



Utilities Connection



January 2002

Utilities Data from December 2001

City of Melbourne Utilities Department

Array of outreach events scheduled in February

Next month, City staff will be meeting with the public at a wide variety of programs to demonstrate and explain everything from how we produce Melbourne's water and how to save water, to how it is cleaned up after it is used and how to keep the water sources cleaner.

The month's events begin with the **Home & Garden Show** that will be held at the Melbourne Auditorium on Feb. 9-10. Melbourne's Groundwater Guardian

program will have a display at the event to teach about water conservation with an emphasis on ways to conserve water outdoors. This is the time of year when outdoor water conservation is especially critical. The spring months over the last several years have been a time when we have experienced critical water shortages, but is also the time when renewed plant growth begins and when people start planting new landscape materials.

The following weekend, Feb. 16-17, the City will be at the Melbourne Square Mall participating in the **Chamber of Commerce's Better Living Expo**. Melbourne will have a large area located in front of the women's Dillard's Department Store, across from Auntie Anne's pretzel shop. Information and hands-on activities will be presented that feature water production, wastewater treatment and reclaimed water, water conservation and recycling.

The annual **High School Government Day** program will be held the following Friday, Feb. 22, but after the morning session with students, it will be **open to the public from 1:30 to 3:30 p.m.** The program will be held at the Melbourne Auditorium, where the utilities and public works departments will provide information about services they provide to the public. Many pieces of heavy equipment will be available to view. The open



Sally Scalera (at podium) speaks to attendees at last year's Florida Friendly Landscape seminar. This annual workshop will be held at the Gleason Auditorium on Feb. 23.

house will also feature the police and fire departments.

The next day, Saturday, Feb. 23, the second annual **Florida Friendly Landscape Seminar** will take place at the Florida Tech's Gleason Auditorium. The workshop, which will be held from 8:30 a.m. to 12:30 p.m., is free of charge but pre-registration is mandatory. To register, please call Melbourne's Utilities

Administration Department at 674-5761. Seating is limited. Featured speakers include Florida Today columnist and University of Florida Horticulture Extension Agent Sally Scalera, along with Dr. Ken Langeland from the University of Florida's Center for Aquatic and Invasive Plants, and Janice Broda, past president of the Florida Native Plant Society.

The month comes to a close with the Feb. 25 meeting of the Brevard Water Supply Board that will include a detailed tour of Melbourne's new surface water treatment plant. Following this meeting, an open house will begin at 1 p.m.

December Highlights

The level of Lake Washington decreased slightly during the past month. At the end of December the lake level was 14.24 feet above sea level. At the end of November, the measurement was 14.79 feet above sea level. Water quality remains good.

The D.B. Lee Wastewater Treatment Plant recorded no rainfall in December. The Grant Street Wastewater Treatment Plant received slightly over one-half inch of rain over seven days during that month.

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Monthly Water Usage and Raw/Finished Water Quality Statistics

Water Usage

- ◆ Water pumped to service: 435,728,000 gallons or 14.056 MGD average
- ◆ Maximum finished water pumped to service: 15.092 on Dec. 21, 2001
- ◆ Water billed: 375,733,200 gallons
- ◆ Fire hydrant flushing: 15,709,100 gallons
- ◆ Fire Department water usage: 47,500 gallons
- ◆ Brevard County water usage – sewer flushing: 28,950 gallons
- ◆ Flushing and testing new water mains: 25,777 gallons
- ◆ Chlorides: 68 mg/L
- ◆ Color: 236
- ◆ Total dissolved solids (TDS): 262 mg/L

Well water quality

- ◆ pH: 7.7
- ◆ Alkalinity: 118 mg/L
- ◆ Total hardness: 596 mg/L
- ◆ Chlorides: 724 mg/L
- ◆ Color: 5
- ◆ TDS: 1,480 mg/L

Finished water quality - pumped to service

- ◆ pH: 7.8
- ◆ Alkalinity: 44 mg/L
- ◆ Total hardness: 139 mg/L
- ◆ Chlorides: 59 mg/L
- ◆ Color: 4
- ◆ Total dissolved solids (TDS): 237 mg/L

Water Quality Statistics

Lake water quality

- ◆ pH: 7.8
- ◆ Alkalinity: 58 mg/L
- ◆ Total hardness: 109 mg/L

Severe weather can foster water line breaks in some pipes

Severe weather changes are often the cause of water line breaks. When cold fronts blast their way in, they are often preceded by strong rain events, followed by sharp temperature drops. This makes the ground soggy and loose. Some of the older water pipes, made of cast iron, will break when the ground shifts. Newer water lines are made of ductile iron or PVC. PVC will give when the ground shifts, but is more susceptible to breakage as a result of lightning, more common during the strong summer storms.

Once a line break is detected, crews will try to repair the pipe while it is under pressure. The last resort, however, is to shut the water off in order to make the repair. When this happens, the water pressure falls below 20 psi, which then makes a mandatory boil water notice required for any properties affected by the pressure drop. "We work as quickly as we can to minimize the effect on the customers and to try to limit it to as small an area as possible," explains Utilities Director Bob Klapproth.

If a boil water notice is issued, water would need to be boiled vigorously for one minute for any consumptive uses. The notice continues for at least 48 hours while the system is flushed and bacteriological testing is performed. Chlorine is also increased into the system as a precautionary measure. If the tests come back clean, the boil water notice is rescinded after the mandatory two-day period.



Tim Hedrick (in the hole dug to repair a water line break that recently occurred behind the Shoppes of Hidden Harbour) works on the repair. Robert Degiovine turns the valve key as Bernie Neanover stands ready to assist.

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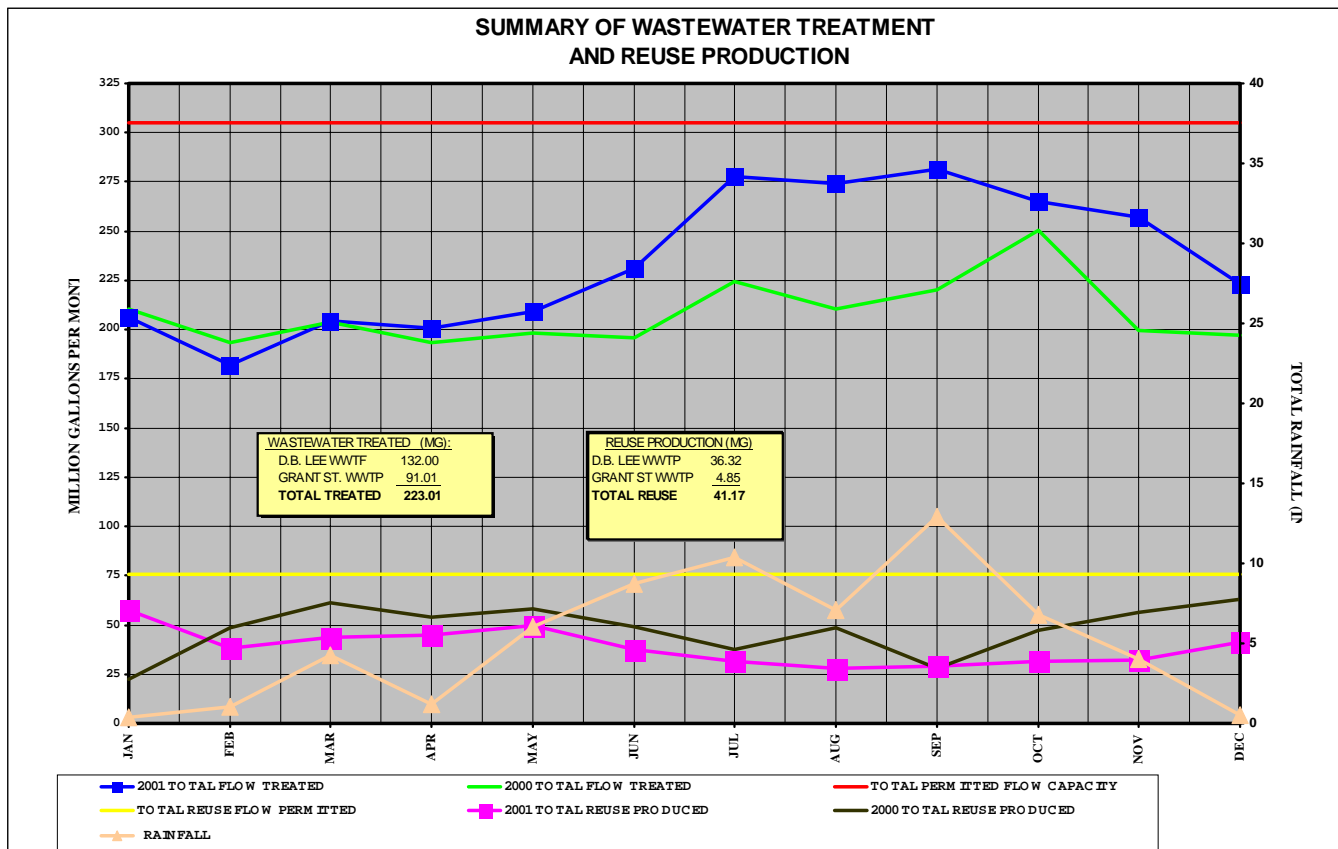
Wastewater Treatment Operational Summary and Reuse Statistics

D.B. Lee WWTP

- ◆ Treated this month: 132 MG
- ◆ Treated daily: 4.26 MGD
- ◆ Reuse distribution — total month flow: 36.32 MG
- ◆ Reuse average daily flow: 1.17 MGD
- ◆ Reuse number of days run: 31
- ◆ Plant efficiency, BOD removal: 98%
- ◆ Committed capacity: 0.1485 MGD
- ◆ Capacity available for development: 0.4223
(Based on 12-month average daily flow)

Grant St. WWTP

- ◆ Treated this month: 91.01 MG
- ◆ Treated daily: 2.94 MGD
- ◆ Reuse distribution — total month flow: 4.85 MG
- ◆ Reuse average daily flow: 0.16 MGD
- ◆ Reuse number of days run: 13
- ◆ Plant efficiency, BOD removal: 98.6%
- ◆ Committed capacity: 0.3097 MGD
- ◆ Capacity available for development: 1.3886 MGD
(Based on 12-month average daily flow)



Streets and Stormwater Management Monthly Summary

- ◆ Daytime street sweeper — hours run: 156.5
Cubic yards of material removed: 209.6
- ◆ Nighttime street sweeper — hours run: 85.8
Cubic yards of material removed: 118.5
- ◆ Asphalt repairs made: 37
- ◆ Tons of asphalt used: 30.5
- ◆ Feet of canals cleaned mechanically: 10,300
- ◆ Acres treated through aquatic spraying: 26
- ◆ Feet of storm drain pipe repaired: N/A
- ◆ Concrete repairs: 17
- ◆ Cubic yards of concrete used: 22.25

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Lake Washington Surface Water Treatment Plant Improvement Project Update



Demolition complete on filters 2 and 4

Demolition of filters two and four is complete and construction of the new filters is underway. The photo shows the base slab and common walls between filters that will remain intact during construction. The new filters will be constructed in a similar fashion to filters five and six that were previously completed. Upon start-up of the new plant, demolition will proceed on filters one and three.



Blend/CT pumps put through their paces

Testing and start-up have begun at the new surface water treatment plant. The blend/CT pumps shown in the foreground, as well as all of the new equipment and treatment units, have undergone extensive testing under a variety of flow and water quality conditions. Final testing will be completed by the end of January.

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

Water Projects

Recently Completed:

- ◆ Dairy Road water line, \$354,800
- ◆ Sarno Service Road waterline replacement, \$39,000

Under Construction:

- ◆ Surface water treatment plant improvements, \$23.4 million
- ◆ Utility relocation associated with U.S. 1 widening, \$1,060,000
- ◆ Well flushing lines at the RO WTP, \$120,300

Recently Awarded:

- ◆ Painting/rehabilitation of Oak Street elevated water tank, \$101,900

Under Design or Ready for Bid:

- ◆ Aquifer exemption - RO potable water byproduct disposal at D.B. Lee WWTP injection well system
- ◆ Lake Washington waterline

extension

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

Wastewater Projects

Under Construction:

- ◆ Phase III improvements at D.B. Lee & Grant St. WWT Plants, \$15,587,000

Under Design or Ready for Bid:

- ◆ Lift Station No. 15 replacement
- ◆ Trickling filter upgrade at Grant Street WWT Plant

Streets & Stormwater Projects

Under Construction:

- ◆ Pineapple Avenue Sidewalk, \$313,906

Recently Awarded:

- ◆ Paving of miscellaneous streets,

\$457,022

Under Design or Ready for Bid:

- ◆ Dove Street paving
- ◆ Rio Lindo dredging -- surveying and preliminary engineering
- ◆ Garfield Street stormwater outfall relocation
- ◆ Parkway Drive realignment study from Stewart Road to Florida East Coast Railroad
- ◆ Eber Road widening from Babcock Street to Dairy Road
- ◆ Sarno Road/Bell Street drainage improvements
- ◆ Upgrade of stormwater outfalls along Charles Drive/Almar Subdivision

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