



# PW/Utilities

# Connection



## November 2004

Utilities Data from Oct. 2004

City of Melbourne Public Works & Utilities Department

### Fleet Management Division keeps the City up and running

Fleet Management keeps the City working; literally. This division ensures that the police cars and the fire engines are always ready for emergencies, that all the heavy equipment used to clean out sewer lines and stormwater lines is in operation, that backhoes are available for digging holes to repair water pipes, and that all the other City vehicles are in good working condition and ready for action.

Doing more with less is the theme of many businesses these days, and it certainly has become the mode of operation at the Fleet Management Division.

In 1982, the division had a staff of 18 who were responsible for the maintenance of 471 vehicles. Today, almost 20 years later, the staff is down to about 15 but the vehicles they are responsible for has more than doubled to just under 1,000.

Superintendent Greg Schmidt says their efficiency is attributable to a number of factors. "We have been able to do this by the use of computer software, detailed vehicle specifications, an excellent scheduled preventive maintenance program, reviewing accidents to increase safety and reduce worker's compensation, and finally, a scheduled vehicle replacement program that reduces repairs and increases the resale value of the vehicles."

The vehicles they maintain and repair are varied and range from small sedans and pickup trucks, to large trucks and SUVs; from police cars and fire engines, to street sweepers, backhoes, dump trucks, concrete trucks and other heavy equipment.

The mechanics who work for the division are all certified by the National Institute for Automotive Service Excellence (ASE) and factory certified by the manufacturers of the vehicles they maintain and repair, including Ford, Chevrolet, Thompson Pumps, Elgin and others. Additionally, other Fleet Management staff are also

certified as emergency vehicle technicians.

While the staff works on the vehicles to keep them in top shape, they also store and stock auto parts and purchase the fuel to keep all the vehicles running. The divisions purchases a staggering 130,000 gallons of gasoline per year and another 60,000 gallons of diesel fuel to keep the City's non-emergency service fleet running. The police and fire department handle their own fuel purchasing and distribution.

Schmidt notes that the last three mechanics hired came from car dealerships in town. At the City's shop, they are offered continuing, on-going education on a wide variety of equipment, along with benefits and job security that many private dealerships do not offer.

"The Fleet Management Division does a great job keeping up with the City's growing fleet of vehicles," said

Public Works & Utilities Director Bob Klapproth. "Without them and the quick, efficient and timely service they provide, we would not be able to do our jobs."



*Auto Mechanic Albert Adams (left) uses a hand-held engine analyzer to read problem codes from a sedan that was in for repairs. Superintendent Greg Schmidt observes.*

#### City earns water conservation awards

At the Florida Section American Water Works Association (FSAWWA) conference held in November, the City of Melbourne, along with the other members of the Brevard Water Resources Conservation Team, earned two awards for water conservation education projects.

The "Best in Show" award was given for the video the team produced called "Conserving Water on the Space Coast."

A meritorious award was earned for the team's educational placemats project.

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

### Water Usage

- ◆ Water pumped to service: 462,782,000 gallons or 14.928 MGD average
  - ◆ Maximum finished water pumped to service: 16.208 MGD on Oct. 4, 2004
  - ◆ Water billed: 378,381,900 gallons
  - ◆ Fire hydrant flushing: 13,898,470 gallons
  - ◆ Fire Department water usage: 49,300 gallons
  - ◆ Brevard County water usage — sewer flushing: 6,500 gallons
  - ◆ Flushing and testing new water mains: 684,441 gallons
  - ◆ Committed capacity: 2.088 MGD
  - ◆ Capacity available for development: 9.142 MGD (Based on 12-month average daily flow)
- ◆ Alkalinity: 43 mg/L
  - ◆ Total hardness: 64 mg/L
  - ◆ Chlorides: 39 mg/L
  - ◆ Color: 279
  - ◆ Total dissolved solids (TDS): 139 mg/L

### Well water quality

- ◆ pH: 7.7
- ◆ Alkalinity: 117 mg/L
- ◆ Total hardness: 612 mg/L
- ◆ Chlorides: 748 mg/L
- ◆ Color: 6
- ◆ Total dissolved solids (TDS): 1,571 mg/L

### Finished water quality - pumped to service

- ◆ pH: 8.3
- ◆ Alkalinity: 33 mg/L
- ◆ Total hardness: 51 mg/L
- ◆ Chlorides: 40 mg/L
- ◆ Color: 3
- ◆ Total dissolved solids (TDS): 207 mg/L

### Water Quality Statistics

#### Lake water quality

- ◆ pH: 7.4

## Fabricating talents benefit water production operation

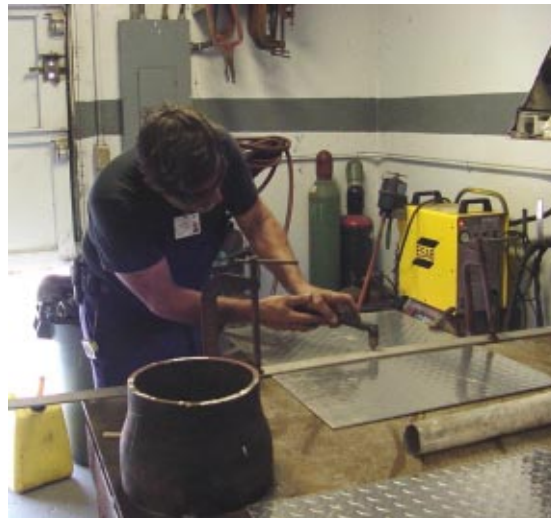
Joe Dean has worked for the City for 25 years, 13 of which have been as a mechanic for the Water Production Division. His primary duties are that of a general mechanic working on pumps, motors and pipes.

He is an experienced fabricator and welder, holding 14 welding certifications.

According to Fred Davis, Water Production Superintendent, Dean can usually find a solution to resolve just about any mechanical issue they have.

"He's been our go-to guy for a number of years," Davis said. "It's important to have someone like this. He can figure out how to fabricate something to make it work."

Dean's efforts have saved the City money by not having to hire an outside contractor to perform some of



*Dean works with the plasma cutter in his shop at the water production plant, a machine that takes air and superheats it to 8,000 degrees. This tool can cut ductile iron, steel and has proven invaluable for his operation.*

the work he has done.

Dean has made coverings for pumps, mounting brackets for hardware, welding benches, exhaust systems, manhole covers, machine covers, tool boxes, handrails, ladders, and much more.

He and another mechanic also fabricated an exhaust system on a large generator.

In his time away from work he is also busy making things. He has built four trucks from the ground up including a 1957 Chevy pickup truck. He has also painted decorative art on many of the trucks he has built.

Before working for Melbourne, Dean, a Maine native, worked in steel mills, as a boiler journeyman, at a GMC dealership as a

mechanic, at a nuclear plant and on the launch pads at the Kennedy Space Center.

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Public Works/Utilities Data from Oct. 2004

## Wastewater Treatment Operational Summary and Reuse Statistics

### D.B. Lee WWTP

- ◆ Treated this month: 157.25 MG
- ◆ Treated daily: 5.07 MGD
- ◆ Reuse production — total month flow: 29.73 MG
- ◆ Reuse average daily flow: 0.96 MGD
- ◆ Reuse number of days run: 22
- ◆ Plant efficiency, BOD removal: 98.10%
- ◆ Committed capacity: 0.861 MGD
- ◆ Capacity available for development: 0.638 MGD  
(Based on 12-month average daily flow)

### Grant St. WWTP

- ◆ Treated this month: 119.36 MG
- ◆ Treated daily: 3.98 MGD
- ◆ Reuse production — total month flow: 6.36 MG
- ◆ Reuse average daily flow: 0.21 MGD
- ◆ Reuse number of days run: 30
- ◆ Plant efficiency, BOD removal: 97.53%
- ◆ Committed capacity: 0.627 MGD
- ◆ Capacity available for development: 1.925 MGD  
(Based on 12-month average daily flow)

## Lift Station 24 being relocated to increase capacity

A new lift station is being constructed that is replacing a more than 40-year-old lift station that had reached capacity. The new system will be a regional-sized station designed to handle wastewater flows from future development in the area.

The old lift station is located at the intersection of Wickham Road and Fountainhead Boulevard in the median. Due to its location, it could not be upgraded. The new lift station is being constructed in an easement behind the ABC Liquor Store along the L-7 drainage canal.



*New wet well is trimmed in as part of the project.*

According to the City's Engineering Construction Inspector Marty Koehler, the location will provide easier access than the old one. Instead of excavating the site to place the wet well, Koehler said they are using the tremmie method, where dirt is dug out from the inside of the new wet well, which allows gravity to drop it into

place.

"This saves money on dewatering and excavation costs, it cuts the time and it is safer for the workers," Koehler explained.

The wet well is 10-feet in diameter. The project also includes two submersible 20-horsepower pumps rated at 700 gallons per minute at 40 feet of head pressure. A 60 kilowatt standby diesel generator will also be installed with an enclosure rated for 130 m.p.h. wind loads. In addition, a new eight-inch force main is being constructed along the

drainage canal easement to Sarno Road, along with a new four-inch force main crossing Wickham Road adjacent to Maryland Fried Chicken. These new mains are replacing existing mains.

Jobear/Warden Construction of Palm Bay is constructing the lift station relocation at a cost of \$451,440.

## Streets and Stormwater Management Monthly Summary

- ◆ Daytime street sweeper — hours run: 115  
Cubic yards of material removed: 211.5
- ◆ Nighttime street sweeper — hours run: 120  
Cubic yards of material removed: 171
- ◆ Asphalt repairs made: 34
- ◆ Tons of asphalt used: 41
- ◆ Feet of canals cleaned mechanically: 3,895
- ◆ Acres treated through aquatic spraying: 18
- ◆ Feet of storm drain pipe repaired: 250
- ◆ Concrete repairs: 27
- ◆ Cubic yards of concrete used: 22.5

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## October Highlights

The level of Lake Washington decreased during the last month. At the end of October the lake level was 17.19 feet above sea level. This compares to the end of September, when it was 18.62 feet above sea level. Water quality remains good.

The D.B. Lee Wastewater Treatment Plant recorded 4 inches of rain during seven days in October. The Grant Street Wastewater Treatment Plant received 2.11 inches of rain over eight days during October. A total of 36.09 million gallons of reclaimed water was produced during October. This represents 13 percent of total plant flows for October.

## Water plant spruce up completed



A painting project has recently been completed at the water production facilities at a cost of \$169,000.

The work included painting the 4.0 MG ground storage tanks at the surface water plant and a 4.0 MG tank at the reverse osmosis plant, pictured above. Also painted were the 2.0 MG storage tank at the north booster station, the sludge belt press building, and other miscellaneous structures.

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

### Water Projects

#### **Recently Completed:**

- ◆ Painting various structures at Lake Washington Water Treatment Plant, \$159,592

#### **Under Construction:**

- ◆ Parkway Drive and Turtlemound water line extension, \$657,000
- ◆ Hibiscus booster station electric shut-off valves, \$75,777
- ◆ 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
- ◆ 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
- ◆ Wickham Road ground storage tank and booster pump station
- ◆ Covered storage building at surface water treatment plant
- ◆ Eau Gallie River sub-aqueous crossing

### Wastewater Projects

#### **Under Construction:**

- ◆ Lift Station 24 replacement, \$451,440
- ◆ Demolition of old treatment units at D.B. Lee WWTF, \$624,700

#### **Under Design or in Bid Process:**

- ◆ New monitoring network for reuse system at DB Lee WWTP

### Streets & Stormwater Projects

#### **Under Construction:**

- ◆ Sherwood Park drainage improvements, \$358,285
- ◆ Sarno Road/Bell Street drainage improvements, \$257,911
- ◆ Babcock Street realignment, \$1,394,649
- ◆ 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 system at 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](mailto:utilitiesadmin@melbourneflorida.org)*