2022

THE COST OF CLEAN

WISCONSIN SEWER USER CHARGE SURVEY REPORT

March 2023 Edition

MSA™

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ACKNOWLEDGEMENTS

I would like to personally thank everyone who took the time to fill out a survey form and for providing us with the raw data on which this report is based. Our days are filled with requests for information in emails, instant messages, phone calls, and other tasks, and this survey added one more thing for you all to do. This survey has become a useful resource for community officials, utility directors, regulators, funding agencies, and consultants in the State of Wisconsin. Your assistance has provided meaningful and valuable data to make this a reliable source of sewer rate information in Wisconsin.

I would also like to recognize the following individuals and their agencies for their assistance in providing data for this study. You have all been great supporters of this effort.

- Steve Kemna, P.E. & Andrew Fisher — Wisconsin Public Service Commission
- Jeanne Cargill — Wisconsin Department of Natural Resources
- David J. Pawlisch — CDBG Program
- Julie Giese — USDA Rural Development

Finally, I would like to thank the MSA Team: Shelley Granberg, Susan Marcott, and Troy Weber for their hard work in compiling data from hundreds of survey forms and putting this report into an organized, easy-to-read format.

Tom Fitzwilliams
September 7, 2022

EXECUTIVE SUMMARY

Background

The information outlined in this 2022 Sewer User Charge Survey report has been collected and analyzed by MSA Professional Services, Inc. (MSA). This is the tenth survey of this nature performed by MSA over the past 26 years. The purpose of this report is to document the cost of sanitary sewer service in Wisconsin, and to provide communities with the ability to compare their current and proposed sewer rates with the rates in similar communities. It is the hope of MSA that communities with access to this information will be empowered to make the best decisions for the healthy and sustainable future of their wastewater utilities.

This report contains data from 310 Wisconsin communities that operate wastewater treatment and collection systems. This represents approximately 40% of the publicly-owned wastewater utilities in the State. Approximately 82% of the respondents have a publicly owned wastewater treatment facility; the other 18% are connected to a regional treatment facility owned by another entity.

Findings

The 2022 Sewer User Charge Survey found the average cost for residential sewer service statewide to be $446 per year ($111.50 per quarter or $37.17 per month) based upon actual water use.

Based on the common benchmark water usage of 55,000 gallons per year, the 2022 statewide average is $524. This represents an increase of 4.8% per year since 1996 when this benchmark was first introduced into MSA's Sewer User Charge Survey report.

As observed in previous Sewer User Charge Surveys, there is a correlation between the cost of sewer service and the size of the community. Even though residents of the largest communities consume more water per capita and subsequently produce more wastewater per capita, they pay less on average for wastewater service. Communities with populations of 500 to 1000 have virtually the same average cost for sewer service as do communities with population of 1000 to 2000. Communities with population less than 500 have a slightly lower average cost for residential sewer service, which is due to the prevalence of lagoon-based wastewater treatment systems, which offer lower construction and operating costs, in very small communities. At populations greater than 2000, the average cost for residential sewer service is significantly less. The larger customer base, and the economy of scale with respect to treatment facility construction and operation, work to the advantage of larger communities.

In communities with populations less than 2000 and greater than 50,000 the average residential cost for sewer service is significantly higher in communities that pump their wastewater to another community for treatment (regionalization).

The 2022 Sewer User Charge Survey found that statewide the median number of years since the last sewer rate increase is approximately 2.5 years; however, the average number of years since the last sewer rate increase is 4.5 years. This indicates there are many communities that have not adjusted sewer rates in quite a few years. The 2022 Survey data indicates the average number of years since the last sewer rate adjustment has increased across all population ranges as compared to the 2019 Survey. A total of 42% of the survey respondents indicated a sewer rate increase will be necessary within the next year, with an average anticipated increase of 7.1%.

A total of 53% of the respondents to the 2022 Sewer User Charge Survey charge a hook-up fee for new connections; however only 6% have implemented an impact fee for new connections.
Statewide, approximately 39% of the survey respondents indicated that holding tank wastes are accepted, and approximately 36% indicated that septage wastes are accepted. Not surprisingly, the rate of acceptance is significantly higher in larger communities where treatment capacity is greater. Approximately 38% of respondents statewide indicated they have a system in place for applying biochemical oxygen demand (BOD) and suspended solids surcharges for high-strength waste. Approximately 35% of respondents statewide have a phosphorus surcharge in place, and approximately 18% have a nitrogen surcharge in place for high strength wastes. As with holding tank and septage wastes, the prevalence of surcharges for high strength wastes is significantly higher in communities with larger populations, which have treatment facilities in place to accommodate high strength waste.

The 2022 Sewer User Charge Survey solicited information regarding compliance with new phosphorus regulations. A relatively large number of respondents, especially those in smaller communities, were unsure of their proposed method for compliance with final effluent phosphorus limits. This may be due to the status of the phosphorus compliance schedule in some WPDES permits, in which the respondent has not yet decided the method for obtaining final compliance. It may also be due to the number of respondents who have obtained a Multi-Discharger Variance for phosphorus, which is a temporary variance and will require final compliance with more stringent effluent limits in the future by some method which has yet to be determined. The reported capital costs and operational costs for phosphorus compliance were quite variable. This is likely a reflection of the number of facilities who are achieving compliance through the use of biological phosphorus removal or a conventional chemical feed system for precipitation of phosphorus, as compared to facilities that need to implement far more expensive tertiary treatment or watershed-based options (adaptive management or water quality trading) to achieve final compliance with much more stringent effluent phosphorus limits.

The average day residential water use in Wisconsin continues to decline across all population ranges. For the respondents to the 2022 Sewer User Charge Survey, the 2021 average day residential water use was nearly 25% lower than in 2006, a decrease of approximately 1.6% per year. Factors contributing to reduced potable water use include the greater prevalence of low-flow plumbing fixtures and possibly water conservation measures by utility customers in response to increasing water and sewer rates. Water rates have consistently increased over all population ranges, at a statewide average of approximately 4% per year since 2004. As with the average residential sewer charge, the average cost for residential water service decreases significantly as the community population increases, reflecting the economy of scale in construction and operation of water source and treatment facilities.

The availability of grant funding from various governmental agencies for the construction of wastewater facilities has varied greatly from year-to-year. There is no doubt that wastewater facility improvements in many communities were only made possible by the availability of grant funds to decrease the cost burden on the residents. The amount of grant funding available for an individual project is limited by the large demand statewide. The agencies administering funding programs typically utilize the anticipated average cost for residential sewer service as a percentage of the community's median household income (MHI) as a key metric in the determination of eligibility for, and the magnitude of, grant funding. In that regard, the average cost for residential sewer service as a percentage of MHI has decreased relatively consistently, albeit by a small amount, since 2000. The 2022 Sewer User Charge Survey found the

statewide average cost for residential sewer service to be approximately 0.8% of the 2018 state average MHI of $59,209, currently identified by Wisconsin Department of Natural Resources (WDNR) for use in state fiscal year 2022 WDNR Clean Water Fund program.

The 2022 Sewer User Charge Survey includes an estimate of the average monthly cost per household for various utilities and the average monthly cost per household for gasoline used by vehicles. The average cost for residential sewer service various greatly between different communities; however, as in past Sewer User Charge Surveys, this comparison found that wastewater service remains one of the least costly utilities for the average household. As a statewide average, the cost per household for water service is the only utility less costly than sewer service.

I. INTRODUCTION AND BACKGROUND

A. Welcome

Welcome to the MSA Professional Services, Inc. (MSA) 2022 Wisconsin Sewer User Charge Survey. This continued effort has proven to be a valued tool for many Wisconsin municipalities, as well as State and Federal agencies. It would not be possible without all the support communities have shown for all of the surveys conducted over the past 26 years. MSA would like to thank all of the respondents for making this survey a complete and reliable source of information.

B. Background

With the cost of everything increasing and availability of wastewater project grant funding variable, the cost of sewer service is volatile, but continues to increase. Communities are striving for the most affordable and fair sewer user charges, and at the same time need to generate enough revenue to maintain their infrastructure.

C. The 2022 Survey Data Request

Survey forms were distributed to 778 municipal WPDES discharge permit holders in Wisconsin in December 2021. There were 310 respondents to the survey, including communities that operate their own wastewater treatment facilities, as well as communities operating a sanitary collection system and sending wastewater to another community for treatment. A copy of the 2022 Survey Form is provided as an appendix to this report.

The 2022 Survey was modeled after the 2013, 2016, and 2019 surveys. Introduced as a new component to the 2022 Survey, communities were asked to provide information about their plan of action for compliance with new effluent phosphorus regulations and costs for phosphorus compliance.

D. Demographics

The survey responses were grouped into seven population ranges intended to provide a large enough sample size within each range. These population ranges are shown in **Figure 1**. Attempts were made to survey all communities in Wisconsin with publicly-owned wastewater facilities, the percentage of communities in each population category are believed to be a fairly accurate representation of the community populations throughout the State.

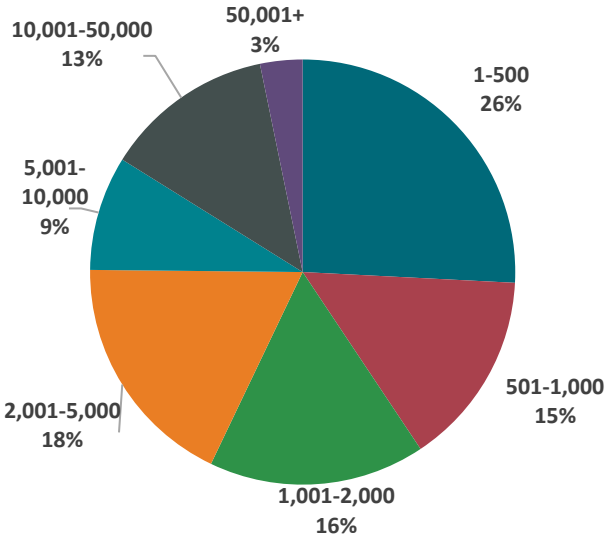


***Figure 1**: Respondents by Population Range*

This report also divides the respondents into three major treatment type categories to evaluate trends in the type of treatment utilized by communities. The percentages of communities utilizing the various types of wastewater treatment is shown in **Figure 2**.

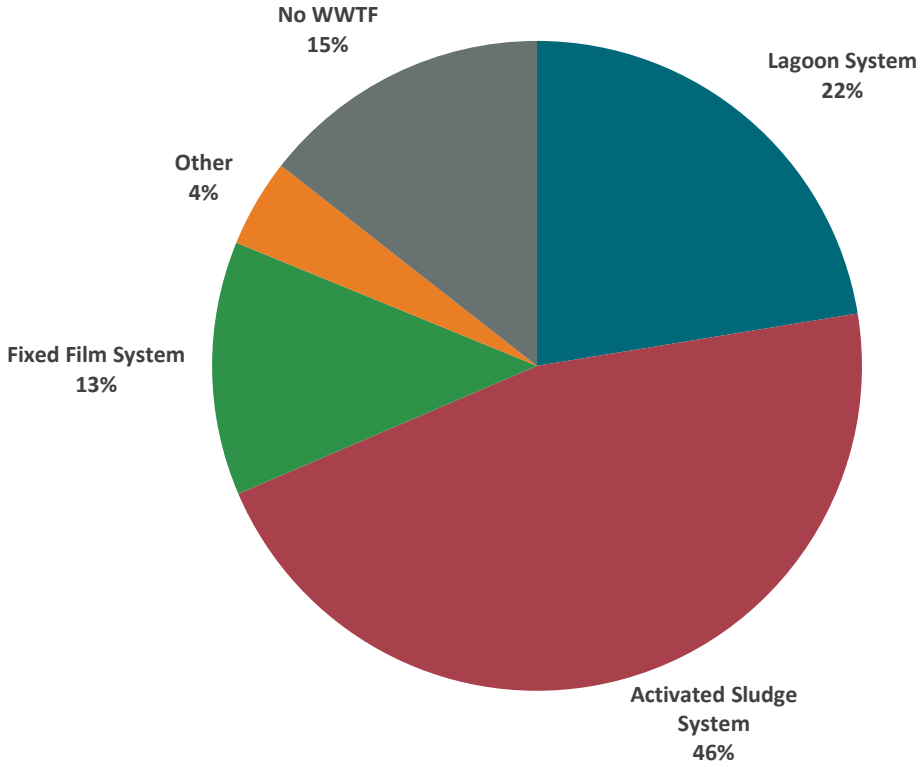


***Figure 2**: Respondent's Wastewater Treatment Type*

Each major treatment type was also divided into subgroups, as follows:

- Lagoon-based treatment includes aerated lagoons (14.4%) and stabilization ponds (8.0%).
- Activated sludge is the most prevalent type of treatment utilized and includes conventional activated sludge (26.8%), membrane bioreactor (0.3%), oxidation ditch (14.7%), "package" plant (1.8%), and sequencing bath reactor (SBR) (2.6%).
- Fixed film treatment includes trickling filter/bio-tower (2.8%), rotating biological contactor (RBC) (3.9%), recirculating sand filter (4.9%), and moving bed bioreactor (MBBR) (1.0%).
- Additional treatment types are also represented in this Survey; however, they represent a small selection of the survey data (4.0%).
- A significant portion of sewered communities send their wastewater to another community for regional treatment. These respondents are referenced as "No WWTF." Overall, 85% of respondents have their own wastewater treatment facility and 15% do not.

From 2004 through 2010, the number responses to requests for data for the Sewer User Charge Survey increased. More recently, the survey response numbers have decreased, although the number and percentage of responses have plateaued in the most recent three surveys. The reduction in responses may be related to the change in the method of soliciting survey data, from a fax and mail survey to an emailed electronic survey. The response numbers and percentage of responses to the Sewer User Charge data requests is shown in **Figure 3.**

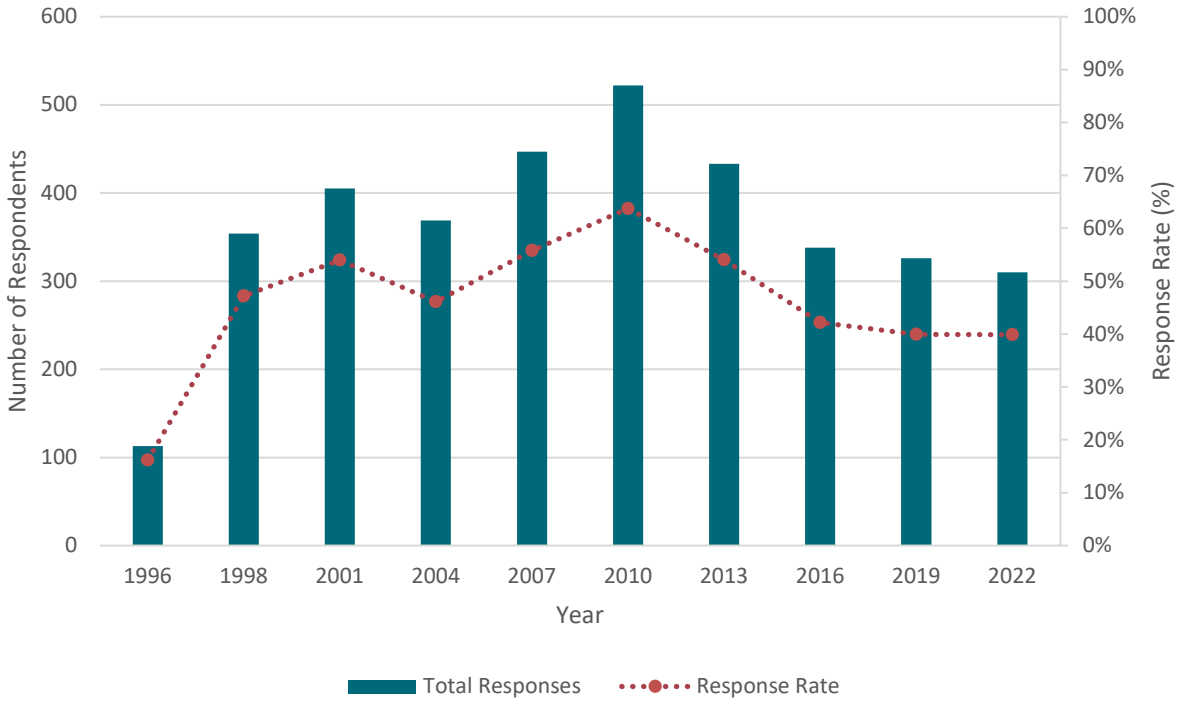


***Figure 3**: Sewer User Charge Survey Response Rate 1996-2022*

E. Key Assumptions

For comparison purposes and to normalize the data, an annual water use of 55,000 gallons per household was assumed to represent typical residential water use, and thus the volume on which sewer service charges are calculated. However, the 2021 statewide average annual residential water use for all survey respondents was only 38,851 gallons per household. Note that the largest communities have the highest annual water use per household. **Figure 4** shows that the average water use per household was significantly lower in the smaller population categories and increases with community population. The key value was chosen for two reasons: 1) a uniform volume assists in the comparison of rates for the same level of service; and 2) previous Sewer User Charge Surveys assumed an average annual residential water use of 55,000 gallons/household used annually therefore continuing to analyze data for this volume of use allows a comparison to previous years.

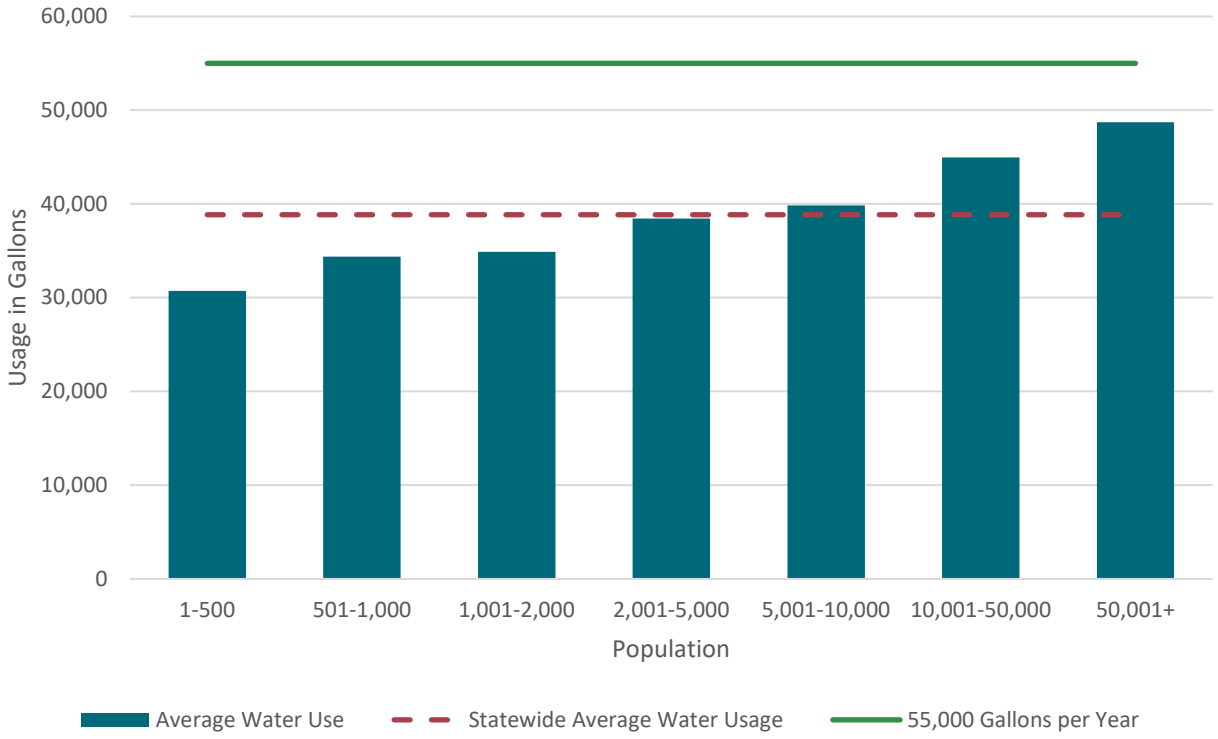


***Figure 4**: Average Annual Residential Water Use, by Population Range*

Figure 5 depicts average annual residential water usage by population size.* As indicated in **Figure 5**, overall water usage in larger communities is greater than smaller communities. Water usage has also consistently decreased over time across all population sizes. While a benchmark water usage of 55,000 gallons per year has been commonly used, the data indicates we continue to drift further from this being a representative value. The reduced water usage is most likely due to higher efficiency plumbing fixtures and conscientious water usage habits.

**Note that the 2019 Sewer User Charge Survey report applied a different method for the computation of the total number of residential connections and this method is isolated to the 2019 Sewer User Charge Survey report.*

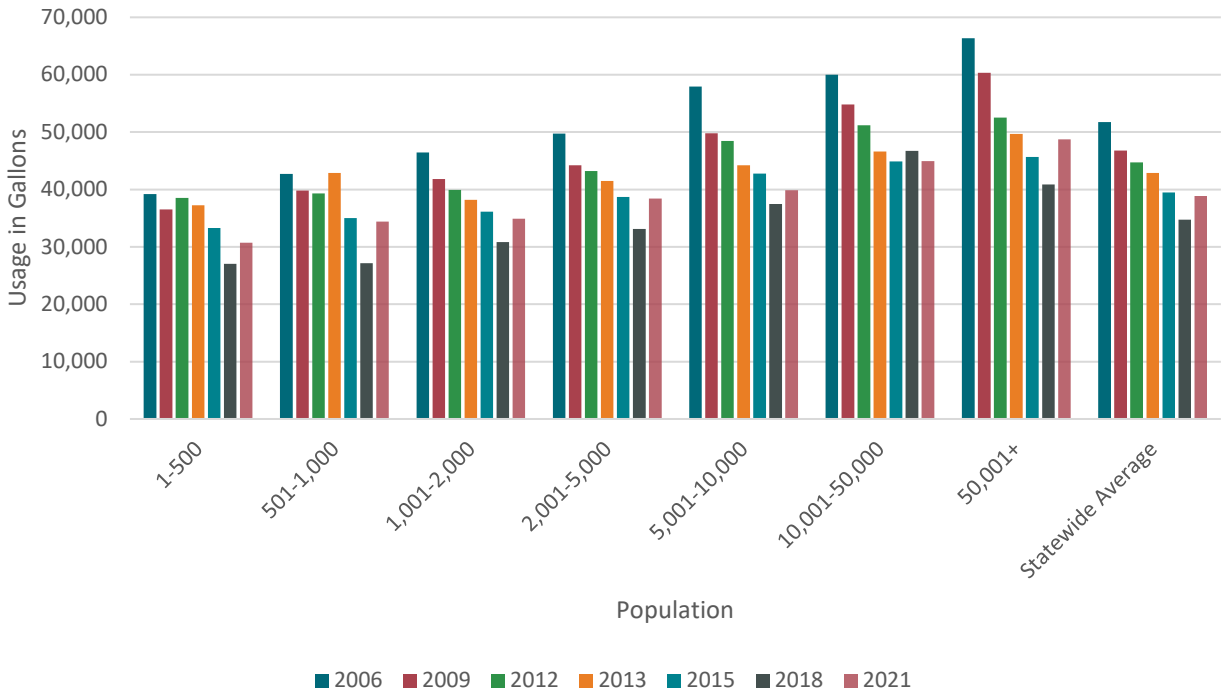


***Figure 5**: Average Annual Residential Water Use, by Population Range (2006-2021)*

F. Errata

While every effort has been taken to verify the data in the responses are correct and to prevent errors in processing the data, errors will undoubtedly occur. Please call or send notification of substantive errors to:

Shelley Granberg
MSA Professional Services, Inc.
1230 South Boulevard
Baraboo, WI 53913
Phone: (608) 355-8918
E-Mail: sgranberg@msa-ps.com

We will issue errata sheets to all registered report recipients in the event there are a significant number of changes.

II. SEWER RATE EVALUATION

There are several factors that impact a community's sewer user charges. As in the past, this Survey found that the community's population is the main factor the main influence on the cost of sewer service. Other factors that impact sewer use charges include:

- Type of wastewater treatment technology
- Age of treatment facility and time since last rate increase
- Other sources of revenue
    - Connection fees and impact fees
    - Volumes and charges for hauled wastes and high strength wastes
- Annual sewer budget for collection system repairs and other improvements

This report evaluates various factors in order to present information that may help communities compare their population, treatment type, and revenue sources, with other communities. For most of the data, both average and median values are provided in population ranges, to provide greater perspective. By doing so, the variability in average sewer charges that might be skewed by a few exceptionally high or low values can be tempered by an evaluation of the number of communities with sewer charges that are above and below a given value.

A. Population

Larger communities are able to charge lower sewer rates than smaller communities. This can be attributed to the principle of economy of scale: as facility size increases, the unit cost associated with construction and operation of a treatment facility decreases. While large communities often require a more complex form of treatment, the number of customers and volume of use result in larger revenues that the utility can apply toward the costs associated with operating a larger/more complex treatment facility.

As shown in **Figure 6**, communities with population less than 2,000 have the highest average and median annual costs for residential sewer service, based on either the actual residential water use and on an assumed normalized volume of 55,000 gallon per year per household.

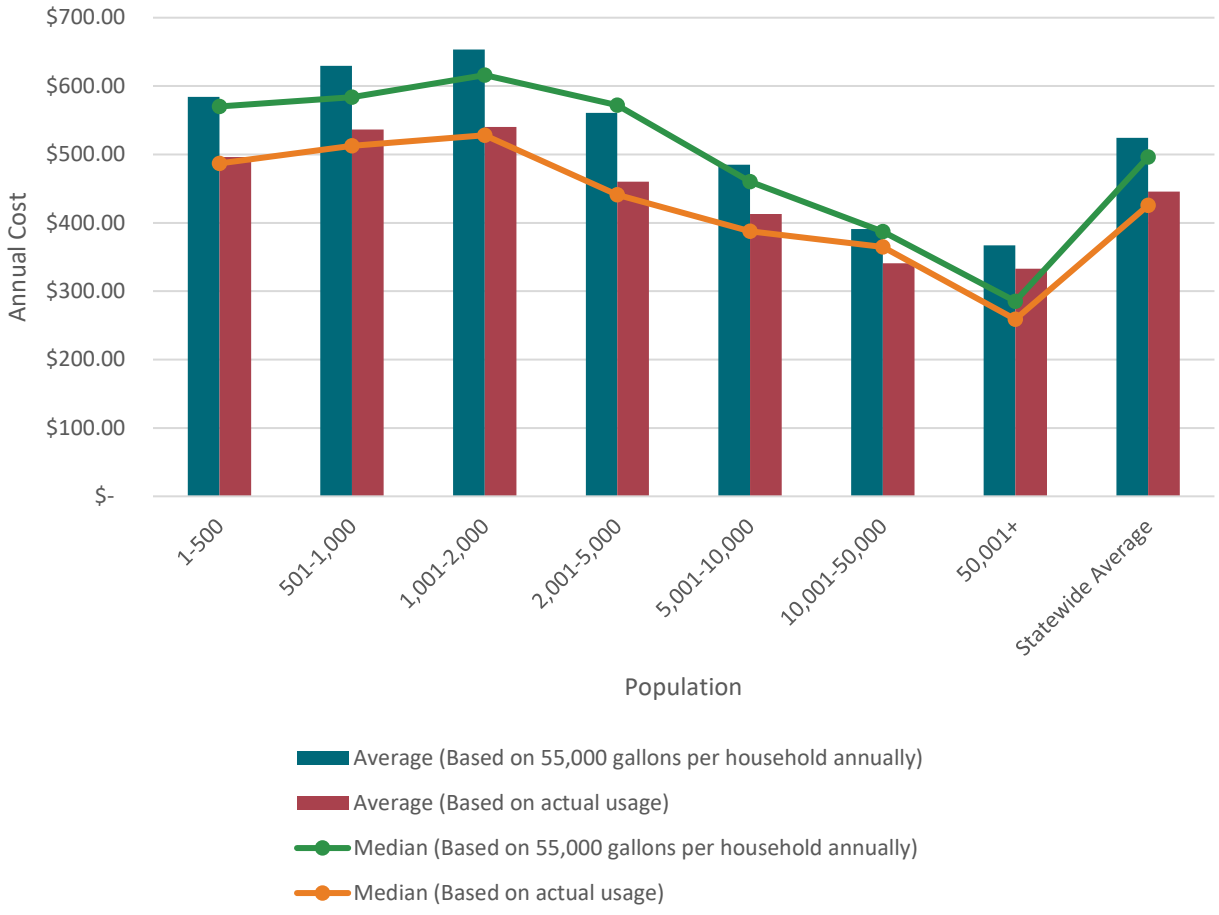


***Figure 6**: Average and Median Average Annual Residential Sewer Charge, by Population Range*

Significant variability in the average cost for residential sewer service exists due to a variety of factors in any particular community. **Figure 7** shows that the greatest cost variability occurs within the 501-1,000 population range, and the least amount of cost variability occurs in the 50,000+ population range.

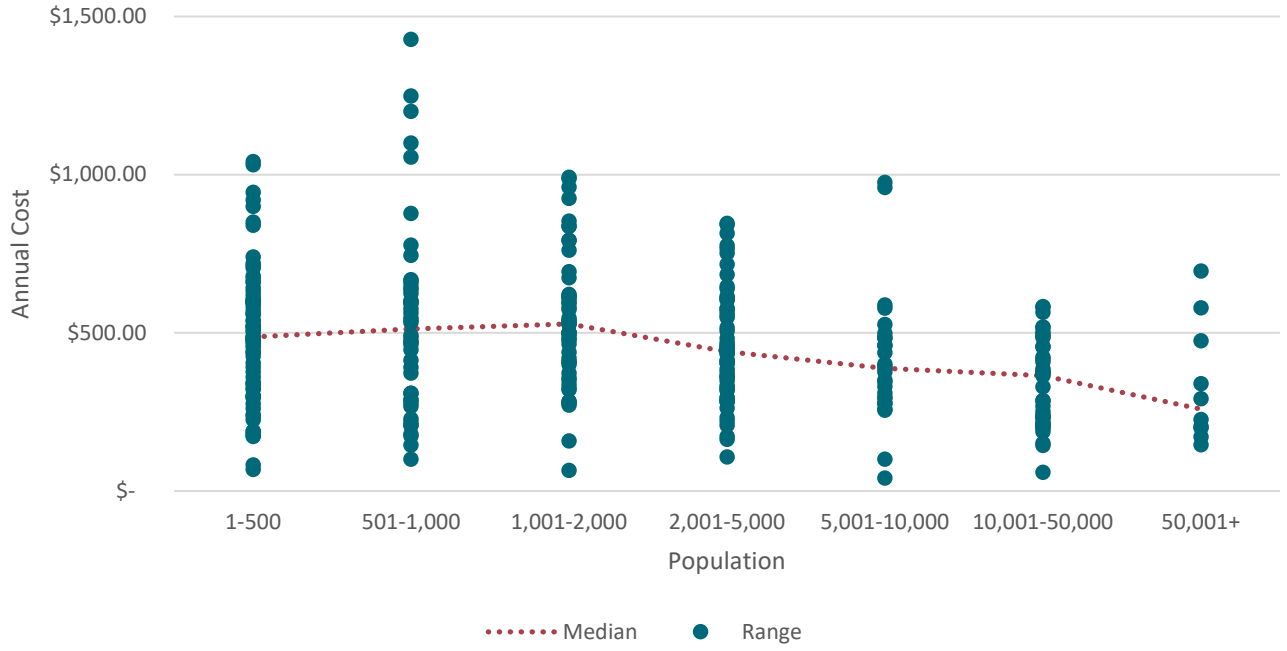


***Figure 7**: Annual Sewer Charges and Median, Based on Actual Use, by Population Range*

The average annual cost for residential sewer service has been increasing since the first Sewer User Charge Survey was conducted 26 years ago. The increasing cost of electricity, fuel, chemicals, and labor all contribute to sewer rate increases, as do new debt payments on capital improvements needed to meet more stringent environmental standards and to replace aging infrastructure. **Figure 8** shows the continual increase in average cost for residential sewer service across all population ranges, and as a statewide average, with each bar on the graph representing one of the 10 past Sewer User Charge Surveys conducted.

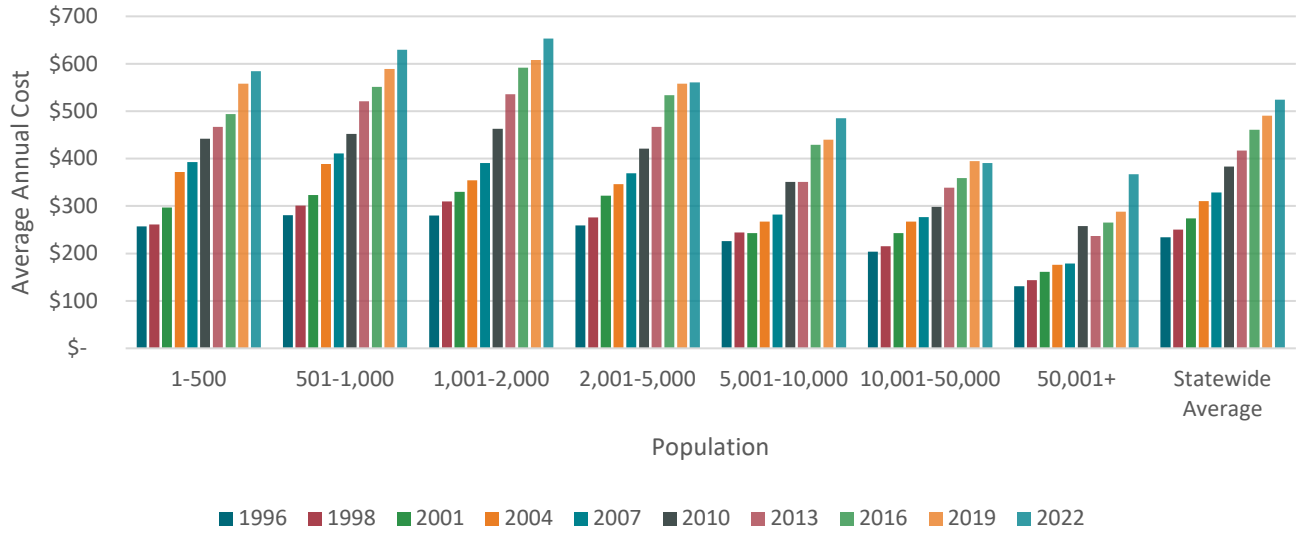


***Figure 8**: Average Annual Residential Sewer Charges, by Population Range, based on 55,000 GPY use (2006-2022)*

As shown in **Figure 8**, the average annual cost for residential sewer service is higher in smaller communities, as was also shown in **Figures 6 and 7**. It is also apparent that the cost for sewer service has increased at a higher rate in communities with smaller population, with the exception of the 50,000+ population range. Communities with a population 1,001-2,000 have experienced the highest overall increase in the average annual cost for residential sewer service since 1996, as the cost has increased by $373, or 5.1% per year. **Figure 9** shows the annual increase in the average cost for residential sewer service from 1996 to 2022, for each population range, both in total dollars and annual percent increase.

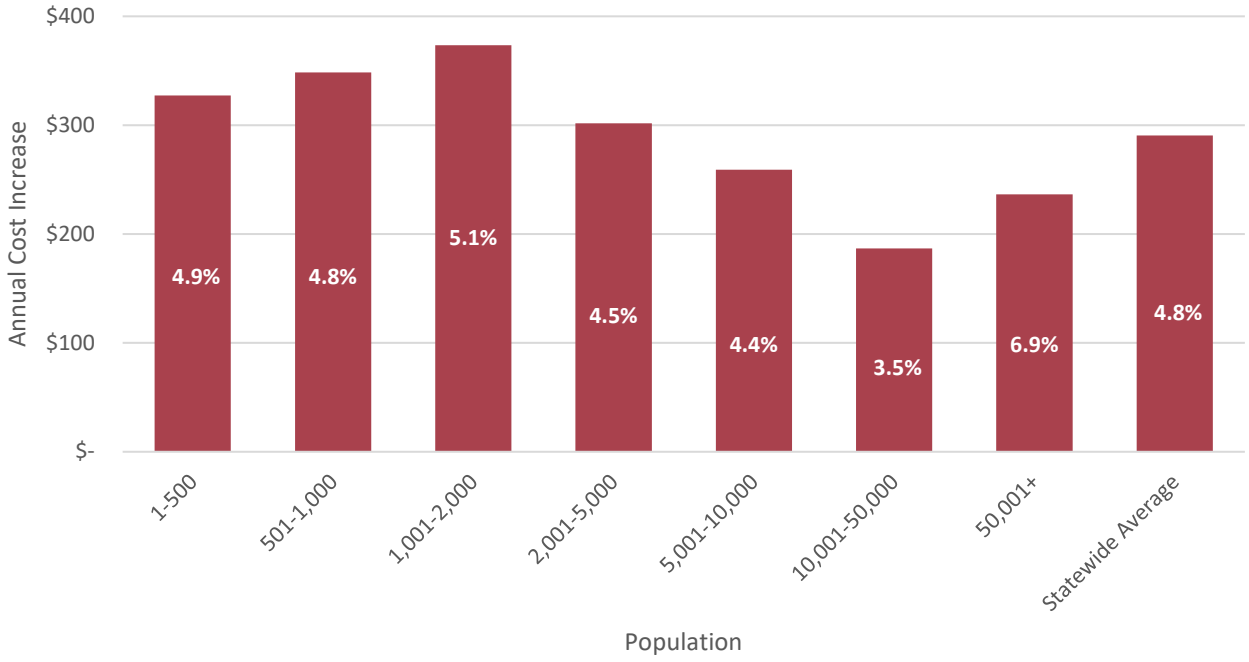


***Figure 9**: Average Annual Percent Increase in Residential Sewer User Charges, based on 55,000 GPY use (1996 to 2022)*

B. Facility Age

Facility age can be used as an indicator of when a sewer rate will increase. Typically, wastewater treatment infrastructure requires a significant upgrade approximately every 20 years. **Figure 10** shows the average age (time since the last significant upgrade) of wastewater treatment facilities by population category from when each of the last nine Sewer User Charge Surveys was conducted. The statewide average treatment facility age shows an increasing trend from 1998 to 2007, dropping at 2010, and then increasing until 2019. The decrease in average age in 2022 indicates that more treatment facilities have completed upgrades since 2019. The greater number of recent facility upgrades may be attributable to improvements necessitated by more stringent regulations associated with effluent phosphorus.

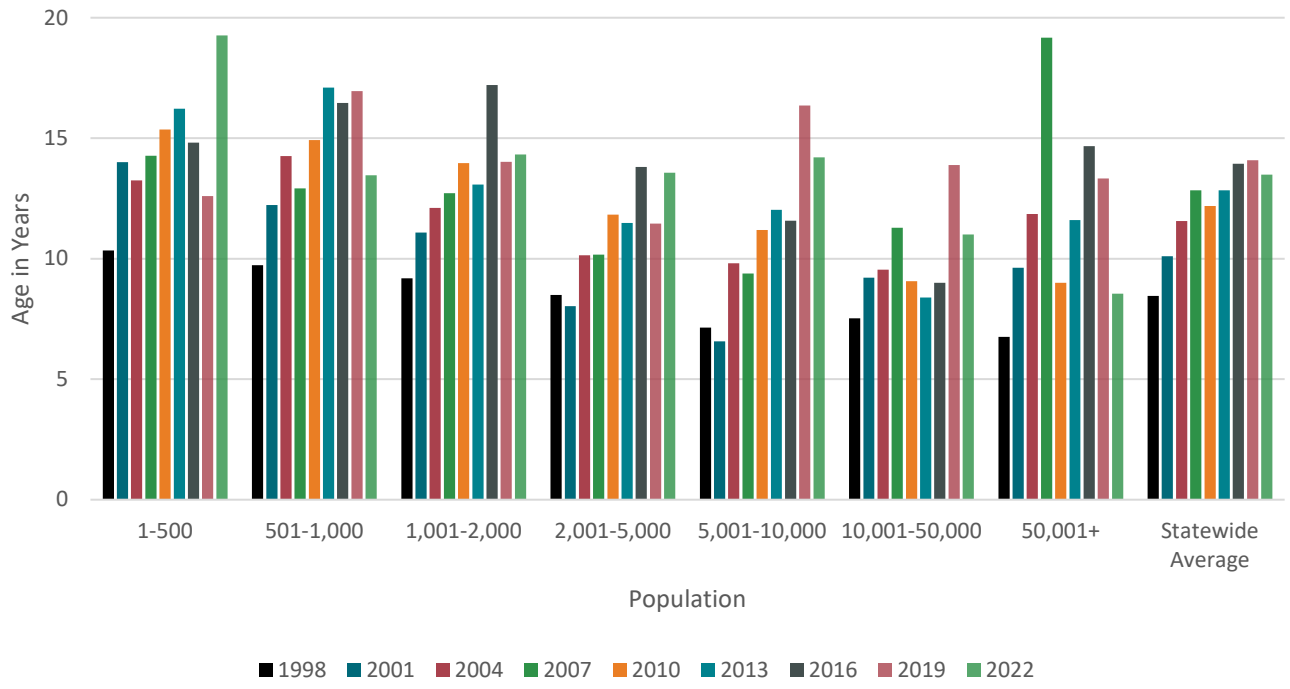


***Figure 10**: Average Age of Treatment Facility, by Population Range (1998 to 2022)*

In general, it can be assumed that population ranges showing a decrease in average facility age include a greater percentage of communities that have undergone a facility upgrade since the 2019 Sewer User Charge Survey. It is also reasonable to assume that communities having recently undergone facility upgrades must collect more revenue to pay the debt service and operational costs associated with the improvements.

C. Treatment Type

The technology a community uses for treating wastewater is an important factor in the cost of sewer service. **Figure 11** shows the relationship between the average annual cost of residential sewer service and treatment type. Some types of treatment, such as lagoon systems, require significantly less labor and (in some cases) power, and much lower annual costs for sludge stabilization and disposal, resulting in lower revenue requirements and thus lower sewer rates. For those reasons, it is not surprising that **Figure 11** shows that stabilization pond treatment has the lowest average cost. The treatment technology with the next highest average cost is conventional activated sludge. Membrane bioreactors and sequencing batch reactors are the treatment technologies with the highest average cost. It should be noted that **Figure 11** does not account for the average age of the facilities or the size of the communities associated with each treatment type, which may have greater impact on cost than does the treatment technology utilized. It is notable; however, that communities utilizing lagoon-based treatment technologies typically have smaller populations. This indicates that lagoon-based treatment technology is particularly cost-effective where that technology is appropriate for the effluent quality required.

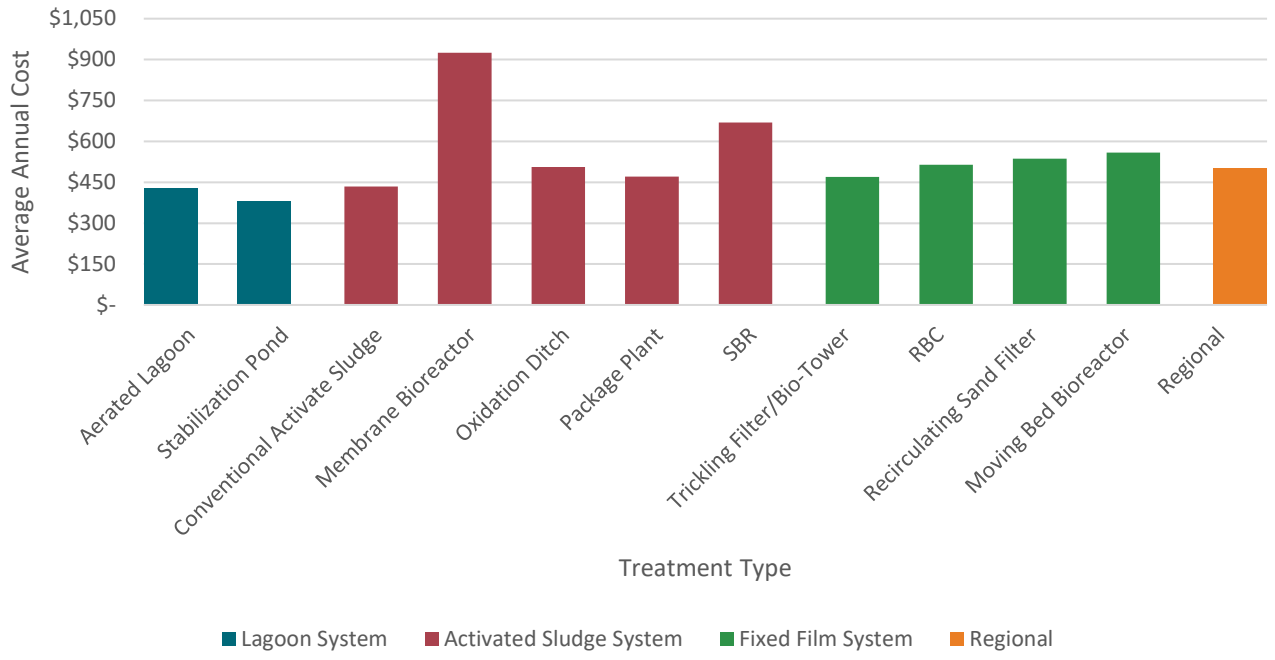


***Figure 11**: Average Annual Residential Sewer Charge, by Treatment Type (Based on Actual Use)*

Figure 12 shows the average annual cost for residential sewer service for each treatment type, in the ten Sewer User Charge Surveys conducted from 1996 to 2022. Since 1996, the average annual cost for residential sewer service has increased annually for the majority of treatment types. Membrane bioreactors are an outlier resulting from the small number of responses to the 2022 Survey data request from communities with that treatment technology. **Figure 13** shows the average age of treatment facilities by treatment type for each of the Sewer User Charge Surveys from 2001 to 2022. **Figure 14** shows the percentages of communities in each population range using the various treatment technologies.

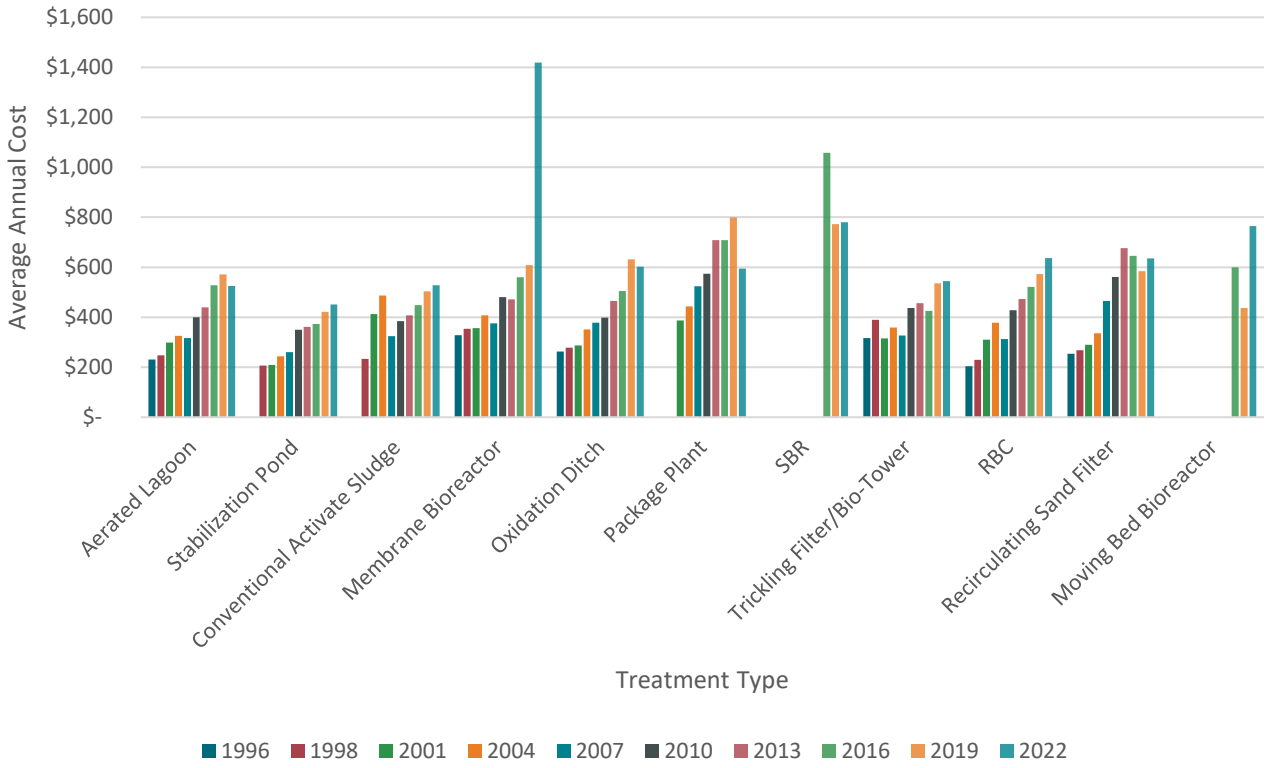


***Figure 12**: Average Residential Sewer Charge, by Treatment Type (1996 to 2022), Based on 55,000 GPY Use*

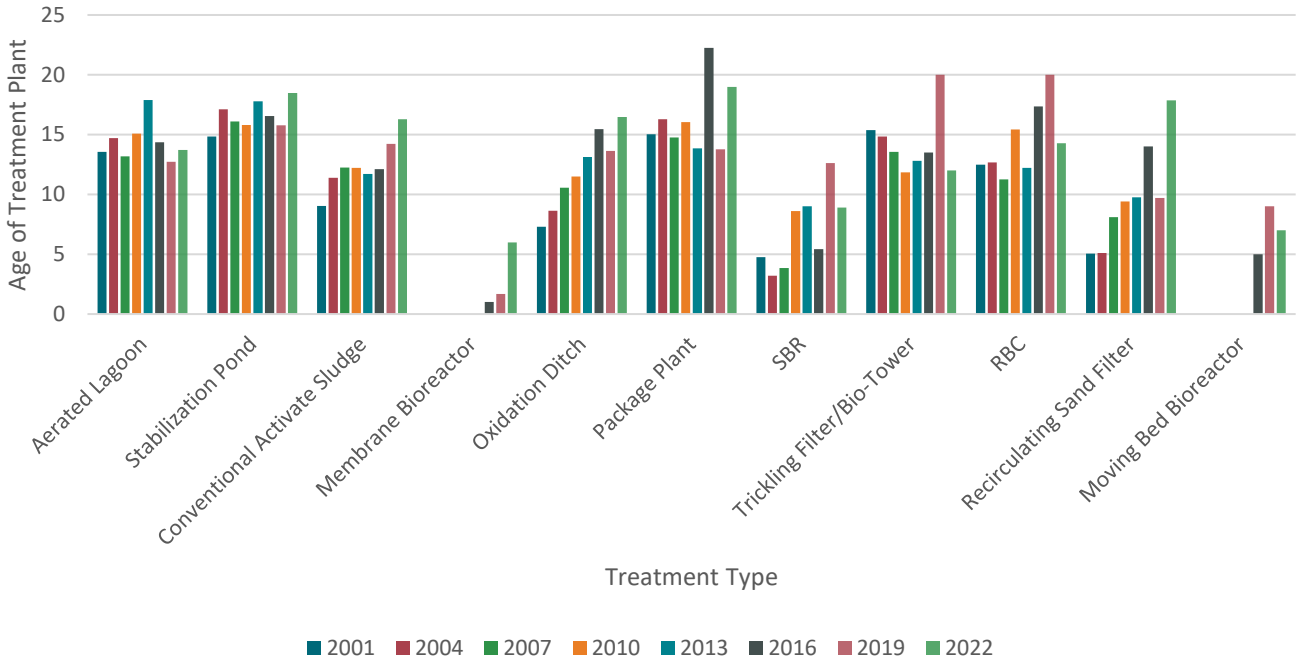
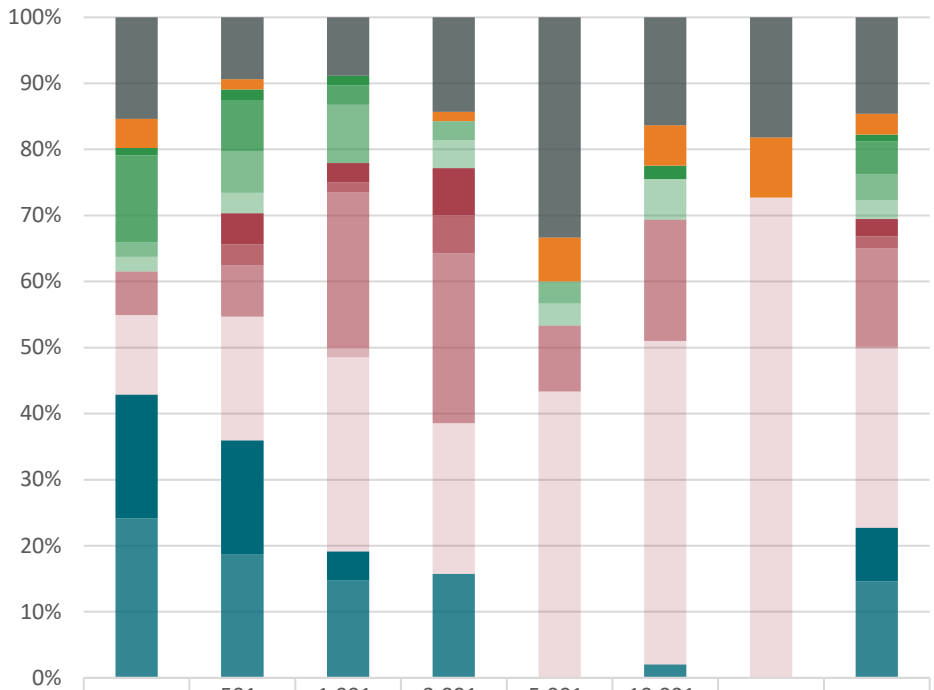


***Figure 13**: Age of WWTF by Treatment Type (2001 to 2022)*



	1-500	501-1,000	1,001-2,000	2,001-5,000	5,001-10,000	10,001-50,000	50,001+	Total
No Treatment Type	14	6	6	10	10	8	2	56
Other	4	1	0	1	2	3	1	12
Moving Bed Bioreactor	1	1	1	0	0	1	0	4
Recirculating Sand Filter	12	5	2	0	0	0	0	19
RBC	2	4	6	2	1	0	0	15
Trickling Filter/Bio-Tower	2	2	0	3	1	3	0	11
SBR	0	3	2	5	0	0	0	10
Package Plant	0	2	1	4	0	0	0	7
Oxidation Ditch	6	5	16	18	3	9	0	57
Membrane Bioreactor	0	0	1	0	0	0	0	1
Conventional Activate Sludge	11	12	20	16	13	24	8	104
Stabilization Pond	17	11	3	0	0	0	0	31
Aerated Lagoon	22	12	10	11	0	1	0	56

***Figure 14**: Respondent's Type of Treatment Facility, by Population Range*

Figure 12 shows that the membrane bioreactor, sequencing batch reactor, and moving bed bioreactor are treatment technologies associated with the highest average annual residential sewer charge. **Figure 13** shows that these treatment technologies have been implemented the most recently. **Figure 14** shows that these technologies tend to be utilized in smaller communities. The fact that these technologies have, on average, been implemented more recently means that higher recent construction costs contribute to the higher average annual residential sewer charges associated with these technologies. The use of these technologies in smaller communities likely contributes significantly to the higher average residential sewer charge in small communities.

Conversely, **Figure 12** shows that lagoon technologies and conventional activated sludge are treatment technologies associated with the lowest average annual residential sewer charge. **Figure 13** shows that lagoon technologies on average have been in service longer. Therefore, even though lagoon technologies are typically implemented in small communities, in many cases the debt service associated with the construction of those facilities has been paid off. **Figure 14** shows that conventional activated sludge treatment is utilized in a higher percentage of communities with a large population.

Figure 15 shows the average annual cost for residential sewer service in communities with and without their own wastewater treatment facility (WWTF). The trend of higher costs for communities with smaller population is evident for communities both with and without their own WWTF. In the smallest and largest population ranges, the average cost of residential sewer service is significantly higher for communities that do not own their own WWTF, suggesting that regionalization is less cost-effective for very small and very large communities. The statewide average annual cost for residential sewer service is approximately $100 per year higher in communities that do not own their own WWTF, suggesting that regionalization typically does not offer a cost advantage.

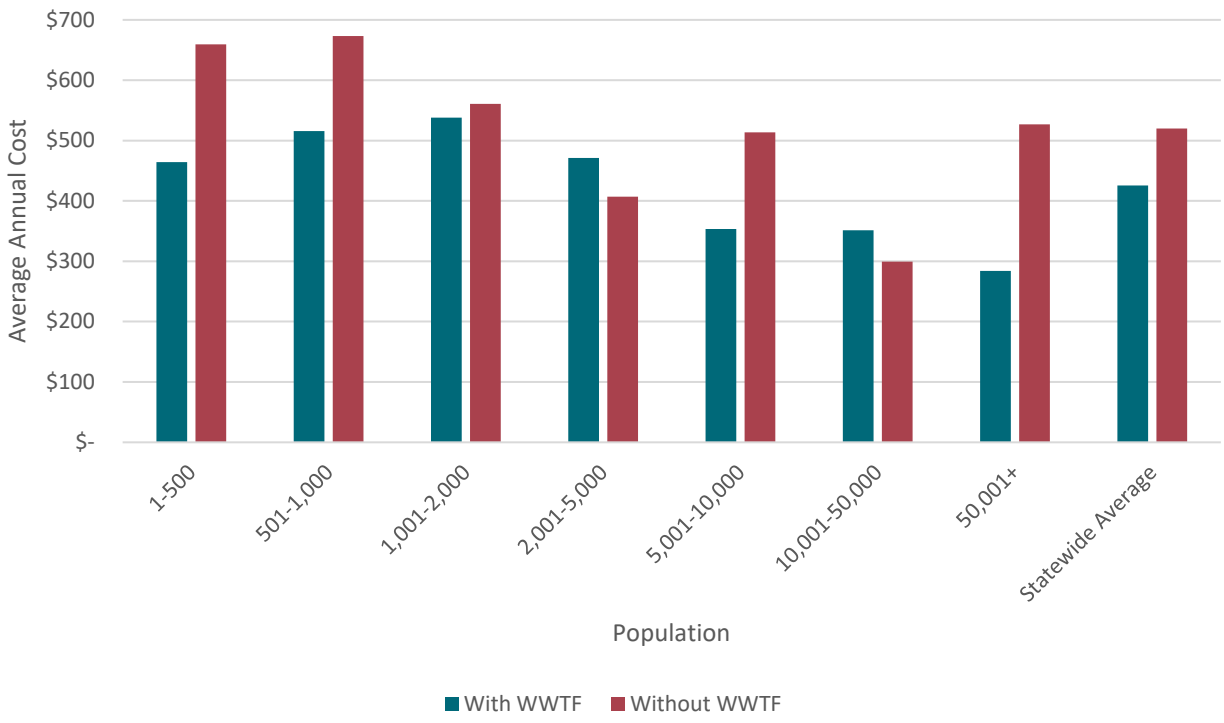


***Figure 15**: Average Annual Residential Sewer Charge, by Population Range, with and without community-owned WWTF (Based on Actual Use)*

The above suggests that the cost of sewer service may be impacted more by the size of the community and the number of years since the last significant treatment facility upgrade, than by the treatment technology utilized. As indicated above; however, lagoon technologies are particularly cost-effective due to their low operational costs, including low sludge processing and disposal costs, if the technology is capable of achieving the required effluent quality.

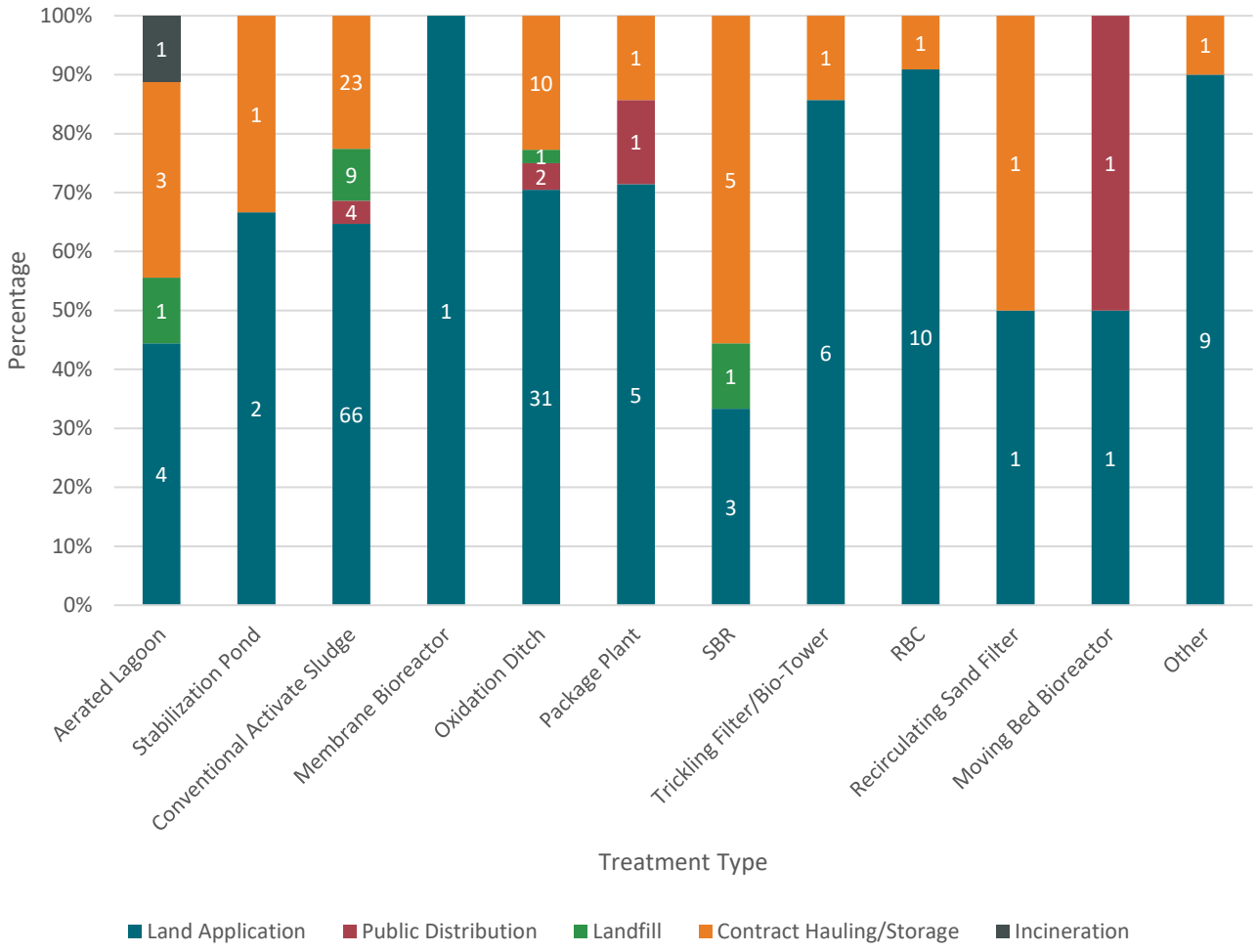


***Figure 16**: Respondent's Method of Sludge Disposal, by Treatment Type*

The 2022 Survey data request asked communities for information regarding sludge disposal. **Figure 16** shows the numbers and percent of respondents, by treatment technology, that use land application, public distribution, landfill, contract hauling/storage, or incineration for sludge disposal. As expected, the most common type of sludge disposal is land application, which is utilized by 67% of the respondents.

Figure 17 shows the numbers and percentage of respondents, by treatment type, that produce sludge meeting the U.S. EPA and WDNR designation of Class A and Class B sludge. Statewide, 11% of the respondents reported production of Class A sludge. A response of "neither" for lagoon and recirculating sand filter facilities likely reflects the fact that sludge from these facilities is not disposed of on an annual basis; it is almost certain these facilities are producing a Class B sludge. When asked if communities foresee a need to move towards Class A sludge, about 17% of respondents answered that they did. Compared to past Sewer User Charge Surveys, this is a large increase in those interested in moving toward production of Class A sludge.

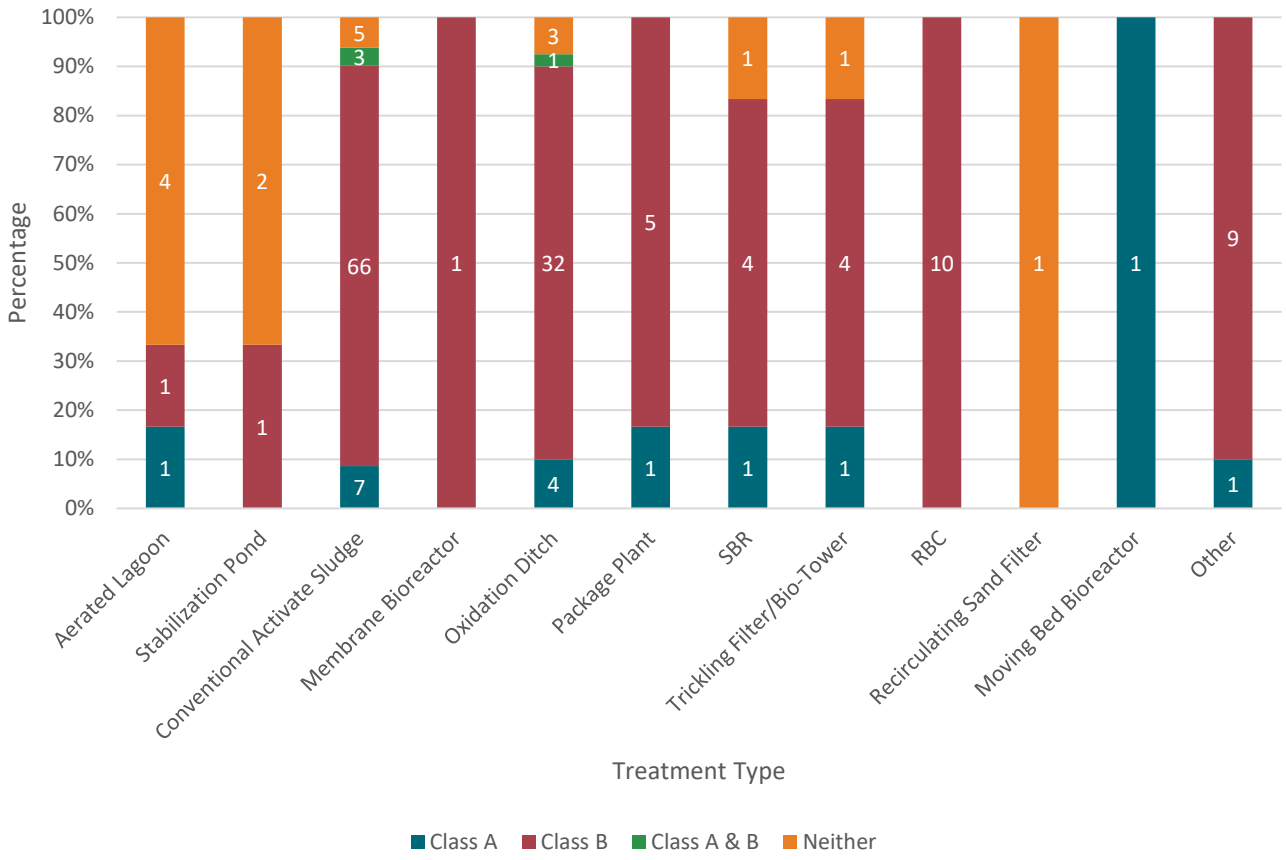


***Figure 17**: Respondent's Sludge Classification, by Treatment Type*

D. Last Rate Increase

To ensure sufficient revenue to cover the cost of debt service, operation and maintenance, and equipment replacement fund contributions, sewer utilities must periodically adjust sewer rates. **Figure 18** shows the average and median number of years since the last rate increase, by population range. The statewide median number of years since the last rate adjustment is approximately 2.5 years, but the average number of years since the last rate adjustment is approximately 4.5 years which indicates there are quite a few communities who have not adjusted sewer rates in a significant number of years.

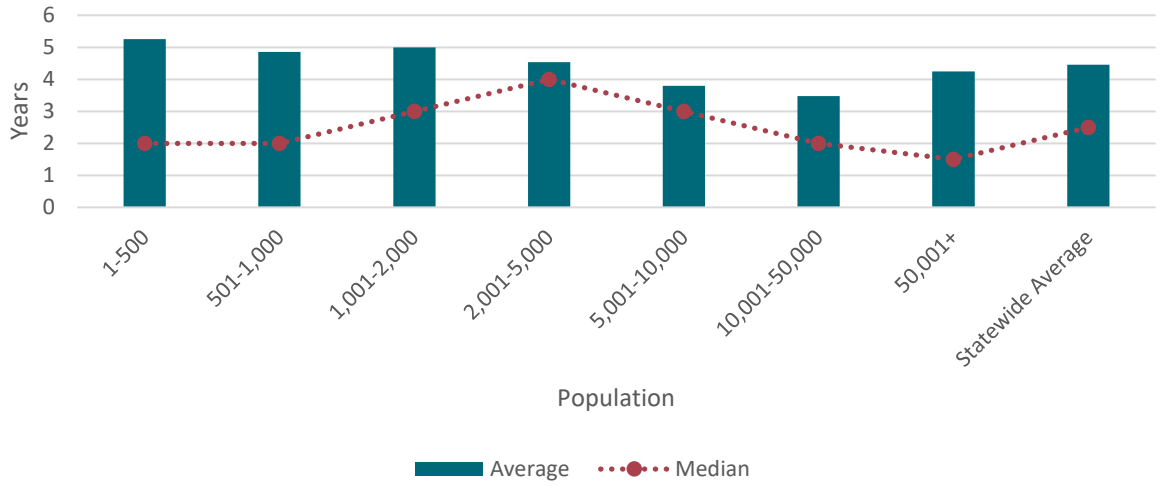


***Figure 18**: Average and Median Time Since Last Sewer Rate Increase, by Population Range*

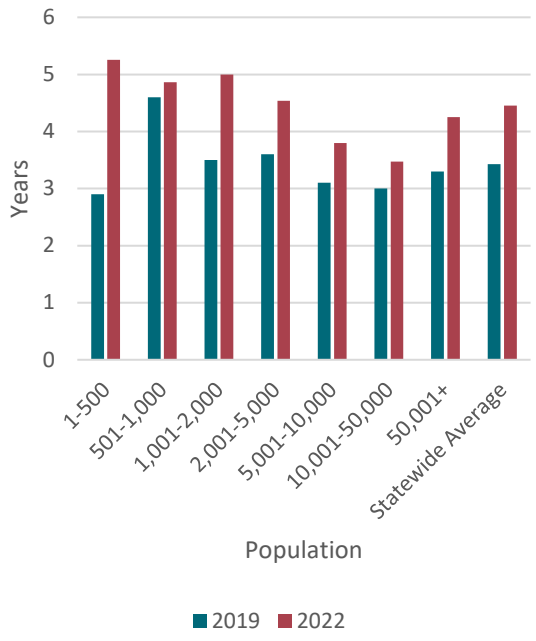


***Figure 19**: Average Time Since Last Sewer Rate Increase, by Population Range, 2019 vs. 2022*

In general, larger communities appear to be conducting somewhat more frequent rate adjustments. In many smaller communities, when there has not been a facility upgrade in recent years or none is anticipated in the immediate future, rates tend to remain constant for longer. This typically results in the need for a relatively large increase when the rates are raised, especially when the need for the rate increase is driven by a significant treatment facility upgrade.

Figure 19 shows the average number of years since the last rate increase by, population range, as reported in the 2019 Sewer User Charge Survey and in the 2022 Survey. In all population ranges, average length of time since the last rate increase has increased. Of the respondents to the 2022 Survey data request, 42% of communities statewide anticipated a rate increase within the next year, with the average anticipated increase being 7.1%.

E. Billing Frequency

Of the respondents to the 2022 Survey, 51% reported utilizing a quarterly sewer user charge billing schedule, rather than a monthly or other billing frequency. **Figure 20** shows the percentages of the communities, by population range, that bill quarterly, monthly, or by another frequency. The highest use of monthly billing is in the 2,001-5,000 and 10,001-50,000 population ranges, at just over 50 percent.

A more frequent billing cycle can help utility customers to budget for higher sewer charges more easily. Smaller communities tend to have the highest sewer rates, and the largest communities have a larger number of low-income customers. Figure 20 shows that the smaller communities and the largest communities, on average, utilize quarterly billing more frequently. The smallest communities may not be adequately staffed to administer a more frequent billing schedule.

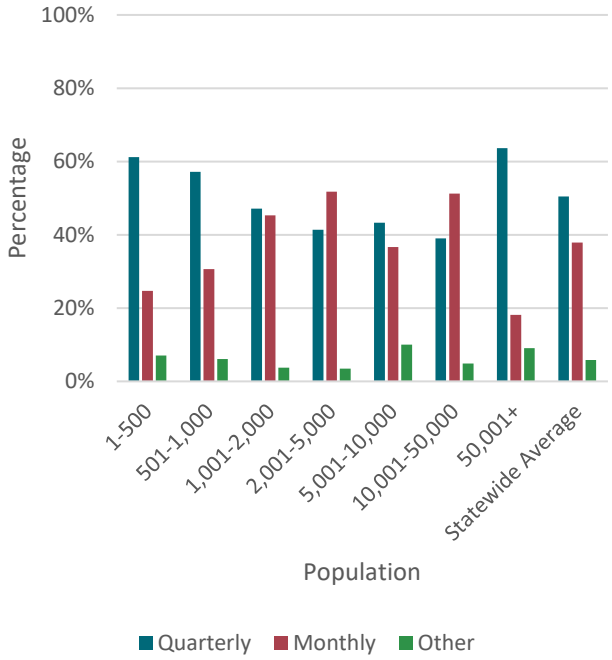


***Figure 20**: Billing Frequency, by Population Range*

Figure 21 shows the average annual sewer charge by billing frequency. This data might be somewhat misleading due to the small numbers of communities who are billing on either an annual or bi-monthly basis.

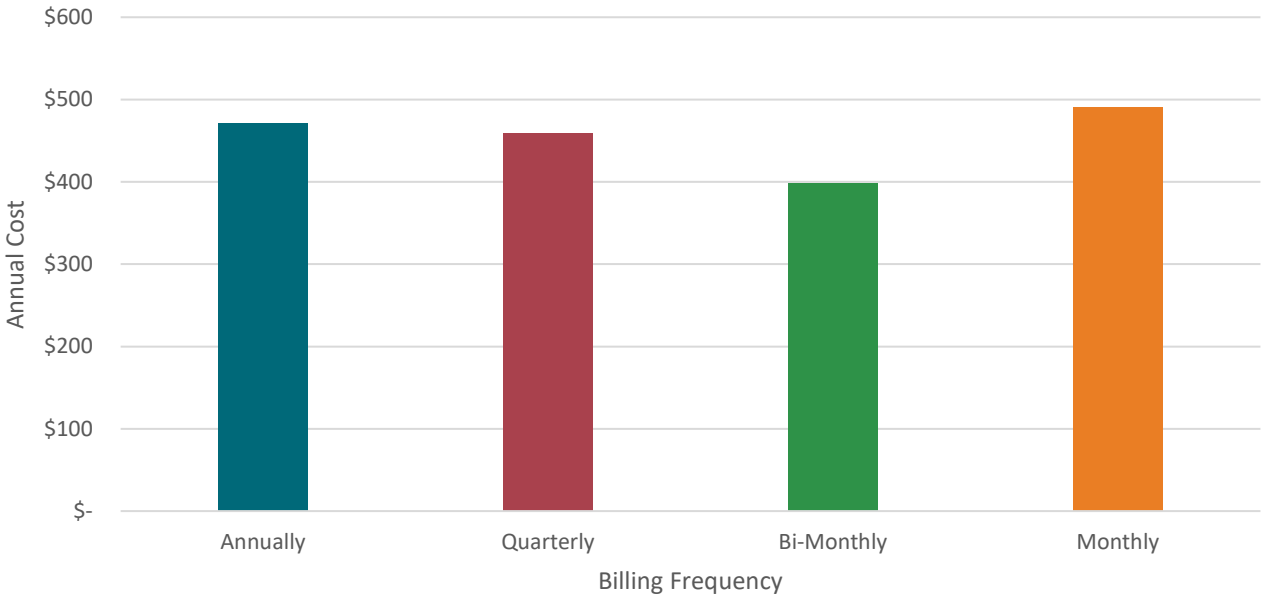


***Figure 21**: Average Annual Residential Sewer Charge, by Billing Frequency (Based on Actual Usage)*

F. Connection Fees

Many communities charge new development for the opportunity of connecting to their sewer system. Connection fees are sometimes meant only to cover the cost of the utility's inspection of the new lateral connection and administrative costs, commonly referred to as hook-up fee. Other times this charge is considered an impact fee to reimburse the existing customer base for collection system and treatment facility capacity already provided or as payment for future updates/expansions that will eventually occur due to the increased number of customers. Connection fees can help a community generate revenue that can be used for future expenses, reducing the impact of growth on existing customers. Many Wisconsin communities, especially small rural communities, experience a very low rate of growth and therefore in most cases connection fees do not significantly affect the amount of revenue that must be generated from sewer user charges.

A hook-up fee is a sum of money collected for a new connection that is not based on funding specific improvements, and as such, the money can be placed in the utility's reserve fund. An impact fee is held to a higher statutory standard, collecting money for specific growth-related improvements and depositing it into a restricted use account. **Figure 22** shows the percentage of survey respondents, by population range, that currently charge connection fees, either as a hook-up fee or as an impact fee.

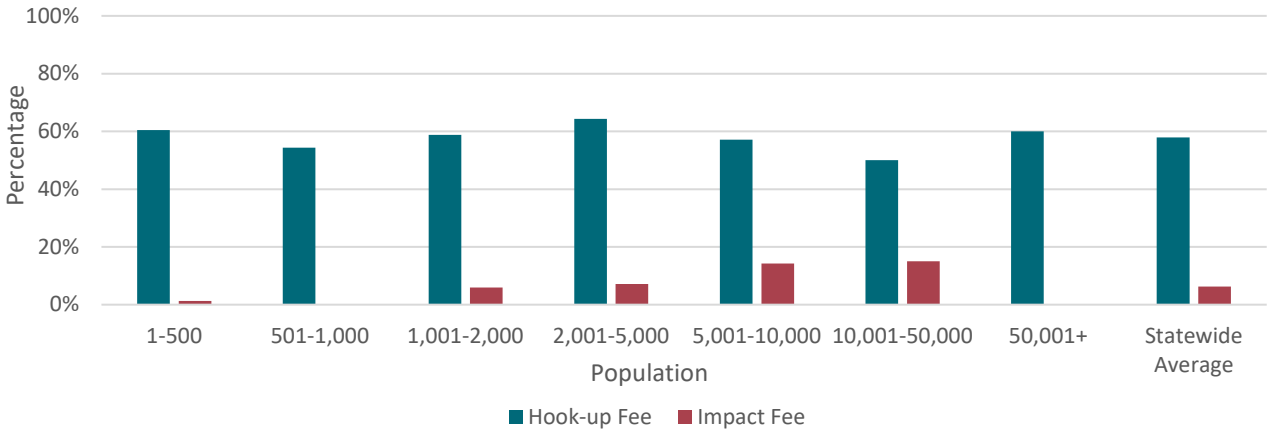


***Figure 22**: Percent of Communities Requiring Connection Fees*

Figure 22 shows that the most common connection fee by far is the hook-up fee. Statewide, approximately 64% of the survey respondents charge some type of connection fee.

Figure 23 shows the average and median hook-up fee by population range. There is no apparently correlation between population and the average hook-up fee, although the median hook-up fee is somewhat higher in larger communities.

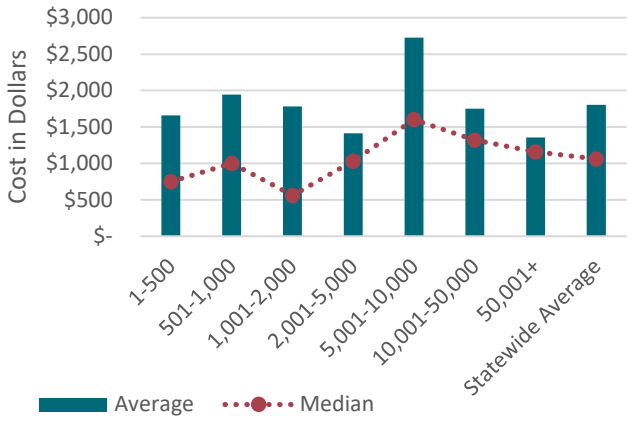


***Figure 23**: Average and Median Hook-Up Fee, by Population Range*

Figure 24 shows the range of hook-up fees and median hook-up fee, by population range.

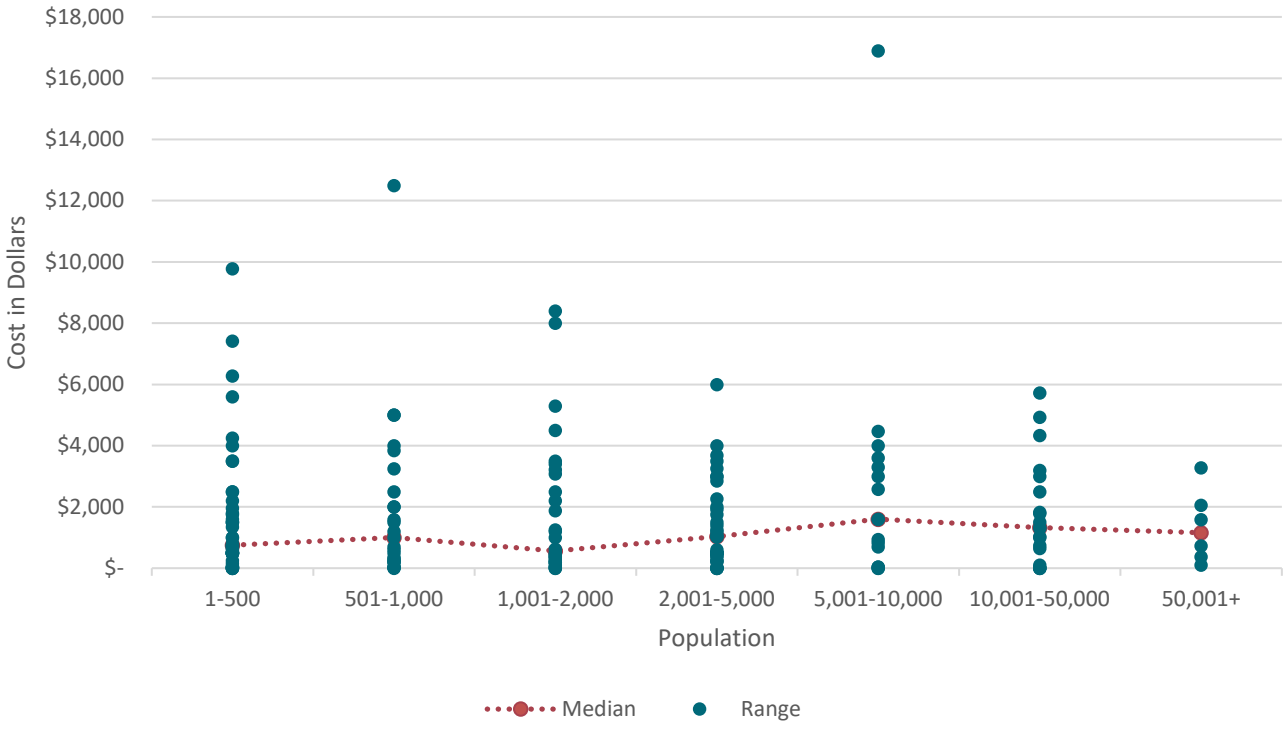


***Figure 24**: Hook-Up Fees and Median Hook-Up Fee, by Population Range*

Because the use of impact fees is much less common than hook-up fees, the trend with impact fees is much less predictable. **Figure 25** shows the average and median impact fee by population range.

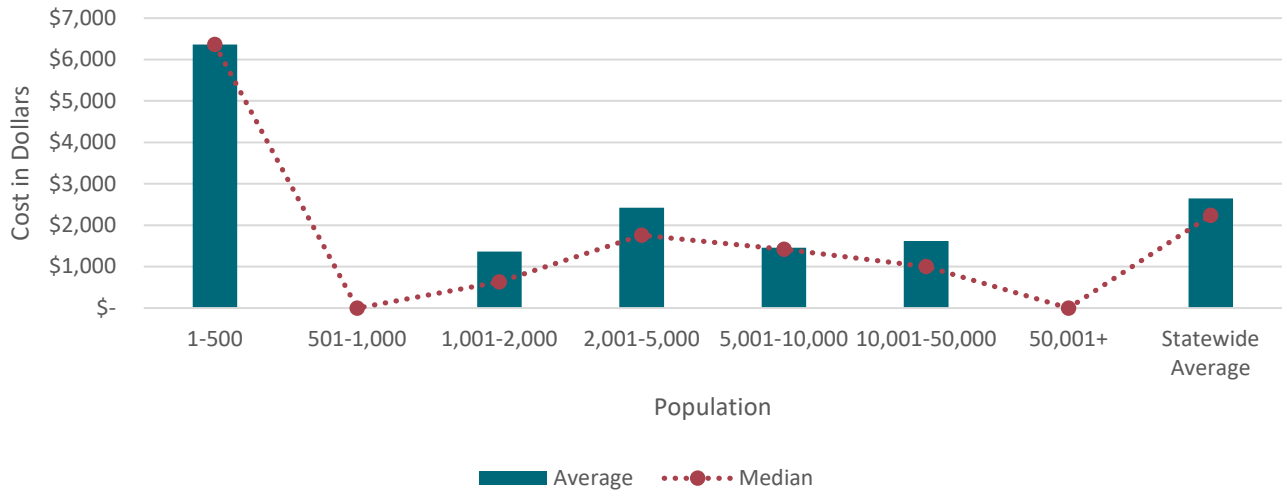


***Figure 25**: Average and Median Impact Fee, by Population Range*

In the years since the Sewer User Charge Survey was first conducted, the use of connection fees has increased at a low annual percentage, as shown in **Figure 26**.

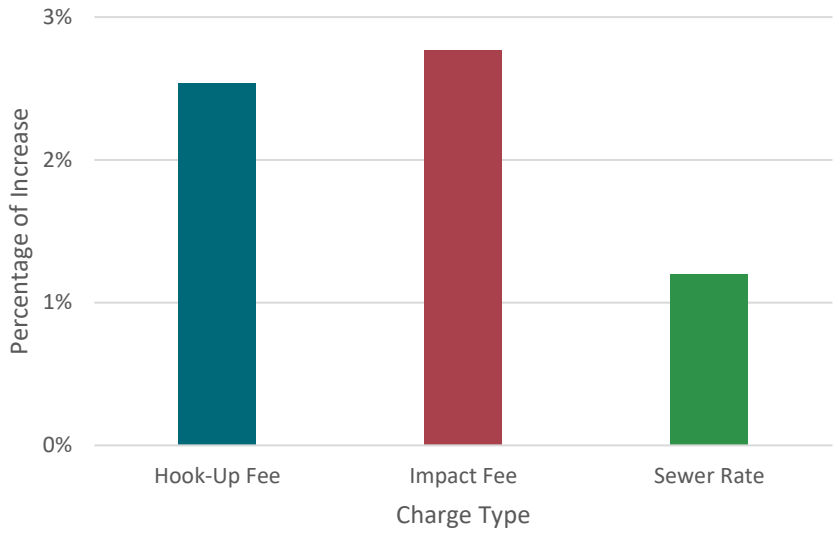


***Figure 26**: Average Annual Percent Increase in Connection Fees and Residential Sewer User Charge - 2001 to 2022*

G. Hauled Waste and High Strength Waste Charges

The survey responses indicate that the largest communities are most likely to accept hauled waste and/or to utilize a surcharge for high strength wastes. **Figure 27** shows the percent of communities, by population range, that accept holding and septic tank waste. It is not surprising that a smaller percentage of the small communities accept hauled wastes or high strength wastes, since in many cases the treatment plant capacity in small communities is not adequate for those wastes.

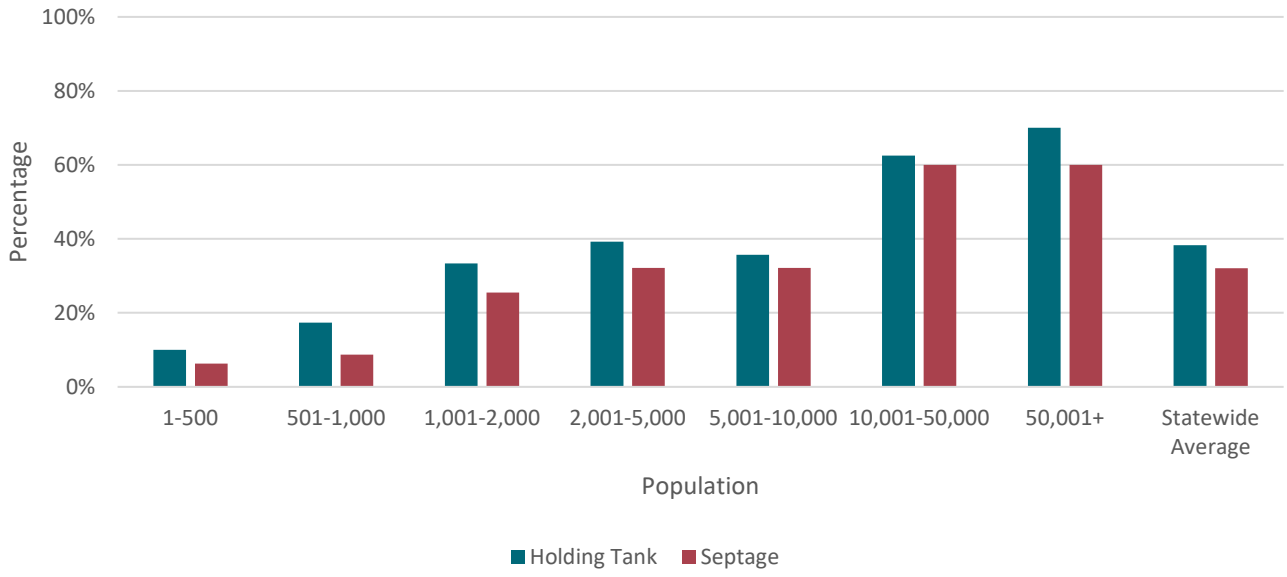


***Figure 27**: Percentage of WWTFs Accepting Hauled Wastes, by Population Range*

Figure 28 shows, by population range, the average charge per 1,000 gallons for hauled wastes, both septage and holding tank wastes. In previous Sewer User Charge Surveys, smaller communities on average charged more for septage hauled wastes than did larger communities. In the 2022 Survey, this trend is continued with the exception of the two smallest population categories. The average charge for septic tank waste (septage) is higher than for holding tank wastes due to the higher strength of septage.

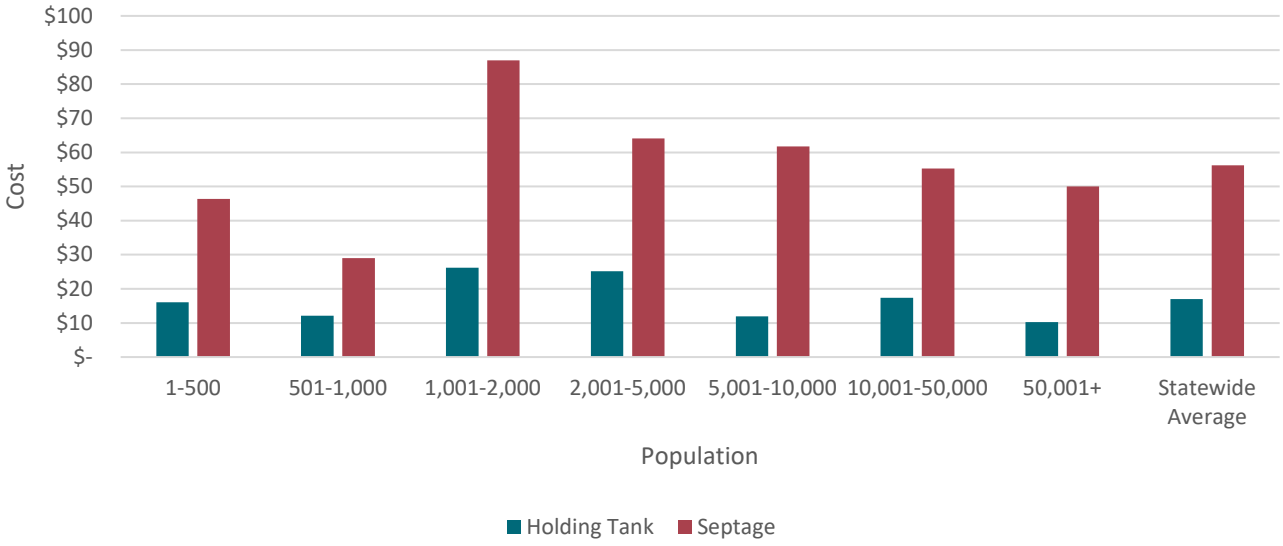


***Figure 28**: Average Charge per 1,000 Gallons for Hauled Wastes, by Population Range*

Larger communities are more likely than small communities to have one or more major commercial or industrial discharger that produces high strength waste. **Figure 29** shows the percent of communities, by population range, who charge for various components of high strength waste.

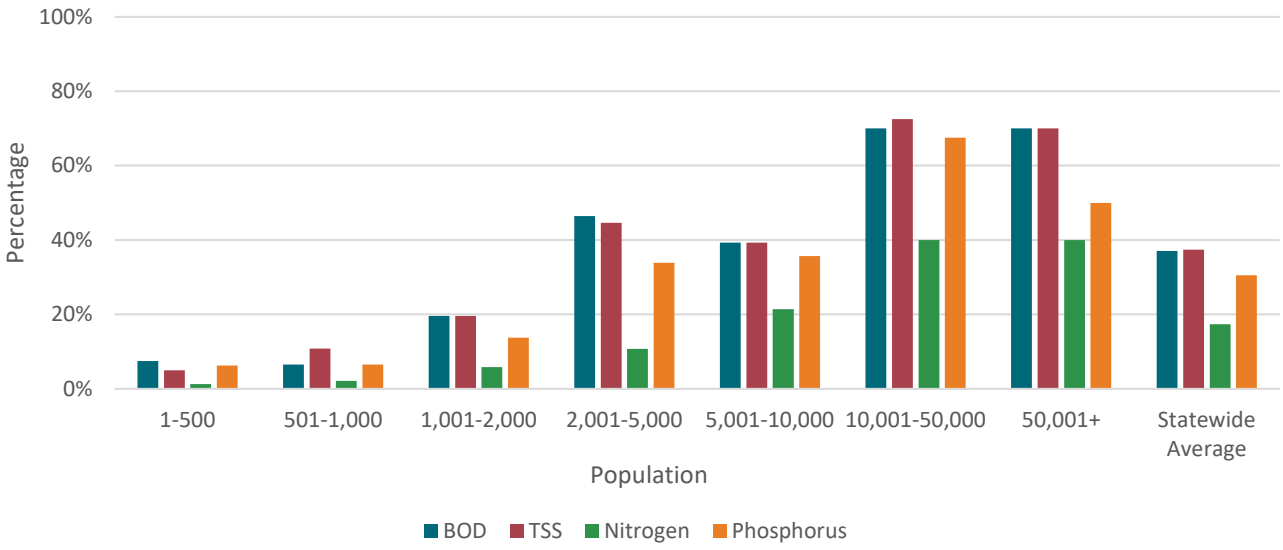


***Figure 29**: Percent of Communities with High Strength Waste Surcharges, by Population Range*

Figure 30 shows, by population range, the average charge per pound for various components of high strength wastes above a domestic strength threshold. Phosphorus continues to be the most expensive component of wastewater to remove on a per pound basis. With the recent implementation of more stringent phosphorus limits at wastewater treatment facilities statewide, it is expected that the assessment of high-strength phosphorus surcharges, and the magnitude of those surcharges, will continue to increase in prevalence in the near future.

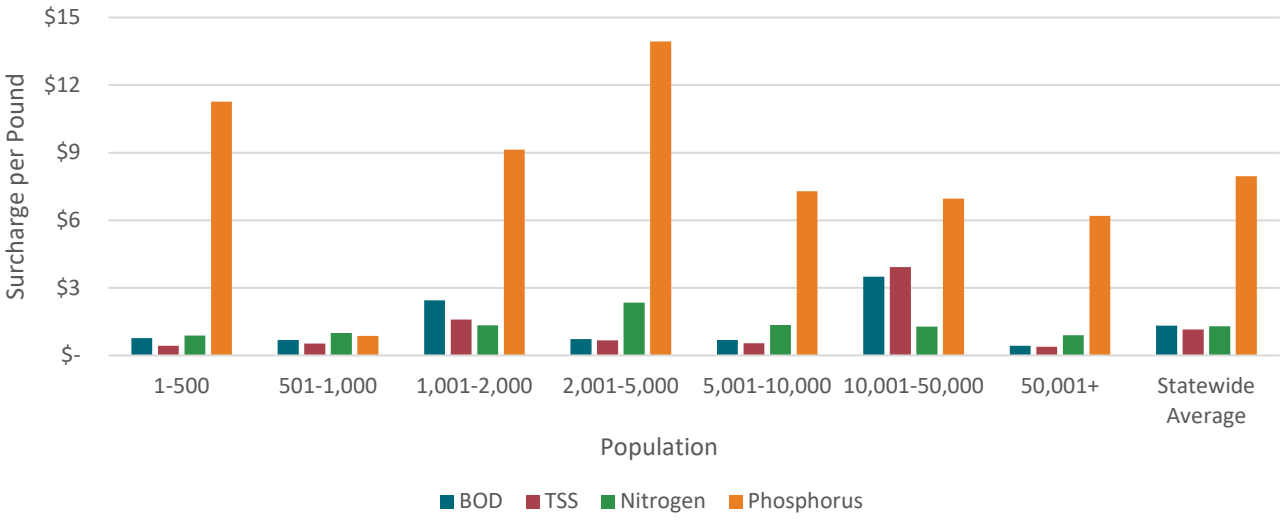


***Figure 30**: Average Surcharge per Pound over High Strength Waste Threshold, by Population Range*

Figure 31 shows, by population range, the average charge per pound of phosphorus above a domestic strength threshold. Since 2007, the magnitude of the average phosphorus surcharge has increased among all population categories, except for communities in the 501-1,000 population range.

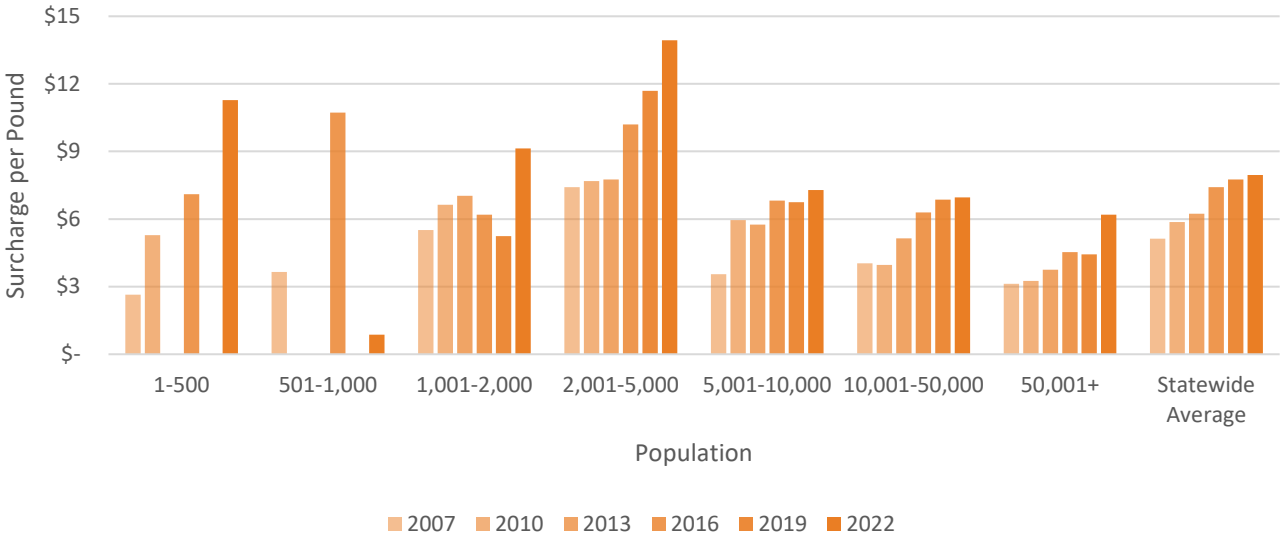


***Figure 31**: Average Surcharge per Pound over Phosphorus Threshold, by Population Range, 2007 - 2022*

III. PHOSPHORUS COMPLIANCE

Phosphorus is recognized as typically being the limiting nutrient with respect to plant and algae growth in surface waters. The State of Wisconsin has been a national leader in the regulation of discharges of phosphorus to surface waters. For many years, larger point source wastewater dischargers were subject to effluent phosphorus limits in their WPDES permit. Facilities that would otherwise discharge more than 150 pounds of phosphorus per month were subject to a monthly average effluent phosphorus limit of 1.0 mg/L.

Additional studies of the impact of phosphorus on water quality led the Wisconsin Department of Natural Resources (WDNR) to implement water quality criteria for phosphorus, resulting in stringent effluent phosphorus limits for many point source dischargers of all sizes. Wisconsin Administrative Code *NR217 – Effluent Standards and Limitations for Phosphorus* was revised in March 2016 to require water quality based effluent limits for phosphorus. Facilities with relatively low wastewater flows and that discharge to rivers and streams with a large base flow and very low background phosphorus concentration are subject to water-quality based effluent limits that are not particularly stringent. For many point source dischargers; however, the water quality based effluent limit calculations result in very low "default" six-month average monthly effluent phosphorus limits equal to the water quality criteria of the receiving water, 0.075 mg/L or lower for discharge to streams and lakes, or 0.10 mg/L for discharge to larger rivers.

Subsequent to the 2016 revisions to NR217, WDNR began studies of various watersheds throughout the State to establish allocations of phosphorus discharges from individual point sources and non-point sources which are estimated to result in maintenance of water quality criteria for phosphorus in the receiving stream. These studies are referred to as Total Maximum Daily Load (TMDL) studies. To date, 35 TMDL studies in river basins of various sizes have been completed by WDNR and approved by USEPA. The larger river basins for which TMDL studies have been completed and approved include the Rock River, the Upper Wisconsin River, Lower Fox River, Upper Fox and Wolf Rivers, and the Milwaukee River. Implementation of the TMDL in the WPDES permits for the various point source discharges in the basin results in TMDL limits for phosphorus. In some cases, most notably for point sources in the upper reaches of the Upper Wisconsin River Basin, the TMDL limits provide significant relief from the previous "default" water quality criteria limits.

The WPDES permit for each point source discharger identifies existing and future effluent phosphorus limits and includes a compliance schedule, where appropriate, for meeting future effluent phosphorus limits. The following alternatives for phosphorus compliance are available to permittees subject to new, more stringent, effluent phosphorus limits:

- *Conventional biological and/or chemical treatment*: The provision of conditions within an activated sludge treatment system to promote additional microbiological uptake of phosphorus which is subsequently removed as waste sludge, and/or the addition of chemical treatment to precipitate phosphorus for removal by settling.
- *Tertiary treatment*: An additional unit process, often tertiary filtration by one of a variety of commercially available media or membranes, to achieve low effluent phosphorus concentrations by precipitation, settling, and filtration.
- *Water quality trading*: Improvements in the watershed to reduce runoff into surface waters and thus obtain credits for phosphorus removal that would otherwise need to be achieved at the wastewater treatment facility.
- *Adaptive management*: Improvements in the watershed to achieve the required water quality criteria for phosphorus in the receiving stream.

- *Economic variance*: A variance limit for effluent phosphorus that is less stringent than the water quality based phosphorus limits, which is available if certain economic indicators in a community are satisfied, including a demonstration that compliance with water-quality based effluent limits would result in an average cost for residential sewer service that would exceed 2% of the community's median household income.
- *Statewide Multi-Discharger Variance (MDV)*: A temporary variance from more stringent water quality based effluent limits for phosphorus, which is available to communities statewide, except for those in a few counties. Eligibility is based on certain economic criteria. The effluent phosphorus limit under the variance is typically 1.0 mg/L for facilities utilizing lagoon-based treatment technology, and 0.8 mg/L or less for facilities utilizing other treatment technology including activated sludge. The MDV became an approved phosphorus compliance option in 2017 and is scheduled to expire in 2027; however, WDNR has begun the process of obtaining U.S. EPA approval to extend the variance, perhaps for another 10 years.

Figure 32 shows a breakdown of the survey respondent's planned method for complying with new effluent phosphorus limits.

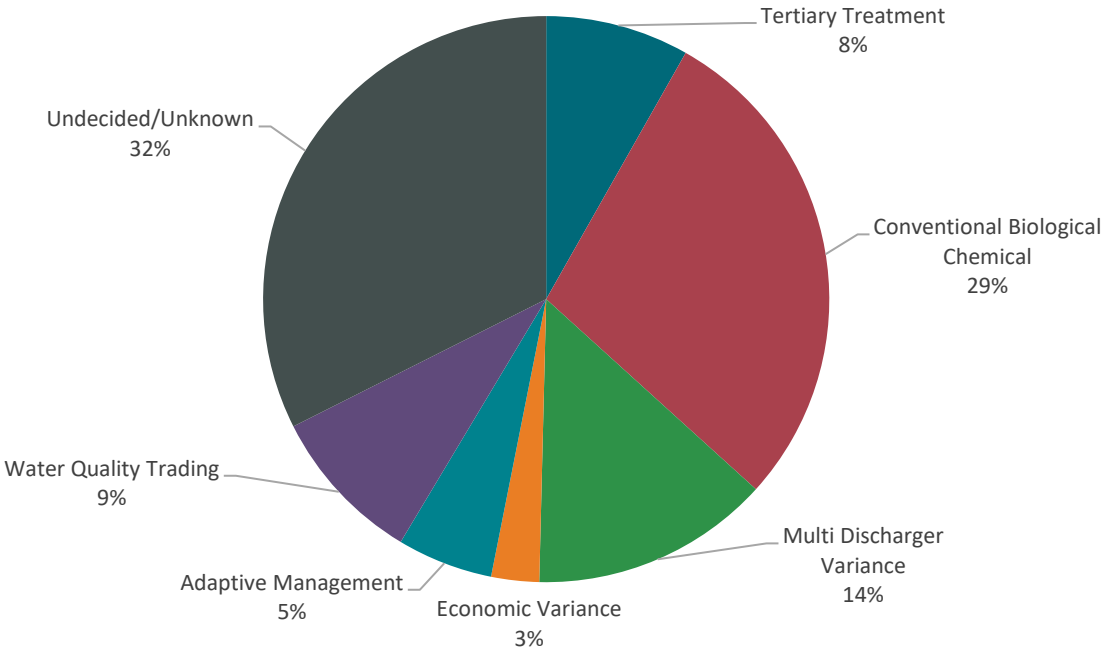
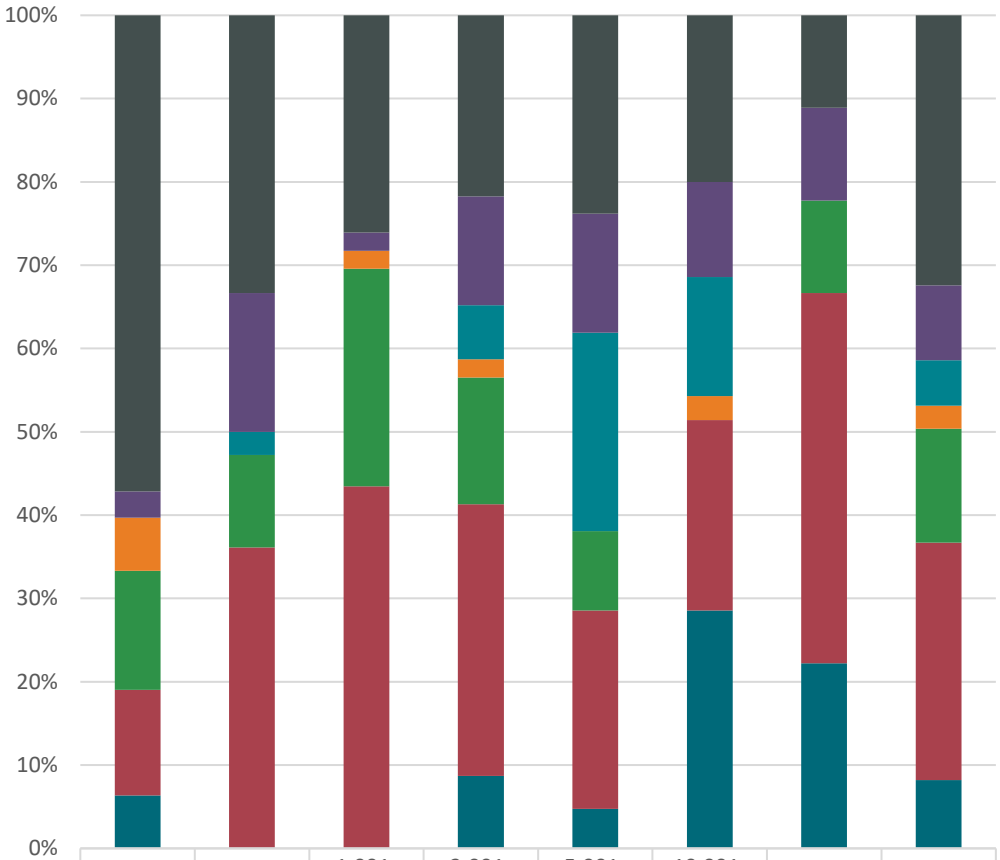


***Figure 32**: Respondent's Planned Method for Phosphorus Compliance*

Conventional biological and/or chemical treatment was the most popular option which is not surprising since biological or chemical phosphorus removal is the most cost-effective option where effluent phosphorus limits are not extremely stringent. Approximately one-third of the respondents indicated that they are "Undecided" or "Unknown" with respect to the method for future phosphorus compliance. This may be due to the status of the phosphorus compliance schedule in some WPDES permits in which the respondent has not yet decided the method for obtaining final compliance with phosphorus regulations. It may also be due to the number of respondents who have obtained a MDV for phosphorus, which is a temporary variance and will require final compliance with more stringent effluent phosphorus limits in the future by some method which has not yet been determined.

Figure 33 shows the planned method for compliance with phosphorus regulations, by population range. The numbers and percentage of survey respondents within each population range who indicated an "Undecided" or "Unknown" method of phosphorus compliance decreases as the population increases.



	1-500	501-1,000	1,001-2,000	2,001-5,000	5,001-10,000	10,001-50,000	50,001+	Total
Undecided/Unknown	36	12	12	10	5	7	1	83
Water Quality Trading	2	6	1	6	3	4	1	23
Adaptive Management	0	1	0	3	5	5	0	14
Economic Variance	4	0	1	1	0	1	0	7
Multi Discharger Variance	9	4	12	7	2	0	1	35
Conventional Biological Chemical	8	13	20	15	5	8	4	73
Tertiary Treatment	4	0	0	4	1	10	2	21

Figure 33: *Respondent's Planned Method for Phosphorus Compliance, by Population Range*

Compliance with the new phosphorus regulations has associated capital costs and annual operating costs that will vary greatly by facility. The survey respondents who have achieved phosphorus compliance provided cost data.

Figure 34 shows the average capital cost for each compliance plan option and **Figure 35** shows the average annual operating cost for each option. Not surprising, tertiary treatment has the highest average capital cost and annual operating costs. These facilities are intended to achieve very low effluent phosphorus concentrations and thus have very significant process equipment and a high chemical cost.

The MDV has the lowest capital cost and operating cost, since the effluent limits under the MDV are not particularly stringent and can typically be met with a conventional chemical feed system, which many facilities already had in place before the implementation of water quality based effluent phosphorus limits.

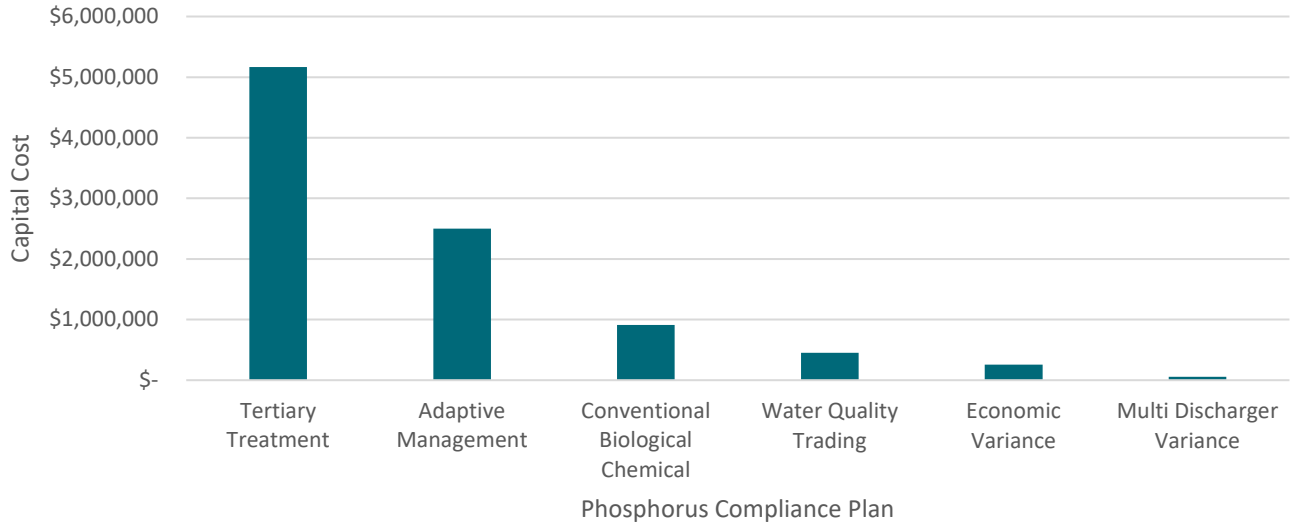


Figure 34: *Average Capital Cost for Phosphorus Compliance, by Method*

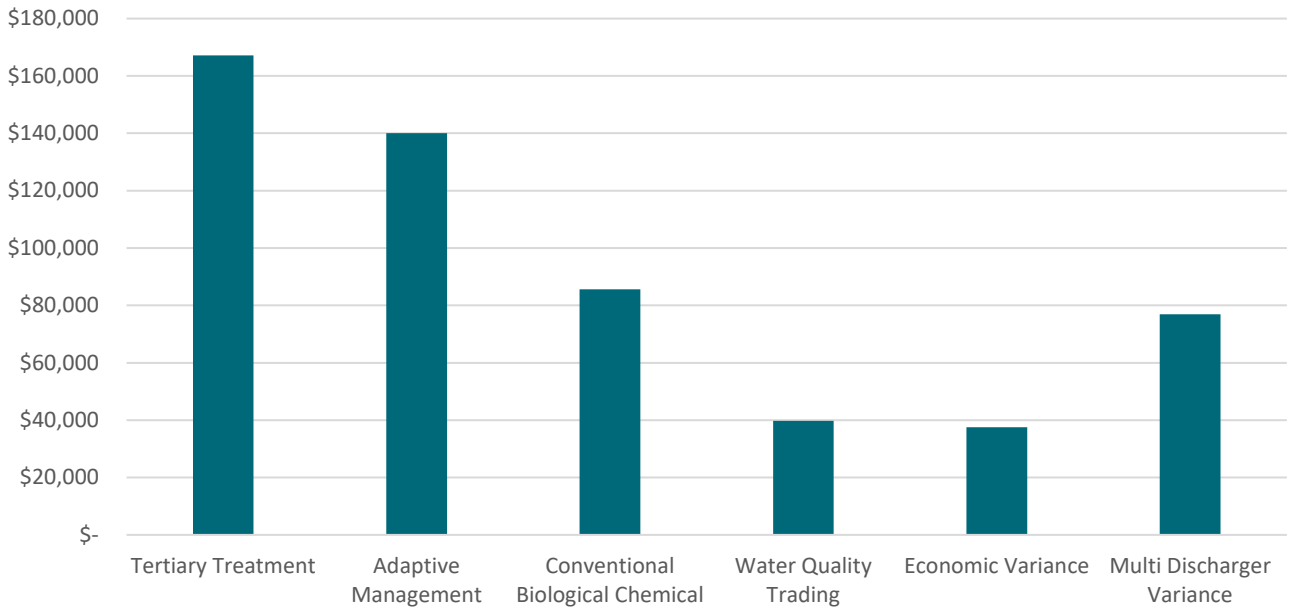


Figure 35: *Average Annual Operating Cost of Phosphorus Compliance, by Method*

The Wisconsin Department of Natural Resources has five regions, as shown in **Figure 36**, including: Northern, Northeast, South Central, Southeast, and West Central. The average of the 2022 Survey respondent's expected capital cost and annual operating cost for phosphorus compliance is shown by region in **Figure 37** and **Figure 38**. The highest expected average capital cost and annual operating cost is in the West Central region. None of the 2022 Survey respondents in the Northern region reported anticipated capital costs for the phosphorus compliance. This may be due to many of the Northern Region respondents being in the northern part of the Upper Wisconsin River Basin TMDL area. In this area, the TMDL study provided significant relief from the initial very low water quality based effluent limits for phosphorus, and many respondents already had the necessary chemical feed system in place to meet the effluent phosphorus limits required under the TMDL. This may also be due to a number of northern region communities that are still in the process of final compliance planning and have yet to identify the related costs.

***Figure 36**: Map of Wisconsin DNR Regions*

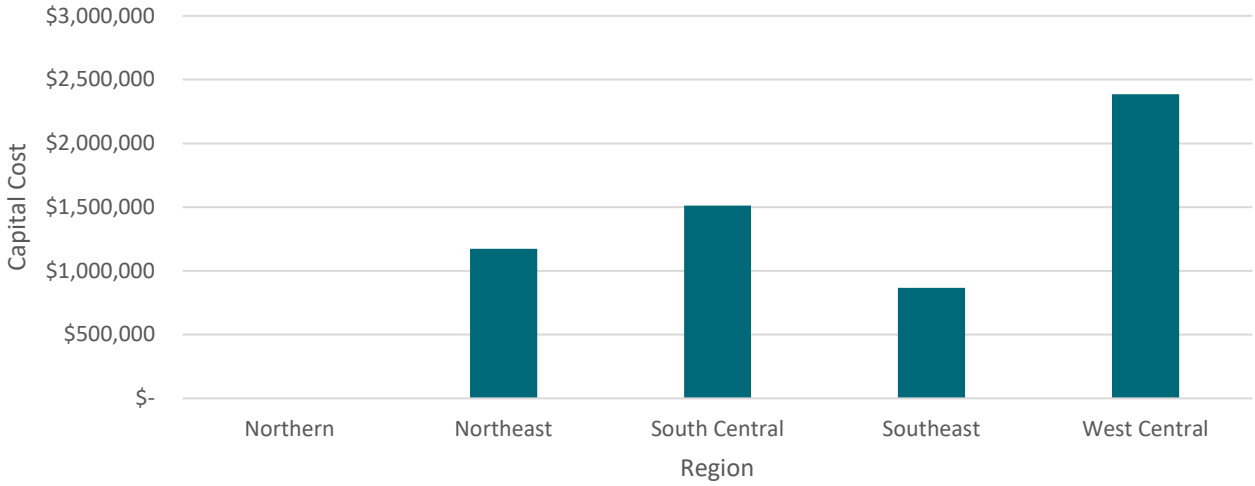


***Figure 37:** Average Capital Cost for Phosphorus Compliance, by WDNR Region*

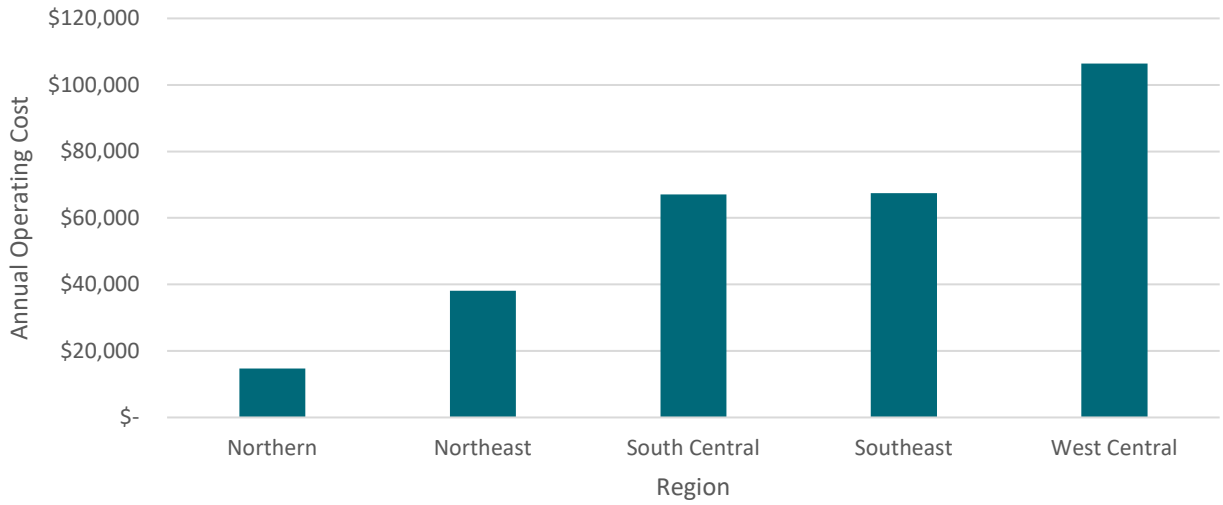


***Figure 38:** Average Annual Operating Cost for Phosphorus Compliance, by WDNR Region*

IV. WATER RATES

The Public Service Commission of Wisconsin provided data with respect to the cost of potable water for the communities that responded to the 2022 Sewer User Charge Survey. **Figure 39** and **Figure 40** show the average annual cost, by population range for residential water service. **Figure 40** shows the average annual cost for residential water service water for each of the Sewer User Charge Surveys from 2004 to 2021. The cost for water has increased in all population ranges, with the highest rate of increase in the 1-500 population category. The statewide average increase in the average cost for residential water service since 2004 is nearly 4% per year.

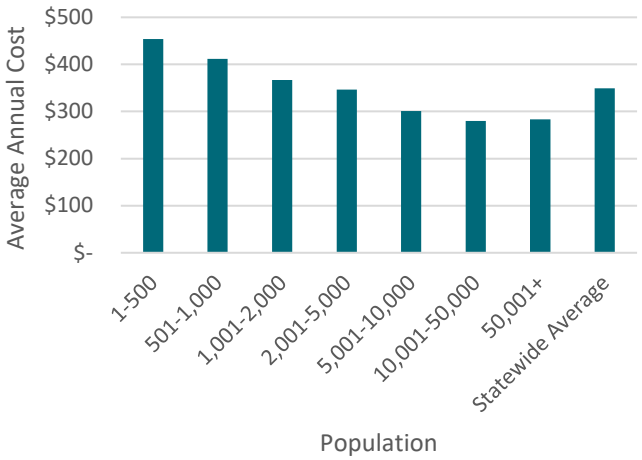


***Figure 39**: Average Annual Cost for Residential Water Service, by Population, Based on 55,000 Gallons per Year per Customer)*

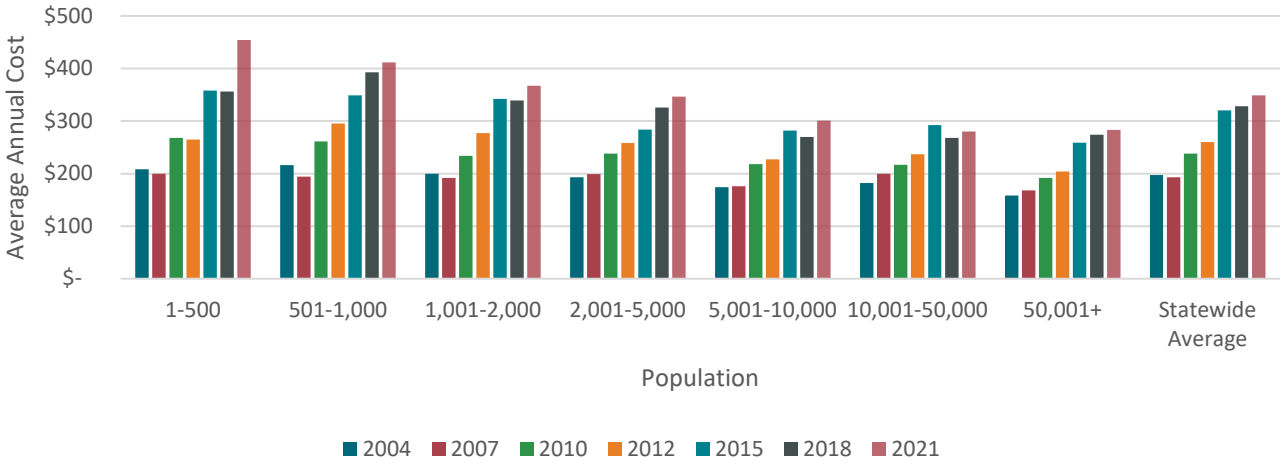


***Figure 40**: Average Annual Cost of Water by Population 2004-2021 (Based on 55,000 Gallons per Year per Customer)*

Figure 41 shows, by population range, the average annual cost for residential sewer and water service. The average cost of residential sewer service is higher than that for water service, across all population ranges. The average cost of residential water service is less dependent on population than is the average cost of sewer service, but the average cost of residential water service follows a consistent trend of decreasing as population increases.

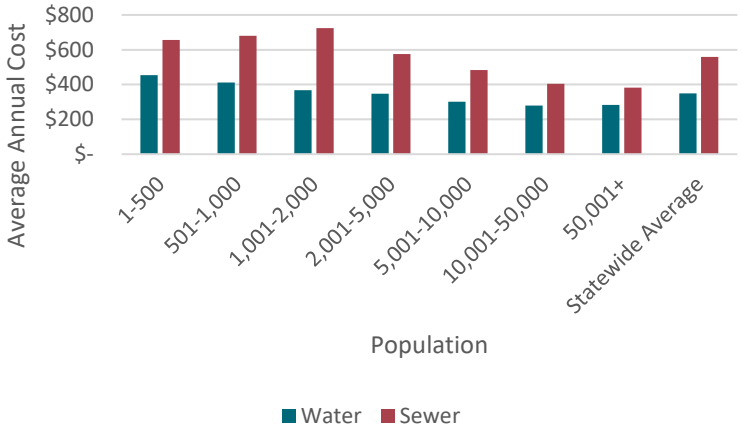


***Figure 41**: Average Annual Cost of Water and Sewer, by Population Range, Based on 55,000 GPY Use*

V. AVAILABILITY OF FUNDING

Governmental agencies provide funding for wastewater projects in the form of grants and loans with subsidized interest rate. The three major governmental sources of funding for wastewater projects in Wisconsin include:

- Wisconsin Department of Natural Resources (WDNR) Clean Water Fund Program
- United States Department of Agriculture (USDA) Rural Development Water and Waste Grant and Loan Program
- Wisconsin Department of Administration (DOA) Community Development Block Grant Program for Public Facilities

The Federal Clean Water Act amendments of 1972 were responsible for many wastewater facility upgrades from the late-1970's through the mid-1980's. The United States Environmental Protection Agency (USEPA) provided grant funds that paid for the majority of construction costs for many treatment facilities built during that era. After 1990, federal grant funds were still available to some specific wastewater facility projects in the form of "earmarks" in the federal budget, but for the most part the USEPA funding for wastewater facility projects was made available through the federal budget in the form of annual USEPA grants to each State's revolving loan program.

The individual States are required to provide matching funds to increase the dollars available in their revolving loan program. The revolving loan program for wastewater facility funding in Wisconsin is administered by the WDNR as the Clean Water Fund (CWF) Program. The CWF Program provides loans at a subsidized interest rate, typically for a term of 20 years.

Until fairly recently, the CWF Program offered "Hardship Grants" for individual wastewater projects where the anticipated average cost for residential wastewater service was expected to exceed 2.0% of the community's median household income (MHI) and where the MHI was less than 80% of the statewide MHI. "Hardship Grants" under the CWF Program were phased out after 2018 and replaced by "principal forgiveness" which is the portion of the loan which is not required to be repaid.

The eligibility for "principal forgiveness" and the amount of "principal forgiveness" available to an individual project is determined based on a combination of population, economic factors, and project cost. The total amount of "principal forgiveness" that is made available statewide each year is determined by the annual USEPA allocation to Wisconsin in the federal budget.

Figure 42 shows the total amount of CWF Program "Hardship Grant" and "principal forgiveness" funding available for wastewater projects in Wisconsin in each year since 1997.

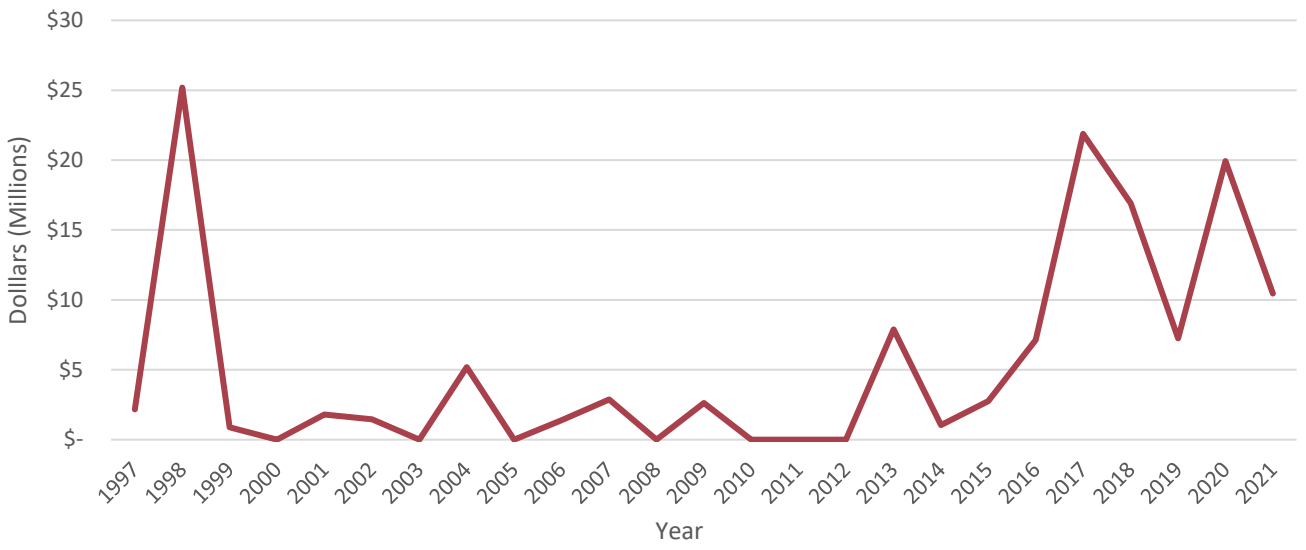


***Figure 42**: WDNR CWF Program Grant Amounts, 1997- 2021*

USDA Rural Development (USDA-RD), formerly Farmers Home Administration, provides grants and loans at a subsidized interest and a typical term of 40 years to fund water and wastewater projects in communities with populations less than 10,000. The USDA-RD Water and Waste Program is administered by each of the state USDA-RD offices. The eligibility and amount of grant available to an individual project is based on USDA-RD determination of project affordability, which is largely based on project cost and the population and median household income of the community. The amount of grant and loan funds available to each State from USDA-RD each year is set by the Federal budget. **Figure 43** shows the USDA-RD obligation of grant funding to the State of Wisconsin for wastewater projects in each year since 1997. In 2021, $42.4 million in USDA-RD grant funding was made available for wastewater funding in Wisconsin, by far the largest annual grant allocation.

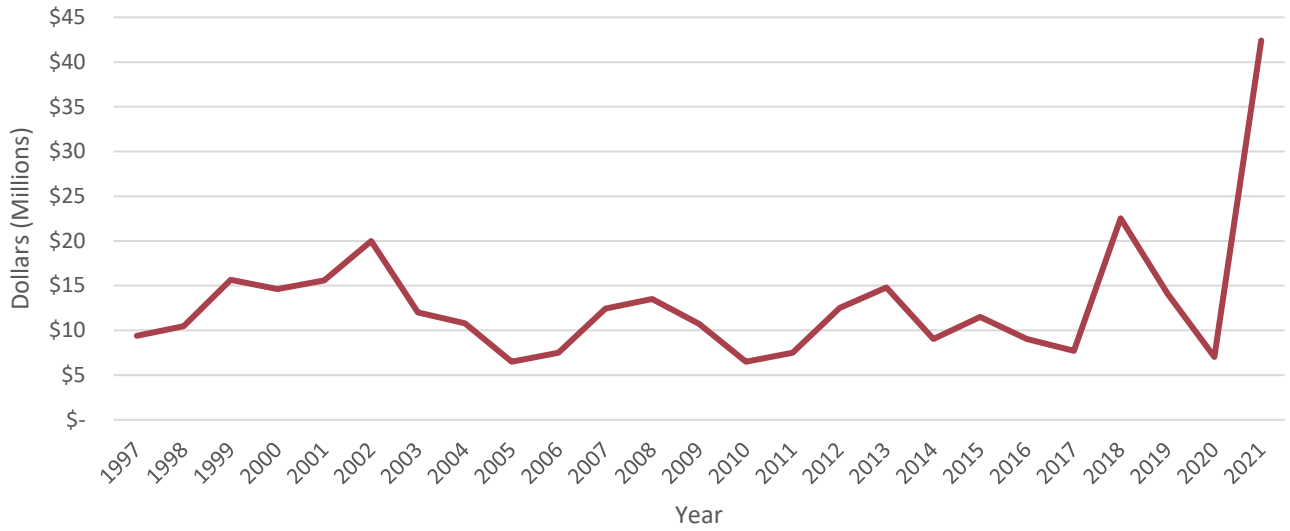


***Figure 43**: USDA-RD Grant Obligations for Wisconsin Wastewater Projects, 1997 to 2021*

The Wisconsin Department of Administration (DOA) administers the Community Development Block Grant for Public Facilities (CDBG-PF) Program, which funds wastewater facility and other infrastructure projects in communities where a minimum of 51% of households meet the definition of "low-to-moderate income." Funding for the CDBG-PF Program is made available by the Federal budget through a grant from the U.S. Department of Housing and Urban Development (HUD). The number of wastewater projects that are funded each year and the grant dollars made available to each project is determined by Wisconsin DOA based on the available funding, DOA evaluation of project need, and economic and other factors in the community. The maximum amount of grant available to any individual project was historically $500,000 but that amount was increased to $750,000 several years ago then increased again in 2020 to $1,000,000 per project. **Figure 44** shows the total amount of CDBG-PF dollars awarded to wastewater projects in Wisconsin in each year since 2013.

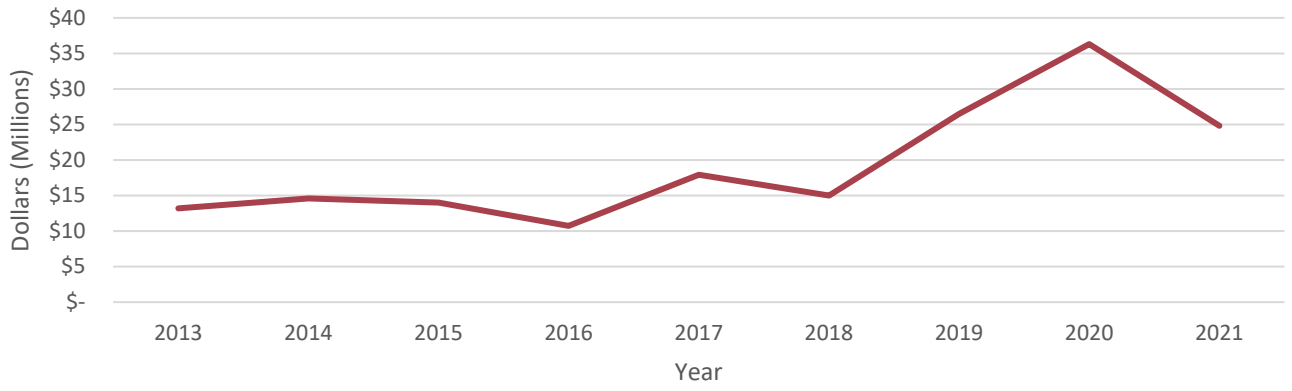


***Figure 44**: CDBG-PF Grant Awards, 2013 to 2021*

VI. AFFORDABILITY

The governmental agencies administering the programs available for funding wastewater projects determine the eligibility for grant funding, and the amount of grant available to an individual project, based largely on the project need and the affordability of the project to the residents of the community. Affordability is based in large part on the expected average cost for residential sewer service as a result of the project and the median household income (MHI) in the community. **Figure 45** shows the average MHI in 2000, 2009, 2013, 2017 and 2020, by population range, for the respondents to the 2022 Survey.

***Figure 45**: Average Median Household Income, by Population Range, 2000-2020*

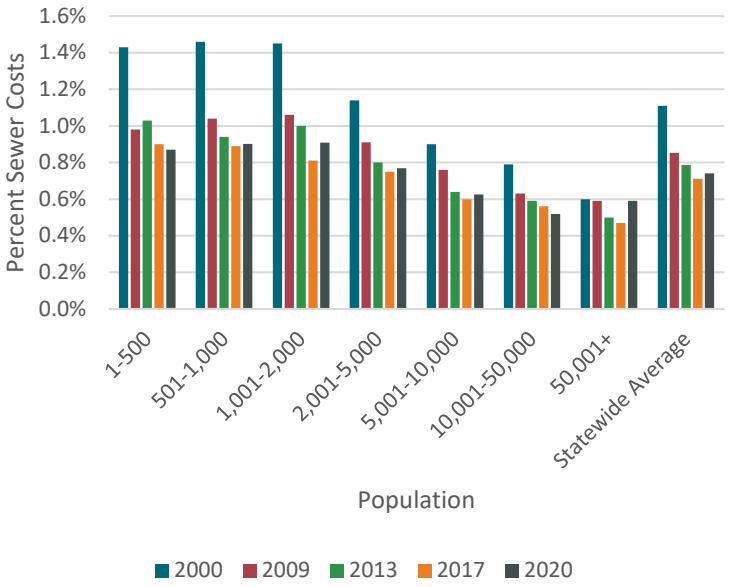


***Figure 46:** Average Cost for Residential Sewer Service as a Percent of MHI, by Population Range. 2000-2020. Based on Actual Use*

Figure 46 shows, by population range, the average cost for residential sewer service as a percent of community MHI, in 2000, 2009, 2013, 2017 and 2020. The average cost for residential sewer service as a percentage of MHI shows a general declining trend for all population ranges. This is likely due in large part to the increases in the average MHI, and suggests that, even though costs for providing wastewater service have increased, increases in sewer user charges on average have not kept pace with increases in MHI. In general, the average cost for residential sewer service as a percentage of MHI is higher in smaller communities.

Figure 47 shows, by population range, the range of cost for residential sewer service in each community as a percentage of MHI, and the median of the range.

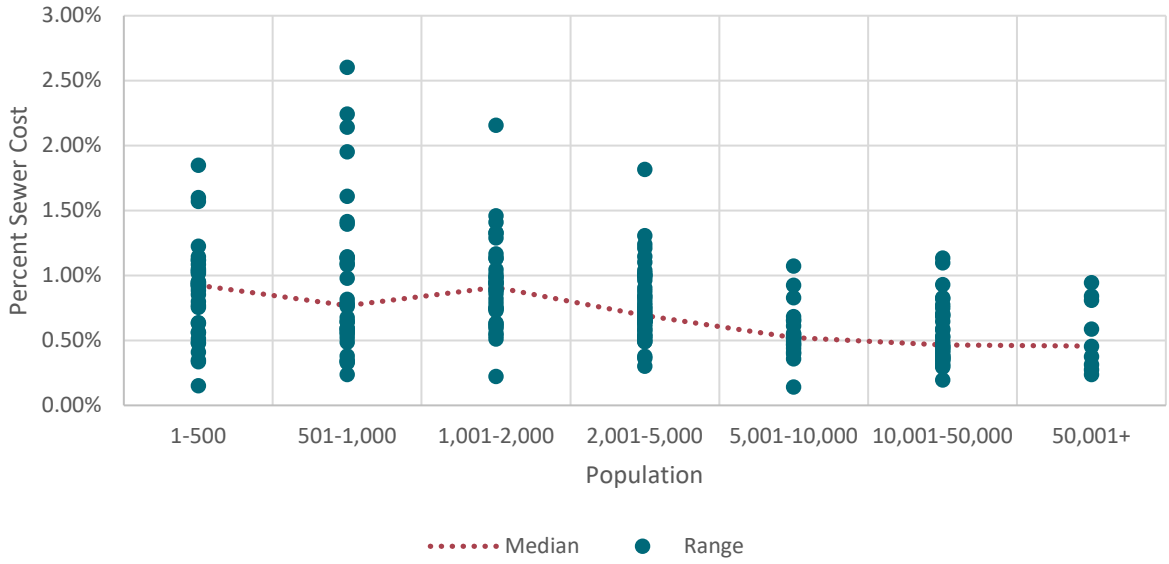


***Figure 47**: Residential Sewer Charges as a Percentage of MHI and Median, by Population, Based on Actual Use*

VII. FUTURE NEEDS EVALUATION

The 2022 Survey requested information regarding the anticipated need for a sewer rate increase in the community, and the estimated percent increase in sewer rates. **Figure 48** and **Figure 49** show, by population range, the percentage of respondents who anticipated that a sewer rate increase would be necessary in 2022, and the average percent anticipated increase in sewer rate, respectively.

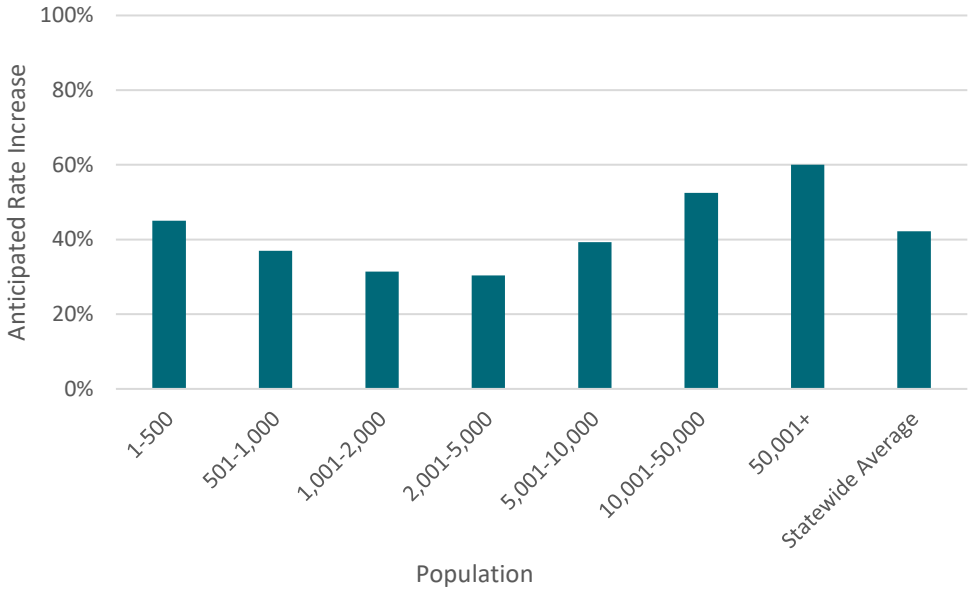


***Figure 48**: Percent of Respondents Anticipating a Sewer Rate Increase, by Population*

Figure 48 indicates that, on average, more of the very smallest and very largest communities expected a rate increase to be necessary in the near future. Across all population ranges, the average anticipated rate increase is quite uniform at approximately at approximately 7 percent, as shown in **Figure 49**.

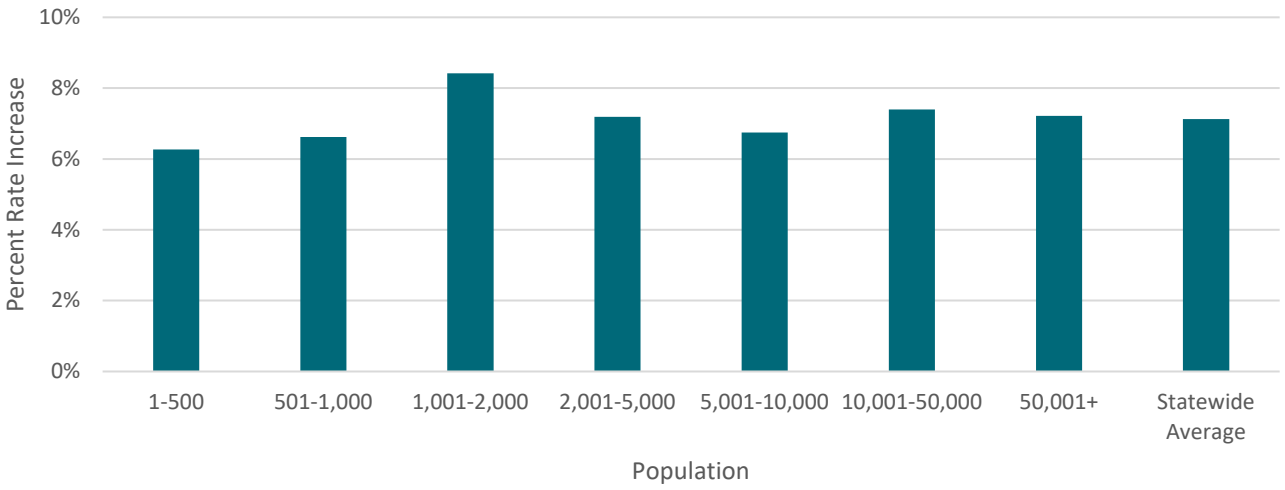


***Figure 49**: Average Anticipated Rate Increase, by Population*

VIII. UTILITY COST COMPARISON

The average cost for residential sewer service varies greatly between communities statewide: however, on average, wastewater service remains one of the least costly utilities for the average household. **Figure 50** shows the average monthly cost per household for various utilities, and the average monthly cost per household for gasoline used by vehicles in 2022. On a statewide basis, the average cost per household for water service is the only utility less costly than sewer service.

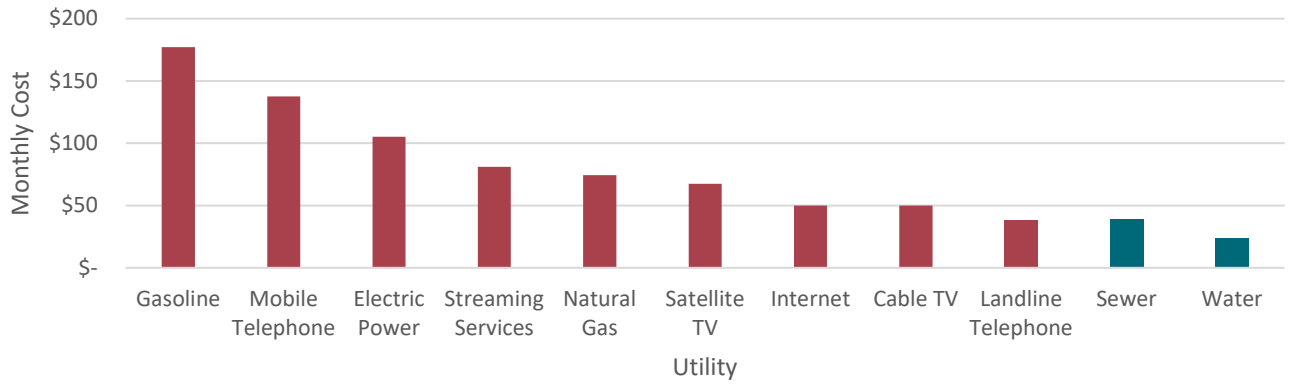


***Figure 50**: 2022 Estimated Average Monthly Cost for Various Utilities*

2022 Utility Rates

Gasoline	$177 | 1,000 miles per month, averaging at 24.5 mpg, and purchasing at $4.338 per gallon
Telephone	
Mobile/Data	$119 | Average of 3 leading providers for average family (2.6 members) on a 5G LTE plan
Landline	$38 | Average of 3 leading providers for basic plans with long distance
Electric Power	$105 | Department of Energy - $0.1097 per kilowatt hour with 958 kilowatts per household per month
Streaming Services	$81 | Average cost of 3 leading internet streaming services (internet cost included) with basic accounts and no ads
Natural Gas	$74 | Energy Information Association – 132,263 million cf annually to 1,811,337 customers at $12.42/1,000 cf
Satellite TV	$67 | Average cost of 2 leading provider starter packs
Internet	$50 | Average of 2 leading providers for basic plans with up to 200 Mbps of high-speed internet
Cable TV	$50 | Cost of the leading provider
Sewer	$39 | MSA 2022 Wisconsin Sewer User Charge Survey (based on Actual Usage)
Water	$24 | PSC data on water rates (based on Actual Usage)

IX. APPENDICES

The following Appendices are provided to this 2022 Sewer User Charge Survey Report:

Summary Tab
2022 Sewer User Charge Survey Form
Sewer User Charges, Hook-up Fees, and Impact Fees
County Tab
Sewer and Water Charges in Individual Communities, by County
1-500 Tab
Information for Population Range 1-500
501-1,000 Tab
Information for Population Range 501-1,000
1,001-2,000 Tab
Information for Population Range 1,001-2,000
2,001-5000 Tab
Information for Population Range 2,001-5000
5,001-10,000 Tab
Information for Population Range 5,001-10,000
10,001-50,000 Tab
Information for Population Range 10,001-50,000
>50,000 Tab
Information for Population Range >50,001

2022 Wisconsin Sewer User Charge Survey

Return completed survey by January 31, 2022. There are three ways to return the survey:

- *Mail this survey in the enclosed self-addressed, postage-paid envelope*
- *Email this survey to ratesurvey@msa-ps.com*
- *Fill out the survey online: tinyurl.com/2022SewerUserSurvey*

General Information

Your Name/Title _____ Utility Name _____ City _____

Email _____ Phone _____ County _____

Population Served

The population of your community or population served by your sanitary district.

☐ 1-500 ☐ 501-1,000 ☐ 1,001-2,000 ☐ 2,001-5,000 ☐ 5,001-10,000 ☐ 10,001-50,000 ☐ 50,000+

Type of Sewer System

☐ City ☐ Sanitary District ☐ Village ☐ Other (please specify) _____

What year was your last major facility upgrade (yyyy)? _____

Rate Information

What is your billing frequency?

☐ Monthly (12/year) ☐ Bi-monthly (6/year)
☐ Quarterly (4/year) ☐ Annually (1/year)

What is your current Residential Fixed Fee sewer rate per your billing frequency indicated above?

$_____

What volume is included in this Residential Fixed Fee, if any?

_____ ☐ Cubic feet ☐ Gallons

What is your current Residential Volume Charge?

$ _____ ☐ Per 1,000 Gallons ☐ Per 100 Cubic Feet

What year was your last sewer rate increase (yyyy)?

_____

Do you anticipate a rate increase in 2022?

☐ No
☐ Yes _____% rate increase (approximate)

Which residential sewer connection fee do you charge?

☐ Hook-up Fee ☐ Impact Fee ☐ Neither/Unsure

What is your residential Hook-up or Impact fee charge?

$_____ ☐ Acre ☐ Equivalency Unit ☐ Meter Size ☐ Other

Treatment Technology

What type of treatment does your facility use?

Check all that apply.

☐ Aerated Lagoon ☐ Stabilization Pond ☐ Conventional Activated Sludge
☐ Membrane Bioreactor ☐ Oxidation Ditch ☐ Package Plant
☐ Sequencing Batch Reactor ☐ Trickling Filter/ Bio-Tower ☐ Rotating Biological Contractor
☐ Recirculating Sand Filter ☐ Moving Bed Bioreactor ☐ Deep Bed Sand Filter
☐ Traveling Bridge Sand Filter ☐ Disc Filter

Plant Capacity

What is your design capacity?

Use MGD format, 0.123 MGD equals 123,000 GPD.

_____

What is your current average daily flow?

Use MGD format, 0.123 MGD equals 123,000 GPD.

_____

PLEASE RETURN SURVEY BY JANUARY 31, 2022.

2022 Wisconsin Sewer User Charge Survey

Hauled Waste

Do you accept hauled waste?

- ☐ No (If no, skip this section.)
- ☐ Yes

Do you accept holding tank waste?

- ☐ No
- ☐ Yes (If yes, what is your disposal charge?)

$ _____ ☐ Per Load ☐ Per 1000 Gallons

Do you accept septic tank waste?

- ☐ No
- ☐ Yes (If yes, what is your disposal charge?)

$ _____ ☐ Per Load ☐ Per 1000 Gallons

High-strength Waste Charges

Do you assess a surcharge for high-strength or industrial wastes?

- ☐ No (If no, skip this section.)
- ☐ Yes

Which of the following high-strength wastes are you surcharging? Check all that apply:

☐ BOD ☐ TSS ☐ Nitrogen ☐ Phosphorus

How much per pound do you charge?

BOD $_____ per lb above mg/l _____

TSS $_____ per lb above mg/l _____

Nitrogen $_____ per lb above mg/l _____

Phosphorus $_____ per lb above mg/l _____

BioSolids (Sludge) Processing

Do you process sludge?

☐ Yes ☐ No (If no, skip this section.)

How do you dispose of sludge? (Check all that apply.)

☐ Land Application ☐ Landfill ☐ Incineration
☐ Public Distribution ☐ Contract Hauling/Storage

Which class of sludge do you produce?

(Check all that apply.)

☐ Class A ☐ Class B ☐ Neither

Do you foresee the need to produce Class A sludge?

☐ Yes ☐ No ☐ Not applicable

Phosphorus Compliance

Which Phosphorus Compliance option are you implementing or considering?

Check all that apply.

- ☐ Tertiary Treatment
- ☐ Conventional Biological/ Chemical Treatment
- ☐ Water Quality Trading
- ☐ Adaptive Management
- ☐ Multi-Discharger Variance
- ☐ Economic Variance
- ☐ Undecided
- ☐ Unknown

If you have implemented a Phosphorus Compliance option, what is the estimated cost of the project?

Total Capital Cost: $ _____

Annual Operating Cost: $ _____

Comments

Thank you for filling out the 2022 Sewer User Charge survey. Share below any additional comments you have.

Need clarification on a question? Contact us: ratesurvey@msa-ps.com
Please return survey by January 31, 2022.

MSA

WWW.MSA-PS.COM | (800) 362-4505

MSA 2022 Sewer User Charge Survey Summary								
	Statewide	**1-500**	**501-1,000**	**1,001-2,000**	**2,001-5,000**	**5,001-10,000**	**10,001-50,000**	**50,001+**
Number of Respondents	310	79	46	51	57	27	40	10
Annual Usage Charge:								
High	$1,428	$1,042	$1,428	$992	$846	$975	$583	$695
Average	$470	$496	$536	$540	$460	$413	$341	$333
Low	$40	$68	$100	$65	$108	$40	$59	$146
Annual Percent Change Since 1996	4.8%	4.9%	4.8%	5.1%	4.5%	4.4%	3.5%	6.9%
(55,000 gal/house/yr)								
Hook-Up Fee								
Percent of Communities Charging	53%	54%	52%	55%	58%	48%	43%	60%
Average	$1,754	$1,659	$1,943	$1,782	$1,443	$2,735	$1,749	$1,355
High	$16,895	$9,781	$12,500	$8,400	$6,000	$16,895	$5,726	$3,281
Impact Fee								
Percent of Communities Charging	6%	1%	0%	6%	7%	15%	15%	0%
Average	$1,879	$6,360	N/A	$1,361	$2,423	$1,458	$1,620	N/A
High	$6,360	$6,360	$0	$3,000	$4,950	$2,055	$4,675	$0

Adams

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Adams WWTF, City of	2,001-5,000	$208	$211	$419
Average		**$208**	**$211**	**$419**

Ashland

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Butternut, Village of	1-500	$300	$397	$698
Glidden Sanitary District	1-500		$288	$288
Madeline Sanitary District	1,001-2,000	$408		$408
Average		**$354**	**$343**	**$464**

Barron

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Barron, City of	2,001-5,000	$285	$135	$420
Chetek, City of	2,001-5,000	$455	$271	$726
Rice Lake Utilities	2,001-5,000	$172	$217	$388
Crystal Lake Sanitary District	1-500	$535		$535
Dallas Municipal Utilities	1-500	$605	$243	$848
Cumberland Municipal Utility	1,001-2,000	$925	$191	$1,115
Average		**$496**	**$211**	**$672**

Bayfield

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Washburn, City of	2,001-5,000	$615	$308	$923
Cable Sanitary District, Town of	1-500	$596		$596
Average		**$606**	**$308**	**$760**

Brown

Community	Population Category	Annual Sewer Cost	Annual Water Cost	Total Annual Utility Cost
Green Bay - Department of Public Works, City of	50,001+	$475	$195	$670
Lawrence Water Utility	5,001-10,000	$485	$365	$850
Ledgeview Sanitary District #2	2,001-5,000	$376	$497	$874
Wrightstown Sanitary District #1	1,001-2,000	$272	$197	$469
Dyckesville Sanitary District	501-1,000	$276		$276
Average		**$377**	**$314**	**$628**

Buffalo

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Fountain City, City of	501-1,000	$637	$272	$908
Average		**$637**	**$272**	**$908**

Burnett

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Siren Sewer and Water Utility	501-1,000	$563	$245	$808
Webster Public Works	501-1,000	$228	$203	$431
Average		**$396**	**$224**	**$619**

Calumet

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Forest Junction SD	501-1,000	$547	$281	$827
Chilton, City of	2,001-5,000	$285	$206	$491
Sherwood Waterworks	2,001-5,000	$846	$908	$1,755
Hilbert Sewer Utility	1,001-2,000	$537	$245	$781
Average		**$554**	**$410**	**$964**

Chippewa

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Chippewa Falls, City of	10,001-50,000	$229	$149	$378
Average		**$229**	**$149**	**$378**

Clark

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Owen Wastewater	501-1,000	$290	$359	$649
Withee Water Works	501-1,000	$391	$417	$808
Curtiss Wastewater	1-500	$276	$273	$548
Granton, Village of	1-500	$321	$389	$710
Abbotsford, City of	2,001-5,000	$556	$396	$952
Average		**$366**	**$367**	**$733**

Columbia

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Arlington, Village of	501-1,000	$533	$678	$1,211
Wyocena Sewer Utility	501-1,000	$413	$196	$609
Portage WWTF, City of	5,001-10,000	$40	$271	$311
Pardeeville Utilities	2,001-5,000	$414	$232	$645
Elba Sanitary District #1	1-500	$660		$660
Friesland	1-500	$338	$480	$819
Fall River, Village of	1,001-2,000	$694	$151	$845
Rio Utilities	1,001-2,000	$277	$223	$501
Wisconsin Dells Municipal Sewer	2,001-5,000	$445	$173	$618
Average		**$424**	**$301**	**$691**

Dane

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Kegonsa Sanitary District	501-1,000	$576		$576
Madison Sewer Utility	50,001+	$579	$347	$926
Cottage Grove, Village of	5,001-10,000	$527	$293	$820
McFarland, Village of	5,001-10,000	$388	$227	$615
Marshall Sewer and Water Utilities	2,001-5,000	$483	$283	$766
Dunn Sanitary District #1, Town of	1-500	$850		$850
Roxbury Sanitary District	1-500	$570		$570
Verona Utility District, Town of	1-500	$473	$192	$665
Oregon Wastewater utility	10,001-50,000	$583	$183	$766
Stoughton Utilities	10,001-50,000	$59	$282	$341
Sun Prairie, City of	10,001-50,000	$365	$200	$564
Waunakee Utilities	10,001-50,000	$502	$238	$741
Black Earth, Village of	1,001-2,000	$853	$316	$1,170
Dane, Village of	1,001-2,000	$529	$288	$817
Shorewood Hills	1,001-2,000		$394	$394
Belleville Public Works, Village of	2,001-5,000	$766	$375	$1,141
Brooklyn, Village of	1,001-2,000	$987	$226	$1,214
Average		**$568**	**$275**	**$742**

Dodge

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Brownsville	501-1,000	$472	$441	$913
Columbus WWTP	5,001-10,000	$260	$324	$584
Mayville Utilities	5,001-10,000	$377	$202	$579
Horicon, City of	2,001-5,000	$232	$265	$497
Juneau Utilities	2,001-5,000	$506	$273	$779
Herman Sanitary District #1	1-500			
Kekoskee Sanitary Department, Village of	1-500	$1,031		$1,031
Leroy Sanitary Disctrict	1-500		$227	$227
Lowell Municipal Water and Sewer Utility	1-500	$944	$364	$1,308
Hustisford Utilities	1,001-2,000	$595	$538	$1,133
Randolph Water Dept	1,001-2,000	$439	$297	$736
Average		**$539**	**$326**	**$779**

Door

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Sturgeon Bay Utilities	5,001-10,000	$255	$203	$458
Baileys Harbor WWTP	1,001-2,000	$420		$420
Sister Bay Sewer and Water, Village of	1,001-2,000	$610	$197	$807
Average		**$428**	**$200**	**$562**

Douglas

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Gordon Sanitary District, Town of	501-1,000	$1,100		$1,100
Superior, Village of	501-1,000	$100		$100
Brule Sanitary District #1	1-500	$344		$344
Oliver, Village of	1-500	$600		$600
Upper St. Croix Lake Sanitary District	1-500	$713		$713
Superior Environmental Services, City of	10,001-50,000	$387	$283	$670
Average		**$541**	**$283**	**$588**

Dunn

Community	Population Category	Annual Sewer Cost (Based on Usage)	Annual Water Cost (Based on Usage)	Total Annual Utility Cost
Boyceville Wastewater	1-500	$294	$158	$452
Ridgeland Sewer, Village of	1-500	$260		$260
Menomonie, City of	10,001-50,000	$216	$138	$354
Average		**$257**	**$148**	**$355**

Eau Claire

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Eau Claire, City of	50,001+	$292	$197	$687
Altoona Municipal Water and Sewer Utility	5,001-10,000	$578	$370	$880
Fall Creek Wastewater, Village of	1,001-2,000	$574	$306	$792
Average		**$482**	**$291**	**$786**

Fond du Lac

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Fond du Lac WTRRF	50,001+	$339	$347	$687
Oakfield Water Utility	1-500	$505	$376	$880
Rosendale Wastewater Treatment Facility	1,001-2,000	$792		$792
Average		**$545**	**$362**	**$786**

Forest

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Wabeno Sanitary District	501-1,000	$174	$154	$328
Crandon Water & Sewer Utility	1,001-2,000	$409	$190	$599
Average		**$291**	**$172**	**$464**

Grant

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Kieler Sanitary District #1	501-1,000	$486	$306	$792
Boscobel Utilities	2,001-5,000	$320	$197	$516
Lancaster WWTP, City of	2,001-5,000	$410	$217	$626
Bagley, Village of	1-500	$426	$155	$581
Mount Hope, Village of	1-500	$439	$357	$796
Platteville Water and Sewer	10,001-50,000	$456	$242	$698
Dickeyville WWTP	1,001-2,000	$336	$265	$602
Hazel Green, Village of	1,001-2,000	$282	$253	$535
Montfort, Village of	501-1,000	$625	$367	$991
Muscoda, Village of	501-1,000	$309	$123	$432
Average		**$409**	**$248**	**$657**

Green

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Browntown Municipal Sewer Utility	1-500	$454	$389	$843
Juda Sanitary District	1-500	$520		$520
Brodhead, City of	2,001-5,000	$469	$173	$641
Average		**$481**	**$281**	**$668**

Green Lake

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Markesan	1,001-2,000	$500	$253	$753
Average		**$500**	**$253**	**$753**

Iowa

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Dodgeville, City of	2,001-5,000	$453	$279	$732
Arena Utilities, Village of	1-500	$618	$220	$838
Cobb, Village of	1-500	$237	$442	$679
Rewey Wastewater Treatment Facility	1-500	$519	$264	$783
Average		**$457**	**$301**	**$758**

Jackson

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Merrillan Utilities	501-1,000	$601	$445	$1,046
Melrose Sewer Dept	1-500	$583	$550	$1,133
Average		**$592**	**$498**	**$1,089**

Jefferson

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Sullivan Sewer Utility	501-1,000	$1,200		$1,200
Ixonia Utility District #1, Town of	5,001-10,000	$588		$588
Oakland Sanitary District #1, Town of	2,001-5,000	$684		$684
Fort Atkinson Wastewater	10,001-50,000	$241	$223	$464
Whitewater Wastewater utility	10,001-50,000	$489	$209	$698
Watertown Sewer Utility, City of	10,001-50,000	$456	$258	$714
Average		**$610**	**$230**	**$725**

Juneau

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Necedah, Village of	501-1,000	$1,249	$337	$1,586
Mauston Municipal	2,001-5,000	$328	$261	$589
New Lisbon, City of	2,001-5,000	$332	$357	$689
Germantown Sanitary District #2, Town of	1-500	$175		$175
Union Center, Village of	1-500	$507	$220	$727
Elroy, City of	1,001-2,000	$619	$396	$1,015
O'Dells Bay Sanitary District #1	1,001-2,000	$465		$465
Average		**$525**	**$304**	**$749**

Kenosha

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Salem lakes Utility	501-1,000	$656		$656
Kenosha Water Utility	50,001+	$172	$195	$366
Twin Lakes Sewer Department, Village of	5,001-10,000	$460		$460
Paddock Lake, Village of	2,001-5,000	$842	$531	$1,373
Bristol Sanitary District #3, Village of	1-500	$483		$483
Bristol Utility District #4, Village of	1,001-2,000	$612		$612
Average		**$537**	**$363**	**$658**

Kewaunee

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Casco Wastewater Treatment Plant	501-1,000	$592		$592
Average		**$592**		**$592**

La Crosse

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Rockland Municipal	501-1,000	$471	$301	$773
La Crosse WWTP, City of	50,001+	$200	$169	$370
Campbell Utility District #1, Town of	2,001-5,000	$318		$318
Holmen WW	10,001-50,000	$495	$220	$715
Onalaska, City of	10,001-50,000	$235	$225	$460
Bangor Municipal Utility	1,001-2,000	$621	$440	$1,062
Average		**$390**	**$271**	**$616**

Lafayette

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Belmont Light & Water	501-1,000	$446	$163	$609
Darlington Water and Sewer Utility	2,001-5,000	$609	$210	$820
Average		**$528**	**$187**	**$714**

Langlade

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Antigo, City of	5,001-10,000	$277	$206	$483
White Lake Waterworks, Village of	1-500	$337	$232	$569
Average		**$307**	**$219**	**$526**

Lincoln

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Merrill Water and Wastewater Utility	5,001-10,000	$310	$220	$530
Average		**$310**	**$220**	**$530**

Manitowoc

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Whitelaw Water and Sewer	501-1,000	$492	$139	$632
Kiel Wastewater Utility, City of	2,001-5,000	$358	$118	$476
Liberty Sanitary District #1, Town of	1-500	$300	$239	$539
St. Nazianz Water Utility	1-500	$559	$250	$809
Manitowoc, City of	10,001-50,000	$285	$133	$418
Two Rivers WWTF	10,001-50,000		$295	$295
Average		**$399**	**$196**	**$528**

Marathon

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Edgar	501-1,000	$463	$246	$708
Rothschild, Village of	501-1,000	$286	$315	$601
Rib Mountain Sanitary District	5,001-10,000	$100	$179	$279
Mosinee Water and Sewer Utility, City of	2,001-5,000	$386	$366	$752
Hatley Sewer and Water Utility, Village of	1-500	$720	$233	$952
Athens, Village of	1,001-2,000	$479	$430	$909
Marathon City, Village of	1,001-2,000	$527	$316	$843
Spencer Wastewater	1,001-2,000	$479	$300	$780
Schofield, City of	2,001-5,000	$404	$235	$638
Average		**$427**	**$291**	**$718**

Marinette

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Crivitz	501-1,000	$1,055	$518	$1,573
Coleman Water/Sewer	1-500	$376	$254	$630
Wausaukee, Village of	1-500	$471	$204	$675
Marinette Wastewater	10,001-50,000	$188	$343	$531
Average		**$523**	**$330**	**$852**

Marquette

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Montello, City of	1,001-2,000	$357	$303	$660
Westfield, Village of	1,001-2,000	$324	$0	$324
Average		**$341**	**$151**	**$492**

Milwaukee

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
River Hills	501-1,000	$372		$372
Hales Corners, Village of	5,001-10,000	$975		$975
Fox Point	2,001-5,000	$282	$378	$659
Brown Deer Sewer	10,001-50,000	$144	$226	$370
Greenfield, City of	10,001-50,000	$205		$205
Shorewood Sewer Utility	10,001-50,000	$485	$329	$814
South Milwaukee Water/Wastewater	10,001-50,000	$423	$308	$730
Average		**$412**	**$310**	**$589**

Monroe

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Norwalk, Village of	501-1,000	$665	$406	$1,070
Tomah Wastewater	5,001-10,000	$401	$211	$612
Oakdale Wastewater	1-500	$490	$393	$884
Wyeville, Village of	1-500	$480		$480
Sparta Sanitary Sewer Utility, City of	10,001-50,000	$253	$198	$451
Cashton, Village of	1,001-2,000	$837	$280	$1,116
Average		**$521**	**$297**	**$769**

Oconto

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Abrams Sanitary District	1-500	$172		$172
Lakewood Sanitary District #1	1,001-2,000	$492		$492
Average		**$332**		**$332**

Oneida

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Rhinelander, City of	5,001-10,000	$483	$225	$708
Lakeland Sanitary	2,001-5,000	$108	$121	$229
Average		**$295**	**$173**	**$469**

Outagamie

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Appleton Wastewater Treatment Plant	50,001+	$203	$327	$530
Hortonville, Village of	2,001-5,000	$752	$262	$1,014
Nichols Utilities	1-500	$241	$258	$499
Grand Chute Sanitary District #2, Town of	10,001-50,000	$234	$296	$530
Kaukauna - Satellite Collection System, City of	10,001-50,000	$375	$274	$649
Black Creek Municipal Water and Sewer Utility	1,001-2,000	$538	$190	$728
Average		**$391**	**$268**	**$658**

Ozaukee

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Belgium Utilities, Village of	2,001-5,000	$777	$296	$1,072
Fredonia	2,001-5,000	$646	$216	$862
Saukville WWTP	2,001-5,000	$463	$245	$708
Cedarburg Water Recycling Center	10,001-50,000	$565	$297	$862
Grafton, Village of	10,001-50,000	$581	$358	$939
Port Washington WWTP, City of	10,001-50,000	$373	$241	$615
Average		**$567**	**$275**	**$843**

Pepin

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Pepin Water/Sewer, Village of	501-1,000	$208	$327	$535
Durand, City of	1,001-2,000	$546	$274	$820
Average		**$377**	**$300**	**$677**

Pierce

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Ellsworth, Village of	2,001-5,000	$441	$143	$584
Bay City, Village of	1-500			
Maiden Rock Water Utility	1-500	$605	$442	$1,048
Spring Valley, Village of	1,001-2,000	$674	$410	$1,084
River Falls Municipal Utilities	10,001-50,000	$285	$152	$438
Average		**$501**	**$287**	**$788**

Polk

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Dresser, Village of	501-1,000	$1,428	$338	$1,765
Amery, City of	2,001-5,000	$365	$146	$511
Osceola Utilities	2,001-5,000	$640	$246	$886
Luck, Village of	1,001-2,000	$533	$199	$732
Average		**$741**	**$232**	**$973**

Portage

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Almond, Village of	1-500	$188		$188
Junction City Water and Sewer Utility, Village of	1-500	$189	$530	$719
Plover Wastewater Utility, Village of	10,001-50,000	$205	$218	$423
Whiting Utilities	1,001-2,000	$792	$224	$1,016
Average		**$344**	**$324**	**$586**

Price

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Park Falls Water & Sewer, City of	2,001-5,000	$548	$317	$866
Ogema Sanitary District	1-500			
Average		**$548**	**$317**	**$866**

Racine

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Yorkville Sewer Utility	501-1,000	$668		$668
Racine Wastewater Utility	50,001+	$226	$259	$485
Norway Sanitary District #1, Town of	5,001-10,000	$396		$396
Rochester Sewer Utility, Village of	2,001-5,000	$516		$516
Western Racine County Metropolitan SD	10,001-50,000	$151		$151
Eagle Lake Sewer Utility District	1,001-2,000	$400		$400
Average		**$393**	**$259**	**$436**

Richland

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Lone Rock, Village of	501-1,000	$268	$175	$443
Sextonville Waterworks	1-500	$520	$95	$615
Viola, Village of	501-1,000	$309	$245	$553
Average		**$366**	**$171**	**$537**

Rock

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Footville Water Utility	501-1,000	$745	$409	$1,154
Janesville, City of	50,001+	$146	$181	$327
Milton, City of	5,001-10,000	$293	$207	$499
Clinton WWTP	2,001-5,000	$577	$306	$883
Consolidated KoshKonong Sanitary District	2,001-5,000	$433		$433
Beloit, City of	10,001-50,000	$329	$157	$486
Average		**$420**	**$252**	**$630**

Rusk

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Ladysmith, City of	2,001-5,000	$348		$710
Conrath Sewer System	1-500	$360		$360
Tony, Village of	1-500	$392	$309	$701
Average		**$367**	**$309**	**$590**

Sauk

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Bluffview Sanitary	501-1,000	$643	$468	$1,111
Christmas Mountain Sanitary District	501-1,000	$598		$598
North Freedom Municipal Water and Sewer Utility	501-1,000	$179	$290	$469
Plain Water Utility & Sewer Department	501-1,000	$777	$333	$1,110
Reedsburg, City of	5,001-10,000	$345	$128	$473
Prairie du Sac, Village of	2,001-5,000	$220	$298	$518
Rock Springs, Village of	1-500	$643	$634	$1,277
Baraboo Sewer Utility	10,001-50,000	$207	$222	$429
Prairie Sanitary District	1,001-2,000	$837		$837
Average		**$494**	**$339**	**$758**

Sawyer

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Hayward Water and Sewer	2,001-5,000	$262	$178	$441
Winter, Village of	1-500	$82	$181	$263
Average		**$172**	**$180**	**$352**

Shawano

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Tigerton WWTP	501-1,000	$145	$308	$453
Bowler Wastewater Utilities	1-500	$439	$428	$867
Caroline Sanitary District	1-500	$480		$480
Gresham Municipal Utilities	1-500		$577	$577
Mattoon Water and Sewer	1-500	$324	$352	$676
Average		**$347**	**$416**	**$611**

Sheboygan

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Northern Moraine Utility Commission	2,001-5,000	$164		$164
Oostburg WWTP	2,001-5,000	$604	$277	$881
Gibbsville Sanitary District	1-500	$840		$840
Glenbeulah Utilities	1-500	$482	$153	$635
Little Elkhart Lake Rehabilitation District	1-500	$405		$405
Lyndon Sanitary District #1, Town of	1-500	$740		$740
Scott Sanitary District #1, Town of	1-500	$900	$393	$1,293
Waldo	1-500	$594	$142	$736
Average		**$591**	**$241**	**$712**

St. Croix

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
New Richmond, City of	5,001-10,000	$351	$224	$575
Somerset, Village of	2,001-5,000	$608	$358	$965
Deer Park WWTF, Village of	1-500	$560		$560
Emerald-Glenwood Sanitary District	1-500	$225		$225
Star Prairie Wastewater Treatment Plant	1-500	$673	$276	$949
Woodville Water and Sewer Utility, Village of	1,001-2,000	$351	$312	$663
Average		**$461**	**$292**	**$656**

Taylor

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Rib Lake Sewer Utility	501-1,000	$878	$225	$1,103
Stetsonville, Village of	501-1,000	$540	$529	$1,069
Chelsea Sanitary District	1-500	$595		$595
Average		**$671**	**$377**	**$923**

Trempealeau

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Eleva, Village of	501-1,000	$596	$238	$834
Lincoln Sanitary District # 1, Town of	1-500	$487	$540	$1,027
Trempealeau Municipal Utilities	1,001-2,000	$597	$366	$963
Arcadia Water & Wastewater Utility	2,001-5,000	$295	$324	$619
Average		**$494**	**$367**	**$861**

Vernon

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Viroqua Utilities	2,001-5,000	$438	$213	$650
Ontario	1-500	$706	$188	$894
De Soto WWTP, Village of	1-500	$461		$461
Average		**$535**	**$200**	**$668**

Vilas

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Land O Lakes Sanitary District #1	1-500	$631	$423	$1,054
Eagle River Light & Water	1,001-2,000	$372	$195	$568
Average		**$502**	**$309**	**$811**

Walworth

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Lake Geneva Utility Commission	5,001-10,000	$276	$168	$445
Delavan Lake Sanitary District	2,001-5,000	$576	$182	$758
Country Estates Sanitary District	1-500	$1,042	$719	$1,760
Lyons Sanitary District #2	1,001-2,000	$992		$992
Lake Como Sanitary District #1	1,001-2,000	$500	$337	$837
Average		**$677**	**$351**	$445

Washburn

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Minong Water Utility, Village of	501-1,000	$217	$237	$453
Birchwood, Village of	1-500	$540	$217	$757
Shell Lake Municipality	1,001-2,000	$65	$232	$297
Spooner Utilities	1,001-2,000	$282	$237	$519
Average		**$276**	**$230**	**$507**

Washington

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Germantown, Village of	5,001-10,000	$498	$280	$778
Jackson, Village of	2,001-5,000	$815	$207	$1,022
Wallace Lake Sanitary District	1-500	$920		$920
Hartford Sewer Utility	10,001-50,000	$371	$379	$750
Newburg Wastewater Treatment Plant	1,001-2,000	$580		$580
Average		**$637**	**$289**	**$810**

Waukesha

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Waukesha Clean Water Plant, City of	50,001+	$695	$327	$1,023
Mukwonago, Village of	5,001-10,000	$461	$381	$842
Oconomowoc, Town of	5,001-10,000	$959		$959
Pewaukee, Village of	5,001-10,000	$330	$300	$630
Brookfield Sanitary District #4	2,001-5,000	$292	$186	$479
Pewaukee Water & Sewer, City of	2,001-5,000	$362	$340	$701
Blackhawk Area Sanitary	1-500	$68		$68
Brookfield, City of	10,001-50,000	$518	$303	$821
Delafield-Hartland WPCC	10,001-50,000	$198		$198
Oconomowoc, City of	10,001-50,000	$417	$348	$765
Sussex, Village of	10,001-50,000	$380	$425	$805
Average		**$425**	**$326**	**$663**

Waupaca

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Waupaca WWTP, City of	5,001-10,000	$437	$170	$607
Clintonville Utilities	2,001-5,000	$455	$272	$727
Scandinavia Sewer System, Village of	1-500	$300		$300
Iola Utilities	1,001-2,000	$500	$142	$642
Manawa, City of	1,001-2,000	$159	$278	$437
Average		**$370**	**$216**	**$543**

Waushara

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Wautoma	2,001-5,000	$716	$274	$990
Coloma Waterworks	1-500	$679	$305	$985
Average		**$698**	**$289**	**$987**

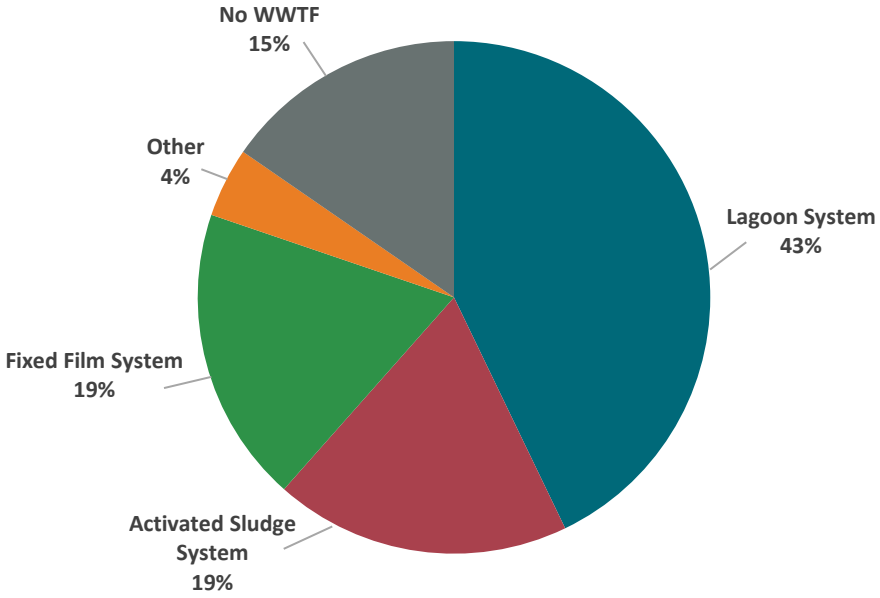
Winnebago

Community	Population Category	Annual Sewer Cost (Based on Usage)	Annual Water Cost (Based on Usage)	Total Annual Utility Cost
Menasha, City of	5,001-10,000	$297	$397	$694
Omro Utility	2,001-5,000	$404	$165	$569
Fox Crossing Utilities	10,001-50,000	$269	$77	$345
Neenah Sanitary Collection System, City of	10,001-50,000	$214	$314	$528
Algoma Sanitary District #1, Town of	1,001-2,000	$761	$303	$1,064
Black Wolf Sanitary District, Town of	1,001-2,000	$320		$320
Average		**$377**	**$251**	**$587**

Wood

Community	Population Category	Average Annual Sewer Charge	Average Annual Water Charge	Total Annual Utility Cost
Pittsville Water & Sewer Dept	501-1,000	$207	$251	$458
Nekoosa, City of	2,001-5,000	$567	$416	$982
Blenker-Sherry Santitary District	1-500	$180		$180
Milladore, Village of	1-500	$662	$273	$954
Wisconsin Rapids Wastewater Treatment Facility	10,001-50,000	$518	$220	$739
Port Edwards, Village of	1,001-2,000	$960	$226	$1,186
Marshfield, City of	10,001-50,000	$408	$239	$647
Average		**$500**	**$271**	**$735**

***Figure 1-A**: Breakdown of Respondents by Treatment Type*
Population 1-500



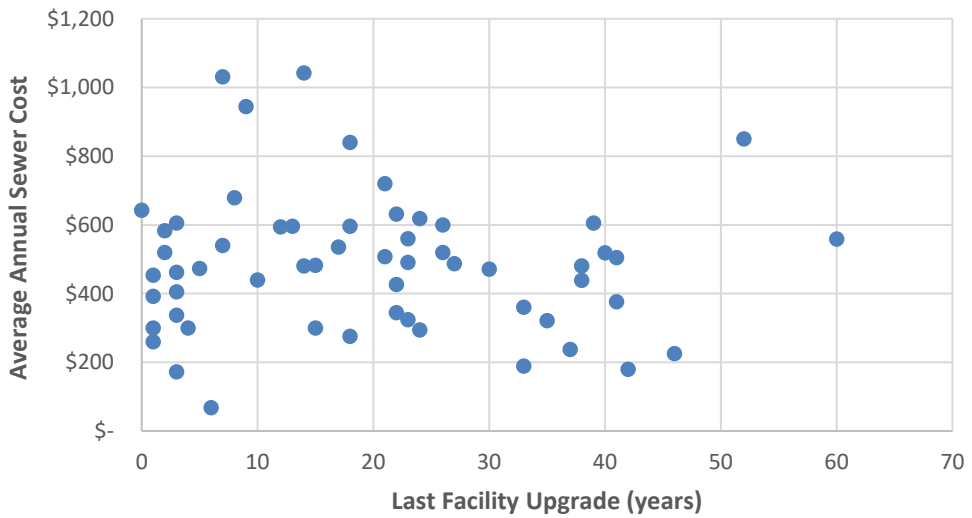
Description:

This graph shows treatment facilities as a percentage of communities

Key Points:

- The majority of communities with a population of 1-500 use regionalization and lagoon systems (aerated lagoons and stabilization ponds) most frequently.

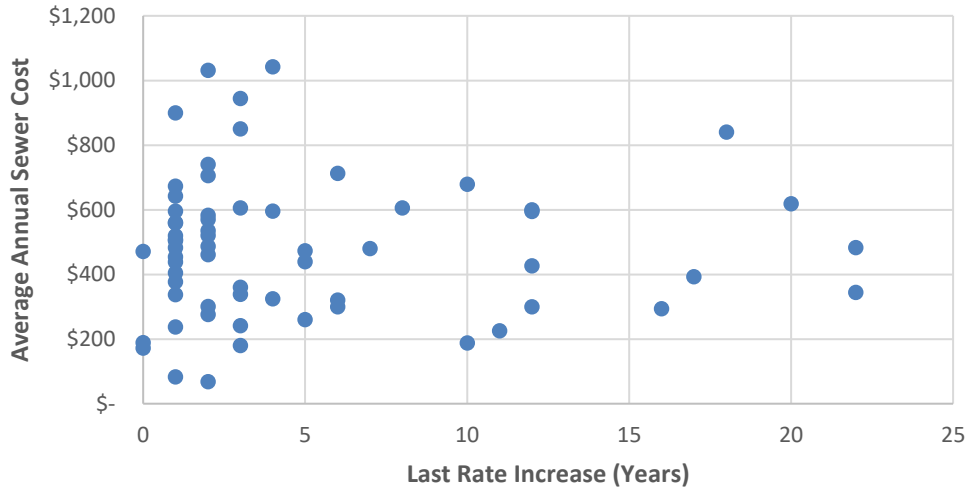
Figure 2-A: *Average Annual Sewer Cost vs. Last Facility Upgrade*
Population 1-500



Description:

This graph compares the average annual sewer utility cost to the number of years since the last facility upgrade.

Figure 3-A*: Average Annual Sewer Cost vs. Last Rate Increase*
Population 1-500



Description:

This graph compares the average annual sewer utility cost to the number of years since the last rate increase.

***Figure 4-A**: Total Average Annual Sewer Charge*
Population 1-500

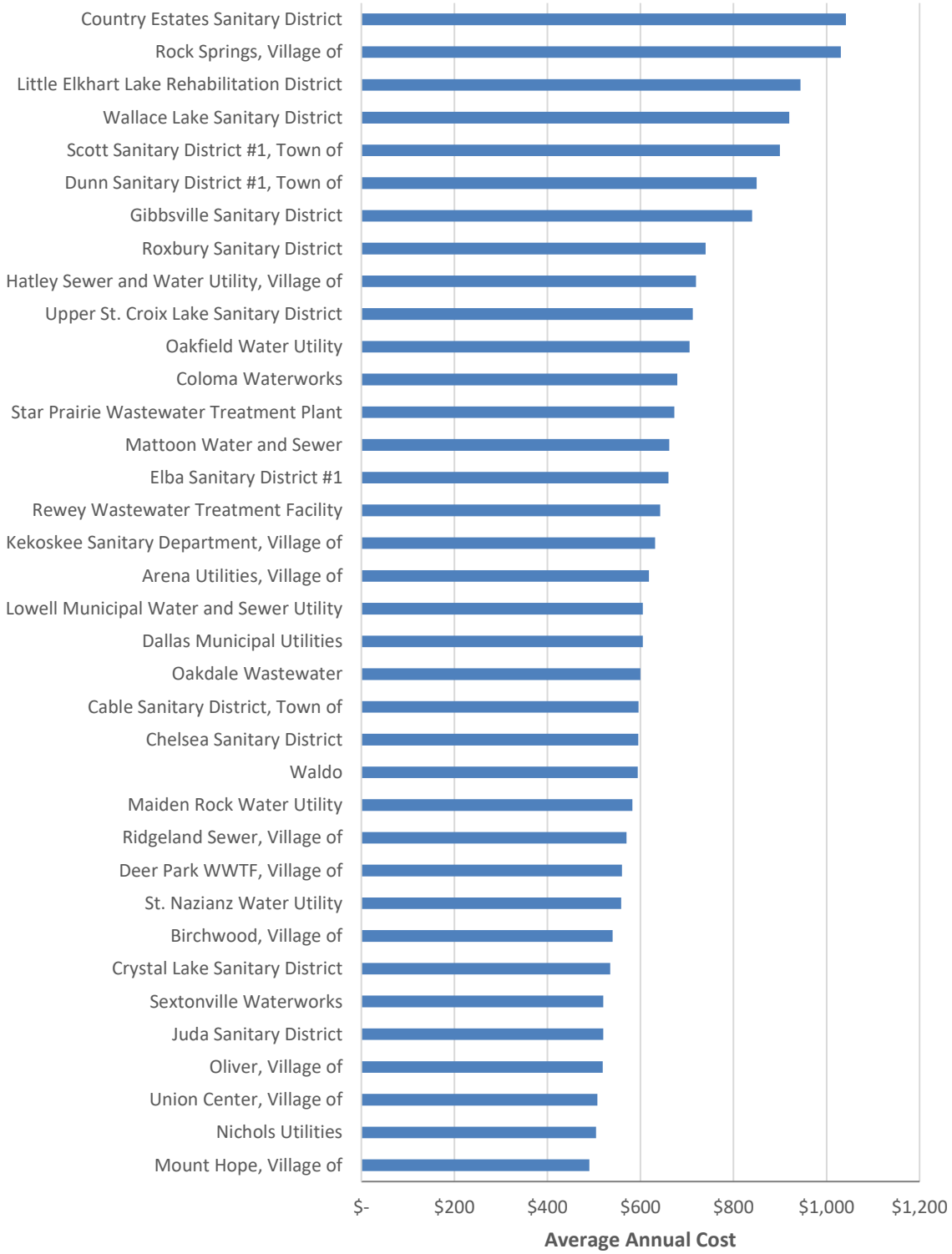


Figure 4-A (continued): *Total Average Annual Sewer Charge*
Population 1-500

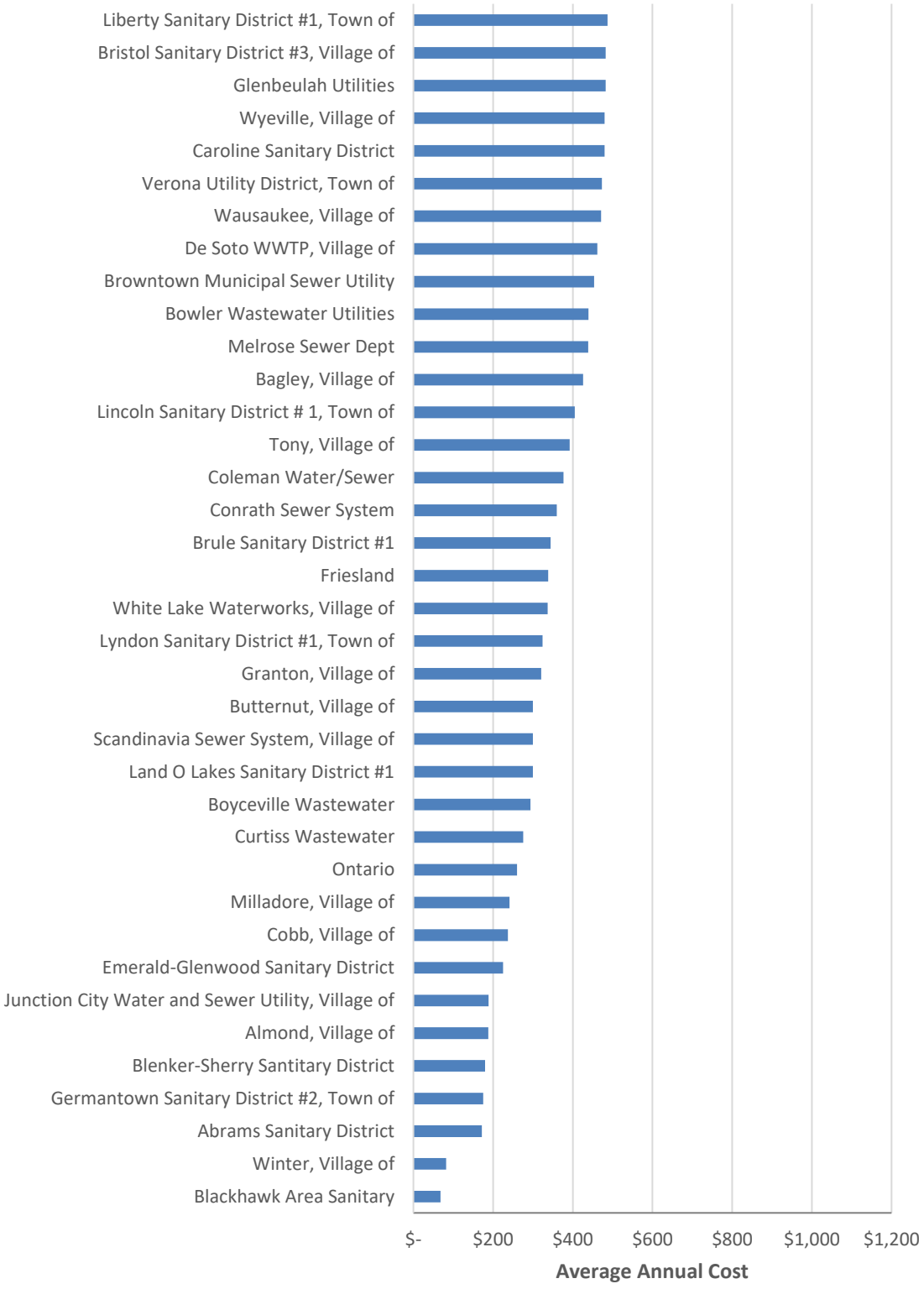
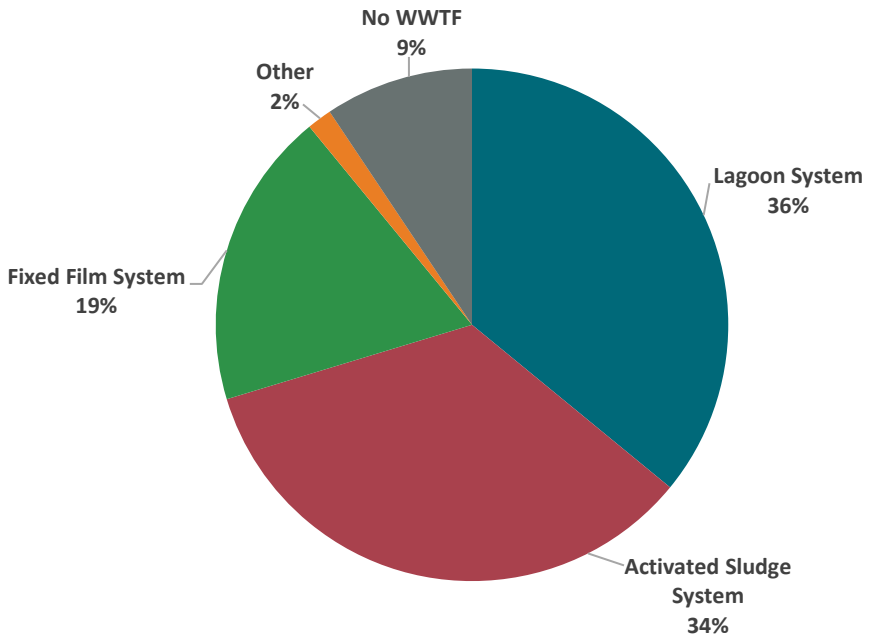


***Figure 1-B**: Breakdown of Respondents by Treatment Type*
Population 501-1,000



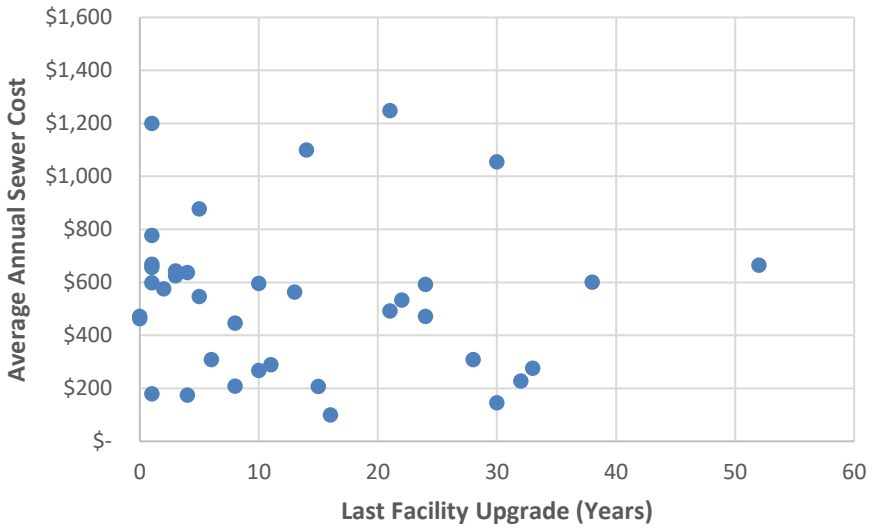
Description:

This graph shows treatment facilities as a percentage of communities

Key Points:

- Nearly half of the communities with a population of 501-1,000 use lagoon systems or regionalization treatment types.

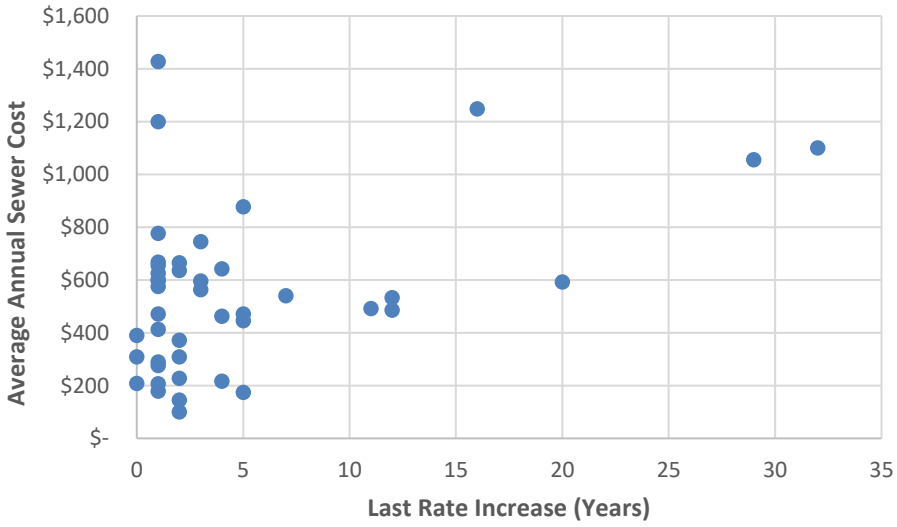
Figure 2-B: *Average Annual Sewer Cost vs. Last Facility Upgrade*
Population 501-1,000



Description:

This graph compares the average annual sewer utility cost to the number of years since the last facility upgrade.

Figure 3-B*: Average Annual Sewer Cost vs. Last Rate Increase*
Population 501-1,000



Description:

This graph compares the average annual sewer utility cost to the number of years since the last rate increase.

Figure 4-B *Total Average Annual Sewer Usage Charge*
Population 501-1,000

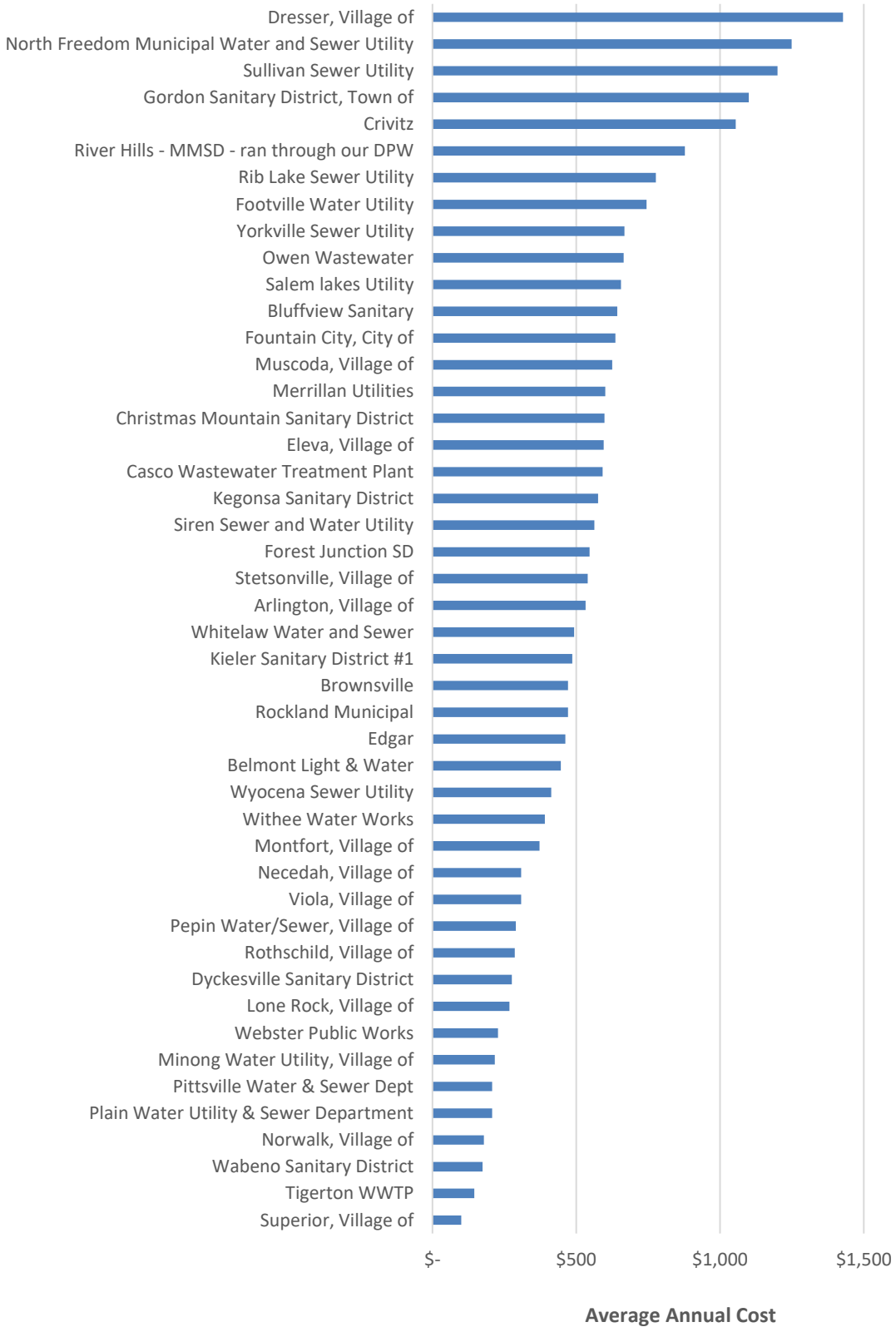
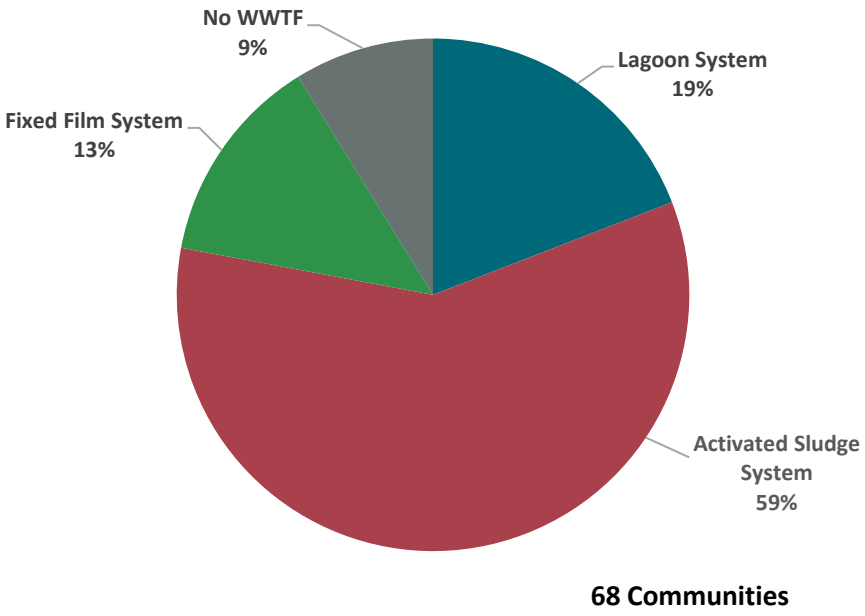


***Figure 1-C**: Breakdown of Respondents by Treatment Type*
Population 1,001-2,000



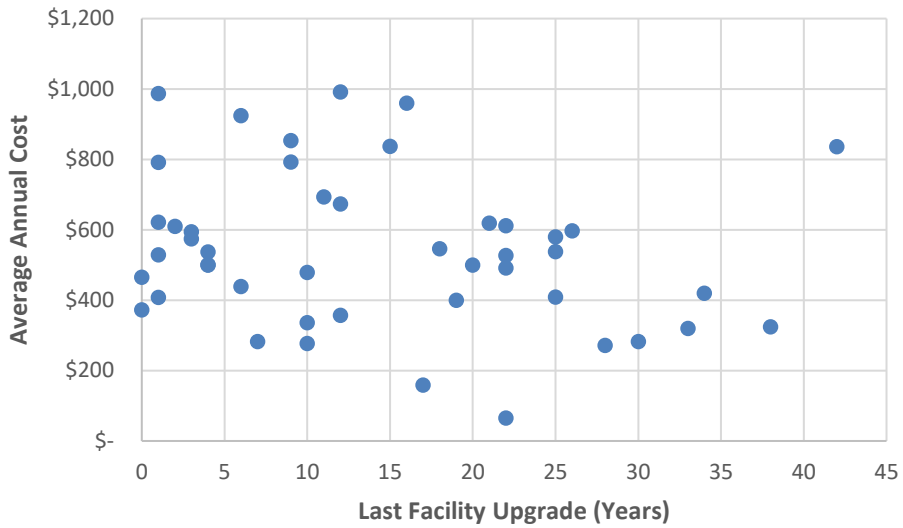
Description:

This graph shows treatment facilities as a percentage of communities.

Key Points:

- Communities with a population of 1,001-2,000 typically us activated sludge treatment systems such as oxidation ditches and conventional activated sludge.

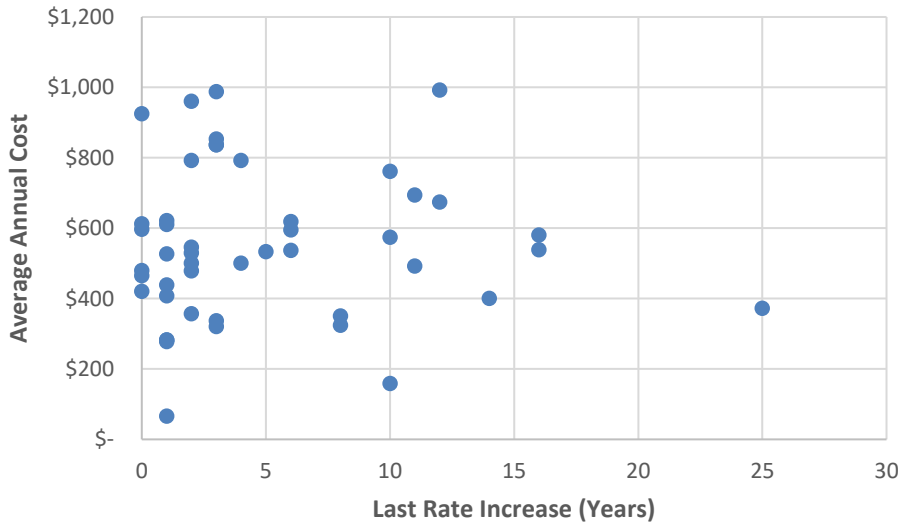
Figure 2-C: *Average Annual Sewer Cost vs. Last Facility Upgrade*
Population 1,001-2,000



Description:

This graph compares the average annual sewer utility cost to the number of years since the last facility upgrade.

Figure 3-C*: Average Annual Sewer Cost vs. Last Rate Increase*
Population 1,001-2,000



Description:

This graph compares the average annual sewer utility cost to the number of years since the last rate increase.

***Figure 4-C**: Total Average Annual Sewer Charge*
Population 1,001-2,000

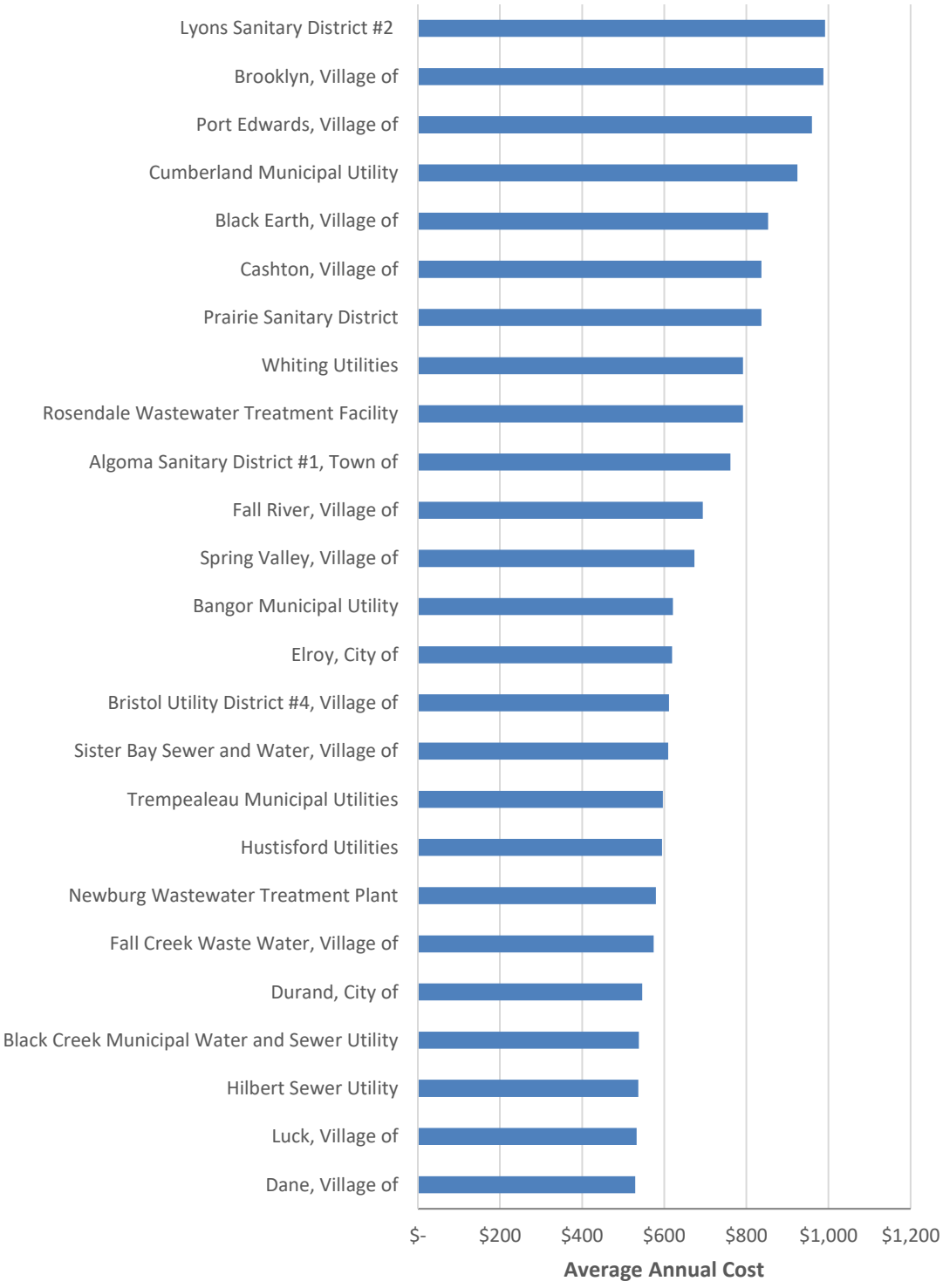


***Figure 4-C (continued)**: Total Average Annual Sewer Charge*
Population 1,001-2,000

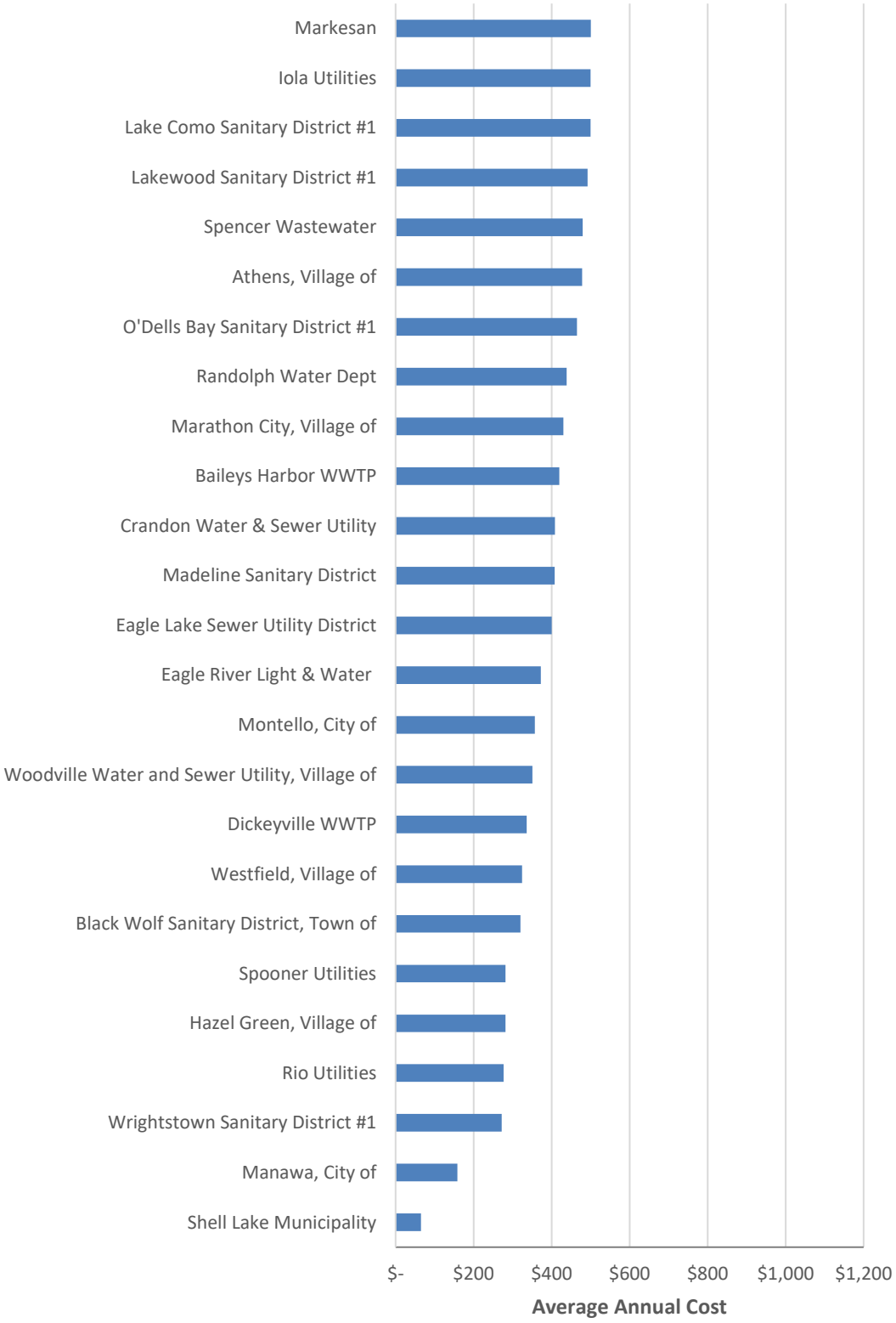
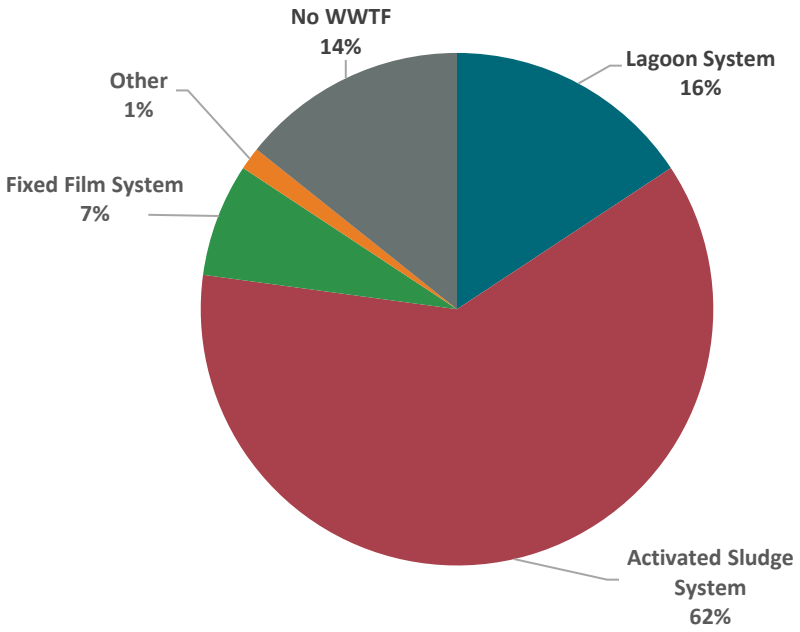


***Figure 1-D**: Breakdown of Respondents by Treatment Type*
Population 2,001-5,000



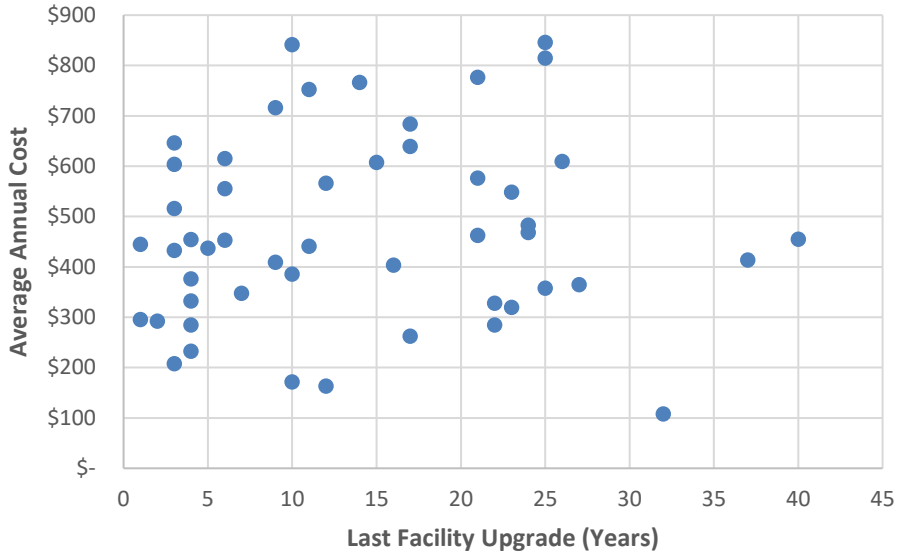
Description:

This graph shows treatment facilities as a percentage of communities

Key Points:

- 62% of communities with a population of 2,001-5,000 use activated sludge systems such as conventional activated sludge, oxidation ditches, package plants and SBRs.

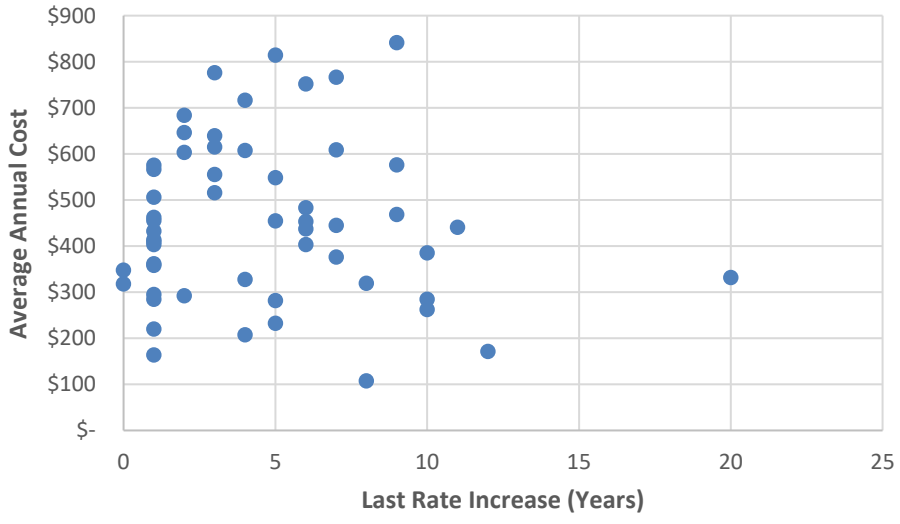
Figure 2-D: *Average Annual Sewer Cost vs. Last Facility Upgrade*
Population 2,001-5,000



Description:

This graph compares the average annual sewer utility cost to the number of years since the last facility upgrade.

Figure 3-D*: Average Annual Sewer Cost vs. Last Rate Increase*
Population 2,001-5,000



Description:

This graph compares the average annual sewer utility cost to the number of years since the last rate increase.

***Figure 4-D**: Total Average Annual Sewer Charge*
Population 2,001-5,000

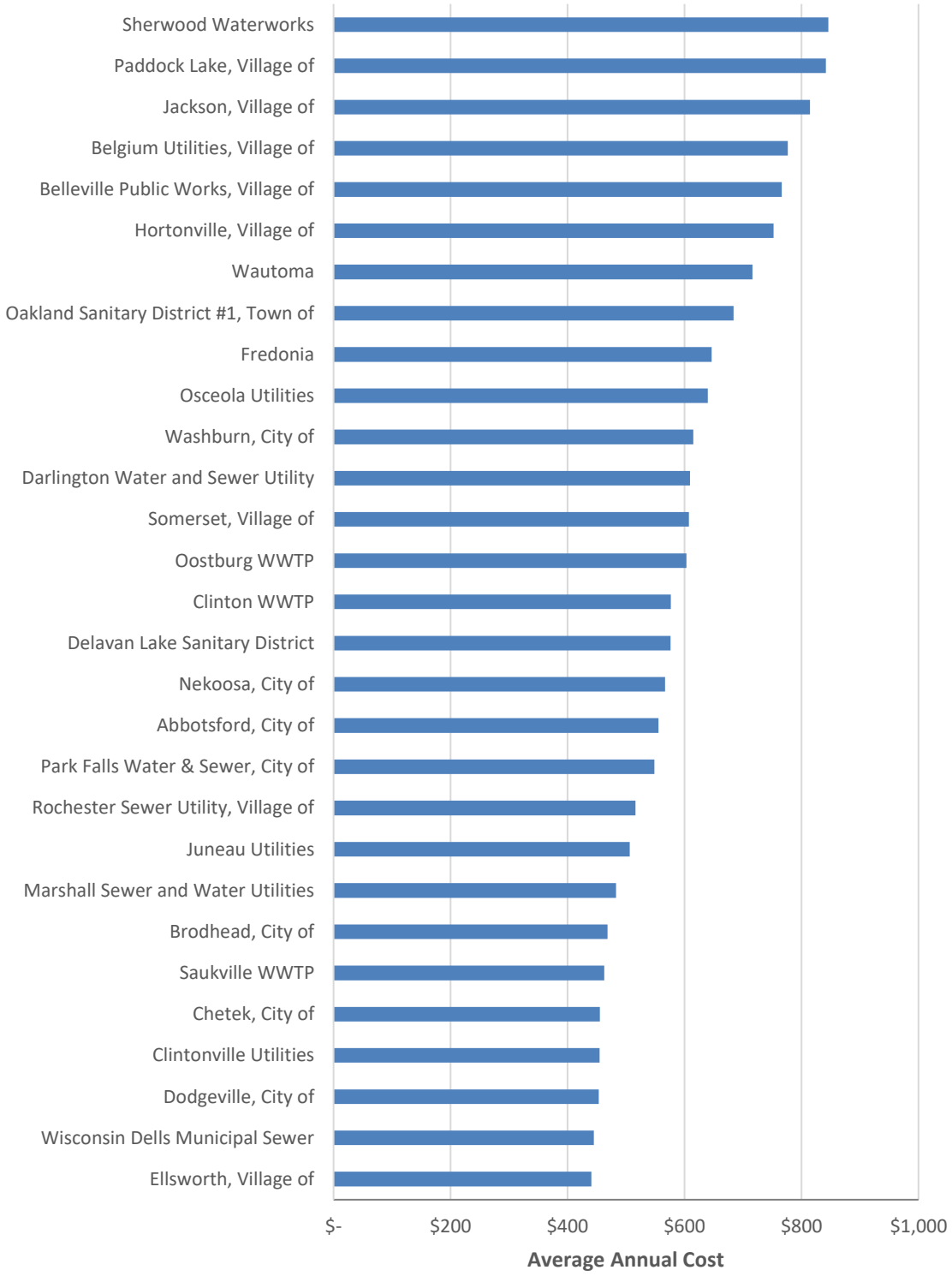


***Figure 4-D (continued)**: Total Average Annual Sewer Charge*
Population 2,001-5,000

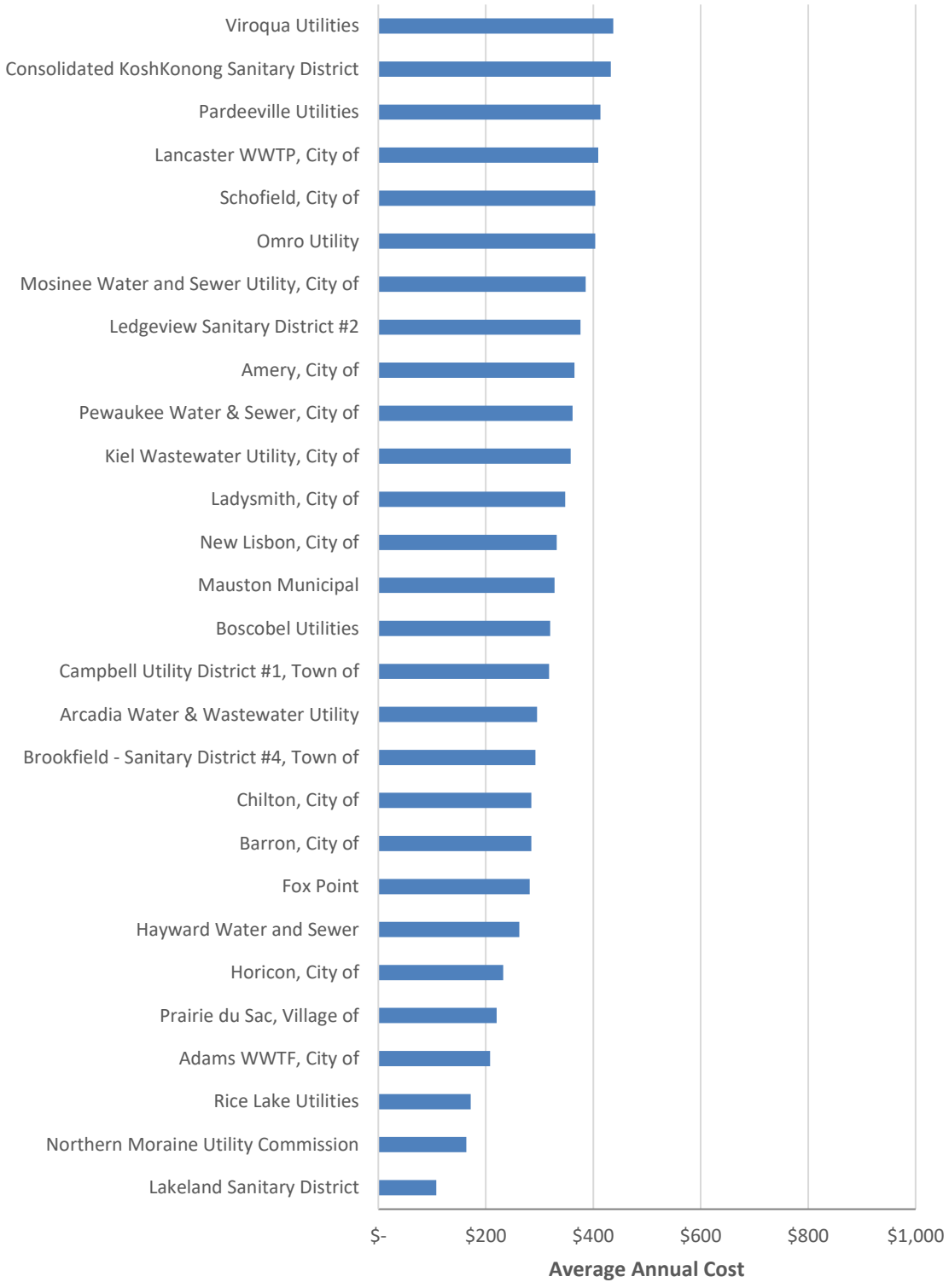
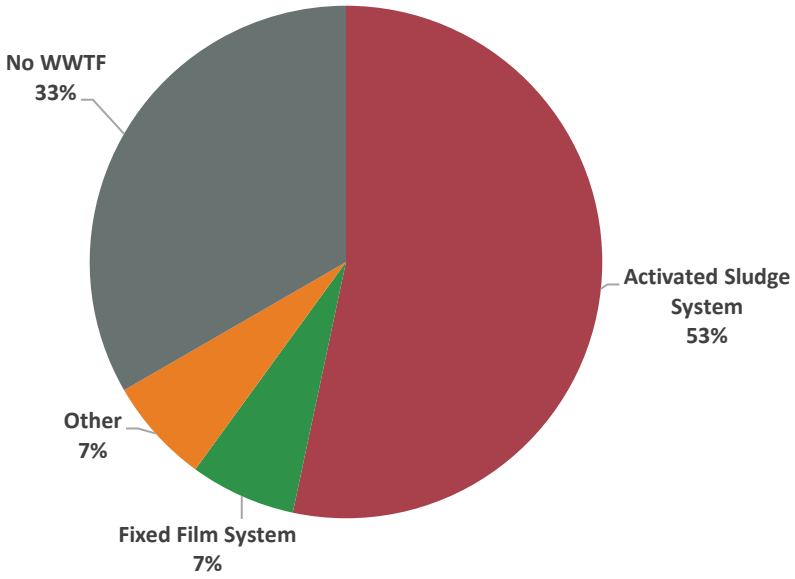


***Figure 1-E**: Breakdown of Respondents by Treatment Type*
Population 5,001-10,000



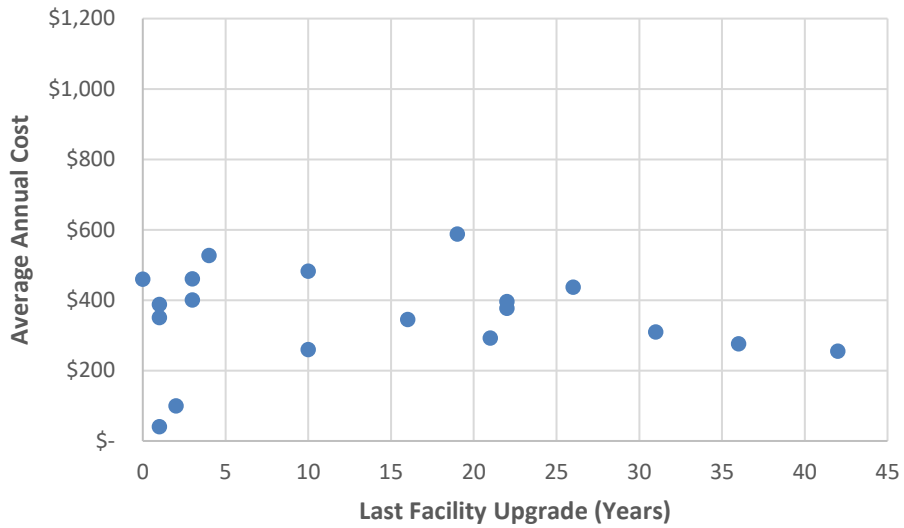
Description:

This graph shows treatment facilities as a percentage of communities

Key Points:

- Communities with a population of 5,001-10,000 use conventional activate sludge or regionalization 86% of the time.

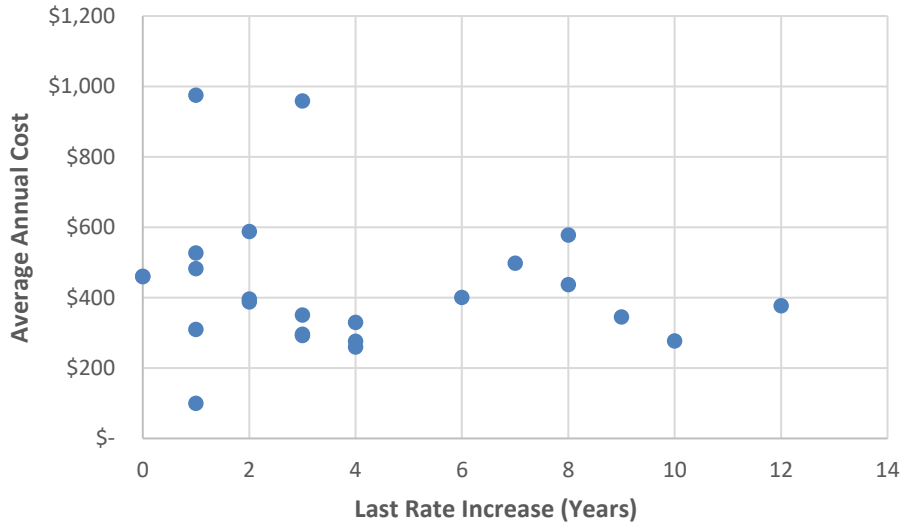
Figure 2-E: *Average Annual Sewer Cost vs. Last Facility Upgrade*
Population 5,001-10,000



Description:

This graph compares the average annual sewer utility cost to the number of years since the last facility upgrade.

Figure 3-E*: Average Annual Sewer Cost vs. Last Rate Increase*
Population 5,001-10,000



Description:

This graph compares the average annual sewer utility cost to the number of years since the last rate increase.

***Figure 4-E**: Total Average Annual Sewer Charge Based on Actual Usage*
Population 5,001-10,000

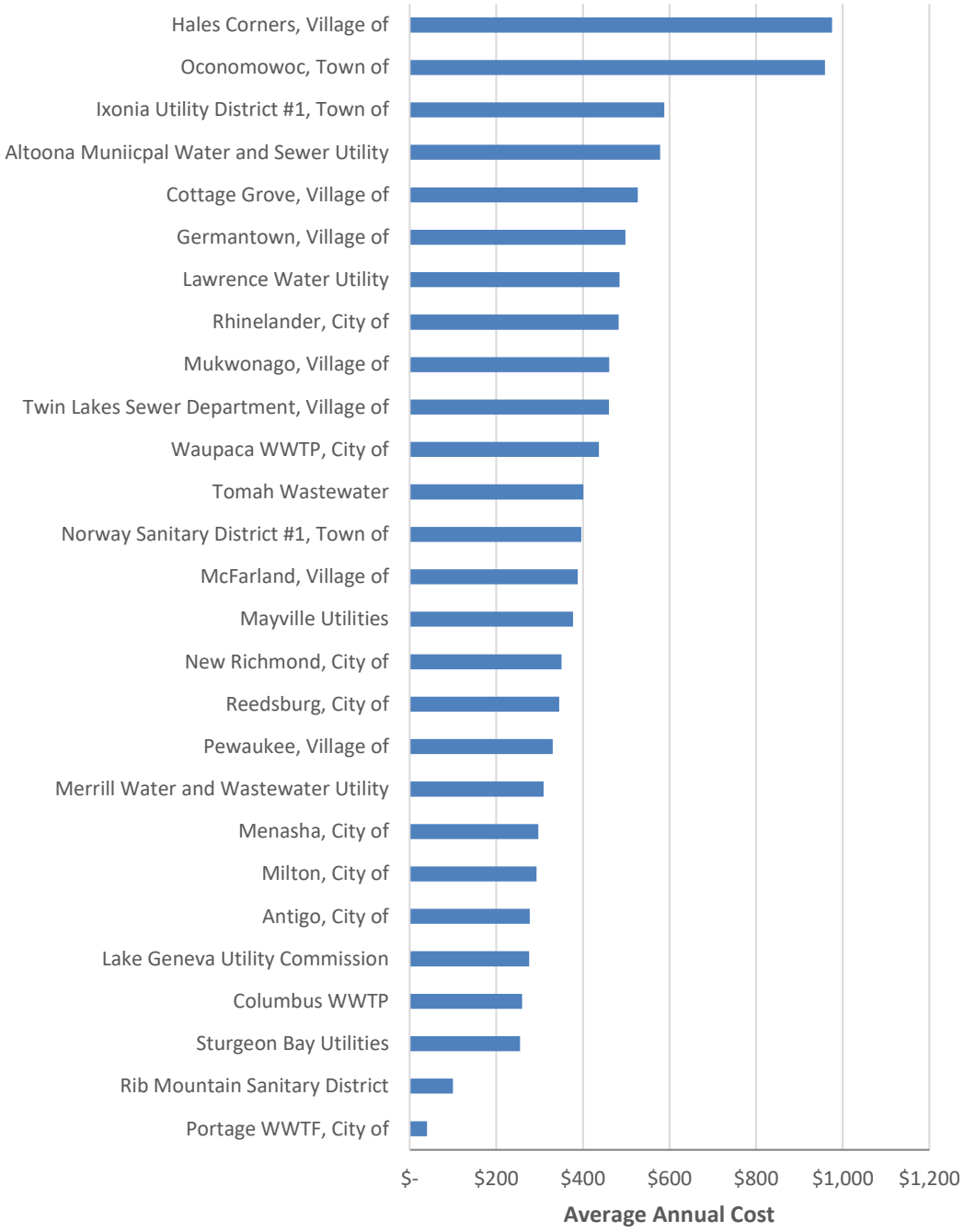
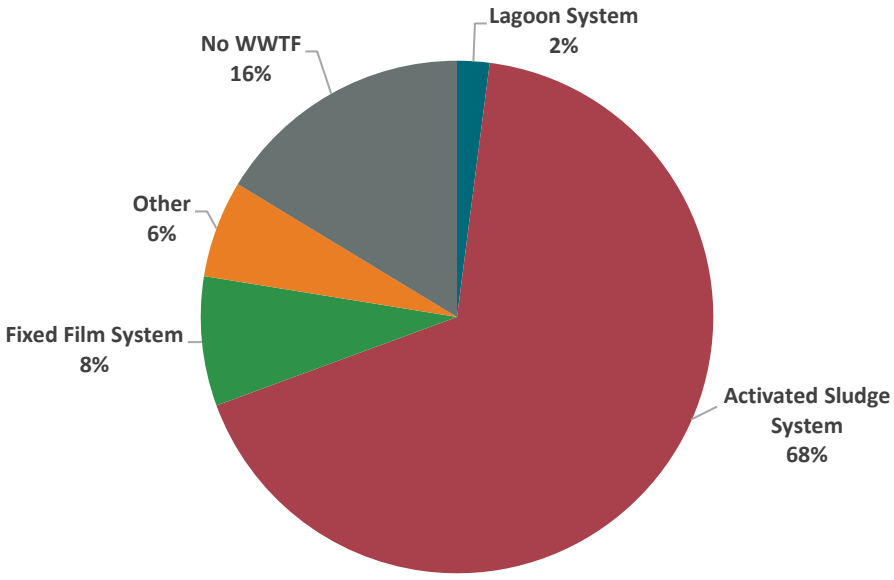


***Figure 1-F**: Breakdown of Respondents by Treatment Type*
Population 10,001-50,000



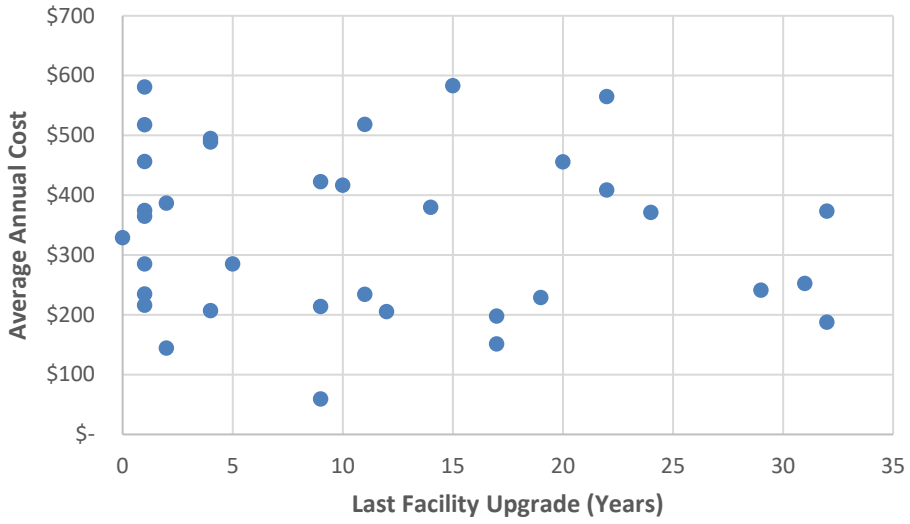
Description:

This graph shows treatment facilities as a percentage of communities

Key Points:

- Communities with a population of 10,001-50,000 primarily use activated sludge treatment process

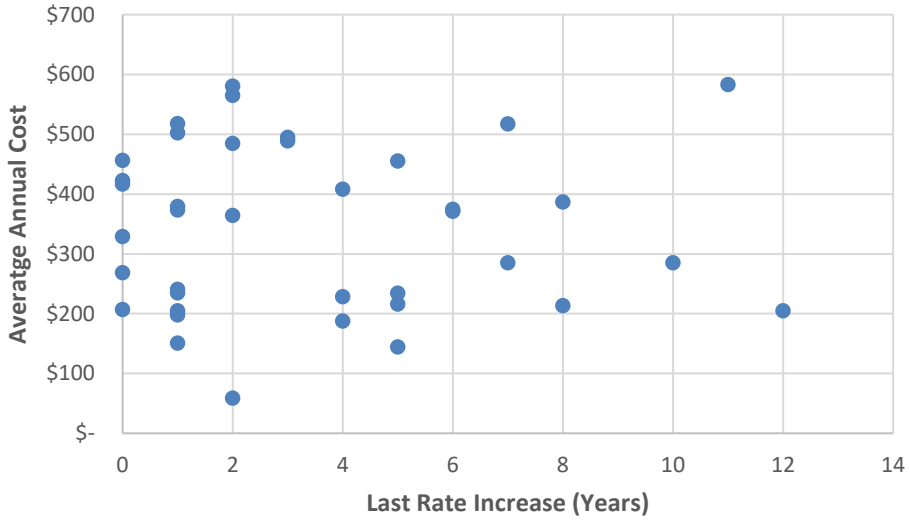
Figure 2-F: *Average Annual Sewer Cost vs. Last Facility Upgrade*
Population 10,001-50,000



Description:

This graph compares the average annual sewer utility cost to the number of years since the last facility upgrade.

Figure 3-F*: Average Annual Sewer Cost vs. Last Rate Increase*
Population 10,001-50,000



Description:

This graph compares the average annual sewer utility cost to the number of years since the last rate increase.

***Figure 4-F**: Total Average Annual Sewer Charge*
Population 10,001-50,000

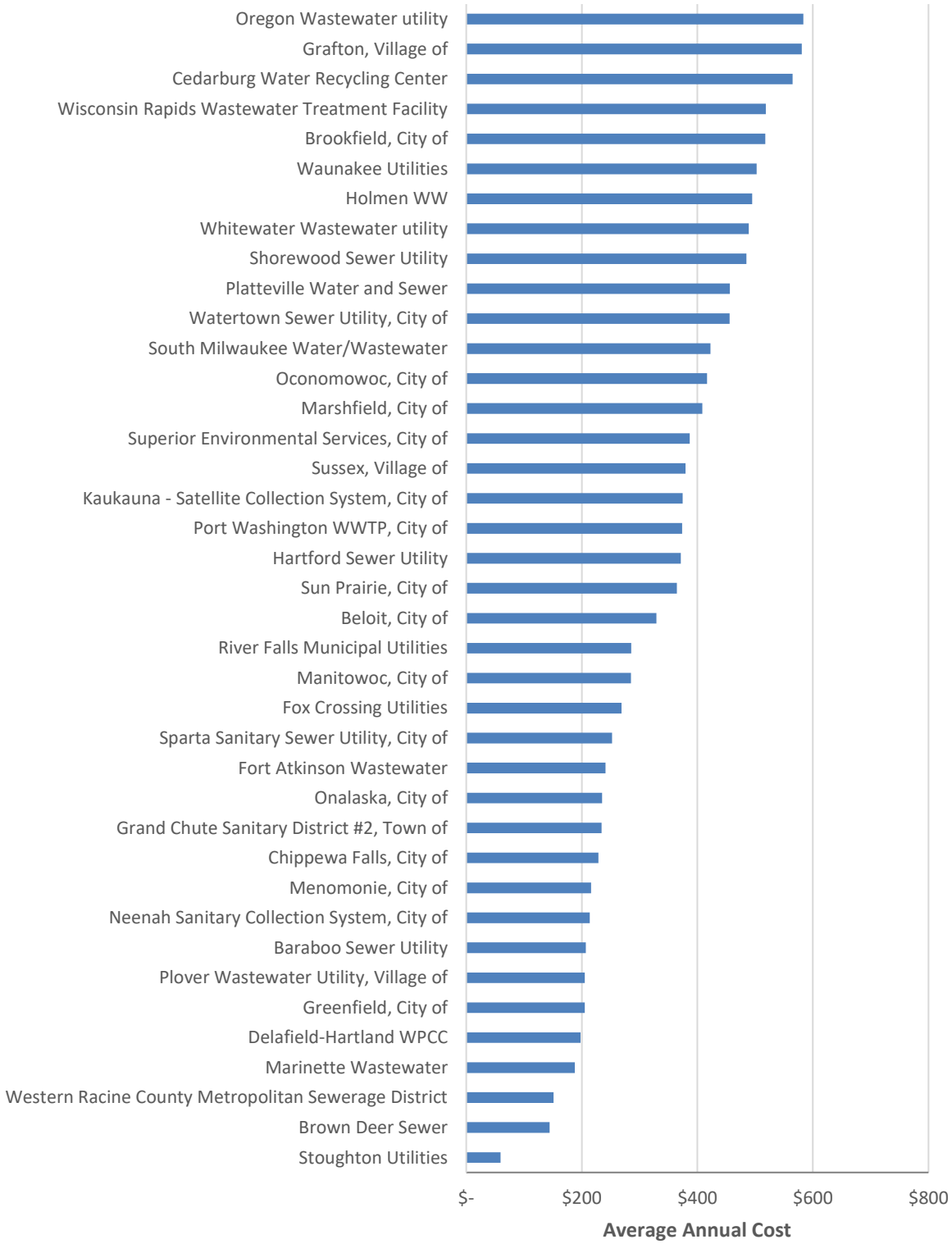
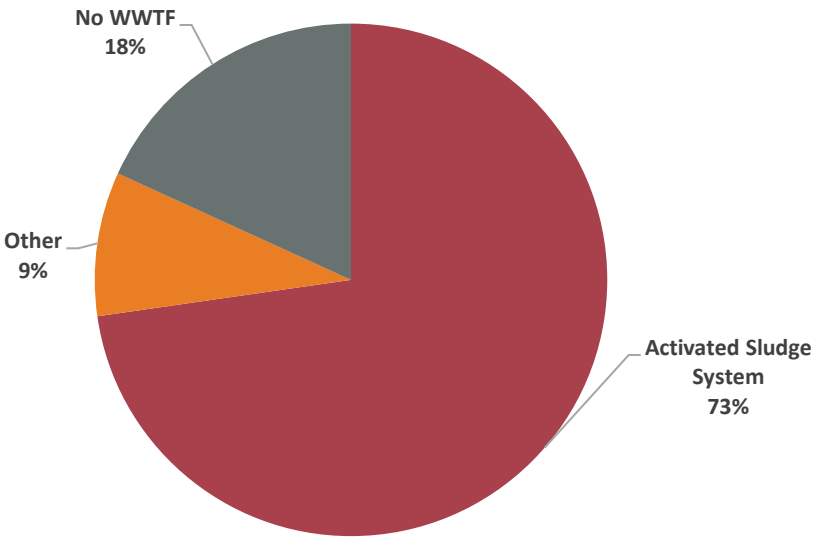


***Figure 1-G**: Breakdown of Respondents by Treatment Type*
Population 50,001+



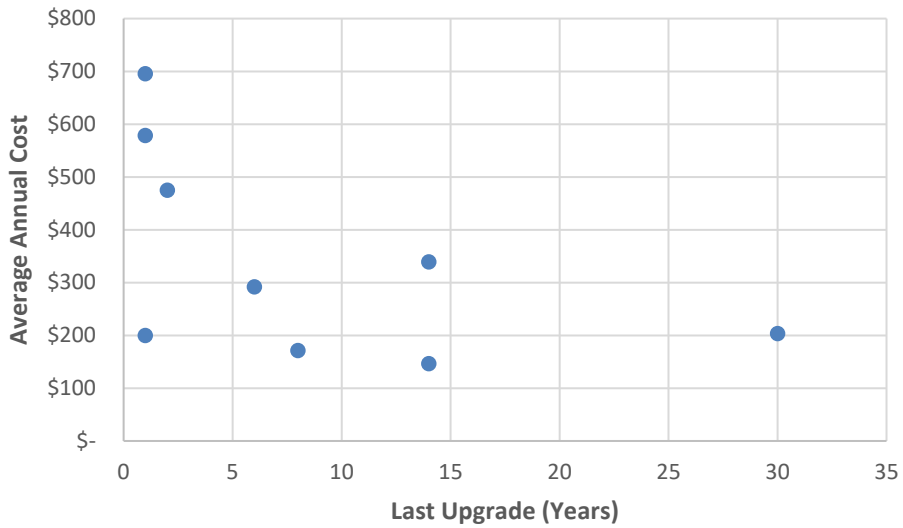
Description:

This graph shows treatment facilities as a percentage of communities

Key Points:

- Of the communities with a population of 50,001+, 73% used conventional activated sludge treatment WWTF.

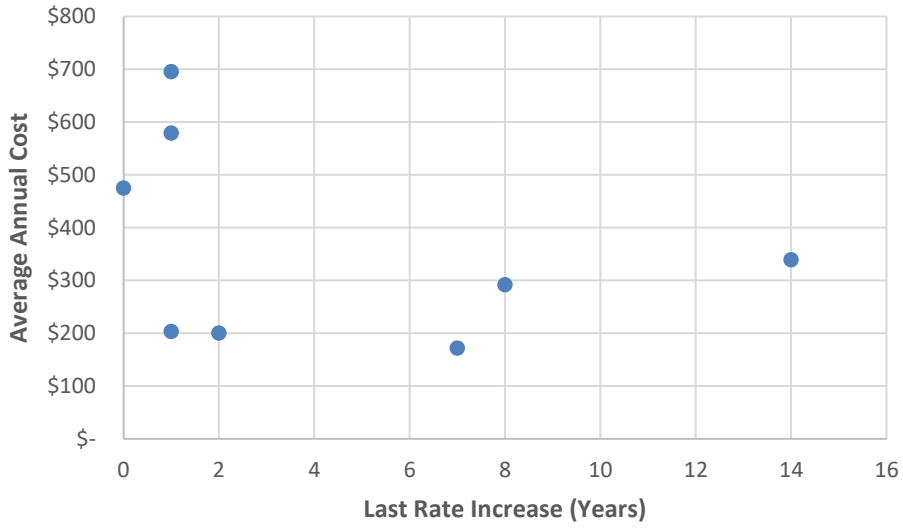
Figure 2-G: *Average Annual Sewer Cost vs. Last Facility Upgrade*
Population 50,001+



Description:

This graph compares the average annual sewer utility cost to the number of years since the last facility upgrade.

Figure 3-G*: Average Annual Sewer Cost vs. Last Rate Increase*
Population 50,001+



Description:

This graph compares the average annual sewer utility cost to the number of years since the last rate increase.

***Figure 4-G**: Total Average Annual Sewer Charge*
Population 50,001+