

Affordability of Water Service

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Session Objectives

- Understand ways to determine whether your water service is affordable for your customers
- Learn approaches to help low income customers pay for their water bills



The Affordability Issue

- You have to the tools to determine what water rates should be for your system. You are an enterprise fund and should run like a business
- However, you are also a public service entity and have to serve all customers with this vital resource



How can we best serve our low income customers while maintaining our business approach?



Maybe You Are Thinking...

- Water, relatively speaking, is cheap
- Have you seen cable bills lately? We are fine!



Cable vs. Water Services: Beware When You Compare

- Which one is a government monopoly?
- Which one has an obligation to serve?
- Which one has realistic customer alternatives for similar products?
- Which one is managed by marketers that know how to promote their product?
- Which one lets you watch old Cosby Show reruns?



What is “affordable” service?



“Percent MHI”

- Measured as the percent of median household income that the average customer at a utility spends on water (and wastewater) service annually
- $\text{Total bill for average water use} / \text{Median Household Income}$



When are Rates Unaffordable?

- Above 2.5%?
- More than what your neighbor charges?
- People complain?
- Your collection rate plummets?



First Things First

- There is **no** nationally accepted standard for affordability of water and wastewater service



However...

- Most quoted figure is 2.5 percent of MHI each for water and wastewater service, for a total of 5 percent
- On a national scale, census data suggests that 23 million households' water and sewer services are currently “unaffordable” using these criteria



EPA CSO

- The 1997 EPA document, “Combined Sewer Overflows: Guidance for Financial Capacity Assessment and Schedule Development” has a two-step process to identify the burden of the CSO on customers



CSO

Permittee Financial Capability Indicators Score (Socioeconomic, Debt and Financial)	Residential Indicator (Cost Per Household as % of MHI)		
	Low (Below 1.0%)	Mid-Range (Between 1.0 and 2.0%)	High (Above 2.0%)
Weak (Below 1.5)	Medium Burden	High Burden	High Burden
Mid-Range (Between 1.5 and 2.5)	Low Burden	Medium Burden	High Burden
Strong (Above 2.5)	Low Burden	Low Burden	Medium Burden



USDA

- USDA has a program to provide funds for water and sewer systems. Loans are made for projects where the residential water bills are greater than 1.5% of MHI



Water Research Foundation

- Water Research Foundation Report, “Water Affordability Programs,” suggests that affordability programs should be based on a measure of 2% of income for poor households, rather than using MHI



The Best Methodology

- You know your own community the best.
You should set the threshold for
affordability



Again, “Percent MHI”

- Measured as the percent of median household income that the average customer at a utility spends on water (and wastewater) service annually
- $\text{Total bill for average water use} / \text{Median Household Income}$



Percent MHI Is Imperfect

- The MHI estimate is for the state, county or place, and not the customer base of the water or wastewater utility itself



Percent MHI Is Imperfect

- MHI estimates are different across the three versions of the American Community Survey (1-year, 3-year and 5-year), even for the same year
- Census recommends using the 5-year numbers



Percent MHI Is Imperfect

- The latest MHI estimates are usually more than a year old
- MHI estimates for a community can significantly change from one year to the next



Percent MHI Is Imperfect

- The Median Household Income is *not* a single number (anymore)
- There is a single point provided, but then also a margin of error, giving you a range. The smaller the community, the larger the margin of error



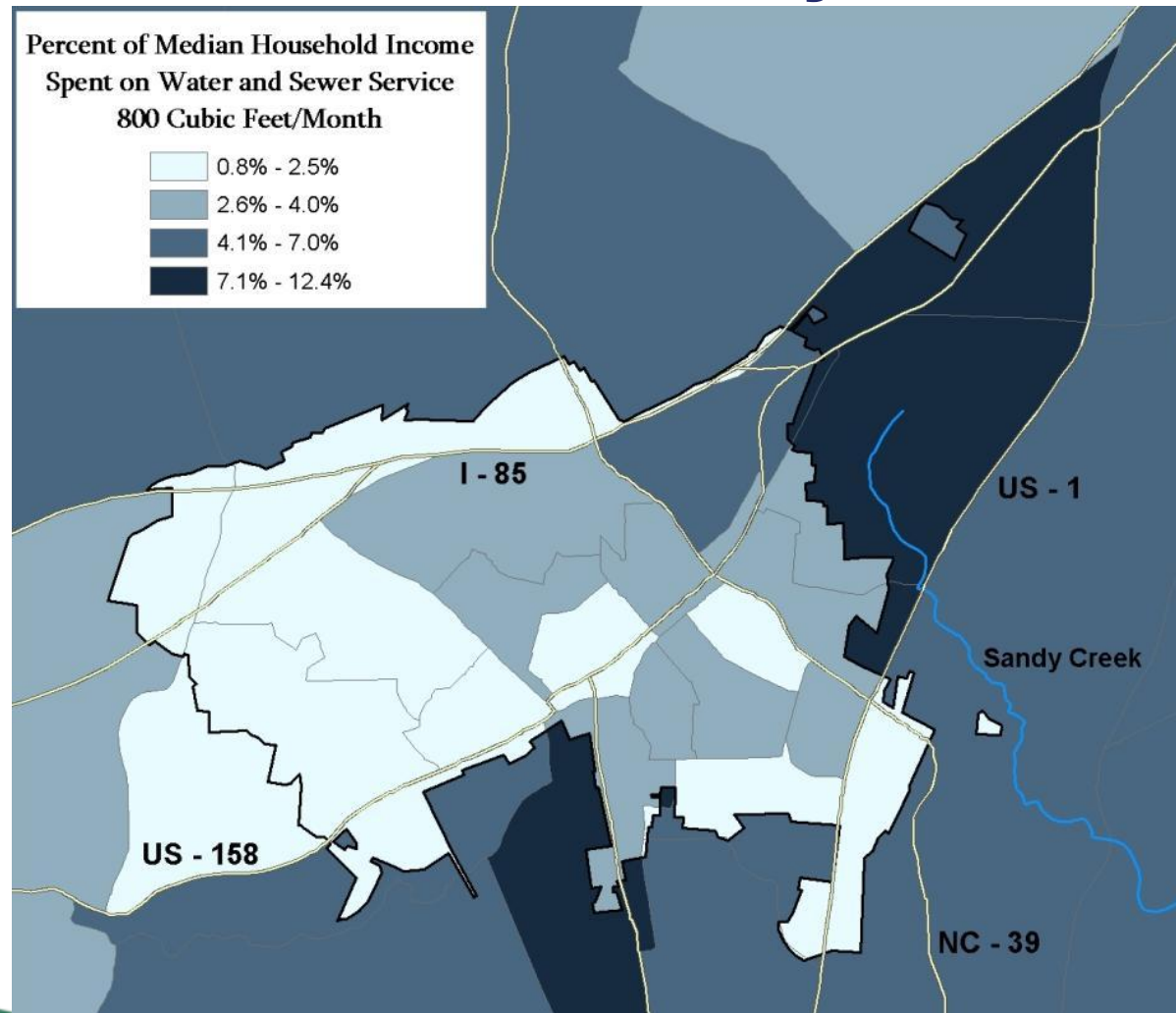
Percent MHI Is Imperfect

- MHI does not provide a complete picture of income distribution of households
- Take two communities with \$40,000 MHI
 - One could have most people between \$38K and \$42K
 - The other could have 40 percent of people below poverty and 40 percent wealthy



Bills Compared to Income of Subset Community

4/9/13



Nevertheless...

- Percent MHI is not a bad place to start, with caution
- But there are other options



Income Distribution

- The American Community Survey now has estimates of the percent of households in different income “buckets”
 - Under \$10,000
 - \$10,000 to \$14,999
 - \$15,000 to \$19,999
 - And so on



1. Go to the American Fact Finder page of the Census Website:
<http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>



2. In the “Community Facts” box at the top, enter the name of the community



3. Under “American Community Survey,” select the link for “Income, Employment, Occupation, Commuting to Work ...”

The screenshot shows the American FactFinder website interface. The browser address bar displays `factfinder2.census.gov/faces/nav/jsf/pages/community_facts.xhtml`. The page title is "AMERICAN FactFinder". The navigation bar includes links for "MAIN", "COMMUNITY FACTS", "GUIDED SEARCH", "ADVANCED SEARCH", and "DOWNLOAD OPTIONS". The "COMMUNITY FACTS" section is active, showing a search bar with the text "Enter a state, county, city, town, or zip code: Chapel Hill town, North Car..." and a "GO" button. Below the search bar, a list of categories is shown on the left, including "Population", "Age", "Business and Industry", "Education", "Housing", "Income", "Origins and Language", "Poverty", and "Veterans". The main content area displays "Chapel Hill town, North Carolina" with a "Total Population" of 57,233. Under the heading "Popular tables for this geography:", there are several sections: "2010 Census", "American Community Survey", "Population Estimates Program", and "Economic Census". The "American Community Survey" section is expanded, showing a list of tables. The table "Income, Employment, Occupation, Commuting to Work ..." is highlighted with a blue circle, and a blue arrow points to it from the right side of the screen.



4. Scroll down to “Income and Benefits”

Environmental Finance Network | American FactFinder - Results

factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_11_5YR_DP03

UNC-TM | EFC | UNC | My Forums | Cherokee Gives Back... | ONEWA - Breved to... | Fragments vechi - S...

U.S. Department of Commerce | **American FactFinder** | Feedback | FAQs | Glossary | Help

MAIN | COMMUNITY FACTS | GUIDED SEARCH | ADVANCED SEARCH | DOWNLOAD OPTIONS

Community Facts - Find popular facts and frequently requested data about your community

Community Facts | Table Viewer

DP03 | SELECTED ECONOMIC CHARACTERISTICS | 2007-2011 American Community Survey 5-Year Estimates

Table View | BACK TO COMMUNITY FACTS

Actions: Modify Table | Bookmark | Print | Download

View Geography Notes | View Table Notes

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities and towns and estimates of housing units for states and counties.

Chapel Hill town, North Carolina				
Subject	Estimate	Margin of Error	Percent	Percent Margin of Error
EMPLOYMENT STATUS				
Population 16 years and over	48,062	+/-413	48,062	(X)
In labor force	27,591	+/-893	57.4%	+/-2.0
Civilian labor force	27,563	+/-891	57.3%	+/-2.0
Employed	25,955	+/-904	54.0%	+/-2.0
Unemployed	1,608	+/-342	3.3%	+/-0.7
Armed Forces	28	+/-34	0.1%	+/-0.1
Not in labor force	20,471	+/-1,042	42.6%	+/-2.0
Civilian labor force	27,563	+/-891	27,563	(X)
Percent Unemployed	(X)	(X)	5.8%	+/-1.2

Chapel Hill town, North Carolina				
Subject	Estimate	Margin of Error	Percent	Percent Margin of Error
Agriculture, forestry, fishing and hunting, and mining	80	+/-96	0.3%	+/-0.4
Construction	653	+/-216	2.5%	+/-0.8
Manufacturing	1,060	+/-235	4.1%	+/-0.9
Wholesale trade	216	+/-110	0.8%	+/-0.4
Retail trade	2,485	+/-346	9.6%	+/-1.3
Transportation and warehousing, and utilities	162	+/-74	0.6%	+/-0.3
Information	598	+/-191	2.3%	+/-0.7
Finance and insurance, and real estate and rental and leasing	998	+/-237	3.8%	+/-0.9
Professional, scientific, and management, and administrative and waste management services	3,550	+/-372	13.7%	+/-1.4
Educational services, and health care and social assistance	11,479	+/-640	44.2%	+/-2.1
Arts, entertainment, and recreation, and accommodation and food services	3,167	+/-446	12.2%	+/-1.6
Other services, except public administration	1,015	+/-234	3.9%	+/-0.9
Public administration	492	+/-156	1.9%	+/-0.6
CLASS OF WORKER				
Civilian employed population 16 years and over	25,955	+/-904	25,955	(X)
Private wage and salary workers	16,683	+/-806	64.3%	+/-2.2
Government workers	7,812	+/-616	30.1%	+/-2.1
Self-employed in own not incorporated business workers	1,399	+/-217	5.4%	+/-0.8
Unpaid family workers	61	+/-46	0.2%	+/-0.2
INCOME AND BENEFITS (IN 2011 INFLATION-ADJUSTED DOLLARS)				
Total households	19,970	+/-966	19,970	(X)
Less than \$10,000	2,554	+/-401	12.8%	+/-1.6
\$10,000 to \$14,999	958	+/-246	4.8%	+/-1.2
\$15,000 to \$24,999	1,710	+/-306	8.6%	+/-1.5
\$25,000 to \$34,999	1,693	+/-264	8.5%	+/-1.3
\$35,000 to \$49,999	2,088	+/-331	10.5%	+/-1.7
\$50,000 to \$74,999	2,615	+/-339	14.1%	+/-1.6
\$75,000 to \$99,999	1,887	+/-328	9.4%	+/-1.5
\$100,000 to \$149,999	2,443	+/-363	12.2%	+/-1.5
\$150,000 to \$199,999	1,286	+/-212	6.4%	+/-1.1
\$200,000 or more	2,536	+/-262	12.7%	+/-1.3
Median household income (dollars)	58,415	+/-4,655	(X)	(X)
Mean household income (dollars)	65,540	+/-5,410	(X)	(X)



5. Copy the information for “Total Households” and paste into an Excel table. This table shows the percentage of households in the community that fall into various income ranges.

Environmental Finance Inc. American Factfinder - Re: X

factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_11_5YR_DP03

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Chapel Hill town, North Carolina

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\$100,000 to \$149,999	2,443	+/-305	12.2%	+/-1.5
\$150,000 to \$199,999	1,298	+/-212	6.4%	+/-1.1
\$200,000 or more	2,536	+/-252	12.7%	+/-1.3
Median household income (dollars)	58,415	+/-1,665	(X)	(X)
Mean household income (dollars)	95,654	+/-5,510	(X)	(X)
With earnings				
Mean earnings (dollars)	16,643	+/-900	83.3%	+/-1.5
With Social Security	86,726	+/-5,003	(X)	(X)
Mean Social Security income (dollars)	3,633	+/-261	18.2%	+/-1.3
With retirement income	20,454	+/-1,111	(X)	(X)
Mean retirement income (dollars)	2,928	+/-265	14.7%	+/-1.4
With Supplemental Security Income	42,351	+/-4,703	(X)	(X)
Mean Supplemental Security Income (dollars)	355	+/-101	1.8%	+/-0.5
With cash public assistance income	8,855	+/-2,366	(X)	(X)
Mean cash public assistance income (dollars)	191	+/-100	1.0%	+/-0.5
With Food Stamp/SNAP benefits in the past 12 months	2,277	+/-740	(X)	(X)
Mean Food Stamp/SNAP benefits in the past 12 months	1,064	+/-211	5.3%	+/-1.0
Families				
Less than \$10,000	10,239	+/-518	10.239	(X)
	393	+/-136	3.8%	+/-1.3

100% 10:02 AM 4/9/2013



Now You Can Measure the Percent of Income Spent for Many Income Levels

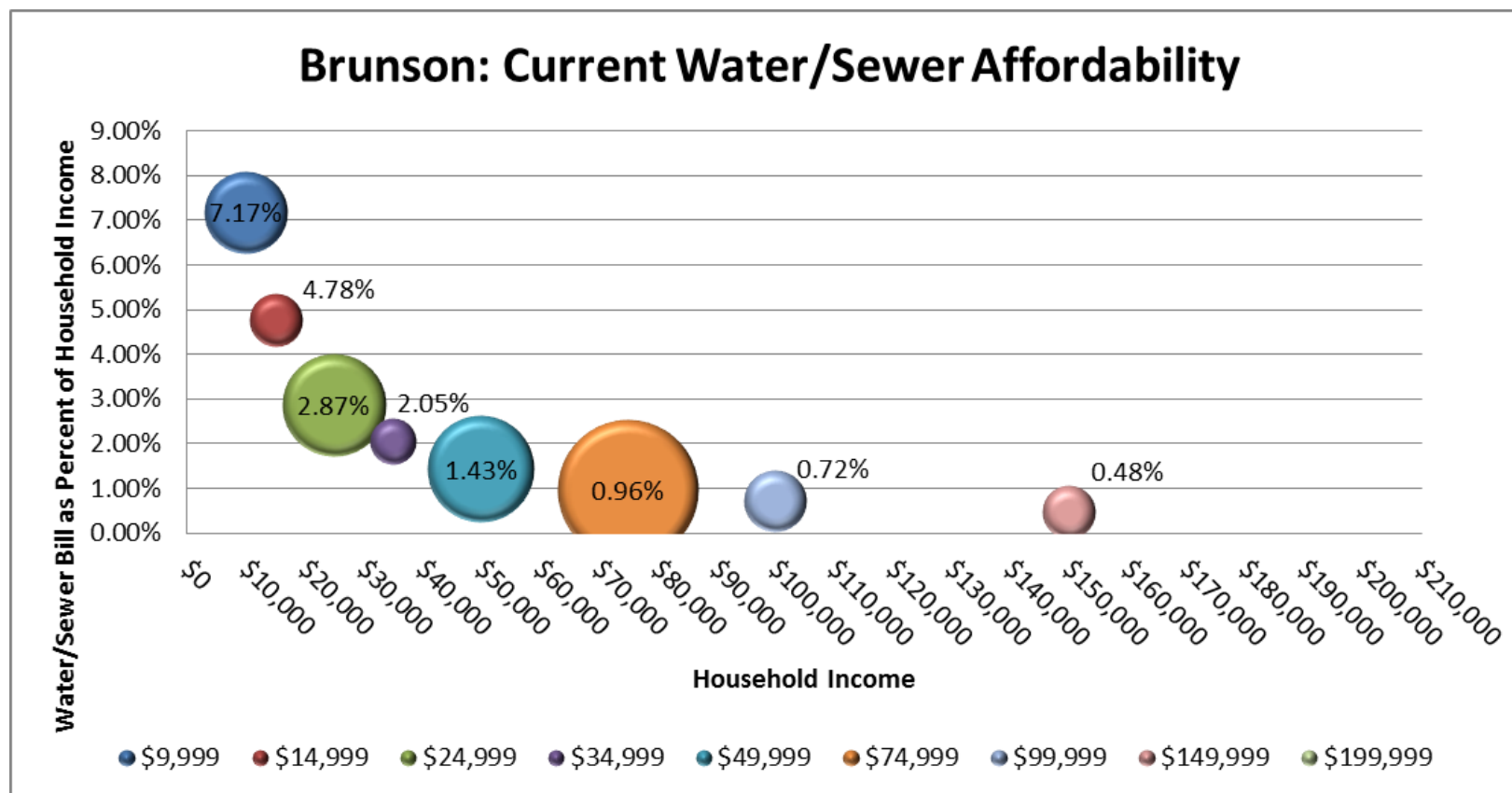


A Tale of Two Cities

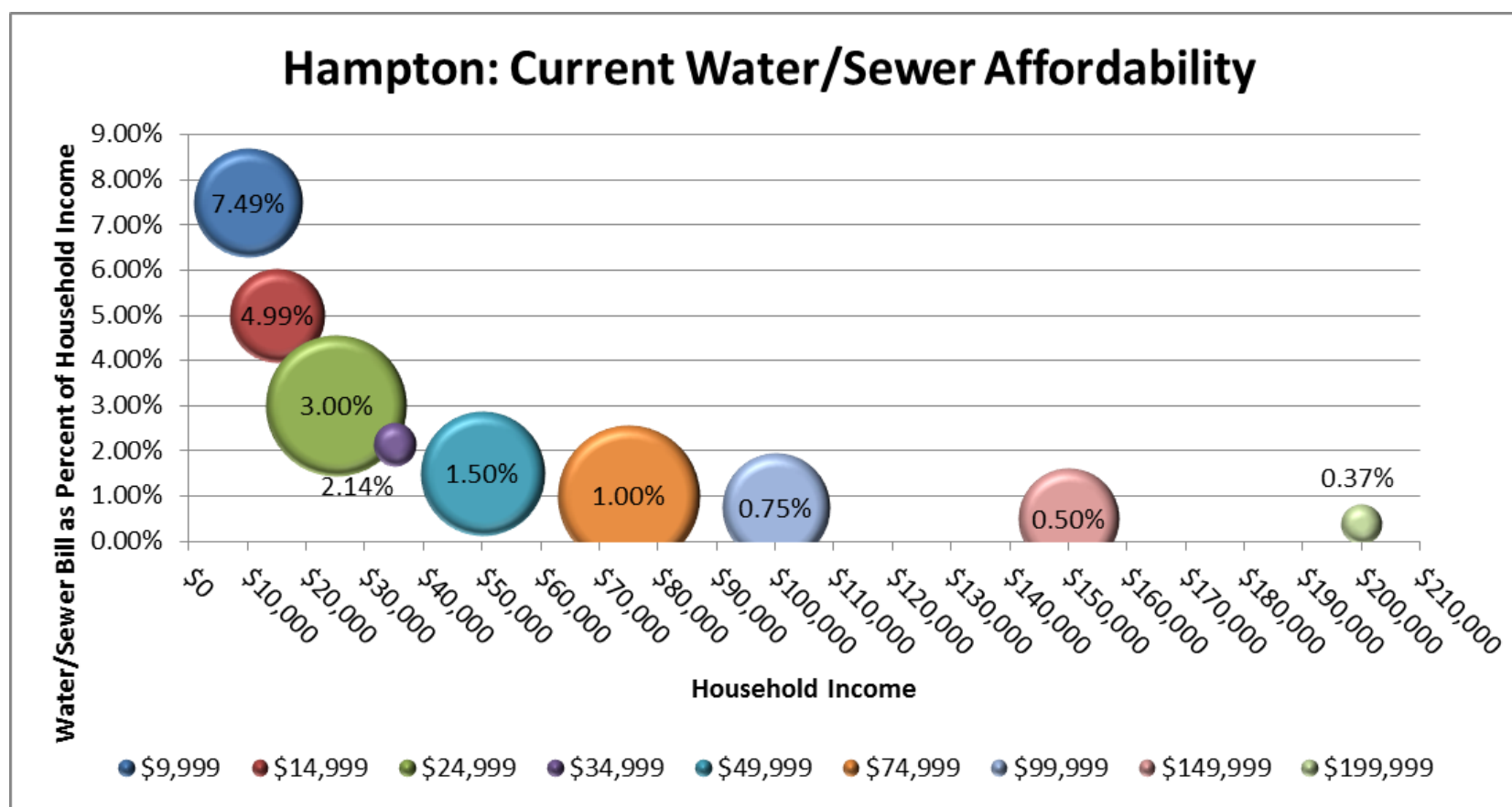
- Brunson and Hampton, SC—both small rural towns in the same county with similar MHIs around \$43,000
- Both have a percent MHI for water and sewer combined of 1.68 percent



Brunson



Hampton



Side Note

- That same Census table has the number of households that receive other public assistance funds including Supplemental Security Income, cash public assistance income, and Food Stamp/SNAP benefits in the past 12 months, as well as unemployment figures



Making the Case for Considering Affordability Programs



Altruistic Reasons

- *Wanting to help folks!*
- Caring about your customers



External Pressures

- Local and state officials
- Funding agencies
- National agencies
- Your customers!



Your Bottom Line

- When customers have trouble paying their bills, there is a cost to the utility, in the form of:
 - Arrearages
 - Late payments
 - Disconnection notices
 - Terminating the service
 - Fielding calls from the delinquent customers



Approaches to Affordability

- Charge everyone less
- Charge poor people less—not allowed in many states
- Charge everyone a higher amount but have some type of social safety net program



Types of affordability programs

Options facing payment-troubled customers		
	Percent	N
Payment plan to allow customer to pay amount over time	76%	231
Customer referral to private, nonutility agency	54%	163
Customer referral to a local gov. agency for assistance	49%	149
Education	35%	105
In-home conservation assistance	25%	76
Special billing arrangements	21%	64
Change in the rate customer is charged	8%	24
Other	8%	24
One-time bill credit from utility funds	3%	8

2010, Best Practices in Customer Payment Assistance Programs, Water Research Foundation #4404



Lifeline Rates

- A minimal amount of water is offered to all customers at a relatively low cost
- May be built into the base charge



OCIM, Hillsborough begin water assistance program

The Herald-Sun

By Emily Coakley : The Herald-Sun

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Emergency Assistance Program

Upcoming Events

**16th Annual
Feast of Caring -**
November 15, First
Baptist Church

General Guidelines

Hours of Operation:

- Financial interview

Times and availability

Assistance is available for:

- Past due rent
- Past due mortgage

not assist with:

- recovery facilities
- Mortgage Company

Taste of Hope

COUNCIL APPROVES EMERGENCY ASSISTANCE PROGRAM

"People have had few places to turn for help to pay for the most basic requirement of life"

Council approved Council Bill 115636 which will provide immediate shut-off of water service. The program will pay half of a past-due water bill up to a certain amount at the eligibility requirements.

When first proposed that Seaside... efforts to shut off of

dorcas MINISTRIES

Christian Community Development

Care Conserve



Customer Assistance Programs

- Customers can have their monthly bills rounded up to the nearest dollar
- Proceeds assist lower-income people who cannot start or continue service
- Administered by a local non-profit organization, NOT the utility itself



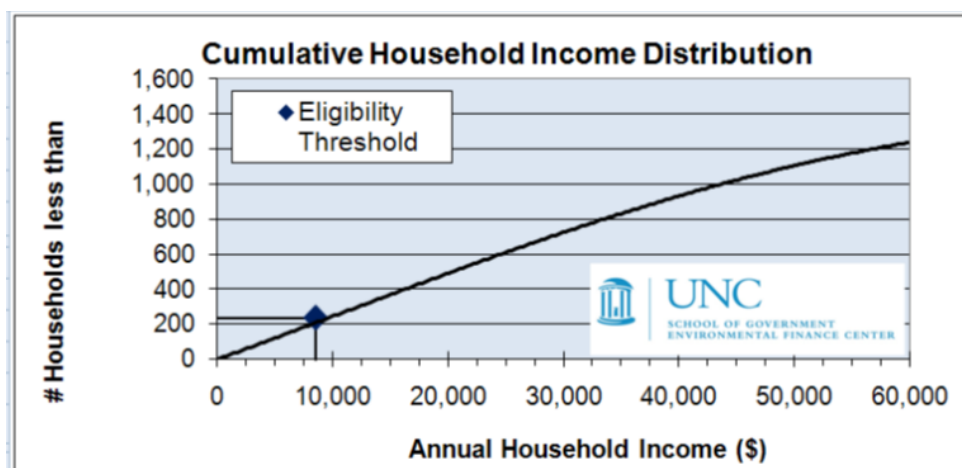
Conservation Assistance

- Help low income customers use less water by fixing leaks and installing conservation devices
- Example: Care and Conserve program in Atlanta



Pricing Out the Cost of a Customer Assistance Program

EFC tool (currently for NC): http://www.efc.unc.edu/tools.htm#customer_assistance



A customer is eligible if
is spent on this quantity of W & WW: 5.0% of their income
6 kgal/Month

	Amount (\$)	Consumption Allowance	
Minimum Water Bill	\$ 1.80	0.0	kgal
Minimum Wastewater Bill	\$ 1.80	0.0	kgal
	Block Maximum* kgal	Rate (\$)	Units
Water Rate Block 1	4.0	\$ 1.38	per kgal
Water Rate Block 2	8.0	\$ 1.59	per kgal
Water Rate Block 3		\$ 2.61	per kgal
Wastewater Rate Block 1	0.0	\$ 3.86	per kgal
Wastewater Rate Block 2	0.0	\$ -	per kgal
Wastewater Rate Block 3		\$ -	per kgal

*Enter "0" for Block Maximums in the case of uniform rate structures

Adjust all cells with data in BLUE.

Select Your Community: Aberdeen

Select your billing units: kgal

Customer Assistance Program:

If a customer spends more than 5.0% of their income on 6 kgal/Month they can receive up to \$150 in direct assistance per year assuming that they pay the rest of their bill.

Amount of Annual assistance per eligible account	\$ 150.00
Percent of eligible customers that will participate	40%
Number of participating customers	95
Annual Program Cost	\$ 14,194
Amount of bad debt recovered through the program	\$ 2,061
Net Annual Program Ballpark Estimate Cost	\$ 12,130

For customers who take advantage of the program, at the income threshold, the fraction of income spent on:

2.0 kgal/Month	0.2%
4.0 kgal/Month	1.7%
6.0 kgal/Month	3.2%
8.0 kgal/Month	4.8%
12.0 kgal/Month	8.4%

Monthly Bill for 6 kgal	\$ 35.46
Annual Bill	\$ 425.52
Annual Household Income Threshold	\$ 8,510
# Households less than	237
Annual Budget for Bad Debt	\$ 20,000

Questions?

