

Mount Laurel Township Municipal Utilities Authority

Quarterly Report



4th Quarter 2012 (October to December)

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”

Authority Members

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

Total Number of Customer Accounts: 17,929

Sewer Department

Sanitary Sewer 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 our sanitary sewer system. We treat all sewage generated within the Township at the Hartford Road Water Pollution Control Facility with the exception of the southwestern area (Laurelwood, Countryside, and Roland/Fellowship industrial area); in these areas, we collect the sewage and pump it to the Camden County MUA for treatment. Some premises (primary residential) continue to be serviced by privately owned and operated septic systems, which fall under the jurisdiction of the Burlington County Health Department.

Our Sanitary Sewer Facilities:

Wastewater Treatment Plant (Hartford Road Water Pollution Control Facility):

Hydraulic Capacity of 6 Million Gallons per Day (MGD)

Advanced secondary treatment using extended aeration and UV disinfection with discharge to the mainstem Rancocas Creek

Sludge dewatered on-site with bio-solids disposal at the Burlington County Composting Facility

Collection System:

41 sanitary sewer pump stations

32 miles of pressure mains (8”-24” diameter)

150 miles of gravity mains (8”-12” diameter)

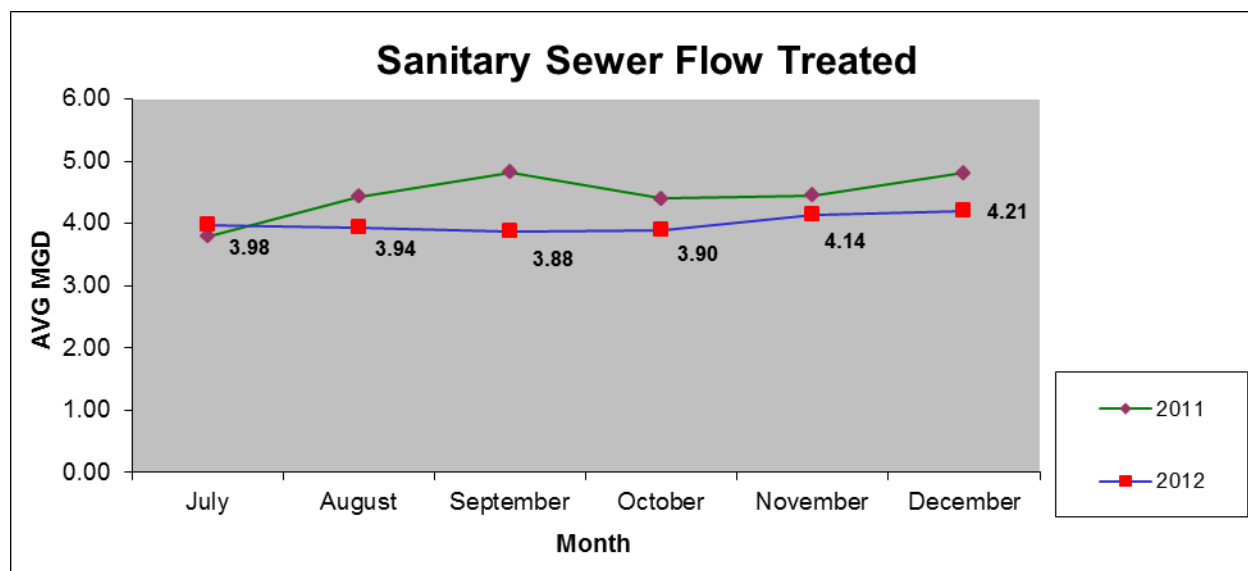
3891 manholes

Our Sanitary Sewer Operations:

Treatment System

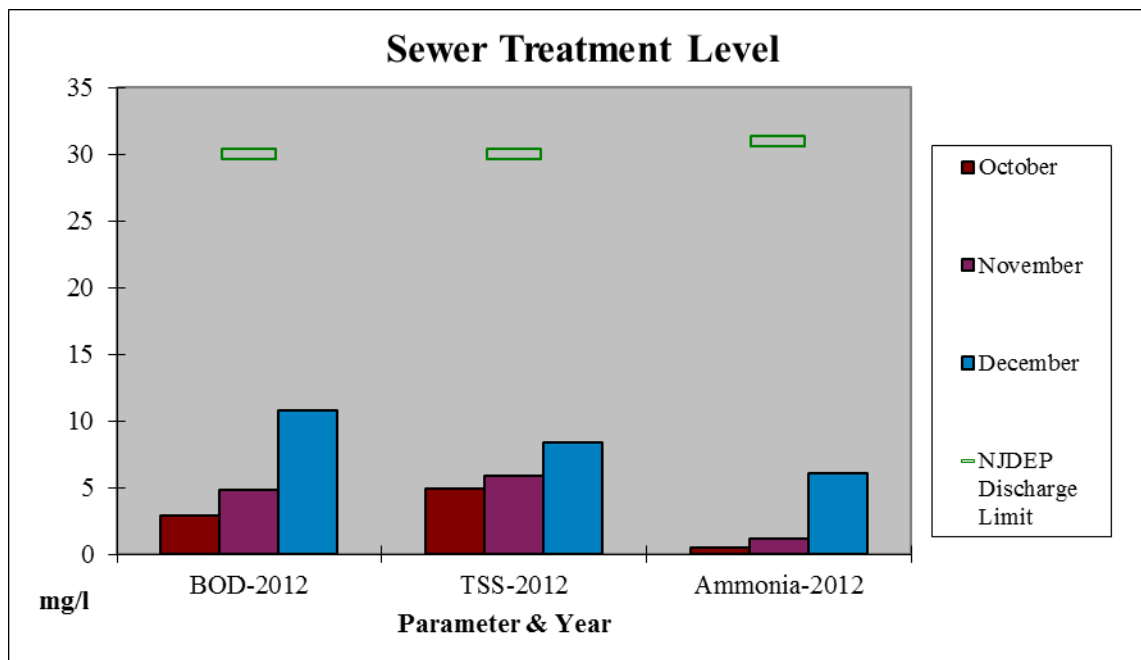
Throughout the years, the MUA has owned and operated three wastewater treatment plants. The Ramblewood facility was demolished in 1989 and the Rancocas Woods plant in 1993. Sanitary sewage from both of these plants were redirected to our only remaining wastewater treatment facility (Hartford Road Water Pollution Control Facility). This facility was originally constructed in 1970. Over the years, the facility has undergone a major transformation with over five capacity expansions and level of treatment upgrades during its lifetime. The present treatment process began operation in 1996 at a cost of over \$17 million. A \$2 million new headworks treatment train was constructed in 2007. Numerous renewal and replacement projects have occurred in recent years. The ultraviolet disinfection system is scheduled for complete replacement next year as the existing system approaches the end of its useful life.

The charts that follow are for the current Hartford Road facility.



Total Treated in Quarter = 375.61 Million Gallons (MG)
= 4.08 Million Gallons per Day (MGD)

The MUA applied for the renewal NJ Pollution Discharge Elimination System (NJPDES) permit in early 2011 and continues to operate on the previously issued expired permit (from 2006). On September 26, 2012, NJDEP issued a draft NJPDES permit for the Hartford Road facility. The revised permit includes increased sampling frequencies for numerous parameters and sampling requirements for over a dozen additional parameters. The MUA's additional annual laboratory expense is currently being calculated. The revised NJPDES permit has not yet been issued.



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 BOD₅, TSS, Ammonia Nitrogen are standards for the industry deemed representative of general treatment plant operations.

This November/December, extreme fluctuations in air temperature in short periods of time have caused an adverse effect on our operation of the treatment unit during what it normally a temperature adjustment transition period. In addition, the sludge sweep arm on secondary clarifier #1 got hung up during the overnight operation without triggering the requisite alarms. Lack of proper sludge removal from the tank for over 12 hours caused the tank to begin denitrifying, thereby temporarily increasing the ammonia levels in our effluent. Fortunately, no permanent damage to the tank was sustained as the shear pin broke in advance of bending the equipment. The issues with the alarms have been addressed.

Reclaimed Water for Beneficial Reuse

Due to the overall 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.

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 used in evaluating the timing for repairs and capital replacement projects of mains. For fiscal year 2012, we contracted to have over 90,000 linear feet of sewer main televised. Our plan is to continue scheduling of additional areas each year, keeping to a 6-8 year cycle for the entire Township (see Capital Projects section for additional information).

Other Sewer Related Items:

Responded to and resolved sewer service calls from 33 customers during the quarter

6 Vent Cap Missing/Broken

1 Manhole Cover Loose

1 Located Sewer Vent

3 Sewer Odor

1 Blockage In Main

- MUA personnel inspected the manhole and found it was full. We jetted the line and broke the blockage. The DEP was notified and a spill report was filed.

5 Vent Overflowing

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

14 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.

1 Sewer Service Break or Leak

- Mount Laurel Road – Found injector station in the front yard failed. Advised customer to have it repaired.

1 Sump Pump Miscellaneous

- 20 Mallard Drive – Customer reported sump pump running continuously. We checked the sump pump and found it was discharging just outside of the house and was draining back into the pump. Informed homeowner to extend the discharge line further into the yard as sump pumps are not permitted to connect to the sanitary sewer system.

Other Operational Issues:

Orchard Pump Station (PS) continues to have operational issues, which now cause approximately 10 hours per week additional manpower to manage. Design for rehabilitation of the pump controls and site work began in July 2012, with contract bidding scheduled for March 2013. Total cost including engineering and permits is estimated at \$250,000 (see Capital Project section for additional information).

The pumps at Atrium PS continue to clog and must be pulled each week. This results in approximately 5 hours additional weekly manpower for operation of this station in addition to the emergency work due to high-level alarms. A better interim operational setup is under evaluation and will continue until permanent improvements to this station can be accommodated in the budget, anticipated in FY15.

The waste oil tank at Hartford Road Sewer Plant was removed and replaced with an above ground tank to conform with the new Underground Storage Tank Regulations. When the tank was removed, a small hole was discovered in it. LSPR hired to remediate and file the necessary DEP reports. The cost to the MUA will be approximately \$11,000.

We had a force main break behind Library PS this quarter. We discovered a hole in the top of the pipe and were unable to fully stop the flow of raw sewage back into the repair excavation; the repair was made with sewage spraying about. The spill, an estimated 54,000 gallons, was reported to the DEP. This section of the Library PS force main has incurred several breaks in the last 10 years. In fact, this repair was complicated by the facts that a previous repair clamp was nearby and that the isolation valve at the intersection of Moorestown-Mount Laurel Rd and Union Mills Rd would not fully close. The force main will be reassessed as part of our asset management program and full replacement of a limited section is likely in the next few years. Options for rehabilitating the malfunctioning valve are also under consideration.

Impact of Superstorm Sandy on Wastewater Operations:

As with all storms of a certain predicted rainfall magnitude, the Authority enacts its emergency response procedures. Following the weather predictions, additional measures were taken. As we all know, the impact of Sandy along NJ's coast was devastating. Fortunately since Mount Laurel is not a coastal community, we were not impacted by the tidal surge. In addition, since rainfall totals were substantially less than predicted, we were also spared major flooding. For the worst case rainfall benchmark, we use the previous local events from July 5, 1999 and July 13/14, 2004. However our wastewater system was not unaffected by the storm. This was likely transparent to our customers. Power outages caused the largest impact to our operations followed by modest rainfall.

During the peak of the storm and up to four days following, 7 of our 41 wastewater pumping stations were without electrical power from the grid, including our largest wastewater pumping facility. Fortunately, all of our wastewater pumping stations are equipped with standby diesel emergency generators. These generators all functioned as designed however due to the widespread devastation, it became apparent early on that fueling of the stations to keep those generators in operation would be an issue. We jockeyed fuel from facilities which were on the grid. We maintained a fuel inventory including predicting duration of remaining fuel supply and we established fueling priority for our critical infrastructure facilities and were placed on the fueling supply priority list at the state level. Again, we were fortunate that our available diesel fuel supply outlasted our power outage.

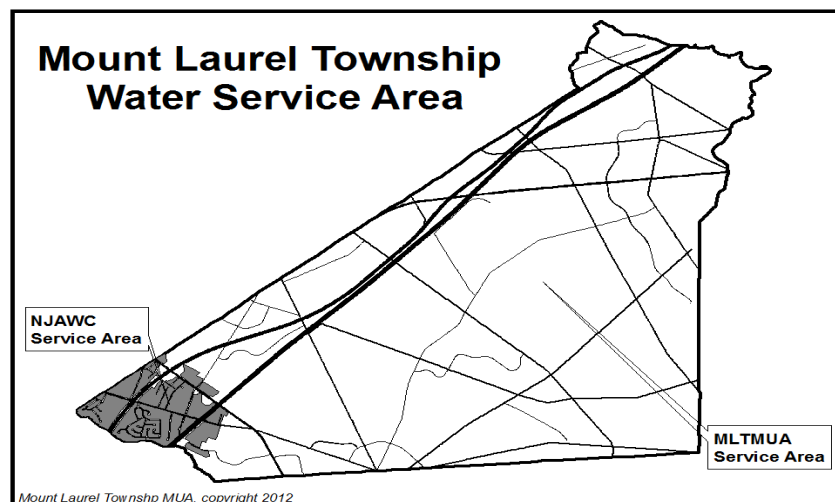
In preparation for the predicted high rain, our wastewater treatment plant operation was modified to the storm mode process. Storm mode isolates almost half of the biological treatment portion of our orbal oxidation ditch from loss/washout during high flows. This allows almost immediate recovery of established treatment levels after increased influent flows. Traditional treatment processes without this option can experience a 30-day recovery period (on average). Storm mode capability was a deciding factor during design of our water pollution control facility in the early 1990's. It is an important component as it allows us to handle our collection system's I/I (largely from illegally connected sump pumps). Current average flow to this facility is 4.1 MGD. With Sandy, flow to our plant increased to over 14,000 gpm with a peak daily flow of 8.05 MG. However this facility routinely experiences higher flows during a routine rain storm. Peak flow to the facility was over 21,000 gpm which exceeded the meter reading capability of our instruments.

Another issue which complicated sanitary sewer operations was the loss of alarm/remote operation monitoring systems for all sanitary sewer pumping stations through the height of the storm, continuing for over 24 hours after. Personnel teams were deployed throughout in order to provide updated status reports to our control room.

Water Department

Water System Summary:

The Mount Laurel Township MUA services the majority of Mount Laurel for water service with the exception of the southwest corner, 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 million gallons per year (MGY) and 1900 MGY. Our actual customer water usage for 2012 was 1532 MG, in the same use range as 2011 (at 1480 MG). The MUA supplied this water from its own wells (allocation limited to 717 MGY by Critical Water Supply Area # 2 regulations) and via water purchase agreements with the NJAWC and Willingboro MUA (WMUA). The MUA withdrew all of its 717 MG ground water allocation (602 MG to service), to satisfy 40% of total customer demand. The remaining 60%, almost a billion gallons of water, was purchased from NJAWC & WMUA to make up the allocation shortfall. The MUA continues to work on alternative supplies of water in order to meet the current and increasing needs of the community.



Our Water Facilities

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 affects operating expenses and water rates. The facility began operation in 2007.
- 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 – 1.2 MGD during remainder of year.

Aquifer Storage and Recovery Well (Well # 7)

- This facility augments our water supply sources in the high summer months. Treated water from our distribution system is pumped into the well in the winter when demand is low and supply is plentiful, and then withdrawn during times of peak demand during the summer. This facility began full-scale operation in 2004.
- Approximately 200 MGY total storage capacity, 1.3 MGD recharge, 3 MGD recovery capacity

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

1526 fire hydrants

2917 water valves

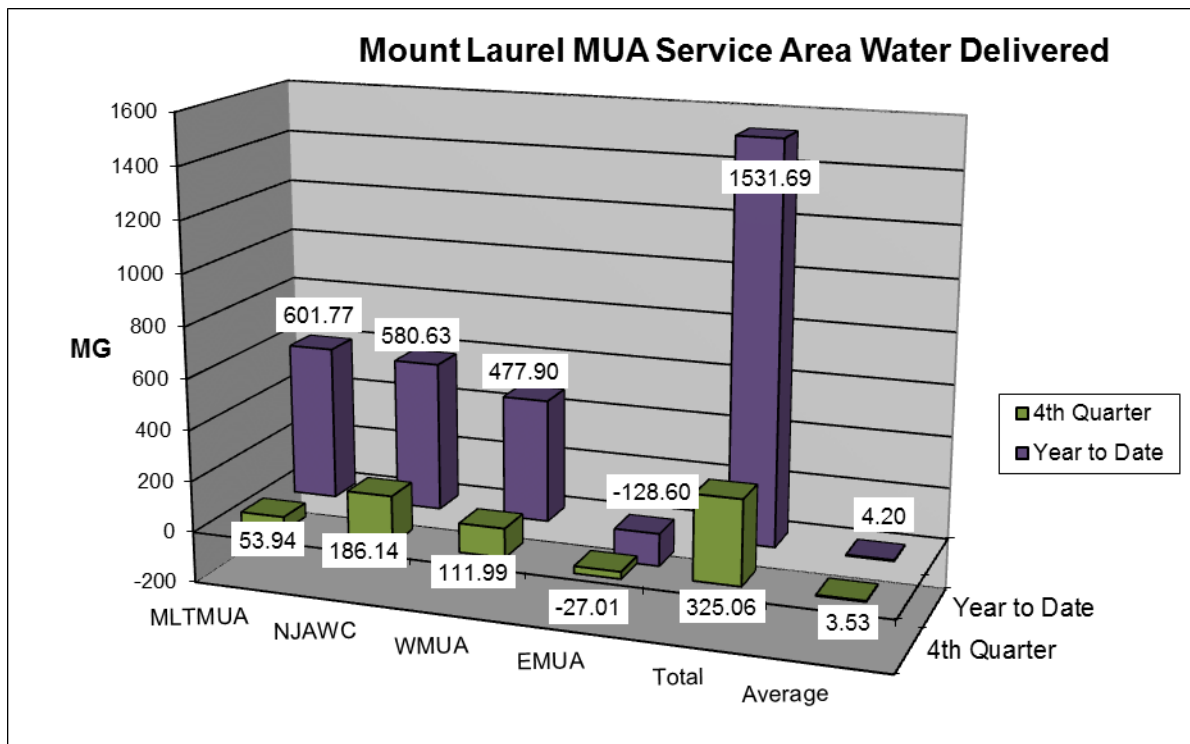
5 bulk interconnections; Willingboro MUA, Evesham MUA, NJ American Water (3)

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

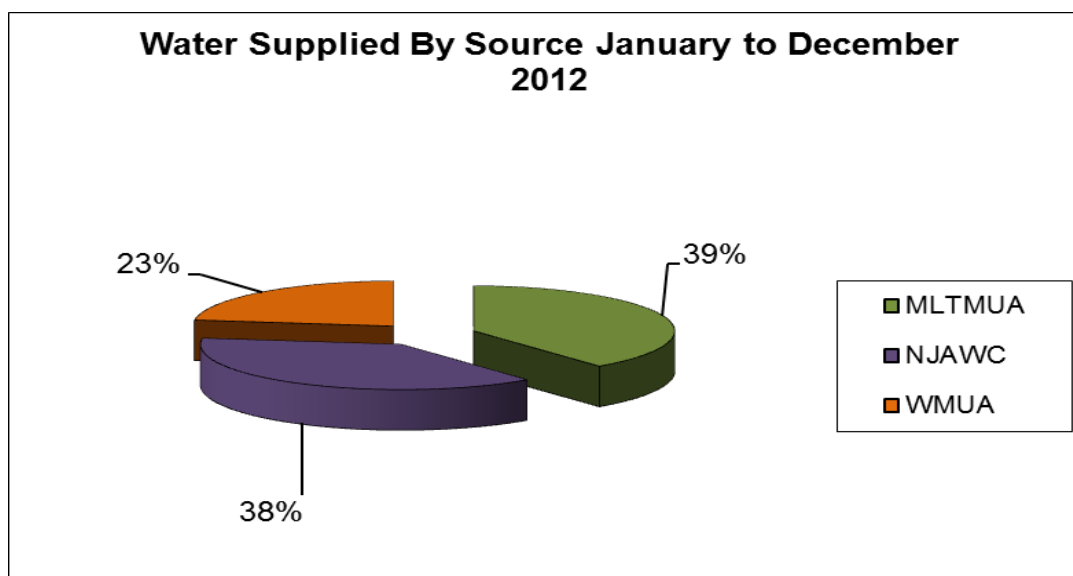
Maple Shade Township (1), NJ American Water (1)

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

Our Water Operations

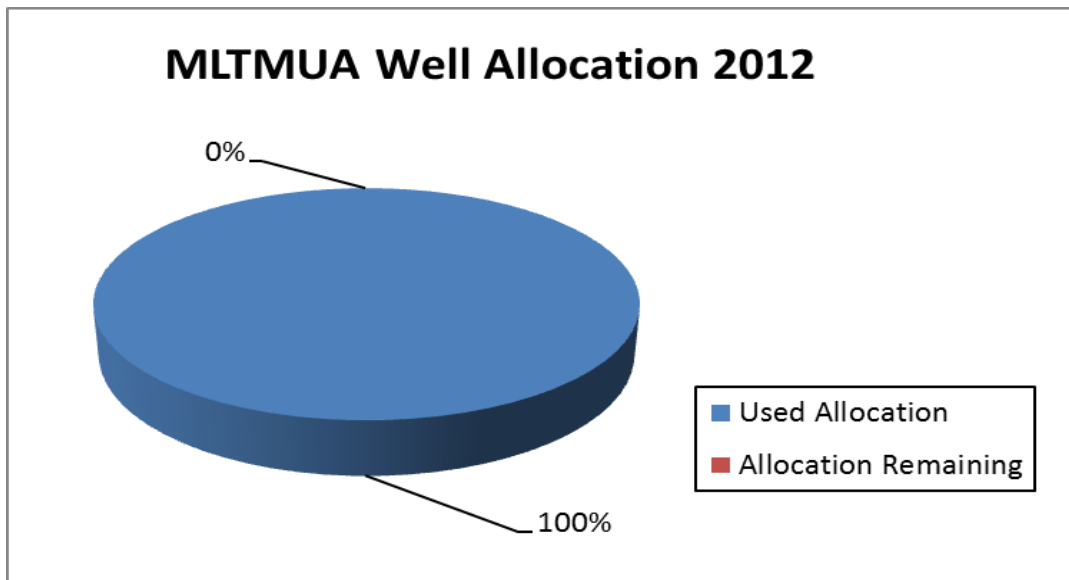


The total amount of water supplied to MLTMUA customers during the quarter was 325.06 MG. The average daily use for the quarter was 3.53 MGD. Historical Daily Peak water usage by Mount Laurel MUA customers occurred on July 23, 2001 when a total of 9.380 MGD was utilized (10.07 MGD including water passed to EMUA). Historically the peak monthly use for Mount Laurel customers was 216.40 MGM, which occurred in July 2011.

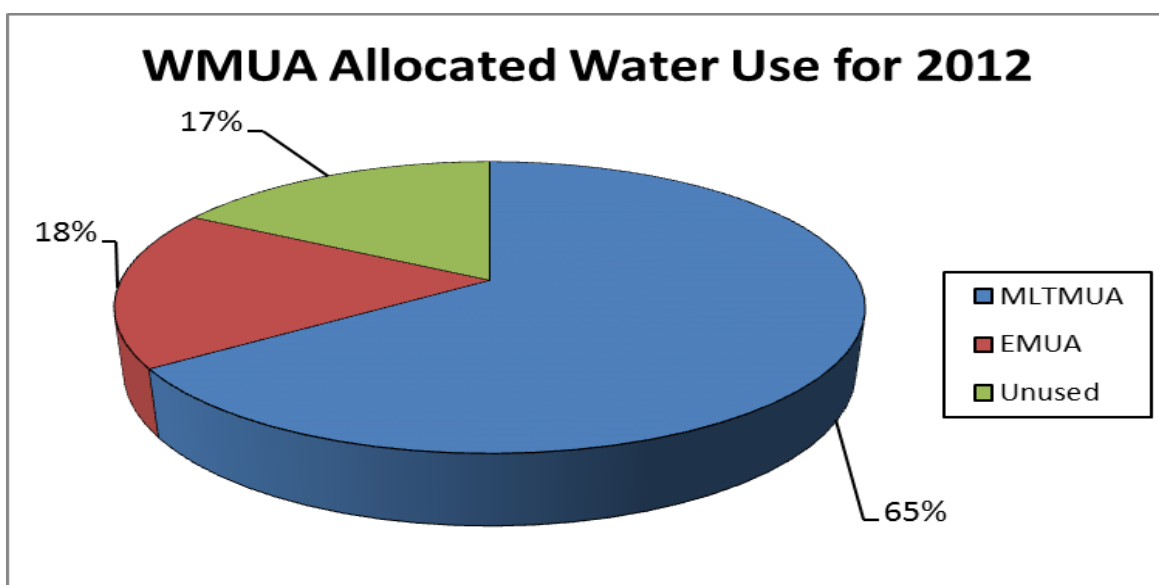


Roughly 60% of the water purchased from NJAWC during the off-peak period was used immediately by our customers. The remaining 40% of NJAWC water purchase was stored in the ASR for use during the peak summer months. The ASR year (October-September) does not match a calendar year; however, our

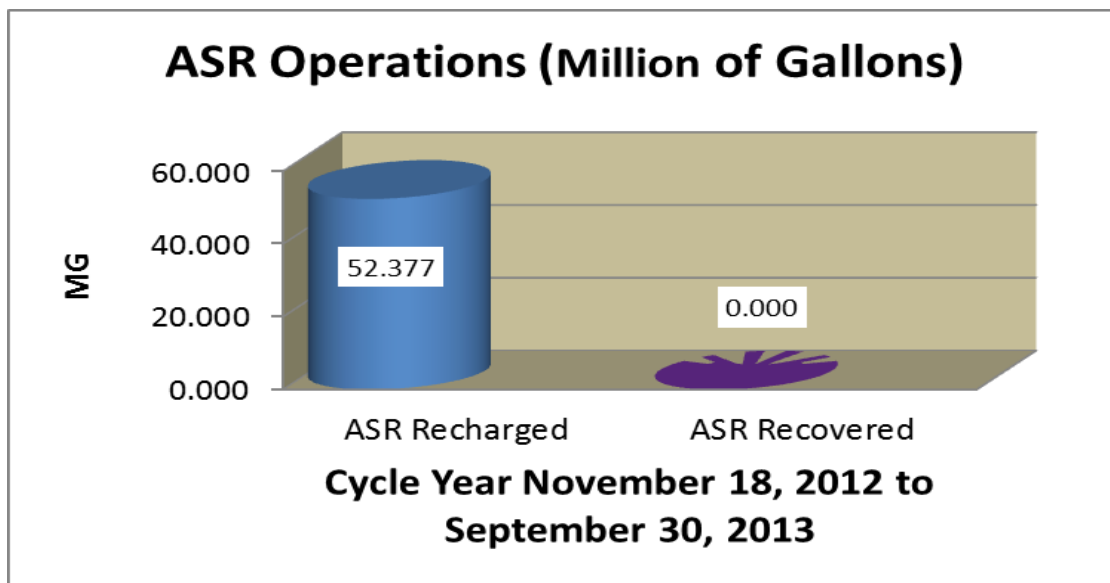
recording keeping for customer use, which is the basis of the chart “Water Supplied by Source”, is depicted in calendar years. Due to this timing discrepancy all of the water purchased from NJAWC and stored in the ASR is not delivered to our customers within the calendar year. In 2012, this timing discrepancy accounted for 28 MG of water that is still in storage in the ASR for use this year.



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 must be done to meet operational demands as well as for cost considerations.



- Assumed Total 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 2012-2013 cycle is to recharge 211 MG of water. Recharging for this cycle began on November 18, 2012: Total amount recharged thru December 31, 2012 for this cycle is 52.377 MG. We recharged an average of 1.218 mgd of water. We have requested and received approval from the NJDEP to carry 11 MG of unrecovered water from our 2011-2012 cycle year into 2012-2013 as the value of this water is over \$30,000. Due to a larger recharge volume in October, November & December of the 2011/2012 recharge cycle we were able to recover 28 MG more than we recharged within the calendar year 2012.

Water System Year End Summary

The total use by our customers in 2012 of 1531.689 million gallons (MG) was somewhat lower than our 2012 projection of 1650 MG. Water use remains slightly lower than normal due to economic conditions associated with reduced demand by several large commercial users. Residential use has returned to normal levels for a somewhat wet summer.

We fully utilized our Groundwater Allocation Permit volume of 717.465 MG at the Authority's Elbo Lane Water Treatment Plant. We were also able to meet this year's Off Peak Contract Nomination from NJAWC of 550 MG. We were not required to fully utilize the Willingboro MUA available supply as customer demands did not require the water; however we did meet our contractual minimum purchase requirements of 67.5 MG per quarter.

Water Distribution System: (This Quarter)

Annual Hydrant Flushing Program:

The MUA flushes fire hydrants and blowoffs as part of our routine maintenance program to improve water quality. This year, flushing occurred from October 1, 2012 continuously through October 18, 2012. Flushing removes harmless minerals that collect in the water mains and enables the MUA to ensure that hydrants are working properly and are available for emergency purposes. During the flushing process, customers may experience low water pressure or discolored water; this is reflected in the types of service calls that occurred during the quarter. While the water is safe to drink during flushing, customers may prefer to wait until the water runs clear before drinking or washing clothes and dishes. The process of flushing can cause water main breaks due to creating hammer when water flow direction changes abruptly. This year, several water main breaks are attributed to the annual flushing program.

Upgrading Our Water Meters:

The Mount Laurel MUA continues the process of upgrading water meters in homes (over a 10-year period) to a metering unit that offers many benefits to the 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.

Work Performed:

- 21 System breaks / Service leaks repaired / Valve repairs
- 9 Curb boxes located / repaired / replaced
- 2 Street boxes repaired
- 119 Meter change outs (FY2013 Meter Change Out Program)
- 27 Meters/ Touch Pads repaired / replaced
- 8 New Meter Connections
- 1175 Hydrant flushed (Annual Program)
- 54 Blowoffs flushed (Annual Program)
- 11 Hydrants painted, repaired or replaced (Preventive Maintenance)
- 3 Blowoffs repaired (Preventive Maintenance)
- 10 Flow Test Performed
- 203 Door hangers delivered
- 4 Main line valves exercised (Preventive Maintenance)
- 8 Cut off for non- payment

Water System Breaks / Repairs Occurred:
Repaired by MUA Crew

Pipe (Crack)

West Bluebell Lane
Custer Ct. & Cornwallis Dr.
South Saint Andrews Drive
Saint David Drive
Route 73 & Ramblewood Parkway

Pipe (Hole)

Windsor Ln. In-front of PS
Marigold Court
Oliphant Lane

Gate Valve Repaired

Saint David Dr. @ St Clair Dr.
Ramblewood Pky & Haines Rd
Oliphant Lane @ Intersection

Valves Replaced & Crack

Southlake Drive & Ursinia Court



Hole repair Windsor Lane In-front of Millstream PS – This hole occurred from corrosion. This watermain is only 24 years old. Mains of this type should last over 60 years.

Hydrants Repaired & Replaced: (non-emergency)

- Repaired Hydrant No. J7-02 Union Mill Terr.
- Repaired Hydrant No. C9-05 Country Ln. & Huntington Way
- Repaired Hydrant No. C11-04 Chelsea Place
- Repaired Hydrant No. C9-08 Hunters Drive
- Repaired Hydrant No. B7-01 Fellowship Road
- Repaired Hydrant No. G4-06 Diemer Drive
- Repaired Hydrant No. I10-02 Horsedrive Drive
- Repaired Hydrant No. I14-03 Hilltop Drive
- Repaired Hydrant No. D19-05 Normandy Drive
- Repaired Hydrant No. B23-01 Centerton Road & Old Centerton Road
- Repaired Hydrant No. M13-02 Patricia Lane
- Replaced Hydrant No. G5-12 Cooper Tree Court

Blowoffs Repaired & Replaced: (non-emergency)

Repaired Blowoff – Texas Avenue & Elbo Lane
Repaired Blowoff - Devonshire Court
Repaired Blowoff – Ursinia Court

The MUA saved approximately **\$25,500.00** on repairs for the 4th Quarter 2012 by performing work previously contracted. Total savings for the MUA for the calendar year 2012 was approximately **\$45,770.000** by performing work previously contracted.

Miscellaneous:

- Flow Test - 403 Kirby Way
- Curb Stop Box Repaired – Holly Hock Lane
- Dug Up and Repaired Valve Boxes
 - Union Mill Road & Laurel Lane
 - Chalmers Road

Repaired by Outside Contractor:

Pipe (Crack)

Ramblewood Parkway

Saint David Drive

Haines Road

Hunters Lane & Beacon Place

Route 73 & Ramblewood Parkway

Custer Ct. & Cornwallis Dr

Valve Repair

Church Street @ Ramblewood Parkway

Private Line (Hole & Crack)

Fairview Terrace (Behind Stores In Parking Lot) (Private Contractor Repaired)

Irwin Road (Fire Service Break) (Private Contractor Repaired)

Other Water Related Items:

The MUA responded to 86 water service calls of the following types:

5 no water	15 emergency shut off / on	2 particles in water
9 low pressure	1 meter leaking	1 curb box sinking
3 hydrant leaking	6 main break	4 service leak
2 irrigation line leaking	3 ground water	1 noisy water pipes
5 lid missing	6 bad odor/taste in water	2 broken water cap
1 broken fire hydrant	2 broken water meter	1 sink hole @ curb line
12 turn on water (off for non payment)		
5 rusty water (Annual Hydrant Flushing Project)		

Impact of Superstorm Sandy on Water System Operations

Preemptive action included complete isolation of well #6, although reconstructed to above flood elevation, it is located directly adjacent to the flood zone. During and subsequent to the storm, all water facilities maintained electrical service from the grid with the exception of the Fostertown Elevated Water Storage Tank and our interconnection with NJAWC at Briggs Road. Fostertown Tank was able to continue operating; however the power loss resulted in complete loss of telemetry which meant that we were operating blindly in one half of the town. In addition, the backup two way radio system's repeater located at this facility became non-functional, which meant that there were now two way radio dead zones throughout the town. At NJAWC's Briggs Road interconnection controls were also impacted, which effected water flow regulation by NJAWC. Complete loss of supply occurred on two separate occasions but for only one-hour duration each. A corrective plan of action was developed and is already being

implemented for these facilities.

The major impact to Mount Laurel's water system from Sandy occurred within the Willingboro MUA's (WMUA) water system. A large portion of Willingboro Township was without electrical power from the grid for a prolonged period. The WMUA does not have back emergency power generation at many of its water supply wells. As such, although the WMUA was able to provide water to their direct residential and commercial customers, they were unable to provide us with a reliable source of water for over 5 days. In order to continue uninterrupted water service to our customers, we fired up our Elbo Lane Water Treatment Plant and ceased supplying water to the Evesham MUA (EMUA). This transition was transparent to our customers but not without consequence. Due to limited annual supply limits within Mount Laurel, on paper we did not have enough water available to operate the facility and could be subject to fines. We immediately appealed to NJDEP for relief but were denied. Fortunately, power was restored in Willingboro before we exceeded our limits. Operational modifications (including postponing recharge of the ASR) had to be made within our water system later in November and December in order to keep our water supply balanced without the availability of the Elbo facility during that period. The economic impact of the WMUA supply loss will only be seen after the summer of 2013, as loss of water stored in the ASR will affect the amount of water that must be purchased from the NJAWC during the summer peak billing rates. We have already met with WMUA to work on a joint plan for upgrading their facilities. Additional contractual modifications (for the three party agreement between MLTMUA, WMUA and EMUA) may be required in order to firm up this water supply commitment.

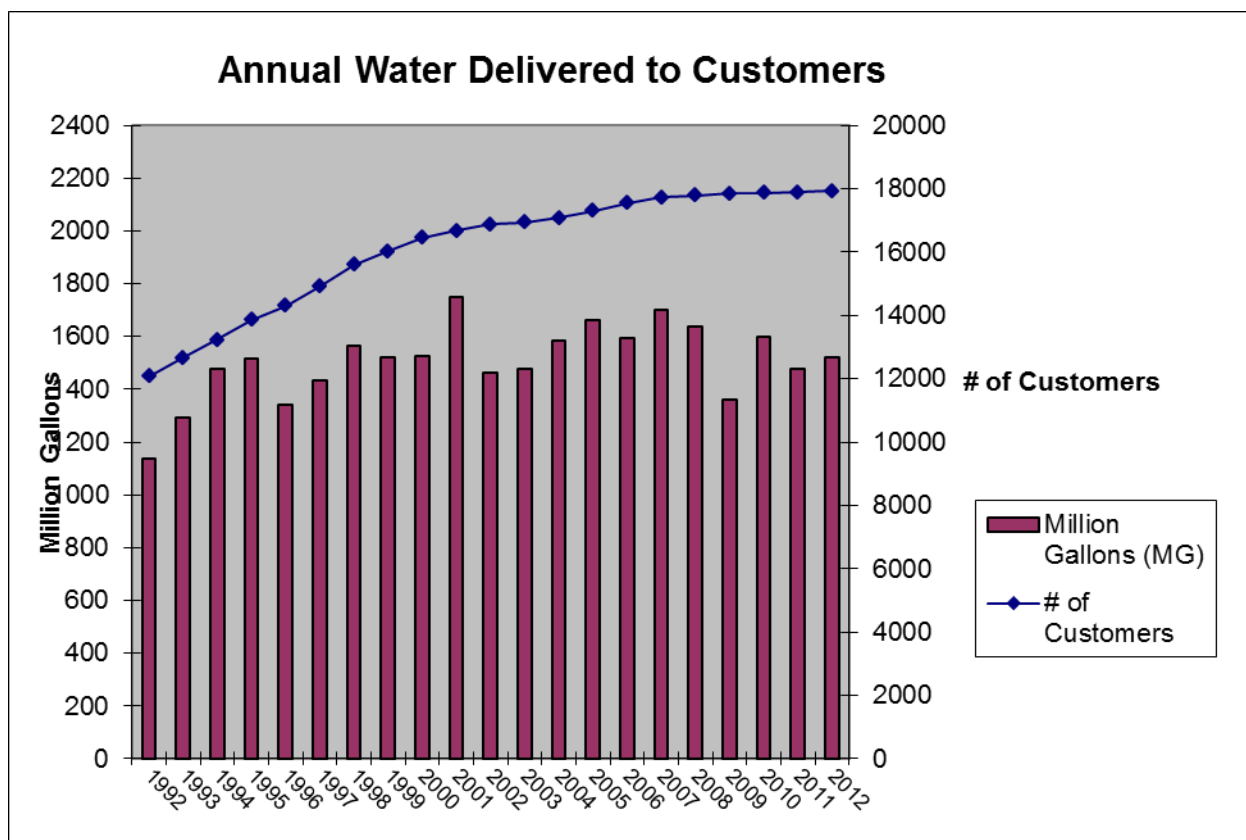
Water Quality in the Mount Laurel MUA Water System:

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 2011 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) because of conversations with NJAWC regarding our off-peak purchase contract. However due to the economic downturn, water required by our customers has waned. Coupled with NJDEP approval of a contract modification for the NJAWC water purchase, on paper the MUA has minimal excess available water capacity to service new connections. 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 Program Interest ID #5193X:

Term – 2/1/2007 to 1/31/2017

Diversions –

Permit No. 5193 for Ground Water = 5800 gpm, 165.2 MGM, 717.452 MGY via wells 3, 4, 6 and ASR 7

Permit No. 5400 for Surface Water = 4200 gpm, 186 MGM, 1237.548 MGY via proposed Rancocas intake. The overall annual allocation will be subject to adjustment based upon safe yield.

The MUA is continuously compliant with allocation limitations.

The second step in our three-part plan for the water supply system was completed in July 2007 and December 2011 and is functioning as expected.

Water Supply Plan:

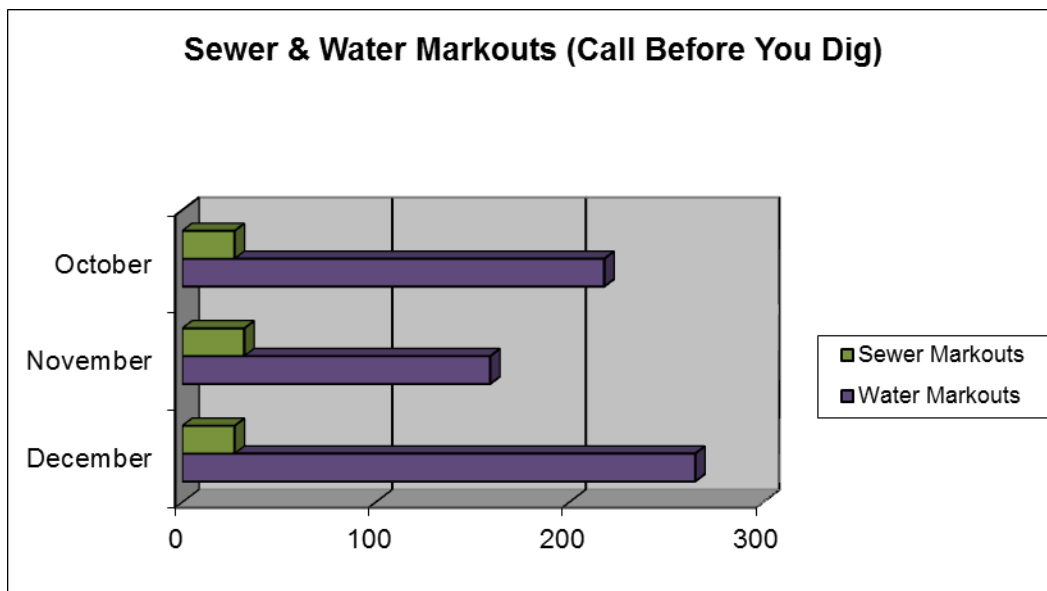
1. Implement ASR to augment summer requirement while reducing summer dependency on purchased water – complete
2. Replace out of date water treatment plants with one facility and controls for source management – increase monthly allocation for summer use - complete
3. Construct a new alternative water supply source within Mount Laurel to reduce water purchases from other suppliers – NJDEP allocation was obtained. Timing of design/construction of this project must be coordinated with existing water purchase agreements.

Looking Forward:

The Authority has been actively pursuing alternative sources of water to meet user demand. Currently, the Authority must purchase from outside water purveyors the excess water gallonage between its system demand and its permitted withdrawal from the Potomac-Raritan-Magothy aquifer. The Authority believes the development of less expensive alternatives is possible. Several have been identified. If the Authority receives approval from the appropriate regulatory agencies and develops these alternatives, particularly the building of a surface water treatment plant, the operating expense for the purchase of water from outside purveyors can be significantly reduced. Capital expenditures for a new plant would be significant. Below is a diagram of a typical surface water treatment system; however if the surface water alternative is employed in Mount Laurel the treatment facility will be more advanced as it will also include pre-oxidation using ozone, micro-filtration using membrane filters and ultraviolet disinfection prior to post chlorination.

Water & Sewer Mark Outs

The MUA receives all requests for Mark Outs when digging is involved anywhere in Mount Laurel Township. 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. Even though the number of mark outs required has reduced in the past several years due to a decrease amount of new construction within Mount Laurel, mark outs continue to require a noticeable amount of manpower.



750 Mark Out Request Received for the quarter

642 Mark Outs Performed by the Water Department

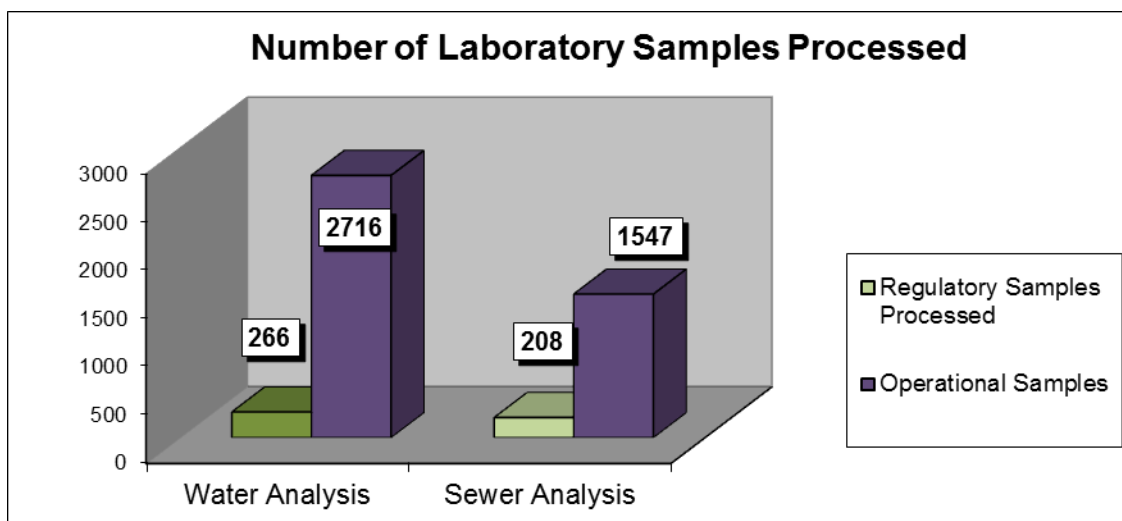
86 Mark Outs Performed by the Sewer Department

782 Total Mark Outs Performed by the Water & Sewer Departments

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. For the calendar year, our Lab processed 1,063 Water Regulatory Samples, 16,184 Water Operational Samples, 727 Sewer Regulatory Samples, 6,200 Sewer Operational Samples & 40 Soil Analysis.



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.

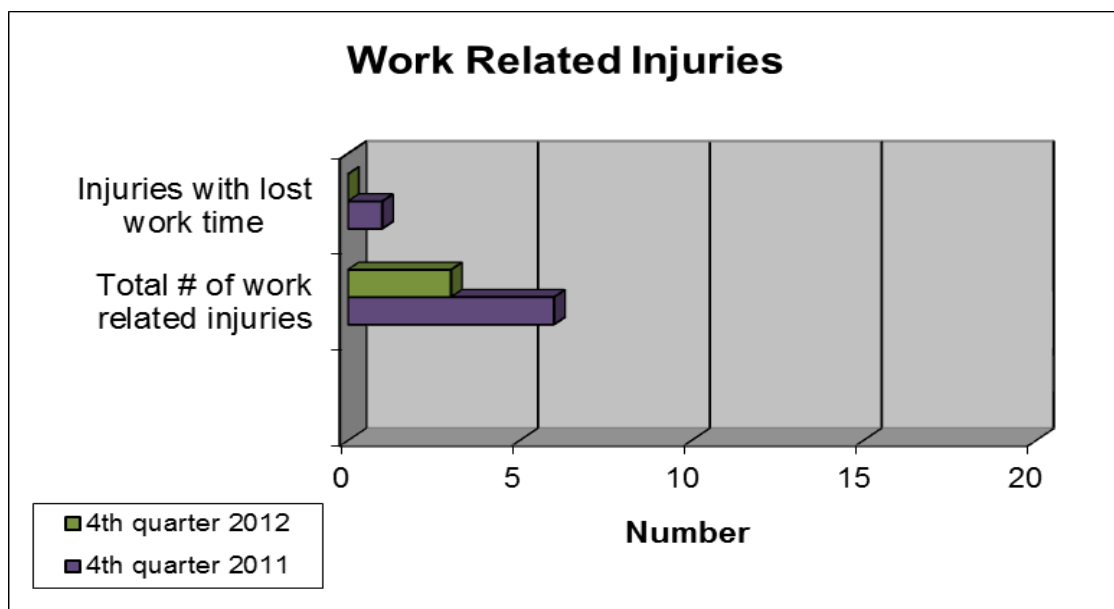
Each generator operates under load once per week. During Philadelphia area poor air quality days, exercising of generators must be postponed until air quality is within normal range. In addition, all standby generators are load-banked once every two/three years; this important service was previously performed once/year, but lack of manpower has required us to reallocate resources. We hope to resume our former schedule in the next few years.

Safety:

- ❖ SAFE Fire Extinguisher Service performed annual inspection and service on all fire extinguishers.
- ❖ Mount Laurel Fire Department inspected all MUA remote facilities.
- ❖ Our business worker's compensation carriers, performed safety inspections at the water and wastewater plants
- ❖ Performed annual inspection on AED units, replaced batteries and pads
- ❖ 6 MUA employees completed National Incident Management (NIMS) ICS-100 training.

There were three minor employee injuries, all without lost time this quarter:

- ❖ Fracture and contusion to left thumb, employee tripped and fell in conference room and his thumb caught a fixed object during the fall.
- ❖ Strained middle back and left shoulder, employee reported pain after pulling a manhole cover.
- ❖ Strained upper back, employee reported pain after pulling rags from a bar-screen at Stonegate Pumping Station.



Human Resources:

- ❖ Our employees participated in the Burlington County Sheriff's Annual Holiday Toy Drive.
- ❖ All Supervisors and Employees attended specialized diversity & bullying training
- ❖ Skilled Communicator training for all Supervisors

Our employees are licensed Water & Wastewater professionals. We have 29 MUA employees holding a total of 59 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.

13 operators with level 1 licenses, for operating systems with 101 to 1,500 people
27 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
8 operators with level 4 licenses, for operating systems with 50,001 or more people

- 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
Automotive Services	Electricians

Finance:

User Fees billed: \$ 4,921,195.10

User Fees budgeted: \$ 4,448,800.00

User Fees collected: \$ 5,308,704.54

Expenditures for the quarter:

Accounts Payable \$ 1,703,856.20

Payroll (including
tax liabilities) \$ 1,078,437.22

Debt Service \$ 0.00

Capital Projects \$ 486,461.81

Total Expenditures: \$ 3,268,755.23

- Fiscal Year 2012 Audit was completed and filed with the state. All procedures and documentation complied with General Accepted Accounting Procedures (GAAP); no comments or deficiency findings were documented by the independent auditor.

Shared Services:

Underdrains:

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 services agreement requires the Township reimburses 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.

Impact of Superstorm Sandy on Underdrain Systems

Much of Mount Laurel was without grid power for an extended period. Such was the case for the six(6) underdrain pump stations. These facilities are not equipped with emergency backup generators. MUA staff needed to monitor water levels within these stations. At times, MUA personnel called upon the Mount Laurel Township Public Works Department to bypass pump as needed. Fortunately Sandy dropped a low volume of rain and therefore the natural area groundwater levels did not increase dramatically. The MUA is developing a corrective action plan for these facilities which will be forwarded to Mount Laurel Township in the near future.

Mount Laurel Township – Miscellaneous:

- As a courtesy for Mount Laurel Township, the MUA Sewer Collections Department cleans out the Pond at PAWS Farm and pumps out the septic tank at Laurel Acres Park the 2nd Tuesday of each month. This was performed in October and December this quarter.

Impact of Superstorm Sandy on Shared Services

Although many of our staff were without power, some sustained damage at their own homes or assisted with damage recovery at homes of their extended family, our employees reported to work during and after the storm. Many volunteered for relief to hard hit areas as we worked closely with the Association of Environmental Authorities of NJ and the NJDEP to develop a resource network for NJ communities who fared worse than Mount Laurel. For several days we aided the Edgewater Park Sewerage Authority by jockeying diesel fuel from Edgewater Park Twp to various sanitary sewage pump stations. We prepared to launch two crews to badly impacted South Monmouth Regional Sewage Authority (in Monmouth County) to jet and televise sanitary sewer collection mains, which became filled with sand during the storm surge. Ultimately, we were called off as early barrier island access became impossible and an approaching nor'easter made our work too risky. We readied and sent our 100kw portable emergency generator and 250kw generator loaded on a lowboy trailer to Ocean Gate and Long Beach, along with mechanics to provide hook ups and service/piping modifications. Again, our efforts were complicated by access issues to barrier islands and severely damaged areas. We plan to continue our formal involvement with other NJ communities in the area of emergency partnerships.

Capital Projects:

Water

Well #3 Rehabilitation & Building Replacement

Well #3 was constructed in ~1976 and is one of three production wells owned and operated by the Authority. Water from this well is pumped to the Authority's Water Treatment Facility also located on Elbo Lane. This project included the construction of a prefabricated building to house the well and controls with addition of an emergency generator behind the building, and the redevelopment of the well screen and a new pump and motor. The contractor, Eagle Construction Services satisfactorily completed project and the work was formally accepted by the Authority at our November 27, 2012 meeting. The facility is now on a 2-year maintenance bond where the contractor is responsible to repair any latent defects. Cost of the entire project including permitting, design, construction and inspection was \$810,000. This project has prolonged the life of the facility for 25 years. As part of our Capital Budget-Renewal & Replacement Program, the next redevelopment of this well is scheduled to occur in 2016 at an estimated cost of \$60,000.



Removed column pipe-originally installed in 2004



New column pipe



Old well facility



New well bldg. with permanent standby diesel generator

Indigo Drive Water Main Replacement

This project includes replacement of 1,120 linear feet of 8" DIP water main, 2 fire hydrants and 41 house service connections. Since the existing pipe was only 15 years old when it reached the end of its useful service life due to acidic soil conditions, the new main was encased in plastic and has 30 cathodic protection anodes devices installed to extend the main's useful life. Although unnecessary to accommodate the water main replacement, the roadway was repaved from curb to curb by the Authority as requested by Mount Laurel Township. The contractor, Pioneer Pipe Contractors, completed installation of the new water main, connected all the existing homes to it and has repaved the roadway. The originally installed water main was filled with grout and abandoned in place. The project can be finalized after completion of minor punch-list repairs and submission of as-built information. The Authority has spent approximately \$310,000 thus far on this project.



New Pipe Installation



New Pipe Installation



Repaving Roadway



Finished Project

Well #4 Pump Rehabilitation and Piping Modifications

This project includes replacement of the well pump, redevelopment of the well, piping modifications, installation of a new flow meter, new electrical control equipment and SCADA system modifications. Construction cost was estimated \$310,000; however bids were received in November 2012, with a low bid of \$358,514. All bids were reviewed, analyzed and found to be accurate. The Authority awarded the contract to the low bidder, Eagle Construction Services at our November 27, 2012 meeting. A pre-construction meeting was held with the contractor on December 14th. This project is on a very tight construction schedule as the well must be back in full operation prior to April 30, 2013. The contract requires that the well be operational by April 8th; stiff penalties will be imposed upon the contractor if this date is not met. At the end of December, the contractor was met with a short delay when obtaining permits from the Mount Laurel Construction Code Official. The contractor has not filed a delay claim.

Sewer

Orchard PS Rehabilitation-Electrical

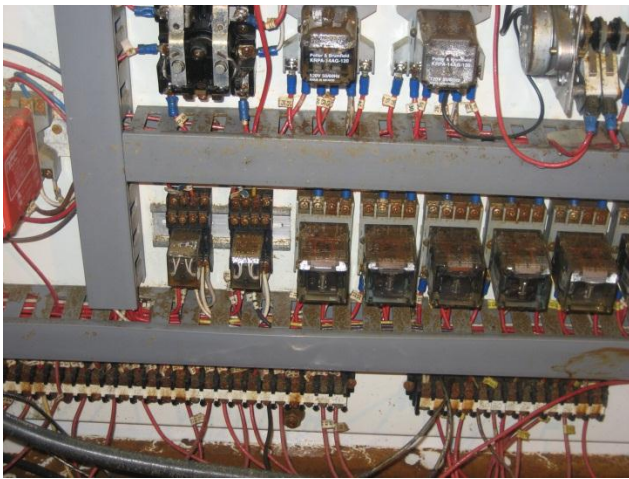
The Orchard PS was constructed in 1984, has been in continuous operation since and has not undergone any major rehabilitation. This facility services a large part of the Larchmont developments on the north side of Rt. 38. It is one of the Authority's five largest sewage pumping stations (41 pump stations in all). The station is a metal can type and its electrical controls are corroded as can be expected due to the atmosphere in which they are housed. This project includes new controls and equipment replacement at a total estimated cost (design, permitting and construction) of \$250,000. Originally the electrical work at Orchard PS was to be combined with that planned for the Holiday Village East PS (described below); however due to budget constraints, the Holiday Village East PS work was postponed to FY2014. Design of the Orchard PS work is underway. We anticipate receiving bids and awarding the contract in March 2013 with work commencing in April.

Orchard PS Rehabilitation-Site Work

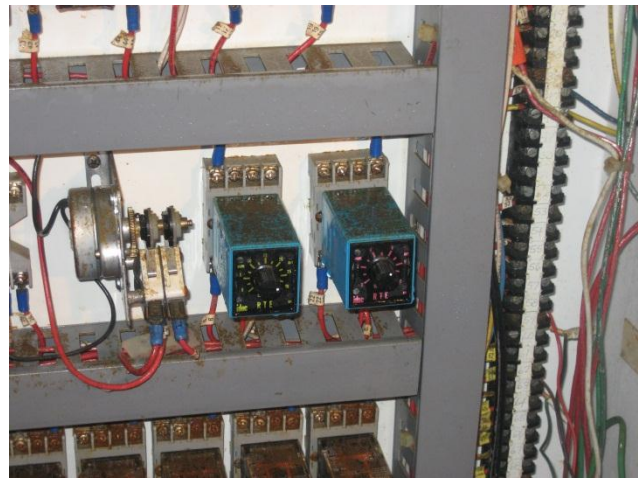
The Orchard PS is located at a low local elevation and routinely experiences flooding problems due to site runoff. This project includes new paving and drainage improvements to address this situation. A new fence is also included. Engineering, permitting and construction cost for this work is estimated at \$140,000 with bidding/award in July 2013.

Holiday Village East PS Electrical Modifications

The Holiday Village East pumping station was constructed in 1988. It is a deep (20'+) metal can type station (wetwell/drywell). Controls and electrical equipment are located below ground in the dry well which is a corrosive atmosphere. In Spring 2011, part of the pumping equipment in the dry well cracked causing the dry well to flood with raw sewage. The already corroded controls were badly damaged. In order to continue moving the untreated sewage through the MUA's collection and pumping system to the wastewater treatment plant, an emergency bypass pump was installed. Emergency pumping continued for several months while the facility was returned to an operational status. The non-functional access elevator was removed during this time.



Existing Controls



Existing Controls

This project includes replacement and relocation of the majority of electronic equipment to the existing building or a modified above grade building/enclosure. The existing electrical supply will be replaced and possibly pump motors as well. Updated construction cost estimates were prepared by our consulting engineer, that are higher than originally anticipated. As such, design of this project continues but construction has been postponed until after July 1, 2013 when the Authority has funds available via our Capital Construction Renewal & Replacement Program.

It should be noted that the ductile iron pipe (DIP) sanitary sewer force main associated with this pumping station was replaced in its entirety in 2004 due to external corrosion from acidic soils when it was merely 15 years of age. Piping of this type, used for this application should last well in excess of 60 years. The ~\$150,000 replacement force main was constructed of PVC pipe in order to better stand up to the area's corrosive soils. As a general rule, the Authority has moved to using PVC for all new force mains however this is not without consequence as PVC may be more susceptible to adverse effects related to water hammer than DIP.

FY12 Cleaning and Videoing of Sanitary Sewer Mains

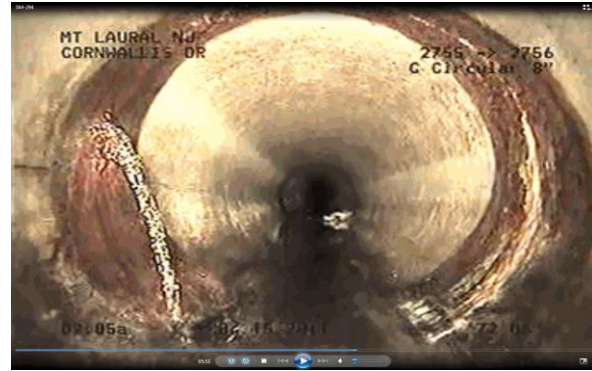
This project consisted of televising 94,132 feet of sanitary sewer mains of various diameters primarily in the Birchfield, Countryside, Laurelwoods, PennOak and Holiday on the Green (both Ramblewood), Timbercrest, and the Rancocas Woods sections of the sewer system. The project is part of the Authority's over multi-year assessment of the sanitary sewer system. Work was performed between 10pm and 6am (low flow period) in order to best observe infiltration and inflow ("leaks") into the sanitary sewer system during April and May 2012. Engineering, construction management and a large share of the pre-televising cleaning was performed by Authority staff for an overall cost savings. Video Pipe Services was the lowest qualified bidder and therefore awarded the contract for televising of the mains. Outside project cost was \$114,258. Although the video work was completed in May 2012, the as-built quantities were only agreed to in December 2012. We anticipate finalizing and closing out the project in March 2013.

In addition to having updated conditions of 94,000 feet of the Authority's 800,000 feet of gravity sanitary sewer main, remedial action is recommended for a number of areas within the next 3 years. Of the 469 sections of main videoed this year, 109 section have been identified as needing work. The majority of work needed will be in the following areas: root removal and control, grouting, slip lining or point repairs. The Authority is using its asset management program to prioritize and schedule repair/rehabilitation of these areas along with previously televised areas and other known issues and is incorporating this

information into the Capital Construction Renewal & Replacement Program.



Satisfactory ACP main



Infiltration at ACP pipe joint, requires repair

Hartford Road WPCF-UV Disinfection System

This project includes installation of new ultraviolet disinfection (UV) equipment as a replacement to the existing equipment which began service in 1996 after the latest treatment plant upgrade/expansion. The existing system has seen its fair share of repairs during its 16 years in service. Hydraulics related to the cleaning system have been non-functional for over 2 years causing a large increase in manpower dedicated to keeping the system operational. Computer controls and circuit boards have been previously been replaced and additional repairs to that system are no longer possible. Operational issues related to this equipment have caused an increase in electric usage.



One arm of 16, prior to weekly cleaning



preliminary cleaning process

At the present time, we are proposing to install a new system in a spare channel in the existing UV tank. After the new equipment is operational, the existing UV equipment will be taken out of service for rehabilitation for future use as backup disinfection. Project cost is estimated at \$1,000,000. Alternatives are currently under evaluation. Conceptual design and layout is underway; final design should be completed so that bidding can occur in June 2013 with contract award in July 2013 when the funds budgeted for construction become available.



Cleaning in July 2010



A cleaned UV module arm

Hartford Rd WPCF Structural Tank Inspections

the orbal oxidation ditch, secondary clarifiers and UV tank are all concrete tanks which were placed into service in 1996. After initial construction, leaching of minerals was noticed on exterior surfaces of each of the tanks. Each of the secondary clarifiers and the UV have been temporarily taken out of service for periodic maintenance over the last 16 years, but never for the purposes of inspecting the integrity of the concrete structure. The orbal has been in continuous service as there is no back up treatment during a shutdown. A scheduled shutdown of each of these tanks was planned so that structural engineering inspections could occur, an analysis and recommendations made and plan of action implemented.

External inspection of both secondary clarifiers and internal for secondary clarifier #2 occurred on March 12, 2012. This inspection of this structure was done first as it exhibited the greatest exterior mineral deposits and the most surface cracking.



Clarifier #2, interior at expansion joint



Clarifier #2, exterior with efflorescence

An Engineering report was issued on 4/27/12; the findings were better than anticipated. Honeycombing of the concrete was apparent on the interior face of the tank wall throughout. Tank contents are seeping into the cracks in the concrete causing the calcification on the outside of the tank; the cracks are non-structural in nature and their impact on the corrosion of reinforcing is limited to the reinforcing at the vicinity of the cracks. Action alternatives identified were: 1. documentation and monitoring of crack depth and size, and 2. performing remedial repairs on the exterior tank surfaces (cost estimated at \$25k per tank).

Inspection of orbal cell #1 occurred during the week of 9/10/12. Operational coordination to lower the liquid level in this was extensive, as we were still required to meet all discharge limits during the event. We expected that some grit/sludge would be found in certain tank areas which would require a future clean-up plan; however this was not the case. A report regarding condition of cell #1 of the orbal was issued on 10/12/12. Action items identified are: 1. minor work is needed on the orbal sluice gates between cell 1 and the other cells, 2. document and monitor crack size/depth, 3. Perform remedial repairs on the exterior cracks, 4. Perform remedial repairs on the interior and exterior of tank at the control joints, 5. Sandblast and re-inspect the interior of the tank.



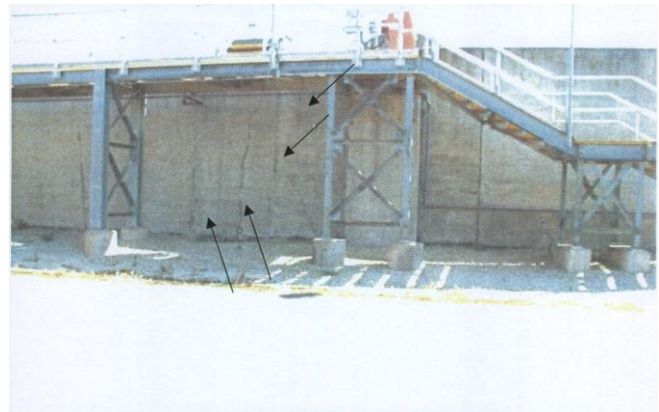
Orbal cell #1 interior



Orbal Cell #1 interior, sluice gates



Orbal exterior with efflorescence



Orbal exterior at control joint B

As a result of the clarifier and orbal inspection findings, inspection of the UV tank has been postponed and will be coordinated with work associated with the UV disinfection system project.

Administrative

Admin Parking Lot Reconstruction

Authority engineering staff designed and managed the construction related to the parking lot/sidewalk reconstruction in order to reduce expenses associated with the project. Command Company performed the work in October 2012 at a cost of \$43,800. All major work is complete with the exception of punch-list items including sealing of the joints in the paving. We hope to close out this project in February 2013.



Records Retention/Disposal

The Authority has begun the process of categorizing, quantifying and applying to the Department of Community Affairs to dispose of authority public records. The last major records disposal project occurred over 5-years ago. The first facility that is targeted is the Hartford Rd WPCF as space is at a premium and some records have been water damaged; however a large number of records for this facility must be retained for extended duration or in perpetuity.