

Calculating Average Water Costs



The population in some areas of the United States has increased so much that water demand currently exceeds water supply.

Contacts with the local municipality could produce average monthly cost figures for water and sewer services in your community, but the exercise can be more personal if the participating young people collect the data on their own homes or apartments. Have participants collect water and sewer bills for the previous year (or as many months as they can find) and calculate a household average by adding the bills and dividing by the number of months included. Each person should have a total amount spent, a number of months included, and an average per month. Once these data are collected for each individual household, the data can be pooled to determine the average water and sewer costs for the club or class. This can be accomplished by several methods.

For participants using municipal water and sewage services:

1. The total costs for all members of the class may be divided by the total number of months represented by all of the households combined to obtain a monthly average cost.
2. Alternatively, the monthly average costs may be added for all participants and divided by the number of entries. These two methods may produce slightly different answers because of rounding error or variation in the times of year included in each average cost calculation. An individual who has costs only for the summer, for example, may have an “annual average” somewhat higher than one who has costs for the entire year. (You may want to have participants discuss reasons why this might be so.) They should be fairly close to an overall average cost per household, however.

For participants with rural water or sewage management systems:

1. If possible, determine the cost of the well and sewage system and divide by the estimated life expectancy of those systems. These vary by location and use rate, but local contractors may be able to provide a reasonable estimate.
2. Add any treatment costs like water softeners, filtration systems, or the regular need to have septic systems pumped to remove solids.
3. Add electricity costs for pumping.
4. Divide the total costs (1, 2 and 3) by the number of years that the system is expected to operate without replacement.
5. Use this figure as the average annual cost for water and sewer services.
6. Divide by 12 to get a monthly cost for comparison with the table of values given.