RAFTELIS

City of Laredo

Comprehensive Water & Wastewater Rate Study 2023

STATEMENT OF QUALIFICATIONS / DECEMBER 1, 2023

DEI@ RAFTELIS

Diversity and inclusion are an integral part of Raftelis' core values.

We are committed to doing our part to fight prejudice, racism, and discrimination by becoming more informed, disengaging with business partners that do not share this commitment, and encouraging our employees to use their skills to work toward a more just society that has no barriers to opportunity.

REGISTERED MUNICIPAL ADVISOR

Raftelis is registered with the U.S. Securities and Exchange Commission (SEC) and the Municipal Securities Rulemaking Board (MSRB) as a Municipal Advisor.

Registration as a Municipal Advisor is a requirement under the Dodd-Frank Wall Street Reform and Consumer Protection Act. All firms that provide financial forecasts that include assumptions about the size, timing, and terms for possible future debt issues, as well as debt issuance support services for specific proposed bond issues, including bond feasibility studies and coverage forecasts, must be registered with the SEC and MSRB to legally provide financial opinions and advice. Raftelis' registration as a Municipal Advisor means our clients can be confident that Raftelis is fully qualified and capable of providing financial advice related to all aspects of financial planning in compliance with the applicable regulations of the SEC and the MSRB.

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Photo on cover courtesy of Barbara Brannon (Flickr)

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LETTER OF INTEREST

December 1, 2023

Mr. Arturo Garcia, Jr., P.E, Director
City of Laredo – Utilities Department
5816 Daugherty Avenue
Laredo, TX 78044

Subject: Statement of Qualifications for Comprehensive Water & Wastewater Rate Study 2023

Dear Mr. Garcia:

Many businesses and residents rely on the City of Laredo (City) as their water and wastewater service provider. Historically, the service provided in our industry is done silently until something goes wrong. In today's world where regulations are changing, significant growth is occurring, and costs are increasing, utilities must have a plan for addressing future needs, as well as emergencies. A study completed by Raftelis will provide the City with a solid financial plan for addressing these challenges and ensuring the utility is financially sustainable. In addition, the cost-of-service analysis will provide the City with support for the costs associated with serving each of the City's class of customers.

For this engagement we have assembled a team that includes Todd Cristiano as our Project Director (Principle) who represents the contractual authority of the firm. Todd has nearly 20 years of experience working with and in utilities. As a past chair of the American Water Works Association (AWWA) Rates Committee, Todd has co-authored the *Manual M1, Principles of Water Rates, Fees and Charges* and is the co-instructor for the AWWA's biennial *Financial Management: Cost-of-Service Rate-Making Seminar*. Our Project Manager (Primary Contact), Angie Flores, has 30 years of experience in the utility industry. Her career started at Texas Water Development as a financial analyst responsible for reviewing financial applications for its funding programs. The rest of our project team is described in our proposal.

We are proud of the resources we can offer the City of Laredo and welcome the opportunity to assist you with this engagement. Raftelis acknowledges that the issuance of a solicitation shall in no way obligate the City to award a contract or pay any costs associated with preparing a response to said solicitation. No addendums were released or received during the preparation of this proposal. Should you have any questions, please do not hesitate to contact me at 512.790.2108 or by email at aflores@raftelis.com.

Sincerely,

Angie Flores

Angie Flores
Senior Manager

PROFILE OF FIRM

Who is Raftelis

HELPING LOCAL GOVERNMENTS AND UTILITIES THRIVE

Local government and utility leaders partner with Raftelis to transform their organizations by enhancing performance, planning for the future, identifying top talent, improving their financial condition, and telling their story. We've helped more than 600 organizations in the last year alone.

We believe that Raftelis is the *right fit* for this project. We provide several key factors that will benefit the City and help to make this project a success.

RESOURCES & EXPERTISE: This project will require the resources necessary to effectively staff the project and the skillsets to complete all of the required components. With more than 160 consultants, Raftelis has the largest water-industry financial and management consulting practice in the nation, including many of the industry's leading rate consultants and experts in key related areas, like stakeholder engagement and data analytics. Our depth of resources will allow us to provide the City with the technical expertise necessary to meet your objectives.

DEFENSIBLE RECOMMENDATIONS: When your elected officials and customers are considering the validity of recommended changes, they want to be confident that they were developed by experts using the latest industry standard methodology. Our staff are involved in shaping industry standards by chairing committees within the American Water Works Association (AWWA) and the Water Environment Federation (WEF) and co-authoring many industry-standard books regarding utility finance and rate setting. Being so actively involved in the industry will allow us to keep the City informed of emerging trends and issues and be confident that our recommendations are insightful and founded on sound industry principles. In addition, with Raftelis' registration as a Municipal Advisor, you can be confident that we are fully qualified and capable of providing financial advice related to all aspects of utility financial planning in compliance with federal regulations.

HISTORY OF SIMILAR SUCCESSES: An extensive track record of past similar work will help to avoid potential pitfalls on this project and provide the know-how to bring it across the finish line. Raftelis staff has assisted 1,500+ utilities throughout the U.S. with financial and rate consulting services with wide-ranging needs and objectives. Our extensive experience will allow us to provide innovative and insightful recommendations to the City and will provide validation for our proposed methodology ensuring that industry best practices are incorporated.

USER-FRIENDLY MODELING: A modeling tool that your staff can use for scenario analysis and financial planning now and into the future will be key for the City going forward. Raftelis has developed some of the most sophisticated yet user-friendly financial/rate models available in the industry. Our models are tools that allow us to examine different policy options and cost allocations and their financial/customer impacts in real time. We offer model options including Microsoft Excel-based and web-based tools that are developed with the expectation that they will be used by the client as a financial planning tool long after the project is complete.

RATES THAT ARE ADOPTED: For the study to be a success, rates must be successfully approved and implemented. Even the most comprehensive rate study is of little use if the recommendations are not approved and implemented. Raftelis has assisted numerous agencies with getting proposed rates successfully adopted. We focus on effectively communicating with elected officials about the financial consequences and rationale behind recommendations to ensure stakeholder buy-in and successful rate adoption.

30 YEARS OF SERVICE

How we stack up

OUR TEAM INCLUDES

160+ consultants focused on finance/management/communication/technology for the public sector

2 chairs & **16** members of AWWA and WEF utility finance and management committees and subcommittees

& a Past President of AWWA

RAFTELIS HAS PROVIDED ASSISTANCE FOR

1,500+ public agencies and utilities

that serve more than **25%** of the U.S. population

including the agencies serving **38** of the nation's 50 largest cities

in the past year alone, we worked on **1,000+** projects for **600+** agencies in **46** states

NATIONAL EXPERIENCE

This matrix shows a brief sample of some of the utilities throughout the U.S. and Canada that Raftelis staff have assisted and the services performed for these utilities.

		Finance							Organization					Technology		
State	Client	Affordability Analysis & Program Development	Capital Improvements Planning/Prioritization	Debt Issuance Support	Economic & Financial Evaluations	Financial Planning & Modeling	Rate, Charge, & Fee Studies	Stormwater Utility Development &Support	Organizational, Governance, & Operations Optimization	Performance Measurement & Benchmarking	Program Planning & Support	Stakeholder Engagement & Communication	Strategic Planning	Billing, Permitting, & Customer Information Audits	Business Process Development	Data Management, Analytics, & Visualization
AL	Birmingham Water Works Board	●	●	●		●	●			●		●	●			●
AR	Central Arkansas Water		●			●	●		●				●			
AR	Little Rock Wastewater Utility		●			●	●			●		●				
AZ	Phoenix, City of	●	●	●		●	●			●						
AZ	Pima County		●			●	●									
AZ	Tucson Water		●			●	●					●				
CA	Alameda County Water District		●	●		●	●									
CA	Anaheim, City of		●			●	●									
CA	Central Contra Costa Sanitation District		●			●	●		●	●						
CA	East Bay Municipal Utility District	●	●			●	●									
CA	Long Beach, City of	●		●		●	●									
CA	Los Angeles, City of					●	●									
CA	Metropolitan Water District of Southern California					●	●			●						
CA	San Diego, City of		●			●	●									
CA	San Juan Capistrano, City of		●			●	●									
CA	Santa Cruz, City of		●			●	●									
CA	Thousand Oaks, City of	●	●			●	●									
CA	Ventura, City of					●	●					●				
CO	Boulder, City of		●			●	●	●								
CO	Denver Wastewater Management Division			●			●		●	●		●				
CO	Denver Water						●									●
CO	Greeley, City of		●	●	●	●	●	●								
CO	Metro Wastewater Reclamation District												●			
CT	Groton, City of		●		●	●	●		●		●	●			●	●
DC	DC Water		●			●	●		●	●			●			●
DE	Wilmington, City of								●				●			
FL	Emerald Coast Utilities Authority		●	●		●										
FL	Florida Keys Aqueduct Authority		●	●		●	●									
FL	Pompano Beach, City of		●			●	●		●							
FL	St. Johns County		●	●		●	●									
GA	Augusta, City of		●			●	●									

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GA	Columbus Water Works		●	●		●	●									
GA	Paulding County		●	●	●	●										
HI	Honolulu ENV, City and County of		●			●	●									
IL	Bloomington, City of		●			●	●									
IL	City of Naperville		●			●	●									
KS	Topeka, City of		●			●	●									
KS	Wichita, City of		●			●	●									
KY	Hardin County Water District #1		●			●	●									
LA	New Orleans, Sewerage & Water Board of		●	●		●	●	●		●		●				●
MA	Boston Water & Sewer Commission		●			●	●	●	●		●	●				●
MA	Northampton, City of	●				●	●					●				
MD	Baltimore, City of	●	●			●	●	●	●			●	●			●
ME	Portland Water District					●	●									
MI	Detroit Water and Sewerage Department					●	●									
MI	Flint, City of					●	●									●
MI	Saginaw, City of		●			●	●									
MO	Metropolitan St. Louis Sewer District		●	●		●	●	●	●							
MS	Jackson, City of	●	●			●	●		●							●
NC	Charlotte Water	●	●			●	●									
NC	Durham, City of		●	●		●	●									
NC	Fayetteville, City of		●	●		●	●	●								
NC	Raleigh, City of		●	●		●	●	●	●		●					
NH	Concord, City of		●			●	●									
NJ	Brick Township Municipal Utilities Authority					●	●									
NJ	Jersey City Municipal Utilities Authority		●			●	●									
NV	Henderson, City of		●			●	●									
NY	New York City Water Board		●			●	●									●
OH	Montgomery County Environmental Services		●			●	●		●	●			●		●	●
OH	Northeast Ohio Regional Sewer District	●	●			●	●	●		●						●
OK	Chickasha, City of						●	●	●	●		●			●	●
OK	Stillwater Utilities Authority					●	●									●

NATIONAL EXPERIENCE

This matrix shows a brief sample of some of the utilities throughout the U.S. and Canada that Raftelis staff have assisted and the services performed for these utilities.

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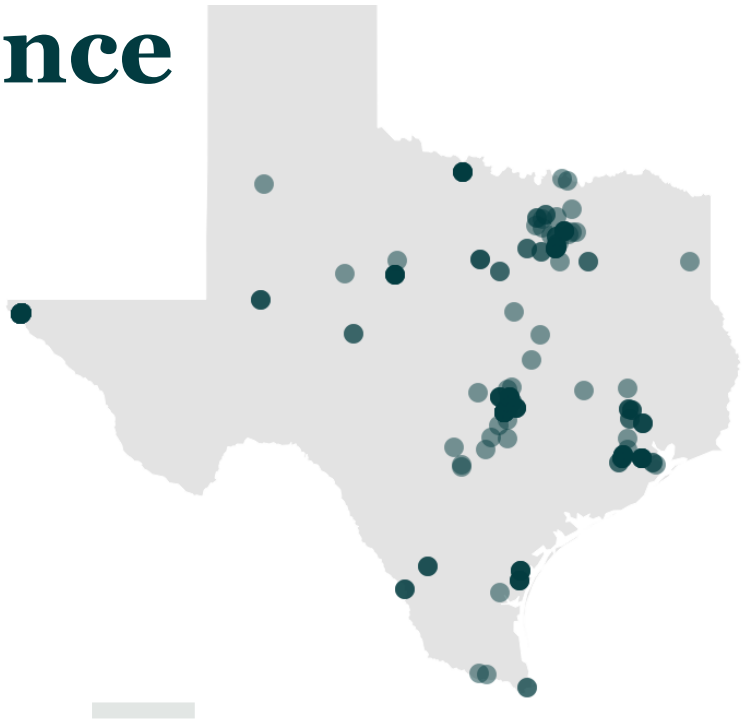
OR	Portland Bureau of Water, City of		●	●		●	●									●
PA	Capital Region Water	●	●	●		●	●	●				●	●			
PA	Philadelphia Water Department	●	●	●		●	●		●	●	●	●			●	●
PA	Pittsburgh Water and Sewer Authority	●	●	●	●	●	●		●	●		●	●		●	●
RI	Newport, City of		●	●		●	●									
RI	Providence Water Supply Board		●			●	●		●	●						
SC	Greenville Water					●	●		●							
SC	Mount Pleasant Waterworks		●			●	●						●			
TN	Johnson City, City of	●	●	●		●	●									
TN	Metro Water Services of Nashville and Davidson County		●	●		●	●	●		●		●	●			
TX	Abilene, City of		●			●	●									
TX	Austin, City of		●	●		●	●			●						
TX	Copperas Cove, City of		●			●	●									
TX	Dallas, City of		●			●	●	●				●			●	●
TX	El Paso Water Utilities		●	●		●	●					●				●
TX	North Texas Municipal Water District		●		●				●	●		●	●		●	
TX	Round Rock, City of						●									
TX	San Angelo, City of		●			●	●									
TX	San Antonio Water System	●	●			●	●					●				
TX	San Jacinto River Authority		●			●	●									
TX	San Marcos, City of		●			●	●									
UT	Salt Lake City					●	●					●				
VA	Newport News Department of Public Utilities, City of		●	●		●	●						●			●
VA	Richmond Department of Public Utilities	●	●			●	●	●				●				●
VA	Suffolk, City of		●	●		●	●									
VT	Burlington, City of		●	●		●										
WA	Tacoma, City of				●		●						●			●
WI	Milwaukee Metropolitan Sewerage District		●			●	●									
WI	Milwaukee Water Works		●			●	●									
WV	Charleston Sanitary Board						●									

Texas Experience

Raftelis has the most experienced utility financial and management consulting practice in the nation.

Our staff has assisted more than 1,500 public agencies and utilities across the U.S., including some of the largest and most complex agencies in the nation. In the past year alone, Raftelis worked on more than 1,000 financial/organizational/technology consulting projects for over 600 agencies in 46 states, the District of Columbia, and Canada.

On the following pages, we have provided descriptions of projects that we have worked on that are similar in scope to the City's project. We have included references for each of these clients and urge you to contact them to better understand our capabilities and the quality of service that we provide.



Raftelis has extensive experience providing financial and rate assistance to water and wastewater utilities in Texas. This map and the list below show some of Raftelis' Texas water and wastewater utility clients who we've assisted with financial and rate issues.

- City of Abilene
- Town of Addison
- City of Arlington
- City of Austin
- Austin Water Utilities
- Bear Creek Special Utility District
- City of Cedar Park
- City of College Station
- Town of Copper Canyon
- City of Copperas Cove
- City of Corpus Christi
- Creedmoor Maha WSC
- Customers of North Texas Municipal Water District
- City of Dallas
- City of Denison
- City of Denton
- Dallas Water Utilities
- City of Donna
- El Paso Water Utilities
- City of Fair Oaks Ranch
- City of Georgetown
- Goforth Special Utility District
- City of Granbury
- City of Huntsville
- City of Jersey Village
- City of Kaufman
- Lakeside Special Utility Districts
- City of Manor
- City of Midland
- North Texas Municipal Water District
- City of Pearland
- City of Pharr
- Porter Special Utility District
- City of Pottsboro
- City of Robinson
- City of Roscoe
- City of Round Rock
- City of San Angelo
- San Leon Municipal Utility District
- Santo Special Utility District
- San Antonio Water System
- San Jacinto River Authority
- City of San Marcos
- City of Shallowater
- City of Wichita Falls

Raftelis + City of Laredo

Raftelis has been a partner to the City of Laredo since 2021.

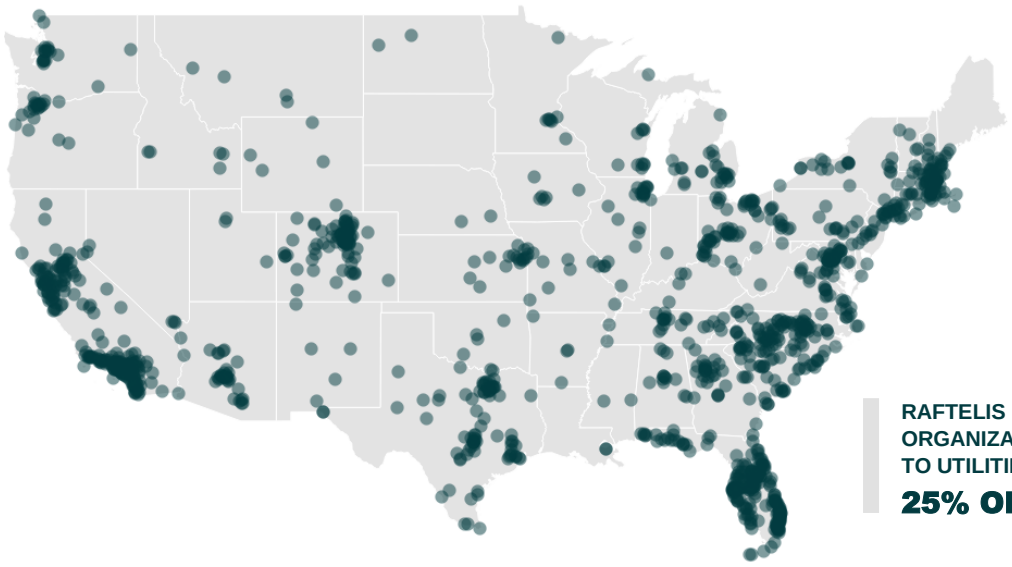
Governance and Strategic Planning Retreat
Reference: Rosario Cabello, Deputy City Manager
P: 966.791.7302 / E: rcabello@ci.laredo.tx.us

The City of Laredo has engaged with Raftelis to plan and facilitate several Governance and Strategic Planning Retreats since 2021, with both the City Council and staff leadership. Topics have included an exploration of good governance, roles, emerging trends, defining success for identified strategic outcomes, creating an organizational mission and values, and the identification of Council priorities. Facilitation included large and small group activities to maximize participation and dialogue.

Project Descriptions and References

RAFTELIS HAS THE MOST EXPERIENCED UTILITY FINANCIAL AND MANAGEMENT CONSULTING PRACTICE IN THE NATION.

Our staff has assisted more than 1,500 local government agencies and utilities across the U.S., including some of the largest and most complex agencies in the nation. In the past year alone, Raftelis worked on more than 1,000 financial, organizational, and/or technology consulting projects for over 600 agencies in 46 states, the District of Columbia, and Canada. Below, we have provided descriptions of projects that we have worked on that are similar in scope to the City's project. We have included references for each of these clients and urge you to contact them to better understand our capabilities and the quality of service that we provide.



RAFTELIS HAS PROVIDED FINANCIAL/ ORGANIZATIONAL/TECHNOLOGY ASSISTANCE TO UTILITIES SERVING MORE THAN **25% OF THE U.S. POPULATION.**

City of Pharr TX

Reference: Karla Saavedra, Finance Director
118 South Cage Boulevard, 2nd Floor, Pharr, TX 78577 / P: 956.702.5318 /
E: karla.saavedra@cityofpharr.com
Key Personnel: Angie Flores / **Completion Year:** 2020
Project Budget: $75,395

Raftelis was selected by the City of Pharr (City) to complete a water and wastewater rate study. The City is part of the greater McAllen metropolitan area and the Rio Grande Valley in Hidalgo County and contains the Pharr-Reynosa International Bridge into Mexico. The City has a population of roughly 80,000 residents. The City obtains its water primarily from the Rio Grande River. In March 2019, the City of Pharr engaged Raftelis to complete a comprehensive water and wastewater rate study for the City utility. The utility has roughly 21,000 connections. The

study included an evaluation of the current rate structure and a determination of the cost of service for each customer class. Along with the cost-of-service analysis, Raftelis developed a financial planning model that can be used to evaluate future operating or capital scenarios. Raftelis presented the rate plan to the City Council in August 2019 with the final adoption of the rate proposal in September.

City of Round Rock TX

Reference: Michael Thane, Director of Utilities
2008 Enterprise Drive, Round Rock, TX 78664 / P: 512.218.3236 / E: mthane@roundrocktexas.gov
Key Personnel: Angie Flores / **Completion Year:** Ongoing
Project Budget: Varied by Project (Total: $835,357)

The City of Round Rock (City) is approximately 20 miles north of Austin. Once just a small suburb of Austin, the City now supports its own economic development and is home to numerous commercial enterprises. The City provides water and wastewater service to approximately 100,000 City residents and another 40,000 residents outside the City through several wholesale customers. The City first engaged Raftelis to conduct a comprehensive cost-of-service and rate study. Raftelis assisted the City in developing an equitable cost-of-service analysis and rate design that will continue to promote the quality and balance of life that is evident in its community and commercial initiatives.

In the initial study in 2014, Raftelis provided an analysis that established the cost of service between retail and wholesale customers. The City has been increasing retail rates at a nominal level to achieve revenue sufficiency for water and wastewater service, but wholesale service rates had not been updated in some time. Raftelis determined the cost of service, calculated wholesale rates according to the utility approach, and developed a three-year phase-in of rates for 2016 to 2018.

Raftelis was engaged again in 2018 to conduct an update to the cost-of-service study and develop a three-year rate forecast for retail and wholesale customers. Raftelis also developed alternative rate structures for the residential, commercial, and irrigation customer classes. Rate structures and rates for retail and wholesale customers were approved and adopted by the City Council.

Raftelis provided assistance to the Drainage Utility for the City by developing the first comprehensive financial planning model for the Drainage Utility for capital planning and annual fee development.

Additionally, Raftelis has been retained as the City's rate expert on Docket No. 48836. Six of the City's wholesale customers have appealed their rates. The case has not progressed to hearing.

In 2021, Raftelis was once again retained to update the City's retail and wholesale rate study. This was an update to the previous study completed by Raftelis but included the development of a new financial planning model. In addition, Raftelis considered the various concerns that have been raised by the wholesale customers through the rate case. These rates were presented to Council in January 2022.

City of Denton TX

Reference: Nicholas Vincent, Assistant Director of Finance
215 E McKinney Street, Denton, TX 76201 / P: 940.349.8063 / E: nicholas.vincent@cityofdenton.com
Key Personnel: Angie Flores / **Completion Year:** 2021
Project Budget: $135,470

The City of Denton (City) engaged Raftelis to perform a comprehensive water and wastewater cost of service and rate study. Raftelis conducted a pricing objectives workshop with City staff to identify the City's pricing objectives. These pricing objectives were used to develop proposed conceptual designs, specifically for the water utility, that would better meet the objectives of the City.

Raftelis worked with the City to review its existing water and wastewater financial plans and ensure they met the needs of the City and provided the capital financing and reserve levels necessary. The City's financial plan was incorporated into a new cost of service and rate model designed and developed specifically for the City's needs. Denton also provides wholesale water and wastewater service under contract, and the City's existing wholesale rate methodologies were incorporated into the new cost of service and rate model developed for the City.

Raftelis reviewed the results of the cost of service and rate study with City Staff and prepared draft and final reports documenting the study process and results. The findings of the study were presented to the City's Utility Commission by Raftelis. Raftelis also provided City Staff with training on the update and use of the model developed.

City of Arlington TX

Reference: Medria Browhow, Financial Administrator
101 W. Abram Street, Arlington, TX 76010 / P: 817.459.6810 / E: medria.browhow@arlingtontx.com
Key Personnel: Angie Flores / **Completion Year:** 2022
Project Budget: $141,074

The City of Arlington (City) has a population of more than 365,000 and spreads across 100 square miles. The utility provides service to approximately 113,000 water and 103,000 wastewater customers in the greater Arlington area. The City's water and wastewater funds are enterprise funds and are financially self-sufficient with funding for capital and operating requirements derived primarily from rates, impact fees, interest income, and other miscellaneous sources.

In 2019, the City retained Raftelis to complete a water and wastewater utility cost-of-service study to determine the necessary level of rate revenue required to meet annual operating expenses, payments on existing debt service, and fund the capital improvement program while maintaining financial performance metrics. The primary study objectives included updating the water and wastewater financial plan for the five-year study period, analyzing the cost of providing water and wastewater service to customer classes, determining water and wastewater rate adjustments for FY 2022 through FY 2023 needed to generate sufficient revenue to meet annual revenue requirements, fund capital improvements, sustain adequate cash reserves and debt service coverage and develop a financial planning model to allow the City to analyze its current financial position and the future impacts of rate adjustments for customers, including its wholesale customers.

As with many other cities, COVID-19 impacted the completion of the study. After a short pause, the study was completed in 2022 with the finalization of the report.

City of El Paso TX

Reference: Arturo Duran, CFO
1154 Hawkins Blvd., El Paso, TX 79925 / P: 915.594.5549 / E: aduran@epwater.org
Key Personnel: Andrew Rheem, Angie Flores / **Completion Year:** Ongoing
Project Budget: Varied by Project (Total: $1.3 million)

Over the past 20 years, Raftelis has worked with El Paso Water on various studies. The studies have included:

- Annual Financial Planning Support
- Annual Wholesale Cost of Service Updates
- Periodic Rate Design Changes
- Impact Fee Study Updates
- Capital Recovery and Service Area Based Fee Development
- Affordability Program Development
- Franchise Fee Assistance
- Reclaimed Water Pricing Policy
- Industrial Pre-treatment Extra Strength Surcharges
- Miscellaneous Rate and Fee Assistance

In particular, Raftelis assisted in the development of the City's residential 3-tier volumetric rate structure with a minimum allowance and tiers based on each customer's percentage of average winter consumption (AWC). Additional rate structure development was completed for its commercial, irrigation, and large water users. Raftelis also developed a water supply replacement charge for the utility.

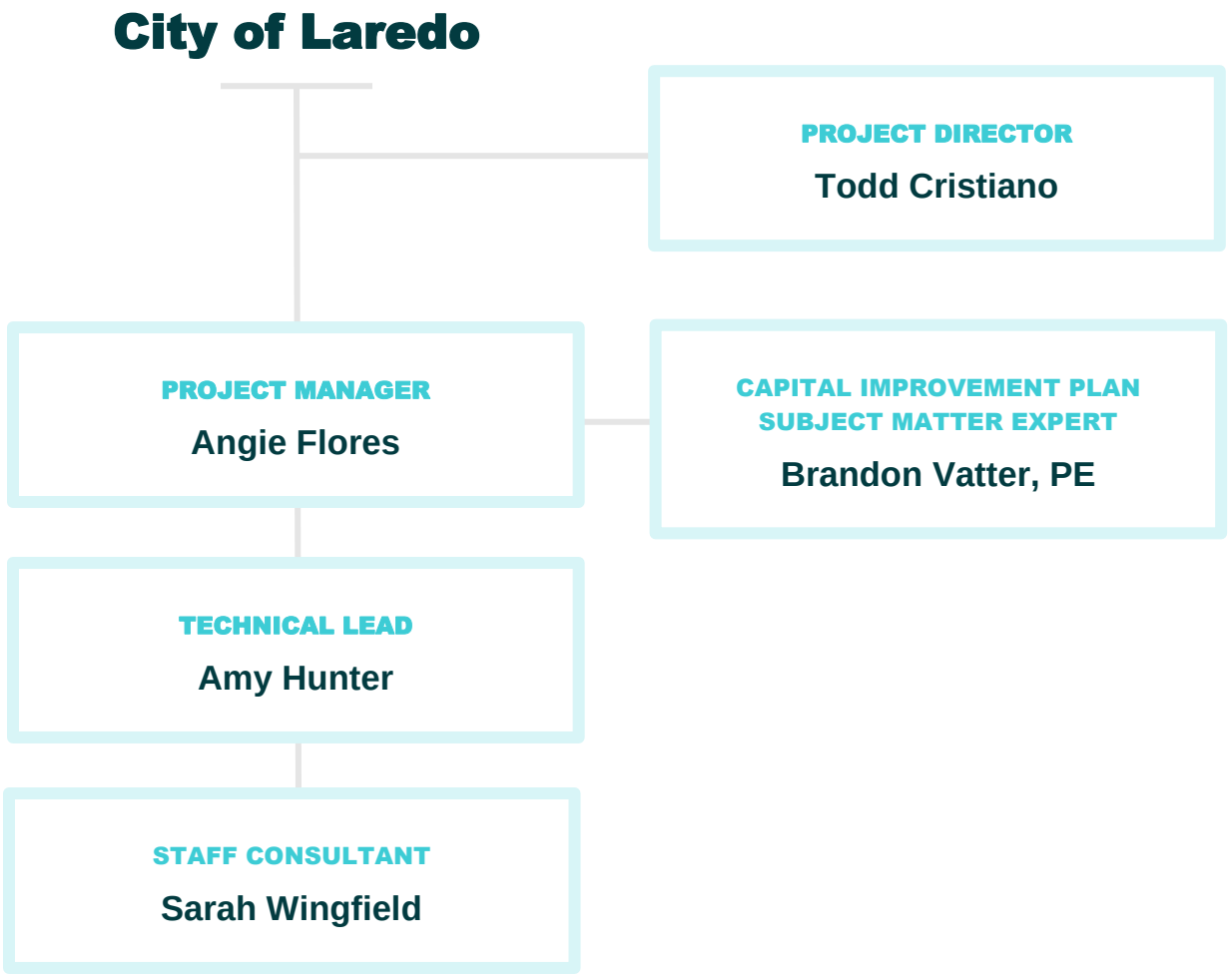
PROJECT TEAM

Project Team

WE HAVE DEVELOPED A TEAM OF CONSULTANTS WHO SPECIALIZE IN THE SPECIFIC ELEMENTS THAT WILL BE CRITICAL TO THE SUCCESS OF THE CITY'S PROJECT.

Our team includes senior-level professionals to provide experienced project leadership with support from talented consultant staff. This close-knit group has frequently collaborated on similar successful projects, providing the City with confidence in our capabilities.

Here, we have included an organizational chart showing the structure of our project team. On the following pages, we have included resumes for each of our team members as well as a description of their role on the project.



Todd Cristiano

PROJECT DIRECTOR

Senior Manager

ROLE

Todd will be responsible for overall project accountability and will be available to provide quality assurance and control, industry perspective, and insights into the project.

PROFILE

Todd has nearly 20 years of utility finance experience—14 years as a consultant to utilities and six years as the Manager of Rates at Denver Water. He has completed studies across the U.S. for water, wastewater, stormwater, electric, and gas utilities. His experience covers technical areas and industries such as municipal fee development, utility cost-of-service and rate structure studies, economic feasibility analyses, impact fee studies, and budget processes. While at Denver Water, he oversaw four significant rate- and fee-related studies, all unanimously approved by the Board of Water Commissioners, and also served as interim budget manager at Denver Water. As a member of the AWWA, he has helped to develop industry guidelines regarding financial and rate-making practices. In particular, as the Past Chair and current member of the AWWA Rates and Charges Committee, he co-authored the water reuse chapter in the latest edition of *Manual M1, Principles of Water Rates, Fees and Charges*. Todd is also co-instructor for the AWWA's biennial *Financial Management: Cost-of-Service Rate-Making Seminar*.

Specialties

- Financial planning
- Cost-of-service & rate structure studies
- Litigation support
- Economic feasibility analyses
- Impact fee studies - utility & non-utility
- Reviews of policies, procedures, & operating practices
- Budget processes

Professional History

- Raftelis: Senior Manager (2019-present); Manager (2017-2018)
- Stantec (2016-2017)
- Denver Water: Manager of Rates (2010-2016)
- Malcolm Pirnie-Arcadis-US
- (2005-2010)
- Black & Veatch (1998-2005)

Education

- Master of Business Administration - University of Colorado (2003)
- Bachelor of Science in Chemical Engineering - University of Tulsa (1995)

Professional Memberships

- AWWA: Past Chair and current member of Rates & Charges Committee
- WEF

KEY PROJECT EXPERIENCE

City of Golden (CO)

The City of Golden (City) provided water, sewer, and drainage services to approximately 5,400 customers through separate self-supporting enterprise funds. Rates charged for services must be adequate to support maintenance and operations, debt service, capital improvements, asset reinvestment, and transfers for general administration.

This City requested a comprehensive financial and rate analysis on their water, wastewater, and stormwater utilities. They wished to focus on the rate structures, updates to the cost-of-service with recommendations on the best alternatives for equitable and sustainable revenue recovery by each customer class. The last cost-of-service study was completed over 10 years ago.

Also, part of this study was convening a Utility Rate Citizens Committee (URCC) to review and provide recommendations on rate alternatives based on identified pricing objectives. Raftelis developed rate alternatives for each utility.

Raftelis prepared financial plans, cost-of-service analysis, and rate design for each utility. Using the pricing objectives from the URCC, we developed three alternatives for water, two for wastewater, and two for stormwater.

For stormwater, of particular interest was improving the equity between residential and commercial customer classes. The existing residential fee was on a per dwelling unit basis and commercial was based on individual impervious area. Raftelis developed an impervious area fee for both residential and commercial. This increased the residential fee and reduced the commercial fee. The City adopted the new rates and rate structures for 2020.

Three Lakes Water and Sanitation District (CO)

Todd served as the project manager on this engagement. The Three Lakes Water and Sanitation District (District) requested a 10-year financial plan and an update to their tap fees. The District is facing a significant upgrade to its wastewater treatment plant as a result of new copper compliance regulations. Raftelis developed a 10-year cash flow which incorporated the enterprise fund as well as their general government funds (general government funds fund a portion of administration expenses). The financial planning projections indicated that revenue adjustments of 3.5% were needed annually over the study period, assuming a state loan would fund 100% of the copper compliance project in 2019.

Raftelis also updated their tap fees which had remained unchanged since 2009. Because the District has capacity available in its existing system, the buy-in replacement cost new methodology was used. During District Board meetings, Directors expressed concern that the proposed fee was greater than the cost to install an individual septic system. Todd presented to the Board three times over the course of six months. The last presentation included the conclusive results of our study. The Board adopted a 6.0% increase for the following year with the anticipation of 3.5% in future years. The tap fee was left at the current levels. Raftelis also provided a rate model for the District to use going forward.

Bancroft-Clover Water District (CO)

Todd served as the project manager on this engagement. Bancroft-Clover Water and Sanitation District (District) is a wholesale customer of Denver Water. They are located west of the City of Denver's boundary and serve approximately 8,000 accounts, most of which are residential customers. The District retained Raftelis to conduct a water and sewer financial plan analysis in 2017. Of concern was the District's ability to cash fund an anticipated wastewater master plan as well as ongoing water repair and replacement projects. He oversaw the development of revenue projections based on historical billing records and the projection of operating and capital expenditures. Todd also provided insight on maintaining sufficient operating and capital reserve levels. Todd presented the findings to the Board of Directors in October 2017. The Board adopted the proposed rate adjustments in December 2018.

The District retained Raftelis to complete a comprehensive water and wastewater cost-of-service and tap fee study in 2018. Of interest to the District was to ensure equity among the customer classes. In addition, the District wanted the cost-of-service analysis and rate design to incorporate the continued gradual reduction in water usage from all customer classes. Todd developed the cost-of-service in accordance with generally accepted rate setting principles and adjusted the allocations to meet District-specific operational parameters. Todd developed several water and wastewater rate design alternatives for the Board's consideration. The Board requested additional analysis which resulted in the adoption of modified versions of the Raftelis proposed alternatives.

Todd also developed water and wastewater tap fees. The District's tap fees were last updated in 2001. Raftelis developed the fees using the buy-in approach as well as the unit cost replacement method using replacement cost estimates from the District's latest master plan. The fees under these methodologies represented the maximum supportable fee. Because of the large increase, the District adopted fees based on inflating the current fees to today's dollars.

City of Durango (CO)

Todd served as the project manager on this engagement. The City of Durango (City) retained Raftelis to conduct a comprehensive, independent assessment of its water and wastewater utilities and provide recommendations on revenue adjustments, cost of service and rate design. The City's broad objective of the study was to adequately fund water and wastewater utility operations, foreseeable capital costs, and any future bonded debt, which will be supported by the proposed rates. The study included a comprehensive review of the City's water and wastewater funds and budgets, an inventory of the water and wastewater capital assets, customer classes, current usage data, future planned service area growth, and any other information deemed necessary. This analysis included a review and update of the City's water and wastewater plant investment fees. The City also requested a review of the rate differential between inside City and outside City customers.

The City's last comprehensive study was completed in 2014 which recommended large rate adjustments to fund an upcoming wastewater treatment construction project and a water treatment plant. The wastewater treatment plant is nearing completion and the City has continued to focus efforts on ongoing repair and replacement. The water plant is projected to be constructed over the next few years. Its primary purpose is to provide redundancy and provide for some growth in the system. The water capital program also included ongoing repair and replacement projects. Raftelis prepared several water financial plan alternatives for staff's review and review by the City's Public Utility Commission's stakeholder group. Raftelis also developed cost-of-service-based rates for inside and outside City water and wastewater customers. As an alternative, Raftelis also developed outside City rates based on a rate differential (i.e., higher rates for outside City). This rate was developed based on the premise that the density of customers outside the City was lower than inside City. This lower density required more distribution infrastructure to serve outside City customers. Raftelis calculated a density ratio for inside and outside City customers based on the number of accounts per length of main. This ratio was applied to distribution-related costs in the cost-of-service analysis to arrive at a rate differential for inside and outside City customers.

Raftelis also updated the City's plant investment fees considering the replacement costs of current assets. Because there is sufficient capacity in the current system, no future expansion costs were included in the fee. The ¾-inch meter equivalency used to develop the ¾-inch meter fee was based on peak demand for all ¾-inch meter water users and ¾-inch meter average winter flows for wastewater.

Town of Eagle (CO)

Todd served as the project manager on this engagement. The Town had retained a consultant in 2016 to develop a financial plan and rate design for their water utility. Following iterations of the report and feedback from stakeholders, the Town requested Raftelis to conduct a peer review of the Excel model, results, and provide any recommendations on the study. Raftelis worked with the Town's consultant, reviewed detailed billing data, financials, rate design options and the Excel model's structure. Overall, Raftelis found the assumptions and results of the model sound, accurately documented, and the financial plan projections were reasonable based on the assumptions provided by the Town. We provided comments on the Consultant's rate design options as they related to meeting conservation goals, equity, and impact to customers. We provided a technical memorandum summarizing our results. This memorandum was presented to the Town's Board of Trustees for review and comment.

City of Craig (CO)

Todd served as project manager on this engagement. Todd also served as project manager on a similar study completed for the City of Craig (City) in 2008. The City retained Raftelis to conduct a comprehensive water and wastewater rate study. Increased federal regulations for the wastewater utility were going to significantly impact the rates over the next 10 years. Regulatory and replacement wastewater treatment plant projects included new sludge ponds, equalization basin, and clarifier improvements. In addition, both the water and wastewater utilities were

facing increased repair and replacement costs. The water utility had projected over $7.5 million in distribution system and tank repairs. The wastewater utility had an estimated $3.6 million in collection system improvements. Compounding these project costs was the lack of growth in the City. Raftelis developed separate 10-year cash flows for each utility and examined various alternatives for state loan funding and grant proceeds. Results were presented at a City Council meeting. The proposed revenue adjustments were adopted for 2019.

City of Aspen (CO)

Todd served as the project manager on this engagement. The City of Aspen (City) retained Raftelis to conduct a technical review of their consultant of record's most recent water and electric rate study. Raftelis reviewed the consultant's rate study and determined that a complete revision was required. The City had developed its own financial plan but requested an update using rate revenue projections based on detailed billing data. Raftelis used the City historical billing to project rate revenues over the five-year period. Based on that data, Raftelis was able to develop the necessary revenue adjustments over the study period.

The City also requested a new cost-of-service and rate model. The cost-of-service model included a unique cost allocation methodology. Instead of the traditional water allocations of average day, peak day, peak hour, and customer costs, the City uses a potable cost allocation separated into four functional cost areas: demand, fire, pumping, and variable charge. They also have a fifth non-potable component for raw water customers. These functional areas also serve as the rate structure components.

We allocated line operation and maintenance costs, their capital program, debt service, and changes in reserves. The City had determined that they were incurring significant increases in fire-related costs. This was due in part to increased operations and maintenance associated with maintaining the various fire-related facilities and capital costs associated with fire protection. The City's topography and customer density presented a number of challenges with having a system properly sized for fire protection.

Instead of customer classes, each customers rate structure is based on the number of equivalent capacity units or ECUs. The four cost components in the cost-of-service analysis also serve as the rate structure components. ECUs are based on the number of fixtures in the dwelling. Demand and fire charges are assessed on a per ECU basis, pumping is assessed on volume of water pumped to the residence. There are three levels of pumping. The variable charge thresholds (a five-tiered increasing block structure) are also based on the number of ECUs.

City Council had provided direction that they wanted to mitigate rate shock to low volume users. Raftelis designed a rate structure module that allowed City staff to transition to cost-of-service over multiple years, while still recovering the overall annual revenue requirement. Todd presented the cost-of-service approach to City Council in August 2018. The final cost-of-service analysis and rates was completed in time for their 2019 budget approval in October 2018.

Denver Water (CO)

Originally developed to provide for Denver Water's revenue needs while encouraging conservation, the organization's current rate structure had not undergone a full-scale rate structure study in 20 years. Much has changed since that time-water use habits, average demand and peak day needs, available technology, revenue stability, and an increased emphasis on the customer experience-for a start. To gain support for this initiative, Todd presented key drivers to the CEO and Board. Coming off of the 2013 drought and floods raised the issue of revenue instability to the forefront. Todd served as the project manager on this engagement, which included assistance from Denver Water's Public Affairs Division as well as an outside facilitator. Todd oversaw and managed a 'lessons-learned' workshop co-sponsored with the Water Research Foundation, an external affordability study, a customer

rate perception survey, as well as a 20-person stakeholder group. Todd led in-house development of all rate structure modeling with staff.

Denver Water outside-city customers make up 50% of revenues and usage for the utility. Denver Water serves these customers through contracts with special districts called "distributors." Distributors are charged in accordance with Denver's Charter provisions, "outside-city rate recover the full cost of providing service plus an additional amount." In 1990, the Board developed a cost-of-service model using the utility-basis of rate setting. This was used to address the significant population growth outside the city with a decline of population in the city of Denver. As time progressed, the methodology became less suitable, more complex, and more opaque. The Board determined that the utility-basis was no longer workable under current conditions.

Todd led this project and developed cost allocation alternatives that both met current circumstances of a growing Denver, satisfied the Charter provisions, and equitably allocated costs between inside and outside city customers. Over a 14-month process, Todd evaluated several alternatives, worked with a Distributor Task Force, and met with Board members individually to review model alternatives. The Board adopted the new cash basis methodology in May 2013.

Denver Water assesses System Development Charges (SDCs) for new connections to the system. SDCs were updated annually however, the last analysis of the structure was completed in 1999. Todd led an internal team to address inconsistencies in the calculations of capacity costs. The SDCs were developed using the 'hybrid' method which considers available capacity with future capacity projects. The unit cost of capacity using the hybrid method was used to develop the fee schedule for each type of development. This uniform unit cost ensured equitable recovery from all classes of customers. Todd developed "SDC guidelines" to assist Water Sales staff in assessing SDCs based on the changes adopted by the Board. Todd met with Distributor representatives, members of the developer community as well as the Citizen's Advisory Council to review alternatives and present findings.

Town of Marana (AZ)

Todd was the project manager on this engagement. The Town of Marana Water Department (Marana Water) required a comprehensive financial plan and rates and fees update for their water and water reclamation utilities. The last complete rate study was conducted and adopted in 2013 and included scheduled rate adjustments through January 2017. The non-rate fees and cost-of-service analysis was last conducted and adopted in 2009. Marana Water's study goals included the development of a long-term rate and fee plan that enabled the department to recover sufficient funds to meet operational and capital expenses associated with the water and water reclamation utilities. They also wanted to recognize the rapid growth anticipated over the next 10 years and the associated and the maintenance necessary to maintain all capital infrastructures, current and future in the financial plan projections.

Todd oversaw the development of multiple water and water reclamation financial plans. Working with Staff, including the Finance Director and Operations Direction, the Raftelis project team refined the cash flows to minimize the annual revenue adjustments while meeting the annual operating and capital needs of each utility. These financial plans were used to develop the revenue requirement and cost allocations for the water and water reclamation cost-of-service analysis.

As part of the cost-of-service analysis, Marana Water requested the development of a new private fire line fee. Although Marana Water had not specifically tracked the number of private fire lines, the Raftelis team worked with the operations department and the business services team to create an estimate of private fire lines. The fire line cost was specifically identified in the cost-of-service analysis and those costs were applied specifically to those customers with that service.

Raftelis also updated Marana Water's groundwater resources volumetric rate. This rate was not adequately recovering these annual resource costs. Like the private fire line cost allocation, the Raftelis team worked with Staff to identify those specific charges which should be included in the rate.

Marana Water also wished to change the wastewater volumetric rate for commercial customers' domestic meters from a winter quarter average basis (WQA) to actual water usage (commercial customers have separate irrigation meters). This is a more representative approach, as the majority of the water supplied to the commercial domestic taps was non-consumptive and as a result, is discharged to the water reclamation facility.

Finally, Marana Water has several miscellaneous fees which required updating. Of critical importance was updating the trip charges from the customer service field department. The trip charges were integrated into many of the other fees. Raftelis calculated fees evaluating identifying staff that were engaged in the process, the tasks and the time to complete the tasks for each fee.

City of Tolleson (AZ)

Todd served as the project manager on this engagement. The City of Tolleson (City) retained Raftelis to conduct a comprehensive financial plan analysis for the City's water and wastewater utilities. The City was embarking on an aggressive renewal and replacement program for the water utility. The City purchases a sizeable portion of their water from the City of Phoenix. The City also relies on wells and storage to meet peak demands. A requirement of the contract with Phoenix is to maintain sufficient redundancy to meet water service demands should there be a disruption in service from the City of Phoenix. Raftelis worked with Staff to develop attainable financial plan goals while minimizing the impact to customers. The City adjusted timing of certain non-critical projects to ensure that revenue adjustments remained smooth and predictable. The wastewater utility was also undertaking a proactive renewal and replacement program. Because the City's wastewater treatment plant is co-owned by three large industrial customers, the increased costs were spread among the City and the industrial users. Remaining costs were passed onto rate payers. Current reserves were able to absorb the nominal increased costs to retail wastewater customers, so no increase was necessary over the 10-year study period. The City Council adopted a 25% revenue adjustment for water—the first increase since 2011.

City of Buckeye (AZ)

Todd served as the project manager on this engagement. The City of Buckeye (City) retained Raftelis to conduct a comprehensive financial plan, cost-of-service, and rate design analysis for the City's water and wastewater utilities. The City service area is approximately 145 square miles and according to the U.S. Census Bureau, is the fifth fastest growing City in the U.S. as of 2018. Water service is provided entirely through groundwater. Wastewater service is provided through four water reclamation facilities. Raftelis developed water and wastewater financial plans for the five-year study period, FY19 - FY23. The City has developed a robust capital plan to address the need for new facilities to support growth as well as maintain the systems. Because facilities must be built prior to new development, impact fee funds must be supplemented with rate revenues and bonds to fund the projects. Raftelis developed a number of rate increase scenarios that not only met operational cost requirements but also satisfied meeting the capital improvement program costs. Raftelis also developed rate alternatives based on a comprehensive cost-of-service analysis for each utility. As of January 2019, the final rate structure alternatives are being presented to the City's Water Rate Advisory Group for review and comment. The City Council adopted a line-item charge to recover the additional revenue rather than through a rate increase. This was approved in November 2019.

Salt Lake City Department of Public Utilities (UT)

Todd served as the project manager on this engagement. The Salt Lake City Department of Public Utilities (City) engaged Raftelis in 2017 conduct comprehensive water, sewer, stormwater, and streetlight cost-of-service rate

studies. These studies included developing revenue requirements, cost-of-service allocations, rate design, and impact fees. Impact fees include a review of the methodology for each utility—water, sewer, and stormwater. A hybrid or combined methodology was selected for the water and sewer utilities. This methodology included an evaluation of the existing assets as well as determining the growth-related portion of future capital and estimating the capacity to be served in the 10-year time horizon. The stormwater impact fee was assessed using the buy-in methodology. The valuation of assets for each utility was based on replacement cost less accumulated depreciation.

In conjunction with the rate studies, the City formed a Rate Advisory Committee (RAC) to solicit feedback and recommend changes to the City's existing water and sewer rate structures. Todd co-facilitated six RAC meetings which included an overview of the water and sewer systems, the long-term challenges faced by the City as well as detailed discussion of rate-setting 101 and analysis of various rate structures. The RAC committee members reached consensus on two water rate structure alternatives and two sewer rate structure alternatives to present to the City's Public Utilities Advisory Board (PUAC). The City anticipated the PUAC made their final recommendation to City Council in January 2018. Todd oversaw the development of the cost-of-service and rate design analysis for the utilities. He developed the rate alternatives for review by the RAC based on the selected pricing objectives. He also led the development of the water, sewer, and stormwater impact fee analysis. The fees were developed based on an Impact Fee Facilities Plan completed by their engineering or record. The impact results had to comply with state statutes.

PUBLICATIONS

- "Evaluating Pricing Levels and Structures to Support Reclaimed Water Systems," Research Report, WateReuse Foundation, 2009

PRESENTATIONS

- "A Guide to Designing Conservation-Oriented Water System Development Charges," AWWA and Western Resources Advocates , 2018, https://westernresourceadvocates.org/projects/water-system-development-charges/
- Co-Instructor for American Water Works "Financial Management - Cost-of-Service Rate Making Seminar," 2010-present
- "The Grass is Always Greener…Building Consensus of Reclaimed Water Project Pricing for Jointly Operated Systems," Water Environment Federation Technical Exhibition and Conference, 2008
- "Honestly, What's the Reuse," WateReuse Symposium, 2008
- "Showers to Flowers - Objectives and Approaches for Reclaimed Water Pricing," Utility Management Conference, 2010
- "Which Conservation Rate Structure is Best for Your Utility," Utility Management Conference, 2013
- "Financial Management and Ratemaking Challenges for Reuse Water," Utility Management Conference, 2015
- "Rate Perception Surveys: Leveraging Customer Knowledge to Create the Right Rate Structure," Annual Conference Exhibition (ACE), 2015
- "Assessing Household Affordability in the Denver Water Service Area," ACE, 2015
- "Rate Perception Surveys: Leveraging Customer Knowledge to Create the Right Rate Structure," Utility Management Conference (ACE), 2016

PROJECT LIST

- City of Aspen (CO) – Water and electric rate study
- Town of Berthoud (CO) – Water and wastewater rate and fee study
- City of Boulder (CO) – Water budget rate study and plant investment fee study

- Breckenridge Sanitation District (CO) – Wastewater impact fee study
- City of Craig (CO) – Water and wastewater financial plan
- City of Davenport (IA) – Water and wastewater financial plan
- Town of Dillon (CO) – Water and wastewater rate and fee study
- El Paso Water Utility (TX) – Reclaimed water rate study
- Town of Erie (CO) – Water and wastewater rate and fee study
- City of Farmington (NM) – Water and wastewater rate study
- City of Fort Collins (CO) – Water and wastewater rate and fee study
- City of Glendale (AZ) – Water and Wastewater Rate Study
- City of Grand Junction (CO) – Wastewater financial plan
- City of Great Falls (MT) – Water and wastewater financial plan
- City of Greeley (CO) – Water and wastewater cost-of-service update
- Mammoth Community Water District (CA) – Water and wastewater rate study
- Moapa Valley (NV) – Water financial plan
- City of Peoria (AZ) – Water and wastewater rate study
- City of Pocatello (ID) – Water, wastewater and sanitation rate and fee study
- City of Prescott (AZ) – Water and wastewater rate and fee study
- Pueblo Wastewater (CO) - Wastewater rate and fee study
- Pueblo West Metropolitan District (CO) – Water and wastewater rate and fee study
- Puerto Rico Aqueduct and Sewer Authority (Puerto Rico) – Water and wastewater rate and fee study
- Sacramento Sanitation District (CA) – Bond feasibility study
- City of Salt Lake City (UT) – Water, wastewater, and stormwater rate and fee study
- Snyderville Water Reclamation District (UT) – Wastewater financial plan study
- City of Surprise (AZ) – General government impact fee study
- Water Research Foundation (CO) – WaterReuse research project

Angie Flores

PROJECT MANAGER

Senior Manager

Specialties

- Financial planning modeling
- Utility cost-of-service & rate studies
- Acquisition analysis
- Conservation pricing
- Cost analysis & cost allocation
- System development/impact fee studies
- Affordability analysis
- Rate case experience

Professional History

- Raftelis: Senior Manager (2020-present); Manager (2018-2019); Senior Consultant (2016-2017)
- HDR Engineering, Inc.: Rates & Finance Lead (2013-2016)
- Lower Colorado River Authority: Senior Financial Analyst & Rates Supervisor (2001-2013)
- Texas Water Development Board: Senior Financial Analyst (1992-2001)

Education

- Bachelor of Arts in Government - The University of Texas, Austin (1991)

Professional Memberships

- AWWA
- AWWA: Publications Committee
- AWWA: Rates and Charges Committee
- Water Environment Federation

Languages other than English

- Spanish

ROLE

Angie will manage the day-to-day aspects of the project ensuring it is within budget, on schedule, and effectively meets the City's objectives. She will also lead the consulting staff in conducting analyses and preparing deliverables for the project. Angie will serve as the City's main point of contact for the project.

PROFILE

Angie has worked in the water and wastewater utility industry for more than 30 years. Over this time, she has completed various cost-of-service and rate studies, financial planning models, and impact fee studies. Before beginning her work as a consultant in 2013, Angie worked for the Lower Colorado River Authority (LCRA) for 12 years. She was responsible for developing rate studies and financial planning models and participating in the business plan process for 32 water and wastewater utilities. LCRA manages the Highland Lakes system in Central Texas and is a major wholesale electric provider. Before LCRA, Angie worked as a financial analyst at the Texas Water Development Board. The Texas Water Development Board is a financial resource for political subdivisions of the State of Texas.

Below are a few projects that Angie has completed in south Texas and for cities with populations over 100,000.

KEY PROJECT EXPERIENCE

City of Pharr (TX): Water and Wastewater Financial Plan and Rate Study

While with a previous employer, Angie was engaged to complete a water and wastewater rate study for the City of Pharr (Pharr). The City had not completed a rate study in several years and had some capital improvements that would be required in coming years. Angie worked with Javier to develop a financial plan that considered the revenue requirements of the City as well as the upcoming capital improvements. Angie coordinated with the City's financial advisor and finance director to ensure that all coverage requirements were being met, as new bonds would be required to fund capital improvements. Angie provided the results to City management to determine which rate increases to present to Council.

In 2019, Angie once again completed a rate and cost-of-service study for the City. Due to a significant capital program, the City was facing the need for rate increases. Raftelis developed a financial planning model that will allow the City to forecast capital expenditures and see the future impact on rates. Angie presented a rate recommendation to the City Council in July 2019.

City of Round Rock (TX): Water and Wastewater Rate Study (Retail and Wholesale), Water and Wastewater Impact Fee Study

Angie has served as the City of Round Rock project manager on several impact fees and rate studies. In 2015 and 2018, Angie updated the City's water and wastewater impact fee study. The impact fee study is completed in coordination with the City's master plan process for water and wastewater. This includes coordination with the Impact Fee Advisory Committee (Planning & Zoning Committee) and presenting reports and findings to the City Council.

Raftelis has conducted rate studies for the City since 2014. Since joining Raftelis in 2016, Angie has been on the team for Raftelis and, most recently, managing the studies. In 2015, Raftelis provided an analysis that established the cost of service between retail and wholesale customers. The City has been increasing retail rates at a nominal level to achieve revenue sufficiency for water and wastewater service, but wholesale service rates were updated some time ago. Raftelis determined the cost of service and calculated wholesale rates according to the utility approach and developed a three-year phase-in of rates for 2016-2018. Raftelis also developed alternative rate structures for the residential, commercial, and irrigation customer classes. City Council approved and adopted rate structures and rates for retail and wholesale customers.

In 2022, Raftelis updated the City's rate study and provided rate calculations for two new wholesale customers. This latest rate study calculated rates for retail and wholesale customers. No changes to the retail rates were required in this study. Wholesale customers saw a decrease in wastewater rates and an increase in water rates.

In 2019, the wholesale customers of Round Rock appealed the rates from the FY 2017 rate study. The case has been filed through the Public Utilities Commission of Texas. The rate case has progressed through the PUCT. Angie is managing the Raftelis team.

City of Denton (TX): Water and Wastewater Financial Plan and Rate Study

In 2019, Raftelis was engaged by the City of Denton to complete a cost-of-service study that considered retail and wholesale rates. Angie worked as a project manager on this study. The study included the cost-of-service allocations to the City's customer classes. As part of the study, Raftelis will complete a pricing objectives workshop that will allow the City to identify the goals of the Public Utility Board and City Council. Rate recommendations were made to City management in March 2021. The project was delayed due to Covid-19.

City of Arlington (TX): Water and Wastewater Financial Plan and Rate Study

In 2019, Raftelis was engaged by the City of Arlington to complete a cost-of-service study considering water and wastewater rates. Angie worked as a project manager for this study. The study included the cost-of-service allocations to the City's customer classes. With the diversity of the City's commercial class, Raftelis considered the usage patterns of the classes and made recommendations for the class. In addition, an essential aspect of the study was the development of the cost of service for fire protection. The study results showed that the customer classes were each covering their costs. The study was completed in 2021 after a pause due to Covid-19.

El Paso Water Utilities (TX): Customer Assistance Program

Angie worked with El Paso Water Utilities (EPWU) to develop a Customer Assistance Program. Angie developed the policies adopted by the EPWU for the Customer Assistance Program, where EPWU will coordinate with a local agency to disburse funds to low-income residents.

City of Corpus Christi (TX): Water and Wastewater Financial Plan and Rate Study, Water, Wastewater, Roadway Impact Fee Study

During her tenure at HDR, Angie completed the annual update to the City of Corpus Christi's (City) rate study and financial planning model. This included coordination with City staff and management. The study calculates rates for water (including raw water, treated water, and retail rates), wastewater, and gas utilities.

Since 2021, as Project Manager, Angie has been working with Pape-Dawson to complete a water, wastewater, roadway, and stormwater Master Plan and Impact Fee Study. The process includes communication with the City and meetings with the Capital Improvement Advisory Committee. The impact fee calculation process is scheduled to start in Spring 2022.

City of Midland (TX): Water and Wastewater Financial Plan and Rate Study, Reclaimed Water Rate Study

In 2019, Raftelis was engaged by the City of Midland to complete a rate study and financial planning model. Angie worked as a project manager on this study. The City was undergoing significant capital improvements and was facing the need for rate increases. The study considered five years and looked at the City's water and wastewater rates. The initial rate study was completed in March 2020. In 2020, Raftelis also developed a raw water rate for a potential wholesale customer. In 2021, Raftelis updated the City's Rate Study to reflect the "new normal" after Covid-19. The study results were presented to City Management.

City of Wichita Falls (TX): Wholesale Water Rate Study, Economic Analysis, Water and Wastewater Rate Study

Since 2016, Angie has worked with the City of Wichita Falls (City) to complete its wholesale rate study. The study is conducted annually and follows a prescribed process developed through negotiations with the wholesale customers of the City. After the study, results are presented to the wholesale customers.

In 2019, a couple of the City's wholesale customers initiated discussions about the current rate study process. Angie worked with the customers' consultants to discuss their issues. In particular, the customers were concerned with the fluctuation in rates from year to year caused by fluctuations in consumption patterns of the wholesale and retail customers. Angie and the Raftelis team successfully negotiated a solution with the customers so that the City could revise the contracts for the wholesale customers.

In 2021, as project manager, Angie completed a retail water and wastewater rate study for the City. This study included the development of a financial planning model and cost of service analysis. Before this study, the City developed rates in-house. The financial planning model will be an essential tool for the City considering the significant investment of a new reservoir in the future. The model will allow the City to anticipate the future rates needed to support the future debt service and allow the City to cash-fund a portion of the investment with revenue from a potential water supply fee. In addition, Raftelis analyzed the City's asset list to identify assets needing repair and replacement. This allows the City to maintain the appropriate level of funding for assets nearing the end of their useful life.

City of Pearland (TX): Water and Wastewater Financial Plan and Rate Study

Angie has served as project manager for the City of Pearland on several engagements related to the City's water and wastewater rates. In 2016, Raftelis was engaged by the City to conduct a rate study for the City's water and wastewater services and develop a financial planning and rate model for ongoing and future use by City staff. Raftelis developed the model for FY 2017 and conducted a cost allocation and rate design study during model development. The City is a rapidly growing community located on the outskirts of Houston, TX. The City is fortunate to have significant areas for continued growth in the City's western service area. Three key study

components were 1) scenario analysis for financing the capital improvement program (CIP), 2) evaluating the fixed cost recovery, and 3) user-friendly functionality in the financial planning rate model.

The City is facing significant capital investment and re-investment to address rapid growth and aging infrastructure. The City, which has approximately 40,000 accounts, developed a CIP of more than $360 million from 2017-2021. To assist the City with this critical challenge, Raftelis developed sophisticated financing scenario analysis functionality into the financial planning and rate model. This enables the City to evaluate different levels of funding as well as multiple financing instruments each year.

The City wanted Raftelis to evaluate its current water and wastewater rate structures and suggest alternatives. One of the City's objectives was to increase revenue stability. Raftelis assessed the utility's fixed costs compared to the level of fixed cost recovery from fixed charges. Raftelis discovered an imbalance, which is typical for almost all utilities. Raftelis evaluated fixed charges to increase revenue stability and provided alternatives that increase by meter size, which was ultimately implemented.

Finally, the City has a knowledgeable staff that has been using the previous rate model for nearly ten years. Due to several changes in budgeting and cost accounting, and with the significant CIP financing issues mentioned above, the City decided it was appropriate to have a qualified consultant develop a new model for their use for the next ten years. Raftelis kept this premise in mind during every step of development so that we provided the City with a fully functioning yet user-friendly and adaptable, updateable financial planning and rate model. City staff has successfully used this model for the FY 2018 update. Raftelis has continued to work with the City to review the model as a team has updated it. This review is typically a quality check to ensure the model works as initially set up.

In 2020, Raftelis did a Utility Billing Process review. The objectives of this review included assessing the organization and structure of Pearland's utility billing and meter services groups to determine where enhancements could be made to improve performance, streamline operations, and improve customer service. Raftelis reviewed the meter-to-cash processes for performance gaps and inefficiencies and identified recommended changes to address these areas. Raftelis also compared Pearland's meter-to-cash operations with national industry data and peers, noting any significant differences. Further, Raftelis analyzed a subset of billing data to confirm the accuracy of bills in the sample. Raftelis provided a report with its findings and recommendations.

In 2021, Raftelis updated the City's financial planning model. Through this update, Raftelis made modifications to the model to enhance its capital planning portion of the model. Since the initial development, the City has estimated debt service during its budget process. The model now reflects the newest approach. Raftelis also worked with City staff to extract consumption data in the format needed to update consumption in the model every year. This will allow for better estimates of future revenues.

City of College Station (TX): Water and Wastewater Financial Plan and Rate Study

In 2019, Raftelis was engaged by the City of College Station to complete a cost-of-service study that considered water and wastewater rates. Angie served as the project manager on this project. The study included the development of a financial planning model and rate design alternatives. The City is unique in that they have many multifamily connections with unique metering issues. Raftelis provided the City with other options for charging these customers. A report was submitted to City Management at the end of 2021. This study was delayed due to Covid-19.

City of Abilene (TX): Water and Wastewater Financial Plan and Rate Study

Angie has worked with the City of Abilene as a project manager since joining Raftelis. The first study was to develop a raw water rate for a potential new customer of the City. The second study was a water and wastewater

financial planning model and cost-of-service analysis. The study, which was the first for the City in many years, provided the City with information for setting rates in the future as capital investment becomes necessary. Included in this study was the development of a financial planning model used by the City each year. In 2020, Raftelis completed another study to determine the cost of providing wholesale treated water from the City of Abilene. The City will use the results of this study to negotiate with future wholesale customers. In 2023, Abilene has once again engaged Raftelis to complete an update to the 2019 financial planning model. This model will include new features giving Abilene the ability to run various scenarios for capital funding.

San Antonio Water System (TX): Water and Wastewater Cost of Service Study

Raftelis has been engaged by the San Antonio Water System (SAWS) to complete a cost-of-service study. Angie served as project manager on the study. SAWS updates the cost-of-service study every five years. As a project manager, Angie led the cost-of-service model's effort and developed the presentations to the Rate Advisory Committee (RAC) in coordination with SAWS staff. The RAC met several times to provide comments on the cost-of-service process and results. Raftelis completed a Rate Advisory Committee Report and suspended the study due to Covid-19.

Brownsville Public Utilities Board (TX): Utility Strategic Plan

At the successful conclusion of its 2013-2018 strategic plan, the Brownsville Public Utility Board (BPUB) retained Raftelis to assist with developing an updated five-year strategic plan. BPUD is a large, publicly owned electric, water, and wastewater service provider to more than 180,000 customers in south Texas. Angie served as the project's financial subject matter expert and co-facilitator for internal and external stakeholder engagement exercises, including employee focus groups and external stakeholder interviews. Raftelis is also tasked with developing and delivering an online strategy management system that will allow the organization to continuously measure, monitor, and report organizational progress and performance as it implements its new strategic plan.

PROJECT LIST

- Brownsville Public Utilities Board (TX) – Utility Strategic Plan
- El Paso Water Utilities (TX) – Customer Assistance Program
- City of Abilene (TX) – Water and Wastewater Financial Plan and Rate Study
- City of Arlington (TX) – Water and Wastewater Financial Plan and Rate Study
- City of College Station (TX) – Water and Wastewater Financial Plan and Rate Study
- City of Copperas Cove (TX) – Water and Wastewater Financial Plan and Rate Study
- City of Corpus Christi (TX) – Water and Wastewater Financial Plan and Rate Study
- City of Corpus Christi (TX) – Water, Wastewater, Roadway Impact Fee Study
- City of Corpus Christi (TX) – EPA Financial Capability Analysis
- City of Denton (TX) – Water and Wastewater Financial Plan and Rate Study
- City of Denison (TX) – Water, Wastewater, Roadway Impact Fee Study
- City of Georgetown (TX) – Water and Wastewater Impact Fee Study
- City of Granbury (TX) – Water and Wastewater Impact Fee Study
- City of Kaufman (TX) – Water and Wastewater Rate Study
- City of Liberty Hill (TX) – Water and Wastewater Rate Study (Retail and Wholesale)
- City of Manor (TX) – Water and Wastewater Financial Plan and Rate Study
- City of Midland (TX) – Water and Wastewater Financial Plan and Rate Study
- City of Midland (TX) – Reclaimed Water Rate Study
- City of Missoula (MT) – Acquisition Analysis
- City of Pearland (TX) – Water and Wastewater Financial Plan and Rate Study
- City of Pharr (TX) – Water and Wastewater Financial Plan and Rate Study

- City of Pueblo (CO) – EPA Financial Capability Analysis
- City of Richmond (TX) – Water and Wastewater Financial Plan and Rate Study
- City of Roscoe (TX) – Water and Wastewater Financial Plan and Rate Study
- City of Round Rock (TX) – Water and Wastewater Rate Study (Retail and Wholesale)
- City of Round Rock (TX) – Water and Wastewater Impact Fee Study
- City of San Angelo (TX) – Water and Wastewater Financial Plan and Rate Study
- City of San Marcos (TX) – Economic Development Analysis
- City of Three Rivers (TX) – Water and Wastewater Rate Study
- City of Universal City (TX) – Water and Wastewater Impact Fee Study
- City of Wichita Falls (TX) – Wholesale Water Rate Study
- City of Wichita Falls (TX) – Economic Analysis
- City of Wichita Falls (TX) – Water and Wastewater Rate Study
- Goforth Special Utility District (TX) – Water and Wastewater Impact Fee Study
- Liberty Utilities (TX) – Water PUCT Rate Case
- Porter Special Utility District (TX) – Water Rate Study
- San Antonio Water System (TX) – Water and Wastewater Cost of Service Study
- San Jacinto River Authority (TX) – Raw Water Rate Study
- San Jacinto River Authority (TX) – GRP Rate Study
- Town of Addition (TX) – Water and Wastewater Rate Study

PRESENTATIONS

- "Sharing Our Resources – How Abilene Priced Its Newest Service," Texas Water 2018
- "Laying the Foundation for a New Reservoir: Economic Analysis and Financial Planning to Ensure Success," Texas Water 2023

ARTICLES

- "Utility Best Management Practices: Strong Adopted Financial Management Policies," coauthored by Bryan A. Mantz and Angie Flores, JournalAWWA, April 5, 2022

DEPOSITIONS/TESTIMONY

- SOAH Docket No. 582-08-2863, TCEQ Docket No. 2008-0093-UCR, "Appeal of Retail Water and Wastewater Rates of the Lower Colorado River Authority"

Brandon Vatter PE

CAPITAL IMPROVEMENT PLAN SUBJECT MATTER EXPERT

Senior Manager

Specialties

- Capital Program Development & Risk Advisor
- Capital Program Delivery Technical Expert
- Asset Management Program Development & Execution
- Capital & Operating Program Organizational Review and Efficiency Improvements
- Cost Efficiency and Reductions Reviews
- Integrated Watershed Management Technical Expert

Professional History

- Raftelis: Senior Manager (2019-present)
- Mott MacDonald: Senior Project Manager (2011-2019)
- Sanitation District No. 1 of Northern Kentucky: Program Manager, Director of Planning & Design (2004-2011)
- Black & Veatch Corporation: Project Manager (2001–2004)
- CH2M Hill: Project Manager (1997-2001)
- Ohio EPA, Division of Surface Water: Regulatory Compliance Officer (1994-1996)
- B.G. Danis Industries, Heavy Construction: Cost Estimator (1993-1994)

Education

- Bachelor of Science in Civil Engineering - University of Cincinnati (1997)

Professional Registrations

- Professional Engineer: OH, 66169, 2001
- WEF Utility Management Committee – Capital Program Development

Professional Memberships

- WEF
- National Society of Professional Engineers
- NACWA
- Chi Epsilon

ROLE

Brandon will provide input and guidance as a Subject Matter Expert for the capital improvement plan components of this project.

PROFILE

Brandon has more than 27 years of experience working directly with multiple public and private clients on the regulatory, consulting, water, wastewater and stormwater utility sides to deliver capital, operations, and asset management programs on-time, at or under budget, and in compliance with necessary regulatory obligations. Brandon's experience includes NPDES permit review and compliance, NPDES permit writing, Clean Water Act (CWA) consent decree negotiations with Federal EPA and ORSANCO, and CWA consent decree implementation. Brandon regularly works with communities to bring practical hands-on experience with capital improvement program development and delivery, asset management program development and implementation, planning and implementation of integrated watershed management plans, green and gray infrastructure projects for wet weather and consent decree compliance, hydraulic modeling, water, sewer, and storm sewer design, wastewater collection and treatment facilities, solids processing facilities, nutrient removal studies, and water, stormwater, and wastewater master planning. Brandon also brings practical field construction knowledge through performance of onsite construction management and inspections for multiple projects and has directed instrumentation, control, process coordination, and start-up for multiple projects.

With a strong technical, operations, and project management background, Brandon regularly provides guidance on necessary capital investments, capital delivery and throughput improvements, NPDES permit compliance, and EPA regulatory compliance to meet the obligations, goals, asset management needs, and affordability of clients.

KEY PROJECT EXPERIENCE

Bear Creek Special Utility District (TX): Capital Improvement Program

Brandon worked with finance and engineering staff to develop a 10-year capital improvement program for the water utility based on Best-in-Class practices for asset management and new asset construction based on the projects identified in their Master Plan. The CIP was then used in a 10-year rate study to account for necessary future costs and to optimize the amount and timing of rate increases to address affordability constraints of the community.

City of Aubrey (TX): Capital Improvement Program

Brandon worked with finance and engineering staff to develop a 10-year capital improvement program for the water and sewer utilities based on Best-in-Class practices for asset management and new asset construction. The CIPs were then used in a 10-year rate study to account for necessary future costs and to optimize the amount and timing of rate increases to address affordability constraints of the community.

City of Corinth (TX): Capital Improvement Program

Brandon worked with finance and engineering staff to develop a 10-year capital improvement program for the water and sewer utilities based on Best-in-Class practices for asset management and new asset construction. The CIPs were then used in a 10-year rate study to account for necessary future costs and to optimize the amount and timing of rate increases to address affordability constraints of the community.

City of Manor (TX): Water and Wastewater Financial Rate Study

Brandon is currently assisting Manor with review of the water and wastewater master plans as part of a financial rate study. Brandon is working with the local engineer and utility staff to confirm growth and flow assumptions, projects sizing and costs, and identify opportunities to reduce nearly $400M of estimated capital investments to provide a more affordable short-term and long-term capital improvement plan for the City.

Brandon reviewed the stormwater utility's current operations and capital programs and asset management practices compared to Best-in-Class stormwater utility programs and provided recommendations for incremental and proactive improvements. The improvements were then incorporated into a stormwater rate study to account for necessary future costs and rate increases.

Sanitation District No. 1 of Northern Kentucky (KY): Compliance Projects, Watershed Management Plans, Capacity Management Operations & Maintenance

Brandon was the Director of Planning & Design for Northern Kentucky SD1 where he led 4.5 FTEs to deliver between $100M to $150M of stormwater and wastewater capital projects annually through highly efficient processes and procedures, staff training, and strategic and cost-effective use of consultant support. He directed the planning and design of multiple wastewater and stormwater compliance projects within the combined and separate sewer systems to address storm water at its source to reduce overflow volume and comply with a Consent Decree and NPDES permit requirements.

Brandon led a team to develop first of its kind integrated watershed management plans for the 16 watersheds in the NKSD1 service area to plan and implement singular projects that achieved the multiple objectives of reducing CSOs and SSOs, reducing surface flooding, reducing pollutant loads from stormwater discharges, eliminating sewage basement backups, and achieving measurable improvement to in-stream water quality. **SD1's Integrated Plan was estimated to save the ratepayers over $1 Billion compared to a traditional long-term control plan mandated by the Regulators.**

Brandon also led a team to develop SD1's Capacity Management Operations & Maintenance (CMOM), Nine Minimum Control (NMC) and overall utility-wide stormwater and wastewater asset management program to meet CWA regulatory requirements, increase efficiency and reduce costs across SD1's operations. The programs were developed by in-house staff, greatly increased efficiency and lowered costs, and moved the organization from a reactive to a proactive asset manager.

Hamilton County (OH): Capital Improvement Program

Brandon served from 2011 to 2022 for Hamilton County (OH) as lead technical reviewer and risk advisor for the MSDGC $4 billion consent decree wet weather and capital improvement program. Brandon worked with the team and the County Administration to confirm MSDGC was complying with all NPDES permits and the consent decree wet weather improvement program. Worked with the County Administration to develop wastewater and stormwater management annual capital improvement programs over the last five years that met all regulatory and asset management requirements with zero percent rate increases to the ratepayers. MSDGC's annual operating and capital budget is about $450M. Documented savings from 2010 to 2019 to the MSDGC ratepayers have been over $80 million in operating budget savings and $800 million dollars in capital budget savings. **This work prevented 30% of rate increases due to operating expense avoidance and prevented more than 20% of rate increases due to capital expense avoidance.**

City of Baltimore (MD): Capital Improvement Program

Working with the Department of Public Works (DPW) Finance Department to assess the utility's stormwater, water, sewer, and solid waste capital budgets and project delivery processes compared to Best-in-Class utilities to optimize and streamline the capital budget development process and project delivery processes with the goal of developing a six-year CIP that accurately reflects the capital dollars most likely to be spent in FY2024 balanced with affordability, and prioritizes the highest regulatory and asset management projects of the Stormwater, Water, Wastewater, and Solid Waste programs. Baltimore DPW's annual operating and capital budget is $550M - $600M. **Developing a Master Cash Flow Spending Tracking report and Master Program Schedule Summary to track project spending and schedule compliance to allow for accurate forecasts of necessary PAYGO and bond funds needed to support the capital program and deliver more than $200M per year in capital projects spending**.

City of Dayton (OH): Capital Improvement Program

Brandon is currently assisting the City with implementing new processes and procedures, including a cash flow target spending plan, spending and schedule variance reports, and master program schedule, to ramp up capital delivery for Dayton Water from about 20 projects per year to 50 projects per year to implement the recommended projects in the water and wastewater master plans. Brandon is also developing a formal five-year CIP planning document for Dayton Water to accompany the annual budgeting process. The document will include details about specific capital projects to be undertaken over the next several years, across all divisions, service areas, and infrastructure assets managed by the Department.

City of Lafayette (CO): Capital Improvement Program

Brandon worked with finance and engineering staff to develop a 10-year capital improvement program for the water and sewer utilities based on Best-in-Class practices for asset management and new asset construction. The CIPs were then used in a 10-year rate study to account for necessary future costs and to optimize the amount and timing of rate increases to address affordability constraints of the community. Brandon also reviewed the stormwater utility and provided Best in Class practices compared to the current program for future implementation.

Hamilton County (OH): Capital Improvement Program

Lead technical reviewer and risk advisor for wet weather and capital program management oversight for the Hamilton County (County) Board of County Commissioners and County Administration. Brandon's and the team's role was to advise the County on regulatory compliance, asset management needs and budgets, and program management risks and opportunities to more cost-effectively and efficiently implement MSD of Greater Cincinnati's planned $3.5 Billion (2006$) Wet Weather Abatement Program to minimize impacts to sewer rates, address future regulatory risks, efficiently and cost-effectively renew the existing system assets, and minimize ongoing legacy costs of the ultimate program to achieve overall compliance with the Clean Water Act. Played a lead role to develop

integrated watershed plans to take advantage of EPA's Integrated Planning Law to ensure the final plan adopted and implemented by MSDGC is the most cost-effective, reasonable, and practical approach for the Hamilton County ratepayers.

Brandon and the team saved Hamilton County in excess of $900M in capital and operating cost reductions through our work.

The team has provided the County with assessments regarding every aspect of the program's organization, management organization, processes and procedures, planning and project sizing, cost-effectiveness, operating and capital costs reductions, strategy for regulatory compliance, including future regulations, asset management vision and execution, project execution, as well as a series of special studies, including the proper calibration and validation of the Collection System Hydrologic and Hydraulic Model (SWM) development. Technical assessments have covered a wide range of topics, including: the SWM; the flow monitoring program; asset management program, the sustainable infrastructure (Green) program; tunnels, pump stations, and relief sewers; new stormwater system; surface flooding and basement backup relief, regulatory compliance; water quality issues; and the various treatment technologies being demonstrated or planned.

Advised the County on policies and procedures to be implemented to address the implementation, monitoring, and effectiveness of planned storm sewer separation, post-construction stormwater MS4 permit requirements, and green infrastructure projects in conformance with their current MS4 NPDES permit, the Mill Creek TMDL, EPA Stormwater Regulations, and overall compliance with the Clean Water Act (CWA). Performed owner representative services for various design-build and construction manager at risk projects.

Assisted the County with the development of two Integrated Watershed Management Plans within their CSO and SSO Muddy Creek and SSO 700 watersheds to reduce the costs of their Consent Decree. IWM in these two watersheds has allowed the County to reduce costs by more than $150M for addressing overflows while providing greater water quality and community benefits.

PUBLICATIONS & PRESENTATIONS

- Asset Management Made Easy – SD1's Continuous Sewer Assessment Program Implements Practical Asset Management," WEFTEC, 2014
- Asset Management Made Easy – Applying Best Business Practices to Develop Practical Asset Management, WEFTEC 2013
- "Great, we now have a Stormwater Utility! Now how do we prioritize and fix all the problems?" multiple presentations, 2020 – 2022
- "Do Not Forget the Force Mains!!, WEF Collections System, 2010," Five Cities Plus Conference, 2010
- SD1's Innovative Continuous Sewer Assessment Program and Data Automation: Lessons Learned After Three Years of Implementation, WEFTEC 2011 & 2013.
- The Need for an Integrated Water Quality Affordability Strategy, NYWEA, June 2012, WEF Webinar, June 2012, WEFTEC USEPA Integrated Planning Panel, October 2012, Charleston, WV Infrastructure Task Force 2013, WEFTEC 2013, Great Lakes - St Lawrence GI Conf 2017
- Alternative Approaches to Affordability Workgroup, WEF, AWWA, US Conf of Mayors – Reviewer of guidance developed on alternative approaches for measuring a community's ability to afford needed water, wastewater and stormwater improvements and infrastructure, 2013
- Water Quality Trading, WEF Publication, Chapter Author – The Future of Water Quality Trading for CWA Compliance, 2014

- Green Infrastructure Implementation, WEF Publication, Chapter Author – Navigating the Institutional Landscape for Implementation of GI, 2013
- Ask the Experts, Green Infrastructure, Center for Watershed Protection – Watershed Science Bulletin, April 2013
- Developing and Defending Your Utility's Private Lateral Program: A Legal Perspective, KY/TN WEA Annual Conference, July 2011.
- Integrating Stormwater Controls Designed for Channel Protection, Water Quality, and Inflow/Infiltration Mitigation in Two Pilot Watersheds to Restore a More Natural Flow Regime in Urban Streams, Watershed Science Bulletin, Center for Watershed Protection, Spring 2012
- Peeking into the World of Private Source I/I Control, An Integrated Approach to SSO Control, KY/TN WEA Annual Conference, July 2011
- Sanitation District No.1 Partners with Development Community to Cost-Effectively Reduce Overflows into the Ohio River, WEF Collections System, 2008
- Backing Them Up – Staging Inline Storage and Green Infrastructure as Low Cost Steps Towards Controlling a Big CSO – Willow Run CSO, WEF Collections System, 2010
- Cleaning Large Diameter Interceptors: Everybody Knows They Need to Do It, But Doesn't Want to Admit It, WEF Collections System, 2010
- What if Industrial Flows Don't Make It to the Plant? Determining and Addressing Potential Water Quality Impacts of Non-Domestic Dischargers in a Combined Sewer System, WEF Collections System, 2010
- Knowing Your Pump Station's Stress Level, WEF Collections System, 2010
- Don't Let Your Model Sit on a Shelf: Are You Getting the Most Out of Your Model?, WEF Collections System, 2010 (Co-author)
- Understanding Tunnel Operation: The Use of Transient Analysis in the Planning and Design of the Northern Kentucky Western Regional Tunnel, WEFTEC, 2008
- Floatables Control is Surfacing Again, What Can You Do? WEFTEC, 2008
- Accurate Representation of Inflow and Infiltration in Separate Sewer System Models, Revolutionizing Infrastructure Sizing, WEF Collections System, 2007
- Developing an Accurate Model to Support Cost-Effective Collection System Design Solutions: Methods and Benefits, WEF Collections System, 2006
- Practical Applications of a System-Wide Model, KY-TN Water Professionals Conference, 2005
- Providing Sanitary Sewer Service Across the Great Miami River, WEFTEC, 2004
- How Should You Remove Your Nitrogen and Phosphorus? A Nutrient Removal Study for the City of Dayton, Ohio Advanced Wastewater Treatment Facilities (AWTF), OWEA Annual Conference, Dayton, Ohio, 2001
- Chlorine Risk Reduction Through the Use of Chlorine Gas Scrubbers, A Chlorine Risk Reduction Study for the City of Dayton, Ohio Water Treatment Plants, AWWA Southwest District, Ohio Section Meeting, 2000
- "Proving that Bladder Surge Tanks Cured Excessive Surge Conditions in a 30" Force Main," WEFTEC, 2011
- "When Good Water's Gone Bad: Prevention and Control of Sewer System Overflows. SD1's Watershed Approach to Water Quality Improvement and Compliance with the Consent Decree," WEFTEC, 2011
- "SD1's Watershed Approach," WEFTEC, 2009
- "Integration of Field Inspection Data and Automated Analysis Streamlines Sewer System O&M and Rehabilitation Work for SD1," WEFTEC, 2009
- "Implementing a Sewer Overflow Consent Decree through Watershed Management," WEFTEC, 2008
- "Western Regional Conveyance and Storage Tunnel," KSPE Annual Conference, 2008
- "Steps to Implementing an Early Warning and Predictive Water Quality Monitoring Program," KY/TN AWWA/WEA Annual Conference, 2004

Amy Hunter

LEAD CONSULTANT

Manager

Specialties

- Financial planning modeling
- Utility cost-of-service & rate studies
- Utility pricing structuring to meet community goals (tier, volumetric, etc.)
- Cost analysis & cost allocation
- System development/impact fee studies
- Affordability analysis
- Rate case experience with Texas Public Utility Commission

Professional History

- Raftelis: Manager (2023-present)
- City of Austin: Finance Manager (2021-2023); Sr. Financial Analyst (2013-2021)
- Electric Reliability Council of Texas: Sr. Financial Analyst (2009-2010)
- Lower Colorado River Authority, Wholesale Power: Sr. Financial Analyst (2004-2009)
- Intel Corporation: Sr. Financial Analyst (1999-2004)

Education

- Master of Business Administration - St. Edward's University
- Bachelor of Business Administration in Finance - Texas A&M University, College Station

Professional Memberships

- Texas Municipal League (TML)
- Government Financial Officer Association (GFOA)
- AWWA: Texas

ROLE

Amy will serve as the Lead Consultant and will work at the direction of Angie in conducting analyses and preparing deliverables for the project.

PROFILE

Amy joined Raftelis after more than 20 years of financial management experience with public utilities and local government. Prior to joining Raftelis, Amy managed the annual budget process and fee creation of $75 million at the City of Austin Development Services Department for nearly three years. Her service in this position was marked by being the first city in Texas to implement development fees using cost-of-service modeling. This ensured the sustainability of Development Services as an Enterprise Fund. She has also actively participated in two rate studies for Austin Water. These studies resulted in going to the Public Utility Commission of Texas (PUCT) to present new rates for Wholesale customers. During this process she identified a miscalculation by PUCT which resulted in a $2.6 million savings to Austin Water. Since joining Raftelis, she has provided a variety of services including financial benchmarking, and technical lead for financial modeling.

KEY PROJECT EXPERIENCE

City of Austin (TX): Development Services, Cost of Service and Fee Design

Amy managed the financial transition from being part of the General Fund to an Enterprise Fund. She built the cost-of-service model for all services including site plan review, building plan review, and inspections leading to certificate of occupancy. The model ensures just and reasonable fees to customers.

Austin Water (TX): Secured Texas Water Development Board Capital Funding

Amy led and coordinated with stakeholders on preparing the winning application to secure $120 million of interest free loans from the Texas Water Development Board. Her effort ensured funding for core infrastructure required to maintain safe reliable water service.

Austin Water (TX): Water and Wastewater Rate Study

Amy managed and prepared the annual water and wastewater revenue budgets of approximately $450 million based upon the calculated cost of service. She built financial models for revenue requirements and applied rate designs using industry standards from AWWA. Finally, her oversight of the budget identified $1.3 million of cost savings opportunities.

Electric Reliability Council of Texas (TX): Implementation of Nodal Market Design

Amy oversaw the financial planning and management of the new electric market capital improvement project, Nodal, with a budget of $650 million. The goal was to transition the current zonal market to market nodes which improved the overall pricing of electricity in Texas. She ensured the project was delivered on budget by reviewing all accounting entries were accurately recorded and capitalized according to Government Acccounting Standard Board (GASB) software rules. Finally, She prepared Board of Directors periodic financial reports.

Lower Colorado River Authority (CO): Wholesale Power Annual Budget

Amy prepared the annual budget for Wholesale Power. This included consolidating the operating and maintenance budgets across all power plants. She reconciled the significant budget variances and provided recommendations to improve financial performance. She also developed technical models for forecasting costs and pricing based upon resources and customer load for the region. Finally, she prepared Board of Director reports to communicate financial performance.

Sarah Wingfield

STAFF CONSULTANT

Associate Consultant

ROLE

Sarah will work at the direction of Angie in conducting analyses and preparing deliverables for the project.

PROFILE

Sarah is a recent graduate from Georgetown University with a range of academic and professional experience in water resources management. Through her work with the California Data Collaborative and the Latitude Zero Ecuador Research Initiative, Sarah has developed a broad knowledge of analytical methods, as well as management approaches and legislation relevant to rate implementation and utilities management. Sarah's work on *Challenges to Water Management in Ecuador: Legal Authorization, Quality Parameters, and Socio-Political Responses* was recently published in the open-access journal, *Water*.

Professional History

- Raftelis: Associate Consultant (2021-present)
- California Data Collaborative: Communications and Marketing Intern (2020-2021)
- Latitude Zero Ecuador Research Initiative: Research Assistant (2019-2021)

Education

- Bachelor of Science in International Affairs - Georgetown University (2021)

Languages other than English

- Spanish

KEY PROJECT EXPERIENCE

Padre Dam Municipal Water District (CA): Water, Wastewater, and Recycled Water Financial Planning, Cost-of-Service, and Rate Design Study

Padre Dam Municipal Water District is currently updating its financial model and cost allocation system to evaluate different CIP scenarios, reserve policies, a comprehensive rate study, debt issues, and other financial/rate matters. The District has recently established two significant capital improvement projects and is in the process of developing advanced purification programs for its recycled water utility. Sarah is currently working with the District and Raftelis team staff to design the 2022 update to the financial and cost allocation models for the District's sewer, potable, and recycled utilities.

City of Orange (CA): Water Rate Update Study

The City of Orange is currently updating its 2015 financial model (also conducted by Raftelis) to evaluate different water demand factors, reserve policies, and other financial/rate matters. With Raftelis' help, the City recently implemented a new rate structure and is now working to understand the long-term impacts to the City's financial health and customer affordability. Sarah is currently working with the City and Raftelis team staff on completing the 2021 update.

KEY PROFESSIONAL EXPERIENCE

California Data Collaborative Communications and Marketing Intern (CA)

Sarah served as the Communications and Marketing intern with the California Data Collaborative (CaDC). Sarah worked directly with water utilities agencies and academics to analyze and describe the impacts of new legislation on water allocation and conservation in California. These provided valuable resources for water agencies to adapt their data collection and analytical methods and improve operations in their service areas.

Latitude Zero Ecuador Research Initiative Research Assistant (Ecuador)

Sarah served as a Research Assistant in the Latitude Zero Ecuador Research Initiative (LOERI) Environmental

Engineering Lab at the Universidad de San Francisco in Quito, Ecuador. Sarah collaborated with several USFQ-affiliated researchers to develop a comprehensive study of the Ecuadorian water and wastewater system. Sarah's work was recently published in the open-access journal, *Water*, and provides a unique perspective to her work in the water sector.

PROJECT LIST

- City of Calistoga (CA) – Water, Wastewater, Recycled Water, Geothermal, and Drought Rates Study
- City of Big Bear Lake (CA) – Water and Wastewater Rate Study
- City of Encinitas, San Dieguito (CA) – Water, Wastewater, Recycled Water, and Drought Rates Study
- City of Kaufman (TX) – Water and Wastewater Rate Study
- City of Pasadena (CA) – Water Rates Study
- City of Canyonlands (UT) – Solid Waste Rate Study

PUBLICATIONS

- "Challenges to Water Management in Ecuador: Legal Authorization, Quality Parameters, and Socio-Political Responses," 2021

Project Approach

In August 2022, the Laredo City Council convened to deliberate not only on its immediate water supply concerns but also the broader imperative of cultivating a culture of conservation. The past two decades have seen Texas grappling with recurrent droughts, making it imperative for municipality like Laredo to chart a sustainable course for their water future.

Why Conservation Matters:
Conservation emerges as a linchpin in the quest for sustainable water management. By conscientiously managing water consumption, municipalities can not only extend the lifespan of current water supplies but also mitigate the impact of droughts. Lessons drawn from regions worldwide showcase that robust conservation measures can act as a bulwark against the depletion of precious water resources.

Striking a Balance:
For Laredo, the challenge lies in striking a delicate balance between conservation imperatives and the practicalities of water system maintenance. The City's extensive network of water lines necessitates periodic flushing to maintain water quality. Consequently, a nuanced approach is required, one that optimizes water use while addressing the operational demands of an aging infrastructure.

Laredo faces the dual challenge of water conservation and the pressing need to rejuvenate its aging infrastructure. The older sections of the City grapple with infrastructure that has reached the end of its life cycle, contributing significantly to water inefficiencies. Urgent attention to infrastructure upgrades is vital not only for averting potential crises but also for ensuring a resilient water supply system. The City Council recognizes the urgency of addressing these infrastructure challenges promptly. By investing in modernizing and replacing aging components, Laredo can enhance the efficiency of its water distribution network, reducing losses and optimizing water usage.

As the City confronts these intertwined challenges, it becomes evident that a holistic approach, including financial planning and rate design, is essential. Few utilities give due consideration to these tools, but their incorporation is pivotal in steering Laredo towards a sustainable water future.

Through our study, we can help in the following ways:

1) Develop pricing strategies that encourage conservation and charge customers that are using the most water,
2) Provide a financial and rate plan that ensures that future water supply and capital investments can be paid for,
3) Ensure that the City has sufficient revenue for funding ongoing repair and replacement projects, and
4) Consider the city's low-income customers by developing rates that address affordability.

In conclusion, the nexus between conservation, infrastructure renewal, and financial prudence forms the bedrock of sustainable water management for Laredo. Recognizing the challenges and seizing the opportunities within this interconnected framework will be key to securing a resilient and water-secure future for the City. It is through the judicious integration of these elements that Laredo can chart a course toward enduring water sustainability.

The following scope has been developed with all this in mind and based on the City's Request for Qualifications (RFQ). The approach has been tailored to address the specific objectives and concerns identified in the RFQ while

maintaining those elements that we believe are essential for a successful project. We have used a similar project approach on many of our rate study projects for utilities throughout Texas, the Southwest, and the U.S.

Task 1: Project Development and Management

The key outcomes for Task 1 are:

- A plan for project delivery that effectively and efficiently meets the needs of the City in a thorough, effective, and timely manner (Task 1.1)
- An in-depth understanding (on the part of the Raftelis team) of the operations of the utility and the receipt and review of the relevant data needed for the study (Task 1.2)
- Identify the pricing objectives of the City (Task 1.3)
- Quality and accurate deliverables provided on time and on budget (Task 1.4)

Task 1.1: Project Initiation and Stakeholder Engagement

The project team will conduct a kick-off meeting with City staff to confirm the project approach, work plan, schedule, and priorities. A successful kick-off meeting ensures that City staff and the project team agree on the project's goals and expectations. We will develop a kick-off meeting package that contains the meeting agenda and presentation materials to guide the discussion. Following the meeting we will provide a brief memorandum summarizing the discussion and any action items.

Task 1.2: Initial Data Request, Review and Evaluation of Data, and Supplemental Data Requests

We will provide a data request upon receipt of notice to proceed from the City. Before the kick-off meeting, we will thoroughly review the data provided by the City. This review is critical for two reasons. First, it is critical to appropriately use the most accurate data possible. This means communicating the types of data we need from the City and ensuring we received what we requested and are using it appropriately. A miscommunication regarding the data can cause significant deviations between expectations and actual results. Raftelis staff will work closely with the City's point person in each area (e.g., finance, operations, and customer service) to ensure that we all agree on the intended use of what is being provided. Second, we have found that beginning to work with the data provided by our clients in advance makes for a much more productive kick-off meeting as it allows us to begin framing preliminary analyses, formulate any questions, and come fully prepared to discuss any issues. Even though we may request additional data or clarification as the study progresses, we will minimize the additional data requests and will strive to balance the time and effort required to provide the data with the relative impact it has on the analysis.

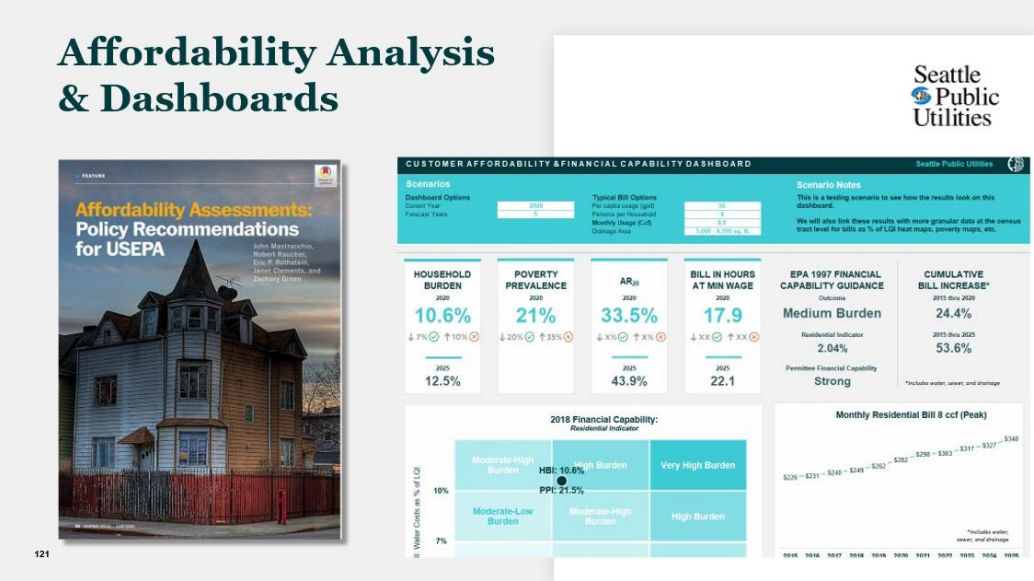
Task 1.3: Pricing Objectives Workshop

Raftelis will hold a workshop to develop priorities related to pricing and rate design. This workshop can be conducted after the initial Kick-off Meeting. Attendees of this workshop should include key stakeholders that will have input into the proposed rate design. These often include city management, city staff and sometimes, council members. The purpose of this workshop would be to determine whether modification to the City's water and wastewater rate structures is necessary. The results of this workshop provide direction regarding the adequacy of the existing structure and direction regarding potential modifications/enhancements to effectively and efficiently meet the most important objectives of the community. Depending on the needs of the community, the topics covered by Raftelis will include the process of developing cost of service water rates using American Water Works Association (AWWA) ratemaking principles and wastewater rates using Water Environment Federation (WEF) ratemaking principles. Most importantly will be a discussion of the often conflicting financial and public policy objectives that

must be evaluated by the City when considering potential modifications to its existing water and wastewater rate structures.

Affordability Considerations

The affordability of water/sewer service is the ability of a household to pay water/sewer bills. The "ability" to pay relates to a household having to forego other discretionary expenditures to pay water/sewer bills. Historically, customers must access funds from charitable organizations when needing assistance with paying bills. Some utilities have developed programs where customers donate money to fund assistance programs. Typically, these attempts to address affordability do not generate sufficient dollars to meet the community's needs, especially now that inflationary pressures have increased the percentage of income spent on basic needs like housing, food, utilities, healthcare, etc. Addressing water and sewer service affordability over the long term requires innovative solutions and community partnerships.



Defining affordability is possible, but it's also nuanced. While there are several frameworks that provide guidance on defining the affordability of water/sewer service, each community must choose the metrics that best fit their community. Regardless of the metrics used the more difficult challenge is often the establishment of the affordability threshold which helps identify the level of funding needed. This is accomplished by analyzing and layering lots of data sets and creating data visualization of the areas of the community in need. Raftelis is a leader in measuring affordability. Through our work with utilities throughout the U.S., like Great Water Alliance Program Manager in Waukesha, WI; Lakewood, OH Financial Capability Assessment; Seattle Affordability Assessment; and El Paso Water Affordability Assessment and Customer Assistance Program development, we have gained knowledge for calculating affordability factors such as the Household Burden Indicator and Poverty Prevalence Indicator. This work has allowed us to develop an Affordability Data Library that allows us to track how other utilities have addressed affordability concerns.

Task 1.4: Ongoing Project Management and Quality Assurance/Quality Control

Effective ongoing project management ensures that City staff are receiving the support they need at all times. This means regular and responsive communication, timely provision of deliverables, and prompt communication of any issues or challenges. One of Raftelis' key project management objectives is to serve as an asset to City staff, enhancing their capabilities and bringing a broader industry perspective to bear on any challenges. Our project management team includes senior Raftelis staff who have successfully collaborated on numerous engagements of a similar size and complexity, including several prior studies for the City. This team is prepared to continue to leverage our institutional knowledge to support the critical work performed by the City going forward. Some of the key features of our project management approach for this engagement include:

- Senior-level participation and oversight with a Project Director and Project Manager each with 20+ years of experience providing similar services to utilities throughout Texas and the United States
- Control of project budget and schedule through Deltek, our project management software
- Control of project team capacity through Raftelis' weekly and monthly workload planning meetings, which will ensure the project team has sufficient capacity to meet the City's needs
- Effective communication between the project team and City staff via scheduled check-in calls, meeting summary memoranda, and regular meetings with the project team.
- Leveraging, as needed, the broader Raftelis team, consisting of 160+ consulting professionals to address issues and questions that may arise during the study

Quality assurance and quality control (QA/QC) is critical to the success of the project because errors undermine the credibility of the process and ultimate recommendations. Our QA/QC process is as follows:

First, we verify the data used for the study. Verification is critical because the data, while accurate for its original intended purpose, may reflect adjustments or anomalies that we would not want to include in our projections. The opposite is also sometimes true in that manual adjustments are occasionally made which are not reflected in the detailed data we receive. One example is detailed customer billing data, which may contain billing errors that are later manually corrected but may or may not be reflected in the detailed data we receive. One check on this issue involves calculating revenues for a recent historical period and comparing against actual results. If the results are materially different, we can examine the data more closely to identify what may be causing the issue.

Verification also involves clear communication between the Raftelis team and City staff to ensure that we are correctly interpreting what we have received and are using it appropriately. We look to establish a staff "subject matter expert" on certain sources of data. We will then work with this person to ensure that they understand what we have requested, that we have received what we asked for, and that we're using it appropriately. This step is critical because data used for the wrong purpose, even if accurate, will compromise the results.

Second, we verify the accuracy of the calculations. Periodically throughout the project, we have an experienced consultant who is not involved in the project review the calculations. This reviewer can mark-up the rate model and schedule a call with the project team to review their findings. This is not a methodological review, but a check on the calculations themselves. We also involve utility staff early in the process. We provide copies of the rate calculations throughout the engagement to allow staff to review, ask questions, and identify any misinterpretation issues. Finally, we create internal error checks within the rate model. Wherever something is summarized, allocated, or otherwise manipulated, we use conditional formatting to ensure the integrity of the calculations. This is also helpful to avoid any issues with utility staff's use of the model in the future.

Finally, we ensure the methodology used for the study is appropriate. In addition to the accuracy of the data and calculations, we want to ensure that the product delivered to the City meets industry standards and is defensible. To accomplish this objective, we will leverage the experience of our Project Director, Todd Cristiano, and our Project Manager, Angie Flores. Our QA/QC process, which ensures the appropriateness of the data, calculations, and methodology, will be critical to the study's success.

Task 2: Financial Plan Development

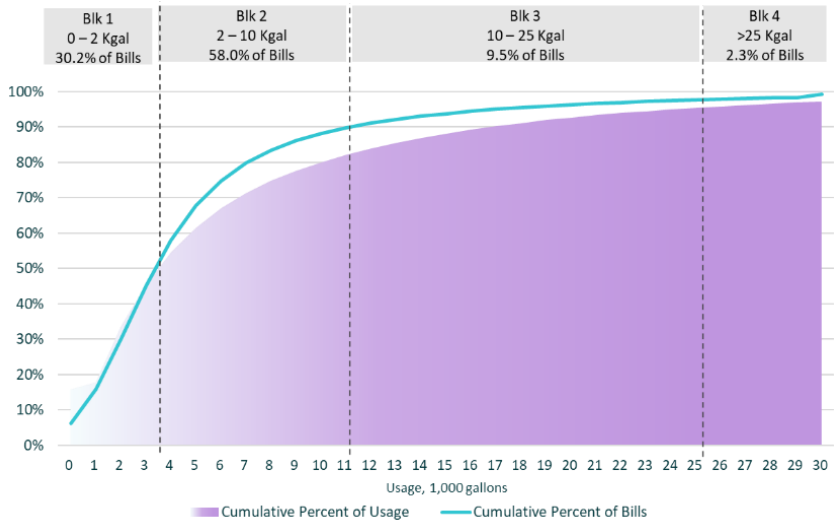
The financial plans identify the overall level of revenue necessary to fund operations and maintenance expenses (O&M), routine repair and replacement capital expenditures, and repayment of debt service (current and future) while achieving the City's financial management objectives. Determining the revenue requirement involves a

detailed cash flow forecast, which compares projected baseline revenues to projected expenditures and identifies any adjustments to revenues that may be necessary to fund utility operations in a financially sustainable manner. This will involve the following subtasks: a projection of revenue under existing rates (Task 2.1); a projection of O&M expense (Task 2.2); a projection of routine and major capital expenditures (Task 2.3); and a projection of revenue adjustments based on a detailed cash flow analysis (Task 2.4).

The projections we typically develop include the balance of the utility's current fiscal year, plus the following 5-10 fiscal years. To the extent that the City has identified major capital improvements or incremental increases in O&M which lie outside of the 5-10-year window, we can extend the plans to include the additional years at no additional cost to City.

Task 2.1: Projection of Revenue Under Existing Rates

Raftelis will develop revenue projections under existing rates and projected customer usage by customer class that will be developed in Task 2.2. This will serve as a revenue baseline if no adjustments to rate levels or structures are made. In Task 2.5, we will compare these baseline revenue projections to projected expenditures to determine the overall level of revenue necessary (including revenue increases) to fund these projected expenditures and achieve City's financial performance objectives.



Revenues typically consist of operating and non-operating revenues. Operating revenues consist principally of rate revenues derived from the services provided by the utility to customers. Operating revenues are directly affected by the level of rates and charges, the service levels provided, and purchased water costs, which are passed through directly to customers. We will forecast other operating revenues using a trend analysis with adjustments to reflect known changes historically experienced and anticipated changes during the forecast period.

We will compare these revenues to the operating and capital expenses forecast in Tasks 2.3 and 2.4 to understand the sufficiency of existing revenues to fund projected expenditures.

Task 2.2: Consumption

Projecting future demand and developing realistic per capita consumption estimates is one of the most difficult tasks that a utility faces each year. The reason for this is that several unforeseeable factors can affect consumption. For water, a particularly rainy or dry season, and unforeseen population growth or decline will dramatically affect consumption. However, projecting consumption is also a utility's most important task. These projections directly affect user rates, which, in turn, determine how much cash a utility will collect. If a utility overestimates consumption, then rates will be too low leading to revenue under-recovery, a deficit, and decreasing fund balances. Yet, if a utility underestimates consumption, then revenue over recovery occurs and this can be met with public scrutiny because of unjustly high rates.

After, we will study available historical consumption of the City's different customer types to arrive at a corresponding usage and growth rate for each type. As a result of these analyses, Raftelis will be able to develop projections of consumption for the forecast period under various scenarios, resulting in an optimistic projection, pessimistic projection, and most likely projection. Raftelis will then calculate the revenues under current rates at projected consumption levels (optimistic, pessimistic, and most likely) to understand the potential realizable revenues. We will then compare these revenues to the revenue requirements forecast in the financial plan developed in Task 3 to understand the magnitude of the potential shortfall under the current rates. Through this analysis, Raftelis can create a graph like the one for each of the City's customer classes. This provides a picture of how its customers use water.

Task 2.3: Projection of O&M Expense

The City's budgets (for the current year and any available future years) will serve as the starting point for the projection of O&M expenses. We typically make three adjustments to project O&M expenses for the forecast period: budget performance adjustments, incremental expense adjustments, and inflationary adjustments.

Budget performance adjustments will be made based on a detailed review of budgeted O&M expenses compared to actual performance. To the extent that the utility tends to outperform in certain areas (i.e., spend less than budgeted), we will discuss potential adjustments so that the projection of baseline O&M (i.e., before any incremental expenses and inflationary adjustments) is a reasonable reflection of what is likely to occur.

The current budget may include one-time expenses that are not expected to be incurred in the future. In this case, the one-time expense will either be excluded from future years or, if it occurs periodically, normalized in future years. To the extent that the current year budget represents a snapshot plan for the year in question, **incremental expense adjustments** ensure future years carry forward the appropriate level of O&M expense. The current budget may also exclude incremental changes in operating expenses anticipated to occur in the future.

Inflationary adjustments account for expected future inflation in O&M expenses, after accounting for budget performance and any incremental expenses. Inflationary adjustments will be based on the best and most relevant data possible. Expenses driven by customer growth and usage will be adjusted based on the projections in Task 2.1. Personnel costs will be adjusted based on planned compensation adjustments from City. For expenses with less detailed data, we will rely on historical trends, discussions with City staff, and our experience working with similar utilities throughout the United States.

Task 2.4: Projection of Routine and Major Capital Expenditures

Task 2.4 involves developing a capital improvement financing plan that identifies the City's capital projects (routine and major) and the mix of cash and debt[1] used to finance them. The cash flow impact of the capital financing plan is incorporated into the cash flow analysis in Task 2.4 as annual cash outlays (i.e., PAYGO or revenue-funded capital) and new debt service. To develop the capital financing plan, we will review the City's approved capital improvement plan (CIP) and work with City staff to ensure that the appropriate level of investment is balanced against the potential rate implications. To the extent that the CIP is in current year dollars, we will include adjustments for future construction cost inflation based on an analysis of trends for the appropriate cost indices (e.g., Engineering News-Record). We will also incorporate any projects that the City already has in progress from prior approved CIPs that will be completed in the first few years of the forecast period.

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[1] *Under the Dodd-Frank Wall Street Reform and Consumer Protection Act, all firms that provide debt issuance support services, including financial feasibility studies, must be registered with the SEC and MSRB to legally provide official opinions and related services. Raftelis' registration allows our clients to be confident that Raftelis is fully qualified and capable of providing financial advice related to debt issuances in compliance with the applicable regulations of the SEC and the MSRB.*

The CIP financing plan we develop for the City will incorporate routine repair and replacement expenditures and major capital improvements. Raftelis will incorporate the City's policy for funding routine expenditures and major capital improvements with reserves. Debt-funding of capital improvements will be estimated based on the amount of reserves available. We will work with City staff to recommend CIP financing alternatives that will achieve the City's financial management objectives. The projected capital costs, including PAYGO and any new debt service, will be incorporated into the cash flow projections in Task 2.5.

Task 2.5: Utility Cash Flow Forecasts and Revenue Adjustments

We will develop a detailed cash flow forecast for the multi-year planning horizon. This forecast will compare existing revenues (Task 2.1) to forecast expenditures (Tasks 2.3 and 2.4), identifying any deficiencies in funding under existing revenues. Throughout Task 2.5, we will discuss the City's existing financial policies and objectives (formal and informal). This will include a review of the utility's performance relative to key financial ratios (e.g., days cash, capital structure, and debt service coverage). Throughout these discussions, we will provide recommendations to ensure the City's financial management strategies align with industry best practices.
We will structure rate adjustments to achieve the City's strategic financial management objectives and maintain alignment with best financial management practices regarding debt service coverage ratios and reserve balances. Where possible, revenue adjustments will be smoothed, mitigating the impact on customers in any given year. The ultimate outcome of Task 2.5 will be identifying the overall level of revenue required (including any adjustments to revenue) to fund the provision of safe and reliable service in a financially sustainable manner. This revenue requirement will be used to support the development of the proposed rates in Task 3.

Task 3: Water and Wastewater Cost-of-Service Analysis and Rate Calculation

We will tailor the City's utility's cost-of-service analysis to incorporate the unique attributes of system operations, operating and capital spending. This tailored cost of service will be premised on the principles set forth in state and local laws, the AWWA's *Manual M1, Principles of Water Rates, Fees, and Charges,* the WEF's *Manual of Practice No. 27, Financing and Charges for Wastewater Systems,* and other legal precedents.

The first step of a cost-of-service analysis is to complete a cost functionalization to allocate costs to the various functions within the utility. For example, in the water utility, these categories may include source of supply, treatment plant, transmission, and distribution. The next step is the classification of costs based on cost-causative parameters. In water, these parameters would be average day demand, maximum day demand, maximum hour demand, meters, and customer service. Finally, the cost of serving each customer class will be determined based on each class's usage characteristics. Raftelis will discuss with the City whether this task and allocation analysis is necessary for each utility.

In this task, Raftelis will provide an appropriate calculation for the City's wholesale rate. Through discussions with staff, Raftelis will determine the methodology for the calculation based on industry-accepted methods. Based on the City's input during the kick-off meeting, Raftelis will work with the City to make any necessary modifications or changes to the selected rate calculation approach. The details of the rate calculation will be documented in a simple, straightforward manner for ease of understanding.

Task 3.1: Rate Calculation

After the revenue requirements have been functionalized, classified, and allocated, we will use the consumption analysis performed in Task 2 and combine it with the new revenue requirements to calculate user rates reflecting the City's specific rate goals and objectives. In identifying these goals and objectives, Raftelis will evaluate the City's

current rate structures and discuss how they compare to industry standards. At this point, we will discuss and evaluate the need for new customer classes, such as senior citizens or irrigation/sprinkler rates. Raftelis has worked with many customers to evaluate existing and new customer classes. This evaluation will be based on existing data and the outcomes of the pricing objectives workshop.

We will project these rates for the forecast period to ensure that all covenant requirements are met and to ensure that customer impacts of rate increases do not lead to rate shock. At the end of this task, we will conduct a meeting with City staff. Raftelis will review the entire cost-of-service and rate-setting process at this meeting and present preliminary rates. Prior to the meeting, City staff will be provided with the draft rate model and preliminary rates so that they will be able to review our methodology and suggest changes. We will discuss all suggested changes and then work with the City to develop final rate recommendations to incorporate into the City's rate ordinances.

Task 3.2: Comparison of Costs by Customer Class

Based on the rate structures identified in this task, we will compare the cost of service to rate recovery under the new and existing rates. This will allow the City to understand any inequities in the existing rate structure as well as how any proposed changes to the rate structure address those inequities.

Task 4: Rate Model Development

At the heart of any successful cost-of-service and rate study is the computer model that is used to develop revenue requirements; perform cost functionalization, classification, and allocation; and calculate rates. The model must be sophisticated enough to perform the complex calculations involved in a comprehensive cost-of-service and rate analysis and yet still be simple enough to allow for future updates by City staff.

The model will incorporate the rate structures and rate calculation methodologies d during Task 4. During the project, City staff will be provided with working copies of rate model drafts in Microsoft Excel so that they will be able to provide input into the development of the model. Once the project is complete, the City will be provided with fully functioning copies of the model and Raftelis personnel will train members of the City staff in its use.

Raftelis will develop a customized financial model that incorporates a dashboard to allow you to easily run scenarios and see the impacts in real time. Shown here is a sample dashboard that we developed for another project.

Task 5: Reports and Presentations

Rate Comparison

Raftelis will prepare a comparative analysis of the City's current and proposed water and wastewater rates to comparable peer utilities. This comparison will be used in the reports and presentations of the study's findings to provide a frame of reference for stakeholders and decision-makers.

Draft Report

The draft report will document the rate development process, describe any recommended changes to the existing rate structures and the reason for such changes, and present the cost-of-service and rate study results. An electronic copy of the draft report will be presented to City staff for their review and comment.

Final Report

Raftelis will incorporate the City staff's comments on the draft report into a final report. Upon finalization of the report, the City will be provided with an electronic copy of the report. In addition to the final report, the City will also be provided with electronic copies of the final rate model in Microsoft Excel. Raftelis will also deliver a model training workshop for City staff.

Presentations

We will prepare a PowerPoint presentation summarizing the rate study process, findings, and recommendations in a clear and concise manner. We will provide a draft of this presentation to City staff for their review and comment prior to delivering the final version.

Raftelis will also present our findings using this presentation for City Council.

Project Timeline

Raftelis will complete the scope of services within the timeframe shown in the schedule below. The proposed schedule assumes a notice-to-proceed by the middle of January 2024 and that Raftelis will receive the needed data in a timely manner and be able to schedule meetings as necessary. Project completion is estimated for May 2024.

TASKS	2024				
	JAN	FEB	MAR	APR	MAY
1. Project Development and Management	●		●		
2. Finanical Plan Development		●	●	●	
3. W/WW Cost-of-Service Analysis and Rate Calculation			●		
4. Rate Model Development		●		●	
5. Reports and Presentations				●●	●●

- *In-person Meetings*
- *Web Meetings*
- *Deliverables*

CONFLICT OF INTEREST

Conflict of Interest

Raftelis or our team members do not have any material agreements, relationships, or employment with any other planning or design firm, government agency or other person or entity that may create conflict of interest or the appearance thereof.