Welcome!

Chapel Hill Peoples Academy
Carrboro Citizen’s Academy

October 19, 2019

Orange Water and Sewer Authority
Carrboro-Chapel Hill’s not-for-profit public service agency delivering high quality water, wastewater, and reclaimed water services.
Our morning together

- Welcome and Introductions
- Presentation and Q&A
- Guided Tours of Jones Ferry Road Water Treatment Plant
- Displays and equipment with the OWASA Team
- 12:00 noon – adjourn
- Safety moment
OWASA
Your community owned utility
Water Supply
University Lake
Cane Creek Reservoir
Quarry Reservoir
Jordan Lake (contingency supply)
Jones Ferry Road Water Treatment Plant (WTP)

Wastewater Management
Mason Farm Wastewater Treatment Plant (WWTP)
Reclaimed Water
OWASA Governance

OWASA Customers/Stakeholders

OWASA Board of Directors
Chair Ray DuBose, Vice Chair Ruchir Vora, Secretary Bruce Boehm, Yinka Ayankoya, John Cooley, Jody Eimers, Robert Morgan, John Morris and Bruce Runberg

Auditor
Martin, Starnes & Associates

Executive Director
Ed Kerwin

General Counsel
Robert Epting

Chapel Hill Town Council (appoints 5)
Carrboro Board of Aldermen (appoints 2)
Orange County Board of Commissioners (appoints 2)
Board of Directors

Responsibilities:
- Represent customers’ and stakeholders’ interests
- Establish policies; strategic planning
- Adopt budgets; set rates, fees and charges
- Authorize issuance of revenue bonds when needed
- Hire Executive Director, General Counsel and Auditor
Key OWASA Obligations (1977 – OWASA Begins)

- Provide water, sewer and reclaimed water services to Carrboro, Chapel Hill and the University consistent with local planning regulations developed by the local governments.
- Rates based on “cost-of-service”.
- “Benefiting” party to pay for all utility extensions.
- Revenue used for utility operation only.
- Supported by users fees (water & sewer bills), not taxes.
Key Facts

- Provide drinking water, wastewater and reclaimed water services for 83,000 people in the towns of Chapel Hill and Carrboro and the University
- About 22,000 customer accounts
- University is OWASA’s largest customer (about 22% of drinking water sales)
- Annual revenues ~$40 million
  - Operating expenses ~$24 million
  - Capital Improvements ~$28 million
  - Debt Service ~$8 million
- About 135 employees
- Maintain about 750 miles of water & wastewater pipes
University Lake

30 Square Mile Watershed

Storage Capacity 0.45 Billion Gallons
Cane Creek Reservoir

32 Square Mile Watershed
Storage Capacity 3.0 Billion Gallons
Storage Capacity 0.2 Billion Gallons

After 2035: 2.2-3.0 Billion Gallons

Quarry Reservoir
Jones Ferry Road Water Treatment Plant

Peak Day Treatment Capacity is 20 Million Gallons Per Day

THE DRINKING WATER SYSTEM

Reservoir → Mixing → Clarification → Filtration → Disinfection → Storage → Customer
OWASA

Jones Ferry Road Water Treatment Plant

Distribution/Collections Operations Center

Administration Building
Drinking Water Storage & Distribution

- 6 storage tanks with capacity of 8 million gallons
- 380 miles of drinking water distribution piping
Emergency Interconnections of Drinking Water System

- City of Durham
- Town of Hillsborough
- Chatham County
Collection of Wastewater (Sewage)

- 329 Miles of Pipe
- 21 Pump Stations

THE WASTEWATER MANAGEMENT SYSTEM

- Customer
- Manhole Pumping
- Headworks
- Primary Clarification
- Aeration Basins
- Secondary Clarification
- Filtration
- Disinfection
- Morgan Creek
- Water to Reclaimed UNC
- Anaerobic Digesters
- Biosolids applied to farmland or dewatered for composting
Mason Farm Wastewater Treatment Plant

THE WASTEWATER MANAGEMENT SYSTEM

Customer → Manhole → Pumping → Headworks → Primary Clarification → Aeration Basins → Secondary Clarification → Filtration → Disinfection → Reclaimed Water to UNC

Biosolids applied to farmland or dewatered for composting

Anaerobic Digesters

Morgan Creek
Mason Farm Wastewater Treatment Plant

Peak Month Treatment Capacity 14.5 Million Gallons Per Day
Recycling Biosolids

Liquid biosolids are applied on local farms

Dewatered biosolids are composted for reuse

THE WASTEWATER MANAGEMENT SYSTEM

- Customer
- Manhole
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- Morgan Creek

Reclaimed Water to UNC

Anaerobic Digesters

Biosolids applied to farmland or dewatered for composting
Recycling Reclaimed Water

UNC uses reclaimed water for 30% of their total water demand.

THE WASTEWATER MANAGEMENT SYSTEM

Operator checks reclaimed water pumps

Liquid biosolids are applied on local farms.
Dewatered biosolids are composted for reuse.

Morgan Creek

Reclaimed Water to UNC

Anaerobic Digesters

Biosolids applied to farmland or dewatered for composting

Customer Manhole Pumping Headworks Primary Clarification Aeration Basins Secondary Clarification Filtration Disinfection Morgan Creek
UNC-OWASA Reclaimed Water System and Uses (2017)
Water Sales and Accounts

Customer Accounts

Water Sales (Million Gallons Per Day Average)

Reclaimed Water to UNC begins 2009
Comparison of Residential Monthly Water and Sewer Bills in the NC Triangle Region for 4,000 Gallons
(as of January 2019)
Investing in Infrastructure
Water Treatment Plant

settling basin rehab
Pritchard Avenue water main replacement

1.7 miles of water main replacement in FY 2020
Sewer rehabilitation

5.6 miles of sewer rehabilitation in FY 2020
FY 2020 Capital Improvements Program Investments

$26.4 million

Breakdown:
- Water Distribution: $9.1 million
- Water Supply: $1.3 million
- Water Treatment: $3.1 million
- Wastewater Collection: $6.2 million
- Wastewater Treatment: $6.7 million

Total: $26.4 million
Five-Year Capital Improvements Program Allocation

- Rehabilitation: 78%
- Enhancement: 18%
- Growth: 4%

$112.7 million
Capital Improvements Program

- Capital improvements are critical to ensuring the long-term reliability of the system.

- Over next five years, we will invest about $16-28 million each year into capital improvements.

- About $0.50 of every $1.00 of OWASA revenue is invested into our infrastructure.
sustainability
[ suh-stey-nuh-bil-i-tee ]
noun

1. A hippy dippy cosmic cupcake term loosely applied to just about everything.... (Urban Dictionary)

2. The ability to be maintained at a certain level (Oxford Dictionary)

3. Meeting the needs of the present without compromising the ability of future generations to meet their needs (United Nations)
OWASA Must Plan for a Growing Population

Baseline, 10th and 90th Percentile Raw Water Demand Projections and Yield
Long-term strategy to ensure safe and reliable supply of drinking water

Consider climate change impacts

Towns recently updated growth projections – using as basis for water demand projections

More dense development occurring in service area

Neighboring communities also growing – limited water supplies
Agua Vista
OWASA's Metering Initiative

- Water Conservation
- Operational Efficiency
- Less Vehicle Miles
- On-Line Water Management Tools
Motivating Comparisons

My Daily Use

121 Gallons Per Day

View use

Compare your past use for this billing period: 49%↑

<table>
<thead>
<tr>
<th>Year</th>
<th>Usage</th>
</tr>
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<tbody>
<tr>
<td>Jul-Aug 2017</td>
<td>64</td>
</tr>
<tr>
<td>Jul-Aug 2018</td>
<td>81</td>
</tr>
<tr>
<td>Jul-Aug 2019</td>
<td>121</td>
</tr>
</tbody>
</table>

My WaterScore

Way To Go!

Way to go, WaterSaver! You ranked in the top 20%.

Who am I compared to?

- You: 121 GPD
- Efficient: 171 GPD
- Average: 212 GPD

Savings up to... 27 GPD | $169/yr

Install Faucet Aerators

Read more
Thank you so much for the new alert aqua vista system. Can’t imagine how much water would have been wasted if undetected until we received water bill. We are senior citizens on a fixed income…

Leak identified: 14 gph
Estimated savings from early leak detection and notification: $68

“We were out of town, and our cat-sitter flushed the toilet, didn't make sure it filled without problems, and then it ran for ~24 hours continuously. Horrifying…”

Leak identified: 148 gph
Potential savings from early leak detection and notification: ~$1,000

“I’ve called for repair. Thank you for quick notification otherwise would not have known there was a problem until much more damage!”

Leak identified: 135 gph
Potential savings from early leak detection and notification: ~$1,000

“Thank you so much for the new alert aqua vista system. Can’t imagine how much water would have been wasted if undetected until we received water bill. We are senior citizens on a fixed income…”

Leak identified: 14 gph
Estimated savings from early leak detection and notification: $68
Program Goals:

• Increase community awareness of options to manage and reduce OWASA bills

• Empower low-income customers and the local agencies that serve them with information and tools to manage and reduce OWASA bills
OWASA’s Energy Management Program

**40% reduction in greenhouse gas emissions***

**29% reduction in electricity use***

**26% reduction in natural gas use***

**Investment in Cost-Effective Energy Efficiency Projects**

**Energy-Minded Decision Making**

**Capital Projects**

**Operations and Maintenance**

**Biogas-to-Boiler Restoration**

Over $400,000 annual savings purchase of electricity and natural gas purchases***

*Since 2010 Baseline*
Sharing information and resources

Reviewing and approving development (water and sewer)

Coordinating capital improvement programs to minimize community disruption and maximize community investment

Emergency preparedness and response

Communicating with the community
Agua Vista
OWASA’s Metering Initiative

Report leaks to OWASA:
major leaks, call 24 hours a day
 919-968-4421
minor leaks, email
info@owasa.org

How everyone can help
Drinking Water – Use It Wisely

Conversation and Education
It's a Toilet, Not a Trash Can!

Never flush the following items (or put down the garbage disposal or drain). Toss them in the trash instead.

- Baby/Facial/Cleaning Wipes
- Tampons
- Sanitary Napkins
- Medication
- Hair
- Dental Floss
- Cotton Swabs/Balls
- Bandages
- Rags and Towels
- Rubber Items (like latex gloves)
- Fat, Cooking Oil, Grease
- Clothing Labels
- Candy/Food Wrappers
- Syringes
- Cigarette Butts
- Disposable Toilet Brushes
- Kitty Litter
- Aquarium Gravel
- Plastic Items
- Diapers
- Fruit Stickers
- Paper Towels

Only Flush the 3 P's - Pee, Poop and (toilet) Paper
Report Sewer Overflows 24 hours a day: 919-968-4421
Be ready!
Together, we can prepare our community to weather the storm.

- Sign up for OC Alerts at www.owasa.org
- Store one gallon per person per day for 3-7 days (don’t forget pets)
- Create a plan to protect your family and property in hurricanes and tropical storms
- Visit www.ready.gov for info on how to plan ahead for disasters
Carrboro-Chapel Hill’s not-for-profit public service agency delivering high quality water, wastewater, and reclaimed water services.

919-968-4421
(24 hours a day)
info@owasa.org
www.owasa.org
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