

**CHARLOTTE-MECKLENBURG UTILITIES**  
**ADVISORY COMMITTEE**  
**MINUTES OF MEETING**  
May 24, 2013

The Charlotte-Mecklenburg Utilities Advisory Committee met Friday, May 24, 2013, 2:30 pm at 4222 Westmont Drive, Charlotte, North Carolina.

Members Present: Jim Duke, Jim Merrifield, Pride Patton, Frank McMahan, Ron Charbonneau, Eric Sieckmann, Ralph Messera

Staff Present:	Barry Gullet	Director
	Kim Eagle	Deputy Director
	Barry Shearin	Chief Engineer
	Karen Whichard	Community Relations Manager
	Chad Howell	Business Manager
	Jackie Jarrell	Environmental Management Superintendent
	Steve Miller	Customer Service Manager

### **Safety Minute**

Fire Safety – Actions to take in case of a fire

### **Minutes**

A motion was made by Eric Sieckmann, and seconded by Ron Charbonneau, to approve the April 2013 minutes.

### **Introduction**

Former Capital Budget Manager of CATS, Chad Howell, will be Mickey Hicks' successor as Utilities Business Manager and will begin with CMUD on Monday, June 3<sup>rd</sup>. Mickey Hicks will be retiring effective July 1<sup>st</sup>, 2013.

### **Budget**

- Rate setting components include:
  - Revenue requirements and service levels
  - Water/Sewer sales forecast
  - Policies/Guidelines
- Three categories of expenditures include:
  - Operating
  - Debt service
  - Paygo/fund balance/debt coverage
- FY2014 budget recommendation = \$318M
- The amount of water consumption is hard to predict, so CMUD used to depend on past trends to project future performance. The trend is not accurate anymore and the amount of water each household uses has decreased. CMUD's best estimation is that it will decrease or stay the same, which is a national trend. In Charlotte, land use densification and more water efficient appliances and plumbing fixtures may have had an impact; however, over last ten years, people have learned that lawn irrigation is not needed as much as they once thought.

- In contrasting fiscal years 2010-2013 data through April, Tiers 1-4 have decreased, as well as the “other” category.
  - CMUD has over-projected revenues in recent years, so there is a need to build in more conservative projections for the future.
  - CMUD’s capital fund will be in a slight deficit during June 2013, but the money will be replenished in July with Paygo funds. CMUD is anticipating bonds to be sold or construction period financing established in early 2014.
  - Residential rate increase projections through FY21 are between 5%-6% each year. Drivers for rate increases are increasing operating costs, growth, consumption and capital needs.
  - The rate increase billing impact for each increment of usage (each ccf) is different because of the tiered rate structure and the inclusion of fixed fees in the bill; 0 ccf equals a 0.5% increase whereas the other end of the scale equals a 9% increase.
  - Service level changes (SLC) that are requested in the FY14 budget include converting contracted work in-house with surveyors and a lift station inspector, reducing Customer Serviced temporary employees by converting 9 to regular employees and eliminating 6 of the temporary positions, adding 1 operator at the McDowell Wastewater Treatment Plant, and adding 2 utility locators. The net savings are expected to be approximately \$152,700 per year.
  - Residential rate comparison shows impact of bill for different customers; the change ranges from \$1.06 to \$20.34. The average customer (7ccf) will see a monthly increase of \$2.14.
  - Charlotte has the lowest water and sewer bill compared to other cities.
  - Next steps in budget process include:
    - Council Workshop on May 29<sup>th</sup> – Council made recommendations to the budget 2 weeks ago. City staff has been working on recommendations and Council will view the impacts from those recommendations on May 29<sup>th</sup>.
    - Council budget approval is scheduled for June 10<sup>th</sup>.
  - General fund capital budget is still receiving discussion. The enterprise fund capital budgets are expected to be approved.
  - The availability fee is based on the annual debt service payment amount, so when debt service increases, the availability fee will increase. Short-term financing affects the availability fee differently than bonds.
  - The capacity fees are calculated using book value of the system (depreciated value of assets) divided by the amount of treatment capacity available. The capacity fee approximately doubles with every meter size increment since meter capacity also approximately doubles from one size to the next.
  - In the FY14 budget, most capacity charges were not changed; however, fire line charges were changed, capping the amount of increase at 10%.
  - The last segment of I-485 is being completed. Although the general area is developed already, Mallard Creek Wastewater Treatment Plant may be impacted by growth triggered by the highway project.
- The moratorium on new water service was recently lifted for the Goose Creek basin near Mint Hill. Residents of Ashe Plantation and several other neighborhoods in that area currently receive water service from a private utility company. Some customers of that private utility are unhappy with the service they are receiving and CMUD staff is exploring options for how they could be transitioned to the CMUD water system. The Ashe Plantation community has approximately 200 houses. N.C. Public Water Supply Section can enforce water quality requirements on the private utility, but the N.C. Utilities Commission regulates Aqua and is not likely to force Aqua to transfer or sell their water system to Charlotte.

## Wastewater Treatment

- CMUD's Environmental Management Division includes 5 wastewater treatment plants (WWTP) ran by a staff of about 90 employees. These plants produce about 90,000 tons of biosolids annually.
- The Environmental Management Division budget is \$33M, which includes \$4M for the biosolids program.
- CMUD currently has ISO 14001 certification for 3 of the 5 plants and the biosolids program. The ISO standards are part of a continuous improvement program and include establishing and documenting operating procedures and improvement processes. The certification renewal process includes an external audit. Employees are very engaged in the continuous improvement aspect of ISO through Preventative Action Teams. The ISO program also helps with knowledge retention. Annual recertification dues are approximately \$2,000 per plant.
- Wastewater policy issues include:
  - Plants that were built 100 years ago and are in need of repair/replacement parts
  - Regulations
  - Public perception
  - Rising operating costs
  - Environmental protection
- Irwin Creek WWTP and Sugar Creek WWTP were both built in the 1920s. Both of these plants have been running continuously since being put into service.
- McAlpine Creek WWTP was built in the 1960s. Irwin and Sugar treat wastewater from the uptown Charlotte area and can divert flow to McAlpine if needed. McAlpine is one of the largest facilities in the southern United States and has received the NACWA Peak Performance Platinum award for operational excellence and long-term sustained compliance with regulatory requirements.
- Mallard Creek WWTP serves the UNCC area. The plant is located between Verizon Amphitheater and Charlotte Motor Speedway.
- McDowell Creek WWTP serves Huntersville and Cornelius. The plant site includes property that was purchased for critical watershed protection.
- Currently, CMUD is making upgrades at Irwin, is under construction at Mallard, and expanding filters at McAlpine to meet capacity needs.
- Wastewater plant capacity numbers are based on monthly averages. Flow equalization basins are used during wet weather events to balance the high flow rates sometimes experienced which also enhances the performance of the plants. .
- Charlotte has been doing a lot of work over the past few years on managing energy use. CMUD is working to stay ahead of air quality regulations related to plant operation and especially emissions from diesel equipment such as emergency generators. Other energy management strategies include utilizing LEED building design principles working with Duke Energy on incentive based equipment upgrades, equipment and operational optimization, and participating in the Power Share Program.
- There is a national trend to convert wastewater treatment's focus to resource recovery, which has environmental and financial advantages. Recoverable resources include treated water, energy, nutrients, and metals.
- Biogas is produced from the digesters; part of it is used to heat the digesters while the remaining gas is burned off. A Request For Proposals (RFP) was issued recently for a private firm to use the biogas to produce electricity to be sold back to the power companies. However, no proposals were received, most likely due to the risk related to low energy costs in this region and uncertainty as to the price the power companies would pay for the power produced. The RFP described a hosted solution which would allow the proposer to use property at the treatment plant

site for construction of the generation equipment and to receive the biogas from CMUD. This is a low risk approach for CMUD.

- Regulatory issues affecting wastewater:
  - Most prevalent issue currently is nutrients in the treated effluent.
  - Phosphorus and nitrogen from treatment plants, storm water, agriculture, industry, and other sources can cause algal blooms in water bodies.
  - Phosphorous limits are in place at McAlpine.
  - Irwin and Sugar are covered under a “bubble permit” whereby phosphorus is regulated on the basis of the total amount discharged by the three plants combined.
  - McDowell has nitrogen and phosphorous limits in that plant’s NPDES permit.
  - The State is developing a plan for new criteria for determining nutrient impacts to streams, river and lakes. They are also looking at other types of criteria to determine if streams are impaired or not.
  - Total Maximum Daily Loads (TMDL) for the South Carolina lakes downstream of Charlotte are also being developed.
- A relatively new technology is available that will take phosphorous out of wastewater and make fertilizer pellets. CMUD has piloted this technology at McAlpine Creek Plant.
- Treated residuals from the wastewater treatment process are currently being land applied by CMUD through Synagro. There is a long-term contract with Synagro that’s reaching the end of its lifecycle . CMUD pays Synagro to land apply the residual biosolids on farmers’ land. The Biosolids Master Plan will help establish a long term approach to residual management and will be presented to Advisory in the future for more information.
- The majority of land application occurs in South Carolina. South Carolina is currently in the permit renewal process and has received opposition to renewing CMUD’s permit during the public comment period.
- The basic technology of wastewater treatment has not changed since the 1920s – the process is biological. The treatment plant process becomes more advanced when more nutrients have to be removed. Biological vs. chemical treatment is reviewed at each plant. The downside of chemical treatment is the cost and the production of more biosolids. However, biological treatment is more subject to upset.
- Pharmaceuticals and endocrine disruptors are often found in wastewater. At this point in time, no one knows how much is too much or will cause problems. There will likely be regulations on these in future.
- Stormwater regulations at the plant sites require intensive monitoring and maintenance.
- Air quality regulations are becoming more stringent and will require improvements to meet requirements.

### **Future Agenda Items**

- Industrial Use Program
- Delinquencies
- Biosolids Master Plan

Adjourned at 3:57 pm

Karen Baldwin