



Proposal—2019 Sewer Utility Rate Study

City of La Crosse, Wisconsin



Submitted by Trilogy Consulting, LLC

January 31, 2019



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Firm Qualifications

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Trilogy Consulting, LLC offers local governments and utilities an objective, independent perspective on planning, administrative and financial issues. Our core services include sewer, storm water and water user charge rate studies and financial plans; utility customer demand studies; funding for capital improvement plans; economic feasibility studies; ordinance preparation; intergovernmental cooperation studies and agreements; impact fees; and specialized economic and policy analysis.

Trilogy was formed in November 2011 and is jointly owned by our principals, Erik Granum and Christine DeMaster. Prior to forming Trilogy, Christine worked at Ruckert/Mielke from 1997 through 2011, and Erik worked at Ruckert/Mielke from 2007 through 2011. Erik and Christine have 32 years of experience working with dozens of municipalities on a wide variety of issues related to managing, operating, regulating and funding local government infrastructure and services, particularly sanitary sewer service, water service and stormwater management. We do not have any additional staff at this time, so all of our consulting services are provided by our principals. As owners of the company, we are passionate about providing excellent customer service and the highest quality work.

Trilogy Consulting, as well as each of our principals, is a registered municipal advisor with the Securities Exchange Commission and Municipal Securities Rulemaking Board. This registration is required for professionals offering advice regarding the potential issuance of municipal bonds to finance capital improvements. Both Christine and Erik have passed the MSRB's Series 50 Exam for Municipal Advisor Representatives. As registered municipal advisors, we provide independent advice to our client communities regarding potential funding and financial plans.

Both Erik and Christine have completed the American Water Works Association Cost--of-Service Ratemaking course and are members of the Association, with Christine serving on the AWWA Rates and Charges Committee. Christine recently co-authored an AWWA paper discussing water and wastewater utility reserve policies. Christine is the Chair of the Audit and Finance Committee for the Wisconsin section of AWWA.

Specific to the requirements of this proposal, our principals' qualifications and experience includes:

- Preparing dozens of water and sewer rate studies and financial plans for municipal utilities.
- Experience preparing wastewater rate studies for Wisconsin utilities serving wholesale customers, such as Racine, Kenosha, Sussex, and Oconomowoc.
- Experience preparing utility financial plans with similar elements and capital funding challenges faced by La Crosse, such as Mukwonago, Grafton, Port Washington, Ashland, and River Falls, Wisconsin.
- Experience with rate studies for communities with large university populations, such as River Falls and Whitewater.

Firm Qualifications

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- Sewer rate cost of service studies according to industry accepted methods that meet EPA and DNR definitions of a 'user charge system', allocating costs to billable volume, infiltration and inflow, customer costs, BOD, TSS, Phosphorus, and TKN.
 - Development of sewer rates for fixed charges (flat or equivalent meter), domestic strength volume, sampled high strength customers, classified (but not sampled) high strength customers, septic and hauled waste, and wholesale customers.
 - Detailed analysis of wastewater treatment plant influent flows and wastestrengths compared to customer billed usage to estimate infiltration and inflow and wastestrength assumptions.
 - Preparing long-range financial plans for utilities that incorporate forecasts of changes in customer demand and expenses, alternative funding plans for capital improvements, existing and recommended cash reserve levels, debt service, and debt coverage, in order to forecast future rate increases and test the sensitivity of changes in capital financing, customer demand and other variables.
 - Discussions and negotiations with wholesale customer communities regarding service agreements and rates for service

Christine A. DeMaster

Principal / Senior Consultant

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Oconomowoc, WI 53066
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Christine has been a consultant to local governments and utilities since 1997, providing analysis and advice on a wide variety of planning, economic and fiscal issues. While her work experience varies widely the common theme is a focus on helping local governments and utilities develop fair and equitable long-term plans and policies.

Christine is a member of the national and Wisconsin chapter of the American Water Works Association, and serves on the AWWA Rates and Charges Committee and sub-committees charged with developing recommendations for utility reserve policies and preparing revisions to the AWWA Manual M-1 Principles of Water Rates, Fees and Charges. Christine is the Chairman of the WIAWWA Audit and Finance Committee.

Recent presentations and publications include:

- “Depreciation Funding; Bond Financing; Pay As You Go, What’s Best?”, Infrastructure Renewal Engineering & Ethics Seminar, WIAWWA, November 2018
- “Utility Cash Reserves”, Money Matters Column, Journal of the American Water Works Association, April 2018

Education:

- Master’s of Urban Planning, University of Wisconsin—Milwaukee, 1997
- Bachelor of Science, Physics, Carroll College, 1994

Professional Affiliations:

- American Planning Association, Wisconsin Chapter
- American Water Works Association, Wisconsin Chapter

Professional Certification:

- Municipal Securities Rulemaking Board Series 50 Exam

Expertise

- Water and Sewer Rate Studies
- Cost-of-Service Rate Studies
- Specialized Rate Design, including Conservation Water Rates and High-Strength Sewer Rates
- Capital Infrastructure Cost Allocations
- Storm Water Utility Rate Studies and Development
- Public Facilities Needs Assessments and Impact Fee Studies
- Utility Creation and Acquisition Feasibility Studies
- Redevelopment, Site and General Planning Services
- Long-Term Capital Infrastructure Planning and Financial Analysis
- Tax Incremental Financing Planning and Analysis
- Expert Witness Testimony and Litigation Support
- Specialized Economic and Statistical Analysis
- Public Policy Research and Analysis
- Ordinance Drafting, Review and Updating

Christine A. DeMaster

Experience



Utility Rate Studies, Financial Plans, Connection Fees and Impact Fees Completed with Trilogy Consulting

Algoma Sanitary District No. 1—City of Omro—Wholesale sewer rate analysis—2013
City of Ashland—Water Rate Study and Sewer Rate Study—2016
Town of Beloit—Sewer Rate Study—2013; 2018
Town of Beloit—Funding Plan for West Bank Sewer and Water Extension—2015-2016
Village of Cary, IL—Water and Sewer Rate Study—2012; 2016
Village of Cary, IL—Water and Sewer Connection Fee Analysis—2018
Central Brown County Water Authority—water rate consulting for service agreement with Manitowoc—2017-2018
Village of Dousman—Financing plan for major sewer and water main replacements—2012
Village of Dousman—Water Rate Study—2013
Village of Grafton—Water and Sewer Rate Study—2017; Sewer Rate Update—2018
Green Bay Water Utility—Cost of service study and rate design for retail and wholesale water rates—2018
Janesville Water Utility—Long range financial plan, cost of service study and rate design for water rates—2018 / 2019
La Crosse Water and Wastewater Utilities—Water and Wastewater Connection Fee Studies—2016
Lake Zurich, IL—Sewer and Water Rate Study—2011
Village of Libertyville—Village of Mundelein, IL—Financial Analysis of WWTP Consolidation—2018
Madison Water Utility—Customer Demand Study—2014
Madison Water Utility—Water Rate Study, Financial Plan and Water Rate Case—2014-2015
Madison Water Utility—Water Rate Study, Financial Plan and Contested Water Rate Case—2017-2018
Village of Menomonee Falls—Sewer Rate Study—2017
Village of Menomonee Falls—Sewer and Water Impact Fee Update—2014; 2017
Milwaukee Water Works—Negotiations with wholesale customers for cost of service design—2015-present
Milwaukee Water Works—Customer Demand Study—2013; Update—2015-present
Milwaukee Water Works—Review of PSC Public Fire Protection Charge Study—2015-2016
Milwaukee Water Works—Contested Water Rate Case—2014
Village of Mukwonago—Sewer and Water Impact Fee Update—2012; 2017
Village of Mukwonago—Sewer and Water Rate Study and Water Rate Case—2017-2018
Oak Creek Water Utility—Negotiations with current / potential wholesale customers—2014—present
Oak Creek Water Utility—Customer Demand Study—2015-present
Oak Creek Water Utility—Financial analysis for funding of major water treatment plant improvements
City of Oconomowoc—Review of water impact fees—2018-present
Village of Pleasant Prairie—Water rate consulting related to purchased water costs—2015-2016
City of Port Washington—Water Rate Study—2016-2017
City of River Falls—Sewer and Water Rate Study—2015
City of River Falls—Sewer and Water Impact Fee Update—2014
Village of Sussex—Sewer Rate Study—2012
Village of Sussex—Water and Sewer Reserve Capacity Assessment Update—2013; 2019
City of Waukesha—Sewer rate study and 20-year financial plan—2013
City of Whitewater—Sewer Rate Study—2013

Christine A. DeMaster

Experience



Example Utility Rate Studies, Financial Plans, Connection Fees and Impact Fees Completed with Ruekert/Mielke (not all-inclusive)

- City of Beloit—financial analysis for purchase of water utility from Alliant Energy, negotiation of service agreements with South Beloit, Town of Beloit, Town of Rock, Town of Turtle
- City of Cedarburg—sewer rate study, water impact fee study
- Village of Elm Grove—negotiations for water service, financial analysis for financing of new water utility
- City of Franklin—contested water rate case for purchased water rates, water impact fee, sewer connection fee
- Kenosha Water Utility—water and sewer rate studies, sewer impact fee
- Village of Menomonee Falls—water and sewer impact fees, water rate study
- City of Mequon—financial analysis for purchase of water utility from Wisconsin Gas
- Village of Mukwonago—sewer and water impact fees, sewer and water rate studies
- City of Muskego—sewer rate study, analysis of wholesale sewer rates from Town of Norway, sewer and water reserve capacity assessments
- Town of Oconomowoc Utility District—financial plan for construction of new sewer system, sewer rate study, special assessments for sewer construction
- City of Oconomowoc—water and sewer impact fees, sewer availability charges, sewer rate studies, sewer connection charges for wholesale customers
- City and Village of Pewaukee—consolidation study for water and sewer utilities
- Racine Water and Wastewater Utility—Water and sewer rate studies, contested water rate cases, contested sewer rates, water connection fees, negotiations for purchase of Sturtevant Water Utility, water and sewer service agreement negotiations
- Village of Slinger—sewer rate study
- Village of Sussex—sewer rate studies, reserve capacity assessments for sewer and water facilities

Presentations and Papers

- “Utility Cash Reserves”, Money Matters Column, Journal of the American Water Works Association, April 2018
- “Funding Annual Water Infrastructure Replacement”, Annual Meeting WIAWWA, September 2017
- “Depreciation Funding; Bond Financing; Pay As You Go, What’s Best?”, Infrastructure Renewal Engineering & Ethics Seminar, WIAWWA, November 2018
- “Utility Cash Reserves”, Money Matters Column, Journal of the American Water Works Association, April 2018
- “Funding Annual Water Infrastructure Replacement”, Annual Meeting WIAWWA, September 2017
- “Straight Talk About Water Finance” - Wisconsin Water Association Annual Conference, September 2013
- “Balancing Declining Revenues and Increasing Costs” - WIAWWA Management Seminar, August 2013
- “Managing the State Budget Crisis at the Local Level” – League of WI Municipalities Annual Conf., October 2011
- “Doing More With Less: Collaborative Leadership for Service Delivery Workshop” – Local Government Institute of Wisconsin, April 2011
- “Racine Revenue Sharing Program” – WI Legislative Council, Special Committee on Local Service Consolidation, November 2010
- “Managing Impact Fees” – WI Municipal Clerks and Treasurers Institute, July 2010

Erik A. Granum

Principal / Senior Consultant

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Erik has been working in the field of municipal and utility consulting since 2007, performing a wide variety of financial, economic and planning-related consulting services. His philosophy to municipal consulting is to provide an objective, fair and independent perspective for the client, while recognizing the political difficulties in public policy decision-making. He excels in developing alternative scenarios that meet the objectives of the municipality, while being reasonable and defensible for government decision makers that are held accountable to the residents and businesses in their communities.

Erik believes in providing local government officials and decision-makers recommendations that are based on the best available information so that public policy is sound, fair and logical. His passions lie in using available data and interpreting it into something that is understandable and has a positive real impact on communities.

Education:

- Master's of Urban Planning, University of Wisconsin—Milwaukee, 2009
- Bachelor of Business Administration, Marketing & Operations Management, University of Wisconsin—Whitewater, 2004

Professional Affiliations:

- American Water Works Association, Wisconsin Chapter

Professional Certification:

- Municipal Securities Rulemaking Board Series 50 Exam

Expertise

- Water and Sewer Rate Studies
- Cost-of-Service Rate Studies
- Specialized Rate Design, including Conservation Water Rates and High-Strength Sewer Rates
- Capital Cost Allocation
- Storm Water Utility Rate Studies and Development
- Public Facilities Needs Assessments and Impact Fee Studies
- Utility Creation and Acquisition Feasibility Studies
- Land Use Planning Services
- Long-Term Capital Planning and Financial Analysis
- Geographic Information Systems (GIS) - Mapping & Spatial Analysis
- Tax Incremental Financing Planning and Analysis
- Expert Witness Testimony and Litigation Support
- Specialized Economic and Statistical Analysis
- Public Policy Research and Analysis
- Ordinance Review and Updating
- Fiscal Impact Analysis
- Life Cycle Cost Analysis
- Analysis of New Funding Methods
- Grant Funding Research and Preparation of Applications

Erik A. Granum

Experience



Utility Rate Studies, Financial Plans, Connection Fees and Impact Fees Completed with Trilogy Consulting

Algoma Sanitary District No. 1—Wholesale Water Rate Analysis—2018
City of Ashland—Water Rate Study and Sewer Rate Study—2016
Town of Beloit—Sewer Rate Study—2013; 2018
Town of Beloit—Funding Plan for West Bank Sewer and Water Extension—2015-2016
Village of Cary, IL—Water and Sewer Rate Study—2012; 2016
Village of Cary, IL—Water and Sewer Connection Fee Analysis—2018
Central Brown County Water Authority—water rate consulting for service agreement with Manitowoc—2017-2018
Village of Clinton—Sewer Rate Study—2013
Village of Dousman—Water Rate Study—2013
Village of Grafton—Water and Sewer Rate Study—2017; Sewer Rate Update—2018
Green Bay Water Utility—Cost of service study and rate design for retail and wholesale water rates—2018
Janesville Water Utility—Long range financial plan, cost of service study and rate design for water rates—2018 / 2019
La Crosse Water and Wastewater Utilities—Water and Wastewater Connection Fee Studies—2016
Lake Zurich, IL—Sewer and Water Rate Study—2011
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Village of Mukwonago—Sewer and Water Impact Fee Update—2012; 2017
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City of Port Washington—Water Rate Study—2016-2017
City of River Falls—Sewer and Water Rate Study—2015
City of River Falls—Sewer and Water Impact Fee Update—2014
Village of Sussex—Sewer Rate Study—2012
Village of Sussex—Water and Sewer Reserve Capacity Assessment Update—2013; 2019
City of Whitewater—Sewer Rate Study—2013

Erik A. Granum

Experience



Example Utility Rate Studies, Financial Plans, Connection Fees and Impact Fees Completed with Ruekert/Mielke (not all-inclusive)

City of Crystal Lake, IL—sewer and water rate study

City of Fitchburg—water rate study

City of Franklin—contested water rate case for wholesale purchased water rates

Village of Germantown—water rate study

City of Lancaster—water rate study

Village of Menomonee Falls—water and sewer impact fees, water rate study

City of Mequon—financial analysis for purchase of water utility from Wisconsin Gas

Village of Mukwonago—sewer and water impact fees, sewer and water rate studies

City of Muskego—sewer rate study

City of Oconomowoc—sewer rate studies

Racine Water and Wastewater Utility—water and sewer rate studies, contested water rate cases, water and sewer service analysis, water impact fees

Village of Sussex—sewer rate study, reserve capacity assessments for sewer and water facilities

City of Whitewater—contested water rate case

Similar Projects



City of New Richmond, WI (Population 8,897)

The City of New Richmond owns and operates a wastewater treatment plant and wastewater collection system, and a groundwater water supply and distribution system that serves customers in the City.

Water and Wastewater Rate Study, Ongoing

In 2018, Triology was hired to perform, and is in the process of completing, a water and wastewater rate study and application to the Wisconsin Public Service Commission for the City to increase water rates. The draft rate study report is scheduled to be presented to the Utility Commission in March 2019.

The study includes a detailed long-term cash flow analysis for each utility that includes evaluation of the utility's current financial condition relative to a variety of metrics, evaluation of multiple rate change alternatives, a growth sensitivity analysis, price elasticity analysis and a recommended strategy for funding future capital improvements.

Services provided by Triology for this project include:

- Development of revenue requirements
- 10-year cash flow analysis that evaluates the current and future financial condition of the utilities, recommends a plan for capital funding and a plan for future monitoring and adjustments to rates
- Full cost-of-service rate study for each utility, including high-strength industrial surcharges
- Evaluation of alternative rate structures and levels of increase to fully recover the revenue requirements
- Price elasticity of demand analysis and sensitivity analysis for impacts of growth
- Future submittal of the application to increase water rates with the PSC.

Reference:

Rae Ann Ailts
Finance Director
715-246-4167
railts@newrichmondwi.gov

City of Janesville, WI (Population 63,575)

The City of Janesville owns and operates a water supply and distribution system that serves 25,000 customers in the City of Janesville.

Water Rate Study, 2018

In 2018, the City retained Triology Consulting to prepare a long-term financial plan and apply for a water rate

Similar Projects

increase with the Wisconsin Public Service Commission. The goal of the study was to prepare a long-range financial plan to correct the Utility’s negative cash balance and allow it to cash finance an annual main replacement program of \$4.0 million per year. In order to achieve this goal, the Utility needed to secure approval from the City to apply for a significant water rate increase, as well as approval from the Wisconsin Public Service Commission for accelerated depreciation on the cash financed water mains. The PSC has traditionally only allowed recovery of straightline depreciation and a fluctuating benchmark rate of return. To date, Trilogy has prepared a 25-year plan for financing capital improvements and rebuilding the Utility’s reserves, and the anticipated rate increases to do so, and has assisted the Utility in obtaining City Council approval to apply for a 48 percent rate increase. Trilogy is currently working with the Utility and PSC staff to complete an application and prepare a detailed cost of service study and rate proposal.

Services provided by Trilogy for this project:

- Preparation of alternative and recommended 25-year financial plan that included all anticipated capital improvements in the Utility’s 5-year CIP and estimated annual expenditures per year thereafter, evaluation of alternative financing options and anticipated debt service, recommendations for cash reserve levels, forecast rate increases, and evaluation of various financial metrics for each alternative.
- Presentation at a workshop with the City Council to review the alternative financial forecasts and obtain approval for the recommended plan.
- Assistance to Utility staff with preparing an application to the PSC to increase water rates and obtain approval to use expense depreciation to cash finance its water main replacement program.
- Preparation of a cost of service and rate study using the base-extra capacity method. This study will include detailed analysis of system pumpage patterns and customer demand patterns for each customer class (residential, multi-family, commercial, industrial, and public authority) to potentially adjust base, max day and max hour allocation factors and volumetric rate tiers for the various customer classes.

Reference:

Dave Botts

Utility Director

608-755-3116

bottsd@ci.janesville.wi.us

Milwaukee Water Works (Population served—865,100)

The Milwaukee Water Works treats and distributes Lake Michigan water to the City of Milwaukee and five other suburban communities on a retail basis and sells water on a wholesale basis to 11 other municipalities. Retail and wholesale water rates must be approved by the Wisconsin Public Service Commission. Recent proposed rate increases have been contested by the wholesale customers. Since 2012, Trilogy

Similar Projects



Consulting has consulted with Milwaukee Water Works on a variety of projects related to water rate setting.

Customer Demand Study—2013-2014

In 2014, Trilogy completed a study for the Milwaukee Water Works to determine appropriate maximum day and maximum hour demand factors to use for each of its customer classes in future cost-of-service studies. A small change in the maximum demand factors can have a significant impact on the costs allocated to each customer class. With ten wholesale customers and major nonresidential customers, it is important for the utility to have a sound basis for its demand factors. Meters were installed for a sample of customers that were capable of reading and storing hourly consumption data for a period of 40 days. Data from the sampled customers was analyzed to estimate the ratio of maximum day to average day and maximum hour to average day demand for each customer class. This study was the basis for proposing revised customer peak demand factors within the cost-of-service study proposed by the utility in its rate case.

Our services to the utility included:

- Analysis of historical billing and pumping data
- Design of the study and sampling methodology
- Sampling of customer accounts
- Analysis of daily and hourly metering data for sampled customers and recommendations regarding demand factors.

Rate Case Consulting Services—2013-2014

In July 2013, Trilogy was hired to assist Milwaukee Water Works and complement the work performed by another consultant for their water rate case, which was decided in late 2014. Trilogy acted as MWW's "owner's rep" during the entire process, providing strategy input, oversight of the process, QA/QC, customer outreach and assistance with testimony for a contested rate case. The scope of work that Trilogy provided included:

- Provide expert support and testimony regarding customer demand study
- Provide input and expert review of cost-of-service methodology, strategy, calculations and assumptions
- Meet with wholesale customers to discuss the cost-of-service study and proposed rate structure to attempt to resolve possible contested issues prior to rate case filing
- Outreach to Wisconsin Public Service Commission staff to discuss proposed methodologies
- Expert review of all legal documents and assistance with the rate case procedure, including testimonies, exhibits, cross-examination strategies, briefs, and memos
- Assist with messaging and presentations to various groups
- Participate in frequent meetings and teleconferences with the entire rate case team (staff and consultants)

Similar Projects

Rate Case Consulting Services—2015 through the present

As part of the rate order in 2013, the Wisconsin Public Service Commission required the Milwaukee Water Works to: 1) Work with its wholesale customer communities to reach agreement regarding the treatment of customer demand factors prior to the next water rate case; and 2) Work with its wholesale customer communities and Public Service Commission staff to reach agreement regarding the allocation of public fire protection costs for the next rate case. Trilogy Consulting has been providing consulting services to Milwaukee Water Works in support of negotiations with the wholesale customer communities. Milwaukee Water Works has reached an agreement with its wholesale customer communities regarding treatment of customer demand factors; Public Service Commission staff are in the process of reviewing methods for allocating public fire protection costs. Trilogy's services for this process have included:

- Participation on the review team for the Public Service Commission's general study of public fire protection cost allocation methods
- Preparation of detailed cost of service models to test the impacts of alternative approaches for treating customer demand factors and public fire protection cost allocation
- Review and comment on alternative proposals provided by the wholesale customers
- Assistance with negotiations with the Wholesale Customers Group regarding methods for allocating costs between retail and wholesale customers in the next water rate case

Customer Demand Study—2016-2018

Trilogy is currently in the process of preparing an updated Customer Demand Study, with a larger sample of customers within each class and a multi-year collection period.

Reference:

Jeff Novak

Water Business Operations

414-286-2809

Jeffrey.novak@milwaukee.gov

Village of Mukwonago, WI (Population 7,820)

The Village of Mukwonago owns and operates a wastewater treatment plant and wastewater collection system, and a groundwater water supply and distribution system that serves customers in the Village.

Water and Wastewater Rate Study

Trilogy recently completed a water and wastewater rate study and application to the Wisconsin Public Service Commission for the Village to increase water rates. The wastewater rates were implemented in fall of 2017 and the water rate increase was approved in November of 2018 by PSC staff.

The study included a detailed long-term cash flow analysis for each utility that included evaluation of the

Similar Projects

utility's current financial condition relative to a variety of metrics, a financial sensitivity analysis and a recommended strategy for funding future capital improvements.

Services provided by Trilogy for this project include:

- Development of revenue requirements
- 5-year cash flow analysis that evaluated the current and future financial condition of the utilities, recommended a plan for capital funding and a plan for future monitoring and adjustments to rates
- Full cost-of-service rate study for each utility
- Evaluation of alternative rate structures to fully recover the revenue requirements
- Evaluation of the feasibility of upgrading the wastewater treatment plant to accept septage and the establishment of a septage rate
- Preparation and submittal of an application to the Wisconsin Public Service Commission to increase water rates.

Reference:

Dave Brown

Utility Director

414-550-2509

dbrown@villageofmukwonago.com

Village of Grafton, WI (Population 11,568)

The Village of Grafton owns and operates a wastewater treatment plant and wastewater collection system, and a groundwater water supply and distribution system that serves customers in the Village.

Water and Wastewater Rate Study

Trilogy recently completed a water and wastewater rate study and application to the Wisconsin Public Service Commission to increase water rates. Wastewater rates were implemented in September 2017, and water rates were approved by the PSC in February 2018.

The study included a detailed five-year cash flow analysis for each utility that included evaluation of the utility's current financial condition relative to a variety of metrics, a financial sensitivity analysis, evaluation of the utility's borrowing capacity, a recommended strategy for funding future capital improvements, and a recommended plan for the ongoing monitoring, timing and methods for adjusting rates during the five-year forecast period.

Alternative cost of service studies were prepared for each utility, with a focus on options for increasing the share of utility revenues generated by fixed service and public fire protection charges.

Services provided by Trilogy for this project include:

Similar Projects

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- Development of revenue requirements
 - 5-year cash flow analysis that evaluated the current and future financial condition of the utilities, recommended a plan for capital funding and a plan for future monitoring and adjustments to rates
 - Evaluation of billing procedures and other fees and charges
 - Full cost-of-service rate study for each utility
 - Evaluation of alternative rate structures to fully recover the revenue requirements
 - Preparation and submittal of an application to the Wisconsin Public Service Commission to increase water rates.

Reference:

Larry Roy
Facility Operations Coordinator
262-375-5300
lroy@village.grafton.wi.us

City of Ashland, WI (Population 7,957)

The City of Ashland owns and operates a wastewater treatment plant and wastewater collection system, and a surface water treatment plant and distribution system that serve customers in the City.

Water Utility Rate Study

In 2016, Trilogy completed a water rate study for the City of Ashland, Wisconsin. The application to increase water rates was filed with the Wisconsin Public Service Commission in April 2016 and rates were approved in November 2016.

A cash flow analysis was also prepared to guide the City for future planning of rate increases over a 10-year period and implementation of an extensive capital improvement program. This included analysis of existing debt service and debt coverage requirements, evaluation of alternative financing scenarios for future capital construction and projection of future rate increases and possible debt issuance to accomplish the City's objectives.

The proposed rate structure that was approved by the City Council eliminated different rate blocks for different amounts of usage, replacing the structure with a single, uniform rate for all water used by customers, regardless of usage.

Services provided by Trilogy for this study included:

- Analyzing the revenue requirements
- 10-year cash flow analysis including an analysis of existing debt service and debt coverage requirements, evaluation of alternative financing scenarios for future capital construction and projection of future rate

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increases and possible debt issuance to accomplish the City's objectives.

- Performing a full cost-of-service rate study
- Recommending a rate structure to fully recover the revenue requirements
- Preparation and submittal of an application to the Wisconsin Public Service Commission to increase water rates

Sewer Rate Study

In 2016, Trilogy analyzed sewer rates for the City of Ashland and prepared several alternative cost of service allocations and proposed rate structures. The City's rate structure included fixed charges and a volumetric rate. The City had an unusual system of fixed charges that charged a reduced rate to customers with residential sized meters, to provide these customers with the benefit of a grant received from the Clean Water Fund. Trilogy evaluated the equity of this charge, in light of the fact that the debt for the project had been retired, and proposed alternative methods of allocating costs to a fixed charge. The recommended approach was to increase the allocation to fixed costs, based on significant system I/I and phase out the differential fixed charges. The study analyzed the percentage change in revenues per year for each customer class and the annual bill impacts for example customers under multiple options for phasing out the differential rates.

Reference:

Julie Vaillancourt
Finance Director
715-682-7190
jvaillancourt@coawi.org

City of River Falls, WI (Population 15,339)

Water and Sewer Rate Study

The City of River Falls, located in northwestern Wisconsin, owns and operates its own wastewater treatment plant, wastewater collection system, and groundwater supply and distribution system. In 2015 and 2016, Trilogy completed a water and sewer rate study for the City. The most recent rate increase had been in 2012, and a combination of declining water demand, increased operation and maintenance expenses and substantial ongoing capital replacement needs led to the need to reevaluate and increase utility rates. The City was also interested in analyzing customer demand patterns and developing rate structures to allocate costs more fairly between customer classes and encourage water conservation for residential customers.

The Wisconsin Public Service Commission, in May 2016, approved a new water rate structure that includes separate rates charged to different customer classes:

- Inclining block conservation rates for residential customers;
- Uniform volumetric rates for multi-family customers;

Similar Projects

- Declining block rates for non-residential customers, including government-owned meters;
- Uniform volumetric rates for irrigation-only customers, which make up a significant amount of total usage with the City's utility.

The sewer rate study included evaluating capital needs for system replacement, fixed charges to recover costs associate with I/I, a potential change to billing sewer usage based on non-peak usage, in order to avoid charging for water consumed for outdoor use and evaluating the customer bill impacts and revenue impacts of that change.

Services for this study included:

- Development of revenue requirements
- 5-year cash flow analysis that evaluated the City's capital improvement plan financing
- Bill frequency analysis and analysis of monthly peaking patterns by customer class
- Full cost-of-service rate study for each utility
- Evaluation of alternative rate structures to fully recover the revenue requirements and better match customer demand patterns
- Preparation and submittal of an application to the Wisconsin Public Service Commission to increase water rates.

Reference:

Julie Bergstrom
Finance Director/Asst. City Administrator
715-426-3416
JBergstrom@RFCITY.org

Town of Beloit, WI (Population 7,600)

The Town of Beloit, located adjacent to the City of Beloit in south-central Wisconsin, owns and operates its own wastewater treatment plant serving a portion of the Town and customers in the adjacent Town of Rock. Water service is provided to a portion of the Town on a retail basis by the City of Beloit Water Utility.

Sewer Rate Study and Capital Funding Evaluation—2014 and 2018

In 2014, Trilogy completed a full sewer rate study for the Town of Beloit, Wisconsin. The final rate recommendation included a 3-step rate increase that would fully fund all of the utility's revenue requirements and maintain adequate cash flow and fund reserves for flexibility in funding the utility's future capital improvement plans. The rate analysis included designing rates for different customer classes and levels of service for Town of Beloit customers, as well as in the adjoining Town of Rock. A portion of flow related costs were allocated to demand costs and recovered through a fixed customer cost. Trilogy is currently in the process

Similar Projects

of updating the sewer rate study for 2018.

Trilogy's services for this project included:

- Detailed forecasts of customer counts and wastewater flows and loadings based on analysis of historical trends
- Evaluation of the Town's budget to identify additional general and overhead costs to allocate to the utility
- Determination of annual revenue requirements using a utility basis—O&M, depreciation and return on investment
- Analysis of required replacement fund contributions and balance
- Capital improvement financing plan and estimation of future debt service payments
- Preparation of alternative 6-year cash flow forecasts under different rate increase scenarios, including analysis of debt coverage and reserve balances versus recommended reserve balances
- Detailed cost of service study allocating each O&M budget line item, depreciation expenses and each category of plant assets to Demand, Volume, BOD, TSS, Phosphorus and Customer costs
- Evaluation of three alternative rate structures
- Evaluation of alternative plans for stepped rate increases

West Bank Service Area Funding Study—2015-2016

In 2008, the Town of Beloit signed an intergovernmental agreement with the City of Beloit regarding the 208 sewer service area on the west side of the Rock River (West Bank service area). This agreement allowed the West Bank service area to be in the Town's sewer service area but be served by the City's wastewater treatment facility on a wholesale basis. The agreement required the Town to complete construction of the sanitary sewer mains and water mains to serve the area by 2018. Sewer mains will be owned and operated by the Town with wastewater treatment provided by the City on a wholesale basis; water mains will be transferred to the City's water utility. The West Bank service area is a particularly challenging area for extending and funding service due to the costs of the improvements and the large amount of vacant land without a developer.

In 2015, the Town hired Trilogy Consulting to analyze various scenarios for the financing and funding of the costs for construction of water and sewer main improvements and road reconstruction, as well as sewer operation and maintenance, in the West Bank service area. Services for this study included:

- Development of multiple scenarios for initial capital funding and charges for ongoing O&M
- Analyzing the Town's existing budget and debt margins to evaluate the feasibility of project financing options
- Estimating debt service payments for the improvements for a variety of sources of financing

Similar Projects

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- Estimating operation and maintenance expenses for the new service area
 - Preparing long-term cash flow forecasts taking into account O&M and debt service expenses and revenues from special assessments, user charges, and tax levies
 - For each of the potential scenarios, evaluating the projected impact on the Town general fund and sewer utility, property tax rates, user charge rates and property owners both within and outside of the proposed service area
 - Conducting multiple workshops with the Town Board to discuss the scenarios and the projected impacts and narrow down and refine the options

Reference:

Sara Regenauer
Finance Director/Treasurer
608-364-2980 x5
sregenauer@town.beloit.wi.us7

Compensation / No Conflict of Interest



The scope of work described in the RFP will be performed with a not-to-exceed amount of compensation of \$20,927.50. Additional services to support contract negotiations with wholesale customers would be provided on a time and materials basis. Trilogy requests use of the Standard Terms and Conditions for Trilogy Consulting approved by the Board of Public Works on August 3, 2015 for the 2015 Sewer Connection Fee Study.

Trilogy has not worked for any of the wholesale communities of Shelby, Campbell, Onalaska, or La Crescent and has no conflicts of interest.

Task	Estimated Hours			Rate	Cost
	Granum	DeMaster	Total		
Project Kickoff Meeting					
Prepare draft information request	0.50	2.00	2.50		
Conference call for kickoff meeting	2.00	2.00	4.00		
Task Subtotal	2.50	4.00	6.50	\$110.00	\$ 715.00
Review of Existing Wastewater Rates and Utility Financial Status					
<i>Review of 2013-2018 trends and current utility financial status</i>					
O&M expense trend analysis	0.50	3.00	3.50		
Customer usage trend analysis	1.00	3.00	4.00		
Analysis of recent years' capital improvements	0.50	2.00	2.50		
Analysis of recent years' operating income, rate of return, cash flow, contingency account balances, and liquidity	0.50	3.00	3.50		
Evaluation of key strengths and weaknesses	1.00	3.00	4.00		
Conference call with City staff to clarify information	1.00	1.00	2.00		
<i>Determination of 2019 revenue requirements</i>					
Develop projected operating expenses	0.50	1.00	1.50		
Develop projections for other operating revenues and non-operating revenues		0.50	0.50		
Update schedule of required replacement fund balance / annual contribution	0.50	2.00	2.50		
Develop capital financing needs based on CIP and proposed financing plan	0.25	2.00	2.25		
Identify any additional revenue requirements, such as contribution to cash reserves	0.50	1.00	1.50		
<i>Evaluate adequacy of current rates</i>					
Develop projected customer demand	0.50	2.00	2.50		
Calculate revenues at current rates	0.25	1.00	1.25		
Evaluate adequacy of current rates to meet 2019 revenue requirements		0.50	0.50		
Task Subtotal	7.00	25.00	32.00	\$110.00	\$ 3,520.00
Forecast Revenue Requirements, Cash Flows and Rate Increases for 2020-2025					
<i>Capital Financing Needs</i>					
Compile list of planned facility upgrades each year for the 7-year planning horizon		2.00	2.00		
Identify additional capital replacement needs based on the CIP, past history, annual depreciation expense, and discussion with City staff	1.00	3.00	4.00		
Evaluate alternative methods of capital financing and prepare schedules of estimated cash financing, debt issuances and debt service	1.00	3.00	4.00		
<i>Cash Flow Scenarios</i>					
Cash flow scenarios to test alternative rate increases for 2019-2025: no rate increase for 5 years; annual rate increases; initial 1-2 rate increases followed by inflationary increases	3.00	6.00	9.00		
Recommendations for reserve levels based on operating expenses, debt service, and capital replacement needs	0.50	2.00	2.50		
Analyze projected cash flows, debt coverage, reserve levels and rate of return by year for each alternative	2.00	2.00	4.00		
Conference call with City staff to discuss scenarios	1.00	1.00	2.00		

Compensation



Task	Estimated Hours			Rate	Cost
	Granum	DeMaster	Total		
<i>Draft 7-year plan for capital financing and rate increases</i>	1.00	2.00	3.00		
<i>Sensitivity analysis for impact of changes in growth</i>	1.00	4.00	5.00		
Task Subtotal	10.50	25.00	35.50	\$ 110.00	\$ 3,905.00
Cost of Service and Rate Structure Analysis					
<i>Cost of Service Allocation</i>					
Review system data to identify any potential changes to allocation methods and factors	1.00	4.00	5.00		
I/I and wastestrength analysis	1.00	3.00	4.00		
Allocation of costs to utility function - collector system, interceptor system, WWTP flows and loadings, etc.	1.00	3.00	4.00		
Proportionate customer demand analysis		2.00	2.00		
Allocation of revenue requirements to customer classes - retail classes, wholesale customers, high-strength, holding tank and septic waste	0.50	2.00	2.50		
<i>Rate Structure Recommendations</i>					
Calculate rates based on current rate structure	0.25	2.00	2.25		
Evaluate equity of current rate structure and develop alternatives to be evaluated	0.50	2.00	2.50		
Develop alternative rate structures and proposed rates	1.00	4.00	5.00		
Prepare summary comparisons of rates and impacts on wholesale customers and example retail customers for each alternative	0.50	3.00	3.50		
Forecast total revenues and increase over present rates for customer classes	0.50	2.00	2.50		
Evaluate equity of proposed rate structures	0.50	3.00	3.50		
Conference call with City staff to discuss cost of service and rates	1.00	1.00	2.00		
<i>Price elasticity of demand analysis</i>	2.00	6.00	8.00		
<i>Update community comparison of rates for comparable local, regional, and state utilities</i>	0.50	4.00	4.50		
Task Subtotal	10.25	41.00	51.25	\$ 110.00	\$ 5,637.50
Connection Fee Analysis					
Update analysis of influent flows and loadings	0.50	2.00	2.50		
Update current value of system assets by category	1.00	6.00	7.00		
Update analysis of REC definition	1.00	4.00	5.00		
Update calculation of fee per REC	0.50	2.00	2.50		
Develop recommendations for amount and structure of fee and implementation	1.00	3.00	4.00		
Task Subtotal	4.00	17.00	21.00	\$ 110.00	\$ 2,310.00
Preliminary Report					
Prepare draft report that includes tentative rate structures	3.00	12.00	15.00		
In-person meeting with City staff to review draft report	2.00	2.00	4.00		
Prepare PowerPoint presentation for Board of Public Works or public information meeting	2.00	5.00	7.00		
Present draft report to Board of Public Works or at public information meeting	1.00	1.00	2.00		
Task Subtotal	8.00	20.00	28.00	\$ 110.00	\$ 3,080.00
Final Report					
Prepare final report based on comments received	2.00	6.00	8.00		
Prepare PowerPoint presentation for final report		2.00	2.00		
Present final report to Board of Public Works	1.00	1.00	2.00		
Present final report to Finance and Personnel Committee	1.00	1.00	2.00		
Attend City Council meeting for adoption of rates	1.00	1.00	2.00		
Task Subtotal	5.00	11.00	16.00	\$ 110.00	\$ 1,760.00
Grand Total	47.25	143.00	190.25		\$ 20,927.50

Project Timeline

Based on the scope of work outlined in the RFP and our budget, in order to complete all study objectives, requirements, and elements, we are proposing a slightly extended timeline with the final report to be presented to the City Council at the June 13th meeting. We believe this allows for more collaborative time with staff and a slightly longer turnaround time for staff review and revisions to be made based on recommendations from the Board of Public Works. Our proposed timeline is below.

Task	Target Date for Completion
Project Kickoff Meeting	
Prepare draft information request	2/15/2019
Conference call for kickoff meeting	2/15/2019
City Staff provides information to Trilogy	2/22/2019
Review of Existing Wastewater Rates and Utility Financial Status	
<i>Review of 2013-2018 trends and current utility financial status</i>	3/8/2019
<i>Conference call with City staff to clarify information</i>	3/8/2019
<i>Determination of 2019 revenue requirements</i>	3/15/2019
<i>Evaluate adequacy of current rates</i>	3/15/2019
Forecast Revenue Requirements, Cash Flows and Rate Increases for 2020-2025	
<i>Capital Financing Needs</i>	3/29/2019
<i>Cash Flow Scenarios</i>	3/29/2019
<i>Conference call with City staff to discuss scenarios</i>	3/29/2019
<i>Draft 7-year plan for capital financing and rate increases</i>	3/29/2019
<i>Sensitivity analysis for impact of changes in growth</i>	3/29/2019
Cost of Service and Rate Structure Analysis	
<i>Cost of Service Allocation</i>	4/5/2019
<i>Rate Structure Recommendations</i>	4/19/2019
<i>Conference call with City staff to discuss cost of service and rates</i>	4/19/2019
<i>Price elasticity of demand analysis</i>	4/19/2019
<i>Update community comparison of rates for comparable local, regional, and state utilities</i>	4/19/2019
Connection Fee Analysis	4/19/2019
Preliminary Report	
Prepare draft report that includes tentative rate structures	4/26/2019
In-person meeting with City staff to review draft report	5/10/2019
Prepare PowerPoint presentation for Board of Public Works or public information meeting	5/17/2019
Present draft report to Board of Public Works or at public information meeting	5/20/2019
Final Report	
Prepare final report based on comments received	5/29/2019
Present final report to Board of Public Works	6/3/2019
Present final report to Finance and Personnel Committee	6/6/2019
Attend City Council meeting for adoption of rates	6/13/2019

Example Rate Study

An example sewer rate study that was prepared in 2017 for the Village of Grafton is attached on the following pages that. Given space considerations of this proposal, the appendix that contains the detailed cost of service tables in support of the study was not included in the hard copies of this proposal, but is in the electronic version. A condensed version of this study was also prepared in 2018 for the Village, which was used for the first of several annual updates to the study analysis.