

# **Mount Laurel Township Municipal Utilities Authority**

## **Quarterly Report**



1<sup>st</sup> Quarter 2011 (January to March)

***Authority Members***

Chairman	Irwin Edelson
Vice Chairman	James Misselwitz
Secretary	Frederick Braun
Member	Elwood Knight
Member	Geraldine Nardello
Executive Director	Pamela J. Carolan, P.E.

*Total Number of Customer Accounts:* 17,855

***Mission Statement:***

“Provide safe, dependable and affordable water and wastewater services to our customers in an environmentally conscious manner while remaining committed to our community’s needs.”

**Sewer Department**

***System Summary:***

The Mount Laurel MUA wastewater service area runs congruent with the Township boundary. Approximately 95% of residential properties and 98% of commercial properties are currently connected to the Mount Laurel Township MUA sanitary sewer system. The Mount Laurel Township MUA treats all sewage generated within the Township at the Hartford Road WPCF with the exception of the southwestern area (Laurelwood, Countryside, and Roland/Fellowship industrial area); in these areas, sewage is collected by the Mount Laurel Township MUA and pumped to the Camden County MUA for treatment.

***Wastewater Treatment Plant:***

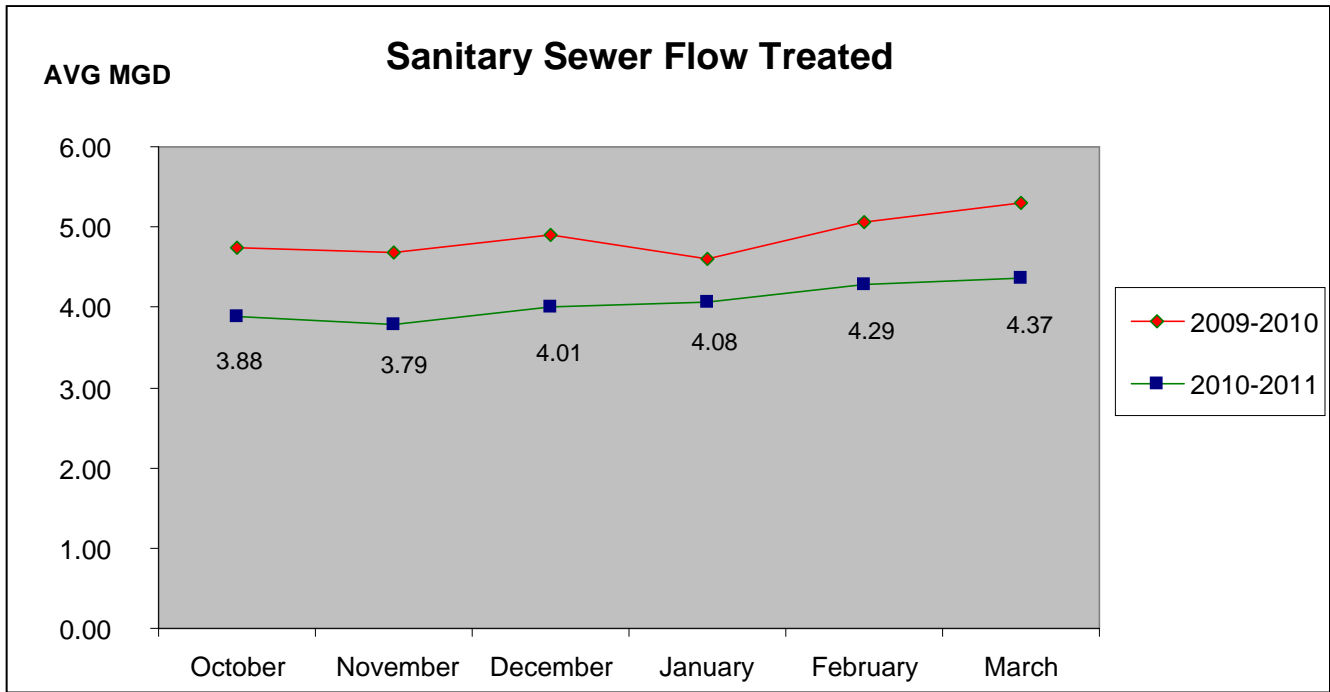
Hartford Road Water Pollution Control Facility  
6.0 Million Gallons Per Day (MGD) capacity  
Advanced secondary treatment using extended aeration and UV disinfection, sludge dewatered on-site with bio-solid disposal at the Burlington County Composting Facility

***Collection System:***

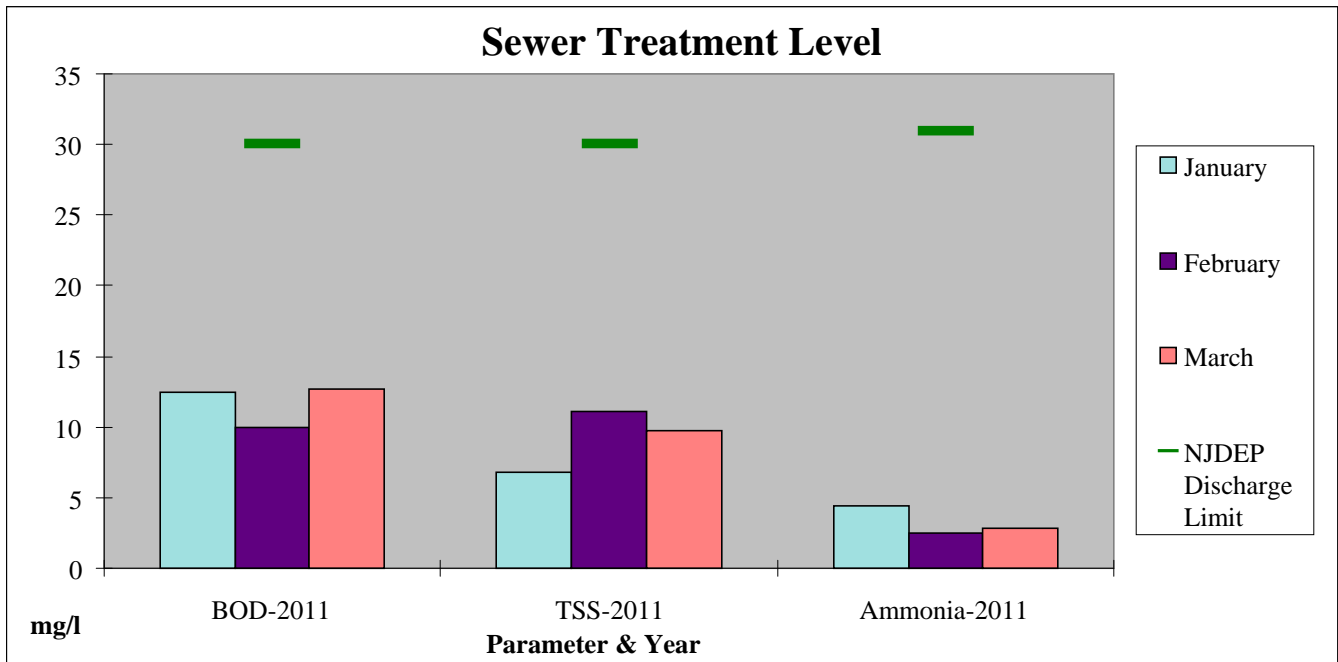
39 pump stations  
3860 manholes  
32 miles of force main  
149 miles of gravity main

# Sewer Operations

*Treatment Plant:*



Total Treated in Quarter = 382.07 Million Gallons (MG)  
 = 4.24 Million Gallons Per Day (MGD)



Our wastewater treatment facility consistently produces an effluent discharge, which is substantially better than required NJDEP limitations. Although we routinely sample for dozens of parameters (hundreds at certain times of year) the three chosen parameters of BOD<sub>5</sub>, TSS, Ammonia Nitrogen are standards for the industry deemed representative of general treatment plant operations.

### ***Reclaimed Water for Beneficial Reuse:***

Due to the high quality effluent from our wastewater treatment plant operations, in 2003 the MUA obtained a permit from the NJDEP for reuse of wastewater effluent for various applications within Mount Laurel. The MUA currently uses the renewed water (treated wastewater treatment plant effluent) for the wastewater treatment plant site utility water system, pumping equipment seal water, process equipment wash down, sewer main cleaning, street sweeping, wastewater treatment plant irrigation, fire protection for the wastewater treatment plant, fire protection for the Mount Laurel Township leaf composting area, and vehicle washing. Use of renewed water reduces the quantity of potable (drinking) water required at the wastewater treatment plant and other MUA operations.

### ***Sanitary Sewer Collection System:***

#### ***Pumping Stations:***

- 2050 operation and maintenance checks were performed
- 167 in-house repairs performed
- 586 preventative maintenance repairs
- 26 of 39 wetwells cleaned
- 13 wetwells cleaned

#### ***Televising & Cleaning of Sewer Mains:***

The MUA owns and operates a sewer camera truck for internally televising sewer mains. This equipment enables us to detect and monitor corrosion, leaks, roots, and grease buildup, so that corrective action can occur before emergencies arise. The MUA can then use its sewer jetting equipment to clean sewer mains of grease buildup and silt. All video documentation is cataloged and is also used in evaluating the timing for repairs and capital replacement projects of mains.



MUA Personnel Jetting Sewer Mains

***Other Sewer Related Items:***

Responded to and resolved sewer service calls from 74 customers during the quarter

4 Sewer Vent Cap Broken/Missing	4 Locate Sewer Vent	4 Bad Odor In Area/Home
4 Sink Hole	1 Broken/Noisy Manhole Lid	3 Manhole Overflowing

**26 Sewer Line Back Up**

- MUA personnel checked our facilities to confirm proper operation of our system. In all cases, backups were determined to be within the property owner’s lateral. We performed courtesy plunging of vents where applicable. The most common causes of clogged laterals are root formation and grease buildup. Owners advised to contact plumbers to ameliorate.

**21 Vent Overflowing**

- MUA personnel plunged the vents and broke blockages in the customer’s lines.

**4 Sewer Field Service**

- Manhole Overflowing Timberline Drive – MUA personnel checked the manhole – it was full. Jetter Crew was sent out to jet the line and break the blockage
- Elbo Lane – Received call from Burlington County Highway Department of open sewer manhole. MUA personnel drove the length of Elbo Lane and could not find the open manhole.
- Larch Road – Sewerage was running out of septic tank in front yard. MUA personnel confirmed it was not a problem at an MUA facility, and advised the homeowner to have the septic tank pumped out.
- Hainesport Mount Laurel Road – Received call, sewer pressure too high – plumber was at property to fix check valve on sanitary ejector pump and when he turned on the system, sewage blew out the pipe. MUA personnel found blown check valve in the customer ejector station. Customer wanted to know if the MUA could repair this problem. We explained it is his responsibility from his tap at force main to his private pump station and he needed to have it repaired.

**3 Blockage In Sewer Main**

- Hickory Lane & Timberline Dr. MUA personnel found blockage in Sewer Main. Jetted 20’ one direction and the blockage would not break. Jetted 190’ the other direction and broke the blockage.
- Timberline Drive MUA personnel found manhole filled at 420 Timberline Drive & Dry at 435 Timberline Drive. Had Jetter truck come out and jet the main and remove roots.

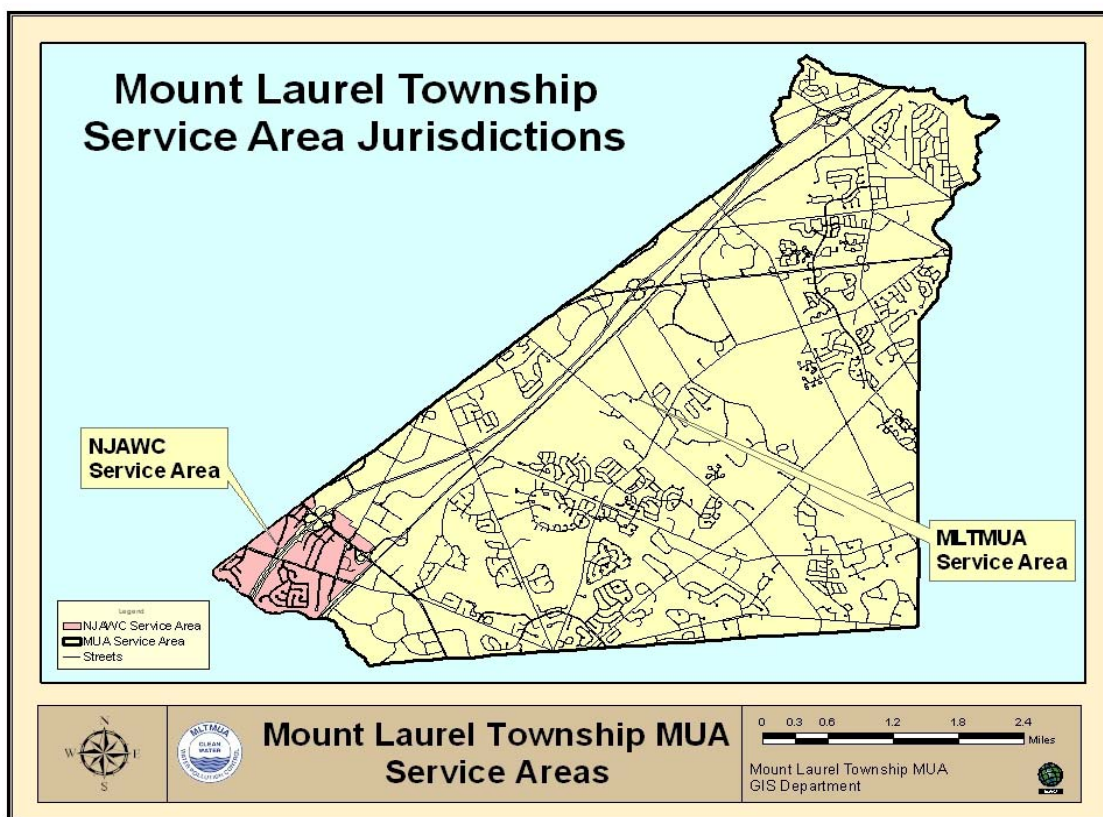
Collections System employees received jetter truck maintenance training this quarter



## Water Department

### System Summary:

The Mount Laurel Township MUA services the majority of Mount Laurel for water service with the exception of the southwest NJ American Water Company (NJAWC) franchise area. Water supply within the Mount Laurel service area comes from several sources: The Potomac-Raritan-Magothy aquifer system, the Kirkwood-Cohansey aquifer, and the Delaware River. Previous annual water demand ranged between 1400 millions gallons per year (MGY) and 1900 MGY; however in 2009 actual use dropped to a low of 1362 MG. The MUA supplied this water from its own wells (allocation limited to 717 MGY by Critical Water Supply Area # 2 Legislation) and via water purchase agreements with the NJAWC and Willingboro MUA (WMUA). The MUA fully utilized its ground water allocation, to satisfy 45% of total customer demand. The remaining 55%,  $\frac{3}{4}$  of a billion gallons of water, was purchased from NJAWC & WMUA to make up the allocation shortfall. The MUA continues to pursue alternative supplies of water in order to meet the current and increasing demands of the community.



## ***Water Treatment Plants***

### **Elbo Lane Groundwater Treatment Plant (Wells 3, 4 & 6, with capability of well 7 ASR)**

- This facility treats our native groundwater (from the lower Potomac-Raritan-Magothy aquifer) by removing naturally occurring minerals such as iron and manganese. In addition, we adjust pH, water hardness, disinfect and add fluoride. Many area water providers do not provide treatment other than required disinfection, which certainly affects operating expenses and probably water rates.
- Peak treatment capacity of 5.3 Million Gallons per Day (MGD) for summer months. Due to NJDEP allocation withdrawal limitations, actual operational level of 0 – 2.0 MGD during remainder of year
- The MUA has been waiting for NJDEP to issue an amended water allocation permit 4 years. However, NJAWC has requested that NJDEP hold a public hearing regarding our request, which has stalled the permit process within NJDEP. The amended permit will allow some increased pumping during the high use summer months, thereby reducing summer purchases at NJAWC peak billing rates.

### **Aquifer Storage and Recovery Well (Well # 7)**

- This facility augments water supply sources in the high summer months. Water is pumped into the well in the winter when demand is low and supply is plentiful, and then withdrawn during times of peak demand.
- Approximately 200 MGY total storage capacity, 1.3 MGD recharge, 3 MGD recovery capacity. The storage goal for 2010-2011 cycle year is 200 MG.

### **Distribution System**

2 elevated water storage tanks; capacity of 500,000 gallons and 1 million gallons

2 ground level water storage tanks; each with a capacity of 1 million gallons

200 miles of water main

1548 fire hydrants

2899 water valves

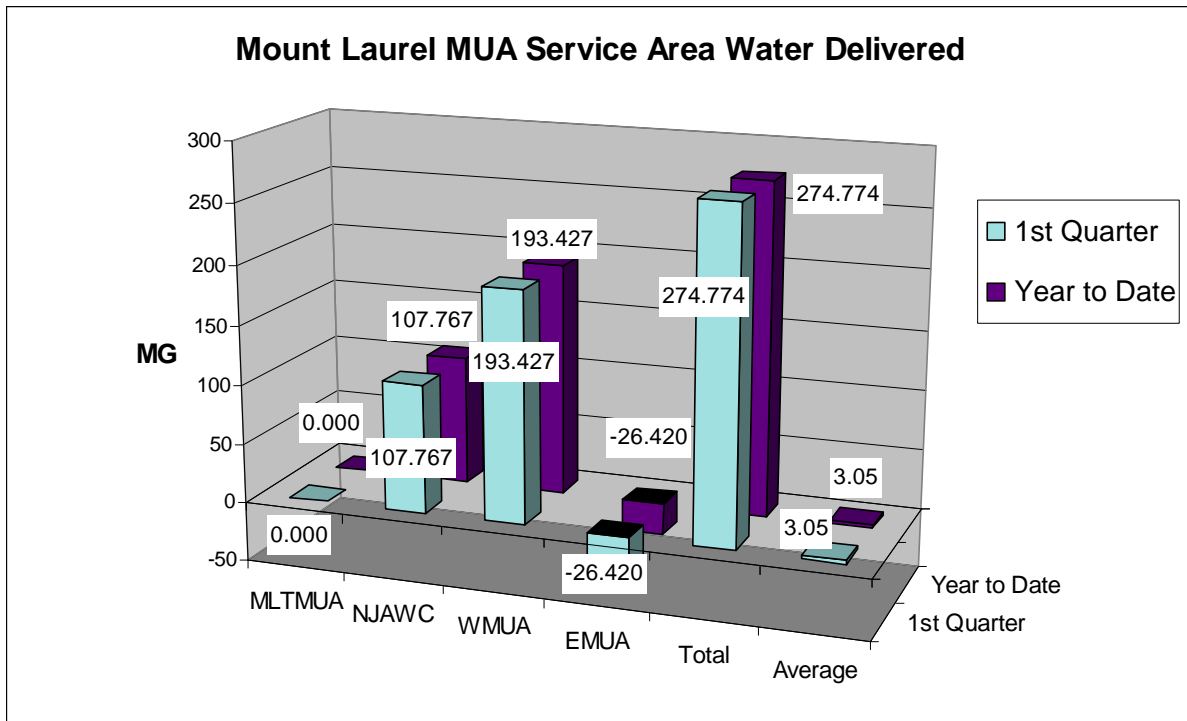
5 bulk interconnections; Willingboro MUA, Evesham MUA, NJ American Water (3)

8 stand-by interconnections; Evesham MUA (4), Moorestown Township (2),

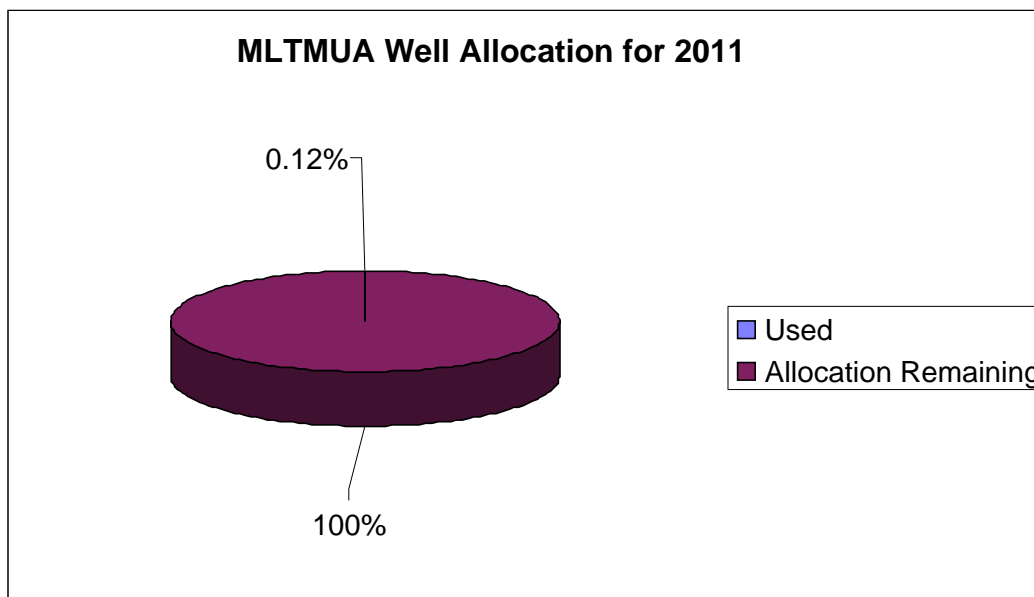
Maple Shade Township (1), NJ American Water (1)

Customers are reminded that ownership and maintenance of the service lateral from the main to the premise is the responsibility of the property owner.

## Water Operations



The total water supplied to MLTMUA customers during the quarter was 274.774 MG. We recharged an additional 104.495 MG to the ASR well for use during the peak summer season in 2011. The average daily use for the quarter was 3.05 MGD. The peak monthly use for Mount Laurel customers was 212.565 MGM, which occurred in July 2010. Mount Laurel MUA demand (which includes water passed to EMUA) was 10.07 MGD and occurred on both July 17, 1999 and July 23, 2001.



The MUA reserves its own well allocation for peak months and utilizes NJAWC during non-peak months when the purchase expense is least costly. This is required in order to meet operational demands as well as for cost considerations.



## Elbo Water Treatment Plant Chlorine Contact Chamber leak:

At the end of February, our personnel noticed water rising up from the ground in the vicinity of the previous 2" chlorine residual sample line leaks. On February 28<sup>th</sup> we began excavation to repair the sample line only to discover that the water was coming from much deeper in the ground. Ultimately, we determined that the 60" diameter chlorine contact chamber was leaking. Fortunately, the plant was off-line for the winter, which afforded us the ability to isolate the leak. The pipe, which makes up the chamber, cracked at one of the joints. During the next 6 weeks, repair of the pipe occurred. In addition, preventative measures were taken to shore up all of the remaining pipe joints without additional excavation. Total cost of the repair, was approximately \$290,000.

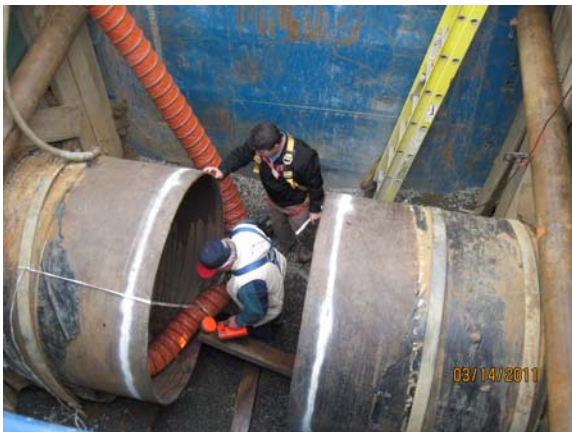
Spring start up of the plant was delayed for over 4 weeks as a result of this incident. However, we were able to maintain water supply via continued purchase from our bulk interconnections without disruption to our customers. A forensic investigation regarding this situation continues.



The leak found after excavation



Cracked Pipe

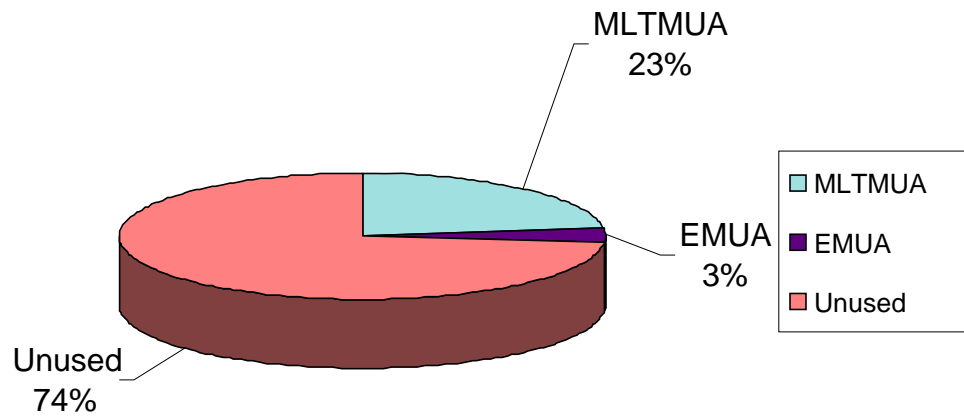


An internal inspection



Sleeve and repair clamps in place

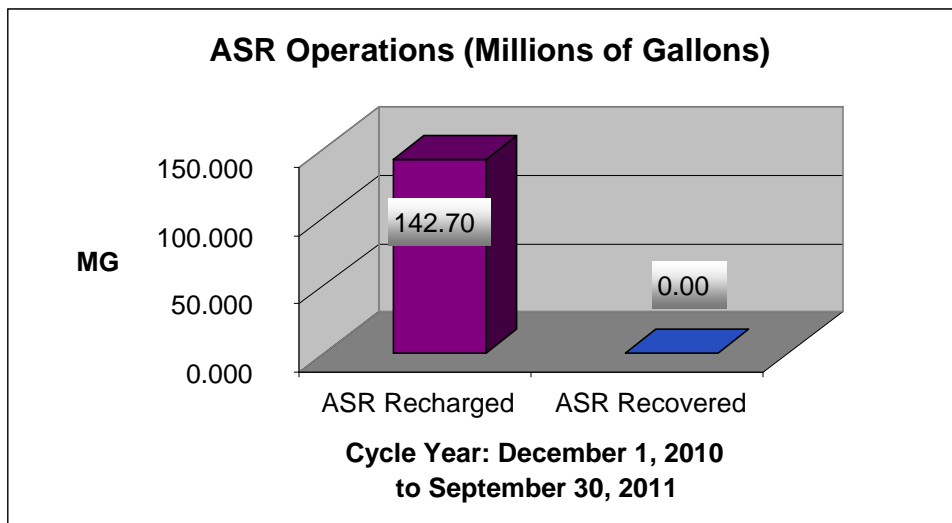
## WMUA Allocated Water Use for 2011



- Assumed Total Gross Available from WMUA = 730 MG

## ASR Operations

In 2004, production Well # 7 was converted to an Aquifer Storage and Recovery Well (ASR). Approximately 200 Million Gallons (MG) of system potable water can be pumped into the well during the winter season (October-April), when the purchase of water from New Jersey American Water Company (NJAWC) is the least expensive. Between May and September, the entire recharge quantity is withdrawn, conditioned and supplied to the water distribution system to supplement supplies during peak use time.



The plan for 2010-2011 cycle is to recharge 200 MG of water. Recharging for this cycle began on December 1, 2010; the start date was delayed due to continuing repairs needed at the well that needed to be performed while the well was out of service. Therefore, the amount recharged for the cycle so far is only 142.705 MG, which is less than that recharged in the same period during prior years. Additional control loop work and pump testing will be performed when the well begins the recovery phase in July 2011 and ends the recovery phase in September 2011. Timing of these additional work items has been coordinated with the individual contractors.

**Distribution System: (This Quarter)**

**Work Performed:**

- 18 System breaks / Service leaks repaired / Valve repairs
- 30 Curb boxes located / repaired (Part of FY2011 Meter Change Out Program)
- 8 Street boxes repaired
- 45 Meter change outs (FY2011 Meter Change Out Program)
- 22 Meters/ Touch Pads repaired / replaced
- 7 New Meter Connections
- 41 Shut-offs (For Non-Payment)
- 13 Hydrants painted, repaired or replaced (Preventive Maintenance)
- 5 Installed Hydrant Flags
- 2 Blowoffs repaired (Preventive Maintenance)
- 18 Blowoffs flushed (Preventive Maintenance)
- 43 Main line valves exercised (Preventive Maintenance)

***Water System Breaks / Repairs Occurred:***

**Repaired by MUA Crew**

**Pipes (Crack)**

Hooten Road  
Rancocas Blvd

**Valve Repair**

Elbo Lane & Mallard Drive  
Country Club Parkway  
Cypress Point Circle  
Mount Laurel Road & Hooten Road

**Curb Stop Box Repair**

Brentwood Drive  
Sedgefield Drive  
East Berwin Way  
Church Street & Elbo Lane

**Miscellaneous Repairs**

- Prepped Holes for Paving – St Andrews Ct., Wharton Rd., Lincoln Dr. & Buckingham Way
- Hand dug up 6” gas main for hydrant repair at Hartford Road & Elbo Lane Hydrant No. M16-03
- Located and dug up line valve on Marne Highway/Creek Road, brought to grade with 24” riser
- Dug up CB’s at 118 & 120 Buckingham Way – Investigated setup of domestic & fire service lines in preparation for Capital Project in FY12

**Hydrants & Blow Offs Repaired & Replaced: (non-emergency)**

- Repaired Blowoff Hydrant No. H10-08 – West Berwin Way & Village Lane
- Replaced Hydrant No. F11-02 Buckingham Way
- Replaced Hydrant No. J17-05 Hainesport Mount Laurel Rd. – Hit by car
- Replaced Hydrant No. F7-03 Cobblestone Drive & Holiday Court
- Replaced Hydrant No. H17-06 Arden Court
- Repaired Hydrant No. H20-04 Sandhurst Drive & Langcliff Court - Hit by Car
- Repaired Hydrant No. F19-17 Willow Turn
- Repaired Hydrant No. E20-10 6400 Building Preston Way
- Repaired Hydrant No. I13-6 Ethel Lawrence Blvd
- Repaired Hydrant No. G17-01 Union Mill Road - Sink Hole
- Repaired Hydrant Located @ 1001 Briggs Road
- Repaired Hydrant No. E06-01 South Brentwood Drive
- Moved Hydrant No. M16-03 Hartford Rd. & Elbo Lane – For Road Construction

The MUA saved approximately **\$12,164.00** on repairs for the 1st Quarter 2011 by performing work previously contracted.

**Repaired by Outside Contractor:**

**Pipe (Hole)**

Buckingham Way

**Pipe (Crack)**

Marne Hwy. & Rancocas Blvd.

(4) Saint Andrews Court

(2) Hooten Road

**Service Leaks/ Fire Hydrants on Private Lines:**

All of the following repairs were initiated by the MUA either as potential main breaks or in the name of public safety. All costs were borne by the owners of these facilities:

- Winterberry Court (Service Leak)
- Masonville Centerton Road (Service Leak)
- Denny’s Route 73 (Service Leak)
- Country Club Parkway 800 Woods Section (Private Hydrant)

***Upgrading Our Water Meters:***

We are continuing the process of upgrading water meters in homes (over a 10-year period) to a metering unit that offers many benefits to both our customers and the MUA. The new units are read by our personnel utilizing radio communication. This allows our reader to gather the meter reading without entering the property as most reads can be obtained from the sidewalk area. The upgraded meters provide all of the capabilities of the current meter with the addition of advanced leak detection capabilities. These meters continuously record usage, however in order to conserve electronic life, the visible readout goes into “rest” mode when not needed. To view the meter reading at any time, the customer must wake up the readout by simply shining a flashlight on the meter face.

**Other Water Related Items:**

The MUA responded to 132 water service calls of the following types:

1 Potential Water Main Break

- Rancocas Blvd. – MUA personnel confirmed a water main break

1 Particles In Water

- Greenwich Lane – Customer called to complain of black water while he was taking a shower. MUA personnel checked all aerators, found parts of dip tube from hot water heater in all plus black specs. Explained to the homeowner that he should contact a plumber and have the hot water heater flushed. A new hot water heater may be required; customer advised of a class action lawsuit against certain manufacturers from the 1990's.

7 Water Field Service

- Sandhurst Drive - Received call from Public Works damaged fire hydrant – Hit by car
- West Berwin Way - Received call from Fire Department damaged fire hydrant – Hit by car
- Sandhurst Drive & Langcliff Court from Fire Chief damaged fire hydrant – Hit by car
- Rancocas Blvd – Plumber called for a new larger meter for the irrigation system. Explained procedure for obtaining and advised the plumber to contact the main office.
- Walt Whitman Avenue – Received call from Mount Laurel Police hydrant leaking causing a large ice patch. The Fire Department had been at the site due to a possible gas leak at the post office. MUA personnel found the Fire Department had shut down the hydrant. There were no leaks and the Township Public Works Department salted the road.
- Danville Court – Customer hears water running in the wall. MUA personnel found the buzzer going off for the stove. When customer set the clock back she turned on the timer for the stove.
- Briarwood Road – Received call from customer of holes left from curb stop box repairs. MUA personnel found the holes in the street needed to be filled and patched. Explained to homeowner the holes were dug by PSE&G and not the MUA.

23 emergency shut off / on

1 noisy pipes/meter

1 locate water cap

1 ground water

7 cloudy / rusty water

5 bad odor / taste in water

2 leak in home

1 frozen pipes/meter

2 irrigation line leaking

2 service leaks

3 curb stop box misc.

56 turn on water (off for non payment)

9 meter leaking/broken

4 lid missing

1 water in basement

3 low/high water pressure

2 hydrant broken / leaking

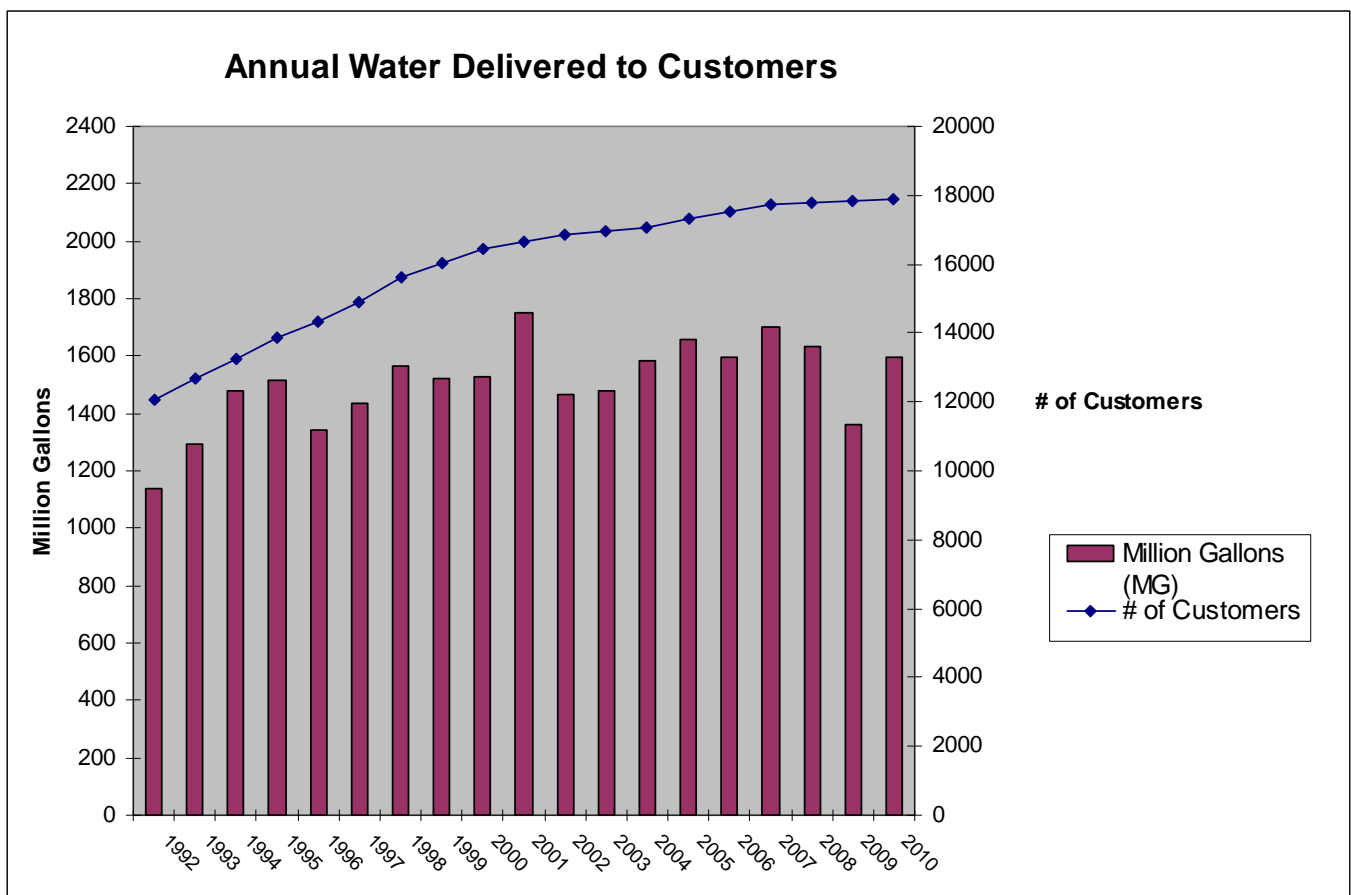
### Water Quality in the Mount Laurel MUA Water System:

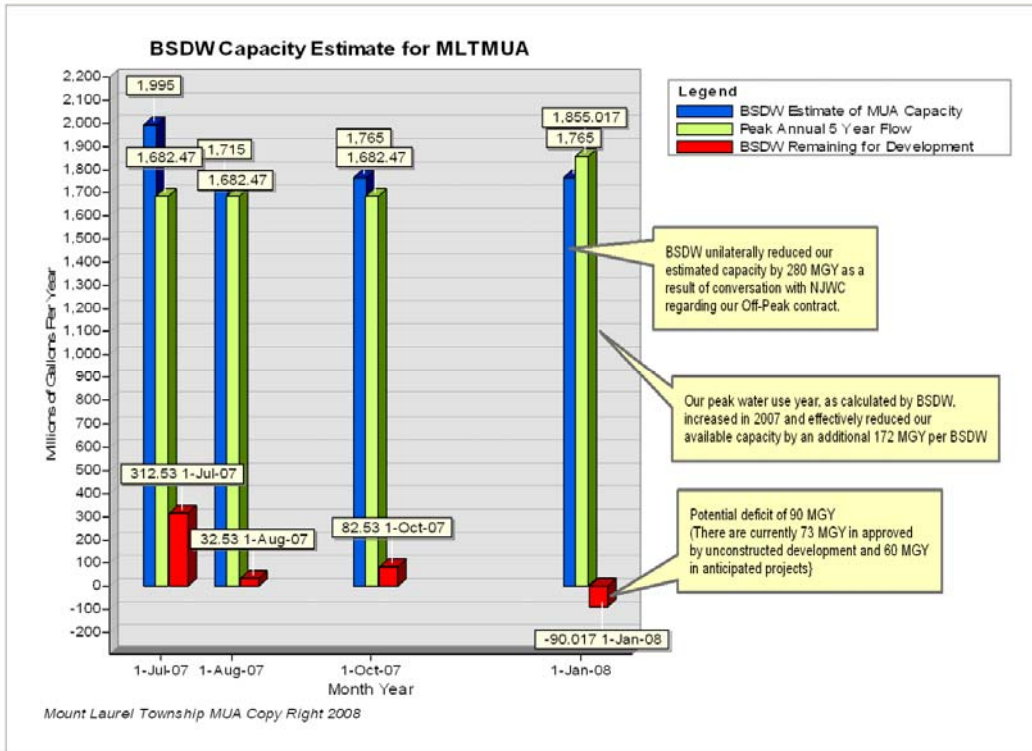
The three distinct categories of water quality that our customers bring to our attention are taste and odor, discoloration, staining, and particles in the water. We find most problems occur locally and the causes accredited to a handful of factors, which include water main breaks, hydrant use (legal and illegal), system maintenance work, and occasionally changes in water use. The remainder of the calls are further identified within the customer’s premise such as: hot water tanks (need flushing or have disintegrating dip tubes-a manufacturing defect from 1993-1996), and undersized/mis-installed point of use filtration systems.

We test the water in Mount Laurel year round, which includes daily operational sampling through compliance monitoring dictated by both state and federal regulations. In all cases, the water is consistently within or exceeds regulated parameters. This confirms that the water delivered to our customers is safe for use as potable water. We will continue to be sensitive to changes in water quality and regulatory compliance in order to protect all who use our water.

### Water Supply Availability Summary:

The MUA continually monitors available water supply for the community by way of MUA customer historical use records and by using New Jersey Department of Environmental Protection (NJDEP) Bureau of Safe Drinking Water (BSDW) standards. Over time, actual water used by our customers is increasing proportionally to the increase in total number of customers. Large annual variations are primarily due to changes in weather (temperature/rainfall) as indicated with 2001 and 2009 use.





The NJDEP BSDW also tracks and calculates available water supply and demand by each water supplier. Although the BSDW calculations relate to actual use and supply availability, the customer demand figures used by BSDW are not the same as the actual historical use records. In addition, in August 2007, the BSDW unilaterally reduced our estimated available supply capacity by 280 million gallons per year (MGY) as a result of conversations with NJAWC regarding our off-peak purchase contract with NJAWC. The MUA began the NJDEP appeals process regarding these issues in September 2007; these issues have not yet been resolved.

Although customer use varied from year to year, this chart remains accurate in the fact that 2007 remains our peak use year in the previous 5-year NJDEP review window. Our water supply system remains in paper deficit, therefore NJDEP permits for new connections are on hold. Through our combination of water supply sources: our Elbo plant and purchased water contracts, the MUA continues to have adequate capacity to supply our customers.

**Water Allocation Permit #5193:**

Term – 2/1/2007 to 1/31/2017

Diversion –

Ground Water = 5800 gpm, 120 MGM, 717.452 MGY via wells 3, 4, 6 and ASR 7

Surface Water = 186 MGM, 1237.548 MGY via proposed Rancocas intake

The MUA is continuously compliant with allocation limitations.

The MUA is currently seeking an increase in annual allocation from NJDEP related to the proposed Rancocas surface water intake; MUA requested an adjudicatory hearing on February 14, 2007. The NJDEP February hearing date was adjourned in order to participate in the Alternate Dispute Resolution (ADR) process with NJDEP.

The MUA is currently seeking an increase in monthly allocation (from 120 MGM to 165 MGM) related to the existing groundwater allocation from NJDEP. A draft permit was issued by NJDEP on April 15, 2008; final permit has not yet been issued, but was expected in May 2008. The MUA has requested the NJDEP hold the public hearing and issue the final permit. Resolution of this issue is included in our ADR process with NJDEP.

We continue to work with NJDEP on a global settlement of our water supply appeals.

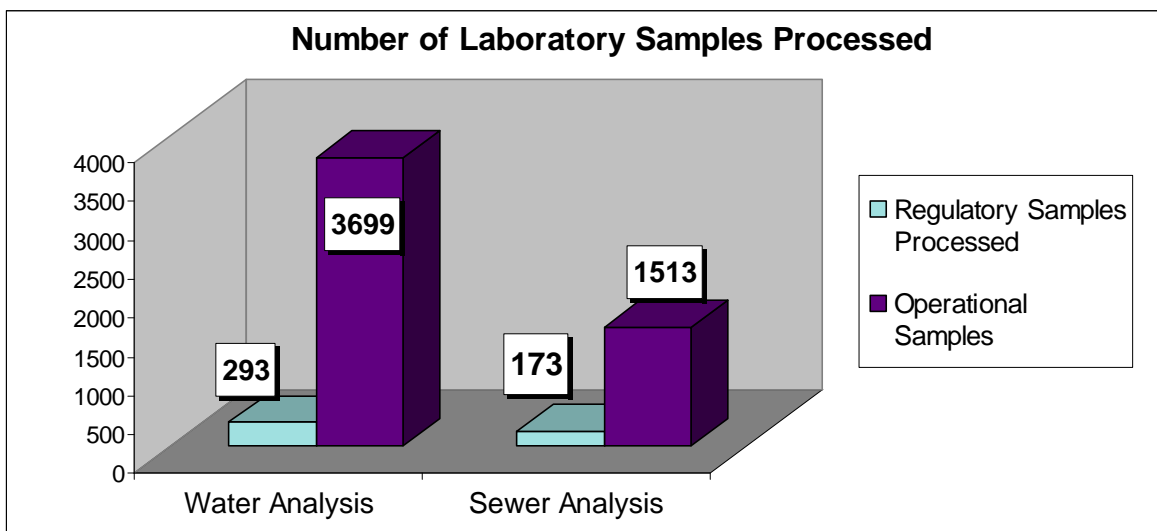
The second step in our three-part plan for the water supply system is nearly complete and is functioning as expected.

**Water Supply Plan:**

1. Implement ASR to augment summer requirement while reducing summer dependency on purchased water – complete
2. Replace out of date water treatment plants with one facility and controls for source management – almost complete (still waiting for NJDEP increased monthly allocation permit, for summer use.)
3. Construct a new alternative water supply source within Mount Laurel to reduce water purchases from other suppliers – in progress (still mediating terms of the NJDEP allocation for the Rancocas permit).

**Other MUA Departments**

**Certified Laboratory:**



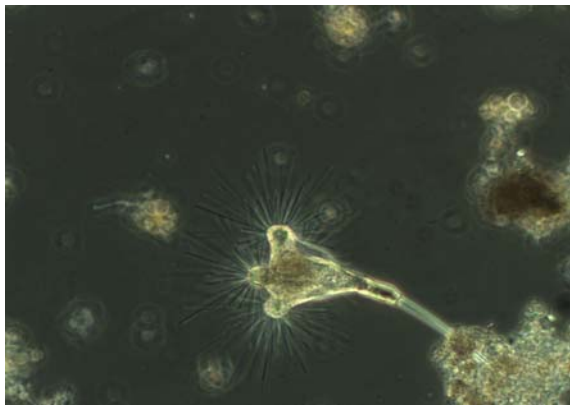


The number of regulatory samples processed conforms to the requirements set forth by regulation or permit requirement. Additional operational samples (not required) are performed in order to refine treatment capability and to detect and react to changes in quality.

- Due to the large number of water main breaks in areas where the mains are considered new (less than 20 years of age), several years ago the Authority began performing soil analysis at water main breaks. We have found a direct correlation with acidic soils and fluctuating ground water conditions with the occurrence of main breaks. Our lab continues to analyze this data so that our engineering department can utilize the data in conjunction with planned water main replacements and rehabilitations. Performed Soil Analysis this Quarter at the following locations:

Cobblestone Drive	Cornwallis Drive	Tulip Court @ South Lake Drive
Rancocas Blvd.	Haines Road	Amsterdam Road
Saint Andrews Ct.	Arden Court	(2) Buckingham Way
Hooten Rd. P/S	Cobblestone Dr.	

- These are some typical photos of healthy microscopic organisms found in our wastewater treatment plant process. Our team continuously monitors the biomass so that changes or upsets can be handled quickly while maintaining treatment levels. Below are photos of a suctoria and a rotifer magnified 100 times. These images were taken with our research grade phase contrast microscope utilizing a 3.0 mega pixel digital camera with enhanced imaging software.

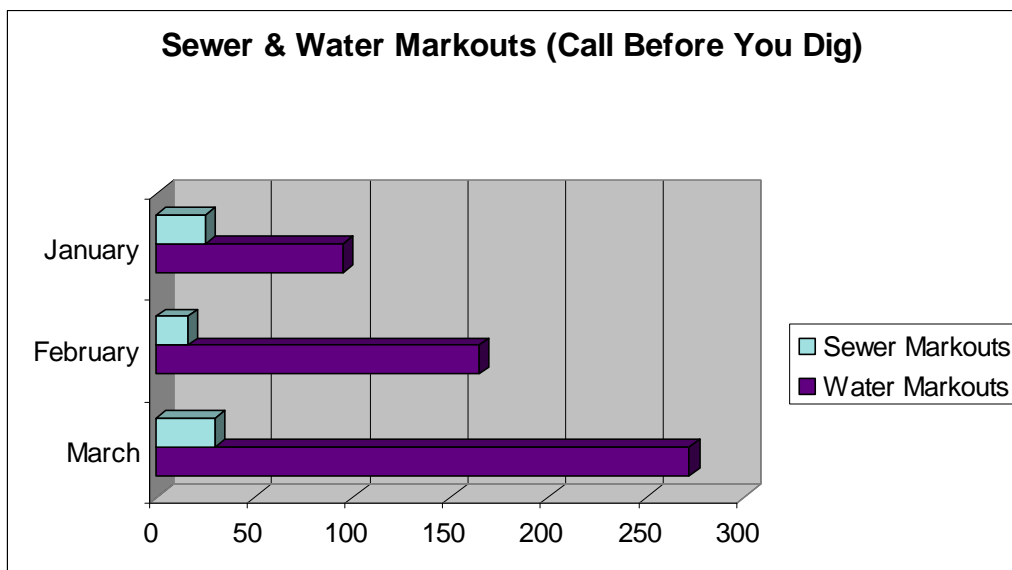


Suctoria



Rotifer

**Water & Sewer Mark Outs**



540 Mark Out Requests Received for the Quarter

532 Mark Outs Performed by the Water Department

71 Mark Outs Performed by the Sewer Department

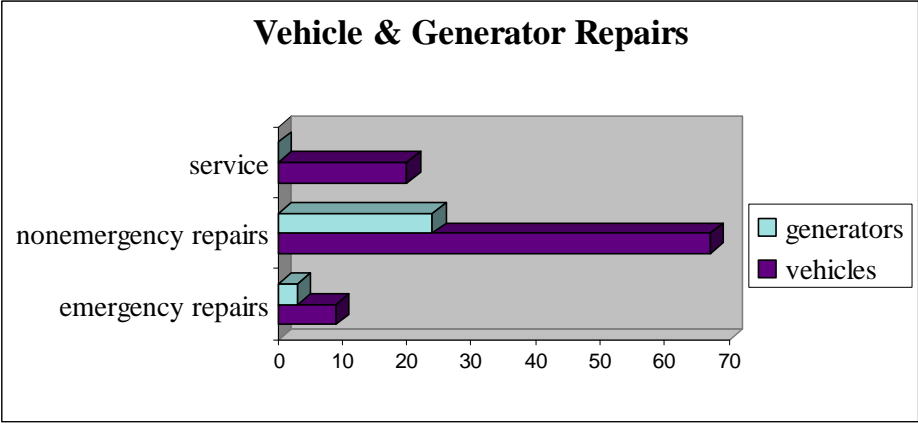
603 Total Mark Outs Performed by the Water & Sewer Departments

The MUA receives all requests for Mark Outs when digging is involved anywhere in Mount Laurel Township, this includes fence/mailbox installation as well as for major construction. The MUA pays for participation with the 1-800-272-1000 call before you dig service for verification management. Each request is reviewed by MUA field personnel to determine if a mark out is required. When a mark out is required, MUA field personnel are dispatched to each request location to identify MUA underground facilities. Manpower dedicated to the state mandated mark-out program remains steady even though mark-outs for new construction has waned.

**Vehicle Maintenance & Power Equipment:**

The MUA maintains 39 Vehicles in its fleet, 17 pieces of equipment and 57 generators for emergency standby power. The MUA facilities are supplied with 100% backup emergency power via diesel powered standby generators. This enables the MUA to operate all facilities at full capacity during power failures or during periods of low voltage (brown outs). This is particularly important during storm events, when wastewater-pumping volume increases due to infiltration and inflow into the sanitary system.

Each generator operates under load once per week. During Philadelphia area poor air quality days, exercising of generators must be postponed until air quality is within normal range. In addition, all standby generators are load-banked once per year. This year load banking is scheduled to occur in the 2<sup>nd</sup> quarter.



- The Burlington County Health Department Inspected Generators at Elbo Lane WTP, Well # 6, Birchfield PS, Orchard PS, Ark Road Booster Station, Laurel Creek PS, & Ramblewood Solar Facility.



*Stand-By Generator for Hartford Road WPCF*



*Stand-By Generator for Elbo Lane WTP*

**Safety:**

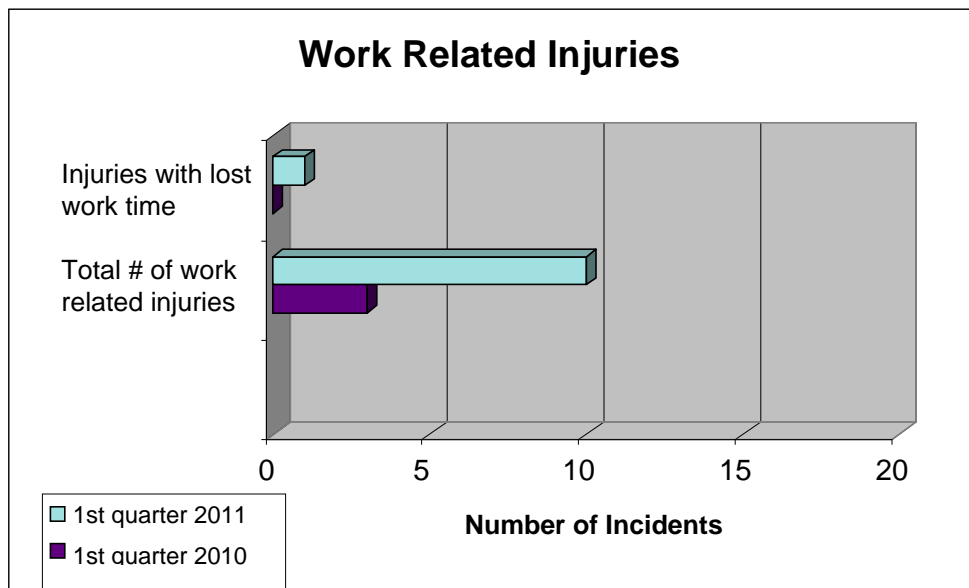
There were 10 minor injuries; one resulted in lost time this quarter:

**Lost Time:**

- ❖ An employee slipped on ice at the wastewater plant and tore the meniscus in his right knee

**No Lost Time:**

- ❖ An employee strained his left shoulder while digging up a water valve box
- ❖ An employee suffered a contusion to his forehead when he hit his head on the windshield of the tractor while pushing snow and the tractor hit manhole rim and stopped short
- ❖ An employee had raw sewerage splash in his left eye while cleaning a bar screen at a pump station
- ❖ An employee strained his groin muscle while lifting a bucket of rags from a pump station bar screen into the truck
- ❖ An employee strained his left shoulder and neck when he tripped while removing snow from solar panels and fell into snow bank
- ❖ An employee strained left upper arm while shoveling snow at a pump station
- ❖ An employee suffered a laceration to the forehead when he was hit with the head of a hammer that broke off the handle when the employee was striking a water valve box to loosen the lid
- ❖ An employee strained his lower back while walking through snow and ice to read water meters
- ❖ An employee reported carpal tunnel pain in both wrists that has developed over time while working in an clerical position



### **Safety Training/Inspections:**

- ❖ ADT and Mount Laurel Fire Department Performed annual alarm system testing on all fire alarm systems.
- ❖ Mount Laurel Fire Department inspected all MUA remote facilities.
- ❖ Worker's compensation carrier, New Jersey Manufacturers Insurance Company, performed an annual audit.
- ❖ MUA employees attended training for Burlington County's new Global Connect System, which can be utilized for reverse 9-1-1 service to alert the community of emergencies. This enhanced system increases our capability to develop call groups for multiple types of incidents. Previously, the MUA contracted with the NJ State Police for use of its basic reverse 911 system.

### ***Human Resources:***

Our employees are licensed Water & Wastewater professionals. We have 29 MUA employees holding a total of 62 NJDEP licenses for operation of water and/or wastewater systems. The MUA must employ and designate a licensed operator for each of our four areas of service: Water Distribution (level W-3), Water Treatment (level T-4), Wastewater Collection (C-3), Wastewater Treatment (S-3). Employment of additional licensed operators in all operational areas adds value to the service we provide to the community.

15 operators with level 1 licenses, for operating systems with 101 to 1,500 people  
26 operators with level 2 licenses, for operating systems with 1,501 to 15,000 people  
11 operators with level 3 licenses, for operating systems with 15,001 to 50,000 people  
10 operators with level 4 licenses, for operating systems with 50,001 or more people

In addition, we employ two ASE Certified (Automotive Services Excellence) Mechanics, a licensed Professional Engineer and a certified laboratory specialist.

- ❖ Members of our staff have formal post secondary education in the following disciplines:
  - Finance/Accounting
  - Chemistry
  - Biology
  - Computer Science
  - Business Management
  - Safety
  - Civil & Environmental Engineering

***Finance Department:***

User Fees billed: \$ 3,610,941.11

User Fees budgeted: \$ 3,749,235.00

User Fees collected: \$ 3,869,243.55

**Expenditures for the quarter:**

Accounts Payable \$ 2,142,515.35

Payroll (including  
tax liabilities) \$ 879,438.47

Debt service \$ 1,631,483.21

Capital Projects \$ 511,289.54

Total Expenditures: \$ 5,164,726.57

- ❖ FY12 Budget preparation began
- ❖ The MUA moved it's funds from TD Bank to Citizen's Bank
- ❖ The MUA's lock box address changed to coincide with the change in banks.

**Shared Services:**

**Mount Laurel Township:**

***Underdrain stations and system:***

The MUA and Mount Laurel Township have a maintenance and operational agreement for the lower level underdrain systems located in the Ramblewood developments. The agreement stipulates that the MUA will check operation of the Township's six underdrain pump stations and respond to all service calls from residents. In addition, the MUA checks the discharge inverts and outfalls from the Ramblewood underdrain system. Improvements to the underdrain system remain the responsibility of the Township. Underdrain related service calls are handled by the MUA. Service calls from areas not covered by the agreement have increased recently; the MUA continues to respond to these calls. The shared service agreement requires the Township to reimburse the MUA for these services.

The MUA is working with Mount Laurel Township to improve the underdrain plans. This project will continue until the MUA is confident that all known upper level and lower level underdrains are adequately mapped.

This quarter our Pumping Station crews checked the 6 Underdrain Pump Stations twice per week and responded to 8 underdrain service calls from residents.

January 20, 2011 – Camber Lane, Sump Pump Running – MUA personnel checked the basement & informed the customer that the amount of wet weather is causing the sump pump to run so often. Homeowner was advised to extend the discharge line out to the curb.

January 28, 2011 – Saint David Drive, Water coming into the basement and sump pump cannot keep up with it – MUA personnel jetted from the storm drain UD outfall. Jetted 550' towards #319, heavy iron flowing full pipe into storm drain. The crew jetted down from UD manhole above #319 180' and then stopped. Homeowner stated the water had stopped coming into the basement and the sump pump stopped running.

February 7, 2011 – Knotty Oak Drive, Sump pump running – MUA personnel found UD system was surcharged. Crews jetted 338' of underdrain line.

February 15, 2011 – Haines Road, Sump Pump Running – MUA personnel checked the basement, found no flooding. Manhole between #113 & #115 was  $\frac{3}{4}$  full. Scheduled for jetting as manpower permits.

February 16, 2011 – Haines Road, MUA personnel returned to the property and jetted the underdrain and broke the blockage. Checked the UD station – lots of flow coming in, crew commented pump was running a while – system was back up and running.

February 16, 2011 – Haines Road, Water in the Basement – Customer told MUA personnel that sump pump was running constantly. Explained to her the melting snow was causing excess ground water and also the jetting crew had just cleaned the lines.

March 17, 2011 – Saint Clair Drive & Saint Clair Court - Public Works called, needs MUA jetter to clean out underdrain at Saint Clair Drive & Saint Clair Court. MUA personnel went out and met with Public Works personnel at the location. Jetted the UD and flow improved. Jetter hose got stuck in UD system and is damaged. MUA scheduled to re-inspect the following day to make sure all is ok.

March 21, 2011 – Braddock Terrace, Sewer back up, line needs flushing – MUA personnel jetted UD system in the court.



Work Performed on Haines Court UD

- As a courtesy for Mount Laurel Township, the MUA Sewer Collections Department cleans out the Pond at PAWS Farm and tanks out the septic tank at Laurel Acres Park the 2<sup>nd</sup> Tuesday of each month.

### **Ramblewood Solar Array**

Operation of the solar array began in the summer of 2010. Our first sale of SRECs occurred in the fall of 2010 and the next sale is planned for April 2011. The solar facility is operating as designed, to power the Ramblewood Sanitary Pump Station and Well #6. In January and February, some minor problems occurred as the snow did not slide off the panels as originally designed. The heavy snowfall coupled with icing conditions caused most of the snow to get hung up on the support frames. Some frames were damaged by the ice. Our personnel needed to periodically remove the snow from the panels so that electric generation could resume. Care was taken not to damage the panels. We've developed a snow removal plan for subsequent events which we believe will be less time consuming than this year.

### **Capital Improvement Projects**

#### ***Water***

#### **Proposed Surface Water Treatment Facility - Rancocas Creek**

- The purpose of this facility is to supplement water supply while reducing purchased water.
- The pilot facility operated and produced drinking water in 2004 and 2005.
- The final water allocation permit was received from NJDEP in January 2007 however; it only allows a maximum diversion from all sources of 1,955 MGY, which is less than the ten (10) year projected demand of 2,201 MGY.
- The MUA appealed these permit conditions in February 2007. DEP Office of Administrative Law scheduled a hearing for May 20, 2008, which was postponed. An initial mediation session was held on July 25, 2008. The administrative hearing for February 7, 2011 was adjourned in favor of entry into the Alternate Dispute Resolution (ADR) process with NJDEP.

#### **2009 Water Main Replacement**

- This project includes replacement of water mains on Sumac Court in Birchfield, Malvern Court & Ashby Court in Larchmont. These sections of main were chosen because of the number of breaks that occurred, and the condition of the existing pipe encountered during the repairs.
- The project was submitted to NJDEP for economic stimulus funding but was denied. Therefore, the MUA will fund via the capital improvement budget; \$348,000 is included in FY2010 with the remainder in FY 2011.
- The contract was awarded on March 18, 2010 in the amount of \$310,329 with a completion date of August 19, 2010.
- All water main work has been completed; however punchlist and contract closeout work remains. It is anticipated that all contract matters will be completed in April 2011.

#### **81 Elbo Lane**

- This project includes retrofitting the existing building to house administrative and warehousing operations allowing for synergy savings. Construction of this project will also offset anticipated costs for housing temperature dependent vehicles and plant equipment.
- The architect has completed the final design plans; however due to budget constraints construction of this project is currently delayed.



### **Well No. 3 Building Replacement**

- This project includes a complete rehabilitation of controls, installation of permanent standby power and equipment building for the last of the MUA's three production wells.
- The project was originally scheduled for FY 2010 but was delayed until FY 2012 due to budget constraints.
- The plans and specifications have been revised by our Consulting Engineer to incorporate comments made by the Planning Board.
- Advertisement is planned for June 2011, with receipt of bids in July.

### **Hartford Rd Parker's Creek Crossing Water Main Replacement**

- In August 2009 a break occurred in the 12" DIP water main near the creek crossing, originally installed in 1989. Upon excavation for repair, the MUA noticed that the main was in substandard condition due to exterior deterioration.
- The main requires replacement, as it is a major transmission main and secondary feed in the distribution system and cannot be out of service for extended periods.
- Due to the number of permits required and potential environmental impact, replacement in kind below the stream bed was not viable. Therefore, alternatives explored were attaching to the County bridge and directional drilling, with directional drilling as the least cost alternative.
- Bids were received on March 1, 2011. The low bidder, Buxmont Excavating had a fatal flaw with their bid and it was rejected. The contract was awarded to the second low bidder, Kmetz Incorporated in the amount of \$82,640.

### **ASR Well #7**

- This well was redeveloped and pump inspected in the fall 2010 by A.C. Schultes, contract amount, \$128,800.
- A pump test still must be completed to close out this contract, but timing must be deferred until September 2011 for operational reasons.
- Emerson is scheduled to work on control modifications in the next few weeks.

### *Sanitary Sewer*

#### **Sanitary Sewer Rehabilitation**

- This project includes slip lining of 7,700 feet of sanitary sewer mains and rehabilitating 43 manholes in the Ramblewood and Devonshire neighborhoods.
- On March 18, 2010 a contract was awarded to EN-Tech in the amount of \$592,768.45.
- This project was fast-tracked and moved to FY2009/2010 due to the potential for federal stimulus funding. The project qualified for principal forgiveness funding but was beyond the fundable range of projects. The project also qualified for the stimulus loan funding; it is being financed with a 0% interest rate for 75% of the project cost; the remaining 25% of the cost was at market rate at the time of closing in March 2010.
- The majority of work associated with this contract is complete.
- The section of sewer main with the defective lining was replaced.
- The contractor continues to work on installing manhole inserts.
- Vacuum testing of the manholes also needs to be completed.

### **Parker's Creek Outfall Main Crossing**

- All bids were rejected at the October 2010 meeting.
- We are investigating options to reduce the project cost, which includes closing the road and the relocation of electric lines by PSEG.

### **Painting Sanitary Sewer Pumping Stations**

- A number of the Authority's can pump stations were showing signs of internal corrosion in the dry wells.
- A contract was awarded to Scaturro Brothers in the amount of \$41,300.
- The contractor completed the first coat on each station and then realized there was a problem with the paint. They are in the process of removing the prime coat that was installed and repainting.