



Utilities Connection



October 2000

City of Melbourne Utilities Department Monthly Report

Monthly Highlights

The level of Lake Washington remained stable during the past month. At month's end, the lake level was 14.26 feet above sea level, which is approximately nine inches above the dam. Water quality remains good.

A total of 47.49 million gallons of reclaimed water was used during the month for irrigation. The north service area system ran 31 days and used 40.67 million gallons. The Melbourne Golf Course irrigated 21 days and used 6.82 million gallons. These figures represented 19 percent of total plant flows for the month.

During October, the Environmental Community Outreach Manager conducted seven school programs involving 167 students. The FY 2001 toilet rebate program began with 21 rebate packages mailed and 16 rebate checks processed. The Florida Section of the American Water Works Association presented Melbourne with three awards during the FWWC & WMI seminar held Oct. 27 in Orlando. First place awards were received for Melbourne's toilet retrofit rebate program and for the "Water for Life" video, with a third place award earned for the "Water for Life" newspaper insert.

Water Supply Pipe Project Completed



The replacement of the two 20-inch aerial crossings on the Melbourne Causeway was recently completed; one at the Central Relief Bridge and one along the Eastern Relief Bridge.

Shown above is the crossing on the north side of the Eastern Relief Bridge. This 20-inch line is one of two large water pipes that supply water to the beachside communities.

The 30-year-old pipes that were replaced were made of gray iron pipe and had become badly corroded. The new pipes are made of ductile iron with a two-layer specialty coating system to withstand the corrosive environment. The steel supports for the pipes were also replaced as part of the project.

Utilities Fast Facts

Customer Service & Water Distribution

January — October, 2000

- ☐ Water turn ons: 13,886
- ☐ Shut offs: 9,290
- ☐ Shut offs for non payment: 8,598
- ☐ Check/read: 17,060
- ☐ Meters replaced: 2,488
- ☐ Meters removed: 61
- ☐ Meters new: 854
- ☐ System locates — water: 9,506
- ☐ Service line repairs/replacements: 1,554
- ☐ Main line repairs: 147
- ☐ Hydrant repairs/replacements: 8
- ☐ Misc. work orders — water: 1,807



The City's new track hoe, purchased for \$165,000 in October, is put through the paces by operator Donnie Farnham. This new equipment can clean 1,000 feet of large canals per day compared to the 100 feet per day achieved by the drag line it replaces. The machine is a mechanical excavator that moves on metal tracks instead of wheels.

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Monthly Water Usage and Raw/Finished Water Quality Statistics

Water Usage

- .. Water pumped to service: 438,748,000 gallons or 14.153 MGD average
- .. Maximum finished water pumped to service: 15.308 on Oct. 18, 2000
- .. Water billed: 383,546,300 gallons
- .. Fire hydrant flushing: 5,021,800 gallons
- .. Fire Department water usage: 62,775 gallons
- .. Brevard County water usage – sewer flushing: 121,025 gallons
- .. Flushing and testing new water mains: 91,461 gallons
- .. Chlorides: 93 mg/L
- .. Color: 237
- .. Total dissolved solids (TDS): 331 mg/L

Well Water Quality

- .. pH: 7.9
- .. Alkalinity: 119 mg/L
- .. Total hardness: 605 mg/L
- .. Chlorides: 694 mg/L
- .. Color: 5
- .. TDS: 1,497 mg/L

Finished water quality - pumped to service

- .. pH: 7.5
- .. Alkalinity: 54 mg/L
- .. Total hardness: 199 mg/L
- .. Chlorides: 100 mg/L
- .. Color: 5
- .. Total dissolved solids (TDS): 403 mg/L

Water Quality Statistics

Lake Water Quality

- .. pH: 7.8
- .. Alkalinity: 66 mg/L
- .. Total hardness: 144 mg/L

New HydroGuards To Improve Water Quality in the Distribution System

Pictured below is a HydroGuard unit, recently installed on the west side of S.R. A1A just south of the



Pineda Causeway.

The HydroGuard is a programmable automatic flushing unit that allows for timed flushing in the water distribution system. It is used to help flush water

through the system to improve water quality and chlorine residual.

The HydroGuard is used in areas where there are dead-ends in the system or difficulties with maintaining the required chlorine residual of 0.6 mg/L. The unit, which costs \$1,500, can be programmed at any time of the day or night to flush for as long as needed.

The advantage to using the HydroGuard is that it can be programmed to flush during the night when it is less noticeable and bothersome. Because it is programmed and activated remotely, it does not require City personnel to be on site to turn it on and off as is required for fire hydrant flushing.

The Utilities Department also currently has two other units installed, at University Boulevard east of U.S. 1, and on S.R. A1A in the southernmost part of the distribution system. Another three units will be installed before the end of the year on Plantation Drive in the Honeybrook Subdivision west of U.S. 1, on Rio Vista Way in Grandview Shores west of U.S. 1 and south of Post Road, and at the north end of Turtle Mound Road.

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Wastewater Treatment Operational Summary and Reuse Statistics

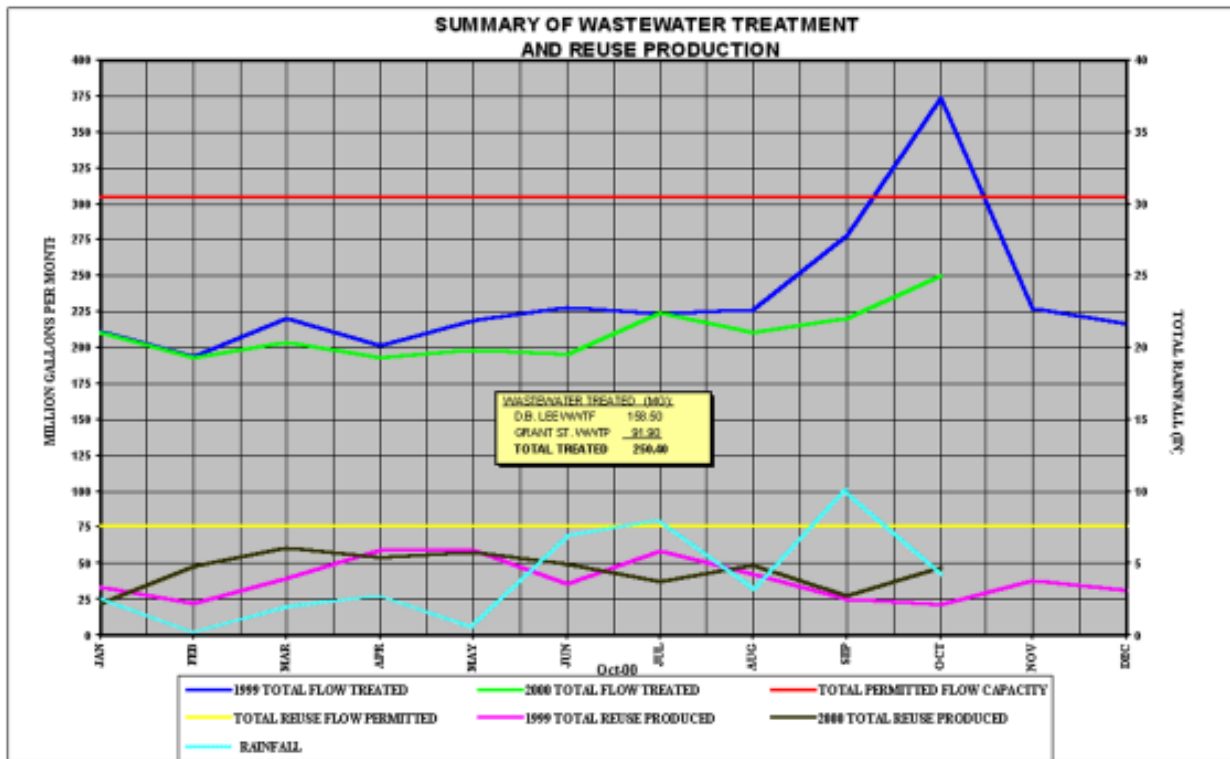
D.B. Lee WWTP

- .. Treated this month: 158.50 MG
- .. Treated daily: 5.11 MGD
- .. Reuse distribution — total month flow: 40.67 MG
- .. Reuse average daily flow: 1.31 MGD
- .. Reuse number of days run: 31
- .. Plant efficiency, BOD removal: 97.76%
- .. Committed capacity: 0.237 MGD
- .. Capacity available for development: 0.543 MGD
(Based on 12-month average daily flow)

Grant St. WWTP

- .. Treated this month: 91.90 MG
- .. Treated daily: 2.96 MGD
- .. Reuse distribution — total month flow: 6.82 MG
- .. Reuse average daily flow: 0.22 MGD
- .. Reuse number of days run: 21
- .. Plant efficiency, BOD removal: 97.49%
- .. Committed capacity: 0.357 MGD
- .. Capacity available for development: 1.893 MGD
(Based on 12-month average daily flow)

Wastewater treatment plant personnel are to be commended for a job well done after having received a "substantial compliance" designation from the Florida Department of Environmental Protection for the plant and laboratory operations following a recent performance audit.



Streets and Stormwater Management Monthly Summary

- .. Daytime street sweeper -- hours run: 1,090
- .. Cubic yards of material removed: 322
- .. Nighttime street sweeper -- hours run: 83.5
- .. Cubic yards of material removed: 75.5
- .. Asphalt repairs made: 27
- .. Tons of asphalt used: 19.5
- .. Canals cleaned mechanically: 4.5
- .. Acres treated through aquatic spraying: 29.25
- .. Feet of storm drain pipe repaired: 180
- .. Concrete repairs: 14
- .. Cubic yards of concrete used: 33.5

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Utilities Department Capital Improvement Projects Status Report

Surface Water Treatment Plant Improvements



Construction continues at the Lake Washington Surface Water Treatment Plant. Shown in the photo is the operations building with the second floor construction well underway. In the foreground you can see three 30-inch pipes in front of the pit for the flow splitter structure. The flow splitter will be used to direct flow to each of the Actiflo treatment trains. To the right of the operations building is the chlorine and ammonia building.

Canova Ground Water Tank Construction

Construction of the new 2.0 million gallon Canova Beach ground storage tank is progressing quickly and should be complete early next year. The new concrete tank replaces the existing steel storage tank and demolished elevated storage tank. It is needed on beachside for water storage in the event of a fire and to maintain adequate water pressure. The photo shows



concrete being poured onto the form of the dome top of the tank. Concrete flows through the pipe attached to the crane.

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

Water Projects

Recently Completed:

- 20-inch aerial water main rehabilitation at the Melbourne Causeway, \$619,115

Under Construction:

- PAFB elevated water tank painting and repairs, \$448,500
- Surface water treatment plant improvements, \$23.4 million
- Simon Road waterline, \$174,251
- 2 MG ground storage tank at Canova Beach, \$714,528
- Miscellaneous waterline replacements, \$351,057

Recently Awarded:

- Utility relocation associated with U.S. 1 widening

Under Design or Ready for Bid:

- Water distribution master plan improvements
- Well flushing lines at the RO WTP

- Old Eau Gallie waterline replacements

- Harlock Road waterline
- U.S. 1 utility relocations — Post Road to Pineda Causeway

Wastewater Projects

Recently Completed:

- D.B. Lee Wastewater Facility sludge thickening improvements and reuse pump station improvements, \$1,059,000
- D.B. Lee and Grant Street wastewater treatment plant improvements, Phase IIB, \$3.87 million

Under Construction:

- Electrical improvements at D.B. Lee Wastewater Treatment Plant, \$228,219

Under Design or Ready for Bid:

- Lift Station No. 15 replacement
- Phase III improvements at D.B. Lee Wastewater Treatment Plant

- Trickling filter upgrade at Grant Street Wastewater Treatment Plant

Streets & Stormwater Projects

Recently Completed:

- Pirate Lane/Lipscomb Street intersection improvements, \$36,285

Under Design or Ready for Bid:

- Paving of miscellaneous streets
- Dove Street paving
- Storm drain replacements at Hickory/Iris Streets
- Downtown alley drainage improvements
- Paradise Boulevard pipe lining

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