



# PW/Utilities Connection



## November 2006

Utilities Data from Oct. 2006

City of Melbourne Public Works & Utilities Department

### Mansfield earns place as new reclaimed water coordinator

Roger Mansfield finds himself in a position that some could envy, while others might view with trepidation.

He has been promoted to a newly-created position — reclaimed water coordinator. The position is so new that Mansfield has the somewhat rare opportunity to define the job and then continually refine it as he progresses.

“Roger is uniquely qualified for this new position because of his experience in wastewater treatment and his enthusiasm for the reuse system,” said Wastewater Treatment Superintendent Eric Blankman. “He’s been a long-term advocate of reclaimed water. Now it will be one person’s responsibility to oversee the program and make it what it should be.”

Mansfield originally started with the City almost 22 years ago as a wastewater treatment operator trainee. He later earned his C, B, then A licenses, became an operations supervisor, and earned a reclaimed water field site inspection certificate. Throughout those years, he has seen many changes in the field.

“When the City started producing reclaimed water in the 1980’s it was seen as another disposal option,” Mansfield said. “Now it is a viable resource.”

Not only viable but regulated. The City is required through its permits from the Florida Department of Environmental Protection and the St. Johns River Water Management District to produce and distribute reuse. A comprehensive master plan is being developed to guide the future of the resource. In addition, a major interconnect project is getting underway to tie together the reuse water systems from the D.B. Lee Wastewa-



*Roger Mansfield, City’s new reclaimed water coordinator.*

ter Treatment Plant with the Grant Street Wastewater Treatment Plant.

Mansfield will coordinate with various City divisions and departments on these projects. He will also provide regulatory agency reporting, respond to customer requests, perform audits of the system, review site plans, update ordinances and specifications, and work to integrate the reclaimed water distribution system into the City’s GIS database.

In addition, a key aspect of the new position will be that of public education. Mansfield plans to develop programs for new reuse customers and for existing customers, and increase the signage. In addition he has ideas for promoting and providing education about the program extensively with the public and with City employees.

“This will come to be a matter of prioritizing,” Blankman said. “There are so many things that are demanding attention. Now, we have a ‘buck stops here’ guy.”

With one person now overseeing the resource, Mansfield will be the point of contact for reclaimed water for other divisions with which he will interact, including engineering, wastewater collection, customer service/meter reading, utility billing, planning & economic development, and others. He will also be the primary contact person for the public.

“I’m looking forward to this challenge,” Mansfield said. “I’m really excited about the potential for the City to maximize the beneficial, efficient use of reclaimed water.”

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## Monthly Water Usage and Raw/Finished Water Quality Statistics

### Water Usage

- ◆ Water pumped to service: 488,551,000 gallons or 15.760 MGD average
- ◆ Maximum finished water pumped to service: 18.478 MGD on Oct. 1, 2006
- ◆ Fire hydrant flushing: 19,338,140 gallons
- ◆ Committed capacity: 3.1475 MGD
- ◆ Capacity available for development: 7.5779 MGD (Based on 12-month average daily flow)

### Water Quality Statistics

#### Lake water

- ◆ Level: 14.01 feet above MSL on October 31, 2006 (Prior month comparison: 15.25 feet on Sept. 30, 2006)
- ◆ pH: 7.6
- ◆ Alkalinity: 68 mg/L

- ◆ Total hardness: 104 mg/L
- ◆ Chlorides: 56 mg/L
- ◆ Color: 371
- ◆ Total dissolved solids (TDS): 238 mg/L

#### Well water

- ◆ pH: 7.8
- ◆ Alkalinity: 122 mg/L
- ◆ Total hardness: 648 mg/L
- ◆ Chlorides: 790 mg/L
- ◆ Color: 6
- ◆ TDS: 1,681 mg/L

#### Finished water - pumped to service

- ◆ pH: 8.4
- ◆ Alkalinity: 34 mg/L
- ◆ Total hardness: 73 mg/L
- ◆ Chlorides: 57 mg/L
- ◆ Color: 2
- ◆ Total dissolved solids (TDS): 315 mg/L

## Field trip to South Florida provides software upgrade info

Thirteen City employees from various departments recently boarded a large passenger van to take a field trip to North Miami Beach (NMB). What they hoped to learn is how powerful new software can help manage their work more efficiently.

The DataStream 7i software is an upgrade to MP2 software that is being used by both the Water Production and Wastewater Treatment Divisions. While evaluating the new upgrade staff discovered that it is being operated in numerous divisions by the City of North Miami Beach.

To see how it could be implemented here, staff from wastewater lift stations, facilities maintenance, streets and stormwater management, information technology, along with water production and wastewater treatment, met with their counterparts to investigate how it can



Employees prepare to enter the van for a recent early morning excursion to North Miami Beach. Pictured from left are Kathy Bigus (IT), Gerald Gary (water production), Sharon Stonecipher (streets/stormwater), John Prescott (IT), Darrell Manchester (lift stations), Joe LaPan, Jonathan Williams, Lee Cheary (wastewater treatment), Bill Spann (water production), Marv Sharp (facilities maintenance), Jyoti Ramchandani (IT), and Debbie McGuire (facilities). Leigh Ann McDonald (wastewater treatment) is not pictured.

similarly be an asset for Melbourne operations.

“They (NMB) have over 300,000 assets in their software system,” explained Assistant Public Works & Utilities Director Harold Nantz. “It is a real powerful and flexible upgrade of what we have and the more people we get using it the better.”

Leigh Ann McDonald, Regulatory Compliance Coordinator for Wastewater Treatment, has been utilizing the older MP2

software for the past nine years. She said the upgrade will now be web-based and more configurable.

“We have been using it for managing our maintenance programs, inventory and purchasing activities,” said McDonald. “7i will be able to integrate the operations side for reporting and time analysis.”

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## Wastewater Treatment Operational Summary and Reuse Statistics

### D.B. Lee WWTP

- ◆ Treated this month: 119.37 MG
- ◆ Treated daily: 3.85 MGD
- ◆ Reuse production — total month flow: 59.43 MG
- ◆ Reuse average daily flow: 1.92 MGD
- ◆ Reuse number of days run: 31
- ◆ Plant efficiency, BOD removal: 99.4%
- ◆ Committed capacity: 0.8983 MGD
- ◆ Capacity available for development: 1.5900 MGD  
*(Based on 12-month average daily flow)*
- ◆ Rainfall: 1.35 inches over four days

### Grant St. WWTP

- ◆ Treated this month: 91.83 MG
- ◆ Treated daily: 2.96 MGD
- ◆ Reuse production — total month flow: 10.02 MG
- ◆ Reuse average daily flow: 0.32 MGD
- ◆ Reuse number of days run: 31
- ◆ Plant efficiency, BOD removal: 98.83%
- ◆ Committed capacity: 1.6743 MGD
- ◆ Capacity available for development: 0.7849 MGD  
*(Based on 12-month average daily flow)*
- ◆ Rainfall: 1.07 inches seven over days

*A total of 69.45 million gallons of reclaimed water was produced during October, representing 33 % of total plant flows.*

## Manholes get rehabilitated



Seventeen manholes at the Grant Street Wastewater Treatment Plant have recently been rehabilitated. Deterioration in the structures had been accelerated because of severely high hydrogen

sulfide gases. This was leading to infiltration and inflow problems increasing the amount of stormwater entering the wastewater system.

The old brick-lined manholes have now been cleaned and lined with a polymer-based epoxy material that serves as a protective coating. All new manholes in these severely gaseous environments are required to have a similar lining when constructed. These are generally receiving manholes or those with force mains discharging into them.

The City “piggybacked” with a Gainesville Regional Utilities annual contract with Dallas 1 Construction

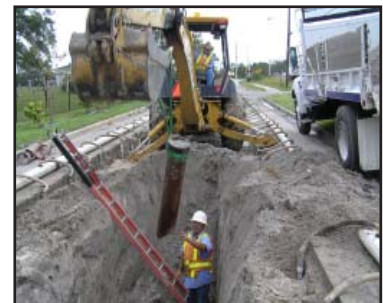
and Development. Pictured at left is a worker from that company preparing one of the manholes for the protective coating application.

## Collapsed pipe repaired inhouse

A wastewater collection crew was recently dispatched to Masterson Street to repair sewer pipe after a resident discovered a sinkhole. While under repair, an additional sinkhole formed. The 155-foot section, from manhole to manhole, was replaced to correct the problem. The existing 50-year old clay pipe was retrofitted with eight-inch PVC pipe.

Charlie Packard is shown in the eight-foot deep trench guiding a section of the old pipe out, while Mike Murray operates the backhoe.

Rubin Rosado and “Bear” Flores were also on the crew.



## Streets and Stormwater Management Monthly Summary

- ◆ Daytime street sweeper — hours run: 115  
Cubic yards of material removed: 210
- ◆ Nighttime street sweeper — hours run: 119.5  
Cubic yards of material removed: 176
- ◆ Asphalt repairs made: 27
- ◆ Tons of asphalt used: 24.25
- ◆ Feet of canals cleaned mechanically: 4,427
- ◆ Acres treated through aquatic spraying: 21
- ◆ Feet of storm drain pipe repaired: 3
- ◆ Concrete repairs: 16
- ◆ Cubic yards of concrete used: 17.25

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## Sewer line breaks on another section of pipe by Fla. Tech

A sinkhole discovered by a resident made known that a wastewater pipe had broken underneath, necessitating emergency repairs. The 24-inch pipe was in the same vicinity as a section of the run of pipe that had been replaced a little over a year ago. It is located east of Country Club Road at Florida Tech.

Sewer gases had eaten away at the old ductile iron pipe. PVC (poly vinyl chloride)



*Insituform Foreman James Cringley provides an update to City Utilities Engineer Michelle Shoultz.*

pipe is now used, which can better withstand the stresses caused by the gases.

Cured-in-place pipe lining was used to repair to 350-foot section of pipe. By-pass pumping was put into place during the work as a temporary measure to bring the wastewater to the treatment plant. The City has an ongoing annual contract with Insituform Technologies for lining. Emergency services were included in the contract.

## What's Done, What's Underway and What's Coming Up

### Water Projects

#### **Recently Completed:**

- ◆ St. Andrews water line replacement

#### **Under Construction:**

- ◆ Phase II surface water treatment plant improvements, \$11,322,000
- ◆ Miscellaneous two-inch to six-inch waterline upgrades, \$874,857

#### **Under Design or in Bid**

##### **Process:**

- ◆ Wickham Road ground storage tank and booster pump station
- ◆ Automatic transfer switch and generator enclosure at the surface water treatment plant's belt press building
- ◆ Pineda Causeway 16" water main
- ◆ Wickham Road 8" water main
- ◆ Babcock Street water line relocation between Fee Avenue and Melbourne Avenue
- ◆ 36" water main clearing, Phase II
- ◆ Waterlines in annexation areas — Deerwood and El Dorado
- ◆ Rehabilitation to RO wells #1, 2 & 3
- ◆ Backup well #4
- ◆ Unidirectional flushing program

& Individual Distribution System Evaluation (IDSE) plan

- ◆ Water model update
- ◆ Harlock Rd water main extension
- ◆ Eau Gallie water line replacement, Phase I, Segments V & VI

### Wastewater Projects

#### **Recently Completed:**

- ◆ Various CIPP sewer line rehabilitation projects

#### **Under Construction:**

- ◆ Various manhole rehabilitation projects
- ◆ Lift Station #43 (Front Street) upgrade, \$567,000
- ◆ Lift Station #55 upgrade
- ◆ St. Andrews lift station and subaqueous force main
- ◆ Reuse interconnect

#### **Under Design or in Bid**

##### **Process:**

- ◆ Reuse master plan
- ◆ Water & Wastewater Operations maintenance building
- ◆ Electrical upgrade to the sludge

belt press building at D.B. Lee and Grant Street WWTPs

- ◆ D.B. Lee WWTP administration building
- ◆ Lift Station #29 (Aurora & Marywood) and Lift Station #46 (BCC) renovations
- ◆ Grant Place lift station and force main
- ◆ Crane Field reuse project

### Streets & Stormwater Projects

#### **Under Construction:**

- ◆ Eber Road widening from Babcock Street to Dairy Road, \$3,840,879
- ◆ Various CIPP pipe rehabilitation projects, \$855,000

#### **Under Design or in Bid**

##### **Process:**

- ◆ Babcock and Hibiscus intersection improvements
- ◆ Gramling Park Road drainage improvements
- ◆ Melbourne Avenue drainage at Penwood Avenue

*For more information about this report, please contact the Melbourne PW/Utilities Administration Department at (321) 674-5761 or send an e-mail to [utilities-admin@melbourneflorida.org](mailto:utilities-admin@melbourneflorida.org)*