

PW/Utilities Connection



June 2008

Utilities Data from May 2008

City of Melbourne Public Works & Utilities Department

Public Works assists Palm Bay with recent fire disaster

The City of Melbourne answered the call for help to assist its neighbors to the south with likely the biggest disaster in Palm Bay's history.

The brush fires that raged in early May destroyed homes and damaged property, caused evacuations of two schools, and left people and animals shocked, dazed, displaced, disrupted, and frightened.

Besides fire and police assistance, Melbourne also provided firefighting help through its Public Works and Utilities Department.

Director Bob Klapproth arranged for Melbourne to send its two Vactor trucks, normally used for wastewater collection and stormwater management operations, a one-ton utility truck with a 120-gallon fuel tank, along with employees and mechanics to assist. Each of the vac trucks holds 1,500 gallons of water.

The vac trucks and operators met each morning for two days at the staging area set up at Bayside High School. They were given general directions on where to go to spray down hot spots, smoky areas, and assist homeowners with whatever they asked.

"It was horrible to see the destruction of houses and cars," said Gator Hembree, of Melbourne's Streets and Stormwater Division.

Butch Burke of the Wastewater Collection Division echoed those sentiments.

"The hardest part was seeing the people and their stuff burned down to nothing," Burke said. "We even saw a baby raccoon with half its hair gone. We tried to spray him to cool him down but he ran off into the woods."

Burke recalled some of his most memorable visions of the event, such as one house that had completely burned down to the slab, but a child's tree fort in the same yard appeared not to have been touched. Or the way it burned a house on either side of a house in the



Assisting with the fire efforts are from left, Butch Burke, John Russell, James Jordan, and Gator Hembree. Other Melbourne Public Works & Utilities staff that assisted were Louis Burdett, Kevin Pugh, and Rick Boychuk.

middle that was left untouched by the fires. Or the many trailers, RVs, boats, trucks, and cars burned down to a bare metal shells.

To assist Palm Bay with this disaster, the two vac trucks were each filled up nine times per day with water from fire hydrants in the area. Over the two days, they sprayed 54,000 gallons of water on wooded hot spots, which Burke said were popping up everywhere. They also sprayed down homes at the request of residents.

Others assisted in the efforts as well. Hembree said the St. Johns River Water Management District was out with their spray rigs, as were various private contractors.

"Anyone with tanks on their trucks was out there," Hembree said. "People really came together."

Besides spraying down hot spots, Melbourne also sent employees from the Fleet Management Division to remotely fill up their fire trucks, brush trucks, and front-end loaders. They also provided electrical repairs to lights that had torn off on many of the brush trucks.

Palm Bay Public Works Director Jim Proce sent a letter of thanks to Klapproth. He noted that when he sent out the call for help to friends in other municipalities, Melbourne answered the call and sent much needed aid.

"The tankers (vac trucks) were instrumental in helping us stop the fires," Proce said.



Butch Burke douses a hot spot.

PW/Utilities Connection - June 2008

www.melbourneflorida.org

Public Works/Utilities Data from May 2008

Monthly Water Usage and Raw/Finished Water Quality Statistics

Water Usage

- ◆ Water pumped to service: 504,466,000 gallons or 16.273 MGD average
- ◆ Maximum finished water pumped to service: 17.642 MGD on May 16, 2008
- ◆ Fire hydrant flushing: 17,619,320 gallons
- ◆ Committed capacity: 5.6793 MGD
- ◆ Capacity available for development: 5.7874 MGD (Based on 12-month average daily flow)

Water Quality Statistics

Lake water

- ◆ Level: 13.08 feet above MSL on May 31, 2008 (Prior month comparison: 13.79 feet on April 30)
- ◆ pH: 8.0
- ◆ Alkalinity: 82 mg/L

- ◆ Total hardness: 186 mg/L
- ◆ Chlorides: 138 mg/L
- ◆ Color: 164
- ◆ Total dissolved solids (TDS): 407 mg/L

Well water

- ◆ pH: 7.8
- ◆ Alkalinity: 123 mg/L
- ◆ Total hardness: 631 mg/L
- ◆ Chlorides: 717 mg/L
- ◆ Color: 6
- ◆ Total dissolved solids (TDS): 1,586 mg/L

Finished water - pumped to service

- ◆ pH: 8.5
- ◆ Alkalinity: 54 mg/L
- ◆ Total hardness: 133 mg/L
- ◆ Chlorides: 108 mg/L
- ◆ Color: 1
- ◆ Total dissolved solids (TDS): 390 mg/L

Household lead and copper testing getting underway

Based on compliance with state and federal standards, the City has only been required to conduct household lead and copper sampling every three years, which is a reduced schedule. Due to last year's change in the treatment process with the addition of ozone, testing will now be conducted twice a year, until a series of two tests shows compliance. After that, testing will revert back to triennially.

The first set of tests will be conducted this month, with samples of 100 homes. The second set of tests is planned in September.

Participants are provided with sample bottles, along with an instructional sheet and DVD. They are to collect samples from their sinks when no one in the home has used water from the faucets for at least six hours. Typically a resident would collect the sample first thing in the morning before anyone has used it since the night before.

The participant places the bottle under the faucet, turns on cold water and completely fills the bottle. Faucets with any type of filter on them are excluded, as are homes with water softeners, reverse osmosis, or other filtration systems.

After collecting the sample, the resident puts the

sample bottle, with a completed and signed form, back in the delivery bag and sets it outside their front door for collection by City staff.

"Lead and copper contamination generally occurs from corrosion of household pipes," said Assistant Public Works & Utilities Director Harold Nantz. "Homes constructed before 1988 with copper plumbing and lead solder may leach trace amounts of lead and copper into the home's drinking water. In addition, some older plumbing fixtures may have lead in the metals that could leach out as well."

This cannot be directly detected or removed by the water system. Instead, the Environmental Protection Agency (EPA) requires water systems to control the corrosiveness of their water if the level of lead or copper at home taps exceeds the acceptable level. Annual water quality testing of Melbourne's distribution

system has found no violations.

The City adjusts the finished water pH to reduce the potential of this occurring in homes, but leaching can still take place, especially if the home has a water softener. A good safeguard for homes with lead-based solder or fixtures is to flush the tap for at least 30 seconds before using tap water that is to be consumed.



Working in assembly-line fashion, Cathy DelBoccio (left), Yvonne Gonsalves, Harold Nantz, and Shaniese Alexander put testing kits together. Colleen Lowman also assisted.

PW/Utilities Connection - June 2008

www.melbourneflorida.org

Public Works/Utilities Data from May 2008

Wastewater Treatment Operational Summary and Reuse Statistics

D.B. Lee Water Reclamation Facility

- ◆ Treated this month: 132.69 MG
- ◆ Treated daily: 4.28 MGD
- ◆ Reuse production — total month flow: 102.48 MG
- ◆ Reuse average daily flow: 3.31 MGD
- ◆ Reuse number of days run: 31
- ◆ Plant efficiency, BOD removal: 99.60%
- ◆ Committed capacity: 1.6660 MGD
- ◆ Capacity available for development: 0.9131 MGD
(Based on 12-month average daily flow)
- ◆ Rainfall: 0.85 inches over 2 days

Grant St. Water Reclamation Facility

- ◆ Treated this month: 86.18 MG
- ◆ Treated daily: 2.78 MGD
- ◆ Reuse production — total month flow: 14.99 MG
- ◆ Reuse average daily flow: 0.48 MGD
- ◆ Reuse number of days run: 31
- ◆ Plant efficiency, BOD removal: 99.07%
- ◆ Committed capacity: 2.4969 MGD
- ◆ Capacity available for development: 0.05898 MGD
(Based on 12-month average daily flow)
- ◆ Rainfall: 0.41 inches over 6 days

A total of 117.47 million gallons of reclaimed water was produced during May, representing 54 % of total plant flows.

City's water continues to improve with various programs

Water quality complaints have dropped drastically from a year ago thanks to a multi-pronged approach to issues that had been plaguing the system. During the five-month period that ended in May of 2007, the City recorded 543 reports of discolored water. During the same time period this year, only 101 such calls have been logged.

Part of the improvements can be attributed to the unidirectional flushing (UDF) program that is well underway. This program is flushing the entire system using clean water to flush with high velocities in one direction.

"When water doesn't have enough flow to keep it moving, small particles (total dissolved solids) tend to clump together and deposit on the lines," said Assistant Public Works & Utilities Director Harold Nantz. "The UDF program fixes this by scouring the deposits out of the pipes.

Advanced ozone treatment also came online during the end of 2007 as part of the Phase II water plant im-

provement project. Ozone reduces the use of chlorine and the potential for disinfection byproducts. A part of the improvements also included the addition of carbon dioxide into the treated water. This is used to increase the alkalinity of the water, making it more stable and less corrosive.

In addition, the City has been undertaking an aggressive pipe replacement program, exchanging miles of old cast iron and galvanized steel pipe with PVC pipe. These old pipes get corroded over the years, which can cause discolored water.

Besides these efforts, a system-wide chlorine "burn" will take place later this year to maintain stable water chemistry. A

"burn" is a common water utility practice used periodically to prevent excessive bacteria buildup in the water distribution system.

"These efforts are working together and paying off," said Bob Klapproth, Public Works & Utilities Director. "We expect to see continual improvements."



Streets and Stormwater Management Monthly Summary

- ◆ Daytime street sweeper — hours run: 100
Cubic yards of material removed: 418
- ◆ Nighttime street sweeper — hours run: 112
Cubic yards of material removed: 97
- ◆ Asphalt repairs made: 41
- ◆ Tons of asphalt used: 30.1
- ◆ Feet of canals cleaned mechanically: 3,209
- ◆ Acres treated through aquatic spraying: 21
- ◆ Feet of storm drain pipe repaired/replaced/lined: 53
- ◆ Feet of storm drain pipe installed: 320
- ◆ Feet of storm drain pipe cleaned: 600
- ◆ Storm inlets cleaned and repaired: 17
- ◆ Concrete repairs: 20
- ◆ Cubic yards of concrete used: 34

PW/Utilities Connection - June 2008

www.melbourneflorida.org

Utilities Data from May 2008

Lorna Drive drainage fixes get underway this month

Work has recently begun to replace 150 feet of failing steel drainage pipe with concrete pipe. The project also includes cleaning and lining existing concrete pipe. The pipes are located in the vicinity of Lorna Drive at its

intersection with Floridiane Drive in the Leewood Forest subdivision. The project will improve storm-water flows and provide better flood protection.

Timothy Rose Contracting is constructing this \$128,947 project.



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

Water Projects

Recently Completed:

- ◆ 2007 misc. water line replacements - Phase I (Ballard Park), \$351,000
- ◆ 2006 misc. water line replacements, \$559,426
- ◆ North water treatment plant demolition, \$179,506
- ◆ Water line upgrade at Turtle-mound Road - Grand Haven subdivision

Under Construction:

- ◆ Rehabilitation to RO wells #1, 2 & 3, \$692,725
- ◆ Backup well #4, \$1,320,900
- ◆ Eau Gallie water line replacement, Phase I, Segments V & VI, \$336,800
- ◆ 2007 misc. water line replacements (Phase II - Ballard Park)
- ◆ Pineda Causeway 16" water main

Under Design or in Bid Process:

- ◆ Automatic transfer switch and generator enclosure at the surface water treatment plant belt press building
- ◆ Wickham Road 8" water main
- ◆ Eau Gallie water line replacement, portion of segments I & II, Phase II

- ◆ Survey and easement clearing for 30" water main at Jones Road between John Rodes Blvd. & Ellis Road (Phase III)
- ◆ Scrubber blow down pump station and force main
- ◆ Pineda tank & booster station

Wastewater Projects

Recently Completed:

- ◆ Lift Station #46 (BCC) renovations, \$198,916
- ◆ Various manhole rehabilitation projects, \$274,340
- ◆ D.B. Lee WRF administration/operators building, \$748,000
- ◆ Lift Station #29 (Aurora & Mary-wood), \$286,154

Under Construction:

- ◆ Grant Place Lift Station and sewer force main, \$575,665
- ◆ 2008 Misc. wastewater collection CIPP rehabilitation, \$838,412
- ◆ Nasa Blvd. reuse project

Under Design or in Bid Process:

- ◆ Sarno Road force main improvements

- ◆ Grant Street Water Reclamation Facility administration building
- ◆ Hibiscus Boulevard reuse project
- ◆ Grant Street Water Reclamation Facility reuse construction, phase I
- ◆ D.B. Lee & Grant Street WRF emergency generator and fuel storage improvements
- ◆ South end reuse expansion, Phase I & II

Streets & Stormwater Projects

Recently Completed:

- ◆ Hickory Apartments/Lane Pontiac emergency drainage repair, \$92,547

Under Construction:

- ◆ University Boulevard emergency pipe repair, \$84,752
- ◆ Lorna Dr. drainage improvements, \$128,947

Under Design or in Bid Process:

- ◆ Babcock and Hibiscus intersection improvements

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