

Water & Sewer Utilities Revenue Form: Future Rate CalculationsName of Applicant: Watertown

System to be Consolidated (if not applicable, then leave blank):

Current Average Residential User Fee (use monthly average for the most recent year):

$$\begin{array}{r} \$ \quad 6,336 \text{ monthly revenue from residential customers} \\ \div \\ \hline 242 \text{ # residential connections} \\ = \\ \$ \quad 26.18 \text{ per residential connection} \end{array}$$

Current Average Non-Residential User Fee (use monthly average for the most recent year):

$$\begin{array}{r} \$ \quad 2,408 \text{ monthly revenue from non-residential customers} \\ \div \\ \hline 5 \text{ # non-residential connections} \\ = \\ \$ \quad 481.50 \text{ per non-residential connection} \end{array}$$

What effect will the project have on the required revenue?

$$\begin{array}{r} 4.91\% \text{ expected interest rate (i) [%/year]} \\ 20 \text{ expected term [years]} \\ \$ \quad 195,808 \text{ budgeted cost of project (present value)} \\ \hline \end{array}$$

$$\begin{array}{r} \$ \quad 15,592 \text{ required additional annual revenue} \\ \$ \quad 1,299 \text{ required additional monthly revenue} \end{array}$$

Projected Average Residential User Fee:

$$\begin{array}{r} 25 \text{ # new connections} \\ \hline \$ \quad 655 \text{ estimated revenue from new connections at current rate} \end{array}$$

$$\begin{array}{r} \text{Consolidation: } \$ \quad 1,954 \text{ monthly revenue from residential customers} \\ \div \\ \hline 25 \text{ # residential connections} \\ = \\ \$ \quad 78.15 \text{ per residential connection} \end{array}$$

$$\begin{array}{r} \text{Any Other Project: } \$ \quad 966 \text{ residential share of required additional monthly revenue} \\ \$ \quad 7,957 \text{ monthly revenue from residential customers} \\ \div \\ \hline 267 \text{ # residential connections} \\ = \\ \$ \quad 29.80 \text{ per residential connection} \end{array}$$

Projected Average Non-Residential User Fee:

$$\begin{array}{r} \text{Any Other Project: } \$ \quad 333 \text{ non-residential share of required additional monthly revenue} \\ \$ \quad 2,740 \text{ monthly revenue from non-residential customers} \\ \div \\ \hline 5 \text{ # non-residential connections} \\ = \\ \$ \quad 548.08 \text{ per non-residential connection} \end{array}$$

% Increase used to "Calculate the projected Residential User Fee for 4,500 gallons /month":

Consolidation: **198.5%** required % increase in water rate

Any Other Project: \$ **9,398** est. monthly water revenue from all (current + future) connections at current rate

13.8% required % increase in water rate

Calculate the current Residential User Fee for 4,500 gallons /month. Report the rate separately for each rate basis (e.g., for inside and outside rates, or for service areas subject to separate rates). Use additional sheets as needed, showing all calculations:

Residential Rate Basis: (e.g., 'inside city limit, pressure zone 1')	Residential Customers	4,500 gallons per month	Monthly Revenue
	10	\$ 26.18	\$ 261.80
		\$ -	\$ -
		\$ -	\$ -
		\$ -	\$ -
Total Number of Customers		Weighted Average Residential Rate	Total Monthly Revenue
	10	\$ 26.18	\$ 261.80

Calculate the projected Residential User Fee for 4,500 gallons /month. Report the rate separately for each rate basis (e.g., for inside and outside rates, or for service areas subject to separate rates). Use additional sheets as needed, showing all calculations:

Residential Rate Basis: (e.g., 'inside city limit, pressure zone 1')	Number of Residential Customers	Residential Rate at 4,500 gallons per month	Monthly Revenue
	2	\$ 29.80	\$ 59.60
		\$ -	\$ -
		\$ -	\$ -
		\$ -	\$ -
Total Number of Customers		Weighted Average Residential Rate	Total Monthly Revenue
	2	\$ 29.80	\$ 59.60

This spreadsheet calculates the current "average household user fee" [NCGS 159G-20(9)] given the following:

1. Current residential revenue from water & sewer
2. Current residential connections to water & sewer.
3. If a majority of connections are both water and sewer, use the water+sewer rate. Otherwise, water-only.

The spreadsheet calculates the "estimated average household user fee" [NCGS 159G-20(9)] due to the construction of the project based on the following:

1. The above-calculated current "average household user fee"
2. The cost of the proposed project
3. The number of water connections served by the proposed project
 - a. For consolidation projects, the relevant number of connections is the number of connections in the system to be consolidated.
 - b. For all other projects, the number of connections is the total anticipated number of connections after the project is completed.
4. The alternative financing of the project.
 - a. For consolidation projects, the alternative financing is 6% interest rate for ten years, born by the connections in the system to be consolidated. This is typical of annexation projects in NC:
http://www.raleighnc.gov/publications/Planning/Booklets_and_Brochures/Annexation.pdf, p14.
 - b. For all other projects, the alternative financing is **market interest rate** for 20 years, born by the total anticipated number of connections after the project is completed. For the purposes of this spreadsheet, "market interest rate" is twice the DWSRF loan rate at the time of application.