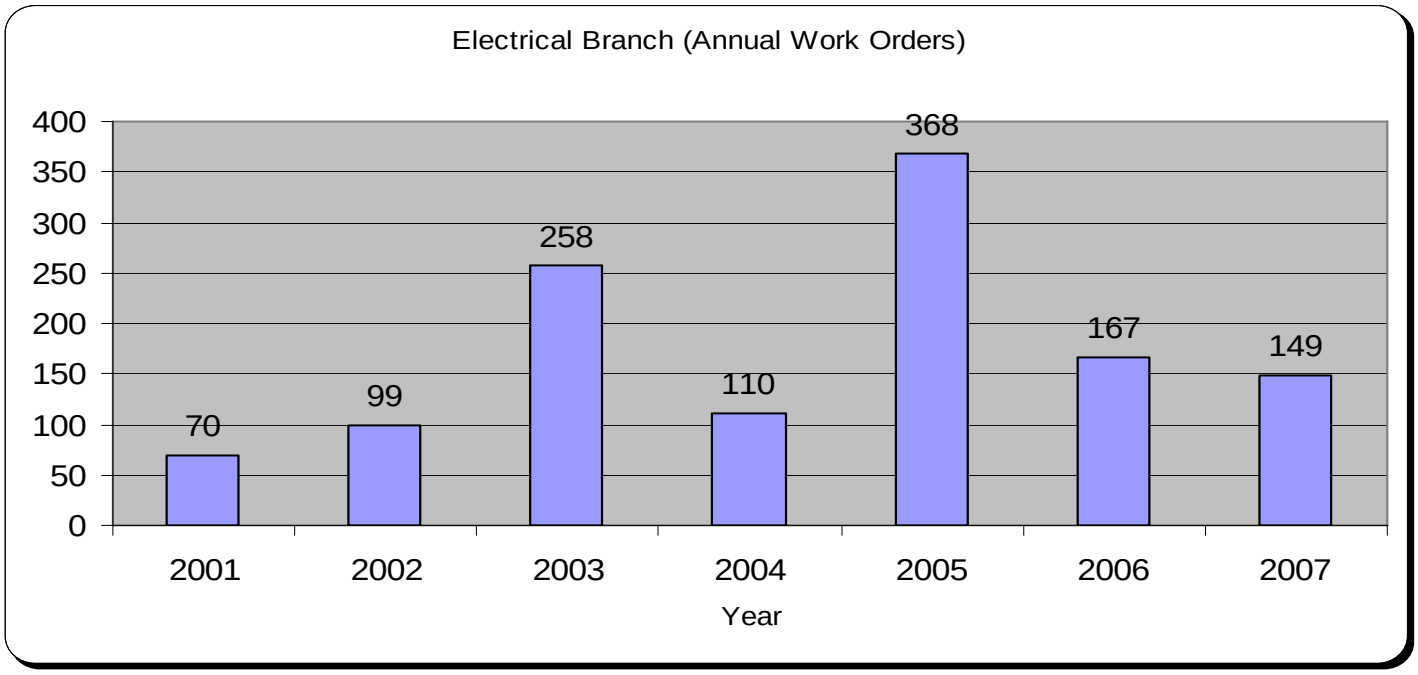
- Electrical Foreman
  Performs scheduling and planning of all work submitted to the Electrical Branch. Oversees all work completed in the CMMS program performed by the other two employees under his charge. Performs work in the field as needed to keep up with requests for electrical work.

- Electrical Service Tech II
  Performs work as assigned by the Foreman which includes all SCADA related instrumentation and related components. This employee performs electrical repairs at both water and sewer facilities as assigned.

- Electrician I
  Performs all work as assigned by the Foreman. Supports all branches of the DPW related to electrical problems or preventive maintenance. Enters data into CMMS per Foreman's directions.

Electrical Branch Annual Work Orders

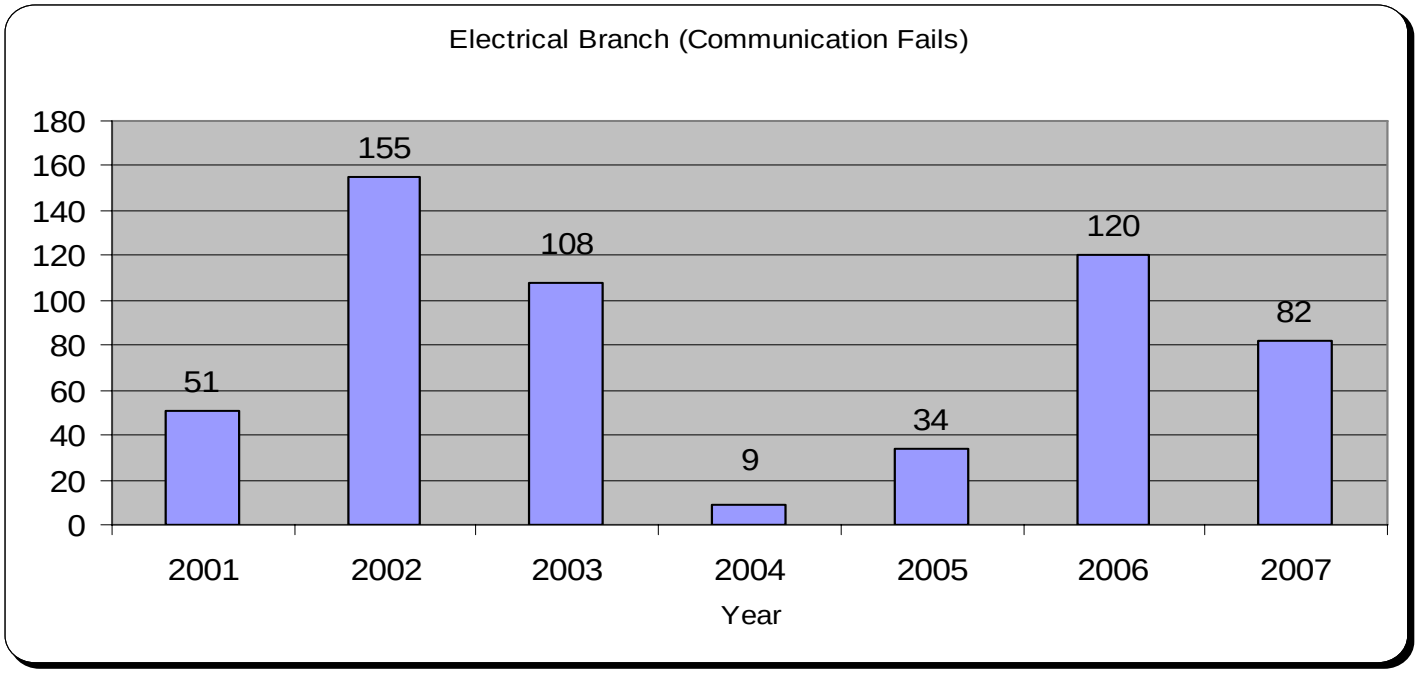
One of the main functions of the branch is the installation of electrical, instrumentation and radio components related to the SCADA system. Additionally, this branch installs generator transfer switches, electrical upgrades and new services at the Township's water and sewer pump station facilities. The graph below indicates the annual number of work orders performed by the branch since 2001. It must be noted that, depending on the scope and complexity of the work, some activities can take weeks to complete.



DPW Electrical Branch Employee Jeff Mohr utilizing the Zycom Computer Interface Unit at a Water Treatment Plant. Electrical Branch Employees work extensively with the monitoring systems at the Township's water and sewer sites.

Communication Fails

This work activity is initiated when the SCADA system initiates an alarm indicating it has lost communication with a water or sewer facility. This is an important alarm condition because it means there could be a problem ranging from electrical to physical damage at the site. The graph below depicts the annual number of communication failures since 2001. It must be noted that there are over 77 sites in the Township that are continuously monitored for communication status by the SCADA system.



Auto-Power Transfer Switches

At the end of 2007 there were 22 switches installed. With these units installed, the generator will start and transfer the electrical load automatically eliminating the need for an employee to respond unless there is a problem. With these in place 35% of the Township's sewer stations are automatically backed up in terms of power, which leaves the balance of 40 to be operated by portable generator. The DPW also has 7 of 10 water plants where stationary generators are in place. These generators are vital when the Township looses power.

Safety Branch

The mission of the Safety Branch is to provide professional safety services to ensure occupational compliance with labor rules and training for DPW personnel. By using the latest in technology and the most recent training materials available, this branch continues to ensure the DPW meets MIOSHA and other regulatory guidelines. The Safety Coordinator reports to the Administrative Superintendent. The abbreviated job duties are listed below.

Safety Coordinator

Responsible for planning, training, monitoring, and implementation of safety, health and related programs. Additionally gathers, analyzes, and inputs data for technical reports in the DPW's CMMS.

Employee Education and Training

In 2007, two (2) employees obtained a higher water license certification from the Michigan Department of Environmental Quality (MDEQ). The DPW also has on staff One (1) Strom Water Management designation, Twenty Nine (29) Water Distribution and Limited Treatment Operators and two (2) MDEQ Wastewater Certifications and six (6) Michigan Water Environmental Association (MWEA) MWEA Sewer Collection Licenses. The licenses and certifications listed above have been encouraged and promoted through the DPW's Career Ladder program. The Career Ladder Program is designed to encourage employees to obtain more licenses and certifications and move up a graduated pay scale. The Program has been a success and benefited both employees individually and the DPW collectively.

As a result of mandates from FEMA and under the guidance of the United States Department of Homeland Security, all DPW's are considered first responders in emergencies. This classification has resulted in comprehensive training for Incident Command and Recovery for supervisory and field staff, which continued through 2007.

A portion of the DPW's License and Certificate display. The DPW's Career Ladder Program has encouraged an ongoing approach to employee development and training.

Facilities and Operations Division

The mission of the Facilities and Operations Branch (F&O) is to provide professional services to Township Departments and the Citizens of Waterford Township. Responsibilities are accomplishes through trained personnel and utilization of the latest in technology including a CMMS.

F&O is headed by the Superintendent of Facilities and Operations and is composed of seven full-time and variable seasonal/part time employees.

- Superintendent of Facilities and Operations
  Responsible for planning, project evaluation, building system evaluation, design and bid specification preparation, budgeting, construction management, fleet management and quality review inspections of work performed by various contractors. Additionally gathers, analyzes, and inputs data for technical reports as well as the CMMS.

- Account Clerk II
  Provides administrative and clerical support, including scheduling appointments and meetings, answering phones, opening and distribution of mail, composing and typing correspondence to routine inquiries, providing counter assistance and receiving payments. Additional duties include purchase order, contract, bidder, budget and financial records keeping, cemetery sales and records. Assists in updating the CMMS and the Geographic Information System (GIS).

- Facilities Maintenance Technician
  Performs a wide variety of tasks related to maintaining, repairing and constructing buildings, fixtures and equipment. Responsible for the completion of data entry and documentation of work order requests in the CMMS system.

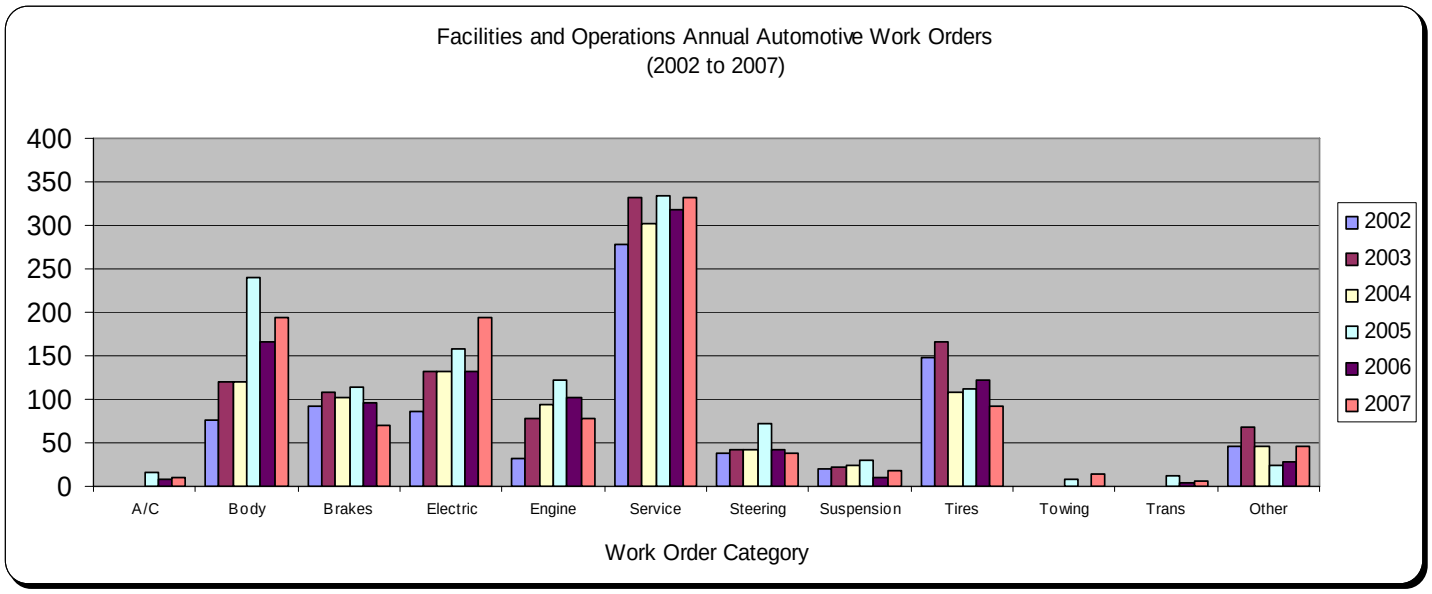
- Maintenance Worker
  Performs tasks related to plumbing, carpentry, welding, painting, masonry and other general ground and maintenance work.

- Mechanics (3)
  Performs repairs and maintains a variety of makes and models of passenger automobiles, light and heavy duty trucks and light and heavy duty construction equipment requiring gas or diesel engine operation. Responsible for the completion of data entry and documentation of work order requests and inventory control utilizing the CMMS.

- Cemetery Sextons (2)
  Responsible for showing and selling cemetery lots to the general public, maintaining precise cemetery plot maps and records, lays out graves, sets up and prepares the grave site for funerals, receives funeral procession and collects proper papers and monies due. Responsible for the completion of data entry and documentation of work order requests in the CMMS and GIS systems.

F&O Branch – Automotive Branch

The Automotive Branch of F&O conducts routine and complex service on the Township vehicle fleet. Currently, there are over 250 vehicles, tractors, mowers, large trucks, generators and other specialized pieces of equipment organized into the CMMS. Maintenance costs are recorded and tracked in the CMMS. Township Departments are charged back on a monthly basis for the services rendered on their respective fleet vehicles and/or equipment. The graph below depicts the major categories of maintenance per year since 2002. Similar trends are likely to continue as the Township fleet continues to age.

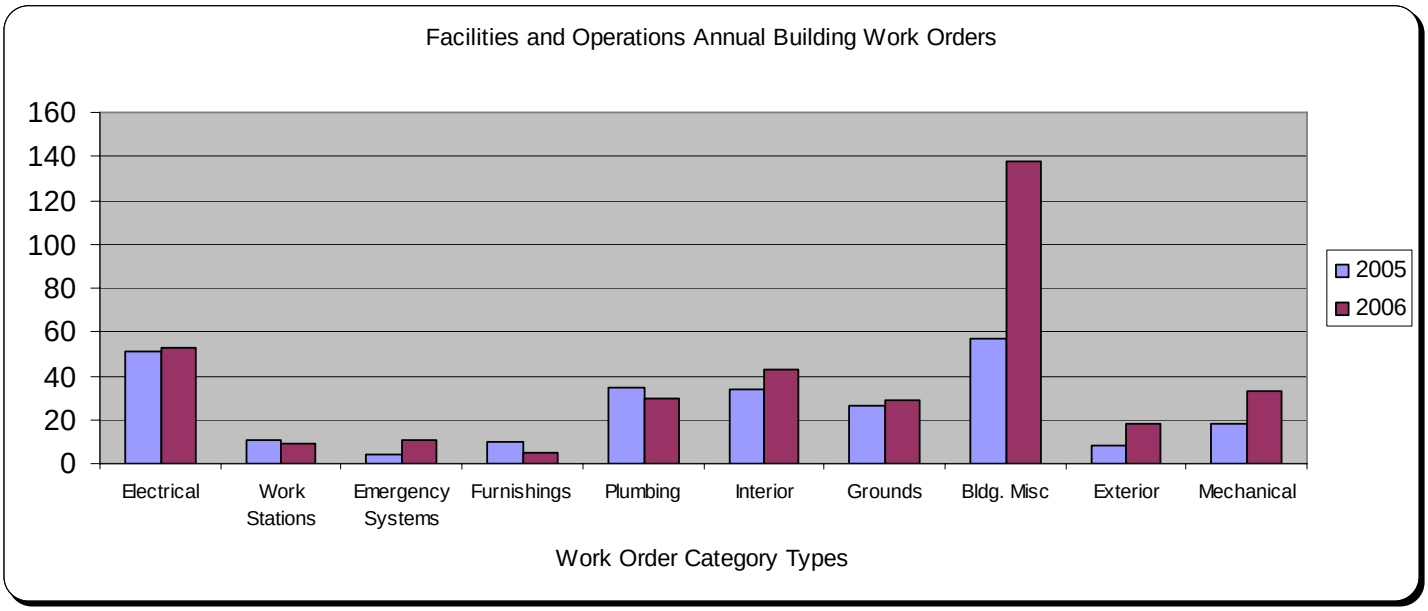


DPW Employees and Mechanics Isaac Nott and Tim VanDeWater working on one of the Township's Service Vehicles.

F&O Division – Building Branch

The CMMS was incorporated into the business process approximately five years ago as the lead program for the monitoring of Motorized Vehicles, Equipment and Facility repairs and maintenance operations in F&O. Even though operational, the system is under continuous modification to improve data entry, activity costing and tracking of work activities. The system is currently 100 percent operational for the motor pool and approximately 85 percent operational for other activities.

The Building Branch aspect of the CMMS continues to grow with respect to work captured and additional equipment and facilities being added. The graph below depicts a summary of work history in the Branch for 2005 and 2006. At the time of the report 2007 work order history was not available. Documentation and historical trend information are invaluable when analyzing facilities costs and projecting future capital expenditures that may be required.



Capital Improvements

In September of 2005, the Facilities & Operations Department started a series of capital improvement projects that would enhance the working environment while beautifying the campus buildings. The following projects were completed in 2006: the Campus Flag presentation (National, State and Township), the Township Hall, 51st District Court, Parks and Recreation, Nature Center Care Taker's house and Classroom building roofs were completed with issuance of manufacturer warranties.

In 2007, the following projects were completed: the replacement of the Township Hall Main and second floor entrances, the 51st District Court Main entrance, the Parks & Recreation Main Entrance, the 51st District Court interior up-grade, the Township Hall & 51st District Court HVAC Control systems, the IS Computer Room electrical up-grade, the Township Hall Main Lobby up-grade, the Township Hall Plumbing up-grade, the Parks and Recreation gutter and down spout system, the Township Clerk's access door and the Treasurer's Counter front.

The Town Hall window wall project awaits completion of punch list items, water testing and inspection with issuance of manufacturer warranties.

F&O Division – Cemetery Branch

The Township currently owns and operates five (5) cemeteries located through out the Township with varying degrees of burial availability. F&O conducts all of the burials, internments and grounds maintenance for the cemeteries. Two (2) of the cemeteries are basically full resulting in diminished revenue while annual maintenance liability and related expenses continue to increasingly be incurred. Through the Cityworks CMMS, the branch is able to accurately record and analyze burial and maintenance time and costs.

Cemetery Name	Location
Crescent Hills	Civic Center Drive
Waterford Center	Corner of Airport Road and Pontiac Lake Road
Four Towns	Cooley Lake Road near Lochaven
Drayton Plains	Dixie Highway and Williams Lake Road
Waterford Village	Rockcroft off of Dixie Highway

Cemetery	Total Spaces =	Burials +	Obstacle +	Sold-Empty +	Available +	Unknown
Crescent Hills	6083	2612	94	1668	1473	24
Waterford Center	2089	1101	24	964	0	0
Drayton Plains	3464	1472	16	1257	707	12
Four Towns	658	333	12	313	0	0
Totals	12294	5518	146	4202	2180	36

* There are currently 212 gravesites that are not plotted in Crescent Hills Cemetery.

- Grave site status based on data analysis of DPW's GIS System.
- Equipment costs based on M-Dot Schedule C.

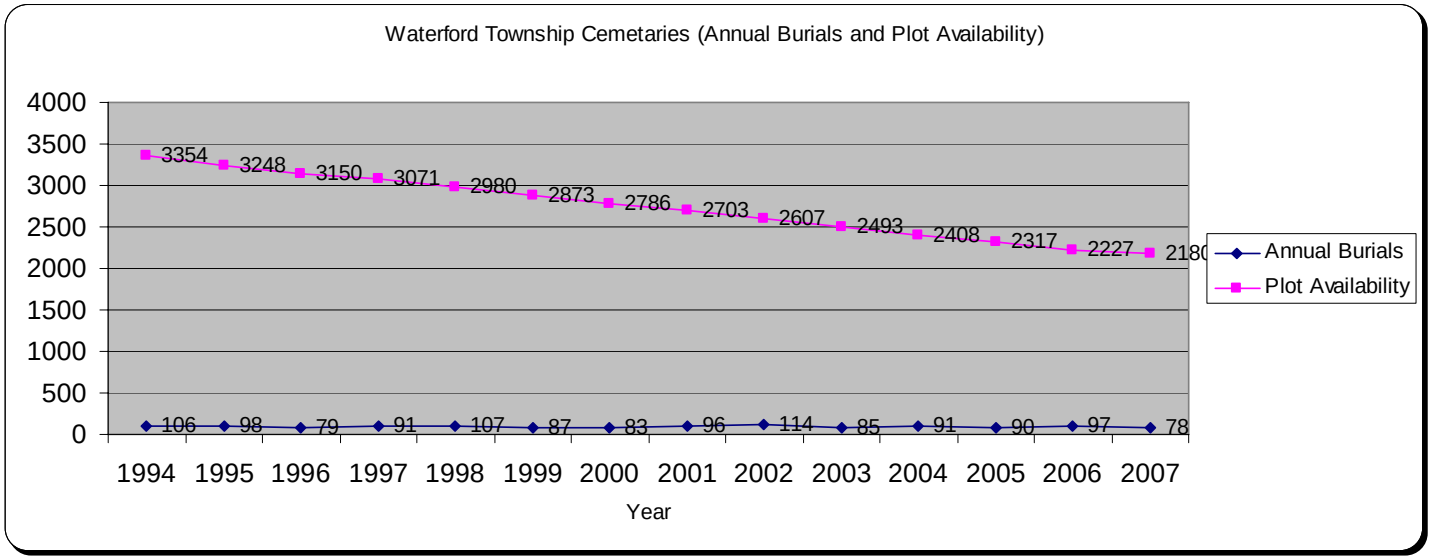
DPW Employees Mike and Carol Poplawski at Crescent Hills Cemetery.

Cemetery – Burial Trends

From 1994 to 2007 Waterford Cemeteries have averaged 93 burials per year. Based only on this trend and holding all other contributing factors constant, the current 2,180 available plots would be completely utilized in the year 2030. This would constitute an estimate, as the population continues to age and many other factors could speed up or slow down this projection.

This brings to light the emphasis and need for the current 'Perpetual Care Fund' for the Cemetery Branch. This fund will be used as a primary source of revenue for future cemetery operation and maintenance when all plots are sold. A Cemetery Rate Analysis was completed in 2006, and rates were adjusted to reduce the annual revenue to expense shortfall for Cemetery Operations. In 2007 Perpetual Care Monies were collected at time of each new lot sale.

The graph below depicts the average annual burials since 1994. The graph also demonstrates the declining availability in plots into the future.



F&O Division – Compost Branch

The F&O Division operates a seasonal compost site available to Township residents at a nominal charge. Residents are permitted to bring in leaves, grass, limbs and other yard waste.

Compost Cost and Expenses Operating Year 2007

Part Time Employee	Wages	Equipment	*Grinding	Total
2	$5,994.50	$700.00	$0.00	$6,694.50

**** A grinding process was not conducted in 2007, but 2008 expected charges are estimated near $20,000.00***

Total revenue generated from compost sales as of Dec. 31, 2007	$16,231.00
Operational Surplus in 2007	**$9,536.50

Please note based on a 5% revenue increase for 2008, the operation will have a deficit when grinding operations are taken into account. The cost analysis also didn't include employee benefits. Equipment costs are based on M-DOT Schedule C.

Revenue in 2007 was lower than previous years in part to the ash bore disease that has infected trees throughout the Township. In order to help contain the spread of the disease, the County established a free drop off site on Scott Lake Road so that residents from all communities could discard the diseased trees in one location. Secondly, the compost site was closed more frequently in 2007 due to inclement weather conditions.

In the future, serious consideration needs to be given as to the direction the compost operations should take. At this time, it is not set up and/or funded to be a fully operational compost site.