



PW/Utilities

Connection



August 2004

Utilities Data from July 2004

City of Melbourne Public Works & Utilities Department

Public Works & Utilities crews prepare City for hurricane

The Public Works & Utilities Department plays a vital role in protecting the City from a hurricane.

One of the measures taken to directly assist residents is providing sandbags free of charge. During the recent brush with Hurricane Charley, crews made 5,100 sand bags and distributed all but 200 of them.

The City has two sandbagging machines that can produce 20 bags per minute. In addition, employees also fill bags by hand. During Hurricane Floyd in 1999,



crews produced 4,500 sand bags.

Pictured at left, sand is loaded into the sand-bagging machine as employees collect sand into the bags, tie them off, and load them onto pallets. Below, vehicles line up at the Public

Works complex to collect the bags.

Sand bags made but not distributed are saved and used later in the season, if needed.



Drainage improvement project underway for Ixora Park area

Melbourne's Ixora Park neighborhood will soon be reaping the benefits of a drainage project that is now underway. The area had been prone to flooding during major rain events.

"The system could handle normal rains, but with major rain events, we would get street flooding," explained Streets and Stormwater Superintendent Tom Williams.

The stormwater pipe that has been handling the flows is 48-inch corrugated metal pipe that has deteriorated. This has restricted the flow through the pipe, resulting in stormwater backing up at the end of the system during heavy rains.

Two new sections of 48-

inch pipe will replace the deteriorated sections. The new reinforced concrete pipe will be installed under Sarno Road north to the Bell Street drainage canal. When this

portion of the work commences, expected to be toward the end of August, drivers can expect lane closures on Sarno Road.

In addition to the new pipes, three new man-hole structures are being constructed, along with other associated improvements.

Don Luchetti Construction, Inc. of West Melbourne is the contractor for this \$257,911 project. The work should be completed by the end of October.



The well-point dewatering system temporarily discharges groundwater into the new storm drainage structure at Bell Avenue.

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Monthly Water Usage and Raw/Finished Water Quality Statistics

Water Usage

- ◆ Water pumped to service: 477,824,000 gallons or 15.414 MGD average
- ◆ Maximum finished water pumped to service: 16.289 MGD on July 2, 2004
- ◆ Water billed: 417,380,500 gallons
- ◆ Fire hydrant flushing: 18,285,940 gallons
- ◆ Fire Department water usage: 37,150 gallons
- ◆ Brevard County water usage – sewer flushing: 2,600 gallons
- ◆ Flushing and testing new water mains: 27,313 gallons
- ◆ Committed capacity: 1.8194 MGD
- ◆ Capacity available for development: 9.5467 MGD (Based on 12-month average daily flow)

- ◆ pH: 7.1
- ◆ Alkalinity: 75 mg/L
- ◆ Total hardness: 136 mg/L
- ◆ Chlorides: 95 mg/L
- ◆ Color: 161
- ◆ Total dissolved solids (TDS): 311 mg/L

Well water quality

- ◆ pH: 7.3
- ◆ Alkalinity: 139 mg/L
- ◆ Total hardness: 609 mg/L
- ◆ Chlorides: 733 mg/L
- ◆ Color: 6
- ◆ TDS: 1,648 mg/L

Finished water quality - pumped to service

- ◆ pH: 8.2
- ◆ Alkalinity: 44 mg/L
- ◆ Total hardness: 111 mg/L
- ◆ Chlorides: 87 mg/L
- ◆ Color: 2
- ◆ Total dissolved solids (TDS): 296 mg/L

Water Quality Statistics

Lake water quality

Houston Street seawall replacement project is underway

The seawall at the end of Houston Street in the Olde Eau Gallie area across from Ballard Park is currently being replaced. The seawall, which was more than 50 years old, had become badly deteriorated.

“It had become a public safety issue,” explained Engineering Design Supervisor Rory Dittmer. “It was basically falling apart and could eventually buckle and fall into the water. If it did fall in, it would also cause erosion into the Eau Gallie River channel and the road would follow in behind it.”

The work, being performed by Santa Cruz Construction, Inc. of Merritt Island, involves the demolition of the



Work proceeds on the new seawall at the end of Houston Street.

old seawall and construction of a new structure. The length is 110 linear feet.

According to Dittmer, the new sheet pile has been installed and concrete tiebacks have been poured.

“The old seawall was made of concrete,” Dittmer said. “The new seawall is polyvinyl sheetpile that should last indefinitely; much longer than the concrete.”

The project also includes minor sidewalk and drainage improvements.

The estimated cost of the project is \$75,960. The City received a \$25,000 grant for this project from the Florida Inland Navigation District. Work should be completed in September.

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Wastewater Treatment Operational Summary and Reuse Statistics

D.B. Lee WWTP

- ◆ Treated this month: 128.05 MGD
- ◆ Treated daily: 4.13 MG
- ◆ Reuse production — total month flow: 59.96 MG
- ◆ Reuse average daily flow: 1.93 MGD
- ◆ Reuse number of days run: 31
- ◆ Plant efficiency, BOD removal: 98.39%
- ◆ Committed capacity: 0.8614 MGD
- ◆ Capacity available for development: 0.8075 MGD
(Based on 12-month average daily flow)

Grant St. WWTP

- ◆ Treated this month: 77.75 MG
- ◆ Treated daily: 2.59 MGD
- ◆ Reuse production — total month flow: 9.68 MG
- ◆ Reuse average daily flow: 0.31 MGD
- ◆ Reuse number of days run: 31
- ◆ Plant efficiency, BOD removal:
- ◆ Committed capacity: 0.4638 MGD
- ◆ Capacity available for development: 2.2271 MGD
(Based on 12-month average daily flow)

Recent Lime Drive project improves neighborhood's safety

The residents of Lime Drive now have a safer neighborhood thanks to a joint project that has recently been completed between the City, County and the School Board.

Parents had been using Lime Drive, which is a residential street that runs behind Croton Elementary School, to cut through to get back onto Croton Road after dropping their children off and picking them up from school.

Many of the neighbors had been complaining about vehicles speeding through the neighborhood. The City worked with its engineering consultant to redesign the road to prevent the school traffic through the street.

"The residents were polled and overwhelmingly chose the option of creating a cul-de-sac which closed the road off," said Public Works & Utilities Director Bob Klapproth.



The south end of Lime Drive has now been closed off to traffic, with a cul-de-sac constructed at the west end. Croton Elementary School is in the background to the right.

The project involved the construction of a 24-foot wide paved street from Croton Road eastward for a distance of 500 feet to a dead end. Then a cul-de-sac at the end of the existing Lime Drive pavement was constructed. The newly paved section of road allows access to a driveway serving Croton Elementary School and eliminates the dusty and sometimes muddy conditions that had existed.

William Turnbaugh
Construction, Inc.

completed the \$123,627 project in time for the start of the new school year. The School Board contributed \$86,000 toward the project, with the County and School Board both contributing a small amount of property for the project.

Streets and Stormwater Management Monthly Summary

- ◆ Daytime street sweeper — hours run: 285
Cubic yards of material removed: 140
- ◆ Nighttime street sweeper — hours run: 110
Cubic yards of material removed: 113
- ◆ Asphalt repairs made: 33
- ◆ Tons of asphalt used: 36.5
- ◆ Feet of canals cleaned mechanically: 5,520
- ◆ Acres treated through aquatic spraying: 20
- ◆ Feet of storm drain pipe repaired: 250
- ◆ Concrete repairs: 24
- ◆ Cubic yards of concrete used: 75

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July Highlights

The level of Lake Washington increased slightly during July. At the end of the month, the lake level was 13.81 feet above sea level. That compares to the end of June reading of 13.67 feet above sea level. Water quality remains good.

The D.B. Lee Wastewater Treatment Plant recorded 3.75 inches of rain during eight days in July. The Grant Street Wastewater Treatment Plant received 1.85 inches of rain over 11 days during the month. A total of 69.64 million gallons of reclaimed water was produced during July. This represents 34 percent of total plant flows for the month.

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

Water Projects

Recently Completed:

- ◆ Croton Road utility relocation associated with widening, \$593,257
- ◆ Trailer Haven waterline upgrades, \$195,905

Under Construction:

- ◆ Wickham Road waterline replacement from SR 192 to Nasa Blvd., \$1,257,000
- ◆ Sludge handling facility motor control center and belt filter press control cabinets, \$175,685
- ◆ Waterline upgrade, Olde Eau Gallie, \$347,409
- ◆ Painting various structures at Lake Washington Water Treatment Plant, \$159,592
- ◆ Fee Avenue waterline replacement under FEC, \$120,330

Under Design or in Bid Process:

- ◆ Phase II surface water treatment plant improvements
- ◆ Utility relocation in association with NASA Boulevard realignment at Wickham Road
- ◆ Chemical feed upgrades at Canova Beach Booster Station
- ◆ Hibiscus booster station

electric shut-off valves

- ◆ Wickham Road ground storage tank and booster pump station
- ◆ Parkway Drive and Turtlemound water line extension
- ◆ Covered storage building at surface water treatment plant
- ◆ Eau Gallie River sub-aqueous crossing

Wastewater Projects

Recently Completed:

- ◆ Sewer manhole rehabilitation, Leewood Forest, \$123,525
- ◆ Inflows and infiltrations elimination, Lift Station 6 area, \$317,953

Under Construction:

- ◆ Lift Station 24 replacement design, \$451,440

Under Design or in Bid Process:

- ◆ New monitoring network for reuse system at DB Lee WWTP
- ◆ Demolition of old treatment units at D.B. Lee WWTF

Streets & Stormwater Projects

Recently Completed:

- ◆ Lime Drive cul de sac, \$123,627

Under Construction:

- ◆ Street milling and resurfacing of various streets, \$794,000
- ◆ Sarno Road/Bell Street drainage improvements, \$257,911
- ◆ Swift Street stormwater improvements, \$195,107
- ◆ Babcock Street realignment, \$1,394,649
- ◆ Houston Street seawall rehabilitation, \$71,707
- ◆ Eber Road widening from Babcock Street to Dairy Road, \$3,840,879

Under Design or in Bid Process:

- ◆ Hoag Avenue paving and drainage improvements
- ◆ Upgrade of stormwater outfalls along Charles Dr./Almar Subdivision
- ◆ Upgrade of existing culvert crossing under Pirate Lane
- ◆ Pineapple Avenue pedestrian bridge at Cliff Creek

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