|  |  |  |
| --- | --- | --- |
|  |  | |
| **Budget Category** | **Fixed Costs** | **Variable Costs** |
| Operation and Maintenance | $205,000 | $300,000 |
| Debt Service | $50,000 | - |
| Increased Reserve Requirement | $35,000 | - |
| **Total** | $290,000 | $300,000 |

**Instructions:** Refer to the *Village of Sunflower Information Sheet* and answer the questions below. Keep in mind, the community is only collecting 94% of what is being billed.

1. Calculate a monthly base charge for each account to recover fixed costs.

*(Hint: Fixed cost / Total accounts / 12 months per year).*

Click or tap here to enter text.

2. Calculate a uniform volume charge per 1,000 gallons to recover variable costs.

*(Hint: Variable costs / [Water metered / 1,000]).*

Click or tap here to enter text.

3. You are presently billing a base charge of $20 per month and a volume charge of $2 per 1,000 gallons. What will be the new monthly charge for users at 5,000 gallons per month and 20,000 gallons per month? Use answers from Problems 1 and 2. How do these compare to the cost per month under the old rates? Answer these questions by completing the table below.

(Hint: Volume charge per 1,000 gallons X [Usage / 1,000 gallons] + Base charge).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Old Rate: Bill/Month** | **New Rate: Bill/Month** | **$ Increase** | **% Increase** |
| **5,000 gal** |  |  |  |  |
| **20,000 kgal** |  |  |  |  |

4. Calculate the affordability index for the new charges based on 5,000 gallons per month usage and the community’s median household income. What is the affordability index for a family of two making $19,000 in annual income?

(Hint: Annual water cost / annual income).

Click or tap here to enter text.

[**Solution (ctrl + click here)**](https://www.wichita.edu/academics/fairmount_college_of_liberal_arts_and_sciences/hugowall/efc/EFCWaterTraining/SunflowerVillageBaseRateChargeSolution.pdf)