TOWN COUNCIL SPECIAL MEETING

January 07, 2025 at 7:00 PM

250 River Circle - Alpine, WY 83128

AGENDA

Notice - The video and audio for this meeting are streamed live to the public via the internet and mobile devices with views that encompass all areas, participants, and audience members. Please silence all electronic devices during the meeting. Comments made on YouTube will not be answered. Please email clerk@alpinewy.gov with any questions or comments.

1. **CALL TO ORDER** - Mayor Green

2. **ROLL CALL** – Monica Chenault

3. **SWEARING IN CEREMONY**

4. **ACTION ITEMS**

   a. Resolution No. 2025-001 - Restricted Gift - Alpine Airpark

      Seeking a motion to approve Resolution No. 2025-001 - Restricted Gift - Alpine Airpark.

   b. Resolution No. 2025-002 - Restricted Gift - Andrew Brooks

      Seeking a motion to approve Resolution No. 2025-002 - Restricted Gift - Andrew Brooks.

   c. Presentation Rules:

      Time Allotted: 20 minutes / Description: The selected consulting firm will have a total of 10 minutes to present their qualifications, proposed methodology, and approach, and 10 minutes to respond to questions from the Town Council and/or Public Comment.

   d. Cushing Terrell Presentation

   e. Harmony Design & Engineering Presentation

   f. Avenue Consultants Presentation

   g. Town of Alpine Comprehensive Master Plan Award

      Seeking a motion to award the Town of Alpine Comprehensive Master Plan Award to the chosen consultant.

h. Raftelis Submission

i. Sunrise Engineering Submission

j. Town of Alpine Development Impact & Capacity Fee Study for Water and Wastewater Award

Seeking a motion to award the Town of Alpine Development Impact & Capacity Fee Study for Water and Wastewater Award to the chosen consultant.

5. PUBLIC COMMENT

6. EXECUTIVE SESSION

7. ADJOURNMENT

TOWN OF ALPINE, WYOMING
RESOLUTION 2025-001

A RESOLUTION ACCEPTING AND ALLOCATING FUNDS FROM THE ALPINE AIRPARK ASSOCIATION FOR THE TOWN OF ALPINE COMPREHENSIVE MASTER PLAN

WHEREAS, pursuant to Wyoming State Statute 15-1-103(vi), municipalities are authorized to "receive bequests, gifts and donations of all kinds of property in fee simple, or in trust for public, charitable or other purposes and do all things necessary to carry out their intended purpose";

WHEREAS, the Town of Alpine's Comprehensive Master Plan was last updated in 2006, and the Town recognizes the need to undertake efforts to update this important document to reflect current conditions, community goals, and future development plans;

WHEREAS, the Town Council of Alpine has budgeted $100,000 for the completion of the updated Comprehensive Master Plan as part of its commitment to responsible growth and planning;

WHEREAS, the Alpine Airpark Board of Directors has generously committed to contributing $100,000 to assist with the completion of the Town of Alpine Comprehensive Master Plan, further demonstrating their commitment to the community's development and sustainability;

NOW, THEREFORE, BE IT RESOLVED, that the Town Council of Alpine hereby accepts the $100,000 donation from the Alpine Airpark Board of Directors to be used specifically for the Town of Alpine Comprehensive Master Plan.

WHEREAS, the Town of Alpine greatly appreciates the generous contribution from Alpine Airpark Association;

BE IT FURTHER RESOLVED, that the Town Treasurer is directed to allocate these funds to the appropriate account designated for the Master Plan project.

____
Alpine Airpark Board of Directors Representative
Print

____ ____________________
Alpine Airpark Board of Directors Representative Date
Sign

PASSED, APPROVED AND ADOPTED this 7th day of January 2025.

Vote: __ Yes, __ No, __ Absent, and __ Abstain.

SIGNED:

____
Eric Green, Mayor of Alpine

ATTEST:

____
Monica L. Chenault, Town Clerk/Treasurer

TOWN OF ALPINE, WYOMING
RESOLUTION 2025-002

A RESOLUTION ACCEPTING A PERSONAL GIFT FROM ANDREW BROOKS AND HIS FAMILY FOR THE TOWN OF ALPINE, WYOMING COMPREHENSIVE MASTER PLAN

WHEREAS, pursuant to Wyoming State Statute 15-1-103(vi), municipalities are authorized to "receive bequests, gifts and donations of all kinds of property in fee simple, or in trust for public, charitable or other purposes and do all things necessary to carry out their intended purpose";

WHEREAS, the Town of Alpine's Comprehensive Master Plan was last updated in 2006, and the Town recognizes the need to undertake efforts to update this important document to reflect current conditions, community goals, and future development plans;

WHEREAS, the Town Council of Alpine has budgeted $25,000 for the completion of the updated Comprehensive Master Plan as part of its commitment to responsible growth and planning;

WHEREAS, Andrew Brooks and his family have generously offered a personal gift of $25,000 to assist with the completion of the Town of Alpine Comprehensive Master Plan, demonstrating their commitment to the community's development and sustainability;

WHEREAS, the Town of Alpine greatly appreciates the generous contribution from Andrew Brooks and his family;

NOW, THEREFORE, BE IT RESOLVED by the Town Council of the Town of Alpine, Wyoming, that the donation of $25,000 from Andrew Brooks and his family is hereby accepted and will be used exclusively for the Comprehensive Master Plan.

BE IT FURTHER RESOLVED, that the Town Treasurer is directed to allocate these funds to the appropriate account designated for the Master Plan project.

____
Andrew Brooks
Print

____ ______________________
Andrew Brooks — Date
Sign

PASSED, APPROVED AND ADOPTED this 7th day of January 2025.

Vote: __ Yes, __ No, __ Absent, and __ Abstain.

SIGNED:

____
Eric Green, Mayor of Alpine

ATTEST:

____
Monica L. Chenault, Town Clerk/Treasurer

hello.

Town of Alpine

REQUEST FOR PROPOSALS

TOWN OF ALPINE MASTER PLAN

October 15, 2024

Cushing Terrell

Cushing Terrell

October 15, 2024

Town of Alpine
250 River Circle
Alpine, WY 83128

RE: Request for Proposal | Alpine Master Plan

Dear Mayor Green and Selection Committee,

By celebrating rich culture and heritage, providing quality recreation, showcasing art, supporting local businesses, and offering places and ways for neighbors to connect, Alpine has it all. It's no wonder so many choose to live, work, and play here.

With a deep understanding of the unique challenges your town faces—from balancing growth with sustainability to enhancing recreational opportunities—our team is confident in offering solutions that align with Alpine's vision and values.

While we are proud of our success in developing and updating Comprehensive Plans across Colorado and the Mountain West, we recognize that this project is unique. It will require innovative ideas and customized methods to meet your needs. Our submittal represents a true and complete expression of our experience, approach, and enthusiasm for this project.

Cushing Terrell has risen to the forefront of planning and urban design in the Mountain West. Our planning work has promoted sustainable economic development and brought meaningful social and cultural benefits to many growing communities.

In both our professional work and our ongoing research, we strive to promote our approach to planning and Urban Design that:

- Maximizes social impact
- Engages communities
- Optimizes urban resources
- Communicates values and creates value for all involved.

At Cushing Terrell, we know that real, authentic, and innovative community participation is critical to the success of a Master Plan update for Alpine. Our commitment to an inclusive planning process is showcased in our equity-centered approach to community engagement. We employ a combination of virtual, online and in-person engagement and outreach strategies that are tailored to different communities' needs.

We prioritize serving communities like Alpine that are facing growth issues, economic diversification, and are struggling to retain portions of their rural or historic character. We understand these issues of context and community identity. It's exciting, rewarding, and very difficult work. We also excel at it, which is why we keep coming back to places like Alpine. We bring reality to a community's vision and offer inspiration and a practical roadmap for implementation.

A final note of interest. We have the right mix of the vibrancy of youth combined with solid visionaries who are grounded with experience and knowledge to tackle this complex planning effort. Thanks for considering our team.

Sincerely,

Laura Dougherty

Laura Dougherty, AIA
Architect | Principal-in-Charge
LauraDougherty@cushingterrell.com | 720.598.9255

Nora Bland

Nora Bland, AICP
Project Manager | Director of Planning
norabland@cushingterrell.com | 720.598.9269

About Cushing Terrell

Cushing Terrell is an 86 year old, full-service architecture, engineering, and planning firm with 17 offices around the country. Our approach is locally based and hands-on, with the responsiveness and creativity of a small-scale office.

At the same time, we are uniquely able to leverage the strengths and knowledge of a national design and planning firm, commanding the resources that have supported Cushing Terrell's rise to the forefront of planning and design. At Cushing Terrell, we treat our clients as friends. While we have a very large bench of professionals and support structure, we are steeped in a small office mentality.

We are a great big, little firm!

Firm-wide, Cushing Terrell has experience leading challenging community and urban planning, visioning, and assessment of revitalization potential across the US. Our team is well-rounded, with experience and expertise in both public and private-sector planning, public infrastructure planning, public outreach, GIS, and more.

We are committed to creating innovative, sustainable, and community-centric solutions that maximize social impact, engage communities, optimize urban resources, and communicate values to create value for our clients.

Our approach emphasizes inclusive planning processes, celebrating local character and identity, balancing growth with environmental stewardship, and providing practical roadmaps for implementation aligned with the unique vision and needs of each community we serve.

Our Services

ARCHITECTURE
BUILDING PERFORMANCE
BUILDING SCIENCES
CIVIL ENGINEERING
COMMISSIONING
ELECTRICAL ENGINEERING
ENERGY SERVICES
FIRE PROTECTION
GRAPHIC DESIGN
HISTORIC PRESERVATION
INTERIOR DESIGN
LANDSCAPE ARCHITECTURE
LAND SURVEYING
MECHANICAL ENGINEERING
PLANNING & URBAN DESIGN
REFRIGERATION ENGINEERING
STRUCTURAL ENGINEERING
VISUALIZATION

By the Numbers

500+
team members

1.3B
annual construction volume

86
years in business

100+
green-certified projects since 2005

17
office locations

1
client-driven mission

PROJECT TEAM

Laura Dougherty

AIA | LEED AP

PRINCIPAL-IN-CHARGE | ARCHITECT

Laura leads Cushing Terrell's Denver design studio, is a project manager, senior architect and an associate principal in the firm. Laura has actively managed and/or directed projects at various scales of size and type ranging from multifamily affordable housing to higher education, healthcare and government. Laura's strengths lie in leading complex teams of architects, engineers and specialists through complicated projects from programming through design and construction. Her passion is to engage a project in the planning stages, participate in community meetings and build strong consensus for forward thinking solutions. As a LEED Accredited professional since 2004, she brings sustainable design sensitivity to each project, backed by her strong technical experience.

Relevant Experience

Lot L Affordable Housing and Transit Interceptor Garage; Telluride, CO

Shandoka Building F Affordable Housing; Telluride, CO

Lumberyard Affordable Housing Neighborhood; Aspen, CO

ArtSpace Salida Affordable Housing; Salida, CO

Basalt Facility Assessment and Capital Improvements Plan; Basalt, CO

Basalt Master Plan; Basalt, CO

Cushing Terrell.

Wayne Freeman

PLA | CLARB

SUPPORTING PRINCIPAL-IN-CHARGE | LANDSCAPE ARCHITECT

As a principal, Wayne has 35 years of professional experience in landscape architecture, land planning, urban planning, and multi-discipline project delivery. He did his first comprehensive plan and wrote his first development code in 1991 for his hometown of Godfrey, Illinois. Wayne has developed comprehensive planning efforts and urban design assignments in primarily rural communities across the U.S. and Western Canada. He has led public outreach efforts across the these communities, some of which include difficult public participation exercises – one notably between the Hatfield and McCoy family members in West Virginia.

Relevant Experience

Granite Ridge Master Plan; Alpine, WY

Town Master Plan; Ennis, MT

Lumberyard Affordable Housing; Aspen, CO

Mountain Area Master Plan; Steamboat Springs, CO

Belgrade Downtown Design Plan; Belgrade, MT

Chaffee County Comprehensive Plan Update; Chaffee County, CO

Trout Creek Master Plan; Buena Vista, CO

Basalt Master Plan; Basalt, CO

Cushing Terrell.

Nora Bland

AICP

PROJECT MANAGER | DIRECTOR OF PLANNING | COMMUNITY OUTREACH SPECIALIST

Nora is a certified urban planner, project manager, and leader with a background in nonprofit work and sustainability planning. She thrives in complex scenarios where multiple stakeholders, issues, projects, and solutions collide. Nora specializes in designing award-winning community engagement efforts that are inclusive, creative, results-driven, and fun! As a leader of Cushing Terrell's planning team, Nora has expanded the firm's community engagement program, leveraging her creativity and problem-solving skills on projects from housing and land use, to urban design and placemaking.

Relevant Experience

Town of Lochbuie Comprehensive Plan; Lochbuie, CO

Basalt Master Plan; Basalt, CO

Together Chaffee County Comprehensive Plan; Chaffee County, CO

Carbondale Comprehensive Plan Update; Carbondale, CO

Mountain Area Master Plan; Steamboat Springs, CO

DU Kennedy Mountain Campus Master Plan; Red Feather Lakes, CO

Town Master Plan & Downtown Streetscape Plan; Ennis, MT

Cushing Terrell.

Randy Rhoads

AIA

DIRECTOR OF AFFORDABLE HOUSING

Randy has managed multiple teams of professionals simultaneously throughout the U.S. to develop various models of housing that are affordable, attainable and/or combinations of market rate units. He is a creative advisor on envisioning and building beautiful, responsive, and sustainable family housing neighborhoods. He has developed more than 6,000 affordable housing units in 13 states, totaling more than $1 Billion in construction. He brings over 30 years of real-world experience in identifying constraints and opportunities for affordable/attainable housing that are consistent with industry best practices and unique housing needs.

Relevant Experience

Lot L Affordable Housing and Transit Interceptor Garage; Telluride, CO

Shandoka Building F Affordable Housing; Telluride, CO

ArtSpace Salida Affordable Housing; Salida, CO

Lumberyard Affordable Housing Neighborhood; Aspen, CO

Alpenglow Phase 2 Affordable Housing; Whitefish, MT

Cushing Terrell.

Art Malito

PLA

LANDSCAPE ARCHITECT | URBAN PLANNER

Art is a passionate advocate for urban design and landscape architecture, from establishing a planning vision through the execution of intricate site detailing. He enjoys the elements of placemaking that create a strong public realm and directly improve the quality of life for all users. Art has assisted in developing Master Plans, Sub-area Plans, and Design Guidelines, all crucial to laying the proper framework for landscape architecture. His wide professional experiences in urban design and planning, parks and recreation, higher education, resorts and hospitality, and master planned communities give him a vast perspective on design.

Relevant Experience

Town of Lochbuie Comprehensive Plan; Lochbuie, CO

Routt County Master Plan; Routt County, CO

Mountain Area Master Plan; Steamboat Springs, CO

DU Kennedy Mountain Campus Master Plan; Red Feather Lakes, CO

Norte-Sur Equitable Transit Oriented Development Strategic Plan; Tucson, AZ

City of Boise Zoning Rewrite Neighborhood Visualization; Boise, ID

Urban+Farm Community Master Plan and Design Guidelines; Bozeman, MT

Cushing Terrell

Alex Modrzecki

AICP

URBAN PLANNER

Alex's background in economics has informed a holistic and forward-looking approach to planning and design projects. He specializes in geographic systems, data visualization, and graphic communication. Alex has a passion for using data-driven quantitative analysis to uplift peoples' voices and lived experiences. This passion has led to a range of professional experiences in food security, active mobility, environmental design, and urban morphology. Alex's primary objective is to create places that are functional, sustainable, and contextually sensitive to each community's unique character. Alex will provide expertise in GIS base mapping, site analysis, and graphic communication.

Relevant Experience

Montana Department of Commerce Housing Supply & Land Suitability Analysis; Statewide

Glenwood Springs Comprehensive Plan; Glenwood Springs, CO

DU Kennedy Mountain Campus Master Plan; Red Feather Lakes, CO

Lewistown Comprehensive Plan; Lewistown, MT

Belgrade Downtown Design Plan; Belgrade, MT

Town of Lochbuie Comprehensive Plan; Lochbuie, CO

Urban+Farm Community Master Plan and Design Guidelines; Bozeman, MT

Cushing Terrell

Charles Trowell

URBAN DESIGNER | GIS SPECIALIST

Charles brings a passion and advocacy for participatory planning, collaborative design, and space-making to Cushing Terrell. His background allows him to sit at the intersection of architecture, urban design, and planning. He has a variety of experience working within public, private and academic settings on projects, placemaking efforts, research, and plans. Before Cushing Terrell, he worked for the business district of one of the country's fastest growing cities and brings a programming and economic development lens to each project. His familiarity with collaborating alongside various stakeholders allows him to recognize the dynamics of working in diverse, urban communities while supporting sustainable and equitable projects and plans for clients and communities.

Relevant Experience

Lot L Affordable Housing and Transit Interceptor Garage; Telluride, CO

Federal Heights Comprehensive Plan Update; Federal Heights, CO

Broomfield Comprehensive Plan; Broomfield, CO

Clearly Belgrade Master Plan; Belgrade, MT

Norte-Sur Equitable Transit Oriented Development Strategic Plan; Tucson, AZ

Belgrade Downtown Design Plan; Belgrade, MT

Cushing Terrell.

Matt Mathes

PLA

OPEN SPACE | PARKS PLANNING

Matt is a highly experienced professional in federal planning, urban design, urban planning, and landscape architecture. He has prepared conceptual site plans and cost estimates for park, recreation, and open space sites for communities in AZ, CA, FL, OR & WA. His expertise includes contract management, landscape architecture, permitting, environmental reviews, and strategic planning. With his passion for creating sustainable, vibrant, and efficient environments, he has transformed urban spaces into aesthetically pleasing and environmentally responsible places.

Relevant Experience

Lewistown Growth Policy; Lewistown, MT

Town of Lochbuie Comprehensive Plan; Lochbuie, CO

Broomfield Comprehensive Plan; Broomfield, CO

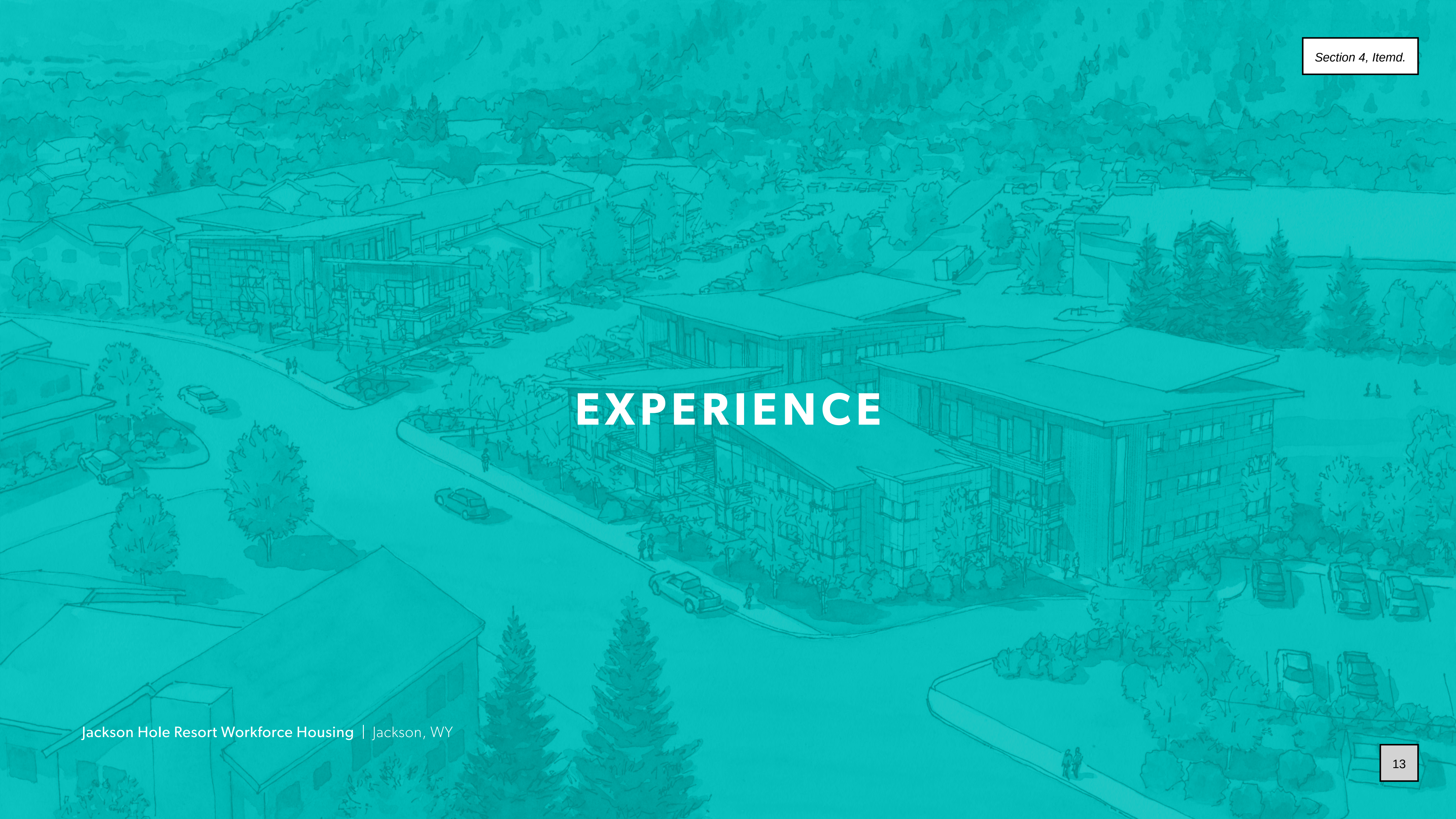
Fraser Comprehensive Plan; Fraser, CO

City of Covington Comprehensive Plan and Annexation; Covington, WA*

Yuba City Parks & Recreation Facilities Plan; Yuba City, CA*

**Completed prior to joining Cushing Terrell*

Cushing Terrell.



EXPERIENCE

Master Planning Experience

Cushing Terrell's master planning process is one that has been proven again and again as an energizing, engaging, informative and effective way to guide and unite both leadership and the community in a common vision. Our team has been proud to successfully complete educational, municipal, and regional visioning master plans, comprehensive plans, special district plans (downtown, Urban Renewal District), and community outreach programs throughout Colorado and the Western U.S. for the following entities:

Parker Master Plan; Parker, CO

Superior Comprehensive Plan; Superior, CO

Broomfield Comprehensive and Transportation Plan

Town of Buena Vista Feasibility & Conceptual Land Use Plan

Lafayette Code Update

Town of Fraser Comprehensive Plan

City of Federal Heights Comprehensive Plan

City of Glenwood Springs Comprehensive Plan Update

Town of Carbondale Comprehensive Plan Update

Routt County Master Plan

Town of Basalt Master Plan and Facilities Plan

Together Chaffee Comprehensive Plan

Steamboat Springs Mountain Area Master Plan

Town of Lochbuie Comprehensive Plan

DU Kennedy Mountain Campus Master Plan

City of Belgrade - Clearly Belgrade Comprehensive Plan, Mayfair Meadows Park, Growth Policy and Downtown Urban Renewal Plan

Farmway Village Master Plan

Lewistown Growth Policy

Envision Ennis Master Plan

Blackfeet Industrial Park Master Plan

One Big Sky District Development Plan

Kalispell - Glacier Town Center, North Town Center, Downtown Core Revitalization Plan

Port Coquitlam Downtown Action Plan

South Kalispell Urban Renewal Plan

Livingston Medical District New Town

Livingston Downtown Streetscape Plan

Urban+Farm Community Master Plan and Design Guidelines

Carlin Master Plan

West Downtown Boise Neighborhood Master Plan

Riverfront Urban Renewal Area Plan

Alton Downtown Riverfront District

Tucson Norte-Sur Equitable Transit Oriented Development Strategic Plan

"Cushing Terrell conducted an assessment of roughly 900 acres of land along with a mixture of water rights and a 1,300 acre-foot reservoir. During this time Cushing Terrell spent a lot of time in our town conducting interviews with community members, analyzing the site with existing infrastructure and reviewing the water rights. We highly recommend that you engage Cushing Terrell for your project. I believe you will be as pleased as we have been.

Phillip Puckett
Former Town Administrator
Town of Buena Vista

Fraser Comprehensive Plan

FRASER, CO

The Town of Fraser is a small mountain community in the Fraser River Valley in Grand County, Colorado. It's situated north of the Town of Winter Park along US Highway 40, approximately 10 minutes from the Winter Park Ski Resort. The area is renowned for its snow-capped peaks, ski areas, abundant recreational opportunities, access to public lands, and relaxing open space.

The Town of Fraser hired Cushing Terrell to update its Comprehensive Plan to provide a renewed vision for its future and a clearer direction for land use in its Three Mile Area. Fraser is experiencing issues common among those with a recreation and tourism-based economy, including increased traffic, parking challenges, and a lack of affordable housing. A unique opportunity exists in Fraser to create a downtown or "Riverwalk District" along the Fraser River, just off Highway 40. With in-house architectural and landscape services, Cushing Terrell is also preparing an illustrative Riverwalk Subarea Plan with implementation strategies for the Town to realize this District's potential.

Project Dates: March 2024 - ongoing

Contact: **Garrett Scott**, *Garrett Scott, Town Planner*
970.505.0467 | *gscott@town.fraser.co.us*

Services Provided: Planning, Urban Design, Community Engagement

Cushing Terrell.

Federal Heights Comprehensive Plan Update

FEDERAL HEIGHTS, CO

The City of Federal Heights is a small community geographically but with a growing population of 14,000, an updated guiding document is critical to chart the path for the community's future. Last updated in 1997, the City's current Comprehensive Plan has not provided enough detail and direction to effectively serve leadership or the community, so Cushing Terrell was hired as a team of problem solvers.

Cushing Terrell was also selected because of our experience with equity-centered community engagement efforts that have successfully engaged Spanish-speaking populations across the state. Increasing redevelopment pressures, reliance on sales tax, and high turnover of commercial uses are among the issues the team is addressing. With Bus Rapid Transit planned along Federal Boulevard estimated to be operational in 2029, Cushing Terrell is developing strategies to prevent displacement while optimizing opportunities for transit-oriented redevelopment.

Project Dates: November 2023 - ongoing

Contact: **Tim Williams**, *Community Development Director*
303.412.3558 | communitydevelopment@fedheights.org

Services Provided: Planning, Urban Design, Community Engagement

Cushing Terrell

Town of Basalt | Master Plan Update

BASALT, CO

Cushing Terrell completed an aspirational Master Plan that will guide growth and accomplish community intentions for the next 10 years. Using design, graphics, and opportunity sites to communicate, the Plan updated stated goals and objectives and recommended courses of action for future growth and development of land, public facilities, and services, with a strong focus on environmental and economic sustainability. This Plan provides the policy framework for regulatory tools like zoning, subdivision regulations, annexations, and extra care was taken to outline coordination with the two counties. The Plan establishes a process for orderly growth and development to address both current and long-term needs and provides a balance between the few remaining stretches of open space left in the Roaring Fork Valley.

Ten neighborhood typologies were created to provide additional guidance with considerations allowed for adaptations that are appropriate for a particular neighborhood.

A Focus On Engagement

The community engagement process included over 20 public meetings, 34 interviews, and resulted in over 5,000 total data points received. Multiple community engagement events ranged from traditional to out-of-the-box, including open houses, ride-alongs, online surveys, issue-based workshops, neighborhood meetings, a Hispanic community picnic, and high school work sessions.

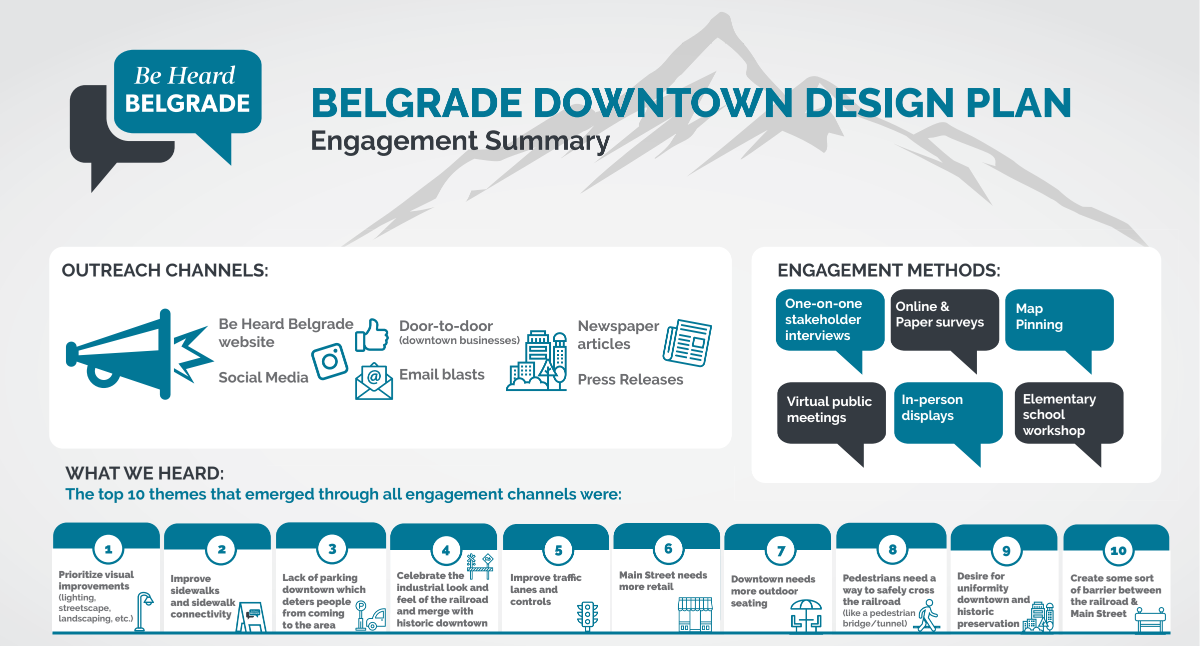
Date of Completion: December 2019

Contact: **James Lindt**, *Assistant Planning Director* | 970.279.4397 | james.lindt@basalt.net

Services Provided: Planning, Urban Design, Architecture, and Civil Design

Above: Option A - Retail Anchor - Redevelopment of the Clark's Market

Cushing Terrell



Section 4, Itemd.

Belgrade Downtown Design Plan, Development Code Rewrite, & Urban Renewal Plan

BELGRADE, MT

As Belgrade grows beyond its identity as a bedroom community to Bozeman, its citizens desire deeper connections to the heart of their community with places to live, shop, and socialize — all connected by a safe and efficient mobility network.

With buildings in disrepair, unsightly utilities, disconnected pedestrian and bicycle infrastructure, and an overall lack of cohesiveness, the City core needed increased investment, infrastructure improvements and a long-range vision. Cushing Terrell hosted a series of virtual design charrettes to understand stakeholder priorities and shape the downtown design that considered circulation, parking, urban design, streetscapes, local businesses, and fiscal sustainability. This series of long-range planning projects was the outcome of a Growth Policy update completed by Cushing Terrell in 2019 and the creation of an Urban Renewal District. Our designers and planners then completed the Downtown Design Plan in 2020 which utilizes the existing Urban Renewal District to advance goals of focusing limited resources on impactful projects to spur economic development. A development code rewrite informed all design decisions and outcomes. Orbital renderings created by Cushing Terrell's designers can be viewed here: *https://www.ctenvision.com/dbv/*

Cushing Terrell has been the primary planning and urban design consultant for Belgrade over the past several years on many projects and has assisted the community plan for the future.

Project Dates: January 2019 - ongoing

Contact: **Jason Karp**, *Planning Director* | 406.388.3763 | jkarp@cityofbelgrade.net

Services Provided: Planning, Landscape Architecture, Urban Design and Infrastructure Planning

Cushing Terrell.

Broomfield Comprehensive Plan and Transportation Plan Update

BROOMFIELD, CO

Cushing Terrell and consultant partners were recently hired by the City and County of Broomfield to "plan for the plan" or do some of the legwork to prepare City/County staff for the undertaking of updates to their Comprehensive Plan and Transportation Master Plan in 2025/2026. The team is tasked with analyzing existing conditions and reporting on the implementation status of over 50 related, specialized plans to better align planning efforts City-wide and ensure various departments are working towards the goals outlined in the Comprehensive Plan.

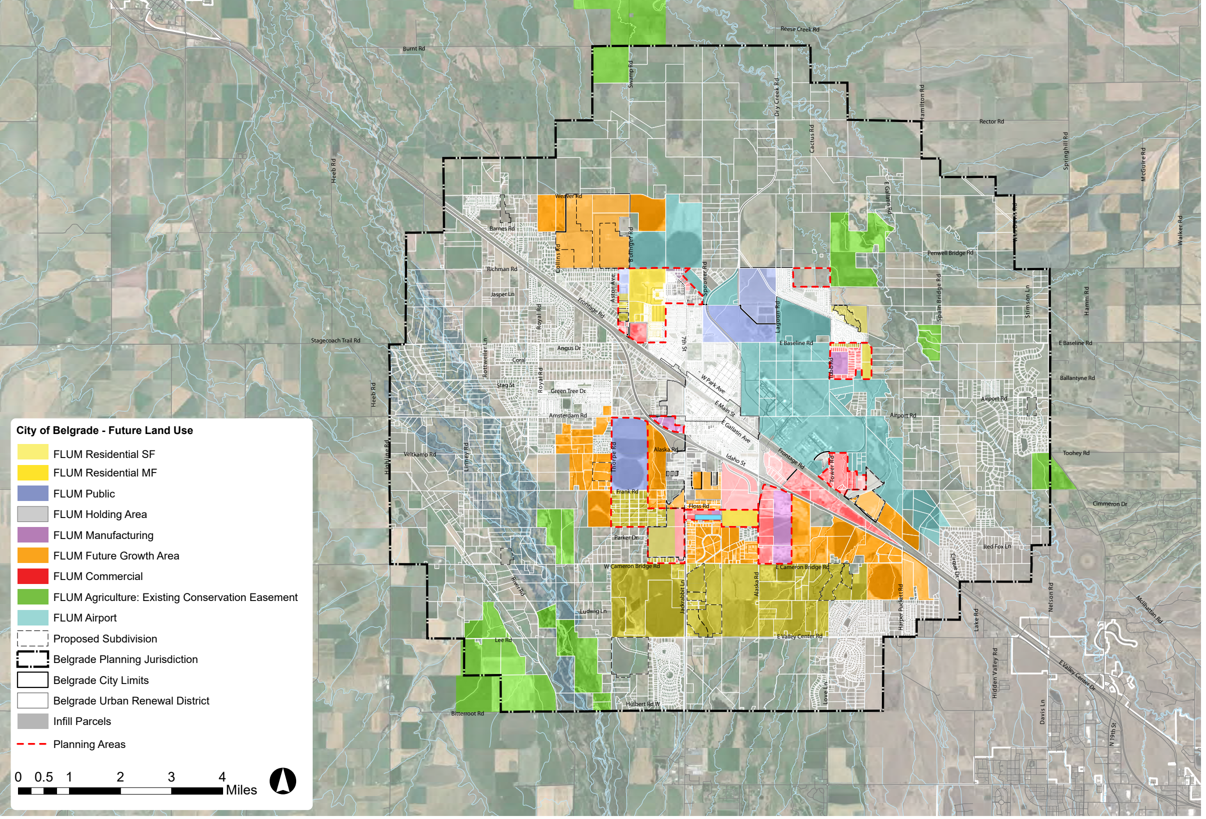
To ensure Broomfield takes an innovative approach to these plan updates, the team is researching best practices and trends of peer communities that can be applied to Broomfield and other communities in which we work. We are developing a Public Engagement Plan (PEP) for the entirety of Phase 2 (Develop the Plan) that includes stakeholder identification, committee recommendations, detailed participation strategies, and a draft schedule. A key component of the PEP is the identification of equity engagement metrics and an equity priority map to target communities that may be harder to reach and can be excluded from planning processes.

Project Dates: February 2024 - ongoing

Contact: **Lynn Merwin**, *Planning Manager*
303.438.6381 | lmerwin@broomfield.org

Services Provided: Planning, Urban Design, Community Engagement

Cushing Terrell



Clearly BELGRADE

LIVE • WORK • THRIVE

Clearly Belgrade

BELGRADE, MT

Clearly Belgrade is the City of Belgrade's comprehensive, strategic master planning effort to develop a unified vision for growth across the community's planning area. Belgrade is experiencing unprecedented growth in and around the community, with projected growth between 4,800 to 6,000 people between 2019 and 2030, generating a demand for adequate housing, employment opportunities, utility, transportation infrastructure, goods and services, and recreational opportunities. The planning effort will evaluate and update the City's guiding documents concurrently with plans for Transportation, Water and Wastewater Infrastructure, Future Land Use, and Parks, Trails & Recreation. The community-wide effort aims to benchmark a comprehensive snapshot and develop an aligned plan for adequate housing and services to maintain the livability that attracts people to the community. In addition, the effort will develop an innovative web-based platform unique to Belgrade that improves access, analysis, and interaction with the City's current and future planning documents.

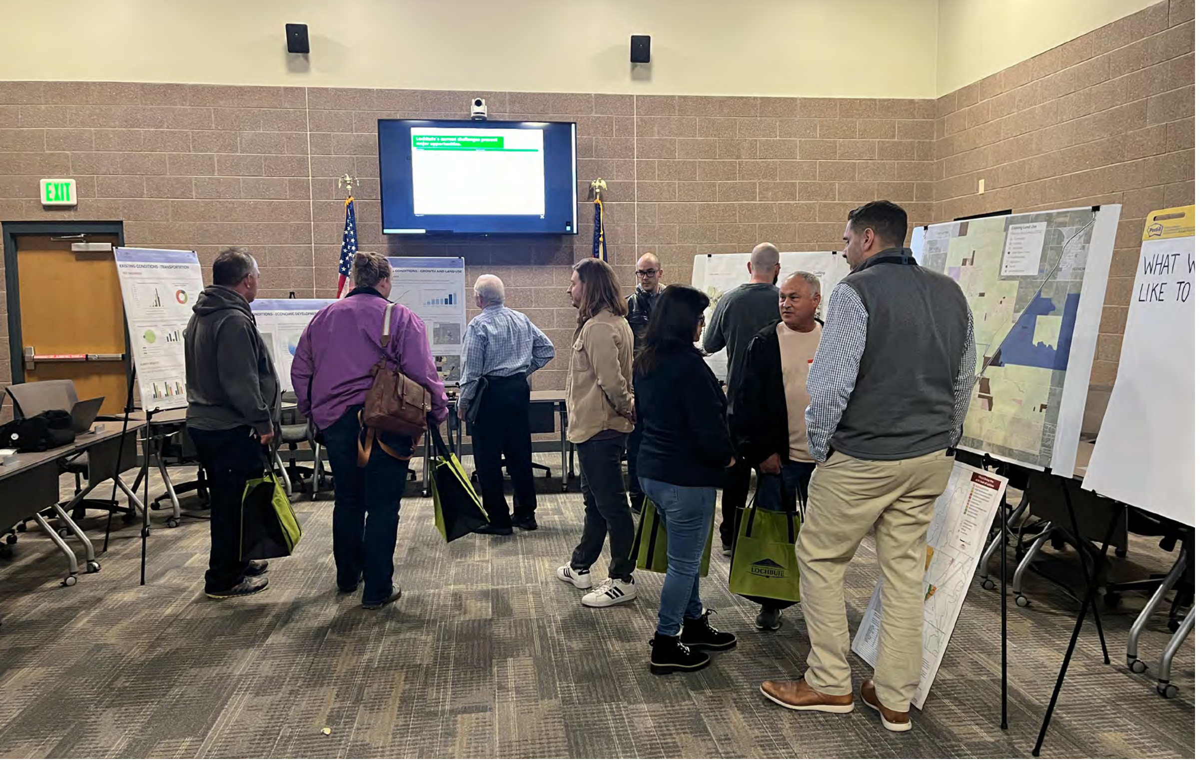
The master planning process is grounded in inter-departmental collaboration, inter-agency coordination, and community engagement, gathering input from various sources while collaborating with local, regional, and state partner agencies informed by the valuable input of residents, businesses, and stakeholders throughout our community. The master planning effort will span the next 24 - 36 months with a study area that focuses on future growth and development within the City and will reach into the surrounding boundary to consider changes in the extraterritorial planning jurisdiction and Gallatin County.

Project Dates: August 2023 - ongoing

Contact: **Jason Karp**, *Planning Director* | 406.388.3763 | jkarp@cityofbelgrade.net

Services Provided: Planning, Landscape Architecture, Graphic Design, Community Engagement

Cushing Terrell



Lochbuie Comprehensive Plan

LOCHBUIE, CO

Cushing Terrell was hired to update Lochbuie's Comprehensive Plan. As part of the larger Denver metro area, Lochbuie has seen increased growth in the form of low-density development without a strong commercial tax base to support necessary infrastructure improvements. Their previous comprehensive plan did not include growth projections or a comprehensive analysis of existing conditions, and therefore, its recommendations were not based on reality or an understanding of how the community is likely to develop.

Community Engagement Process - With a high population of Spanish-speaking residents, an inclusive community engagement process is paramount to the planning effort's success. Our work leading bilingual engagement efforts and our proposed approach that centered on equity were also cited as reasons why we were contracted.

Lake Henry Park Conceptual Plan - Cushing Terrell is working with the Town of Lochbuie to provide a conceptual plan for the 40-acre Henry Reservoir property. The plan will include preferred levels of service, future amenity locations, trails, or other critical topics that the Town can use to work towards future funding and improvements.

Project Dates: May 2023 - ongoing

Contact: **Chris Kennedy**, *Community Development Director*
303.990.5324 | CKennedy@Lochbuie.org

Services Provided: Planning, Landscape Architecture, Urban Design, Community Engagement

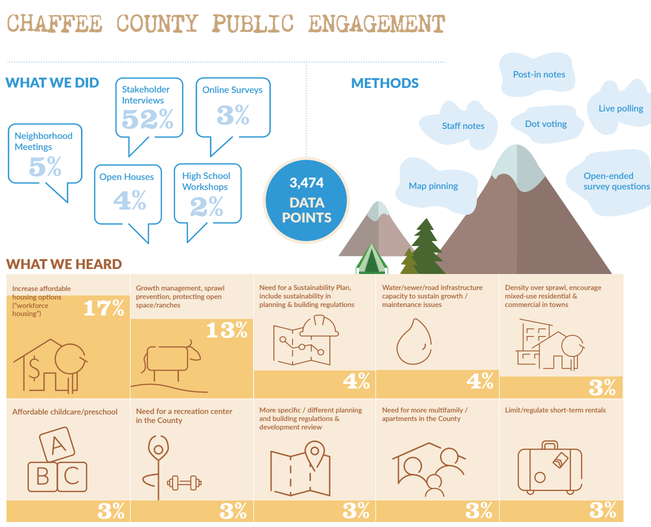
Cushing Terrell.

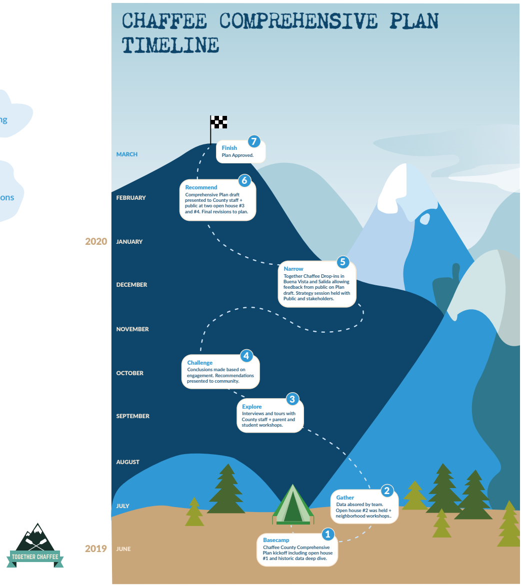
"Together Chaffee County" Comprehensive Plan Update

CHAFFEE COUNTY, CO

Chaffee County is a diverse canvas of varying geographies, climate, culture, and land uses. An estimated 83% of Chaffee County is publicly managed land. Meanwhile, the County saw unprecedented residential growth on its unincorporated county lands, experiencing a 15% loss of farmland over a five-year period. As such, the critical element introduced in the 2020 Plan update was the addition of four sub-area plans, complete with future land use maps and a series of prioritized action steps -- including infrastructure projects -- that enabled each of the community's goals to be accomplished on the ground. In the process, CT helped envision growth and development patterns for every parcel across the County's 160,000+ acres.

Community Engagement Process - Because of the 20-year gap since the last update -- and a shift in regional demographics -- the plan developed out of an extended but calculated public outreach and education process that included open houses, neighborhood meetings, drop-in events, stakeholder interviews, high school workshops, and a series of online surveys.





Date of Completion: August 2020

Contact: **Jon Roorda**, *Planning Manager Chaffee County*
719.530.5566 | jroorda@chaffeecounty.org

Services Provided: Planning, Graphic Design, Community Engagement

Award: 2021 APA Colorado Chapter Public Outreach Award Winner

Video: https://vimeo.com/585049668

Cushing Terrell.

Town of Carbondale Comprehensive Plan Update

CARBONDALE, CO

Carbondale's escalating housing costs, shifting economy, and strained mobility network threaten its diverse, family-friendly character. In mid-2021, the Cushing Terrell team was contracted to address these emerging challenges in a focused update to the Comprehensive Plan. With an eye toward climate action, multimodal mobility, and services for a community of all ages and abilities, the Update will also turn the key for redevelopment opportunities in underutilized areas of the Town's core.

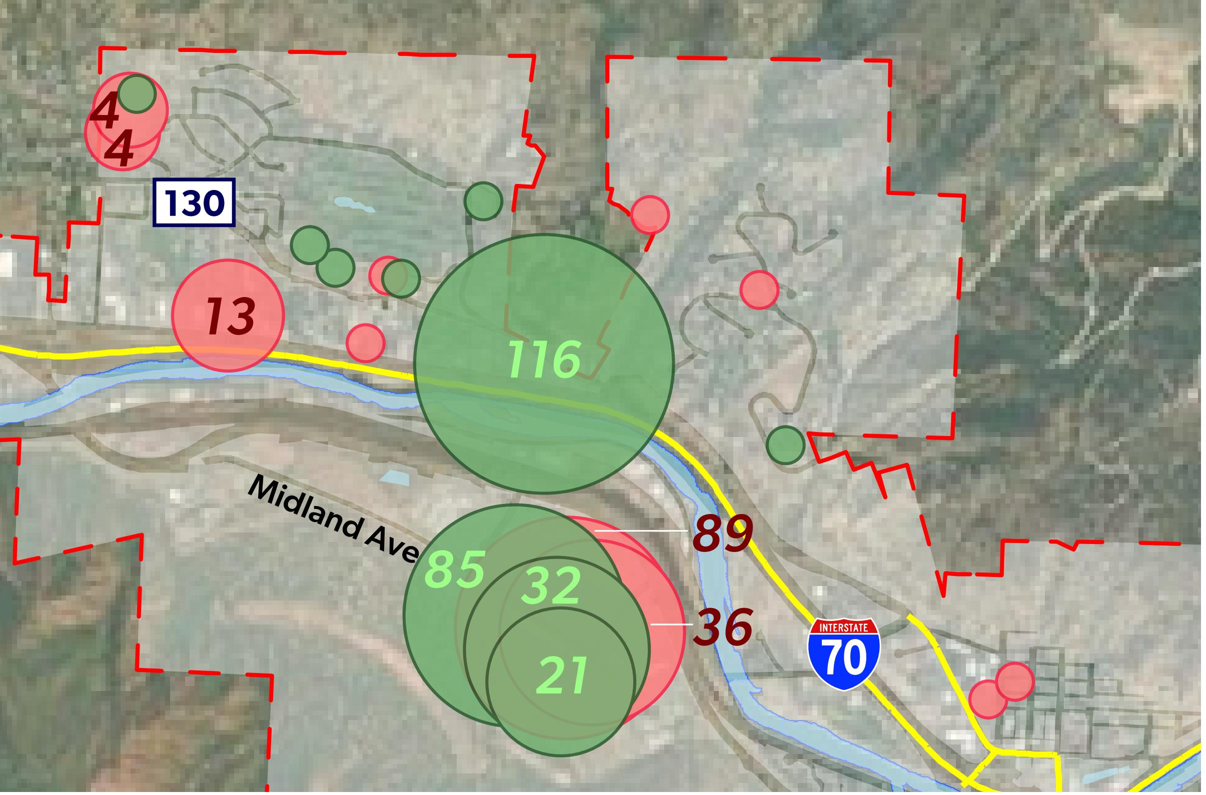
Community Engagement Process - To coincide with the Town's high population of Hispanic community members, all engagement was available in both English and Spanish, including an Open House held entirely in Spanish with bilingual facilitators. Cushing Terrell created a project website with Bang the Table and employed various online engagement tools throughout the project. The Community Engagement Plan included a diversity of types of meetings, including in-person and virtual open houses, pop-up booths, design charrettes, and stakeholder focus group interviews.

Date of Completion: October 2022

Contact: **Jared Barnes**, *Planning Director on behalf of Janet Buck, Planning Director (retired)*
jbarnes@carbondaleco.net | 970.510.1208

Services Provided: Planning, Landscape Architecture, Graphic Design, Community Engagement

Cushing Terrell.



Glenwood Springs Comprehensive Plan

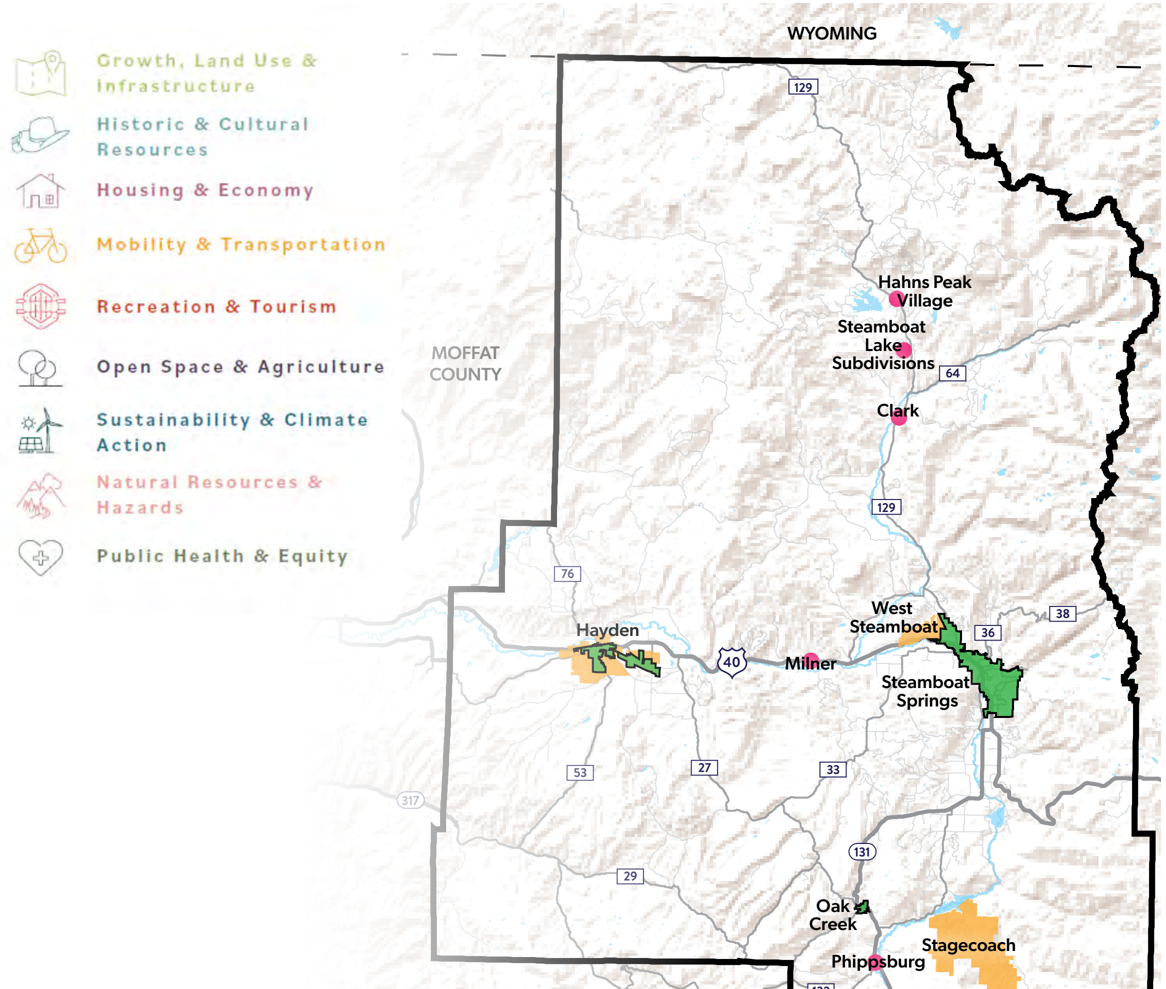
GLENWOOD SPRINGS, CO

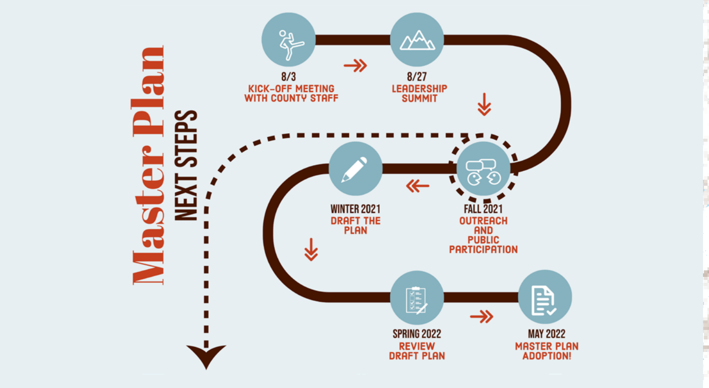
For the Southern Ute tribes and those that followed, Glenwood Springs has a sacred history as a place of community gathering and healing. Today, it continues to be a cultural, recreational, and commercial hub where the Colorado River and the Roaring Fork Valley meet. A thriving community serving residents, workers, and thermal tub-soakers, Glenwood Springs' mountain-town identity as a recreational destination with relatively attainable living and working opportunities is shifting as a recent uptick in development has limited housing and job offerings. Geography and topography further stress the mobility network as natural hazards routinely threaten community access and water resources. The comprehensive plan update Cushing Terrell completed aims to help local leaders and citizens understand the impacts of certain growth management approaches in an effort to understand how policy changes might affect Glenwood Springs' character. A careful look at innovative growth and urban design recommendations, including examining code and design guidance techniques, will enable the City to move more seamlessly into its expanded role as a home base for all who seek to live, play, and make a living within its bustling charm.

Date of Completion: March 2023

Contact: **Hannah Klausman**, *Planning Director* |
970.384.6407 | hannah.klausman@cogs.us

Services Provided: Planning, Community Engagement





Routt County Master Plan

ROUTT COUNTY, CO

Cushing Terrell assisted Routt County in updating its almost 20-year old Master Plan. Between 2000 and 2018, Routt County's population grew 30%, changing the dynamics of the community. Changing demographics, strained water resources, growth pressures, rising home prices, regional transportation issues, recreation conflicts, and the continued threats to rural/agricultural character are all pressure points that led County leadership to initiate the development of a new long-range plan.

Among other needed updates, Cushing Terrell crafted an updated future land use framework that used a tiered approach to address the County's unique municipalities and unincorporated communities. Three distinct tiers of areas suitable for different types of growth were established, and the nature of development was clearly defined for each. This provided the County with a clearer lens to look at growth, as well as flexibility to allow a project that checks all the boxes to come to fruition. The Plan's Implementation Plan provides a roadmap with actionable steps to work towards achieving the vision established by the community through outreach.

Date of Completion: August 2022

Contact: **Kristy Winser**, *Planning Director* | kwinser@co.routt.co.us | 719.530.5567

Services Provided: Planning, Landscape Architecture, Community Engagement, Civil Engineering

Envision Ennis Master Plan

ENNIS, MT

Ennis is a tourist based community on the west side of Big Sky, Montana. Ennis has a population of roughly 1,000 but is facing with unprecedented growth as Big Sky grows on the west side of Lone Peak Mountain. Centered on the mythical and world renowned Madison River, Ennis has become a tourist mecca for trout fishing, skiers, hunters, and visitors to nearby Yellowstone National Park.

Cushing Terrell was hired to work with the community to develop its first community master plan including public engagement, land use planning, community development opportunities, transportation alternatives, and affordable and locally attainable housing. A critical part of the project was analyzing and updating infrastructure and utility systems at a high level to anticipate growth patterns and voids in the system. Much of the town is a mixture of pockets of wells and septics scattered in with modern utility services, and understanding how to upgrade and modernize the town was critical to the plan's success.

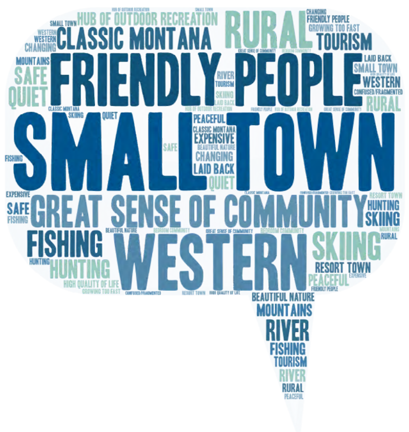
Date of Completion: June 2022

Contact: **Lisa Roberts**, *Commissioner* | lisa.roberts@evrealestate.com | 406.570.4683

Services Provided: Planning, Landscape Architecture, Community Engagement

Project Website: cushingterrell.com/envisionennis

ENVISION
Ennis



Cushing Terrell

Urban+Farm Community Master Plan and Design Guidelines

BOZEMAN, MT

This 100-acre agrarian-themed community is designed around a village core that highlights sustainable food production, physical well-being, and social connectivity.

Cushing Terrell's landscape architecture, planning, and architecture teams meld open space, wetlands, parks, trails, orchards, and gardens to create a dynamic neighborhood gathering area. The landscape design incorporates various local eco-climates with a focus on drought tolerant, native, and edible landscapes. The core provides a variety of outdoor experiences for residents and visitors with a farming influence woven throughout the designed elements.

The central green includes a recreation pond and plazas rimmed by restaurants, cafes, markets, and a large greenhouse. The greenhouse, as planned, will serve as a source of food for the cafés, restaurants, and village residents. Additionally, the proximity of residential units will infuse the community center with vitality and engagement.

Date of Completion: 2021 - 2021 - Ongoing

Contact: **Tom Berkley**, *Director of Development Outlaw Real Estate Partners*
508.728.1088 | tom@theoutlawpartners.com

Services Provided: Urban Planning, Landscape Architecture, Architecture

Cushing Terrell

Aspen Lumberyard Affordable Housing Neighborhood

ASPEN, CO

The 11-acre Lumberyard Affordable Housing Neighborhood site will serve as a new dynamic gateway to Aspen and will create 277 new affordable homes for a community that is facing a severe affordable housing crisis. Cushing Terrell visited numerous existing affordable housing developments in Aspen, sat down with city staff and local stakeholders, and worked with City Council to understand Aspen/ Pitkin County Housing Authority's Vision related to Affordable Housing. Through this, Cushing Terrell crafted the following Vision for the Lumberyard Neighborhood:

A stable, thriving, affordable neighborhood that is pedestrian friendly, environmentally sustainable, connected, and welcoming that looks, lives, and feels authentically Aspen.

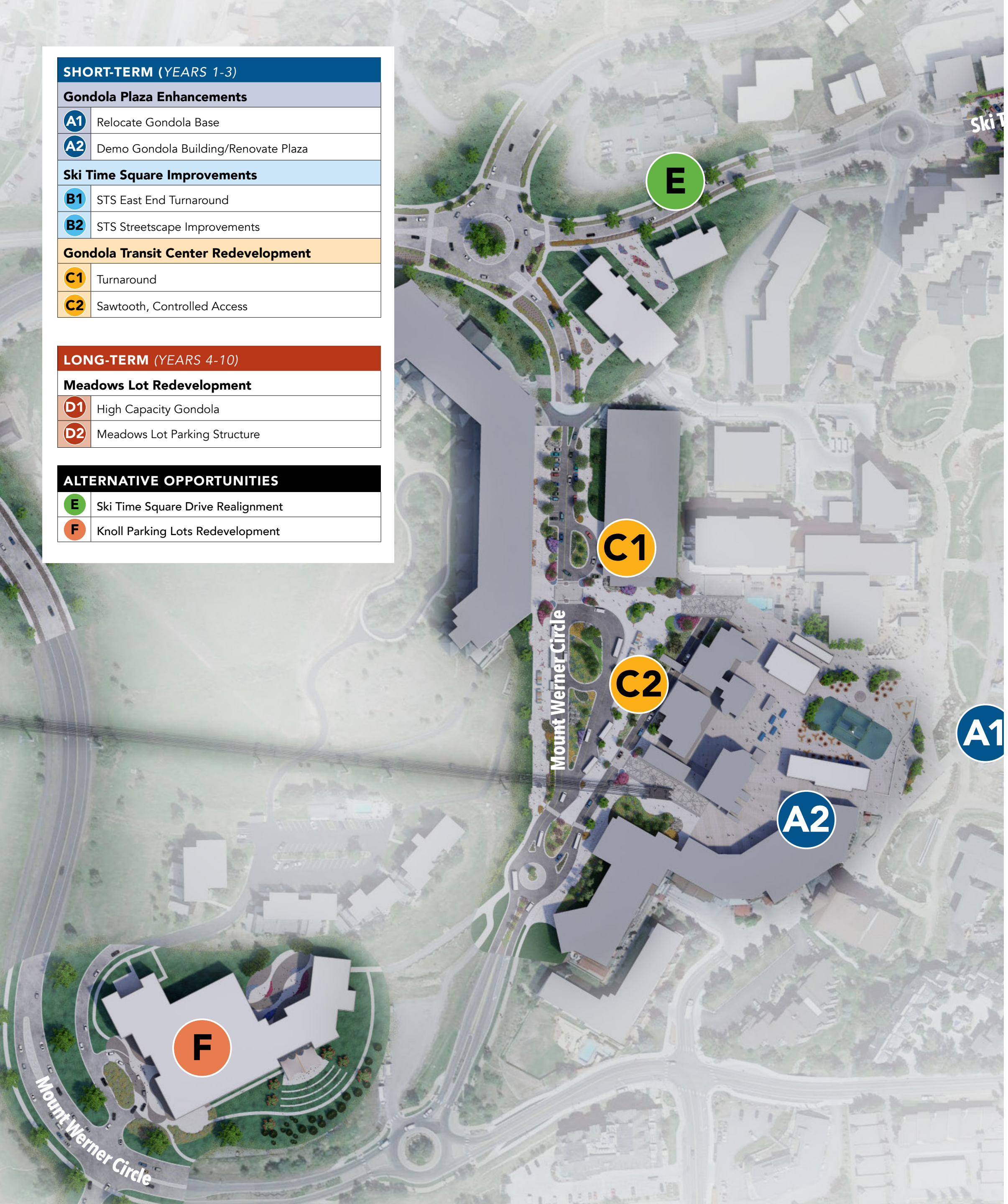
Cushing Terrell has followed an equally rigorous process in assisting Aspen in determining a pathway forward related to Sustainability. Workshops were held with Aspen city staff and other local environmental stakeholders and through a consensus process arrived at a list of "Must Haves" in terms of environmental stewardship and resiliency which led the project to pursue aggressive 75% Net Zero on-site energy offsets, decarbonization, and Enterprise Green Communities Plus certification.

Project Dates: July 2021 - ongoing

Contact: **Chris Everson**, *Affordable Housing Development Senior Project Manager*
970.429.1834 | chris.everson@aspen.gov

Services Provided: Architecture, Planning, Landscape Architecture, Interior Design, Public Outreach, Sustainability, Fire Protection, Electrical, Mechanical, and Plumbing Engineering

Cushing Terrell.



City of Steamboat Springs Mountain Area Master Plan

STEAMBOAT SPRINGS, CO

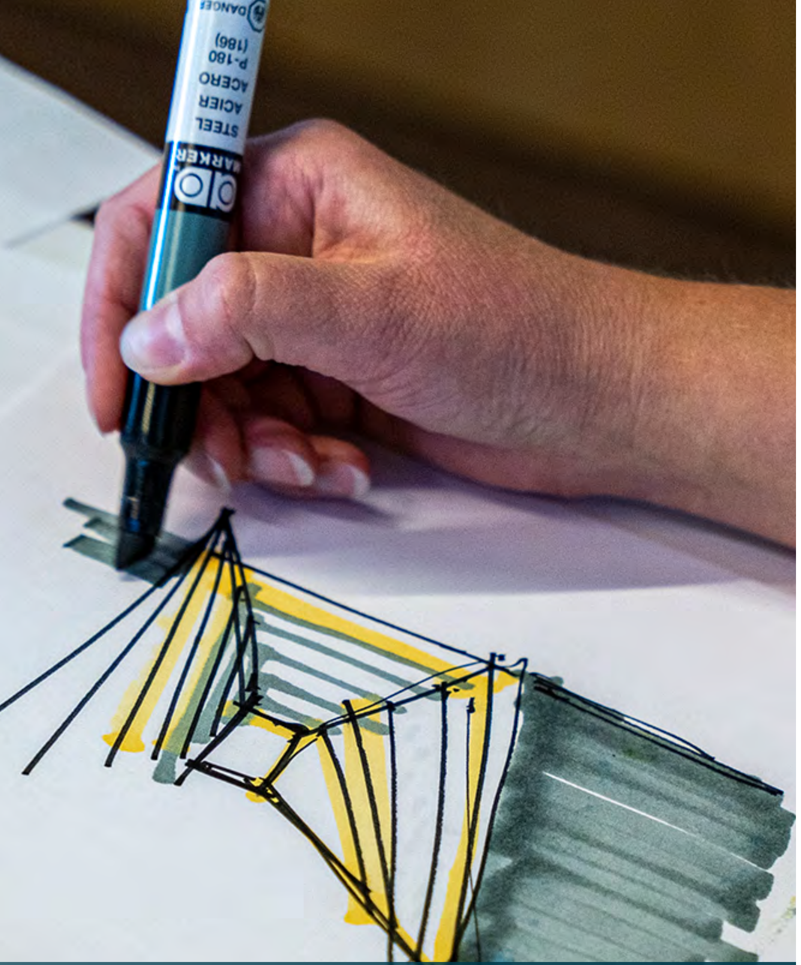
Embracing a long history of successful city-wide plans and urban redevelopment efforts, the City of Steamboat Springs ventured to create a master plan to revitalize the City's ski resort base area to boost year-round vibrancy. After seeing a decade of average but uninspiring redevelopment, the Mountain Area Master Plan amalgamates the best parts of several previous planning efforts to come up with physical solutions and policy adjustments to bring the Mountain Area into a new period of prominence. Utilizing mostly virtual tools, the planning team focused on a community input-driven approach that translates public and stakeholder commentary into interventions that will create meaningful change - Identity and Character of the Built Environment, Economic Vitality, and Mobility.

A substantial effort was made to involve a spectrum of business and community leaders to fully understand how such a wide variety of people move to and through a complicated base area where businesses struggle and vitality is lacking due to difficult grade separations and the attraction of a nearby bustling downtown.

Date of Completion: June 2021

Services Provided: Planning, Landscape Architecture, Urban Design, Community Engagement

Cushing Terrell.



APA Award

After 18 months of intensive involvement in creative public outreach and engagement, for the Chaffee County Comprehensive Plan, Cushing Terrell was awarded the APA Award for Community Engagement.

To learn more about Cushing Terrell's outreach approach, visit: https://vimeo.com/535935795/6d9df0462d

Equity-Centered Engagement

At Cushing Terrell, we know that real, authentic, and innovative community engagement is critical to the success of comprehensive planning efforts. Our work in other communities throughout the Mountain West underscores our ability to recognize that citizens are very proud of the community they live, play, and work in. For Alpine, residents enjoy an ideal location, a high quality of life, and access to premier recreation opportunities. As the Master Planning process begins, we will build off our experience in Wyoming's diverse communities that face similar challenges. We will identify positive outcomes from previous planning efforts to help embark on a community-wide conversation as we identify key issues, opportunities, and challenges.

Inclusion

We understand that traditional approaches to outreach can exclude some community members due to language barriers, feedback methodology, the location and time of engagement events, and more. Therefore, we use targeted outreach and marketing strategies to reach communities and populations that have historically been left out of planning processes. We employ non-traditional engagement that invites participants to define project values and reach agreements while keeping the door open for creative, fun, and fiscally responsible expression.

Access

Given the occasional difficulty with large, face-to-face engagement, our focus is on facilitating activities that are accessible and equally immersive, whether in-person or virtual. The goal is to reach large audiences and key stakeholders to achieve a broad understanding of the community's vision.

Transparency

Keeping accurate and measurable metrics of the process and then reflecting on what information we've gathered from the community instills trust. We employ this by hosting and regularly updating a project website to display what we've heard from the community so far and give people the opportunity to engage further. This level of transparency helps residents feel empowered because their voice is being heard and that the plan ultimately reflects their values and priorities.

Respect

From its unique natural amenities to its historic Downtown, Alpine is rich in character. This can, however, lead to differing opinions about what that character should look like in the future. We pride ourselves on our ability to facilitate conversations that at times can be divisive, but by leveraging shared community values, ultimately result in solutions that are sensitive to the needs of all.

Our approach will focus on building connections, meeting people where they are, and learning from the collective wisdom of people who live and work in the Town. As a part of all our endeavors, we strive to capture themes of community pride, identify place-based stories, and celebrate each neighborhood's sense of identity.

Methodology & Approach

Phase 1

TASK 1: PROJECT MANAGEMENT

We are committed to the active participation of all our team members as a part of this effort. To manage the day-to-day activities, project timelines, and budget, Nora Bland (project lead) will be available to the Town Project Manager throughout the process. Nora will attend project management check-ins and be responsible for the following deliverables:

- Contract scope of work refinement and finalization
- Project management meetings
- Scheduling and project administration
- Task management and quality controls
- Subcontractor coordination and contract administration
- Monthly invoicing

Subtask 1.1: Project Kick-off Meeting

We will begin the Plan process with a Project Kick-off Meeting to verify project assumptions, scope, timelines, and deliverables. Participants will confirm project goals and objectives, identify existing issues, and define big picture desired outcomes and measures of success for the planning process. We will confirm regular project management meetings and participants. The Cushing Terrell team will also conduct an in-person visit and tour with Town staff to understand what areas of the community should be preserved and get a sense of areas that can accommodate growth and infill.

TASK 2: OUTREACH & ENGAGEMENT PLAN

Based on information gathered during the project kick-off, the project team will deliver an Outreach and Engagement Plan (OEP) that will include dates and detailed community outreach tasks to be held during the entire project. The OEP is an interactive spreadsheet (updated weekly) that includes all major outreach channels, such as (virtual or in-person) open houses, workshops, pop-ups, interviews, and stakeholder meetings. This task will:

- Establish goals for engagement
- Identify key stakeholders/partner organizations
- Establish a flexible and adaptable engagement schedule
- Solidify marketing and outreach campaign strategy
- Determine overseeing groups/committees
- Establish data gathering strategy to further define target demographics/underrepresented audiences and define listening strategies for each

One of the primary goals is to creatively engage a broad spectrum of community stakeholders through the Master Plan Update process – including residents, business and property owners, service providers, nonprofits, and other community partners. We will strategically spread different outreach and engagement efforts out over the course of the project to ensure ample opportunities for input are available.

CONTINUED

Methodology & Approach

TASK 3: OUTREACH ROUND 1 - ANNOUNCE

Add-on - Subtask 3.1: Project Webpage and Branding

Our team will work with staff to develop content for a project webpage hosted through either the Town's website or carried as a link on Cushing Terrell's website. The webpage will serve as the main information portal for the project so that the community can learn about the Master Plan. It will also have multiple interactive tools for community members to give input throughout the duration of the project. Our in-house branding and marketing experts will develop a project logo and branding templates to create a distinct identity that will be reflected in all work products and materials.

Subtask 3.2: Kick-off Outreach Event

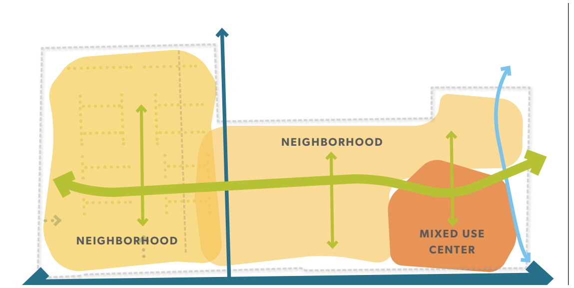
The purpose of this initial engagement effort is to spread awareness for the project, advertise the project website, and have high-level visioning conversations with community members. We recommend that this event be tagged onto an existing Town event to leverage its attendance and to ensure we're reaching a diverse set of residents. We'll capture attention and input with an interactive activity while announcing the project to the community and providing the website for a constant line of communication.

Subtask 3.3: Community Survey

The project team will develop a survey asking questions similar to those used in the Kick-off Outreach Event. Mirroring survey questions to in-person allows for straightforward and transparent reporting. Unless otherwise indicated by the Town, the team will conduct this survey via Survey Monkey (consultant's account). It is recommended that the survey be available for approximately one month, and the team will work with the PIO to broadly advertise this survey to gather a wide range of demographic responses. Stakeholder partners identified in Task 1 will be critical to this advertising effort.

Phase 1 Deliverables:

- Project Kick-off Meeting & Site Visit
- Weekly Project Management Meetings
- Outreach & Engagement Plan
- Project Webpage & Branding Materials
- Kick-off Outreach Event
- Community Survey
- Town Planning & Zoning Commission Update
- Town Council Update



Phase 2

TASK 4: RESEARCH & ANALYSIS

Subtask 4.1: Existing Plans/Studies Review

Our process begins with research. We will identify materials necessary to develop a baseline of information that will inform the Plan Update.

Subtask 4.2: Land Use & Community Character Studies

Add-on - **Community Character Study**

Our team will review local development patterns and neighborhood amenities that contribute to Alpine's sense of place. This inventory will consider neighborhood context and will help define the nature of new development and redevelopment, and how this affects the overall community character. Community character is about placemaking, Town pride, authenticity, citizen-led arts & culture, visual quality, and public improvements that reflect the heart and soul of a community.

Land Use & Zoning Code Review

It is critical that our team familiarize ourselves with the current land uses, zoning regulations, historic resources, and building code requirements. While a detailed code audit is not part of this Plan Update, we will conduct an initial scan of codes that

CONTINUED

Methodology & Approach

regulate development to identify areas where they could be improved. We'd like to answer the question: "If our codes are not allowing/producing the desired type of development, what changes need to be made?"

Primary scope objectives will include:

- Review existing development and building codes and related policies
- Identify current best practices (locally, regionally, nationally)
- Define gaps and recommendations for new policy or code amendments

TASK 5: OUTREACH ROUND 2 - GATHER

Add-on - Subtask 5.1: Stakeholder Interviews

In addition, the team will hold up to four (4) stakeholder focus group meetings on key planning elements identified by Town staff through Round 1 of engagement. These discussions are smaller than a community workshop with up to 15 attendees representing public, private, and nonprofit groups. They are free-flowing dialogues that will explore existing issues, assets, and opportunities. If the topic was housing, for example, we would assemble affordable housing developers and financers, real estate/market experts, housing activists/nonprofits, and Randy Rhoads, Cushing Terrell's Director of Affordable Housing would lead the discussion.

Subtask 5.2: Community Workshop #1

Community Workshops are larger-scale, open-house style events that correspond to project phases. Each will be designed to answer a question, solve a problem, or confirm community priorities. The purpose of Workshop #1 will be to hold a community visioning session and begin to understand what issues are elevated by the community.

Phase 2 Deliverables:

- Existing Plans/Studies Review
- Community Character Analysis
- Land Use & Zoning Code Review
- Stakeholder Interviews
- Community Workshop #1
- Refined Collective Vision Statement
- Existing Conditions Report/SWOT Analysis

CONTINUED

Methodology & Approach

Phase 3

TASK 6: INFRASTRUCTURE INVENTORY

The Team will conduct an inventory of infrastrure through visual review, photo documentation, interviews with Town staff of elements including water & Sewer, sidewalks, recreation facilities and roads. We will develop a summary of findings documents including conceptual level improvements and cost estimates.

TASK 7: DRAFT RECOMMENDATIONS/STRATEGIES

Subtask 7.1: Policy Recommendations

We will develop a set of draft policy recommendations based on all analyses conducted thus far, community input, and best practices. An Implementation Strategies Matrix will outline action items for plan implementation, responsible parties, and general target dates/timelines. The Matrix will also prioritize alternatives, outlining specific alternative actions to be completed by the Town over a period of ten years and the amount of funding needed to complete those actions. We will also identify potential regional and community partners and funding sources, as applicable.

TASK 8: DRAFT PLAN

Cushing Terrell will distill the information gathered from the community and staff and provide a plan that defines a broad community vision, goals, and strategies required to achieve the vision. The Draft Plan Update will reflect a compilation of existing conditions, a detailed summary of the community outreach process, the preferred growth scenario, and infrastructure recommendations. The Draft Plan will be a visual expression of the planning process and include high-quality graphics to articulate design principles and other takeaways.

TASK 9: OUTREACH ROUND 3 - CONFIRM

Subtask 9.1: Community Workshop #2

When Draft Plan elements are ready for review, we will share them with the community at our second Workshop event. We will ask for feedback on the Draft Recommendations through a series of interactive stations. This Workshop can be held both in-person and virtually (on a different date).

Subtask 9.2: Public Engagement Summary

This will be the summation of our public engagement effort. It will detail the outreach and listening methodologies used, audiences targeted, quantitative metrics of people reached, responses gathered, and attendees to meetings and focus groups. This section will also include the specific strategies employed to reach traditionally under-represented populations.

Phase 3 Deliverables:

- Infrastructure Analysis & Recommendations
- Draft Policy Recommendations
- Draft Master Plan
- Town Council Update
- Workshop #2
- Public Engagement Summary

CONTINUED

Methodology & Approach

Phase 4

TASK 10: FINAL PLAN & ADOPTIONS

Subtask 10.1: Final Draft Master Plan Update

We will work with staff to make adjustments to the Draft Plan based on feedback from the community, stakeholders, and elected officials. The revised plan narrative and associated maps and visualizations will be incorporated into a highly graphic and user-friendly Final Draft Plan Update. An electronic format of the Final Master Plan will be made available. Any large format maps will be provided in PDF format. All documents related to survey responses, graphics, schedules, appendices, addenda, and narrative will be delivered in electronic format. Spreadsheets and charts will be delivered in Excel format, including supporting data for all tables and graphs.

Subtask 10.2: Final Plan Approvals

Cushing Terrell will prepare draft and final draft presentations for the Planning Commission and the Town Council as part of the public review process. The schedule for plan review and public hearings will be determined by Town staff. We will provide the Town with a Final Master Plan Update and all supporting digital files post-plan adoption.

Base Cost Proposal

Phase 1	$30,000
Phase 2	$25,000
Phase 3	$35,000
Phase 4	$10,000
Subtotal	$ 100,000
Reimbursables (Team travel, printing)	*$15,000*
Project Total	**$ 115,000***

Cost Proposal with Recommended Add-ons

Phase 1	$50,000
Phase 2	$65,000
Phase 3	$80,000
Phase 4	$40,000
Subtotal	$ 240,000
Reimbursables (Team travel, printing)	*$15,000*
Project Total	**$ 250,000****

**The Base Cost Proposal includes a minimal update to the plan. It excludes the project website and branding, stakeholder interviews, additional workshop events, and additional analyses by specialized subconsultants (housing and market studies).*

***The Cost Proposal with recommended add-ons reflects the add-ons outlined in the methodology and approach. Cushing Terrell will work with the Town to modify the scope and fee to meet budgetary constraints.*

Right: Jackson Hole Affordable Housing Conceptual Design

thank you.

1700 Broadway | Suite 1200
Denver, CO 80290
720.359.1416

cushingterrell.com

Cushing Terrell

Town of Alpine
Planning & Zoning

ALPINE
WYOMING

Chairman:
Melisa Wilson

Commission Members:
Sue Kolbas
Dan Schou

December 10th, 2024

Mayor Eric Green and Council Members;

Recommendation from the Planning & Zoning Commission

On Tuesday December 10th, 2024, the Planning & Zoning Commission reviewed and discussed the request for proposals for the Alpine Master Plan for the Town of Alpine. The Commission strongly feels that the company of Cushing Terrell would be the best suited company for the preparation and research needed to update the Town of Alpine Master Plan.

Mr. Dan Schou moved to send a recommendation to the Town Council for the selection of Cushing Terrell for the preparation and updating of the Town of Alpine Master Plan. Ms. Sue Kolbas seconded the motion. Vote: 2 yes, 0 no, 1 abstain (Wilson), 0 absent. Motion carried.

250 River Circle * P.O. Box 3070 * Alpine, Wyoming 83128 * (307) 654-7757 * FAX (307) 654-7454
E-Mail: planning@alpinewy.gov * www.alpinewy.gov

Proposal for Services:
Town of Alpine Master Plan

Alpine, Wyoming

October 12
2024

Presented to
Monica Chenault
Town of Alpine Clerk
250 River Circle
Alpine, WY 83128

Presented by
HARMONY
DESIGN & ENGINEERING
80 E Pearl Ave, Jackson, Wyoming
18 N. Main St, Ste 305, Driggs,

HARMONY
DESIGN & ENGINEERING

October 12, 2024

Monica Chenault
Town of Alpine Clerk
250 River Circle
Alpine, WY 83128

RE: Statement of Qualifications for Planning Services for Town of Alpine Master Plan

Dear Ms. Chenault,

Harmony Design & Engineering (Harmony) is pleased to submit the enclosed response to the Request for Proposals (RFP) for the update of its Town Master Plan. We are excited to work with Town of Alpine staff and residents to create an updated plan that not only meets Wyoming statues, but brings the community together through a transparent public process. We bring to this project first-class planning expertise, a wealth of experience, a commitment to delivering high-quality products, and responsive project management.

Harmony has broad-based experience creating successful master plans and comprehensive plans for communities throughout the intermountain west. Our plans are visually pleasing and easy to use and have helped communities grow and prosper in a resilient and economically responsible way. The plan we help Alpine develop will include all of the required and desired information outlined in the RFP with the overarching goal to capture community priorities in a strategy for infrastructure upgrades and an effective, straight-forward implementation plan to make these projects a reality.

Harmony is uniquely positioned to deliver exceptional results for reasonable fees, thanks to our location in nearby Teton County, Wyoming, combined with our efficient project management. If you require any additional information, please do not hesitate to reach out. I can be reached at 208-354-1331 x4003 (office) or via email at jen.zung@harmonydesigninc.com.

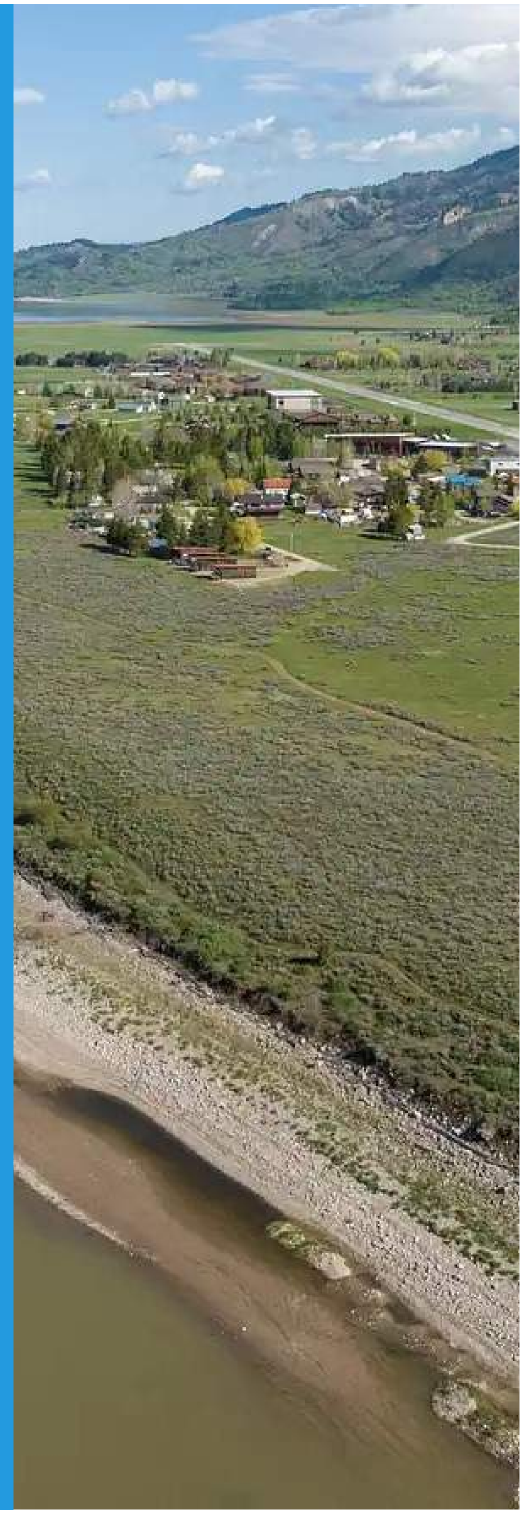
Sincerely,

Jennifer Zung

Jennifer Zung, PE, CFM
Principal, Harmony Design & Engineering

Enclosures

Contents
(Links)



About Us -
The Harmony Team

Harmony Design & Engineering has offices in Jackson, Wyoming, and Driggs, Idaho, and has been providing professional engineering and planning services to public and private clients in small, western communities for almost 20-years. Our land planning, civil engineering, landscape architecture, land surveying, and water resources services are considered the best in the region. We have provided high-quality engineering and planning services for municipalities within Teton County, Idaho; Teton County, Wyoming; Fremont County, Wyoming; and the Cities of Jackson, Driggs, Victor, Rexburg, McCall, and Hailey, among others.

Harmony is a nationally certified Women Business Enterprise, an Idaho Department of Transportation Department DBE, and a Wyoming S-corporation with two principal owners, Jennifer Zung and Randel Blough. We have a long history of exceptional service and high client satisfaction creating master plans for communities across Idaho and Wyoming. With a tight-knit team of 20 highly qualified professionals, we can efficiently accomplish in-house tasks and effectively communicate with partners.

Because we are invested local residents, we seek out projects that create long term benefits for our region, cultivating meaningful relationships with our clients and our communities.

Project Understanding & Approach

Harmony's approach to community planning is holistic and adaptive, allowing thorough conditions analysis, local context, and public feedback to define the product. Our extensive experience creating Comprehensive Plans and Master Plans for rural and recreation gateway communities in the West allows our team to anticipate challenges, staying true to the scope and schedule. One of our key strengths is our commitment to clear communication and responsive project management throughout the life of our projects. The result will be a plan that meets the Town's goals, represents the Community, and can act as an effective and easy-to-use decision making tool.

Small towns like Alpine do not have the time and resources for plans that sit on a shelf or analysis and public outreach to answer questions that we already know. Harmony understands that we can limit time and expense by avoiding performative and vague information gathering, instead focusing on a strategic public outreach campaign to provide meaningful, concise feedback. This data will be directly applied to policy recommendations.

The basis of the Plan will be an in-depth inventory of current infrastructure, available land, and facilities. We will also undertake a demographic analysis, projecting future needs for these resources based on growth rates and capacity limitations.

An implementation plan will provide an attainable path to achieving community goals for the future of Alpine. If desired, Harmony will include a cost of community services analysis and Future Land Use Map. These will define a playlist for achieving revenue generation to fulfill future needs. A zoning/annexation strategy will support the implementation plan and can be augmented with policy strategies for housing and economic development.

Harmony will create a Master Plan for Alpine that:

- **Simplifies land use decisions and capital improvements budgeting**
- **Defines future facility and infrastructure needs**
- **Provides policy strategies that reflect community goals**
- **Prioritizes projects for implementation, and provides accurate cost and timeframe estimates**
- **Provides a method for fiscally responsible policy implementation**

Plan Content

The following elements will make up the content of the Town Master Plan and will be supplemented with introduction, appendices, etc. The elements that are highlighted in yellow will enhance the accuracy and effectiveness of the Plan while meeting the requirements of Wyoming Statute 15-1-503 to "make careful and comprehensive surveys and studies of the existing conditions and probable future growth of the municipality and its environs." The estimated cost of these are broken out as additions in the fee scope. Elements in white are part of the base scope described in the Request for Proposals.

Vision & Goals

Community Statement from Public Outreach

Most Master Plans lead with a vision and goals statement supported by the community. This validates the direction of recommendations and signals that these support the public interest. Visioning can be a fun way to involve the community and build support for the process.

Demographic Analysis

Current Population Characteristics and Available Services

Mirroring Alpine's 2006 Master Plan, this section will describe current conditions as a baseline. This is important to measure the effectiveness of implemented projects and policies over time.

Infrastructure Inventory

Transportation Network, Recreational and Municipal Facilities, Water/Sewer

Understanding what we have on the ground will make it possible to assess what we will need to meet future demand. With our team of surveyors and GIS technicians, we can accurately and quickly create an inventory based on surveyed data with detailed attributes made accessible through GIS to City Officials, and if desired, the public.

Future Land Use Map

Land use allocation for a 15-20 year timeframe with annexation plan

A Future Land Use Map is a helpful tool for guiding land use decisions such as zone changes and annexations, working in conjunction with the capital improvements plan. By defining the desired land use scenario, an estimate of tax revenue and infrastructure expenditures can be made (Cost of Community Services Analysis).

Plan Content, continued

Needs Gap Analysis

Residential & Visitor Population Growth
Traffic Demand Modeling
Services Demand Projections

Combining our demographic analysis and infrastructure inventory with projections based on growth statistics, we will assess what services and infrastructure are needed for a timeframe matching the Future Land Use Map. Service demand will be analyzed for Medical, EMS, Schools, Recreation, Municipal Capacity and Water/Sewer and Telecoms. Our team of engineers understands the cost of upgrades and improvements to utilities infrastructure and can create accurate estimates for capital budgeting.

Recommended Projects & Implementation

Prioritization Framework
Estimated Cost and Time to Complete
Funding Sources and Responsible Parties

The meat of the plan will be the recommended projects list, based on the needs gap analysis and input from the CAC and TAC. We will create a project prioritization framework based on evaluation criteria such as cost, complexity, community desire, safety impacts, and environmental impacts. The resulting list will provide a straight-forward tool for budgeting and implementation, making it clear which projects must be undertaken now, and when others should be initiated.

Policy Strategies

Zoning/Annexation
Housing
Economic Development

Recommendations on zoning updates will be based on successes in similar communities, adapted for Alpine's unique conditions. If desired, a housing strategy can address affordability, availability, quality, and density. Economic Development strategies will work in conjunction with these, providing guidance for improving Alpine's quality of life. Each strategy will be accompanied by recommendations to finance proposed directives.

Public Engagement

Validation of Public Input
Documentation of Community Goals in Plan
Monitoring for Effectiveness of Plan Elements

Public Engagement activities will be documented and summarized, ensuring that public opinion is represented in the Plan. A monitoring plan can also be developed to assess whether implemented projects meet their intended purpose and remain aligned with community desire.

Plan Methods

Enhance effectiveness by integrating with concurrent planning efforts such as SS4A and Water Master Plan

Inspire community buy-In with meaningful public engagement

Create accessible, directly useable products by formatting GIS and other data for simple hand-over

Approach to Consensus

As a small business operating in rural Idaho and Wyoming, Harmony has a deep understanding of the issues surrounding land use regulations. When people do not agree, it is paramount to ensure that each perspective is validated publicly. As facilitators, we can approach compromise by identifying a group's interests as well as their position on controversial subjects. In all likelihood, this leads to common ground that strengthens community buy-in of the process and the resulting plan.

We understand that no issue is black or white. When the data from public outreach are inconclusive, we can understand the results by rephrasing the question. The answer to a different question is contained in the data, which is likely the heart of the matter. Context and intimate knowledge of the issues help our planners understand what the community is telling us so we can craft policies that elected officials can confidently support.

Public Outreach

Through consultation with Town of Alpine Staff, a Public Engagement Plan will be created including the desired elements and timeframe for outreach. We aim to engage the public through the most meaningful avenues for participation, maintaining our timeframe and budget.

Engagement Strategies

Citizen Advisory Committee

With up to ten community members, the Citizen Advisory Committee (CAC) will participate in an activity to create a list of high-level community goals, which will be vetted with the public and City Officials. These goals will guide project prioritization and provide a community statement to introduce the new plan. The CAC will be our most valuable opportunity to listen and learn from one another, acting as representatives for groups that may not participate in traditional outreach activities. Harmony understands that each of the committee members have many other obligations, and their time is valuable. We will structure our meetings as work sessions, with activities designed to facilitate decision making at key points in the planning process.

Technical Advisory Committee

City Officials and Key Stakeholders will comprise the Technical Advisory Committee (TAC), offering guidance about feasibility, cost, and implementation of projects and plan elements. The main function of the TAC will be to generate the proposed project list, contribute to prioritization, and review plan components such as community goals and future land uses. The TAC will meet three times with the opportunity to provide feedback throughout. It is assumed that the Town of Alpine will provide the TAC participants list.

Public Open House

We will create and facilitate a public open house in a community space at two phases of the project, mirrored with digital content on an online platform. Offering as many opportunities as possible to engage will help ensure broad and representative results, increasing community buy-in.

Public Outreach

Engagement Strategies, continued

Survey

A broad community survey will provide information about community desire for specific projects, such as transportation network connections, recreation facilities, and municipal facilities. This data will be one component of the evaluation criteria used to prioritize the project list. The survey will also solicit comment on community goals created by the CAC to inform a cohesive vision for the Master Plan. The survey will be hosted online, with print copies available at strategic locations. A Spanish language version will be promoted concurrently, with options to translate to other languages.

Promotion

Our team will create a central online location for the community to gather information and provide feedback. This platform will be user friendly, easily accessed from desktop or mobile apps. We will include links to surveys, project mapping, technical information, draft materials, and other interactive tools to keep this updated throughout the process.

To promote outreach activities, we will create contemporary and functional posts for municipal websites and social media channels, with consistent posts leading up to opportunities. Partnering with local organizations will allow access to newsletters and website traffic to push survey and workshop opportunities. Local newspapers, flyers, and print advertising are key to reaching certain populations. These can be placed on buses and at bus stops, as well as locations identified by the CAC and TAC to reach specific groups, and by pop-up advocates at community events.

Key Personnel

Harmony's versatile personnel possess extensive technical expertise, considerable experience, and a track record of delivering top-notch results. Each team member assigned to this project is a full time employee based in Jackson or Driggs and will be actively involved in the project from its inception to completion. Our team has the capacity and capability to complete this project in a timely manner, and is supported by a complete staff of technicians and administrative personnel. Full resumes with roles described are included in the Appendix.

Allison Alhert, AICP

Planner/Project Manager

Allison will be the project manager and main point of contact for this project. She will be responsible for production of the plan and leading public outreach. Allison has experience managing long-term, complex projects from start to finish, maintaining relationships with municipal officials, developers, and community leaders through professionalism and mutual respect. Allison lends her insights into public policy and government function to create plans with real benefits to communities. She has designed and led multiple community outreach programs, conducting meaningful and inclusive public engagement, and facilitated committees and public meetings. Her high quality products are always accompanied by effective project management and on-going support for the target community.

Jennifer Zung, PE, CFM

Principal Engineer

Jennifer Zung, PE, will be the Principal in Charge for this project, providing final quality control checks, general oversight, and a secondary point of contact. Jennifer has more than 28 years of professional experience in the engineering field and has been the project manager, lead planner, and lead engineer for numerous projects for Harmony. Jennifer ensures that her teams run smoothly through a supportive and inclusive management style, while providing the technical insights to create great work. She is a responsive communicator and attentive to details while possessing the rare skill of high-level prioritization and oversight for optimum results.

Key Personnel

Randy Blough, PLA

Principal Landscape Architect

Randy will be supporting the planning team with production, public outreach, and map design. Randy is a licensed Professional Landscape Architect with more than 35 years of experience. He is a principal owner of Harmony Design & Engineering and has lived and worked in the intermountain west since 1992. He has been involved with a wide variety of projects including commercial and residential neighborhood master plans, pathway design and master plans, urban park plans, small town streetscapes, and small town master plans. From conceptual plans to detailed design, Randy's blend of landscape architecture, planning, and engineering experience offers a unique and broad perspective to all projects.

Lindsay Kissel, PLA

Project Landscape Architect

Lindsay will provide support with plan production and public outreach, lending her experience with municipal planning in Wyoming to success of the project. With over 17 years of professional experience in the landscape architecture and planning field and 5 years of planning and grant writing experience in the non-profit realm, Lindsay has spent most of her career working in Teton County, WY. She has practiced landscape architecture as a private consultant in residential and commercial settings and as a public servant working at the Town of Jackson and Grand Teton National Park. Lindsay has extensive experience with resort and community master plans, park and pathways master plans, landscape design, and site design in sensitive settings such as National Recreation Areas and National Preserves.

Sarah Foster, PE, CFM

Civil Project Engineer

Sarah will act as lead civil project engineer for this project. Sarah is a licensed Professional Engineer and Certified Floodplain Manager. She has a well-rounded and diverse civil engineering background developed during her 10 years within the field. Her areas of expertise include wastewater collection system, roadway, and water system design and planning. She's completed numerous system designs for large-scale subdivisions in Twin Falls, Idaho, as well as subdivisions located in Arvada and Lakewood, Colorado. Sarah is detail oriented and always produces high quality work, reliably delivering products and supporting team members to create solutions.

Key Personnel

Tyler Bushong, EIT

Civil Project Engineer

Tyler will be supporting Sarah with capital facilities evaluation. Tyler produces excellent work and has outstanding evaluation and management skills. His experience with utility and infrastructure design, drainage and grading, accessible routes and pathways, and projects on a variety of scales makes him an invaluable team member. Tyler is responsive and attentive during the construction phase, providing requests for information, submittal reviews, and site visits. He is always on time and is dedicated to completing tasks accurately.

Daniel Johnson-Shcunk

Survey/GIS Technician

Daniel will be responsible for map production and analysis using ArcGIS products including ArcPro and ArcGIS Online. Daniel is a GIS Specialist and Land Survey Technician. He has experience as a survey technician for a land and water conservation group in Wisconsin prior to joining Harmony in 2022. He has completed various topographic survey field work and processes information using Trimble Business Center and ESRI ArcGIS software.

Aaron Farmer, LSIT

Surveyor II

Aaron will be responsible for conducting the field work to gather data to support the infrastructure inventory. Aaron is a Land Surveyor In Training with 5 years of experience working in the field and office. He has completed numerous topographic surveys, as well as boundary surveys, lot flaggings, and ALTA surveys. He has also completed construction staking for large roadway projects as well as small single family residential projects. He has a B.S. in Construction Engineering Technology with a minor in Land Surveying from Montana State University. Aaron is enthusiastic, energetic, and always has a smile on his face, especially when he is working hard surveying a tough site.

Project Examples

The following project examples demonstrate our team's experience with projects that are similar to the Alpine Master Plan. In addition, Harmony has completed many other public outreach programs, community plans, master plans, and neighborhood plans as shown on our resumes.

VICTOR, IDAHO
COMPREHENSIVE PLAN UPDATE

Victor, Idaho

Project Description

Victor, Idaho undertook an update of its Comprehensive Plan, Envision Victor, in 2020. The update included broad public outreach, a new future land use map to inform ongoing Capital Improvements Plans Updates, and redefined vision and goals for the community. The project involved over 500 community members through public outreach in a town of just over 2000 people. The new plan, Re-envision Victor, defines six key values identified by the community, with policies supporting each, in an accessible and attractive document.

Services Provided

Harmony Design & Engineering worked closely with City staff and Logan Simpson as a sub-contractor for this six-month public outreach campaign. Harmony acted as a local intermediary and representative to the larger, nationwide consultant team.

Harmony planned and staged an extensive public outreach program, including stakeholder interviews, two open house/workshops, small group workshops, and collaboration with the City's Technical Advisory Committee.

Harmony then created a draft Future Land Use Map and recommendations based on the results of the communitywide workshops. These were vetted with the Technical Advisory Committee and the consulting partners before presentation at public open house. Harmony worked closely and efficiently with Logan Simpson in order to achieve Victor's goal to accurately represent Community desires in policy recommendations. The project was a resounding success, with Re-envision Victor adopted as an exemplary small-town comprehensive plan.

Re-Envision Victor is filled with local imagery and can be downloaded from the City website

Many Victor residents participated in a variety of events in multiple locations

Victor's Future Land Use Map has broad categories to guide development

TETON COUNTY, IDAHO COMPREHENSIVE PLAN UPDATE

Teton County, Idaho

Project Description

Teton County, Idaho, is the gateway to Grand Targhee Resort, an international destination with 1,200 skiable acres. From 2000 to 2010, Teton County was one of the fastest-growing counties in the nation. However, under a previous controversy-laden comprehensive plan, the County experienced its largest-ever development boom/bust cycle, resulting in inefficient, fiscally irresponsible and unsustainable development patterns.

The Teton County, Idaho Comprehensive Plan Update project started in 2010 and was completed in 2012. The update process emphasized an opportunity to outline a new direction for the county: one based on lessons learned from the past and from other western communities. This process represented western, grassroots planning at its best and resulted in a landscape-based approach to development levels and incentives and an implementation framework aimed at creating actionable change and an economically resilient county.

Services Provided

Harmony Design & Engineering worked closely with the County staff and managed the consultant team which included AECOM, Jorgensen Associates, and Intermountain Aquatics. Harmony managed the public outreach component of the plan, facilitated citizen committee meetings, wrote several sections of the Plan and coordinated the final composition of the Plan. The Comprehensive Plan included information on the history of the County, community vision, goals and policies, future land uses and implementation strategies.

Extensive community engagement efforts included public workshops; open houses; stakeholder interviews; a mobile "plan van;" online surveys; special events; landowner workshops; newspaper articles; and a dedicated website. More than 4,000 comments and other input were received, with a significant portion of the County's 10,000 residents participating. The plan was unanimously adopted by the Board of County Commissioners in August 2012. In October 2012, the plan was awarded the **2012 APA Idaho Public Outreach Award.**

The community filled the fire station during extra meetings held in response to public needs

The Comprehensive Plan Update strove to balance natural resource preservation with property rights using creative solutions

The "Plan Van" went to where the people were to gather input

DRIGGS, IDAHO
COMPREHENSIVE PLAN UPDATE

Driggs, Idaho

Project Description
The City of Driggs, Idaho, updated their Comprehensive Plan in 2019. Entitled "Uniquely Driggs" the Driggs Comprehensive Plan update had a goal to create an efficacious and easily understood tool for developers and planners to guide growth into the future. The project included analyzing existing conditions and trends for background information and outlines an implementation timeline and monitoring plan to ensure that decision making remains relevant.

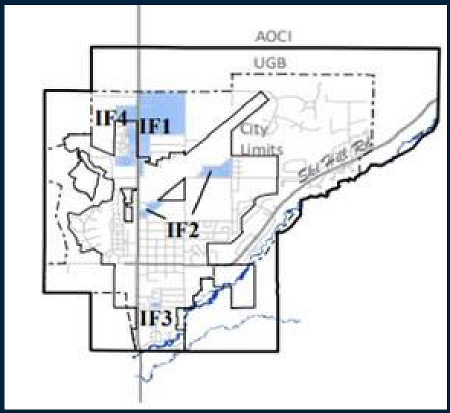
Uniquely Driggs divides policies into community defined goals, objectives which meet these goals, and specific actions to fulfill the objectives. By taking the generalized values gathered in public outreach, and making them into specific implementation strategies, the Plan helps City Officials simplify complex land use decisions.

Services Provided
Harmony Design & Engineering assisted Logan Simpson as a local representative, working closely with the City of Driggs, the Comprehensive Plan Committee, and the public to achieve a high quality product. Harmony reviewed accuracy of data and existing conditions analysis and took a large roll in community engagement throughout the project. Harmony also collaborated on development of goals, objectives and actions, reviewed plan text, and provided recommendations based on the results of local events.

Public input was gathered through a variety of methods despite the challenges of COVID-19, which framed the needs of the community through a new lens. As the local representative and as community members, Harmony was well-suited to connect with the public, including hosting Comprehensive Plan Committee meetings, stakeholder interviews, public open houses, a committee workshop, neighborhood workshops, and presenting at adoption hearings. Harmony's local presence allowed the project to proceed without delays and hang-ups, and help ensure that the resulting plan was locally sensitive and relevant.

Residents attended meetings, workshops, and participated in online surveys

Public outreach and the resulting Plan sought to represent many community groups



Driggs' Future Land Use Map Designations define goals for specific areas as well as land use types

Project Timeline

Notice to Proceed

NOV, 2024 — KICK-OFF WITH STAFF AND CONSULTANTS

SET UP

- Finalize project schedule
- Create Public Engagement Plan
- Background Research and Plan Review

DEC, 2024

ANALYSIS

- Convene TAC, CAC
- Demographic Analysis
- Begin Infrastructure Inventory
- Promote Public Outreach Events (on-going)

JAN, 2025

OUTREACH

- 1st Open House
- TAC, CAC Meeting
- Draft Vision & Goals

FEB, 2025 — CHECK IN WITH STAFF AND CONSULTANTS

ANALYSIS

- Draft FLUM
- Cost of Community Services Analysis
- Draft Policy Strategies

APR, 2025

- Complete Infrastructure Inventory

CHECK IN WITH STAFF AND CONSULTANTS

JUN, 2025

OUTRACH

- Create Projects List
- Online Survey
- 2nd Open House
- TAC, CAC Meeting

AUG, 2025

DRAFTING

- Prioritize Projects
- Draft Plan Sections
- Format Draft Master Plan and FLUM

NOV, 2025 — PRESENT DRAFT MASTER PLAN TO STAFF

FINALIZE

- TAC, CAC Meeting
- Revise/Finalize Draft Master Plan

Adoption

WETLAND BOARDWALK WITHIN THE HAILEY GREENWAY
INCLUDED IN HAILEY GREENWAY MASTER PLAN (HARMONY)

APPENDIX

Allison Ahlert, AICP

PUBLIC OUTREACH MANAGER

REGISTRATION & CERTIFICATIONS

American Institute of Certified Planners (AICP)

EDUCATION

Masters of Community and Regional Planning
University of Oregon | 2021

Graduate Certificate Environmental Conflict Resolution: Land Use

B.A. Geography
University of Washington, 2008

Honors and Awards

Kenton Grua Memorial Scholarship, The Whale Foundation

Overview

Allison will be the project manager and main point of contact for this project. She will be leading the public outreach program and responsible for production of the plan. She is a deft delegator and can track logistics for complex projects. Allison has distinguished herself as a pragmatic and effective leader in the public and private sectors. As a project manager, she led successful teams in environmental planning consulting and has overseen complex land use applications from concept through final approval. She has designed and led multiple community outreach programs, facilitated committees and public meetings, and endeavors to forge relationships with decision makers and stakeholders throughout her community. As a planner for Harmony, she is working to create positive impacts through community planning projects and implementation of ethical development principles.

Representative Projects

Modernizing Mobility for West Jackson, Neighborhood Transportation Plan | 2023-24
Lead planner on joint Town of Jackson/Teton County, WY public engagement for creation of the West Jackson Transportation Plan. Responsible for designing program, leading outreach events, creating reports and presenting results to decision makers.

Bicycle and Pedestrian Master Plan Update- Blaine County, Idaho | 2022-23
Planner responsible for designing and implementing a comprehensive community outreach program to assess public priorities, creating new methodology for project prioritization including social justice metric, managing steering committee collaboration, and drafting report.

Pathway Safety Project – Jackson, WY | 2023
Planner responsible for creating a schedule of physical and programmatic interventions to control speeds and reduce user conflicts on Town of Jackson multi-use pathways. The project involved compiling best practices and design standards for speed control and e-bike usage on pathways, vetting alternatives for site specific conditions and project goals, and collaborating on a concept design.

Downtown Core Framework Plan Update – Driggs, Idaho | 2023
Planner and Project Manager for plan update to Driggs NE and NW Block Master Plans. Responsible for coordinating communication between sub-contractors and municipality, designing and hosting a stakeholder workshop, documenting feedback, updating plan text, graphic design, and presenting to appointed and elected officials.

Climate Hazards Vulnerability Assessment – Coos Bay, Oregon | 2020-21
Project Manager for a consulting team of graduate students, including creating a work plan for 9 months, defining deliverables, creating methodology for assessing sensitivity and adaptive capacity of community resources, convening stakeholders, developing data gathering methods, and facilitating personal and professional growth in a dispersed work context.

Jennifer Zung, PE, CFM

PRINCIPAL ENGINEER

Overview

Jennifer will be overseeing this project, conducting quality control on all deliverables and assisting Allison in project management. Facilitating public meetings and developing public outreach plans takes special insight and skill, and Jennifer has the ability to bring groups together to accomplish project goals. Public outreach is the cornerstone of Jennifer's projects and is what sets these projects apart and makes them successful. Jennifer has been the principal-in-charge and project manager for Harmony Design & Engineering over the past 20 years. This has generally included fifteen to twenty-five projects occurring simultaneously for a range of clients from individual homeowners to local municipalities and large government agencies.

Representative Projects

Hailey Greenway Master Plan and Lions Park Improvements – Hailey, Idaho | 2017 & 2023

Project manager for this master plan that combines long-term floodplain management and ecosystem health with recreation access and land use planning. Extensive public outreach was conducted to help address immediate flooding concerns from the neighboring properties. Lions park improvements includes picnic areas, parking, baseball field, and concession areas.

R Park – Wilson, Wyoming | 2016

Project civil engineer and facilitator collaborating with a large project team to develop the final plan for this natural park on the west bank of the Snake River that includes large ponds, wetlands, nature playgrounds, trails, and public art. Programming for the park emphasized connecting people to water while preserving space for wildlife. Lead engineer responsible for the SWPPP, final park grading plans, roadway plans, and utility plans.

Blaine County Community Bicycle and Pedestrian Master Plan | 2015

Project manager and facilitator working with six different jurisdictions to develop a comprehensive plan for bike and pedestrian infrastructure using a variety of public outreach tools. The plan was awarded the 2016 Citizen Advocacy Award by Idaho Smart Growth and a 2015 Honorable Mention Award of Merit by the Idaho APA.

Downtown McCall Master Plan – McCall, Idaho | 2013

Project Manager of a large consulting team for this project that synthesized public goals into an integrated vision for Downtown McCall. The plan had broad public support and was awarded the 2014 Idaho APA Outstanding Plan Award and the 2014 Idaho Smart Growth Award.

McCall Area Pathways Master Plan – McCall, Idaho | 2012

Project Manager and lead author of this Master Plan for pathways in and around McCall. The plan includes recommended improvements and implementation strategies to create a safe, efficient, and interconnected pathway system. Provided detailed design standards and guidelines for trail and pathway development.

Teton County Idaho Comprehensive Plan Update | 2010

Project manager and lead facilitator for this multi-year project with a significant public outreach component that included six subcommittees that met 72 times, six public meetings, and four public hearings. This project was awarded the 2012 Public Outreach Award from the Idaho Chapter of the American Planning Association.

REGISTRATION & CERTIFICATIONS

Professional Engineer
Idaho (No. 11539), Wyoming (No. 10463), Montana (No. 49392), Colorado (No. 34767), Washington (No. 55758)

Water Pollution Control Manager (WPCM)

Certified Floodplain Manager (CFM)

LEED Accredited Professional

EDUCATION

M.S. Civil Engineering - Hydrologic and Environmental Sciences and Engineering

Colorado State University,
Fort Collins, Colorado,
Summa Cum Laude | 1996

B.S. Civil Engineering | Missouri University of Science & Technology, Rolla, Missouri, Summa Cum Laude | 1994

Civic Involvement

Teton County Wyoming School District #1 Trustee | 2020- present

Randel G. Blough, PLA

PRINCIPAL LANDSCAPE ARCHITECT

REGISTRATION & CERTIFICATIONS

Licensed Professional Landscape Architect (Idaho, Wyoming, Utah, Montana)

American Society of Landscape Architects (ASLA) Member

Council of Landscape Architectural Registration Boards (CLARB) Certified

EDUCATION

B.S. Landscape Architecture
West Virginia University | 1986

Civic Involvement

Community Foundation of Teton Valley – Past Board Member

Teton Valley Trails and Pathways – Past President

Volunteer Nordic trail groomer in Alta, WY

Targhee Towne Water Board – Past President

Overview

Randy will be supporting the planning team with production, public outreach, and map design. Randy is a licensed Professional Landscape Architect with more than 35 years of experience in the landscape architecture, planning, and engineering fields. He is a principal owner of Harmony Design & Engineering and has lived and worked in the intermountain west since 1992 and the Greater Yellowstone region since 2003. He has been involved with a wide variety of projects including commercial and residential neighborhood master plans, pathway design and master plans, single-family, multi-family, and commercial site planning and engineering, urban park plans, small town streetscapes, campus plans, and small town master plans. From conceptual plans to detailed design, Randy's blend of landscape architecture, planning, and engineering experience offers a unique and broad perspective to all projects.

Representative Projects

Teton Creek Corridor Greenway Path – Driggs, Idaho | ongoing
Lead planner and design engineer for this multipurpose pathway along Teton Creek in Driggs, Idaho. The pathway is being designed to include river access but also respect sensitive riparian habitat.

Blaine County Community Bicycle and Pedestrian Master Plan | 2015
Planner and outreach coordinator for this comprehensive plan for bike and pedestrian infrastructure throughout Blaine County, Idaho. The plan was awarded the 2016 Citizen Advocacy Award by Idaho Smart Growth and a 2015 Honorable Mention Award of Merit by the Idaho APA.

Teton County Recreation and Public Access Master Plan - Teton County, Idaho | 2014
Project planner for this Master Plan that provided a framework for making recreation and public access even better, which would allow the valley to grow economically, socially, and physically. This included options for funding and concrete implementation steps.

Downtown McCall Master Plan – McCall, Idaho | 2013
Project landscape architect and planner for this project that synthesized public goals into an integrated vision for Downtown McCall. The plan had broad public support and was awarded the 2014 Idaho APA Outstanding Plan Award and the 2014 Idaho Smart Growth Award.

McCall Area Pathways Master Plan – McCall, Idaho | 2012
Project planner for this Master Plan for pathways in and around McCall. The plan includes recommended improvements and implementation strategies to create a safe, efficient, and interconnected pathway system. Provided detailed design standards and guidelines for trail and pathway development.

Teton County Idaho Comprehensive Plan Update | 2010
Project planner and facilitator for this multi-year project with a significant public outreach component that included six subcommittees that met 72 times, six public meetings, and four public hearings. This project was awarded the 2012 Public Outreach Award from the Idaho Chapter of the American Planning Association.

Lindsay Kissel, PLA

PROJECT LANDSCAPE ARCHITECT

REGISTRATION & CERTIFICATIONS

Professional Landscape Architect Wyoming (No. 108B)

EDUCATION

M.E.M.
Environmental Management – Resource Ecology
Duke University, Durham, North Carolina | 2005

B.L.A. Landscape Architecture
University of Georgia, Athens, Georgia, Cum Laude | 2000

Civic Involvement

Tribal Trail Connector Project -Stakeholder Advisory Committee Member

Teton County Integrated Solid Waste and Recycling - Past Board Member

Overview

Lindsay will provide support with plan production and public outreach, lending her experience with municipal planning in Wyoming to success of the project. With over 17 years of professional experience in the landscape architecture and planning field and 5 years of planning and grant writing experience in the non-profit realm, Lindsay has spent most of her career working in Teton County, WY. She has practiced landscape architecture as a private consultant in residential and commercial settings and as a public servant working at the Town of Jackson and Grand Teton National Park. Lindsay has extensive experience with resort and community master plans, park and pathways master plans, landscape design, and site design in sensitive settings such as National Recreation Areas and National Preserves.

During her time as a planner for the Town of Jackson, Lindsay was involved in public outreach and engagement related to the 2012 update to the Town of Jackson Comprehensive Plan and the Town of Jackson Land Development Regulations, assisting with open houses and leading small breakout groups to elicit public input. She led the adoption of the 2015 Community Streets Plan by the Town of Jackson, organizing public workshops, gathering feedback from stakeholder groups, and guiding the plan through the public approval process. Lindsay was appointed to the Teton County Tribal Trails Connector Project Stakeholder Committee between 2021 and 2023. She advised Teton County staff and elected officials on transportation options to connect South Park Loop Road to Wyoming Highway 22 with consideration to multimodal goals. In Lindsay's current position with Harmony, she is involved with outreach and engagement projects such as the City of Rexburg Comprehensive Plan update.

Representative Projects

City of Rexburg Comprehensive Plan update | 2022-2023

The City of Rexburg is currently updating their Comprehensive Plan with opportunities for public outreach and engagement throughout the process.
Responsibilities include attending public engagement events to elicit public comment on the draft Comprehensive Plan, discussing plan highlights with citizens, and attending steering committee meetings to report on public feedback findings.

Town of Jackson Land Development Regulations update – Jackson, Wyoming | 2013-2016

The Town of Jackson began the Land Development Regulations update after approval of the Teton County/Town of Jackson Comprehensive Plan update in 2012. Responsibilities included assisting with public outreach workshops, gathering citizen input, explaining proposed regulation updates to the public at open house meetings, writing and editing proposed revisions for public meeting presentations.

Town of Jackson/Teton County Comprehensive Plan update, 2011-2012

The Town of Jackson/ Teton County began their Comprehensive Plan update in 2007 and began the final phases of Plan approval during the "Illustrating Our Vision: Character Districts" Plan development process in 2011. Responsibilities included facilitating attendee workshop participation and summarizing community feedback recorded during the workshops, preparing graphics and illustrations that incorporated community feedback.

Sarah Foster, PE

PROJECT ENGINEER

Overview

Sarah is a licensed Professional Engineer and Certified Floodplain Manager. She has a well-rounded and diverse civil engineering background developed during her 8 years within the field. Originally from Idaho, she attended school in Montana. After gaining experience as an engineer in Montana, Washington, Colorado, and New Mexico, she returned to Idaho and the Northern Rockies where she currently resides. Sarah is detail oriented and always produces high quality work.

Representative Projects

Hydrologic and Hydraulic Analysis and Floodplain Mapping for FEMA RiskMAP updates - Chippewa County, Wisconsin | Ongoing

Project engineer responsible for hydrologic analysis to determine peak flood discharges utilizing HEC-HMS and hydraulic analysis utilizing HEC-RAS 1D and 2D modeling for all mapped stream in Chippewa County, which includes approximately 217.2 stream miles.

The Preserve Subdivision Improvement Plans – Twin Falls, Idaho | Ongoing

Project engineer responsible for design of roads, water distribution, sewer collection, and stormwater system designs for this 250-acre subdivision which is being developed in multiple phases. The first phase is under construction and includes 65 lots on approximately 35 acres.

Teton Creek Pedestrian Bridge – Driggs, Idaho | 2021

Design engineer for this multipurpose pathway extension in Driggs, Idaho. The pathway was designed to link up the existing path through town with the pathway along Teton Creek. The pathway design included a pedestrian bridge design to cross over Teton Creek, separately from the existing vehicular bridge.

Indigo at Red Rocks – Lakewood, Colorado | 2020

Project Engineer responsible for the drainage analysis and stormwater design of a 98-acre subdivision site, that was developed over the course 5 phases, resulting in over 200 housing units, including single family homes, multifamily homes, and apartments. Provided an overall drainage analysis for the entire site, followed by detailed drainage reports and stormwater designs for each phase. Designed a storm sewer system to adequately collect and convey stormwater runoff from the housing development site, from both minor and major storms, towards a series of three regional detention ponds. Detention ponds were sized and designed to meet all local standards and regulations. Coordinated closely with site development engineers. Also worked closely with upstream and downstream properties, in the larger drainage system, to address offsite run on and to avoid any adverse impacts for the downstream development. Additionally, worked closely with local jurisdictions to provide improvements to the floodplain throughout the site, and designed the site in a way to improve the health and vitality of the floodplain system.

REGISTRATION & CERTIFICATIONS

Professional Engineer
Colorado (No. 56970)
Idaho (No. 20203) and Wyoming (No. 18704)

Certified Floodplain Manager (CFM)

EDUCATION

B.S. Civil Engineering
B.S. Earth Sciences
Montana State University | 2014

Stream Management Academy
Mile High Flood District | 2020

Civic Involvement

Wyoming Coordinator
SheJumps Outdoor Experiences for Women and Girls that Nurture Growth and Transformation

Outreach Committee Member
Friends of Berthoud Pass

REGISTRATION & CERTIFICATIONS

Engineer in Training
Texas (No.60624)

Fitwel Ambassador (ID#3144)

OSHA 10 Certification

EDUCATION

B.S. Civil Engineering
Texas Tech University
Lubbock, Texas | 2017

Civic Involvement

Coombs Outdoors
Volunteer

Tyler Bushong, EIT

CIVIL PROJECT ENGINEER

Overview

Tyler has 7 years of site civil engineering design experience including utility and infrastructure design, evaluation and management of drainage and grading, and design of accessible routes and pathways. He has led design teams through design and production of plans for public infrastructure, multi-family and single family residential, and commercial and industrial projects while ensuring that project timelines and goals were met. He has experience with preparing technical specifications and drawings, as well as construction phase services including responding to requests for information, reviewing submittals, and construction site visits. Tyler also recently passed the PE exam and is looking forward to becoming a licensed professional engineer!

Representative Projects

Sherman Park Apartments – Victor, Idaho | 2024
Project engineer for this HUD sponsored affordable housing project that includes 90 units within 4 apartment buildings located on 2.98 acres. Duties include preparing the schematic, preliminary, and final grading plan, stormwater management plan, horizontal control plan, water distribution, wastewater collection, and dry utility design, as well as project specifications. Construction is expected in 2025-2026.

Aspen Point Townhomes – Driggs, Idaho | 2024
Project engineer for this housing project that includes 22 units located within six-plex and four-plex townhome buildings on 2.39 acres. Duties include preparing the schematic, preliminary, and final grading plan, stormwater management plan, horizontal control plan, water distribution, wastewater collection, and dry utility design.

Center Street Apartments – Victor, Idaho | 2023
Project engineer for this housing project that includes a three story 43,767 SF building located on 1.25 acres. The plans accommodated protection of an irrigation canal and its associated riparian vegetation and floodplain. Duties include preparing the schematic, preliminary, and final grading plan, stormwater management plan, horizontal control plan, water distribution, wastewater collection, and dry utility design, as well as project specifications.

The Preserve PUD – Twin Falls, Idaho | ongoing
Project engineer for two phases of this 347-acre planned unit development subdivision. The first phase was 17.4 acres with 12 residential lots and the second phase was 48.9 acres with 77 residential lots. Infrastructure included approximately 9,000 LF of roadways and utilities. Duties include preparing the schematic, preliminary, and final roadway plans, grading plans, stormwater management plans, horizontal control plans, water distribution, wastewater collection, and dry utility design, as well as project specifications.

Windmill Ranch – Odessa, Texas
Tyler designed approximately 3,000 linear feet of sanitary sewer and 3,250 Linear feet of domestic water for an +/-18-acre garden style multi-family complex consisting of 326 units across 14 buildings. Tyler also designed the grading of accessible routes, and community amenity spaces on site.

Daniel Johnson-Schunk

GIS Specialist/ Land Survey Technician

Overview

Daniel will be responsible for map production using ArcGIS products including ArcPro and ArcGIS Online. Daniel is a GIS Specialist and Land Survey Technician. He has experience as a survey technician for a land and water conservation group in Wisconsin prior to joining Harmony in 2022. He has completed various topographic survey field work and processes information using Trimble Business Center and ESRI ArcGIS software.

Areas of Expertise

ArcGIS Desktop and Online Mapping
Cartography
Data Collection for Survey
Carlson Survey Software
Trimble Business Center

Representative Projects

Bathymetric Survey – Boise County, Idaho | ongoing

Performed field survey of channel bottoms for streams in Boise County, Idaho to be used in hydraulic modeling for FEMA RiskMAP update project. Will process the data to meet FEMA DCS requirements and produce the DFIRM Database and metadata.

Stormwater Management Master Plan – Town of Jackson, Wyoming | ongoing

Processed existing GIS data from the Town of Jackson and organized survey files. Performed field survey of stormwater system including manhole rims and inverts to be used in a full hydraulic model of the town stormwater infrastructure. Responsible for attributing the existing GIS data with updated data collected during the survey.

EDUCATION

B.S. Geographic Information Systems & Earth Science
University of Wisconsin – La Crosse, WI | 2020

UNDERGRADUATE RESEARCH GRANT

Mapping Biodiversity in North America Prairie in Wisconsin using UAS imagery

HARMONY
DESIGN & ENGINEERING

Thanks

www.harmonydesigninc.com

A Proposal for the:

ALPINE TOWN MASTER PLAN

Prepared by:

avenue CONSULTANTS

ALPINE
WYOMING

COVER LETTER

Dear Alpine Mayor & Town Council,

Avenue Consultants has assembled an experienced team of certified planners and licensed engineers to deliver Alpine a Town Master Plan that follows a transparent process, meets Wyoming State statute requirements, provides an orderly plan for growth, and focuses on special issues relevant to Alpine residents and businesses. Our team has the following strengths:

- **The Right Experience:** Kirby, our project manager, has been through the Master Planning process several times as a City Planner, Planning Director, and private consultant.
- **A Skilled Team:** Avenue has a current staff of nearly 200 employees, including certified planners and civil engineers who specialize in planning for and helping develop municipal infrastructure.
- **Local Knowledge:** Our team has worked on multiple projects in the area, and is currently working for Lincoln County to complete a master plan.

Thank you for the opportunity to submit this proposal for the Alpine Town Master Plan. Our team is genuinely excited to help Alpine produce a once in a generation plan that brings the community together. Please contact me with any questions.

J. Kirby Snideman

J. Kirby Snideman, AICP
ksnideman@avenueconsultants.com
(801) 745-7476

PROPOSAL OUTLINE

Avenue is currently leading the Transportation Master Plan for Lincoln County. This effort involves a comprehensive analysis of transportation and land use throughout the County. The team has been working with representatives from the incorporated areas such as Alpine to ensure their input is included in the process.

METHODOLOGY & RESOURCES

PROJECT UNDERSTANDING:

Alpine is growing! While this represents an opportunity for the Town's economic development, it also comes with challenges. The 2006 Master Plan needs to be updated to reflect the current residents' vision for how this new growth should unfold.

To determine our ability to deliver a successful plan, we carefully reviewed current conditions in Alpine. We have read through the currently adopted Master Plan. We reviewed Planning & Zoning Commission meetings to understand the scale and timing of new development. We surveyed the 2023 update effort, as well as the 2024 recommendations to improve the Land Use and Development Code. Based on our understanding, we have identified the following priorities:

MASTER PLAN PRIORITIES:

- **TRANSPARENT PROCESS:** For the planning process to be successful, it requires engaging local residents and stakeholders to ensure the plan reflects community values and has popular support. One key component of engagement is transparency. As our project approach demonstrates, we will spend considerable effort listening to and informing the community. We are proposing multiple public meetings, six stakeholder meetings, four online surveys, and an interactive website that will be continually updated —all to ensure residents and stakeholders have every opportunity to participate.
- **MEET STATE STATUTE REQUIREMENTS:** Our team has the experience and skill necessary to ensure the updated Master Plan meets the requirements outlined in the *Wyoming Statutes, Title 15 - Cities and Towns Chapter 1 General Provisions, Article 5 - Planning, Section 15-1-503 - Master Plan.*
- **PROVIDE AN ORDERLY PLAN FOR GROWTH:** Our team will deliver a Master Plan that serves as a comprehensive guide for new growth, ensuring that future development aligns with the town's long-term vision. Our team will identify gaps in public services and infrastructure, creating a list of future projects that are prioritized and phased with accurate cost estimates. This will allow the Planning & Zoning Commission and the Town Council to make better decisions when considering zone changes, annexations, and public investments.
- **FOCUS IN ON ISSUES RELEVANT TO ALPINE:** Throughout the planning process, our team will regularly incorporate the feedback of Town officials, residents, businesses, and other stakeholders. While our main objective will be to update the essential elements of the Master Plan (and follow Wyoming State Statute) we will also focus in on special issues that are of interest to the community at large. We will accommodate these emerging issues by being flexible and allowing for reasonable adjustments to our scope of work in order to meet the community's needs.

METHODOLOGY & RESOURCES

PROJECT APPROACH: TASKS & DELIVERABLES

Our Team will deliver the Town Master Plan in a **twelve-month timeline**, completing five tasks in three main areas. For a more detailed breakdown of tasks, meetings, and deliverables, refer to the proposed schedule on page 7.

Public Involvement Throughout the Planning Process

Project Mgmt. & Engagement

Stakeholder Involvement

Public Surveys and Meetings

Existing Conditions Analysis

Current and Future Conditions

Incorporate Feedback

Plan Creation and Finalization

Task 1: Project Management

- Our project manager will provide regular and continual communication throughout the project. This will start with a kickoff meeting, which can either be for Town officials / staff or include the public. The kickoff meeting will be used to explain the plan process in detail and also refine the goals, tasks, and deliverables. Following the kickoff meeting, we will have monthly virtual project team meetings to report progress. Additionally, our project manager will coordinate weekly through calls and emails to designated Town staff to ensure Town officials stay updated and can provide input.
- Deliverables:
  - In-Person Kickoff Meeting; Monthly Virtual Project Team Meetings

Task 2: Public & Stakeholder Engagement

- Our team understands that transparency and public involvement are key to the success of this plan. To that end, we will present our plan for engagement at the kickoff meeting and adjust it based on Town input. Our strategy will ensure all Town residents and business owners stay informed and are able to provide feedback by maintaining a project website, creating four online surveys, and facilitating two in-person public meetings. In addition, we will host four virtual stakeholder meetings. These stakeholder meetings will serve as focus groups meetings for special groups that have unique interests such as business owners, developers, Town partners such as WYDOT, utility companies, and other groups.
- Deliverables:
  - Project Website & Updates; Up to Four Public Surveys; Up to Four Virtual Stakeholder Meetings; Two In-Person Public Meetings

Task 3: Existing Conditions Analysis

- Our team will provide a comprehensive inventory and analysis of the Town's existing conditions (and projected conditions). This will include economic data, population and demographic data, a public infrastructure inventory, and a land use and zoning analysis. This work will be completed utilizing ArcGIS and the maps and data generated will be published on the project website for public review.
- Deliverables:
  - GIS / Data Collection & Management; Demographic Analysis; Infrastructure Inventory; Land Use & Zoning Analysis

Task 4: Draft Plan Creation

- Our team will create a ten chapter Master Plan, starting with an executive summary in chapter 1 and nine chapters that follow the outline of the currently adopted master plan (2. Natural resources and environmental setting; 3. Community demographic and economic trends; 4. Community land uses; 5. Prospects for future economic development; 6. Community infrastructure; 7. Land use management; 8. Conclusions and recommendations; 9. Community development objectives and strategies; 10. Implementation plan). Key deliverables of the draft plan will be a vision goals statement and a list of projects that are prioritized, phased, and have cost estimates. We will provide the draft plan in text form to City officials and will facilitate two rounds of edits.
- Deliverables:
  - Vision and Goals; Project List & Recommendations; Implementation Strategies; Draft Plan Text with Two Rounds of Edits

Task 5: Plan Finalization

- Our team will finalize the draft plan and format it to include maps, graphics, and be visually impressive. Our team will virtually attend and present the plan at the adoption meetings for the Planning and Zoning Commission and Town Council. The final adopted plan will be hosted online and in a PDF format to maximize its accessibility.
- Deliverables:
  - Final Plan (PDF & Website Versions); Commission & Council Adoption Meetings (Virtual)

CAPABILITY & EXPERIENCE

KIRBY SNIDEMAN, AICP

Project Manager

Kirby has seventeen years of project management experience and an extensive background working with local governments in both public and private positions. As a public servant Kirby has worked as a City Planner and Planning Director. His experience includes several aspects of master planning, including the implementation of adopted plans. His planning work includes the following:

- Comprehensive, General, and Master Plans
- Transportation Network & Corridor Plans
- Parks and Open Space Master Plans
- Affordable Housing Studies and Plans
- Blight Studies and Redevelopment Plans
- Land Development Code Updates
- Tax Increment Reinvestment Studies and Plans
- Impact Fee Facility Plans and Impact Fee Assessments for Parks, Fire, Police, Water, Sewer, Storm Water, Roads, and other Utilities
- Municipal Utility District Feasibility Studies
- Office, Retail, and Residential Feasibility Studies
- Local & Regional Population Growth Studies

ROB ELDREDGE, AICP

Data & Analysis Lead

Rob is a certified planner with sixteen years of experience collecting and analyzing socio-economic and land use data. He has overseen the analysis on dozens of municipal plans and will lead the existing conditions analysis for this plan. His work will provide a window into current and future conditions to help identify needs for public services and infrastructure.

THOMAS MCMURTRY, AICP

Documentation Lead

Thomas is a certified planner with twenty years of experience, and is currently leading the Transportation Master Plan for Lincoln County. He will provide support throughout the planning process and will take the lead role in developing a draft and final Master Plan that meets the requirements and reflects the vision of residents.

JESSICA TRACY

Public Engagement Lead

Jessica is a planner with seven years of experience. She will lead our public engagement effort by crafting presentations, launching and updating the website, publishing surveys, and reaching out to Stakeholders. She will be our point person in communicating to the Alpine community and gathering their feedback.

GREG SANCHEZ, PE

Implementation Lead

Greg is a planner and engineer with eight years of experience and a proficiency in the technical tools and methodologies required for complex planning projects. He will lead our implementation effort, ensuring that the Town has an implementation plan that is detailed and scaled to the capabilities of local staff and the Town's contracted engineering firm.

KEVIN CROSHAW, PE

Infrastructure Lead

Kevin is a municipal engineer with ten years of experience developing plans and studies for communities large and small. He will lead the effort to create a list of capital projects needed based on the gaps identified in the existing conditions analysis. He will work closely with the Town's contracted engineering firm to ensure that projects are prioritized and phased correctly.

ADDITIONAL SUPPORT STAFF

Providing support to our team will be **Adrian Welsh**, a GIS expert, **Matt Montgomery**, a environmental planner, and **Toby Lowry**, a planner and data analyst. Should we need it, we have additional planners and civil engineers ready assist the team and ensure that the project is completed within the twelve month timeline.

CAPABILITY & EXPERIENCE

COMPANY EXPERIENCE & REFERENCES

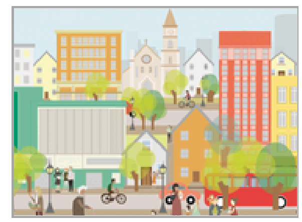
Avenue has been serving the Intermountain West communities for the past 18 years and is known for providing innovative planning and engineering services. With a current staff of nearly 200 employees, we have a deep bench of experts to pull including certified planners and civil engineers who specialize in planning for and developing municipal infrastructure.

OREM GENERAL PLAN UPDATE

Reference: Ryan Clark, Development Services Director, rclark@orem.org, 801-229-7058

Kirby led a team of City staff to update the Orem General Plan. All elements of the plan were updated including land use, economics, transportation, parks and recreations, and public services. A large part of process was a significant update to the City's affordable housing plan. This plan remains the currently adopted general plan of the City.

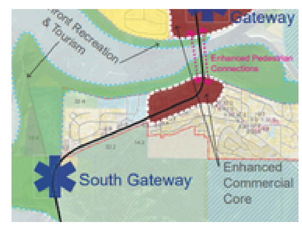
LAREDO COMPREHENSIVE PLAN CITY CODE UPDATE



Reference: Juan Mendive, LWCAMPO Director, jmendive@ci.laredo.tx.us, 956-794-1613

Kirby led a team of City staff and consultants to update 400 pages of the City's code after adopting a new Comprehensive Plan. This involved dozens of internal and public meetings bringing multiple City departments together along with private developers to find feasible solutions and supportable compromises where necessary.

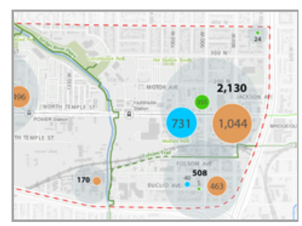
LINCOLN COUNTY ECONOMIC DEVELOPMENT PLAN



Reference: Robert King, ED Director, robert.king@lincolncountywy.gov 307-885-4700

Kirby was part of a team of consultants who developed Lincoln County's currently adopted Economic Development Plan. This plan provided an extensive analysis of the County's economic related data as well as "Community-Based Enhancements" (local strategies) that can be implemented by Alpine and other towns to increase economic opportunities.

SLC NORTH TEMPLE ECONOMIC ACTION PLAN



Reference: Jake Maxwell, Deputy Director, jacob.maxwell@slcgov.com 801-535-7208

Kirby, Greg, Toby and the team are completing an economic focused plan for North Temple in SLC. This process involved a large group of stakeholders including City staff and local businesses. A key recommendation of the plan has been developing strategies to support new local businesses, including a sub-leasing program to create new retail spaces.

GARFIELD COUNTY TRANSPORTATION MASTER PLAN

Reference: David Dodds, Public Works Director, dave.dodds@garfield.utah.gov 435-238-0935

Kirby, Rob, Toby and the team have recently completed a transportation master plan for a rural county in Utah with increasing tourism. Due to limited funds, a key to the plan's success has been a small and efficient consultant team focused on results. The team developed an infrastructure inventory for the County to prioritize future funding for key projects.

LINCOLN COUNTY TRANSPORTATION MASTER PLAN

Reference: Amy Butler, County Engineer, amy.butler@lincolncountywy.gov, 307-877-2104

Thomas, Kirby, Rob, and the team are currently working on a transportation master plan for Lincoln County. This effort involves a comprehensive analysis of transportation and land use throughout the County, including the incorporated areas like Alpine. The team has been working with representatives from Alpine to ensure their input is included in the process.

CAPABILITY & EXPERIENCE

CREATIVE ENGAGEMENT:

Public engagement is not only a part of what we do, its our favorite part. We make an effort to have meaningful interactions with stakeholders and community members that actually inform and shape the planning process. We do so by hosting events and meetings that we ourselves enjoy. If we have fun and learn something new, then so too will the stakeholders and public who attend. For the two Alpine public meetings, we will bring this same approach.


Stakeholder BBQs

LEGO® Brainstorm for In-Meeting Concepting


Survey Work on Location


Project Booths at Local Events

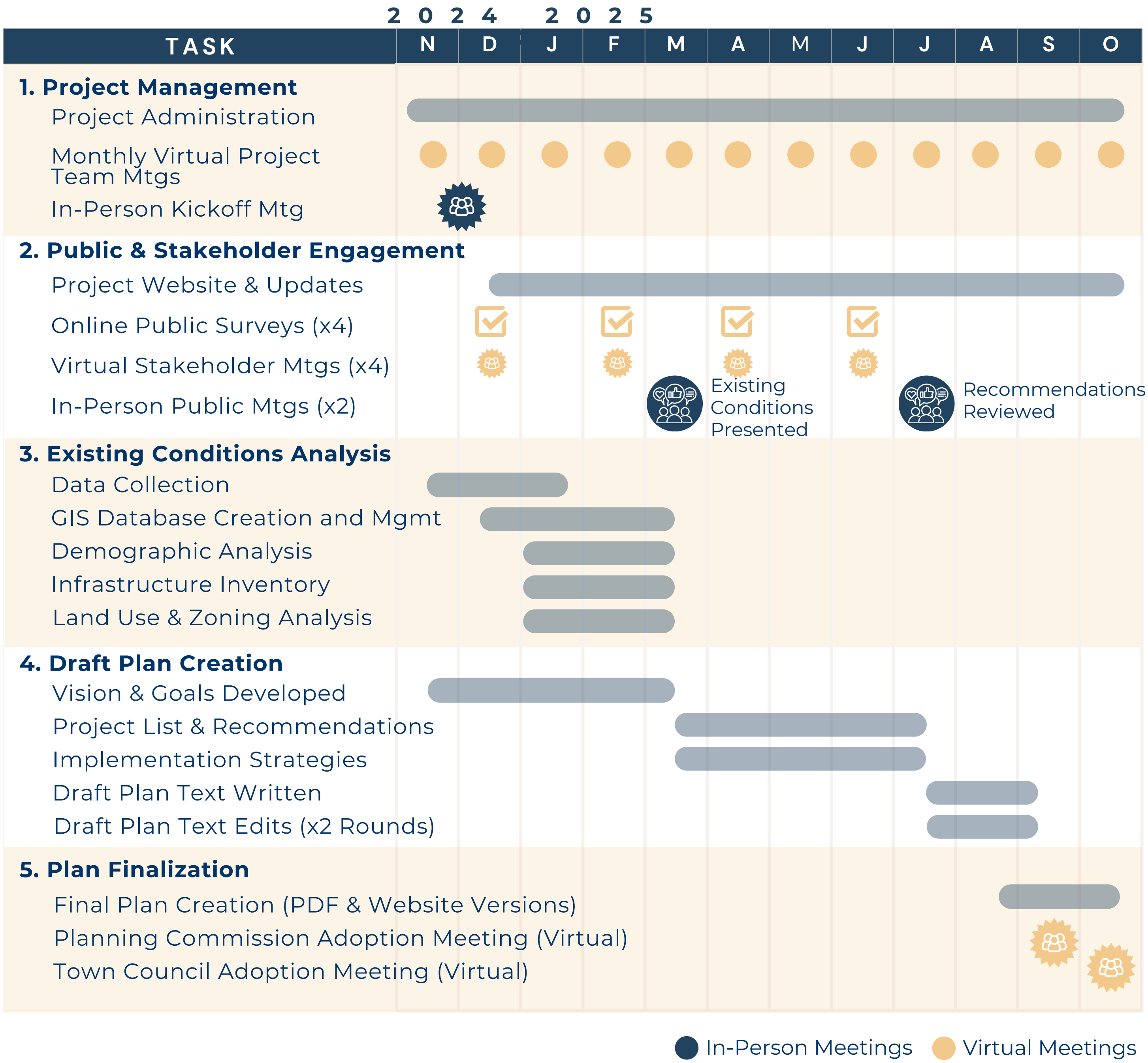

Utilizing VR to Envision Plans


Accessibility Tours


Bike Tours

PROPOSED SCHEDULE

The schedule below reflects a **twelve-month timeline**. Existing conditions analysis and vision and goals development will occur in the first five months. Plan recommendations, the project list, and implementation strategies will be produced in the following four months. In the final three months a master plan document will be drafted, reviewed, and finalized. We are proposing six virtual meetings and **three in-person meetings**. The virtual meetings will include up to four stakeholder meetings and the final adoption meetings (our team will attend virtually). The in-person meetings will include a kickoff meeting and two public meetings. As part of the public engagement effort we will organize up to four online public surveys to ensure we have adequate public input. Our team will also facilitate regular monthly virtual project team meetings to keep Town staff and officials updated.



PROPOSED BUDGET

The proposed budget below includes all hours and expenses for Avenue to complete the plan within the proposed schedule. The hours displayed below include a mix of hours and hourly rates from the team members listed on the team information page. Our budget for expenses include the cost associated with travel to Alpine and meeting supplies.

	Hours	Cost
1. Project Management & Project Team Coordination	94	$16.460
2. Public and Stakeholder Engagement	146	$21.080
3. Existing Conditions Analysis	195	$29.475
4. Draft Plan Creation	140	$21.200
5. Plan Finalization	66	$8.640
Sub-total	641	$96.855
*Expenses		$2,950
Total		**$99,805**

** The amount allocated for expenses which is not utilized may be billed as additional hours to the project.*

Town of Alpine
Planning & Zoning

ALPINE
WYOMING

Chairman:
Melisa Wilson

Commission Members:
Sue Kolbas
Dan Schou

December 10th, 2024

Mayor Eric Green and Council Members;

Recommendation from the Planning & Zoning Commission

On Tuesday December 10th, 2024, the Planning & Zoning Commission reviewed and discussed the request for proposals for the implementation of the Town of Alpine Impact Fees for the Town of Alpine. The Commission feels that the company of Raftelis would be the fit for the Town with their knowledge and understanding of what would benefit the Town of Alpine for the preparation and research that is needed for the implementation of impact fees for the Town of Alpine.

Mr. Dan Schou moved to send a recommendation to the Town Council for the selection of Raftelis to prepare the impact fee study for the Town of Alpine. Ms. Sue Kolbas seconded the motion. Vote: 2 yes, 0 no, 1 abstain (Wilson), 0 absent. Motion carried.

250 River Circle * P.O. Box 3070 * Alpine, Wyoming 83128 * (307) 654-7757 * FAX (307) 654-7454
E-Mail: planning@alpinewy.gov * www.alpinewy.gov

RAFTELIS

December 5, 2024

Ms. Monica Chenault
Clerk and Treasurer
Town of Alpine, WY
Alpine, WY 83128

Subject: Impact Fee Proposal Information Request

Dear Ms. Chenault-

I would like to thank you, the Town Council, and staff for the opportunity to present our qualifications for this important project. This letter responds to the items outlined in your email from November 22, 2024. Additionally, I have provided further context for a few of the questions raised during the regular Council meeting on November 19.

1. *Example reports*. Included at the end of this letter are three reports from studies we conducted for the City of Sheridan[1], Town of Jackson[2], and the City of Casper. Additionally, I have attached a recent financial plan report from a study completed for the Town of Pinedale. I anticipate the financial plan task outlined in this impact fee proposal will require a similar level of effort as the Pinedale report. The impact fee analyses for the Town of Jackson and the City of Casper were components of broader water and wastewater financial plan and rate studies.
2. *Data Management*.
    a. *Unavailable information*. This is a common challenge we encounter with most studies and is often resolved by relying on other data sources or the expert knowledge of staff to 'fill in the blanks'.
    b. *Town engineer involvement*. Our studies are built on collaboration, but we understand that Town staff have limited time. Having served as the Rates Manager at Denver Water, I am familiar with the time pressures your team faces. To address this, we implement regular project check-in meetings—typically 30 minutes or less—on most projects. These meetings, held weekly, biweekly, or as needed, help keep the project on track while providing an ongoing review of deliverables and milestones.
    c. *Typical data collection issues*. We don't anticipate many data collection issues. Our data requests are for readily available information. A list of typical data items is at the end of this letter along with a response to a question raised at the Town Council meeting regarding the need for water and wastewater system asset data.
3. *Communications/meetings*. Effective communication is critical to the success of any study. Our scope includes virtual meetings at key milestones, beginning with a kick-off meeting, as well as one on-site Board meeting to present findings. Additional in-person meetings can also be arranged if needed. Over the past four years, the shift to virtual meetings, accelerated by the Covid-19 pandemic, has proven to be highly beneficial for both us and our clients. While in-person meetings have their merits, virtual meetings provide greater flexibility and accessibility, are more cost-effective, and help maximize efficiency. By focusing on clear agendas and concise discussions, we can make the most of staffs' valuable time.

[1] Plant investment fee (impact fee) chapter begins on page 17 of the pdf document.
[2] The capacity fee (impact fee) chapter begins on page 59 of the pdf file. The appendices have been excluded to reduce file size.

4. *Final report.* As demonstrated in the examples provided, we create tailored, comprehensive reports for our studies. Each report includes detailed assumptions, calculations, findings, and recommendations. Serving as our final touchpoint with the client, these reports act as reference documents, outlining the basis for the fees and offering analytical support in case of challenges or inquiries from community members seeking further understanding of the fees.

5. *Financial plan.* The financial plan task in our scope of work is listed as optional, as it was not specifically required in the RFP. However, we believe a cash flow analysis is essential for two key reasons: it demonstrates the fees' ability to fund future capital projects and highlights how fee increases may help mitigate the need for future rate increases. Our financial plan analysis, as outlined in the scope of work, will cover both the water and wastewater utilities. Since the fees will partially rely on projects identified in the master plan, we will incorporate that information into the cash flow development.

   We frequently collaborate with engineering firms during the master planning process to create financial plans that illustrate how rates, fees, and other funding sources can support the projects outlined in the plan. The final deliverables will include a multi-year financial plan for the water and wastewater utilities, featuring a capital program with project costs and timelines for design and construction, proposed loans and grants, and projected user rate revenue increases to meet annual revenue requirements.

Once again, thank you for the opportunity to submit on this project. As you conclude your deliberations, I want to emphasize our deep commitment to supporting communities like the Town in achieving their financial and community goals. With our vast experience from thousands of studies, we bring valuable expertise to this engagement and are confident that the outcomes of this study will provide long-lasting benefits. We take great pride in building trust with our clients and fostering long-term relationships with our clients.

Sincerely,

Todd Cristiano
Vice President

ADDITIONAL INFORMATION

The list below is an example of the data needed for this study. Most of this information is contained in your budget and/or financial documents as well engineering data.

- Financial Data
  - Most recent budget detail and prior years actuals
  - Water and wastewater beginning fund balances for FY25
  - Copies of the most recent annual reports (FY24 and FY25)
  - Outstanding water and/or wastewater loans
  - Summary water and wastewater billing data
  - 10-year capital improvement program
    - Identify those projects that are growth-related vs repair and replacement or regulatory
  - Detailed asset listing*
- Engineering/operational data
  - Capacity of current system (i.e. capacity of WTP or wells, and WWTP)
  - Capacity added with expansion facilities projected over the study period
  - Demand requirement for a single family ¾” customer (this can also be determined from billing data)

*The are different methods to calculate impact fees. Fees can be based on the addition of future capacity or the fee can incorporate the value of existing facilities should there be available capacity to serve new development. We would examine this option during the kickoff meeting. Should there be capacity available in the existing system, we can use detailed asset data to determine a valuation of those assets to calculate a fee.

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CITY OF SHERIDAN, WY

Water and Sewer Rate and Fee Study

Final Report / July 2018

RAFTELIS

RAFTELIS

5619 DTC Parkway
Suite 850
Denver, CO 80111

Phone 303.305.1135
Fax 720.475.1103

www.raftelis.com

July 24, 2018

Mr. Dan Roberts
Utilities Director
City of Sheridan
55 Grinnell Plaza
P.O. Box 848
Sheridan, WY 82801

Subject: Water and Sewer Rate and Fee Study

Dear Mr. Roberts:

Raftelis is pleased to provide this Water and Sewer Rate and Fee Study Report (Report) for the City of Sheridan (City) to address current financial challenges the City is facing and to establish water and wastewater rates that are equitable and achieve the City's pricing objectives.

The major objectives of the study include the following:

» Develop financial plans for the water and wastewater enterprises to ensure financial sufficiency, meet operation and maintenance (O&M) costs, ensure sufficient funding for capital replacement and refurbishment (R&R) needs, and improve the financial health of the enterprises
» Develop sound and sufficient reserve fund targets
» Review and calculate Plant Investment Fees (PIFs)
» Review current rate structures for the water and wastewater enterprises

The Report summarizes the key findings and recommendations related to the development of the financial plans for Water and Wastewater utilities and the development of the updated water rates.

It has been a pleasure working with you, and we thank you and the City staff for the support provided during the course of this study.

Sincerely,
RAFTELIS FINANCIAL CONSULTANTS, INC.

Todd Cristiano
Manager

Brian Kirsch
Senior Consultant

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1. EXECUTIVE SUMMARY

1.1 Introduction

The City of Sheridan retained Raftelis to conduct a review and update of the City's water and sewer, financial plans, rates and plant investment fees (PIF). The study included development of the following:

- 10-year financial plans for the water and sewer utilities and the level of rate revenue required to meet annual revenue requirements
- Plant investment fees for the water and sewer utilities
- A review of the current water rate structure and recommendations for better alignment with the City's rate structure objectives
- A raw water rate

1.2 Findings and Recommendations

1.2.1 Plant Investment Fees

Plant investment fees (PIF) are one-time fees assessed to new development. This fee is designed to recover the cost of capacity required to serve the new connection. Raftelis reviewed the existing water and sewer PIFs and the previous consultant's calculations and methodology. Based on discussion with City staff, Raftelis calculated the recommended PIFs using the buy-in methodology. Tables 1-1 and 1-2 show the existing and recommended PIFs for water and sewer, respectively

Table 1.1 Water Utility - Existing and Recommended Maximum Supportable Plant Investment Fee Inside City

Meter Size (inch)	Meter Capacity Ratio	Existing*	Recommended*	Change - $
3/4 – Small Commercial	0.41	$1,230	$1,230	$0
3/4 – Small Multi-Family	0.66	1,980	1,980	0
3/4	1.00	3,000	3,000	0
1	1.67	5,010	5,010	0
1 1/2	3.33	9,990	9,990	0
2	5.33	15,990	15,990	0
3	11.67	35,010	35,010	0
4	21.00	63,000	63,000	0
6	43.33	129,990	129,990	0
8	80.00	240,000	240,000	0
Outside City fees are 1.25x Inside City.				

Table 1.2 Sewer Utility – Existing and Recommended Maximum Supportable Plant Investment Fee Inside City

Meter Size (inch)	Meter Ratio	Existing*	Recommended*	Change - $
3/4 – Small Commercial	0.41	$1,230	$1,020	($210)
3/4 – Small Multi-Family	0.66	1,980	1,650	(330)
3/4	1.00	3,000	2,500	(500)
1	1.67	5,010	4,180	(830)
1 1/2	3.33	9,990	8,320	1,670)
2	5.33	15,990	13,320	(2,670)
3	11.67	35,010	29,180	(5,830)
4	21.00	63,000	52,500	(10,500)
6	43.33	129,990	108,320	(21,670)
8	80.00	240,000	200,000	(40,000)
***Outside City fees are 2.0x Inside City.**				

1.2.2 Water and Sewer Financial Plans

Raftelis developed 10-year financial plans for the water and sewer utilities. This analysis included projecting rate revenue using detailed customer billing data, PIFs and other revenues, estimating annual operation and maintenance expenses, and anticipated capital projects. We identified the funding sources for each capital project – rate revenue, capital tax, and/or state loans. We also established target reserve levels and debt service coverage targets. Reserve targets included 90 days of operation and maintenance and a renewal and replacement reserve for both utilities. The target debt service coverage was set at 1.2x net income; 1.1x net income is required for state loans.

The 10-year water utility financial plan should be sufficient to meet annual operating expenses, debt service, capital expenditures, reserve requirements and debt service coverage. To meet these requirements annual increases of 2.5% are needed in FY20, FY22, FY24, and FY26. These annual revenue adjustments assumed PIF revenues remained at their current fees (which are the same as the recommended fees).

Table 1.3: Water Utility: 10-Year Financial Plan Summary

Description	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27
Rate Increase	0%	0%	2.5%	0%	2.5%	0%	2.5%	0%	2.5%	0.0%
Fund Balance - $ million	$2.46	$2.10	$2.47	$2.75	$3.06	$2.53	$2.39	$2.21	$2.24	$2.32
Target Reserve - $ million	2.02	2.04	2.04	2.09	2.07	2.07	2.11	2.10	2.12	2.14
Over/(Under) Target - $ million	0.44	0.05	0.43	0.66	0.99	0.46	0.28	0.10	0.11	0.18
Debt Service Coverage Ratio	3.93	1.56	2.18	1.89	1.89	1.81	1.76	1.97	1.93	2.06

The 10-year sewer utility financial plan should be sufficient to meet annual operating expenses, debt service, capital expenditures, reserve requirements and debt service coverage. To meet these requirements, equal annual increases of 3.25% are needed from FY19 through FY21 and 3.00% are needed from FY 22 through FY 26. These annual revenue adjustments assumed PIF revenues are set at recommended levels.

Table 1.4: Sewer Utility: 10-Year Financial Plan Summary

	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27
Rate Increase	0.00%	2.75%	2.75%	2.75%	3.00%	3.00%	3.00%	3.00%	3.00%	0.00%
Fund Balance - $ million	$1.65	$1.82	$1.52	$1.51	$1.80	$1.80	$1.85	$1.78	$1.84	$1.90
Target Reserve - $ million	1.26	1.25	1.26	1.27	1.27	1.28	1.29	1.29	1.30	1.31
Over/(Under) Target - $ million	0.39	0.57	0.26	0.25	0.52	0.52	0.56	0.49	0.54	0.59
Debt Service Coverage Ratio	3.76	1.93	1.74	1.62	1.72	1.59	1.70	1.38	1.61	3.57

The revenue adjustments are supported by the City's use of the state's low/no interest and loan forgiveness program. Without these funding sources, water and sewer rate increases would be greater than the ones proposed in these two scenarios.

1.2.3 Rate Structure Review

The City requested a review of their water rate structure. Across the utility industry, a variety of rate structures are used to recover the cost of providing service. Utilities select the rate structure that best meets its goals and objectives. Typical pricing objectives to support community goals include:

- Conservation/wise use of water
- Demand management
- Essential use affordability
- Equity between classes of customers
- Equity within a class of customers
- Revenue stability
- Equity between new and existing customers
- Implementation and administration compatibility

For the purposes of the analysis Raftelis and Staff identified conservation/wise use of water; essential use affordability; and revenue stability as priorities. Our review does not show the need for significant, immediate changes. However, should the City decide to embark on a full rate structure evaluation and possible update, we two options for consideration. A detailed discussion of proposed options for adjustments to the rate structure are contained in Section 4.

1.2.4 Raw Water Rates

The City requested Raftelis to review and update their raw water rate. The City currently charges raw water at 50% of the rate that SAWS pays, which in 2017 was $0.90 per kgal. To recover the costs of delivering raw water, the City should recover the O&M costs associated with the raw water system as well as a rate of return on the capital that has been invested in the raw water system. Raw water costs for customers who own their portion of the raw water system would only be responsible for O&M costs. This rate is $0.02 per 1,000 gallons ($20,985/928,165 = $0.02 per 1,000 gallons). Table 1.5 presents the calculated raw water rate produced by the analysis.

Table 1.5: Raw Water Rate

Description	Amount
Book Value of Raw Water Assets	$22,369,191
Rate of Return on Raw Water Capital	5.08%
Annual Capital Cost	$1,136,355
Annual Raw Water O&M	20,985
Total Annual Raw Water Costs	$1,157,340
2017 Billed Volume (kgal)	928,160
Raw Water Rate ($ / kgal)	$1.25

2. WATER AND SEWER FINANCIAL PLAN

2.1 Introduction

The City's water and sewer funds are self-sustaining enterprise funds with funding from rates and fees to meet annual operating expenses and capital expenditures.

2.2 Water Financial Plan

A defining feature of the City's water utility is its partnership with the Sheridan Area Water Supply (SAWS). The City and SAWS collectively own and operate two separate, yet interconnected water utilities. The primary, but not sole, financial tie between the two utilities is an agreement to share operating costs in which O&M costs are split according to the proportion of taps connected to each system. Thus, SAWS's operating expenses are contained within the City's operating expenses. The SAWS taps represent approximately 20% of the total taps on the combined system and SAWS reimburses the City proportionally. SAWS's expenses are included in this financial plan. These costs are offset by funds recovered from SAWS.

2.2.1 Sources of Funds

Revenues

Operating revenues consist of water sales, hydropower, reimbursement and grants, interest income, SAWS revenues, and other miscellaneous revenue. Projected water sales are based on a detailed analysis of the City's historical utility billing records for FY 2015 through FY 2017. This data is used to project revenue under existing rates by customer class, considering the projected number of accounts and projected water usage. Total water sales are projected to be 1.2 million ccf in FY 2018 and will increase approximately 1.0% annually based on the growth in the number of accounts. Revenue under existing rates will generate $3.55 million in FY 2018 and increase annually by approximately 1.0%. Note that these volume and revenue projections are exclusive of SAWS-related consumption and revenue.

Miscellaneous revenue

Miscellaneous revenue includes transfers from SAWS, water card / hydrant sales, hydropower revenues, transfers from the Solid Waste and Mosquito Control Funds, sale of fixed assets, and interest income. Miscellaneous revenues are projected to be $1.05 million in FY 2018, with $852,000 originating from SAWS. Miscellaneous revenues are projected to increase by 1.5% annually. Interest income is calculated using an interest rate of 0.5% applied to average fund balances.

Other sources

Other income sources include PIF revenue, loan proceeds from the state revolving loan fund (SRF), and grants. Sources of grants include the Wyoming Water Development Commission (WWDC), the State Lands and Investments Board (SLIB), and 1% monies. The SRF loans often include a component of principal forgiveness, which serves as an offset to capital projects. Principal forgiveness in the amount of almost $2.2 million is expected to be received as part of an SRF loan to pay for the City's meter project in 2018. PIF revenue is based on an annual growth rate of 64 new connections resulting in estimated annual PIF revenue of $202,000. PIF revenues are based in the current FY 2018 fee schedule.

2.2.2 Uses of Funds

Operation and maintenance expenditures

The water fund revenue requirements include operation and maintenance expense, payments on existing and proposed debt service, and capital expenditures associated with expansion, repair and replacement, and equipment. The O&M expenses consist of personnel, materials, and supplies to treat, distribute, and maintain the water system continuously. FY 2018 operation and maintenance expenses total $3.3 million and will increase by on average 2% per year.

Payments on existing and proposed debt service total $416,000 in FY 2018. The City has been taking and continues to take advantage of favorable SRF loan terms, including principal forgiveness and low interest rates. The annual debt service is projected to exceed $1.01 million in FY 2023 before declining to $0.96 million by the end of the Study Period in FY 2027.

Capital expenditures

Capital expenditures include expansion, repair and replacement projects, and other general equipment purchases. The Capital Improvement Plan (CIP) includes $5.05 million in spending in FY 2018. It should be noted that 85% of this spending is debt financed with a 0% interest loan, and half of that principal will be forgiven. Total capital spending for FY 2019 through FY 2027 is $11.6 million in 2018 dollars. Of that amount, $6.3 million is anticipated to be paid for through grants and SRF loans.

2.2.3 Target Reserves

The City maintains two separate reserves to ensure the water utility's financial health and is able to weather unexpected costs or interruptions to revenue streams. Maintaining adequate reserves also prevents the utility from reactively having to adjust rates in response to unexpected events. The City maintains an operating reserve equal to 25% of annual O&M expenses (sometimes expressed as 90 days of O&M expenses). The City also maintains a capital reserve of $1.2 million which is equal to two-years of repair and replacement projects.

2.2.4 Debt Service Coverage Requirements

Most lenders require that the borrower maintain a minimum debt service coverage (DSC) ratio, where the DSC is defined as net revenues divided by the annual debt service. Net revenues are defined as operating revenues including PIF revenues less O&M expenses. The City's SRF loans require the water utility to maintain a minimum DSC ratio of 1.10. The City has established a planning target for the minimum DSC ratio of 1.20.

2.2.5 Indicated Revenue Adjustments

Revenue should be sufficient to meet annual revenue requirements, loan covenants (including DSC ratios), and target reserves. To meet these requirements annual increases of 2.5% are needed in FY20, FY22, FY24, and FY26. These annual revenue adjustments assumed PIF revenues remained at their current fees (which are the same as the recommended fees). Table 2.1 presents projected financial metrics for the water utility.

Table 2.1: Water Utility: 10-Year Financial Plan Summary

Description	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27
Rate Increase	0%	0%	2.5%	0%	2.5%	0%	2.5%	0%	2.5%	0.0%
Fund Balance - $ million	$2.45	$2.08	$2.45	$2.72	$3.02	$2.49	$2.34	$2.15	$2.17	$2.25
Target Reserve - $ million	2.02	2.04	2.04	2.09	2.07	2.07	2.11	2.10	2.12	2.14
Over/(Under) Target - $ million	0.44	0.04	0.41	0.64	0.95	0.42	0.23	0.05	0.05	0.11
Debt Service Coverage Ratio	3.93	1.56	2.18	1.89	1.89	1.81	1.76	1.97	1.93	2.03

2.3 Sewer Financial Plan

The City’s sewer utility collects wastewater from throughout the City and certain areas outside the City and treats the wastewater at a single treatment plant.

2.3.1 Sources of Funds

Rate revenue

Operating revenues consist of wastewater sales, grease / septic fees, inspection fees, interest income and other miscellaneous revenue. Projected wastewater sales are based on a detailed analysis of the City’s historical utility billing records for FY 2016 through FY 2017. This data is used to project revenue under existing rates by customer class, considering the projected number of accounts and projected water usage. Total billed wastewater volume is projected to be 707,000 ccf in FY 2018 and is projected to increase less than 1.0% annually based on the growth in the number of accounts. Revenue under existing rates will generate $2.4 million annually increasing less than 1.0% per year.

Miscellaneous revenue

Miscellaneous revenue includes grease / septic fees, inspection fees, interest income, and miscellaneous fees. The total miscellaneous revenue projected to be $96,000 in FY 18. Interest income is calculated using a 0.5% interest rate applied to the average fund balance.

Other sources

Other income sources include PIF revenue, loan proceeds from the state revolving loan fund (SRF), and grants. Sources of grants include the State Lands and Investments Board (SLIB), and 1% monies. The SRF loans often include a component of principal forgiveness. PIF revenue is based on an annual growth rate of 64 taps per year, which totals $160,000 annually beginning in FY 2018.

2.3.2 Uses of Funds

Operation and maintenance expenditures

The sewer fund revenue requirements include operation and maintenance expense, payments on existing and proposed debt service, and capital expenditures associated with expansion, repair and replacement, and equipment. The O&M expenses consist of personnel, materials, and supplies to collect, treat, and dispose of effluent on a continuous basis while meeting state and federal statutes. FY 2018 are projected at $1.9 million and will escalate by 3% each year.

Payments on existing and proposed debt service total $168,000 in FY 2018. The City has been taking and continues to take advantage of favorable SRF loan terms, including principal forgiveness and low interest rates. The annual debt service is projected to peak at $462,000 in FY 2025 before declining to $408,000 by the end of the Study Period in FY 2027.

Capital expenditures

Capital expenditures include expansion, repair and replacement projects and other general equipment purchases. The Capital Improvement Plan (CIP) includes $435,000 in spending in FY 2018. The CIP also projects total annual capital spending in excess of $2 million in FY 2019 and FY 2024. There is a total of $8.7 million in planned capital spending in 2018 dollars between FY 2019 and FY 2027. Approximately $3.5 million in 2018 dollars is expected to be funded through SRF loans issued in FY 2022 and FY 2024.

2.3.3 Target Reserves

The City maintains two separate reserves to ensure the sewer utility's financial health and is able to weather unexpected costs or interruptions to revenue streams. Maintaining adequate reserves also prevents the utility from reactively having to adjust rates in response to unexpected events. The City maintains an operating reserve equal to 25% of annual O&M expenses or 90 days of O&M expense. The City also maintains a capital reserve equal $920,000.

2.3.4 Debt Service Coverage Requirements

Most lenders require that the borrower maintain a minimum debt service coverage (DSC) ratio, where the DSC is defined as net revenues divided by the annual debt service. Net revenues are defined as operating revenues including PIF revenues less O&M expenses. The City's SRF loans require the water utility to maintain a minimum DSC ratio of 1.10. The City has established a planning target for the minimum DSC ratio of 1.20. The DSC ratio remains above 1.20 for the entire Study Period.

2.3.5 Indicated Revenue Adjustments

The 10-year sewer utility financial plan should be sufficient to meet annual operating expenses, debt service, capital expenditures, reserve requirements and debt service coverage. To meet these requirements, equal annual increases of 2.75% are needed from FY19 through FY21 and 3.00% are needed from FY 22 through FY 26. These annual revenue adjustments assumed PIF revenues are set at recommended levels.

Table 2.2: Sewer Utility: 10-Year Financial Plan Summary

	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27
Rate Increase	0.00%	2.75%	2.75%	2.75%	3.00%	3.00%	3.00%	3.00%	3.00%	0.00%
Fund Balance - $ million	$1.65	$1.82	$1.52	$1.51	$1.80	$1.80	$1.85	$1.78	$1.84	$1.90
Target Reserve - $ million	1.26	1.25	1.26	1.27	1.27	1.28	1.29	1.29	1.30	1.31
Over/(Under) Target - $ million	0.39	0.57	0.26	0.25	0.52	0.52	0.56	0.49	0.54	0.59
Debt Service Coverage Ratio	3.76	1.93	1.74	1.62	1.72	1.59	1.70	1.38	1.61	3.57

3. PLANT INVESTMENT FEES

3.1 Introduction

A Plant Investment Fee (PIF) is a one-time charge assessed to new development to recover the cost for the capacity required to provide service. PIFs are also assessed to existing customers that require an increase in capacity. PIFs provide a source of funds that allow utilities to finance future projects to serve growth as well as a reimbursement mechanism for the up-front funds that have been contributed by existing rate-payers to fund expansion projects. PIFs serve to mitigate inequities between new and existing customers by requiring 'growth to pay its own way.' Stated differently, the costs of increased capacity are borne by those who require it.

The pricing objectives and policy goals of a governing body can greatly influence the development of PIFs. At a minimum, the development of PIFs should consider the following:[1]

- Local and state legal requirements
- Financial objectives of the utility
- Generally accepted water utility industry financing and pricing practices
- Generally accepted methodologies for determining PIFs

3.2 Methodology

The development of PIFs is typically based on three primary components:

1. The value of backbone system facilities;
2. The capacity associated with those facilities; and
3. The customer demand requirements.

Backbone facilities include major infrastructure such as conduits, transmission mains, raw and treated water storage, treatment plants, and pumping facilities. Several different methodologies exist to calculate PIFs, dependent upon whether the utility is attempting to recover costs related to existing capacity (Buy-In), future capacity expansion plans (Incremental), or a combination of existing and future capacity (Hybrid). We selected the buy-in method, which is typically reserved for utilities that have capacity available in the existing system to serve new customers in the near and long term.

3.2.1 Step 1: Estimate Value of Backbone System Assets

The City has ample capacity with no new expansion projects planned for both water and sewer. The buy-in method considers the valuation of existing assets in service and the design capacity of those assets to determine the PIF and recoups funds expended by existing rate payers to build the current system for which the new development is connecting. This equates to new development buying into the system. However, this methodology does not imply a transfer or impart ownership of the assets to the customer.

[1] Principles of Water Rates, Fees, and Charges: Manual of Water Supply Practices, 7th edition, M1. (2017). American Water Works Association: Denver, CO.

There are four approaches to determine the value of assets under the buy-in methodology.

- Original cost (OC)
- Original cost less accumulated depreciation (OCLD)
- Replacement cost new (RCN)
- Replacement cost new less accumulated depreciation (RCNLD)

The OC approach values existing facilities at the original cost in the year the facilities were completed. This allows new customers to buy into the system at the same cost level as existing customers. The OCLD approach also values existing facilities at the original cost in the year the facilities were completed but reduces the cost by accumulated depreciation. Accumulated depreciation accounts for the loss in value of an asset due to use, repair, and obsolescence. With the OCLD approach, new customers buy into the system at a lower cost than existing customers. The accumulated depreciation not recovered through the PIF using the OCLD approach is recovered through user rates. Because new development occurs over time, both the OC and OCLD approaches do not reflect the time value of money, and do not compensate the existing customers for carrying cost of the initial funds used to add capacity.

The RCN and RCNLD approaches both consider the current value of facilities as if they were added at the time of the new connection. However, RCNLD deducts accumulated depreciation from the current replacement value. The RCN and RCNLD approaches estimate the value of facilities using historical asset data and apply a cost index factor from publications such as *Engineering News Record*, or the *Handy Whitman Cost Index for Public Utilities*. These methods account for inflation of the market value of facilities over time and fairly compensate existing customers for the carrying cost of building facilities in advance of serving new development.

To determine net value in the system, the cost of existing facilities is reduced by outstanding principal on debt to avoid double recovery of costs. Once a new customer connects to the water system, that customer begins paying for service through user charges or rates like all existing customers and according to their financial policies. These charges typically recover annual principal and interest payments for retirement of outstanding debt. For this reason, it is necessary to deduct outstanding debt from system value in order to avoid double-charging a new customer.

This Study uses the RCNLD method to determine the value of the utilities' backbone assets as this valuation method best represents the investment that the City's existing customers have made in the systems.

3.2.2 Step 2: Estimate System Capacity

The second step in determining PIFs is estimating the capacity of existing facilities. The measure of capacity can be stated in million gallons per day or single-family equivalents. For the purposes of this calculation, Raftelis used the build-out capacity for both water and sewer in terms of EQRs to be consistent with the City's measure of capacity to be served by the system.

3.2.3 Step 3: Customer Demand Analysis

A customer demand analysis determines the demand requirements for an equivalent residential 3/4-inch meter and serves as the basis for the PIF. Customer demands must be analyzed using the same unit measurements as the unit cost of capacity calculation in order to maintain the rational nexus between the cost of facilities and the cost to serve a new customer. Dividing the system capacity from Step 2 by the demand from an equivalent residential 3/4-inch meter determines the number of customers that may be served by the system.

3.2.4 Step 4: Calculate PIF for an Equivalent Residential 3/4-inch Meter

PIFs for customers are determined by dividing the estimated value of existing assets by the number of customers that may be served by the facilities included in the valuation.

3.2.5 Step 5: Assessment Schedules

The unit cost of capacity can be applied to the customer class demand characteristics to determine the cost to serve a new customer. The final task is to develop an assessment schedule in order to apply the PIF in an equitable manner to various meter sizes.

3.3 Water Plant Investment Fee

3.3.1 Asset Valuation

The valuation of the water system's backbone assets is composed of three parts: water supply (e.g., water rights), raw water infrastructure (e.g., intake facilities, raw water transmission pipelines), and treated water infrastructure (e.g., water treatment plant, treated water storage, etc. The RCNLD of the raw water and treated water infrastructure is reduced by the outstanding principal. Outstanding principal is divided proportionally between the two classes of assets according to their proportional valuations.

3.3.2 System Capacity

The capacity of the system to serve customers is based on a water rights study which estimated that the water system has capacity to serve 16,079 equivalent residential 3/4-inch meters based on a 100-day irrigation season.

3.3.3 Customer Demand Analysis

For the water system, the customer demand analysis was built into the system capacity analysis. During non-irrigation season, 3/4-inch equivalents were assumed to use approximately 319 gpd, and assumed to use approximately 811 gpd during the irrigation season. Together, there is an annual peak summer usage of 455 gpd per 3/4-inch equivalent.

3.3.4 PIF Calculation

The calculation of the water PIF for a 3/4-inch equivalent meter for an Inside City customer is contained in Table 3.1.

Table 3.1: Calculated Water PIF

Description	Raw Water Infrastructure	Treated Infrastructure	Total
Asset Value – RCNLD	$29,739,817	$38,399,994	$68,139,811
Outstanding Principal	(6,875,297)	(5,003,775)	(11,879,072)
Water Supply Cost ($/ac-ft)			
Total Backbone Assets	$22,864,520	$33,396,219	$56,260,739
Water Supply Capacity (3/4-in Eq.)	16,079	16,079	
Water Usage Per ERU (gpd)			
Unit Cost	$1,422	$2,077	
Treated Water PIF Per 3/4-inch Eq.	1,422	2,077	**$3,499**
Raw Water PIF Per 3/4-inch Eq.	1,422		**1,422**

3.3.5 Water Assessment Schedule

Water PIFs are calculated according to the City's meter schedule. The City also charges PIFs to Outside City customers at 125% of the cost charged to Inside City customers. The recommended water PIF schedule was developed in discussion with City Staff who wished to balance economic development with equity for current customers while still maintaining the financial health of the utility.

Table 3.2: Water PIF Schedule

Meter Size (inch)	Meter Ratio	Existing Inside City	Recommended Inside City
3/4 – Small Commercial	0.41	$1,230	$1,230
3/4 – Small Multi-Family	0.66	1,980	1,980
3/4	1.00	3,000	3,000
1	1.67	5,010	5,010
1 1/2	3.33	9,990	9,990
2	5.33	15,990	15,990
3	11.67	35,010	35,010
4	21.00	63,000	63,000
6	43.33	129,990	129,990
8	80.00	240,000	240,000

3.4 Sewer Plant Investment Fee

3.4.1 Asset Valuation

The Replacement Cost New (RCN) for the sewer system is calculated to be $60,349,914 which includes a credit for outstanding principal. The RCN valuation method was selected because a significant part of sewer facilities has been depreciated based on accounting life. Although, these assets are depreciated and 'off the books', they are still in service. RCN is a more appropriate method because it best captures the value of in-service assets whereas RCNLD would recover only a portion of the facilities required to serve new growth.

3.4.2 System Capacity

The treatment capacity of the WWTP is 4.5 MGD. Average daily indoor use per equivalent 3/4-inch meter is 211.0 gallons per day based upon the number of equivalent 3/4-inch meters connected to the system and historic flows into the WWTP[2], which produces a capacity of 21,327 equivalent 3/4-inch meters.

3.4.3 Customer Demand Analysis

The usage of an ERU is calculated to be 211 gpd. This value is obtained from an analysis of flows to the WWTP and the number of equivalent 3/4-inch meters currently on the system.

3.4.4 PIF Calculation

The calculation of the sewer PIF for an equivalent residential 3/4-inch meter for an Inside City customer is contained in Table 3.3.

Table 3.3: Calculated Sewer PIF

Description	Amount
Asset Value - RCNLD	$64,713,994
Outstanding Principal	(4,364,080)
Total Backbone Assets	$60,349,914
WWTP Capacity (MGD)	4.5
Average Daily Indoor Use per Eq. 3/4-inch Meter	211.0
WWTP Eq. 3/4-inch Meter Capacity	21,327
Sewer PIF Per Eq. 3/4-inch Meter	$2,830

3.4.5 Sewer Assessment Schedule

Sewer PIFs are calculated according to the City's meter schedule. The City also charges PIFs to Outside City customers at 200% of the cost charged to Inside City customers. The recommended sewer PIF schedule shown in Table 3.4 was developed in discussion with City Staff who wished to balance economic development with equity for current customers while still maintaining the financial health of the utility.

Table 3.4: Sewer PIF Schedule

Meter Size (inch)	Meter Ratio	Existing Inside City	Recommended Inside City
3/4 – Small Commercial	0.41	$1,230	$341
3/4 – Small Multi-Family	0.66	1,980	548
3/4	1.00	3,000	831
1	1.67	5,010	1,388
1 1/2	3.33	9,990	2,769
2	5.33	15,990	4,431
3	11.67	35,010	9,702
4	21.00	63,000	17,460
6	43.33	129,990	36,025
8	80.00	240,000	66,512

[2] Flow data into the WWTP were provided in an Excel file titled "3 yr data flow_bod_tss.xlsx".

4. RATE STRUCTURE REVIEW

4.1 Introduction

The City of Sheridan (City) requested that Raftelis Financial Consultants, Inc. (Raftelis) conduct an evaluation of the existing rate structure against three objectives selected by Staff: 1) revenue stability, 2) essential use affordability, and 3) conservation. Our evaluation indicates that the existing rate structure is meeting those objectives however, we have provided a few options should the City wish to modify the structure and enhance meeting these objectives.

Across the utility industry, a variety of rate structures are used to recover the cost of providing service. Utilities selects the rate structure that best meets its goals and objectives. Overarching goals include defensibility and revenue sufficiency. Regardless of the rate structure, they should all be defensible and recover utilities' costs. Typical pricing objectives to support those goals include:

- Conservation/wise use of water
- Demand management
- Essential use affordability
- Equity between classes of customers
- Equity within a class of customers
- Revenue stability
- Equity between new and existing customers
- Implementation and administration compatibility

These objectives may be financial characteristics, such as the stability of the revenue stream it produces, or these rate structures may be selected for attributes such as how it promotes values of the community, perhaps through affordability or conservation. In many cases, a rate structure is selected for how it combines a group of attributes that best meets the utility's and/or the community's priorities.

This memo focuses on the water rate structure however, many of the points made here are applicable to the sewer utility rate structure. The sewer rate structure consists of a minimum charge which varies by meter size. Included in the minimum charge is a volume allowance which varies by meter size. A uniform volume rate is applied to the customer's winter water use average based on the months of December through March. Nonresidential customers are billed for all water usage above their meter size minimum.

4.2 Existing Rate Structure Analysis

The City's current water rate structure include a minimum charge which varies by meter size and a two-tiered increasing block structure. The minimum charge includes a volume allowance that also varies by meter size. Table 4.1 shows the existing rate structure.

Table 4.1: Existing City Water Rate Structure

Meter Size	Meter Cost Ratio	Minimum Charge	Volume Allowance (ccf)	Block 1 Threshold (ccf)	Block 2 Threshold (ccf)	Block 1 Rate $ per ccf	Block 2 Rate $ per ccf
¾”	1.00	$18.88	2	2-8	>8	$1.37	$1.87
1”	1.18	22.26	4	4-15	>15	1.37	1.87
1 ½”	1.47	27.66	8	8-30	>30	1.37	1.87
2”	1.75	33.04	12	12-45	>45	1.37	1.87
3”	3.00	56.63	30	30-113	>113	1.37	1.87
4”	4.43	83.60	50	50-188	>188	1.37	1.87
6”	7.96	150.26	100	100-375	>375	1.37	1.87
8”	16.00	302.02	200	200-750	>750	1.37	1.87

Advantages:

- ***Revenue stability***. This rate structure provides annual revenue stability. Approximately, 52% of rate revenue is generated from the minimum charge. Utilities in Rocky Mountain region average between 15% - 25% of rate revenue from the fixed charge.
- ***Essential use affordability***. Essential water use if the minimum amount of water required to bathe and cook. Typical essential use is 50 gallons per day per person. Census data shows the typical Sheridan household has 2.18 people. This equates to approximately 3,300 gallons or 4.4 ccf. The ¾” minimum charge includes 2 ccf which can account for a portion of essential usage. Water use above the 2 ccf is billed at the block 1 rate of $1.37 which is lower than the average rate for the system of $1.28[3].
- ***Conservation.*** The City currently has adequate sufficient water rights and access adequate water supply. The existing rate structure contains a two-tiered volume rate structure. As customers use more, they pay more. The second-tier volume rate is 1.26 times the volume 1 rate. This differential provides a price signal to customers to encourage the wise use of water.

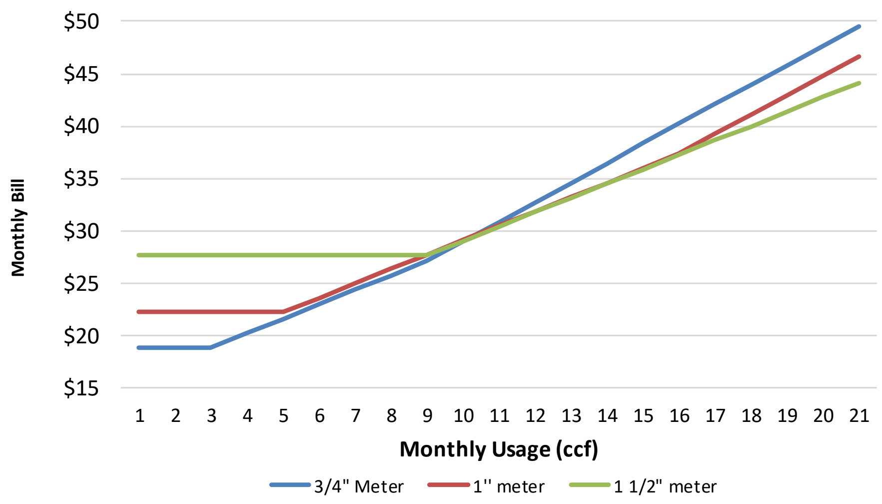
Disadvantages

- ***Balance of revenue stability and conservation***. Total rate revenue from the minimum charge is 52%. This higher than average percentage can mute the impacts of using a two-tiered structure for conservation. With a higher fixed charge, less is recovered through the volume rate. As a result, a change in customer’s water usage may not translate to a similar change in their revenue.
- ***Balance of revenue stability and essential use affordability***. The minimum charge portion makes up approximately 75% of the total bill for a customer with a ¾” meter using 8 ccf or less. This high percent of fixed costs does not allow for a significant bill reduction through usage alone.
- ***Conservation***. The City does not currently have a water conservation program and the tiers do not appear to be tied to a water savings goal. A tiered structure aligned with specific water reduction goals would be more effective in promoting the wise use of water. In addition to the tier threshold, the City could increase the price ratio between the first and second to further enhance the price signal and encourage further water savings. A greater price ratio also results in a lower tier one rate. That coupled with reduced water use could results in lower water use and sewer bills.

[3] The $1.28 per ccf is the quotient of total inside City volume revenue divided by inside city billable water volume.

- The current minimum threshold and the tier 1 threshold by meter results in some inequity between the meter sizes. The figure below shows the monthly bill at various levels consumption for a ¾", 1" and 1 ½" meter.
- The current differential for outside City rates varies by the minimum charge and the volume rate. The minimum charge is 1.25x the inside City minimum charge and the volume is 1.36x the inside City volume rate.

Figure 4-1: Monthly Bills Under Existing Rates



4.3 Rate Structure Alternatives

Raftelis developed the following options should the City decide to better align with their existing structure with the identified pricing objectives.

4.3.1 Eliminate the Volume Allowance

A minor change may be made to the existing water rate structure. Namely, the monthly volume allowance can be eliminated. The proposed service charge has been adjusted to recover customer service, general administration, and a portion of annual depreciation expense. Total service charge revenue recover is 30% which is greater than the average for a utility of this size.

Table 4.2: Conceptual Monthly Charge with No Volume Allowance and 2 Tier Volume Rate

Meter Size	Service Charge Billing and Admin Costs	Service Charge Capital Costs	Total Monthly Service Charge	Volume Allowance (ccf)	Block 1 Threshold (ccf)	Block 2 Threshold (ccf)	Block 1 Rate $ per ccf	Block 2 Rate $ per ccf
<= ¾"	$7.12	$3.43	$10.56	0	0 – 8	>8	$1.69	$2.11
1"	7.12	5.72	12.85	0	0 - 15	>15	1.69	2.11
1 ½"	7.12	11.45	18.57	0	0 – 30	>30	1.69	2.11
2"	7.12	18.31	25.44	0	0 – 45	>45	1.69	2.11
3"	7.12	40.06	47.18	0	0 – 113	>113	1.69	2.11
4"	7.12	72.11	79.23	0	0 – 188	>188	1.69	2.11
6"	7.12	148.79	155.92	0	0 – 375	>375	1.69	2.11
8"	7.12	274.69	281.82	0	0 - 750	>750	1.69	2.11

(1) In this example, the estimated service charge recovers customer service costs, general administrative costs, and a portion of annual depreciation expense. Total revenue recovery from service charge is 30%.

The water consumed in the existing volume allowance would be charged at the Tier 1 rate, which would be charged at $1.69 per ccf for all meter sizes. Tier 2 volume rates would be $2.11 per ccf for all meter sizes. The existing volumes included in Tier 1 and Tier 2 for the various meter sizes would be maintained.

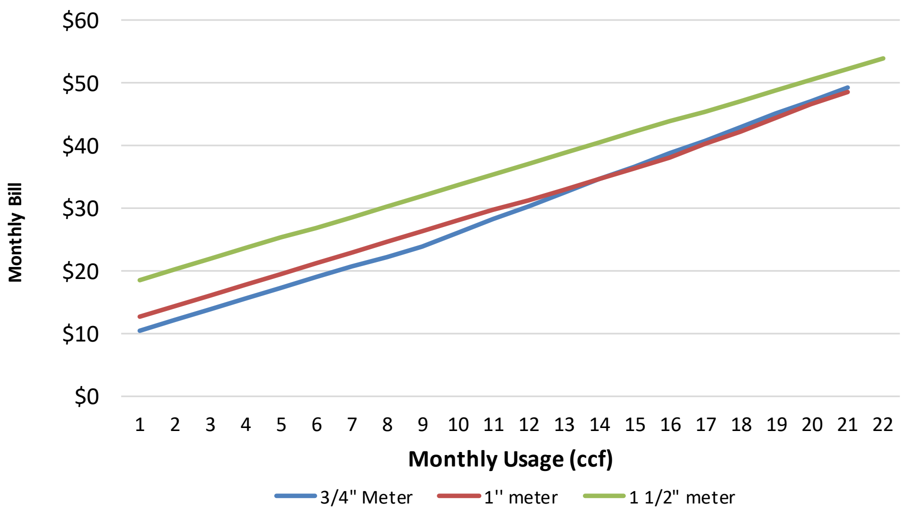
Advantages:

- Implementation of this rate structure would be fairly easy, with minimal public outreach and education required. A message of "pay only for what you use" would be used to promote the change.
- Setting the tier 2 threshold by meter size and increasing the price ratio to achieve specific conservation goals could lower the tier 1 rate. The combination of price signal and tier threshold could reduce consumption while lowering customers' monthly water and sewer bills.
- Those customers with very low usage would have greater control over their billed amount and would see a reduction in their monthly service charge.
- Low volume users would likely see their monthly bills drop.
- The figure below illustrates the equity alignment between the meter sizes at various levels of consumption. The rate of bill increases is approximately the same for each.

Disadvantages:

- Revenue stability. The total revenue recovered from the service charge would drop from 52% to 30% generating the potential for greater revenue volatility during wet or emergency events. However, the City does maintain reserve levels of 90 days of O&M and 1-years depreciation expense. This should be considered when modifying the service charge.
- Customers may consider the elimination of the "free water" included in the monthly bill to be "nickel and diming", especially in the absence of other rate increases.
- Larger volume users and larger meters would likely see their monthly bills increase.
- Tier 2 is not currently tied to a conservation program or water reduction goal which may be sending the incorrect pricing signal to customers to conserve water.
- The tier thresholds vary by meter size. There is still an slight inequity between the 1 ½" meter customer and the 1" customer. The increase in the monthly bills is increasing at a different rate.

Figure 4-2: Typical Monthly Bills under Hypothetical Rate Structure with No Volume Allowance



4.3.2 Uniform Volume Rate with No Volume Allowance

Eliminating the tiers by meter size and charging a uniform rate for all usage and meter sizes will improve customer equity. Table 4.3 shows a hypothetical rate structure similar to Table 4.2 however, with no tiers.

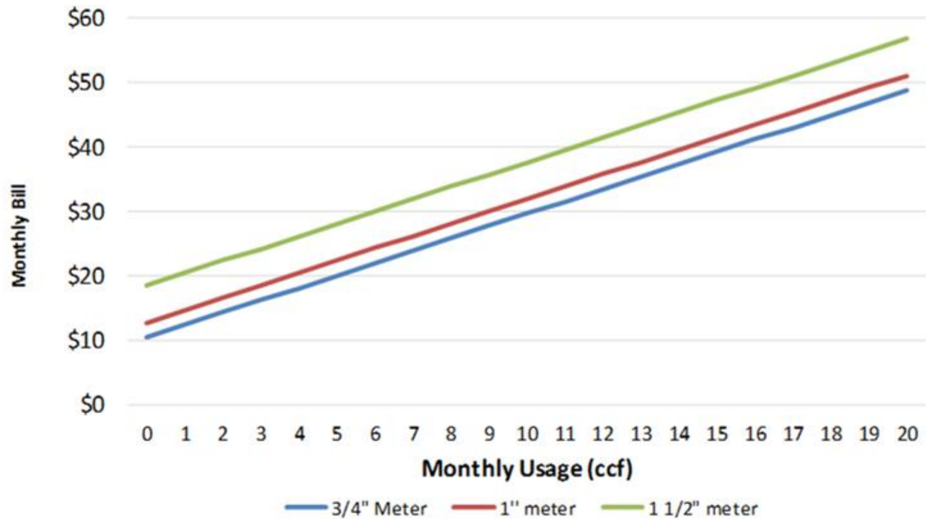
Table 4.3: Hypothetical Monthly Charge with No Volume Allowance and Uniform Volume Rate

Meter Size	Service Charge Billing and Admin Costs	Service Charge Capital Costs	Total Monthly Service Charge	Uniform Rate (applies to all usage) $ per ccf
¾"	$7.12	$3.43	$10.56	$1.93
1"	7.12	5.72	12.85	1.93
1 ½"	7.12	11.45	18.57	1.93
2"	7.12	18.31	25.44	1.93
3"	7.12	40.06	47.18	1.93
4"	7.12	72.11	79.23	1.93
6"	7.12	148.79	155.92	1.93
8"	7.12	274.69	281.82	1.93

(1) In this example, the estimated service charge recovers customer service costs, general administrative costs, and a portion of annual depreciation expense. Total revenue recovery from service charge is 30%.

Figure 4-3 shows that customers' bills increase at the same rate regardless of meter size. The difference in the initial costs is due to the service charge. However, the monthly service charge increases by meter size to recognize the differing levels of system infrastructure required to serve different meter capacities.

Figure 4-3: Hypothetical Bills under a Uniform Volume Rate Structure



Advantages:

- This option would be fairly easy to implement – unless some customers are adversely affected, in which case there may be public opposition.
- Eliminating the tiers provides water use charge equity among all classes.
- The elimination of the second tier reduces revenue volatility from a previous higher volume rate.
- A uniform rate would be slightly higher than under the current tiered structure. This added revenue will support revenue stability.
- The service charge for a ¾" meter would be lower in this example. Despite a slightly higher volume rate, typical bills for ¾" meter customers would be lower than under the existing structure.

Disadvantages:

- The uniform volume rate would eliminate the conservation signal that currently exists in the tiered rate structure.
- Customers may consider the elimination of the "free water" included in the monthly bill to be "nickel and diming", especially in the absence of other rate increases.

5. RAW WATER RATE

5.1 Introduction

The City provides service to approximately five raw water customers. The City charges raw water users at 50% of the SAWS rate. As of 2017, this rate was $0.90 per kgal.

5.2 Cost Allocation Analysis

To recover the costs of delivering raw water, the City should recover the O&M costs associated with the raw water system as well as a rate of return on the capital that has been invested in the raw water system.

The rate of return on capital is 5.08%, which is selected as the sum of the interest rate that the utility can borrow at (2.50%) plus the Long-Term (20-year) U.S. Treasury Coupon Bond Yield (2.58% as of 12/31/17). Raw water costs for customers who own their portion of the raw water system would only be responsible for O&M costs. This rate is $0.02 per 1,000 gallons ($20,985/928,165 = $0.02 per 1,000 gallons). Table 5.1 presents the development of the raw water rate.

Table 5.1: Development of Raw Water Rate

Description	Amount
Book Value of Raw Water Assets	$22,369,191
Rate of Return on Capital	5.08%
Annual Capital Cost	$1,136,355
Annual Raw Water O&M	20,985
Total Annual Raw Water Costs	$1,157,340
2017 Billed Volume (kgal)	928,160
Raw Water Rate ($ / kgal)	$1.25

APPENDIX A:
WATER FINANCIAL PLAN

Table 1
City of Sheridan, WY
Water Financial Plan
Summary of Operating and Maintenance Expenses By Org

Description	Cost Center	*Budget* 2018	*Projected* 2019	*Projected* 2020	*Projected* 2021	*Projected* 2022	*Projected* 2023	*Projected* 2024	*Projected* 2025	*Projected* 2026	*Projected* 2027
Sheridan W&S Admin O&M	1	$803,959	$820,038	$836,439	$853,168	$870,231	$887,636	$905,388	$923,496	$941,966	$960,805
Sheridan Billing Phase Out O&M	2	0	0	0	0	0	0	0	0	0	0
Sheridan Customer Service (New - No	3	253,281	258,346	263,513	268,784	274,159	279,642	285,235	290,940	296,759	302,694
Sheridan Cashier Phase Out	4	0	0	0	0	0	0	0	0	0	0
Sheridan Source of Supply	5	208,009	234,009	221,889	252,251	216,496	220,826	225,243	229,747	234,342	239,029
Sheridan Distribution	6	536,756	602,531	561,714	700,508	579,518	590,749	644,204	595,888	607,805	619,961
Sheridan SAWS	7	252,056	257,097	262,239	267,484	272,834	278,290	283,856	289,533	295,324	301,230
Sheridan SWTP	8	670,191	702,895	690,853	674,070	712,551	701,302	715,328	729,635	744,227	759,112
Sheridan BGWTP	9	590,727	541,342	582,169	583,212	604,476	585,966	632,685	609,639	621,832	634,268
Total Operating and Maintenance Expenses		**$3,314,979**	**$3,416,259**	**$3,418,816**	**$3,599,476**	**$3,530,266**	**$3,544,411**	**$3,691,939**	**$3,668,878**	**$3,742,256**	**$3,817,101**
Scenario-Specific Adjustments to O&M		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Operating and Maint. Expense w/ Adjustments		**$3,314,979**	**$3,416,259**	**$3,418,816**	**$3,599,476**	**$3,530,266**	**$3,544,411**	**$3,691,939**	**$3,668,878**	**$3,742,256**	**$3,817,101**
% Change from Previous Year		*4%*	*3%*	*0%*	*5%*	*-2%*	*0%*	*4%*	*-1%*	*2%*	*2%*

Table 2
City of Sheridan, WY
Water Financial Plan
Capital Improvement Program - Current Dollars

Project Description	Funding	Forgiveness	% City Fund	Project Type	Budget 2018	Projected 2019	Projected 2020	Projected 2021	Projected 2022	Projected 2023	Projected 2024	Projected 2025	Projected 2026	Projected 2027
Sheridan CIP														
Sheridan Hydropower (4660.4552)	F 0% / Princ Forg	0%	100%	SS	1,256,700	0								
~~SWTP Hydropower~~	F 0% / Princ Forg	0%	100%	SS	0	0								
~~Twin Lakes Telemetry & Intake Stream Guage & Generator~~	Rates	0%	100%	SS	0	0								
Wetland Mitigation (4660.4505)	Rates	0%	100%	SS	0	0								
Watershed Control Plan (4660.4501)	Rates	0%	100%	SS	50,000	50,000								
NW TANK / BGWTP Clearwell1 (4674.4721)	Rates	0%	100%	BGWTP	0	0								
~~Vehicles~~	Rates	0%	100%	BGWTP										
Flouride (4660.4500)	Rates	0%	100%	BGWTP										
Storage Garage & PAC Storage	Rates	0%	100%	BGWTP										
Sludge Drying Bed	Rates	0%	100%	BGWTP						250,000				
Convert to Hypchlorite	Rates	0%	100%	BGWTP			200,000							
Utilidor	Rates	0%	100%	BGWTP		350,000								
Replace Flocculators	Rates	0%	100%	BGWTP					110,000					
Replace Floccurlators	Rates	0%	100%	SWTP					110,000					
4MG Tank Lid Repairs (4660.4502)	Rates	0%	100%	SWTP										
4MG Tank Lid Replacement Project	WWDC	0%	100%	SWTP										
4MG Tank Lid Replacement Project WWDC Matching	SRF 2.5% / Prir	0%	100%	SWTP										
BIG CONVENTIONAL UPGRADE! (4671.4716)	ready Funded SF	0%	100%	SWTP										
Forklift / Half a Dumptruck	Rates	0%	100%	SWTP										
Backwash Piping	Rates	0%	100%	SWTP				50,000						
Security Gates (Both WTPs)	Rates	0%	100%	SWTP										
Replace roll-seal with SCADA controlled flow valve	Rates	0%	100%	SWTP					50,000					
Irrigation System (Intake and SWTP)	Rates	0%	100%	SWTP			30,000							
~~DR6000 LAB BENCH METER~~	Rates	0%	100%	SWTP										
North Sheridan Interchange Design (4660.4729)	Rates	0%	100%	DIST										
North Sheridan Interchange	SRF 2.5%	0%	100%	DIST		750,000								
Lewis Street Bridge	Rates	0%	100%	DIST	0	0								
West Downtown Improvements - Phase III	Rates	0%	100%	DIST	0	0								
South Main	SRF 2.5%	0%	100%	DIST	0	0			1,100,000					
Illinois St Neighborhood Project (4660.4726)	Rates	0%	100%	DIST										
NW Water Loop	SRF 2.5%	0%	100%	DIST										
North End Water Extension	SRF 2.5%	0%	100%	DIST		644,700								
West Downtown Improvements - Phase IV (4660.4725)	Rates	0%	100%	DIST	0									
North Heights Water Main Replacement	SRF 2.5%	0%	100%	DIST				1,000,000						
East Downtown Improvements	Rates	0%	100%	DIST	100,000									
Leopard Street Waterline Replacement (4660.4741)	Rates	0%	100%	DIST	0	0								
Leopard Street Waterline Replacement (4660.4741)	WWDC	0%	100%	DIST										
Leopard Street Waterline Replacement (4660.4741)	SRF 2.5% / Prir	0%	100%	DIST										
Wyoming Park Improvements Phase 2 (4671.4703)	ready Funded SF	0%	100%	DIST	0	0								
Wyoming Park Improvements Phase 3 (4660.4703)	ready Funded SF	0%	100%	DIST										
Wyoming Park Improvements Phase 3 (4660.4703)	ready Funded SF	0%	100%	DIST										
5th Street Water Main Replacement (4660.4751)	SRF 2.5% / Prir	0%	100%	DIST	0									
South Downtown Improvements (1-3)	Rates	0%	100%	DIST		150,000	150,000	200,000						
West Loucks Improvements (4660.4742)	SRF 2.5%	0%	100%	DIST		600,000								
West Loucks Improvements (4660.4742)	Rates	0%	100%	DIST	387,500									
North End Water Extension (Grants)	WWDC	0%	100%	DIST		1,945,300				0	0			
Creek Crossings	Rates	0%	100%	DIST		150,000				150,000		150,000		
Mydland and Dome Drive PRV's (4660.4744)	Rates	0%	100%	DIST	150,000									
Large Meter Rebuilds	Rates	0%	100%	Meters	0	0	0	0	0	0				
Residential Meter Replacement & Fixed Base Radio Project	F 0% / Princ Forg	0%	100%	Meters	3,052,000									
Fixed Base Radio Read	Rates	0%	100%	Meters	0	0	0	0	0	0	0			
Vehicles	Rates	0%	100%	MISC	0	25,000	0	0	0	0	0			
Water Salesman	Rates	0%	100%	MISC										
Upgrade Roll Seal Vaults	Rates	0%	100%	MISC										
Future Capital Replacements	Rates	0%	100%	MISC						600,000	600,000	600,000	600,000	600,000
Utility Services Vehicle	Rates	0%	100%	MISC										
Rotomill & Overlay Project - Hydrant Replacements (4660.4701)	Rates	0%	100%	DIST	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000		
Total CIP					**$5,046,200**	**$4,715,000**	**$430,000**	**$1,300,000**	**$1,420,000**	**$1,050,000**	**$650,000**	**$800,000**	**$600,000**	**$600,000**

Table 3
City of Sheridan, WY
Water Financial Plan
Capital Improvement Program - Inflated Dollars

Description			*Budget* **2018**	*Projected* **2019**	*Projected* **2020**	*Projected* **2021**	*Projected* **2022**	*Projected* **2023**	*Projected* **2024**	*Projected* **2025**	*Projected* **2026**	*Projected* **2027**
Annual Inflation Rate		Mean	0.0%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
Future Value Factor			1.0000	1.0250	1.0506	1.0769	1.1038	1.1314	1.1597	1.1887	1.2184	1.2489
Annual Replacement Funding Budget			700,000	700,000	700,000	700,000	700,000	700,000	700,000	700,000	700,000	700,000
Annual Replacement Funding Budget (Escalated)			$700,000	$717,500	$735,438	$753,823	$772,669	$791,986	$811,785	$832,080	$852,882	$874,204
Cost Category												
DIST	$8,432,377		$687,500	$4,397,250	$210,125	$1,346,113	$1,269,385	$226,282	$57,985	$237,737	$0	$0
BGWTP	$973,146		0	358,750	210,125	0	121,419	282,852	0	0	0	0
SAWS	$0		0	0	0	0	0	0	0	0	0	0
SS	$1,357,950		1,306,700	51,250	0	0	0	0	0	0	0	0
SWTP	$261,973		0	0	31,519	53,845	176,610	0	0	0	0	0
MISC	$3,593,857		0	25,625	0	0	0	678,845	695,816	713,211	731,042	749,318
DIST67	$0		0	0	0	0	0	0	0	0	0	0
Meters	$3,052,000		3,052,000	0	0	0	0	0	0	0	0	0
Total Planned Capital Improvements - City			**$5,046,200**	**$4,832,875**	**$451,769**	**$1,399,958**	**$1,567,414**	**$1,187,979**	**$753,801**	**$950,949**	**$731,042**	**$749,318**
Scenario-Specific Increases to Capital Spending			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Scenario Specific Planned Capital Expenditure			**$5,046,200**	**$4,832,875**	**$451,769**	**$1,399,958**	**$1,567,414**	**$1,187,979**	**$753,801**	**$950,949**	**$731,042**	**$749,318**
Expected % of Cash Expenditure to Appropriated Totals			100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Previous Year's Unexpended Appropriation			0	0	0	0	0	0	0	0	0	0
Override												
TOTAL CASH EXPENDITURE - City			**$5,046,200**	**$4,832,875**	**$451,769**	**$1,399,958**	**$1,567,414**	**$1,187,979**	**$753,801**	**$950,949**	**$731,042**	**$749,318**
Adjustment			*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*

Table 4
City of Sheridan, WY
Water Financial Plan
Cash Fund Activity Balance

Description	*Budget* 2018	*Projected* 2019	*Projected* 2020	*Projected* 2021	*Projected* 2022	*Projected* 2023	*Projected* 2024	*Projected* 2025	*Projected* 2026	*Projected* 2027
Indicated Revenue Increase	**0.0%**	**0.0%**	**2.5%**	**0.0%**	**2.5%**	**0.0%**	**2.5%**	**0.0%**	**2.5%**	**0.0%**
Beginning Cash & Investment Balance	**$2,116,167**	**$2,460,398**	**$2,097,013**	**$2,470,164**	**$2,750,662**	**$3,058,452**	**$2,532,985**	**$2,393,536**	**$2,208,779**	**$2,235,350**
Sources of Funds										
Retail Rate Revenues	$3,498,997	$3,527,964	$3,590,755	$3,675,546	$3,740,471	$3,828,302	$3,895,429	$3,986,398	$4,055,797	$4,150,006
Wholesale/Contract Revenues	55,000	55,000	55,523	55,000	55,523	55,000	55,523	55,000	55,523	55,000
Other Revenues	1,045,688	1,078,582	1,249,418	1,122,827	1,113,570	1,120,729	1,154,105	1,154,153	1,173,184	1,192,595
Scenario-Specific Increases/(Decreases) to Revenue	0	0	0	0	0	0	0	0	0	0
Net Debt Proceeds (Net of Principal Forgiveness)	2,154,350	2,044,568	0	1,076,891	1,214,194	0	0	0	0	0
Total of Other Capital Funding	2,154,350	1,993,933	0	0	0	0	0	0	0	0
Total Development Fees	202,050	202,050	202,050	202,050	202,050	202,050	202,050	202,050	202,050	202,050
Internal Transfers										
Interest Earnings	10,909	10,861	10,886	12,516	13,983	13,440	11,782	10,973	10,579	10,851
Total Sources of Funds	**$9,121,344**	**$8,912,958**	**$5,108,632**	**$6,144,829**	**$6,339,791**	**$5,219,520**	**$5,318,889**	**$5,408,574**	**$5,497,132**	**$5,610,502**
Uses of Funds										
Operating and Maintenance Expenses	$3,314,979	$3,416,259	$3,418,816	$3,599,476	$3,530,266	$3,544,411	$3,691,939	$3,668,878	$3,742,256	$3,817,101
Debt Service Payments - Outstanding Bonds	399,313	902,331	608,210	608,210	608,210	608,210	608,210	569,116	592,876	557,276
Debt Service Payments - Projected Issues	16,621	124,877	256,686	256,686	326,111	404,388	404,388	404,388	404,388	404,388
Capital Project Costs	5,046,200	4,832,875	451,769	1,399,958	1,567,414	1,187,979	753,801	950,949	731,042	749,318
Costs of Bond Issuance	0	0	0	0	0	0	0	0	0	0
Total Uses of Funds	**$8,777,113**	**$9,276,342**	**$4,735,481**	**$5,864,331**	**$6,032,001**	**$5,744,988**	**$5,458,338**	**$5,593,331**	**$5,470,561**	**$5,528,082**
Total Change in Fund Balance	*$344,231*	*($363,385)*	*$373,151*	*$280,499*	*$307,790*	*($525,467)*	*($139,449)*	*($184,757)*	*$26,571*	*$82,420*
Ending Cash & Investment Balance	**$2,460,398**	**$2,097,013**	**$2,470,164**	**$2,750,662**	**$3,058,452**	**$2,532,985**	**$2,393,536**	**$2,208,779**	**$2,235,350**	**$2,317,770**
Target Reserves										
O&M	817,392	842,365	842,996	887,542	870,477	873,964	910,341	904,655	922,748	941,203
Capital	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000
Total Target Reserves	**$2,017,392**	**$2,042,365**	**$2,042,996**	**$2,087,542**	**$2,070,477**	**$2,073,964**	**$2,110,341**	**$2,104,655**	**$2,122,748**	**$2,141,203**
Annual Surplus / Deficiency	443,006	54,648	427,168	663,120	987,976	459,021	283,195	104,124	112,602	176,568
Debt Service Coverage	3.93	1.56	2.18	1.89	1.89	1.81	1.76	1.97	1.93	2.06

APPENDIX B:
SEWER FINANCIAL PLAN

Table 1
City of Sheridan, WY
Sewer Financial Plan: 2018 Update
Summary of Operating and Maintenance Expenses

Description	Acct #	% Fixed	Budget 2018	Projected 2019	Projected 2020	Projected 2021	Projected 2022	Projected 2023	Projected 2024	Projected 2025	Projected 2026	Projected 2027	Projected 2028
Collection Lines	4680	100%	$412,319	$420,565	$428,977	$437,556	$446,307	$455,233	$464,338	$473,625	$483,097	$492,759	$502,615
Treatment	4681	100%	903,550	921,621	940,053	958,854	978,032	997,592	1,017,544	1,037,895	1,058,653	1,079,826	1,101,422
Water/Sewer Administrative & General	4660	100%	507,283	611,969	624,208	636,692	649,426	662,415	675,663	689,176	702,960	717,019	731,359
Customer Service	4662	100%	164,280	0	0	0	0	0	0	0	0	0	0
Other O&M Adjustments			-	-	-	-	-	-	-	-	-	-	-
Scenario-Specific Adjustments to O&M					-	-	-	-	-	-	-	-	-
Total Operating and Maint. Expense w/ Adjustments			**$1,987,432**	**$1,954,155**	**$1,993,238**	**$2,033,103**	**$2,073,765**	**$2,115,240**	**$2,157,545**	**$2,200,696**	**$2,244,710**	**$2,289,604**	**$2,335,396**
% Change from Previous Year			2%	-2%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%

Table 2
City of Sheridan, WY
Sewer Financial Plan
Capital Improvement Program - Current Dollars

SEWER FUND Project Description	Funding	Project Category	Budget 2018	Projected 2019	Projected 2020	Projected 2021	Projected 2022	Projected 2023	Projected 2024	Projected 2025	Projected 2026	Projected 2027
Capital Projects												
Wastewater Treatment Improvements	Rates	Treatment	-	-								
WWTP - Headworks Improvements - Rotomat (Redundant Unit)	SRF 2.5%	Treatment							775,000			
WWTP - C - Oxidation Ditch Enhancements	SRF 2.5%	Treatment							1,170,000			
WWTP - Pumps - VFD Conversion PUMPS & SCADA	SRF 2.5%	Treatment							150,000			
WWTP - Disinfection Improvements	SRF 2.5%	Treatment							325,000			
North Sheridan Interchange Design (4660.4729)	Rates	Collection										
North Sheridan Interchange	SRF 2.5%	Collection		750,000								
North End Water & Sewer Extensions	SRF 2.5%/Princ Forgivi	Collection	-	1,304,000								
North End Water & Sewer Extensions (SLIB Grant)	SLIB Grants	Collection		140,000								
West Downtown Improvements - Phase IV (4660.4725)	Rates	Collection	200,000									
South Main	SRF 2.5%	Collection					675,000					
Illinois St Neighborhood Project (4660.4726)	Rates	Collection	-	-								
Wyoming Park Improvements (4680.4703)	Rates	Collection	-	-								
South Downtown Improvements (1-3)	SRF 2.5%	Collection					400,000					
West Loucks Improvements (4660.4742)	SRF 2.5%/Princ Forgivi	Collection		300,000								
West Loucks Improvements (4660.4742)	Rates	Collection										
NW Water (and Sewer) Loop, Yellowtail and HT Biz Park (4660.4853)	Rates	Collection										
Sheridan Commercial Park (4660.4723)	Rates	Collection										
General Sewer Line Creek Crossings	Rates	Collection	150,000		150,000							
Slip Lining Project (SID 75)	Rates	Collection			400,000							
Utility Maintenance Service Center (4660.4702)	Rates	MISC										
Vehicles	Rates	MISC	-	-	-	-						
Future Capital Projects	Rates	MISC						300,000	300,000	300,000	300,000	300,000
Operating Capital Expenses			-	-								
Capital Outlay - Infrastructure - 50.6520.4680	Rates	Collection										
Capital Outlay - Buildings & Grounds - 50.6530.4680	Rates	Collection		25,600	8,000							
Capital Outlay - Machinery and Equip. - 50.6550.4680	Rates	Collection	37,000	37,000	35,000	150,000	12,000					
Capital Outlay - Sewer Lines - 50.6570.4680	Rates	Collection										
Capital Outlay - Infrastructure - 50.6520.4681	Rates	Treatment	38,700	83,000	50,000	40,000	40,000					
Capital Outlay - Buildings & Grounds - 50.6530.4681	Rates	Treatment	10,000	14,500		6,500						
Capital Outlay - Machinery and Equip. - 50.6550.4681	Rates	Treatment				100,000	15,000					
Capital Outlay - Sewer Lines - 50.6570.4681	Rates	Treatment										
Utility Services Vehicle	Rates	MISC										
Total			**$435,700**	**$2,654,100**	**$643,000**	**$296,500**	**$1,142,000**	**$300,000**	**$2,720,000**	**$300,000**	**$300,000**	**$300,000**
Annual Replacement Funding Budget (for calculation of OMR/Fixed Charge Cvg. only)			500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000

Note:

Table 3
City of Sheridan, WY
Sewer Financial Plan: 2018 Update
Capital Improvement Program - Inflated Dollars

Project Category / Description		Budget 2018	Projected 2019	Projected 2020	Projected 2021	Projected 2022	Projected 2023	Projected 2024	Projected 2025	Projected 2026	Projected 2027
Treatment	3,226,101	48,700	99,938	52,531	157,764	60,710	-	2,806,458	-	-	-
Interceptors	-	-	-	-	-	-	-	-	-	-	-
Lifts	-	-	-	-	-	-	-	-	-	-	-
Collection	4,991,914	387,000	2,620,515	623,021	161,534	1,199,845	-	-	-	-	-
General	-	-	-	-	-	-	-	-	-	-	-
Wholesale	-	-	-	-	-	-	-	-	-	-	-
Equipment	-	-	-	-	-	-	-	-	-	-	-
MISC	1,784,116	-	-	-	-	-	339,422	347,908	356,606	365,521	374,659
Adjust		-	-	-	-	-	-	-	-	-	-
N/A2		-	-	-	-	-	-	-	-	-	-
Grand Total		**435,700**	**2,720,453**	**675,552**	**319,298**	**1,260,554**	**339,422**	**3,154,366**	**356,606**	**365,521**	**374,659**
Annual Replacement Funding Budget		$500,000	$512,500	$525,313	$538,445	$551,906	$565,704	$579,847	$594,343	$609,201	$624,431
Annual Inflation Rate		0.0%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
Future Value Factor		1.0000	1.0250	1.0506	1.0769	1.1038	1.1314	1.1597	1.1887	1.2184	1.2489

Table 4
City of Sheridan, WY
Sewer Financial Plan
Cash Fund Activity and Balance

Description	Budget 2018	Projected 2019	Projected 2020	Projected 2021	Projected 2022	Projected 2023	Projected 2024	Projected 2025	Projected 2026	Projected 2027
Indicated Rate Increase	0.00%	2.75%	2.75%	2.75%	3.00%	3.00%	3.00%	3.00%	3.00%	0.00%
Beginning Fund Balance	$1,613,123	$1,646,231	$1,822,671	$1,519,997	$1,512,287	$1,796,703	$1,803,469	$1,848,208	$1,780,470	$1,840,406
Sources of Funds										
Retail Rate Revenues	2,368,568	2,418,576	2,502,253	2,588,702	2,681,390	2,780,522	2,883,188	2,989,512	3,099,620	3,165,097
Wholesale/Contract Revenues	0	0	0	0	0	0	0	0	0	0
Other Revenues	87,876	87,876	194,976	87,876	87,876	87,876	87,876	87,876	87,876	87,876
Projected Net Debt Proceeds	0	2,001,825	0	0	1,186,599	0	2,806,458	0	0	0
Total Other Capital Inflows	0	554,525	0	0	0	0	0	0	0	0
Total Development Fees	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000
Interest/Investment Earnings	8,128	8,651	8,336	7,562	8,252	8,978	9,106	9,049	9,030	9,318
Total Sources of Funds	$2,624,572	$5,231,453	$2,865,565	$2,844,140	$4,124,117	$3,037,376	$5,946,628	$3,246,437	$3,356,526	$3,422,292
Uses of Funds										
Operating and Maintenance Expenses	$1,987,432	$1,954,155	$1,993,238	$2,033,103	$2,073,765	$2,115,240	$2,157,545	$2,200,696	$2,244,710	$2,289,604
Debt Service Payments - Outstanding Bonds	168,332	370,395	370,395	370,395	370,395	370,395	370,395	370,395	299,881	315,721
Debt Service Payments - Projected Issues	0	0	129,053	129,053	129,053	205,551	205,551	386,477	386,477	386,477
Capital Project Costs	435,700	2,720,453	675,552	319,298	1,260,554	339,422	3,154,366	356,606	365,521	374,659
Costs of Bond Issuance	0	10,009	0	0	5,933	0	14,032	0	0	0
Total Uses of Funds	$2,591,464	$5,055,012	$3,168,239	$2,851,850	$3,839,701	$3,030,609	$5,901,890	$3,314,174	$3,296,589	$3,366,462
Total Change in Fund Balance	$33,108	$176,441	($302,674)	($7,710)	$284,416	$6,766	$44,739	($67,738)	$59,936	$55,830
Ending Fund Balance	**$1,646,231**	**$1,822,671**	**$1,519,997**	**$1,512,287**	**$1,796,703**	**$1,803,469**	**$1,848,208**	**$1,780,470**	**$1,840,406**	**$1,896,236**
Target Reserves										
O&M	337,863	332,206	338,850	345,627	352,540	359,591	366,783	374,118	381,601	389,233
Capital	920,000	920,000	920,000	920,000	920,000	920,000	920,000	920,000	920,000	920,000
Total Reserve Target	1,257,863	1,252,206	1,258,850	1,265,627	1,272,540	1,279,591	1,286,783	1,294,118	1,301,601	1,309,233
Surplus / Deficiency	*388,367*	*570,465*	*261,146*	*246,660*	*524,163*	*523,878*	*561,425*	*486,352*	*538,806*	*587,004*
Debt Service Coverage	3.76	1.93	1.74	1.62	1.72	1.59	1.70	1.38	1.61	3.57

APPENDIX C:

WATER PIFS

City of Sheridan, WY
Water Plant Investment Fee
City of Sheridan Water Asset Listing as of June 30, 2017

Acq. Year	Backbone? 1=Yes,2=No	Raw Water 1=Yes,2=No	% Water	Asset Description	Dep. Method/ Asset Life	Original Cost	EOY Depr.	ENR Value	ENR Factor	PIF Eligible Asset: RCNLD - Raw	PIF Eligible Asset: RCNLD - Treated
1920	1	0	100%	1141-010 2 ACRES-FRTH LO	Land / 30	$200	$0	251	1.0	$0	$200
1920	1	0	100%	1137-010 2 ACRES-SOUTH LO	Land / 30	$200	$0	251	1.0	$0	$200
1936	1	0	100%	1136-010 1.05 ACRES-EAST	Land / 30	$1,050	$0	206	1.0	$0	$1,050
1936	1	0	100%	1138-010 3.6 ACRES-SOUTH	Land / 30	$360	$0	206	1.0	$0	$360
1936	1	0	100%	1139-010 2.94 ACRES-SOUTH	Land / 30	$294	$0	206	1.0	$0	$294
1936	1	0	100%	1141-010 2.24 ACRES FRTH	Land / 30	$224	$0	206	1.0	$0	$224
1941	1	1	100%	1135-010 9.18 ACRES-INTAK	Land / 30	$9,180	$0	258	1.0	$9,180	$0
1952	1	0	100%	1143-010 0.26 ACRES-PUMP	Land / 30	$104	$0	569	1.0	$0	$104
1964	1	0	100%	1129-010 2.35 ACRES	Land / 30	$1,000	$0	936	1.0	$0	$1,000
1964	1	0	100%	1142-010 0.32 ACRES-FRTH	Land / 30	$360	$0	936	1.0	$0	$360
1978	1	0	100%	1054-010 4 MG WATER TANK	Land / 30	$39,512	$0	2,776	1.0	$0	$39,512
2006	1	0	0%	5208 127 Seymour St/BL 16 Sub Hom	Land / 30	$138,000	$0	7,751	1.0	$0	$0
2012	1	0	100%	0000000010 20 Waterline Easements	Land / 30	$220,646	$0	9,308	1.0	$0	$220,646
otal						$411,130	$0			$9,180	$263,950
2017	1	0	100%	2017- 45 5th St & Marion St Waterline Replacement	SLMM/25	$916,110	$0	10,754	1.0	$0	$916,110
otal						$916,110	$0			$0	$916,110
1967	1	0	100%	1036-218 Standpipe - Contract 2	MAN / 30	$14,600	$14,600	1,074	10.0	$0	$0
1968	1	0	100%	1039-218 RESEVOIR COVERS	SLMM / 30	$111,000	$111,000	1,155	9.3	$0	$0
1970	1	0	100%	1043-218 RESIVOIR COVERS	SLMM / 30	$94,150	$94,150	1,381	7.8	$0	$0
1980	1	0	100%	1050-218 4MG STORAGE TANK	SLMM / 35	$594,653	$594,653	3,237	3.3	$0	$0
1981	1	0	100%	0389-214 UTILITY SERVICE	SLMM / 30	$66,298	$66,298	3,535	3.0	$0	$0
1986	1	0	100%	0980-214 METAL STORAGE BL	SLMM / 20	$23,025	$23,025	4,295	2.5	$0	$0
1988	1	0	100%	1269-219 4 Fisher&Porter Oxygen probe transmitter	SLMM / 10	$7,453	$7,453	4,519	2.4	$0	$0
1989	1	0	100%	1350-223 2 dayton heaters	SLMM / 10	$798	$798	4,815	2.2	$0	$0
1990	1	0	100%	1511-215 30'X41'X10' POST	SLMM / 20	$6,929	$6,929	4,732	2.3	$0	$0
1990	1	0	100%	1543-229 R-19 INSULATION	SLMM / 50	$5,850	$3,147	4,732	2.3	$0	$6,142
1990	1	0	100%	1572-215 30'X41'X10' POST	SLMM / 41	$7,446	$4,944	4,732	2.3	$0	$5,685
1991	1	0	100%	1622-223 CARRIER GAS FURN	SLMM / 20	$3,108	$3,108	4,835	2.2	$0	$0
1991	1	0	100%	1680-223 CARRIER FURNACE	SLMM / 20	$3,108	$3,108	4,835	2.2	$0	$0
1991	1	0	100%	1655-299 METER SHOP-MISC	SLMM / 41	$5,274	$3,404	4,835	2.2	$0	$4,161
1991	1	0	100%	1678-229 Admin Office Rem	SLMM / 41	$8,129	$5,246	4,835	2.2	$0	$6,413
1991	1	0	100%	1654-215 UTILITY BUILDING	SLMM / 41	$23,290	$15,011	4,835	2.2	$0	$18,415
1992	1	0	100%	1702-215 UTILITY BLDG ADD	SLMM / 41	$1,334	$850	4,985	2.2	$0	$1,044
1994	1	0	100%	2063-229 hayward strainer	SLMM / 10	$7,268	$7,268	5,408	2.0	$0	$0
1994	1	0	100%	2064-229 hayward strainer	SLMM / 10	$7,450	$7,450	5,408	2.0	$0	$0
1995	1	0	100%	2138-229 VARIABLE FREQUEN	SLMM / 20	$64,306	$64,306	5,471	2.0	$0	$0

City of Sheridan, WY
Water Plant Investment Fee
City of Sheridan Water Asset Listing as of June 30, 2017

Acq. Year	Backbone? 1=Yes,2=No	Raw Water 1=Yes,2=No	% Water	Asset Description	Dep. Method/ Asset Life	Original Cost	EOY Depr.	ENR Value	ENR Factor	PIF Eligible Asset RCNLD - Raw	PIF Eligible Asset RCNLD - Treated
1996	1	0	100%	2724-223 CARRIER FURNACE	SLMM / 10	$8,256	$8,256	5,620	1.9	$0	$0
1996	1	0	100%	2372-218 12 ALTITUDE VAL	SLMM / 10	$6,167	$6,167	5,620	1.9	$0	$0
1996	1	0	100%	2374-218 12 ALTITUDE VAL	SLMM / 10	$6,167	$6,167	5,620	1.9	$0	$0
1996	1	0	100%	2490-229 REPLACE ROOF	SLMM / 15	$6,444	$6,444	5,620	1.9	$0	$0
1997	1	0	100%	2555-219 UTILITY SERVICE	SLMM / 15	$12,332	$12,332	5,826	1.8	$0	$0
1997	1	0	100%	2701-229 REMODEL UTILITIE	SLMM / 10	$18,949	$18,949	5,826	1.8	$0	$0
1997	1	0	100%	2959-229 ROOF-SHERIDAN WA	SLMM / 20	$19,526	$19,132	5,826	1.8	$0	$728
2000	1	0	100%	3041-229 2 INSULATED DOOR	SLMM / 10	$5,486	$5,486	6,221	1.7	$0	$0
2001	1	0	100%	5005 HVAC Control System	SLMM / 10	$11,077	$11,077	6,334	1.7	$0	$0
2002	1	0	100%	5008 Water Plant Security System	SLMM / 10	$5,360	$5,360	6,538	1.6	$0	$0
2002	1	0	100%	5009 BGWP Security System	SLMM / 10	$7,960	$7,960	6,538	1.6	$0	$0
2003	1	0	100%	5066 Slow Mix Facilities	SLMM / 10	$246,832	$246,832	6,695	1.6	$0	$0
2009	1	0	100%	0000000007 Water Treatment Plant Improvements	SLMM / 25	$4,243,759	$1,428,733	8,570	1.3	$0	$3,532,547
2016	1	1	100%	2016-09 New 60 Mil Membrane Roof - BG Intake Bldg	SLMM / 20	$8,000	$433	10,338	1.0	$7,871	$0
2016	1	0	100%	2016-08 Replaced Fluoride Room Door at SWTP	SLMM / 20	$5,980	$299	10,338	1.0	$0	$5,910
2016	1	0	100%	2017-44 Utility Maintenance Building	SLMM/40	$2,297,477	$0	10,338	1.0	$0	$2,390,016
2017	1	0	100%	2017-43 Big Goose Water Treament Plant Forklift Ramp	SLMM/20	$69,562	$0	10,754	1.0	$0	$69,562
2017	1	0	100%	2017-01 Comtronix Security System Upgrade	SLMM/10	$5,295	$0	10,754	1.0	$0	$5,295
otal						$8,040,098	$2,820,374			$7,871	$6,045,920
										$0	
1961	1	0	0%	1032-124 SE INTERCEPTOR-C	SLMM / 30	$162,612	$162,612	847	12.7	$0	$0
1966	1	0	100%	1033-124 MONTANA-SMITH -FO	SLMM / 30	$92,270	$92,270	1,019	10.6	$0	$0
1967	1	0	100%	1037-122 TRANSMISSION-LIN	SLMM / 30	$299,366	$299,366	1,074	10.0	$0	$0
1967	1	0	100%	1038-122 DISTRIBUTION FEE	SLMM / 30	$87,154	$87,154	1,074	10.0	$0	$0
1968	1	0	100%	1040-122 16 WATER TRASN	SLMM / 49	$145,153	$145,153	1,155	9.3	$0	$0
1969	1	1	100%	1041-121 20 RAW WATER TR	SLMM / 30	$920,111	$920,111	1,269	8.5	$0	$0
1971	1	1	100%	1044-122 INTAKE FACTLITTIE	SLMM / 20	$377,498	$377,498	1,581	6.8	$0	$0
1976	1	0	100%	0188-122 NORTH WATER MAIN	SLMM / 41	$77,600	$77,600	2,401	4.5	$0	$0
1977	1	0	100%	0270-122 NORTH WATER MAIN	SLMM / 41	$77,996	$77,996	2,576	4.2	$0	$0
1978	1	1	100%	0091-122 WATER INTAKE IMP	SLMM / 20	$17,247	$17,247	2,776	3.9	$0	$0
1978	1	0	100%	0327-122 WATER LINE-BURTO	SLMM / 41	$51,922	$51,025	2,776	3.9	$0	$3,475
1978	1	0	100%	1055-122 20 WATER MAIN/C	SLMM / 50	$235,052	$182,403	2,776	3.9	$0	$203,968
1978	1	0	100%	1056-122 20 WATER MAIN/C	SLMM / 50	$120,043	$93,154	2,776	3.9	$0	$104,168
1979	1	0	100%	0073-124 FRTHWEST TRUNK	SLMM / 41	$125,475	$120,694	3,003	3.6	$0	$17,124
1979	1	0	100%	1062-122 16 WATER MAIN/E	SLMM / 50	$322,367	$245,537	3,003	3.6	$0	$275,146
1979	1	0	100%	0152-121 Electric heat-valvu vaults	SLMM / 5	$1,966	$1,966	3,003	3.6	$0	$0
1979	1	0	100%	1053-122 20&24 WATER MA	SLMM / 50	$81,838	$62,061	3,003	3.6	$0	$70,825
1979	1	0	100%	1060-122 10&16 WATER MA	SLMM / 50	$219,947	$165,327	3,003	3.6	$0	$195,606
1980	1	1	100%	1059-122 20 RAW WATER MA	SLMM / 50	$269,175	$201,433	3,237	3.3	$225,062	$0
1980	1	0	100%	1061-122 24&20 WATER MA	SLMM / 50	$613,519	$456,049	3,237	3.3	$0	$523,167

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1982	1	0	0%	0559-124 ENGINEERING-INTE	SLMM / 41	$5,055	$4,452	3,825	2.8	$0	$0
1982	1	0	0%	1049-124 SHERIDAN AVE INT	SLMM / 50	$25,760	$17,932	3,825	2.8	$0	$0
1986	1	0	100%	1011-122 AVOCA AVE WATER	SLMM / 50	$16,627	$10,439	4,295	2.5	$0	$15,493
1986	1	0	100%	1014-122 ROCK SPARROWHAWK	SLMM / 50	$3,955	$2,470	4,295	2.5	$0	$3,717
1986	1	0	100%	1015-122 MATERIALS-SPARRO	SLMM / 50	$19,159	$11,934	4,295	2.5	$0	$18,093
1986	1	0	100%	1016-122 INSTALLATION SPA	SLMM / 50	$6,785	$4,218	4,295	2.5	$0	$6,427
1986	1	0	100%	1017-122 CONSTRUCTION-SPA	SLMM / 50	$3,792	$2,356	4,295	2.5	$0	$3,596
1986	1	1	100%	1010-122 INTAKE RECONSTRU	SLMM / 50	$219,754	$135,882	4,295	2.5	$210,010	$0
1986	1	0	100%	1007-122 ENGINEERING-ALLE	SLMM / 50	$8,200	$5,044	4,295	2.5	$0	$7,903
1986	1	0	100%	0981-122 MICROSTRAINERS	SLMM / 20	$10,000	$10,000	4,295	2.5	$0	$0
1986	1	0	100%	1006-122 ALLEY WATER MAIN	SLMM / 50	$80,845	$49,585	4,295	2.5	$0	$78,272
1986	1	1	100%	1009-122 ENGINEERING-INTA	SLMM / 50	$43,750	$26,813	4,295	2.5	$42,408	$0
1987	1	1	100%	1110-122 ENGINEERING-INTA	SLMM / 41	$50,000	$37,366	4,406	2.4	$30,837	$0
1987	1	1	100%	1111-122 WATER INTAKE REN	SLMM / 41	$276,185	$206,395	4,406	2.4	$170,346	$0
1988	1	0	100%	1288-122 3 84 CONCRETE L	SLMM / 41	$2,337	$1,693	4,519	2.4	$0	$1,532
1988	1	1	100%	1295-122 ENGINEERING INTA	SLMM / 41	$25,000	$18,058	4,519	2.4	$16,521	$0
1988	1	0	100%	1309-122 KEYSTONE 24 BUT	SLMM / 41	$6,327	$4,544	4,519	2.4	$0	$4,244
1988	1	0	100%	1310-122 KEYSTONE 24 BUT	SLMM / 41	$5,135	$3,688	4,519	2.4	$0	$3,442
1988	1	0	100%	1329-122 6 WATER MAIN-6T	SLMM / 50	$5,965	$3,418	4,519	2.4	$0	$6,062
1989	1	0	100%	1436-132 Gilsabind Sealant	SLMM / 10	$5,074	$5,074	4,815	2.2	$0	$0
1989	1	0	100%	1456-122 20 DUCTILE IRON	SLMM / 50	$31,758	$17,506	4,815	2.2	$0	$31,831
1991	1	0	100%	1600-122 2 ELECTRIC VALVE	SLMM / 30	$30,168	$26,530	4,835	2.2	$0	$8,092
1991	1	0	100%	1693-122 EAST SIDE WATER	SLMM / 41	$461,757	$296,013	4,835	2.2	$0	$368,662
1992	1	0	100%	1757-139 CATTLEGUARD	SLMM / 20	$3,325	$3,325	4,985	2.2	$0	$0
1992	1	0	100%	1781-139 CATTLEGUARD	SLMM / 20	$2,374	$2,374	4,985	2.2	$0	$0
1992	1	0	100%	1788-121 Electric City 20 Water Line	SLMM / 10	$1,241	$1,241	4,985	2.2	$0	$0
1993	1	0	100%	1859-131 F Description	SLMM / 5	$812	$812	5,210	2.1	$0	$0
1993	1	0	100%	1915-122 800' OF 16 WATE	SLMM / 41	$36,817	$21,838	5,210	2.1	$0	$30,920
1994	1	0	100%	2100-122 16 WATER MAIN-D	SLMM / 41	$11,760	$6,626	5,408	2.0	$0	$10,210
1995	1	0	100%	2118-122 565' 12 WATER L	SLMM / 41	$6,010	$3,365	5,471	2.0	$0	$5,200
1995	1	0	100%	2190-122 16 WATER LINE-D	SLMM / 41	$85,319	$47,051	5,471	2.0	$0	$75,223
1995	1	0	100%	2256-122 16WATERLINE-ET	SLMM / 41	$13,415	$7,343	5,471	2.0	$0	$11,937
1996	1	0	100%	2354-122 CATHODIC PROTECT	SLMM / 20	$20,670	$20,670	5,620	1.9	$0	$0
1996	1	1	100%	2382-151 Intake Piping Re	MAN / 30	$17,675	$0	5,620	1.9	$33,823	$0
1996	1	0	100%	2415-122 1ST AV WEST WAT	SLMM / 41	$106,395	$56,173	5,620	1.9	$0	$96,105
1996	1	0	100%	2429-122 SCOTT DRIVE WAT	SLMM / 41	$9,429	$4,959	5,620	1.9	$0	$8,554
1996	1	0	100%	2552-139 ASPHALT SURFACES	SLMM / 20	$8,000	$8,000	5,620	1.9	$0	$0
1996	1	0	0%	2539-124 BURKITT ST SEWE	SLMM / 41	$61,096	$31,402	5,620	1.9	$0	$0
1997	1	0	100%	2686-122 DANA/DOWNER WATE	SLMM / 20	$625,197	$624,363	5,826	1.8	$0	$1,541
1997	1	0	100%	2662-124 REHABILITATION 4	SLMM / 10	$170,040	$170,040	5,826	1.8	$0	$0

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1998	1	0	100%	2775-122 WATER LINES-PHAS	SLMM / 41	$515,514	$244,555	5,920	1.8	$0	$492,229
1998	1	0	100%	2777-122 WATER LINES-SID#	SLMM / 41	$605,481	$285,639	5,920	1.8	$0	$581,032
1998	1	0	100%	2780-122 12 WATER MAIN E	SLMM / 70	$14,202	$3,843	5,920	1.8	$0	$18,819
1999	1	0	100%	4121-122 WATER LINES-SID#	SLMM / 50	$332,680	$122,477	6,059	1.8	$0	$373,099
1999	1	0	100%	4123-122 3RD AV EAST WAT	SLMM / 50	$47,398	$17,443	6,059	1.8	$0	$53,167
1999	1	0	100%	4124-122 6TH AV EAST WAT	SLMM / 50	$37,587	$13,833	6,059	1.8	$0	$42,163
2000	1	0	100%	4181-122 WATER SYSTEM-GRI	SLMM / 41	$40,896	$17,079	6,221	1.7	$0	$41,173
2000	1	0	100%	4187-122 WATER LINES-SID#	SLMM / 41	$754,558	$315,123	6,221	1.7	$0	$759,663
2001	1	0	100%	4168-122 UPGRADE WATERSAL	SLMM / 10	$7,900	$7,900	6,334	1.7	$0	$0
2001	1	0	100%	5003 Sheridan Ave. Reconstruction Water	SLMM / 41	$323,730	$126,597	6,334	1.7	$0	$334,709
2002	1	0	100%	5006 SID #75 Water Lines	SLMM / 41	$769,558	$296,515	6,538	1.6	$0	$778,112
2002	1	0	100%	5017 Sheridan Ave Extension Water	SLMM / 41	$231,163	$86,545	6,538	1.6	$0	$237,882
2005	1	0	100%	5158 Fort Road Water Line	SLMM / 41	$21,109	$6,550	7,446	1.4	$0	$21,029
2005	1	1	100%	5163 Intake Improvement Project	SLMM / 41	$4,045,719	$1,229,941	7,446	1.4	$4,066,881	$0
2005	1	0	100%	5201 Olympus/DeSmet Water Lines	SLMM / 25	$505,941	$238,401	7,446	1.4	$0	$386,413
2005	1	0	100%	5199 Intake Septic System	SLMM / 15	$7,500	$5,875	7,446	1.4	$0	$2,347
2005	1	0	100%	5202 Avoca Realignment Water Lines	SLMM / 25	$58,061	$26,971	7,446	1.4	$0	$44,904
2006	1	0	100%	5204 Scott/Broadway Water Lines	SLMM / 25	$496,830	$227,475	7,751	1.4	$0	$373,727
2006	1	0	100%	5209 Sumner Water Lines	SLMM / 25	$223,522	$99,095	7,751	1.4	$0	$172,640
2006	1	0	100%	5745 Sumner St Completion - Water Lines	SLMM / 25	$98,290	$42,593	7,751	1.4	$0	$77,279
2008	1	1	100%	095011 30 Water Line Meters - SAWS	SLMM / 18	$37,860	$18,755	8,310	1.3	$24,725	$0
2008	1	1	100%	0950110 30 Water Line Vault Structures	SLMM / 75	$886,905	$105,443	8,310	1.3	$1,011,335	$0
2008	1	1	100%	0950111 30 Water Line Seeding	SLMM / 75	$13,508	$1,606	8,310	1.3	$15,403	$0
2008	1	1	100%	0950112 30 Water Line Mains & Eastside Ind Main	SLMM / 75	$13,761,000	$1,636,030	8,310	1.3	$15,691,628	$0
2008	1	1	100%	095013 30 Water Line Mains & Eastside Ind Main	SLMM / 60	$6,471,665	$961,762	8,310	1.3	$7,130,686	$0
2008	1	1	100%	095014 30 Water Line Valves & Equipment	SLMM / 60	$900,485	$133,823	8,310	1.3	$992,182	$0
2008	1	1	100%	095015 30 Water Line Plug Valves	SLMM / 60	$9,524	$1,416	8,310	1.3	$10,494	$0
2008	1	1	100%	095016 30 Water Line Becton Hall 24	SLMM / 60	$45,765	$6,802	8,310	1.3	$50,424	$0
2008	1	0	100%	095017 16 Cross Conneciton West View Mains/Valve	SLMM / 60	$16,784	$2,495	8,310	1.3	$0	$18,492
2008	1	0	100%	095018 BH Brundage Girls School Main/Valve/Hydrant	SLMM / 60	$220,821	$32,817	8,310	1.3	$0	$243,307
2008	1	0	100%	095019 Install Clubhouse	SLMM / 50	$410,344	$73,178	8,310	1.3	$0	$436,346
2010	1	0	100%	2010-30 Re-roof water treatment	SLMM / 20	$29,800	$10,554	8,799	1.2	$0	$23,523
2011	1	0	100%	2011-20 Cross Valley Slip Lining	SLMM / 25	$1,109,049	$277,263	9,070	1.2	$0	$986,259
2011	1	0	100%	2011-24 Brooks Smith Street	SLMM / 25	$1,722,756	$424,946	9,070	1.2	$0	$1,538,827
2011	1	0	100%	2011-22 Sugarland Utilities	SLMM / 25	$1,979,901	$481,776	9,070	1.2	$0	$1,776,344
2011	1	0	100%	2011-12 Paradise Pump Station	SLMM / 20	$30,868	$9,261	9,070	1.2	$0	$25,621
2011	1	0	100%	2012-28 Fire Hydrant - R&O project	SLMM / 25	$6,000	$1,400	9,070	1.2	$0	$5,454
2011	1	0	60%	2012-22A Bridgecreek Subdivision Phase I & II W&S	SLMM / 25	$82,345	$18,665	9,070	1.2	$0	$45,303
2011	1	0	0%	2011-21 North Lift Station Expansion	SLMM / 25	$1,398,034	$367,696	9,070	1.2	$0	$0
2012	1	0	100%	0000000008 20 Waterline	SLMM / 25	$3,262,689	$1,098,439	9,308	1.2	$0	$2,500,560

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2012	1	0	60%	2013-28 Brooks / Smith Street Phase II - W&S	SLMM / 25	$538,698	$105,944	9,308	1.2	$0	$300,001
2012	1	0	100%	2013-29 Sheridan NW Tank & Transmission Main-W&S	SLMM / 25	$4,609,107	$906,458	9,308	1.2	$0	$4,278,017
2012	1	0	100%	2013-41 SAWS Loan Asset -133 WTP Under Structures	SLMM / 25	$836,593	$297,106	9,308	1.2	$0	$623,319
2012	1	0	100%	2013-41 SAWS Loan Asset -134 WTP Above Structures	SLMM / 25	$429,555	$174,687	9,308	1.2	$0	$294,473
2012	1	0	100%	2013-42 SAWS Loan Asset -135 WTP Piping Valves	SLMM / 25	$497,280	$202,229	9,308	1.2	$0	$340,900
2012	1	0	100%	2013-43 SAWS Loan Asset -136 WTP Equipment	SLMM / 25	$722,677	$368,377	9,308	1.2	$0	$409,356
2012	1	0	100%	2013-44 SAWS Loan Asset -137 WTP Instrumentation	SLMM / 10	$95,811	$95,811	9,308	1.2	$0	$0
2012	1	0	100%	2013-45 SAWS Loan Asset -138 WTP Site Work	SLMM / 25	$154,289	$78,647	9,308	1.2	$0	$87,396
2012	1	0	100%	2013-46 SAWS Loan Asset -143 SCADA System	SLMM / 5	$125,451	$125,451	9,308	1.2	$0	$0
2012	1	0	100%	2013-47 SAWS Loan Asset -35-59 Tools & Misc Items	SLMM / 10	$12,471	$10,338	9,308	1.2	$0	$2,464
2012	1	0	100%	2013-30 BGWTP Clearwell Tank & Piping - W&S	SLMM / 25	$1,176,887	$215,763	9,308	1.2	$0	$1,110,477
2013	1	0	100%	2013-01 Sun Power Electric Security Gate - SWTP	SLMM / 20	$14,706	$3,064	9,547	1.1	$0	$13,114
2013	1	0	100%	2014-43A North Main Rebuild	SLMM / 25	$1,779,401	$972,080	9,547	1.1	$0	$909,422
2013	1	0	60%	2014-48A West Downtown Infrastructure - Phase III	SLMM / 25	$1,003,183	$153,822	9,547	1.1	$0	$574,067
2014	1	0	100%	2014-01 Bulk Water Salesman Unit-Washington Park	SLMM / 10	$39,751	$13,250	9,806	1.1	$0	$29,064
2014	1	0	100%	2014-01A Bulk Water Salesman Unit - Kroe Lane	SLMM / 10	$37,738	$12,580	9,806	1.1	$0	$27,592
2014	1	0	60%	2014-44A High Tech Business Park Infrastructure	SLMM / 25	$1,922,054	$256,274	9,806	1.1	$0	$1,096,133
2014	1	0	0%	2014-41A Sheridan Commercial Park Improvements	SLMM / 25	$124,646	$15,789	9,806	1.1	$0	$0
2014	1	0	100%	2014-02 Seamless Aluminum Siding & 2 Garage Doors	SLMM / 20	$7,965	$1,195	9,806	1.1	$0	$7,425
2015	1	0	100%	2016-72A Frth West Water Loop & Yellowtail Drive	SLMM / 25	$2,573,237	$188,704	10,035	1.1	$0	$2,555,478
2015	1	0	60%	2016-70A Wyo Av/Park Area Reconstruction Phases I-III	SLMM / 25	$2,945,543	$186,551	10,035	1.1	$0	$1,774,069
2015	1	0	100%	2016-76 West 5th St Water Lines Project	SLMM / 25	$117,789	$7,067	10,035	1.1	$0	$118,659
2017			100%	4 MG Tank Repairs		$2,397,594					
2017			100%	Meter Replacement		$455,166					
2017			100%	Sheridan Hydropower		$479,080					
2017			100%	Conventional WTP Upgrades		$6,485,086					
2017			100%	North Sheridan Interchange		$102,944					
2017			100%	Water Creek Crossing Replacements		$207,155					
2017			100%	Leopard Street Waterline replacement		$1,966,157					
2017			60%	N. End Infrastructure Extension		$56,516					
otal						$80,269,540	$19,217,409			$29,722,765	$29,132,382
1979	0	0	100%	0363-639 Alarm panel-chlorine leak dect	SLMM / 5	$300	$300	3,003	3.6	$0	$0
1982	0	0	100%	0797-411 DIESEL GENERATOR	SLMM / 20	$32,900	$32,900	3,825	2.8	$0	$0
1984	0	0	0%	1194-359 1981 Terra Truck	SLMM / 5	$112,073	$112,073	4,146	2.6	$0	$0
1988	0	0	100%	1286-639 Fisher & Porter Chameleon Mark II Controller w,	SLMM / 10	$7,384	$7,384	4,519	2.4	$0	$0
1989	0	0	100%	1384-344 CASE 580K BACKHO	SLMM / 20	$37,955	$37,955	4,815	2.2	$0	$0
1989	0	0	100%	1388-482 Stanley Pave break w/ asphalt	SLMM / 10	$12,900	$12,900	4,815	2.2	$0	$0
1989	0	0	100%	1408-839 Rockwell Interrogator	SLMM / 5	$5,120	$5,120	4,815	2.2	$0	$0
1989	0	0	100%	1409-839 Rockwell Interrogator	SLMM / 5	$5,120	$5,120	4,815	2.2	$0	$0

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1989	0	0	100%	1410-834 Rockwell RMMS software	SLMM / 5	$2,600	$2,600	4,815	2.2	$0	$0
1989	0	0	100%	1416-349 FORD DIESEL TRAC	SLMM / 15	$16,611	$16,611	4,815	2.2	$0	$0
1989	0	0	100%	1419-439 CROWN PALLET TRU	SLMM / 15	$7,100	$7,100	4,815	2.2	$0	$0
1989	0	0	100%	2713-371 1988 TOYOTO PICKUP	SLMM / 5	$9,850	$9,850	4,815	2.2	$0	$0
1991	0	0	100%	1583-362 flat bed trailer	SLMM / 10	$5,485	$5,485	4,835	2.2	$0	$0
1991	0	0	100%	1628-847 trillum telephone system	SLMM / 5	$425	$425	4,835	2.2	$0	$0
1991	0	0	100%	1631-861 CaFn copier	SLMM / 5	$4,298	$4,298	4,835	2.2	$0	$0
1991	0	0	100%	1638-922 Lorado Management chair	SLMM / 10	$350	$350	4,835	2.2	$0	$0
1991	0	0	100%	1679-971 Carpet flooring	SLMM / 10	$1,544	$1,544	4,835	2.2	$0	$0
1991	0	0	100%	1641-469 High pressure washer	SLMM / 10	$2,175	$2,175	4,835	2.2	$0	$0
1991	0	0	100%	1648-879 2 minitor II pagers	SLMM / 5	$680	$680	4,835	2.2	$0	$0
1991	0	0	100%	1649-871 Radio	SLMM / 5	$461	$461	4,835	2.2	$0	$0
1991	0	0	100%	1657-922 managemnt chair	SLMM / 10	$170	$170	4,835	2.2	$0	$0
1991	0	0	100%	1658-979 antistatic mat 60x46	SLMM / 10	$130	$130	4,835	2.2	$0	$0
1991	0	0	100%	1659-919 ErgoFmic furniture	SLMM / 10	$1,377	$1,377	4,835	2.2	$0	$0
1991	0	0	100%	1661-649 Chlorine analyzer	SLMM / 5	$2,200	$2,200	4,835	2.2	$0	$0
1991	0	0	100%	1683-831 Printer	SLMM / 5	$1,933	$1,933	4,835	2.2	$0	$0
1991	0	0	100%	1697-932 Book case	SLMM / 10	$398	$398	4,835	2.2	$0	$0
1992	0	0	100%	1706-699 15 ton frame press	SLMM / 10	$588	$588	4,985	2.2	$0	$0
1992	0	0	100%	1709-936 Hon Book Case	SLMM / 10	$326	$326	4,985	2.2	$0	$0
1992	0	0	100%	1718-834 Taabs Multi-plus VP Grade	SLMM / 5	$2,450	$2,450	4,985	2.2	$0	$0
1992	0	0	100%	1719-859 VCR	SLMM / 5	$197	$197	4,985	2.2	$0	$0
1992	0	0	100%	1729-421 Stanley Hyd. Pump W/50Ft. Hose	SLMM / 10	$2,400	$2,400	4,985	2.2	$0	$0
1992	0	0	100%	1743-639 Chlorinator W/Ejector	SLMM / 10	$3,882	$3,882	4,985	2.2	$0	$0
1992	0	0	100%	1744-831 Backpack External Floppy Drived	SLMM / 5	$300	$300	4,985	2.2	$0	$0
1992	0	0	100%	1745-469 Vanguard Power Washer	SLMM / 10	$2,895	$2,895	4,985	2.2	$0	$0
1992	0	0	100%	1753-371 1991 GMC 4x4 3/4 Ton Pickup	SLMM / 10	$15,995	$15,995	4,985	2.2	$0	$0
1992	0	0	100%	1754-922 Hon 7901 Chair	SLMM / 10	$179	$179	4,985	2.2	$0	$0
1992	0	0	100%	1759-359 1992 International Cab+Chassis Unit#3-81	SLMM / 5	$26,709	$26,709	4,985	2.2	$0	$0
1992	0	0	100%	1773-834 Computer Software	SLMM / 5	$1,351	$1,351	4,985	2.2	$0	$0
1992	0	0	100%	1774-834 Computer Software	SLMM / 5	$1,351	$1,351	4,985	2.2	$0	$0
1992	0	0	100%	1776-353 Heil Dump Body-SL 516 Yn	SLMM / 10	$4,798	$4,798	4,985	2.2	$0	$0
1992	0	0	100%	1789-871 Motorola Radio-Jet Rodder	SLMM / 5	$582	$582	4,985	2.2	$0	$0
1992	0	0	100%	1790-499 4hp Trailblazer Mower	SLMM / 5	$1,383	$1,383	4,985	2.2	$0	$0
1993	0	0	100%	1814-350 Int Hovgh 515B Loader	SLMM / 10	$20,000	$20,000	5,210	2.1	$0	$0
1993	0	0	100%	1817-439 Butco Tripod W/Harness	SLMM / 10	$1,189	$1,189	5,210	2.1	$0	$0
1993	0	0	100%	1818-639 2 8 4100LB Tank Scales	SLMM / 10	$5,857	$5,857	5,210	2.1	$0	$0
1993	0	0	100%	1835-871 Motorola Radio W/Pager	SLMM / 10	$535	$535	5,210	2.1	$0	$0
1993	0	0	100%	1837-963 Microwave	SLMM / 10	$149	$149	5,210	2.1	$0	$0
1993	0	0	100%	1827-911 Desk+Computer Stand	SLMM / 10	$309	$309	5,210	2.1	$0	$0

City of Sheridan, WY
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1993	0	0	100%	1841-639 Do Probe + Meter	SLMM / 5	$1,283	$1,283	5,210	2.1	$0	$0
1993	0	0	100%	1845-834 Dictaphone 3710 Execuscribe	SLMM / 5	$1,495	$1,495	5,210	2.1	$0	$0
1993	0	0	100%	1860-847 F Description	SLMM / 10	$250	$250	5,210	2.1	$0	$0
1993	0	0	100%	1869-362 F Description	SLMM / 10	$7,520	$7,520	5,210	2.1	$0	$0
1993	0	0	100%	1870-656 F Description	SLMM / 10	$4,110	$4,110	5,210	2.1	$0	$0
1993	0	0	100%	1876-918 F Description	SLMM / 10	$592	$592	5,210	2.1	$0	$0
1993	0	0	100%	1877-918 F Description	SLMM / 10	$592	$592	5,210	2.1	$0	$0
1993	0	0	100%	1878-918 F Description	SLMM / 10	$364	$364	5,210	2.1	$0	$0
1993	0	0	100%	1884-639 F Description	SLMM / 10	$1,673	$1,673	5,210	2.1	$0	$0
1993	0	0	100%	1894-699 F Description	SLMM / 10	$5,353	$5,353	5,210	2.1	$0	$0
1993	0	0	100%	1897-911 F Description	SLMM / 10	$1,261	$1,261	5,210	2.1	$0	$0
1993	0	0	100%	1898-921 F Description	SLMM / 10	$300	$300	5,210	2.1	$0	$0
1993	0	0	100%	1903-911 MCA Ketboard Drawer	SLMM / 10	$152	$152	5,210	2.1	$0	$0
1993	0	0	100%	1904-934 Ase 4 drawer lateral file	SLMM / 10	$816	$816	5,210	2.1	$0	$0
1993	0	0	100%	1928-639 Dissoved O2 probe	SLMM / 10	$655	$655	5,210	2.1	$0	$0
1993	0	0	100%	1929-936 wall cabinet	SLMM / 10	$158	$158	5,210	2.1	$0	$0
1993	0	0	100%	1945-639 8propeller meter	SLMM / 10	$1,875	$1,875	5,210	2.1	$0	$0
1993	0	0	100%	1952-444 Mueller drilling maching	SLMM / 10	$3,019	$3,019	5,210	2.1	$0	$0
1994	0	0	100%	1969-922 Clerical chair	SLMM / 20	$349	$349	5,408	2.0	$0	$0
1994	0	0	100%	1970-934 lateral file	SLMM / 10	$326	$326	5,408	2.0	$0	$0
1994	0	0	100%	1977-654 Pak 3 porta pak	SLMM / 10	$1,295	$1,295	5,408	2.0	$0	$0
1994	0	0	100%	1978-654 2 Hip Pak	SLMM / 10	$1,550	$1,550	5,408	2.0	$0	$0
1994	0	0	100%	1980-934 36 lateral file	SLMM / 10	$801	$801	5,408	2.0	$0	$0
1994	0	0	100%	1981-934 4 drawer legal file	SLMM / 10	$189	$189	5,408	2.0	$0	$0
1994	0	0	100%	2058-491 Toro lawn tractor with mower	SLMM / 10	$5,448	$5,448	5,408	2.0	$0	$0
1995	0	0	100%	2725-639 3.558 SENSUS WAT	SLMM / 10	$498,850	$498,850	5,471	2.0	$0	$0
1995	0	0	100%	2727-421 REPAIR VERTICAL	SLMM / 10	$8,400	$8,400	5,471	2.0	$0	$0
1995	0	0	100%	2247-639 STREAMING CURRENT	SLMM / 5	$7,510	$7,510	5,471	2.0	$0	$0
1995	0	0	100%	2248-639 STREAMING CURRENT	SLMM / 5	$7,495	$7,495	5,471	2.0	$0	$0
1995	0	0	100%	2268-499 HONDA ROUGH TERR	SLMM / 10	$6,765	$6,765	5,471	2.0	$0	$0
1995	0	0	100%	2738-421 SUBMERSIBLE PUMP	SLMM / 10	$6,500	$6,500	5,471	2.0	$0	$0
1996	0	0	100%	2363-639 ULTRASONIC LEVEL	SLMM / 10	$5,492	$5,492	5,620	1.9	$0	$0
1996	0	0	100%	2376-421 PACE PUMP W/7.5 H	SLMM / 10	$6,025	$6,025	5,620	1.9	$0	$0
1996	0	0	100%	2508-414 QUINCY AIR COMPR	SLMM / 10	$5,591	$5,591	5,620	1.9	$0	$0
1996	0	0	100%	2518-699 CHLORINATION UNIT	SLMM / 10	$6,124	$6,124	5,620	1.9	$0	$0
1996	0	0	100%	2528-639 PARTICLE OCOUNYING	SLMM / 10	$5,500	$5,500	5,620	1.9	$0	$0
1997	0	0	100%	2594-421 GOULDS SURFACE P	SLMM / 10	$5,591	$5,591	5,826	1.8	$0	$0
1997	0	0	100%	2623-491 JOHN DEERE LAWN &	SLMM / 10	$5,408	$5,408	5,826	1.8	$0	$0
1997	0	0	100%	2678-639 PARTICLE COUNTER	SLMM / 7	$29,500	$29,500	5,826	1.8	$0	$0
1998	0	0	100%	2747-414 AIR COMPRESSOR	SLMM / 7	$11,700	$11,700	5,920	1.8	$0	$0

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1998	0	0	100%	2873-371 1999 FORD PICKUP	SLMM / 5	$17,784	$17,784	5,920	1.8	$0	$0
1999	0	0	100%	2889-350 1999 FORD MMETLR	SLMM / 7	$55,034	$55,034	6,059	1.8	$0	$0
2000	0	0	100%	3046-834 Flexibill / Conversion	SLMM / 5	$9,695	$9,695	6,221	1.7	$0	$0
2000	0	0	100%	3088-639 IMSTRUMENTATION	SLMM / 10	$700,995	$700,995	6,221	1.7	$0	$0
2000	0	0	100%	4151-221 UPGRADE ELECTRICAL	SLMM / 20	$11,613	$9,823	6,221	1.7	$0	$0
2000	0	0	100%	4168-699 FILLTOMAT AUTO FI	SLMM / 10	$11,715	$11,715	6,221	1.7	$0	$0
2001	0	0	100%	4161-359 HYDRAULIC POWER	SLMM / 10	$6,626	$6,626	6,334	1.7	$0	$0
2001	0	0	100%	5001 Asset Management Software	SLMM / 2	$9,805	$9,805	6,334	1.7	$0	$0
2002	0	0	100%	5010 Server w/5 Computer Workstations	SLMM / 2	$15,714	$15,714	6,538	1.6	$0	$0
2002	0	0	100%	5013 Pathfinder Mapping System	SLMM / 5	$7,495	$7,495	6,538	1.6	$0	$0
2002	0	0	100%	5014 FlowMeter w/Datalogger	SLMM / 5	$5,320	$5,320	6,538	1.6	$0	$0
2002	0	0	100%	5015 Portable Water Salesman	SLMM / 10	$13,055	$13,055	6,538	1.6	$0	$0
2002	0	0	100%	5056 Inhance Software	SLMM / 2	$14,960	$14,960	6,538	1.6	$0	$0
2002	0	0	100%	5057 Dodge Dakota Pickup	SLMM / 5	$20,000	$20,000	6,538	1.6	$0	$0
2002	0	0	100%	5058 Trailmax TD-42 Trailer Unit#5-66	SLMM / 5	$17,915	$17,915	6,538	1.6	$0	$0
2003	0	0	100%	5061 WaterCAD-2000	SLMM / 2	$14,896	$14,896	6,695	1.6	$0	$0
2003	0	0	100%	5062 2003 Sterling Tandem Dump Truck #L79669	SLMM / 5	$87,096	$87,096	6,695	1.6	$0	$0
2003	0	0	100%	5063 Radio Read Transceiver	SLMM / 10	$166,590	$166,590	6,695	1.6	$0	$0
2003	0	0	100%	5064 Roller Bucket	SLMM / 5	$9,300	$9,300	6,695	1.6	$0	$0
2003	0	0	100%	5065 Mechanical Thumb w/Coupler	SLMM / 5	$6,268	$6,268	6,695	1.6	$0	$0
2003	0	0	100%	5113 Radio Reads UNits w/Brackets	SLMM / 10	$10,618	$10,618	6,695	1.6	$0	$0
2004	0	0	100%	5115 Self Cleaning Water Filter	SLMM / 10	$9,970	$9,970	7,115	1.5	$0	$0
2004	0	0	100%	5116 DR/4100 Spectropotometer	SLMM / 10	$5,571	$5,571	7,115	1.5	$0	$0
2004	0	0	100%	5156 2004 John Deere 310S Backhoe Loader #943227	SLMM / 10	$58,677	$58,677	7,115	1.5	$0	$0
2005	0	0	100%	5166 Handheld Radio Read Device	SLMM / 10	$9,700	$9,700	7,446	1.4	$0	$0
2005	0	0	100%	5164 Overload Alarm	SLMM / 10	$32,995	$32,995	7,446	1.4	$0	$0
2005	0	0	100%	5198 Hydrostatic All Wheel Drive Loader	SLMM / 12	$55,400	$54,582	7,446	1.4	$0	$0
2006	0	0	100%	5211 SCADA Computers & Software	SLMM / 5	$64,932	$64,932	7,751	1.4	$0	$0
2006	0	0	100%	5704 Konica Bizhub C450 Digital Copier with finisher	SLMM / 3	$6,898	$6,898	7,751	1.4	$0	$0
2006	0	0	100%	5710 Kubota 4WD Tractor w Cab Unit#4-80	SLMM / 10	$37,065	$37,065	7,751	1.4	$0	$0
2007	0	0	100%	5723 Grundfos Booster	SLMM / 5	$21,205	$21,205	7,967	1.3	$0	$0
2007	0	0	100%	5803 Chevy Silverado 4WD 1/2 Ton Pickup	SLMM / 10	$18,699	$18,053	7,967	1.3	$0	$0
2007	0	0	100%	5804 Chevy Silverado 4WD 1/2 Ton Pickup	SLMM / 10	$18,699	$18,053	7,967	1.3	$0	$0
2007	0	0	100%	5806 Chevy Silverado 4WD 1/2 Ton Pickup	SLMM / 10	$20,713	$19,998	7,967	1.3	$0	$0
2007	0	0	100%	5808 Chevy Colorado 4WD Ext Cab Pickup	SLMM / 10	$17,646	$17,037	7,967	1.3	$0	$0
2008	0	0	100%	5810 2008 Sterling LT9500 Dump Truck #AA3252	SLMM / 10	$98,350	$90,827	8,310	1.3	$0	$0
2009	0	0	100%	0000000014 2009 GMC Sierra 1500 Ext Cab 4WD-SCADA	SLMM / 5	$27,362	$27,362	8,570	1.3	$0	$0
2009	0	0	100%	0000000013 2009 GMC Sierra 1500 Reg Cab 4WD	SLMM / 5	$21,137	$21,137	8,570	1.3	$0	$0
2009	0	0	100%	0000000015 2009 GMC Sierra 1500 Crew Cab 4WD BGWTI	SLMM / 5	$26,833	$26,833	8,570	1.3	$0	$0
2009	0	0	100%	0000000016 Hand Held Meter Reader	SLMM / 5	$5,310	$5,310	8,570	1.3	$0	$0

City of Sheridan, WY
Water Plant Investment Fee
City of Sheridan Water Asset Listing as of June 30, 2017

Acq. Year	Backbone? 1=Yes,2=No	Raw Water 1=Yes,2=No	% Water	Asset Description	Dep. Method/ Asset Life	Original Cost	EOY Depr.	ENR Value	ENR Factor	PIF Eligible Asset RCNLD - Raw	RCNLD - Treated
2009	0	0	100%	2010-35 Tarper System to Slider Truck	SLMM / 5	$7,500	$7,500	8,570	1.3	$0	$0
2009	0	0	0%	2010-34 Turntable Sub Assy For N Clarifier	SLMM / 10	$18,117	$13,739	8,570	1.3	$0	$0
2009	0	0	100%	2010-9-2010 Compressor SWTP	SLMM / 10	$7,043	$5,341	8,570	1.3	$0	$0
2010	0	0	100%	2010-28 Coaguilant Charge Analyzer	SLMM / 10	$12,200	$9,049	8,799	1.2	$0	$0
2010	0	0	100%	2010-20 2010 Ford F350 Truck Unit#3-9	SLMM / 5	$27,591	$27,591	8,799	1.2	$0	$0
2010	0	0	100%	2010-19 2010 Ford F150 Pickup Unit#2-73	SLMM / 5	$23,687	$23,687	8,799	1.2	$0	$0
2010	0	0	100%	2010-31 Booster Replacement - Rapid Cr	SLMM / 5	$22,712	$22,712	8,799	1.2	$0	$0
2010	0	0	100%	2010-32 Booster Replacement - Timm Dr	SLMM / 5	$22,915	$22,915	8,799	1.2	$0	$0
2010	0	0	100%	2011-07 MTR Transceiver Ken Dept 534	SLMM / 10	$186,600	$127,510	8,799	1.2	$0	$0
2012	0	0	100%	2012-06 2012 Ford F150 4x4 White #B57126 Unit#2-5	SLMM / 5	$23,264	$23,264	9,308	1.2	$0	$0
2012	0	0	100%	2013-12 GEO XH 6000 Series Handheld GPS Unit w/Floodli	SLMM / 5	$8,870	$8,722	9,308	1.2	$0	$0
2012	0	0	100%	2013-14 2012 Ford F150 Pickup 4x4 Truck - White	SLMM / 5	$19,586	$18,280	9,308	1.2	$0	$0
2013	0	0	100%	2013-13 2013 Ford S-DTY F-45 Utility Truck - White	SLMM / 5	$28,720	$23,933	9,547	1.1	$0	$0
2013	0	0	100%	2014-05 db UVAS sc Probe 50mm & SC100 Universal Conti	SLMM / 5	$9,000	$7,050	9,547	1.1	$0	$0
2014	0	0	100%	2014-06 Halogen Duplex II Emergency Valve Shutoff Syste	SLMM / 5	$16,762	$11,175	9,806	1.1	$0	$0
2014	0	0	100%	2014-07 db UVAS sc Probe 50mm	SLMM / 5	$8,393	$5,036	9,806	1.1	$0	$0
2014	0	0	100%	2015-01 2013 TCM Mitsui Forklift FHG25T3	SLMM / 10	$28,500	$7,600	9,806	1.1	$0	$0
2014	0	0	100%	2015-02 2013 TCM Mitsui Forklift FHG25T3	SLMM / 10	$27,500	$7,333	9,806	1.1	$0	$0
2015	0	0	100%	2015-30 Formazine Turbidity Standard 4100NTU 500ML	SLMM / 5	$5,642	$2,633	10,035	1.1	$0	$0
2015	0	0	100%	2015-29 SCADA Equipment & Software - SWTP	SLMM / 5	$18,412	$7,365	10,035	1.1	$0	$0
2015	0	0	100%	2016-63 2015 Caterpillar 314CLCR Hyd Excavator	SLMM / 10	$211,872	$40,609	10,035	1.1	$0	$0
2015	0	0	100%	2016-01 DR 6000 UV VIS Spectrometer DR 6000 with RFID	SLMM / 10	$8,456	$1,550	10,035	1.1	$0	$0
2015	0	0	100%	2016-02 2015 Ford F150 Supercab Truck	SLMM / 5	$26,268	$8,756	10,035	1.1	$0	$0
2015	0	0	100%	2016-03 2016 Ford S DTY F250 Crew Cab Truck	SLMM / 5	$28,875	$9,144	10,035	1.1	$0	$0
2015	0	0	100%	2016-04 Triplex Control Panel & 2 Myers 4WHV100M4-23	SLMM / 10	$22,218	$3,518	10,035	1.1	$0	$0
2016	0	0	100%	2016-06 Paco pump rebuild Model #58-49511	SLMM / 10	$14,136	$1,767	10,338	1.0	$0	$0
2017	0	0	100%	2017-03 Volumetric Soda Ash Feeder System	SLMM / 10	6,091.71	$0	10,754	1.0	$0	$0
2017	0	0	100%	2017-04 40ft High Cube Storage Container	SLMM / 25	7,200.00	$0	10,754	1.0	$0	$0
1979	1	0	60%	0061-124 SEWER & WATER LI	SLMM / 41	$102,911	$98,990	3,003	3.6	$0	$8,427
2001	1	0	0%	5002 13th Street Sewer Extension	SLMM / 41	$19,614	$7,671	6,334	1.7	$0	$0
2004	1	0	60%	5117 Gladstone Area Water/Sewer Lines	SLMM / 41	$663,943	$215,377	7,115	1.5	$0	$406,807
2004	1	0	60%	5155 KROE Lane Water/Sewer Lines	SLMM / 41	$323,435	$101,025	7,115	1.5	$0	$201,706
2009	1	0	60%	0000000005 Linden Project - Water & Sewer	SLMM / 25	$1,112,311	$367,063	8,570	1.3	$0	$561,122
2010	1	0	60%	2010-3 N Broadway N Gould Project-Water and Sewer	SLMM / 25	$1,658,577	$480,987	8,799	1.2	$0	$863,571
2017	0	0	100%	2017-02 Solitax Turbidity Probe with Controller	SLMM / 10	5,183.42	$0	10,754	1.0	$0	$0
Subtotal						$7,526,601	$4,498,641			$0	$2,041,632
						$97,163,479	**$26,536,425**			**$29,739,817**	**$38,399,994**

City of Sheridan, WY
Water Plant Investment Fees
Buy-in Methodology - Water Supply Capacity Basis
Replacement Cost New Less Depreciation

Line No.	Description	Raw Water Infrastructure	Treated Infrastructure	Total
1	Asset Value - Replacement Cost New Less Depreciation	$29,739,817	$38,399,994	$68,139,811
2	Outstanding Principal	(6,875,297)	(5,003,775)	(11,879,072)
3	**Total Backbone Assets**	**$22,864,520**	**$33,396,219**	**$56,260,739**
4	Water Supply Capacity (Eq. 3/4" Meters)	16,079	16,079	
5	Water Usage Per Eq. 3/4" Meter (gpd)			
6	Unit Cost	$1,422	$2,077	
7	Treated Water Tap Fee Per Eq. 3/4" Meter	$1,422	$2,077	**$3,499**
8	Raw Water Tap Fee Per Eq. 3/4" Meter	$1,422		**$1,422**

Existing SFR 3/4" - Inside City	$3,000
Existing SFR 3/4" - Outside City	$3,750

City of Sheridan, WY
Water Plant Investment Fees
Buy-in Methodology - Water Supply Capacity Basis

Meter	Meter Ratio	Existing Inside City	Proposed Inside City	Existing Outside City	Proposed Outside City
3/4 - Small Comm.	0.41	$1,230	$1,435	$2,460	$1,793
3/4 - Small MF	0.66	1,980	2,309	3,690	2,887
3/4 - inch	1.00	3,000	3,499	3,750	4,374
1 - inch	1.67	5,010	5,843	6,263	7,304
1 1/2-inch	3.33	9,990	11,652	12,488	14,565
2 - inch	5.33	15,990	18,650	19,988	23,312
3 - inch	11.67	35,010	40,833	43,763	51,042
4 - inch	21.00	63,000	73,479	78,750	91,849
6 - inch	43.33	129,990	151,611	162,488	189,514
8 - inch	80.00	240,000	279,920	300,000	349,899

APPENDIX D:
SEWER PIFS

City of Sheridan, WY
Sewer Plant Investment Fee
City of Sheridan Sewer Asset Listing as of June 30, 2017

Acq. Year	Asset Code	Backbone? 1=Yes,2=No	% Sewer	Asset Description	Dep. Method / Asset Life	Original Cost	EOY Depr.	ENR Value	ENR Factor	PIF Eligible Assets RCN	PIF Eligible Assets RCNLD
1920	1410	1	100%	1091-010 5 ACRES SEWER PL	Land / 30	$1,000	$0	251	1.0	$1,000	$1,000
1964	1410	1	100%	1570-010 1 ACRE SEWER PLA	Land / 30	$2,300	$0	936	1.0	$2,300	$2,300
1964	1410	1	100%	1065-010 2.2 ACRES SEWER	Land / 30	$5,050	$0	936	1.0	$5,050	$5,050
1965	1410	1	100%	1569-010 0.6 ACRES-SEWER	Land / 30	$1,380	$0	971	1.0	$1,380	$1,380
otal						$9,730	$0			$9,730	$9,730
1967	1440	1	100%	1034-219 SEWAGE TREATMENT	SLMM / 35	$367,867	$367,867	1,074	10.0	$3,683,603	$0
1967	1440	1	100%	1035-219 SEWAGE TREATMENT	SLMM / 30	$623,479	$623,479	1,074	10.0	$6,243,153	$0
1984	1440	1	100%	1046-219 SEWER TREATMENT	SLMM / 35	$9,823,729	$9,268,936	4,146	2.6	$25,481,988	$1,439,088
1997	1440	1	100%	2547-221 NEW LIGHTS-SCREE	SLMM / 10	$6,500	$6,500	5,826	1.8	$11,999	$0
1997	1440	1	100%	2650-229 ROTAMAT FINE SCR	SLMM / 10	$89,865	$89,865	5,826	1.8	$165,885	$0
1997	1440	1	100%	2633-219 GRIT BUILDING AD	SLMM / 41	$206,299	$102,164	5,826	1.8	$380,814	$192,226
1997	1440	1	100%	2634-219 SCREENING BUILDI	SLMM / 41	$95,792	$47,439	5,826	1.8	$176,825	$89,256
1999	1440	1	100%	3025-229 ROOF/SECONDARY S	SLMM / 15	$9,850	$9,850	6,059	1.8	$17,483	$0
2005	1440	1	100%	5160 Grease/Septage Handling Facility	SLMM / 41	$1,315,166	$408,049	7,446	1.4	$1,899,520	$1,310,167
2006	1440	1	100%	5206 WWTP Electrical Improvements	SLMM / 20	$97,628	$55,508	7,751	1.4	$135,458	$58,441
2011	1440	1	100%	2012-08 New Roof - WWTP Pump Stations	SLMM / 20	$10,000	$2,959	9,070	1.2	$11,857	$8,349
otal						$12,646,175	$10,982,616			$38,208,585	$3,097,528
1977	1450	1	100%	5711 Infrastructure - 410' Sewer Line Recoup	SLMM / 41	$7,500	$7,494	2,576	4.2	$31,311	$26
1978	1450	1	100%	1045-124 SOUTHSIDE SEWER	SLMM / 30	$436,158	$436,158	2,776	3.9	$1,689,702	$0
1979	1450	1	100%	1052-124 NORTH END SEWER/J	SLMM / 50	$364,836	$283,735	3,003	3.6	$1,306,559	$290,443
1979	1450	1	100%	1058-124 DANA OUTFALL SEW	SLMM / 50	$107,843	$81,062	3,003	3.6	$386,209	$95,907
1980	1450	1	100%	1057-124 NORTHWEST TRUNK	SLMM / 50	$360,670	$277,494	3,237	3.3	$1,198,267	$276,339
1981	1450	1	100%	1048-124 COFFEEN AVE SEWE	SLMM / 50	$21,612	$15,741	3,535	3.0	$65,751	$17,862
1984	1450	1	100%	1047-124 INTERCEPTOR SEWE	SLMM / 50	$3,640,366	$2,431,088	4,146	2.6	$9,442,827	$3,136,775
1993	1450	1	100%	1917-124 42 OF 8 SEWER	SLMM / 41	$3,866	$2,293	5,210	2.1	$7,980	$3,246
1994	1450	1	100%	2046-124 MANHOLE INSTALLA	SLMM / 41	$5,349	$3,062	5,408	2.0	$10,637	$4,549
1997	1450	1	100%	4125-124 SEWER LINE-SID #7	SLMM / 50	$61,649	$24,237	5,826	1.8	$113,799	$69,059
1998	1450	1	100%	2776-124 SEWER LINES-PHAS	SLMM / 41	$132,413	$55,735	5,920	1.8	$240,543	$139,294
1998	1450	1	100%	4126-124 SEWER LINE-SID #7	SLMM / 50	$85,828	$31,098	5,920	1.8	$155,917	$99,423
1998	1450	1	100%	2760-124 8 SEWER-HOSP	SLMM / 75	$27,095	$6,853	5,920	1.8	$49,220	$36,771
1999	1450	1	100%	4122-124 SEWER LINES-SID #	SLMM / 50	$96,038	$35,343	6,059	1.8	$170,462	$107,730
2000	1450	1	100%	4188-124 SEWER LINES-SID #	SLMM / 41	$311,442	$130,066	6,221	1.7	$538,397	$313,548
2001	1450	1	100%	5004 Sheridan Ave Reconstruction Sewer	SLMM / 41	$158,139	$61,842	6,334	1.7	$268,502	$163,502
2002	1450	1	100%	5007 SID #75 Sewer Lines	SLMM / 41	$326,442	$125,780	6,538	1.6	$536,966	$330,071
2002	1450	1	100%	5016 Sheridan Ave Extension Sewer	SLMM / 41	$162,683	$60,908	6,538	1.6	$267,599	$167,412
2003	1450	1	100%	5112 Sludge Drying Beds	SLMM / 10	$104,320	$104,320	6,695	1.6	$167,573	$0

City of Sheridan, WY
Sewer Plant Investment Fee
City of Sheridan Sewer Asset Listing as of June 30, 2017

Acq. Year	Asset Code	Backbone? 1=Yes,2=No	% Sewer	Asset Description	Dep. Method / Asset Life	Original Cost	EOY Depr.	ENR Value	ENR Factor	PIF Eligible Assets RCN	PIF Eligible Assets RCNLD
2004	1450	1	100%	5159 Fort Road Sanitary Sewer	SLMM / 41	$68,019	$21,246	7,115	1.5	$102,812	$70,698
2005	1450	1	100%	5203 Avoca Realignment Sewer Lines	SLMM / 25	$25,148	$11,682	7,446	1.4	$36,321	$19,449
2006	1450	1	100%	5205 Scott/Broadway Sewer Lines	SLMM / 25	$277,711	$127,151	7,751	1.4	$385,320	$208,900
2006	1450	1	100%	5210 Sumner Sewer Lines	SLMM / 25	$264,067	$117,070	7,751	1.4	$366,389	$203,956
2006	1450	1	100%	5746 Sumner St Completion - Sewer Lines	SLMM / 25	$62,798	$27,003	7,751	1.4	$87,131	$49,664
2007	1450	1	100%	5802 Dana/Downer Sewer	SLMM / 50	$438,112	$85,432	7,967	1.3	$591,394	$476,072
2008	1450	1	100%	5809 Sewer Line Whitney Plaza	SLMM / 50	$55,462	$10,461	8,310	1.3	$71,777	$58,239
2009	1450	1	100%	0000000006 WWTP Improvements	SLMM / 25	$2,021,433	$680,549	8,570	1.3	$2,536,675	$1,682,661
2013	1450	1	100%	2013-08 New Roof Membrane-WWTP Second	SLMM / 20	$18,500	$3,700	9,547	1.1	$20,840	$16,671
2013	1450	1	100%	2013-08A New Roof Membrane-WWTP Efflue	SLMM / 20	$5,500	$1,100	9,547	1.1	$6,196	$4,956
2013	1450	1	100%	2014-43B North Main Rebuild	SLMM / 25	3,163,378.70	495,596.12	9,547	1.1	$3,563,449	$3,005,175
2013	1450	1	100%	2014-47 Mydland Road Sewer Crossing	SLMM / 25	$72,573	$11,128	9,547	1.1	$81,751	$69,216
2014	1450	1	100%	2014-08 New 60 Mil Membrane Roof for CL2	SLMM / 20	$7,650	$1,148	9,806	1.1	$8,390	$7,131
2015	1450	1	100%	2016-71 South Side Sewer Inceptor Rehabilit	SLMM / 25	$1,848,178	$135,533	10,035	1.1	$1,980,672	$1,835,423
2015	1450	1	100%	2016-07 Easy Vision Tile Flooring-Safety & Ol	SLMM / 15	$7,783	$951	10,035	1.1	$8,341	$7,321
2017			100%	WWTP Dewatering Improvements		$2,340,771					
2017			40%	N. End Infrastructure Extension		$56,516					
2017			100%	WWTP Emergency Generator		$32,076					
2017			100%	North Sheridan Interchange		750,000,.00					
2011			40%	Bridge Creek W&S		$82,345					
2012			40%	Brooks /Smith Ph II W&S		$538,698					
2015			40%	Wyoming Ave/Park reconstruct		$2,945,543					
2014			40%	HighTech Business Park		$1,922,054					
2013			40%	West Dowtown Phase III		$1,003,183					
2014			100%	Sheridan Commercial Park sewer		$124,646					
otal						$17,179,922	$5,904,058			$26,495,679	$12,967,489
1976	1460	0	100%	0507-469 Sewer rodder	SLMM / 5	$7,325	$7,325	2,401	4.5	$0	$0
1992	1460	0	100%	1768-659 6X6XLSM TRENCH B	SLMM / 10	$2,840	$2,840	4,985	2.2	$0	$0
1993	1460	0	100%	1841-467 Sewer Jet/Flusher Washer	SLMM / 10	$32,501	$32,501	5,210	2.1	$0	$0
1993	1460	0	100%	1844-816 Hewlett Packard IV Laser Pri nt	SLMM / 5	$1,140	$1,140	5,210	2.1	$0	$0
1995	1460	0	100%	2726-421 OVERHAUL RAW SEW	SLMM / 10	$7,423	$7,423	5,471	2.0	$0	$0
1997	1460	0	100%	2653-371 Rotamat fine screnn	SLMM / 5	$12,495	$12,495	5,826	1.8	$0	$0
1999	1460	0	100%	2896-863 SEWER VIEDO EQUIP	SLMM / 5	$91,863	$91,863	6,059	1.8	$0	$0
1999	1460	0	100%	2939-429 VFD Drive - Effluent pump station	SLMM / 3	$6,822	$6,822	6,059	1.8	$0	$0
2004	1460	0	100%	5114 Sewer Flow Meter	SLMM / 10	$5,985	$5,985	7,115	1.5	$0	$0
2004	1460	0	100%	5157 Sewer Flow Meter	SLMM / 10	$5,020	$5,020	7,115	1.5	$0	$0
2005	1460	0	100%	5161 Kubota Utility Tractor	SLMM / 10	$35,600	$35,600	7,446	1.4	$0	$0
2005	1460	0	100%	5162 Video Inspection Unit Upgrade	SLMM / 10	$71,000	$71,000	7,446	1.4	$0	$0
2005	1460	0	100%	5165 2005 Freightlinier Truck	SLMM / 10	$90,945	$90,945	7,446	1.4	$0	$0

City of Sheridan, WY
Sewer Plant Investment Fee
City of Sheridan Sewer Asset Listing as of June 30, 2017

Acq. Year	Asset Code	Backbone? 1=Yes,2=No	% Sewer	Asset Description	Dep. Method / Asset Life	Original Cost	EOY Depr.	ENR Value	ENR Factor	PIF Eligible Assets RCN	PIF Eligible Assets RCNLD
2005	1460	0	100%	5200 2006 GMC Pickup Unit#2-81	SLMM / 6	$19,341	$19,341	7,446	1.4	$0	$0
2006	1460	0	100%	5207 Digital Sewer Camera	SLMM / 5	$19,852	$19,852	7,751	1.4	$0	$0
2006	1460	0	100%	5707 2006 GMC Pickup 1/2 ton Unit#2-82	SLMM / 5	$16,400	$16,400	7,751	1.4	$0	$0
2007	1460	0	100%	5801 2200 Utility Vehicle	SLMM / 10	$12,924	$12,601	7,967	1.3	$0	$0
2007	1460	0	100%	5805 Chevy Silverado 4WD 1/2 Ton Pickup	SLMM / 10	$18,969	$18,314	7,967	1.3	$0	$0
2009	1460	0	100%	2010-33 Root Cutter	SLMM / 5	$5,690	$5,690	8,570	1.3	$0	$0
2010	1460	0	100%	2010-29 SFw Blade for Loader	SLMM / 10	$6,273	$4,653	8,799	1.2	$0	$0
2011	1460	0	100%	2012-07 CCTV Equipment	SLMM / 10	$94,999	$54,625	9,070	1.2	$0	$0
2012	1460	0	100%	2012-09 WWTP Digester Pump Replacement	SLMM / 25	$37,642	$8,031	9,308	1.2	$0	$0
2012	1460	0	100%	2012-10 Paco Pump Replacement	SLMM / 10	$14,353	$7,655	9,308	1.2	$0	$0
2012	1460	0	100%	2013-10 2012 TCM MITSUI FD30 Forklift Tag i	SLMM / 10	$25,543	$11,707	9,308	1.2	$0	$0
2013	1460	0	100%	2013-09 SCADA & Digestive Sludge Control U	SLMM / 5	$20,141	$17,456	9,547	1.1	$0	$0
2013	1460	0	100%	2012-09 Flygt Model 3153.095 Sewage Digest	SLMM / 10	$2,518	$1,028	9,547	1.1	$0	$0
2013	1460	0	100%	2014-04 Steamscrubber Undercounter 120 G	SLMM / 10	$6,114	$2,395	9,547	1.1	$0	$0
2013	1460	0	100%	2014-03 Digestive Sludge Pump - Flygt Model	SLMM / 10	$18,012	$6,755	9,547	1.1	$0	$0
2014	1460	0	100%	2015-03 2014 Freightliner Vac-Con Sewer Cle	SLMM / 10	$252,842	$67,425	9,806	1.1	$0	$0
2015	1460	0	100%	2015-46 WAS D5433WD Submersible Pump #	SLMM / 10	$23,815	$5,160	10,035	1.1	$0	$0
2015	1460	0	100%	2015-46A RAS D5434 SVO Pump #1 Serial #24	SLMM / 10	$36,424	$7,892	10,035	1.1	$0	$0
2015	1460	0	100%	2015-46B RAS D5434 SVO Pump #2 Serial #24	SLMM / 10	$36,424	$7,892	10,035	1.1	$0	$0
2015	1460	0	100%	2015-46C RAS D5434 SVO Pump #3 Serial #24	SLMM / 10	$36,424	$7,892	10,035	1.1	$0	$0
2015	1460	0	100%	2015-46D RAS D5434 SVO Pump #4 Serial #24	SLMM / 10	$36,424	$7,892	10,035	1.1	$0	$0
2015	1460	0	100%	2016-05 C-80441 3HP Drive Conversion for 55	SLMM / 10	$9,207	$1,611	10,035	1.1	$0	$0
						$1,121,288	$683,224			$0	$0
						$30,957,116	**$17,569,898**			**$64,713,994**	**$16,074,747**

City of Sheridan, WY
Sewer Plant Investment Fee
Buy-in Methodology - WWTP Capacity Basis
Replacement Cost New

Line No.	Description	Infrastructure	Total
1	Asset Value - Replacement Cost New	$64,713,994	$64,713,994
2	Outstanding Principal	(4,364,080)	(4,364,080)
3	**Total Backbone Assets**	**$60,349,914**	**$60,349,914**
4	WWTP Capacity (MGD)	4.5	
5	Average Daily Indoor Use per Eq. 3/4" Meter (gpd)	211.0	
6	WWTP Eq. 3/4" Meter Capacity	21,327	
7	Unit Cost	$2,830	
8	Wastewater Tap Fee Per Eq. 3/4" Meter		**$2,830**
	Existing SFR 3/4" - Inside City	$3,000	
	Existing SFR 3/4" - Outside City	6,000	

City of Sheridan, WY
Sewer Plant Investment Fee
Buy-in Methodology - WWTP Capacity Basis

Meter	Meter Ratio	Existing Inside City	Proposed Inside City	Existing Outside City	Proposed Outside City
3/4 - Small Comm.	0.41	$1,230	$1,160	$2,460	$2,320
3/4 - Small MF	0.66	1,980	1,868	3,690	3,735
3/4 - inch	1.00	3,000	2,830	6,000	5,659
1 - inch	1.67	5,010	4,726	10,020	9,451
1 1/2-inch	3.33	9,990	9,423	19,980	18,846
2 - inch	5.33	15,990	15,083	31,980	30,165
3 - inch	11.67	35,010	33,023	70,020	66,046
4 - inch	21.00	63,000	59,425	126,000	118,849
6 - inch	43.33	129,990	122,613	259,980	245,225
8 - inch	80.00	240,000	226,379	480,000	452,758

Town of Pinedale, WY

Wastewater Financial Plan

Draft Report / April 27, 2023

RAFTELIS

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383 North Corona Street
Mail Stop 600
Denver, CO 80218

www.raftelis.com

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Introduction

The Town of Pinedale provides service to over 5,000 water customers. The Town operates the wastewater utility as a stand-alone, financially self-sufficient entity. The Town retained Raftelis to conduct a comprehensive financial planning study to ensure that revenue from rates and other non-rate revenue is sufficient to meet annual operation and maintenance expenses, payments on existing and proposed debt service, capital projects identified in this master plan, and maintain adequate reserves and meet debt service coverage requirements. Raftelis used industry standard methodologies supported by the *Water Environment Federation's Manual of Practice, MOP27* combined with our firm's 30 years' experience in utility financial consulting.

Appendix A contains the supporting tables detailing the development of the water financial plans, and rate design.

Assumptions

This study is based on numerous assumptions. Changes in these assumptions could materially affect the study findings. Raftelis incorporated the following key assumptions into the study:

- The study period forecast is for FY23 through FY32 (fiscal year is from July 1 to June 30)
- Annual customer account growth: 1.0%
- Aggregate annual O&M inflation: 3.8%
- Annual capital project inflation: 5.0% for FY24 and FY25, 3.0% thereafter
- Annual reserve levels equal to 60 days of O&M based on wastewater industry standards
- Debt service
    - Coverage target is 1.1x debt service based on the Wyoming Department of Environmental Quality's recommendation
    - Bond terms: 5.0% interest rate, 30-year term, July 1 issue date

Financial Plan Summary

Raftelis created three separate financial plan each varying the timing of debt and various loan programs available from the Wyoming Department of Environmental Quality. The scenarios are summarized below.

- ***Scenario 1***.
    - WWTP project costs begin in FY27 and complete in FY29.
    - State loan for full project amount. Loan repayment begins in FY27.
- ***Scenario 2***.
    - WWTP project costs begin in FY27 and complete in FY29.
    - Project is funded 100% from State Loans with a 25% principal forgiveness[1].
- ***Scenario 3***.
    - WWTP project costs begin in FY27 and complete in FY29.
    - Project is funded 100% from State Loans under the Tiered Interest Rate Program.

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[1] For the purposes of this study, under the principal forgiveness scenario, the full loan amount is distributed to the Town and debt repayments are based on a loan of 75% of full project costs.

- The parameters of this program state that utilities eligible for principal forgiveness when the grant is not available can receive a lower interest rate. Utilities eligible for 25% principal forgiveness would receive a loan with a 1.25% interest rate.

Table 1 compares the annual revenue adjustments over the 10-year study period.

Table 1: Annual Revenue Adjustments by Scenario

Scenario	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	Total
1	**0.0%**	**20.0%**	**15.0%**	**15.0%**	**15.0%**	**15.0%**	**17.0%**	**10.0%**	**4.0%**	**4.0%**	**115.0%**
2	**0.0%**	**15.0%**	**15.0%**	**15.0%**	**15.0%**	**8.0%**	**8.0%**	**8.0%**	**4.0%**	**4.0%**	**92.0%**
3	**0.0%**	**15.0%**	**15.0%**	**13.0%**	**13.0%**	**6.0%**	**6.0%**	**4.0%**	**4.0%**	**4.0%**	**80.0%**

Tables 2 through 4 compares a typical monthly bill under each scenario based on their respective revenue adjustments.

Table 2: Scenario 1 - Typical Bill Comparison

Monthly Bill Impacts	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32
Inside Average Customer **Below** Usage Allowance	$22.00	$26.40	$30.36	$34.91	$40.15	$46.17	$54.02	$59.43	$61.80	$64.27
Dollar Increase		$4.40	$3.96	$4.55	$5.24	$6.02	$7.85	$5.40	$2.38	$2.47

Table 3: Scenario 2 - Typical Bill Comparison

Monthly Bill Impacts	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32
Inside Average Customer **Below** Usage Allowance	$22.00	$25.30	$29.10	$33.46	$38.48	$41.56	$44.88	$48.47	$50.41	$52.43
Dollar Increase		$3.30	$3.80	$4.36	$5.02	$3.08	$3.32	$3.59	$1.94	$2.02

Table 4: Scenario 3 - Typical Bill Comparison

Monthly Bill Impacts	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32
Inside Average Customer **Below** Usage Allowance	$22.00	$25.30	$29.10	$32.88	$37.15	$39.38	$41.74	$43.41	$45.15	$46.96
Dollar Increase		$3.30	$3.80	$3.78	$4.27	$2.23	$2.36	$1.67	$1.74	$1.81

Financial Plan

Introduction

The wastewater utility is a self-supporting enterprise fund with operation and maintenance expenses, debt service, and capital projects funded primarily from rates, septic hauler fees, plant investment fees, and other non-rate revenue.

Cash Flow Scenarios

Raftelis developed three cash flow scenarios based on the timing of the WWTP project costs, and the repayment options of state loan funding. The cash flow proformas for each scenario are in the Appendix.

- ***Scenario 1***.
  - WWTP project costs begin in FY27 and complete in FY29.
  - State loan for full project amount. Loan repayment begins in FY27.
- ***Scenario 2***.
  - WWTP project costs begin in FY27 and complete in FY29.
  - Project is funded 100% from State Loans with a 25% principal forgiveness[2].
- ***Scenario 3***.
  - WWTP project costs begin in FY27 and complete in FY29.
  - Project is funded 100% from State Loans under the Tiered Interest Rate Program.
  - The parameters of this program state that utilities eligible for principal forgiveness when the grant is not available can receive a lower interest rate. Utilities eligible for 25% principal forgiveness would receive a loan with a 1.25% interest rate.

Cash Flow Analysis

SOURCES OF FUNDS

The wastewater cash flow tracks all activities associated with operating and maintaining the wastewater utility on a daily basis and funding capital projects. The FY23 beginning balance in the operating fund is approximately $692,500. The FY23 beginning balance in the restricted reserve fund is approximately $429,100.

Operating Income

Operating revenues primarily consist of user rate revenue. The projected 2023 user rate revenue under current rates is $426,800 and increase based on a customer growth of 1.0% per year. Other non-rate revenues include septic hauler fees, late fees, and interest income. Revenues from septic hauler fees are projected to average $78,500 annually. Interest income from fund balances averages $3,400 annually.

Non-operating Income

Non-operating income includes plant investment fee revenue and state loans to fund capital projects. Annual plant investment fee revenue averages $56,200 over the study period. State loans of $500,000 are projected in 2024 for

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[2] For the purposes of this study, under the principal forgiveness scenario, the full loan amount is distributed to the Town and debt repayments are based on a loan of 75% of full project costs.

the Orcutt Seep project. Other state loans totaling $8.9 million are anticipated in 2027 for the wastewater treatment plant MBBR project.

USES OF FUNDS

Operations & Maintenance Costs

Operation and maintenance (O&M) expenses consist of the cost collection, treat, and effluent discharge to Pine Creek. Major expenses categories include, chemicals, electricity, and supplies and maintenance. These expenses were forecasted by escalating current budgets using industry standard practices and incorporating the current, higher than normal inflationary environment. Using these industry standard escalations, O&M costs are projected to increase from $455,400 in FY23 to $648,500 in FY32. The proposed state loans are to fund a portion of the Orcutt Seep project and wastewater treatment plant Moving Bed Biofilm Reactor (MBBR) project.

Debt Service Costs

Debt service payments on existing state loans remain constant for a total of $3.8 thousand. Payments on proposed debt varies under each scenario and are presented below.

- ***Scenario 1***
  - Annual debt payments of $31,100 begin in FY24 for the Orcutt Seep project
  - Once the MBBR project is completed annual debt payments of $561,600 begin in FY29.
- ***Scenario 2***
  - Annual debt payments of $31,100 begin in FY24
  - Once the MBBR project is completed annual debt payments of $421,200 begin in FY29.
- ***Scenario 3***.
  - Annual debt payments of $31,.100 begin in FY24
  - Once the MBBR project is completed annual debt payments of $346,900 begin in FY29.

Capital Improvement Program Costs

The capital improvement program includes costs associated with (1) future capital investments and (2) capital investments to comply with changing regulatory requirements associated with operating the system. The 10-year capital improvement program totals $10.9 million and will be funded through a combination of rate revenue, plant investment fees, and state loans. Table 5 summarizes the 10-year CIP.

Table 5: 10-Year CIP Summary

Improvement	Value, $ millions
Manhole Sealant Project	$273,370
Manhole Replacement Project	$539,665
Orcutt Seep Project	$499,290
Clay Sewer Line Replacement Projects	$560,600
Shelter Park Sewer Flow Monitoring Project	$78,300
Lift Station Improvement Project	$79,500
Treatment Plant Alt C: MBBR	$8,900,000
Total Capital Improvement Program	**$10,930,725**

INDICATED REVENUE ADJUSTMENTS

Projected water rate revenue under existing rates combined with other non-rate revenue is insufficient to meet annual operation and maintenance expense (O&M), payments on existing debt service, the capital improvement program while also maintaining recommended and target utility reserve levels, and meeting debt service coverage requirements. To meet these requirements, the following increases show in Table 6 are needed.

Table 6: Annual Rate Increases for Each Scenario

Scenario	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	Total
1	0.0%	20.0%	15.0%	15.0%	15.0%	15.0%	17.0%	10.0%	4.0%	4.0%	115.0%
2	0.0%	15.0%	15.0%	15.0%	15.0%	8.0%	8.0%	8.0%	4.0%	4.0%	92.0%
3	0.0%	15.0%	15.0%	13.0%	13.0%	6.0%	6.0%	4.0%	4.0%	4.0%	80.0%

DEBT SERVICE COVERAGE AND RESERVES

Wyoming Department of Environmental Quality recommends a debt service coverage of 1.1 times annual debt service. Raftelis recommends a target of 1.2 times debt service coverage (DSC) to avoid falling below the requirement with future loan proceeds. The industry standard for wastewater utilities is an operating reserve equal to 60 days of O&M. The primary goal of the operating reserve is to absorb cash flow fluctuations due to the variability in monthly expenditures and the inflow of revenues. The operating reserve target for 2023 is $75,000 and will increase with the changes in annual O&M.

In addition, Raftelis recommends the Town maintain a capital reserve equal to the average cash capital expense. Like the operating reserve, the capital reserve is to be used to offset fluctuations in the capital program due to unanticipated cost increases or emergencies. Raftelis proposes a target capital reserve in 2023 of $400,000 with annual increases of 3.0%, which is currently achieved by the Town. Combined, these reserves strengthen the utility's financial health and ability to weather unexpected operating costs or capital interruptions. Maintaining adequate funds also prevents the utility from reactively having to adjust rates in response to unforeseen events. Tables 7 through 9 summarize the financial plan key metrics for each scenario.

Table 7: Scenario 1 - Key Financial Metrics

Description	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32
Calculated DSC	3013%	493%	663%	884%	442%	138%	111%	128%	135%	142%
Required DSC	120%	120%	120%	120%	120%	120%	120%	120%	120%	120%
Beginning Balance	$692,487	$803,353	$443,547	$423,666	$700,888	$242,374	$383,826	$349,221	$515,861	$722,243
Rev Over/(Under) Exp	$110,866	$359,806	-$19,881	$277,222	$458,515	$141,452	-$34,604	$166,640	$206,381	$248,397
Ending Balance	$803,353	$443,547	$423,666	$700,888	$242,374	$383,826	$349,221	$515,861	$722,243	$970,640
Target Balance	$74,867	$78,672	$82,411	$85,613	$88,904	$92,176	$95,575	$99,108	$102,779	$106,595

Table 8: Scenario 2 – Key Financial Metrics

Description	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32
Calculated DSC	3013%	432%	592%	801%	478%	146%	104%	118%	124%	130%
Required DSC	120%	120%	120%	120%	120%	120%	120%	120%	120%	120%
Beginning Balance	$692,487	$803,353	$421,974	$376,967	$624,943	$146,475	$278,243	$196,851	$277,506	$386,435
Rev Over/(Under) Exp	$110,866	$381,379	-$45,007	$247,975	$478,467	$131,768	-$81,391	$80,655	$108,929	$138,877
Ending Balance	$803,353	$421,974	$376,967	$624,943	$146,475	$278,243	$196,851	$277,506	$386,435	$525,312
Target Balance	$74,867	$78,672	$82,411	$85,613	$88,904	$92,176	$95,575	$99,108	$102,779	$106,595

Table 9: Scenario 3 – Key Financial Metrics

Description	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32
Calculated DSC	3013%	432%	592%	769%	491%	154%	108%	113%	119%	126%
Required DSC	120%	120%	120%	120%	120%	120%	120%	120%	120%	120%
Beginning Balance	$692,487	$803,353	$421,974	$376,967	$613,337	$115,579	$247,768	$176,562	$227,286	$301,036
Rev Over/(Under) Exp	$110,866	$381,379	-$45,007	$236,370	$497,758	$132,189	-$71,206	$50,724	$73,751	$98,176
Ending Balance	$803,353	$421,974	$376,967	$613,337	$115,579	$247,768	$176,562	$227,286	$301,036	$399,212
Target Balance	$74,867	$78,672	$82,411	$85,613	$88,904	$92,176	$95,575	$99,108	$102,779	$106,595

Proposed Wastewater Rates

Current and Proposed Rates

Raftelis developed the proposed rates based on the current rate structure. The current rate structure consists of a monthly service charge which varies by meter size and a volume rate which varies by customer class and meter size. Winter usage allowance is from November 15 through April 15, and summer usage allowance is from April 16 to November 14. The proposed rates maintain the existing structure and are shown in Table 10 forFY24.

Table 10: Comparison of Existing and Proposed FY24 Rates Under Each Scenario

Item	Usage Allowance (per 1,000 gallons)		Existing Rates	Scenario 1 Proposed FY24 Rates	Scenario 2 Proposed FY24 Rates	Scenario 3 Proposed FY24 Rates
Rate Increase				20%	15%	15%
In Town Customers	Winter	Summer				
Monthly Service Charge, $ per bill						
Water Meter Size (inches)						
0.625, 0.75, 1	40	20	$22.00	$26.40	$25.30	$25.30
1.5	10	5	$69.00	$82.80	$79.35	$79.35
2	5	5	$87.00	$104.40	$100.05	$100.05
2.5	5	5	$87.00	$104.40	$100.05	$100.05
3	5	2.5	$172.00	$206.40	$197.80	$197.80
4	5	2.5	$236.00	$283.20	$271.40	$271.40
6 and 8	5	2.5	$236.00	$283.20	$271.40	$271.40
Volume Rate, $ per 1,000 gallons						
Over Usage Allowance						
Water Meter Size (inches)						
0.625, 0.75, 1	40	20	$0.25	$0.30	$0.29	$0.29
1.5	10	5	$1.00	$1.20	$1.15	$1.15
2	5	5	$1.25	$1.50	$1.44	$1.44
2.5	5	5	$1.25	$1.50	$1.44	$1.44
3	5	2.5	$1.75	$2.10	$2.01	$2.01
4	5	2.5	$1.75	$2.10	$2.01	$2.01
6 and 8	5	2.5	$1.75	$2.10	$2.01	$2.01

Note: Town uses a 1.5 multiplier for Out of Town customers.

Typical Bill Comparison

Tables 11 through 13 compares bills under existing and proposed rates for the study period for a 1-inch customer with a wastewater volume of 5,000 gallons. This volume is below the minimum for both summer and winter.

Table 11: Scenario 1 - Typical Bill Comparison

Monthly Bill Impacts	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32
Inside Average Customer Below Usage Allowance	$22.00	$26.40	$30.36	$34.91	$40.15	$46.17	$54.02	$59.43	$61.80	$64.27
Dollar Increase		$4.40	$3.96	$4.55	$5.24	$6.02	$7.85	$5.40	$2.38	$2.47

Table 12: Scenario 2 - Typical Bill Comparison

Monthly Bill Impacts	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32
Inside Average Customer Below Usage Allowance	$22.00	$25.30	$29.10	$33.46	$38.48	$41.56	$44.88	$48.47	$50.41	$52.43
Dollar Increase		$3.30	$3.80	$4.36	$5.02	$3.08	$3.32	$3.59	$1.94	$2.02

Table 13: Scenario 3 - Typical Bill Comparison

Monthly Bill Impacts	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32
Inside Average Customer Below Usage Allowance	$22.00	$25.30	$29.10	$32.88	$37.15	$39.38	$41.74	$43.41	$45.15	$46.96
Dollar Increase		$3.30	$3.80	$3.78	$4.27	$2.23	$2.36	$1.67	$1.74	$1.81

Reliance on Client Provided Data

During this project, the Town provided Raftelis with a variety of technical information, including cost and revenue data. Raftelis did not independently assess or test for the accuracy of such data – historic or projected. Raftelis has relied on this data in the formulation of our findings and subsequent recommendations, as well as in the preparation of this report. Raftelis also relied on cost allocation data provided by the Town needed to complete the cost-of-service analysis.

There are often differences between actual and projected data. Some of the assumptions used for projections in this report will not be realized, and unanticipated events and circumstances may occur. Therefore, there are likely to be differences between the data or results projected in this report and actual results achieved, and those differences may be material. As a result, Raftelis takes no responsibility for the accuracy of data or projections provided by or prepared on behalf of the Town, nor do we have any responsibility for updating this report for events occurring after the date of this report.

APPENDIX A:

WASTEWATER UTILITY FINANCIAL PLAN TABLES

Cashflow

Revenue	Revenue Adjustments	Effective Month	Months Effective	FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027	FYE 2028	FYE 2029	FYE 2030	FYE 2031	FYE 2032
Rate Revenue from Existing Rates				**$426,793**	**$430,384**	**$434,011**	**$437,675**	**$441,375**	**$445,112**	**$448,886**	**$452,698**	**$456,549**	**$460,438**
Fiscal Year	**Revenue Adjustments**	**Effective Month**	**Months Effective**										
FYE 2023	0.0%	July	12	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
FYE 2024	20.0%	July	12		$86,077	$86,802	$87,535	$88,275	$89,022	$89,777	$90,540	$91,310	$92,088
FYE 2025	15.0%	July	12			$78,122	$78,781	$79,447	$80,120	$80,800	$81,486	$82,179	$82,879
FYE 2026	15.0%	July	12				$90,599	$91,365	$92,138	$92,919	$93,709	$94,506	$95,311
FYE 2027	15.0%	July	12					$105,069	$105,959	$106,857	$107,765	$108,681	$109,607
FYE 2028	15.0%	July	12						$121,853	$122,886	$123,930	$124,984	$126,048
FYE 2029	17.0%	July	12							$160,161	$161,522	$162,895	$164,283
FYE 2030	10.0%	July	12								$111,165	$112,110	$113,065
FYE 2031	4.0%	July	12									$49,329	$49,749
FYE 2032	4.0%	July	12										$51,739
Total Revenue Adjustments				**$0**	**$86,077**	**$164,924**	**$256,915**	**$364,156**	**$489,092**	**$653,401**	**$770,115**	**$825,993**	**$884,768**
Rate Revenue (including Revenue Adjustments)				$426,793	$516,461	$598,935	$694,589	$805,531	$934,204	$1,102,287	$1,222,813	$1,282,542	$1,345,205
Interest Earnings				$11,322	$3,109	$2,163	$2,804	$2,352	$1,562	$1,828	$2,157	$3,088	$4,222
Non-Rate Revenue				$132,000	$133,320	$134,653	$136,000	$137,360	$138,733	$140,121	$141,522	$142,937	$144,366
Total Revenue				**$570,115**	**$652,890**	**$735,751**	**$833,394**	**$945,243**	**$1,074,499**	**$1,244,236**	**$1,366,492**	**$1,428,567**	**$1,493,793**
Operating Expenditures				**FYE 2023**	**FYE 2024**	**FYE 2025**	**FYE 2026**	**FYE 2027**	**FYE 2028**	**FYE 2029**	**FYE 2030**	**FYE 2031**	**FYE 2032**
Administration				$256,142	$267,673	$279,493	$291,335	$303,689	$316,443	$329,748	$343,628	$358,107	$373,214
Treatment				$105,000	$111,900	$118,367	$122,393	$126,315	$129,862	$133,513	$137,272	$141,141	$145,125
Utilities Engineering				$15,000	$15,900	$16,695	$17,196	$17,712	$18,155	$18,608	$19,074	$19,550	$20,039
Indirect Costs				$79,300	$83,112	$86,776	$89,891	$93,119	$96,277	$99,547	$102,934	$106,441	$110,073
Total Operating Expenditures				**$455,442**	**$478,585**	**$501,331**	**$520,815**	**$540,835**	**$560,737**	**$581,417**	**$602,907**	**$625,240**	**$648,451**
Check				TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
Debt Service													
Town of Pinedale - CWSRF No. 173				$3,806	$3,806	$3,806	$3,806	$3,806	$3,806	$3,806	$3,806	$3,806	$3,806
New Proposed Debt				$0	$31,550	$31,550	$31,550	$87,709	$368,503	$593,139	$593,139	$593,139	$593,139
Total Debt Service				**$3,806**	**$35,356**	**$35,356**	**$35,356**	**$91,515**	**$372,310**	**$596,945**	**$596,945**	**$596,945**	**$596,945**
Net cash flow before capital				**$110,866**	**$138,949**	**$199,064**	**$277,222**	**$312,893**	**$141,452**	**$65,874**	**$166,640**	**$206,381**	**$248,397**
Cash Funded CIP				$0	$498,755	$218,945	$0	$771,407	$0	$100,478	$0	$0	$0
Grant Funded CIP				$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Capacity Funded CIP				$0	$54,540	$55,085	$0	$56,193	$0	$57,322	$0	$0	$0
Debt Funded CIP				$0	$485,000	$0	$0	$8,633,000	$0	$0	$0	$0	$0
Subtotal CIP - Cash and Debt Funded				**$0**	**$1,038,295**	**$274,030**	**$0**	**$9,460,600**	**$0**	**$157,800**	**$0**	**$0**	**$0**
Total Expenses				**$459,248**	**$1,012,697**	**$755,632**	**$556,171**	**$1,403,758**	**$933,047**	**$1,278,840**	**$1,199,852**	**$1,222,185**	**$1,245,397**
Net Cashflow				**$110,866**	**($359,806)**	**($19,881)**	**$277,222**	**($458,515)**	**$141,452**	**($34,604)**	**$166,640**	**$206,381**	**$248,397**
Financial Metrics and Ratios													
Calculated Debt Coverage Ratio				3013%	493%	663%	884%	442%	138%	**111%**	128%	135%	142%
Required Debt Coverage Ratio				**120%**	**120%**	**120%**	**120%**	**120%**	**120%**	**120%**	**120%**	**120%**	**120%**
Fund Balances				**FYE 2023**	**FYE 2024**	**FYE 2025**	**FYE 2026**	**FYE 2027**	**FYE 2028**	**FYE 2029**	**FYE 2030**	**FYE 2031**	**FYE 2032**
Operating Fund Balance													
Beginning Cash Balance				$692,487	$803,353	$443,547	$423,666	$700,888	$242,374	$383,826	$349,221	$515,861	$722,243
Net Cash Change				$110,866	($359,806)	($19,881)	$277,222	($458,515)	$141,452	($34,604)	$166,640	$206,381	$248,397
Ending Cash Balance				**$803,353**	**$443,547**	**$423,666**	**$700,888**	**$242,374**	**$383,826**	**$349,221**	**$515,861**	**$722,243**	**$970,640**
Target Cash Balance	16%	*of Operating Expenses*		$74,867	$78,672	$82,411	$85,613	$88,904	$92,176	$95,575	$99,108	$102,779	$106,595
Restricted Depreciation Reserve Fund													
Beginning Balance				$429,100	$463,326	$499,647	$537,850	$577,316	$618,082	$659,999	$703,096	$747,403	$792,952
Net Change				$32,000	$33,920	$35,616	$36,684	$37,785	$38,730	$39,698	$40,690	$41,708	$42,750
Ending Balance without Interest				$461,100	$497,246	$535,263	$574,535	$615,101	$656,811	$699,696	$743,786	$789,111	$835,702
Interest				$2,226	$2,401	$2,587	$2,781	$2,981	$3,187	$3,399	$3,617	$3,841	$4,072

Cashflow													
Revenue				**FYE 2023**	**FYE 2024**	**FYE 2025**	**FYE 2026**	**FYE 2027**	**FYE 2028**	**FYE 2029**	**FYE 2030**	**FYE 2031**	**FYE 2032**
Rate Revenue from Existing Rates				**$426,793**	**$430,384**	**$434,011**	**$437,675**	**$441,375**	**$445,112**	**$448,886**	**$452,698**	**$456,549**	**$460,438**
Fiscal Year	**Revenue Adjustments**	**Effective Month**	**Months Effective**										
FYE 2023	0.0%	July	12	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
FYE 2024	15.0%	July	12		$64,558	$65,102	$65,651	$66,206	$66,767	$67,333	$67,905	$68,482	$69,066
FYE 2025	15.0%	July	12			$74,867	$75,499	$76,137	$76,782	$77,433	$78,090	$78,755	$79,425
FYE 2026	15.0%	July	12				$86,824	$87,558	$88,299	$89,048	$89,804	$90,568	$91,339
FYE 2027	15.0%	July	12					$100,691	$101,544	$102,405	$103,275	$104,153	$105,040
FYE 2028	8.0%	July	12						$62,280	$62,808	$63,342	$63,881	$64,425
FYE 2029	8.0%	July	12							$67,833	$68,409	$68,991	$69,579
FYE 2030	8.0%	July	12								$73,882	$74,510	$75,145
FYE 2031	4.0%	July	12									$40,236	$40,578
FYE 2032	4.0%	July	12										$42,201
Total Revenue Adjustments				**$0**	**$64,558**	**$139,969**	**$227,974**	**$330,592**	**$395,672**	**$466,860**	**$544,707**	**$589,575**	**$636,798**
Rate Revenue (including Revenue Adjustments)				$426,793	$494,941	$573,980	$665,648	$771,967	$840,783	$915,746	$997,405	$1,046,124	$1,097,236
Interest Earnings				$11,322	$3,056	$1,992	$2,499	$1,924	$1,059	$1,185	$1,183	$1,656	$2,274
Non-Rate Revenue				$132,000	$133,320	$134,653	$136,000	$137,360	$138,733	$140,121	$141,522	$142,937	$144,366
Total Revenue				**$570,115**	**$631,317**	**$710,625**	**$804,147**	**$911,250**	**$980,576**	**$1,057,052**	**$1,140,110**	**$1,190,717**	**$1,243,876**
Operating Expenditures				**FYE 2023**	**FYE 2024**	**FYE 2025**	**FYE 2026**	**FYE 2027**	**FYE 2028**	**FYE 2029**	**FYE 2030**	**FYE 2031**	**FYE 2032**
Administration				$256,142	$267,673	$279,493	$291,335	$303,689	$316,443	$329,748	$343,628	$358,107	$373,214
Treatment				$105,000	$111,900	$118,367	$122,393	$126,315	$129,862	$133,513	$137,272	$141,141	$145,125
Utilities Engineering				$15,000	$15,900	$16,695	$17,196	$17,712	$18,155	$18,608	$19,074	$19,550	$20,039
Indirect Costs				$79,300	$83,112	$86,776	$89,891	$93,119	$96,277	$99,547	$102,934	$106,441	$110,073
Total Operating Expenditures				**$455,442**	**$478,585**	**$501,331**	**$520,815**	**$540,835**	**$560,737**	**$581,417**	**$602,907**	**$625,240**	**$648,451**
Check				TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
Debt Service													
Town of Pinedale - CWSRF No. 173				$3,806	$3,806	$3,806	$3,806	$3,806	$3,806	$3,806	$3,806	$3,806	$3,806
New Proposed Debt				$0	$31,550	$31,550	$31,550	$73,669	$284,265	$452,742	$452,742	$452,742	$452,742
Total Debt Service				**$3,806**	**$35,356**	**$35,356**	**$35,356**	**$77,476**	**$288,071**	**$456,548**	**$456,548**	**$456,548**	**$456,548**
Net cash flow before capital				**$110,866**	**$117,376**	**$173,938**	**$247,975**	**$292,940**	**$131,768**	**$19,087**	**$80,655**	**$108,929**	**$138,877**
Cash Funded CIP				$0	$498,755	$218,945	$0	$771,407	$0	$100,478	$0	$0	$0
Grant Funded CIP				$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Capacity Funded CIP				$0	$54,540	$55,085	$0	$56,193	$0	$57,322	$0	$0	$0
Debt Funded CIP				$0	$485,000	$0	$0	$8,633,000	$0	$0	$0	$0	$0
Subtotal CIP - Cash and Debt Funded				**$0**	**$1,038,295**	**$274,030**	**$0**	**$9,460,600**	**$0**	**$157,800**	**$0**	**$0**	**$0**
Total Expenses				**$459,248**	**$1,012,697**	**$755,632**	**$556,171**	**$1,389,718**	**$848,808**	**$1,138,443**	**$1,059,455**	**$1,081,788**	**$1,104,999**
Net Cashflow				**$110,866**	**($381,379)**	**($45,007)**	**$247,975**	**($478,467)**	**$131,768**	**($81,391)**	**$80,655**	**$108,929**	**$138,877**
Financial Metrics and Ratios													
Calculated Debt Coverage Ratio				3013%	432%	592%	801%	478%	146%	**104%**	**118%**	124%	130%
Required Debt Coverage Ratio				**120%**	**120%**	**120%**	**120%**	**120%**	**120%**	**120%**	**120%**	**120%**	**120%**
Fund Balances				**FYE 2023**	**FYE 2024**	**FYE 2025**	**FYE 2026**	**FYE 2027**	**FYE 2028**	**FYE 2029**	**FYE 2030**	**FYE 2031**	**FYE 2032**
Operating Fund Balance													
Beginning Cash Balance				$692,487	$803,353	$421,974	$376,967	$624,943	$146,475	$278,243	$196,851	$277,506	$386,435
Net Cash Change				$110,866	($381,379)	($45,007)	$247,975	($478,467)	$131,768	($81,391)	$80,655	$108,929	$138,877
Ending Cash Balance				**$803,353**	**$421,974**	**$376,967**	**$624,943**	**$146,475**	**$278,243**	**$196,851**	**$277,506**	**$386,435**	**$525,312**
Target Cash Balance	16%	*of Operating Expenses*		$74,867	$78,672	$82,411	$85,613	$88,904	$92,176	$95,575	$99,108	$102,779	$106,595
Restricted Depreciation Reserve Fund													
Beginning Balance				$429,100	$463,326	$499,647	$537,850	$577,316	$618,082	$659,999	$703,096	$747,403	$792,952
Net Change				$32,000	$33,920	$35,616	$36,684	$37,785	$38,730	$39,698	$40,690	$41,708	$42,750
Ending Balance without Interest				$461,100	$497,246	$535,263	$574,535	$615,101	$656,811	$699,696	$743,786	$789,111	$835,702
Interest				$2,226	$2,401	$2,587	$2,781	$2,981	$3,187	$3,399	$3,617	$3,841	$4,072

Cashflow				FYE 2023	FYE 2024	FYE 2025	FYE 2026	FYE 2027	FYE 2028	FYE 2029	FYE 2030	FYE 2031	FYE 2032
Revenue				**FYE 2023**	**FYE 2024**	**FYE 2025**	**FYE 2026**	**FYE 2027**	**FYE 2028**	**FYE 2029**	**FYE 2030**	**FYE 2031**	**FYE 2032**
Rate Revenue from Existing Rates				**$426,793**	**$430,384**	**$434,011**	**$437,675**	**$441,375**	**$445,112**	**$448,886**	**$452,698**	**$456,549**	**$460,438**
Fiscal Year	**Revenue Adjustments**	**Effective Month**	**Months Effective**										
FYE 2023	0.0%	July	12	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
FYE 2024	15.0%	July	12		$64,558	$65,102	$65,651	$66,206	$66,767	$67,333	$67,905	$68,482	$69,066
FYE 2025	15.0%	July	12			$74,867	$75,499	$76,137	$76,782	$77,433	$78,090	$78,755	$79,425
FYE 2026	13.0%	July	12				$75,247	$75,883	$76,526	$77,175	$77,830	$78,492	$79,161
FYE 2027	13.0%	July	12					$85,748	$86,474	$87,207	$87,948	$88,696	$89,452
FYE 2028	6.0%	July	12						$45,100	$45,482	$45,868	$46,258	$46,652
FYE 2029	6.0%	July	12							$48,211	$48,620	$49,034	$49,452
FYE 2030	4.0%	July	12								$34,358	$34,651	$34,946
FYE 2031	4.0%	July	12									$36,037	$36,344
FYE 2032	4.0%	July	12										$37,797
Total Revenue Adjustments				**$0**	**$64,558**	**$139,969**	**$216,397**	**$303,975**	**$351,648**	**$402,841**	**$440,621**	**$480,405**	**$522,294**
Rate Revenue (including Revenue Adjustments)				$426,793	$494,941	$573,980	$654,072	$745,349	$796,760	$851,727	$893,319	$936,954	$982,732
Interest Earnings				$11,322	$3,056	$1,992	$2,470	$1,818	$906	$1,058	$1,007	$1,318	$1,746
Non-Rate Revenue				$132,000	$133,320	$134,653	$136,000	$137,360	$138,733	$140,121	$141,522	$142,937	$144,366
Total Revenue				**$570,115**	**$631,317**	**$710,625**	**$792,541**	**$884,527**	**$936,399**	**$992,906**	**$1,035,848**	**$1,081,208**	**$1,128,845**
Operating Expenditures				**FYE 2023**	**FYE 2024**	**FYE 2025**	**FYE 2026**	**FYE 2027**	**FYE 2028**	**FYE 2029**	**FYE 2030**	**FYE 2031**	**FYE 2032**
Administration				$256,142	$267,673	$279,493	$291,335	$303,689	$316,443	$329,748	$343,628	$358,107	$373,214
Treatment				$105,000	$111,900	$118,367	$122,393	$126,315	$129,862	$133,513	$137,272	$141,141	$145,125
Utilities Engineering				$15,000	$15,900	$16,695	$17,196	$17,712	$18,155	$18,608	$19,074	$19,550	$20,039
Indirect Costs				$79,300	$83,112	$86,776	$89,891	$93,119	$96,277	$99,547	$102,934	$106,441	$110,073
Total Operating Expenditures				**$455,442**	**$478,585**	**$501,331**	**$520,815**	**$540,835**	**$560,737**	**$581,417**	**$602,907**	**$625,240**	**$648,451**
Check				TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
Debt Service													
Town of Pinedale - CWSRF No. 173				$3,806	$3,806	$3,806	$3,806	$3,806	$3,806	$3,806	$3,806	$3,806	$3,806
New Proposed Debt				$0	$31,550	$31,550	$31,550	$66,236	$239,667	$378,411	$378,411	$378,411	$378,411
Total Debt Service				**$3,806**	**$35,356**	**$35,356**	**$35,356**	**$70,043**	**$243,473**	**$382,218**	**$382,218**	**$382,218**	**$382,218**
Net cash flow before capital				**$110,866**	**$117,376**	**$173,938**	**$236,370**	**$273,649**	**$132,189**	**$29,272**	**$50,724**	**$73,751**	**$98,176**
Cash Funded CIP				$0	$498,755	$218,945	$0	$771,407	$0	$100,478	$0	$0	$0
Grant Funded CIP				$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Capacity Funded CIP				$0	$54,540	$55,085	$0	$56,193	$0	$57,322	$0	$0	$0
Debt Funded CIP				$0	$485,000	$0	$0	$8,633,000	$0	$0	$0	$0	$0
Subtotal CIP - Cash and Debt Funded				**$0**	**$1,038,295**	**$274,030**	**$0**	**$9,460,600**	**$0**	**$157,800**	**$0**	**$0**	**$0**
Total Expenses				**$459,248**	**$1,012,697**	**$755,632**	**$556,171**	**$1,382,285**	**$804,210**	**$1,064,112**	**$985,125**	**$1,007,458**	**$1,030,669**
Net Cashflow				**$110,866**	**($381,379)**	**($45,007)**	**$236,370**	**($497,758)**	**$132,189**	**($71,206)**	**$50,724**	**$73,751**	**$98,176**
Financial Metrics and Ratios													
Calculated Debt Coverage Ratio				3013%	432%	592%	769%	491%	154%	**108%**	**113%**	**119%**	126%
Required Debt Coverage Ratio				**120%**	**120%**	**120%**	**120%**	**120%**	**120%**	**120%**	**120%**	**120%**	**120%**
Fund Balances				**FYE 2023**	**FYE 2024**	**FYE 2025**	**FYE 2026**	**FYE 2027**	**FYE 2028**	**FYE 2029**	**FYE 2030**	**FYE 2031**	**FYE 2032**
Operating Fund Balance													
Beginning Cash Balance				$692,487	$803,353	$421,974	$376,967	$613,337	$115,579	$247,768	$176,562	$227,286	$301,036
Net Cash Change				$110,866	($381,379)	($45,007)	$236,370	($497,758)	$132,189	($71,206)	$50,724	$73,751	$98,176
Ending Cash Balance				**$803,353**	**$421,974**	**$376,967**	**$613,337**	**$115,579**	**$247,768**	**$176,562**	**$227,286**	**$301,036**	**$399,212**
Target Cash Balance	16%	*of Operating Expenses*		$74,867	$78,672	$82,411	$85,613	$88,904	$92,176	$95,575	$99,108	$102,779	$106,595
Restricted Depreciation Reserve Fund													
Beginning Balance				$429,100	$463,326	$499,647	$537,850	$577,316	$618,082	$659,999	$703,096	$747,403	$792,952
Net Change				$32,000	$33,920	$35,616	$36,684	$37,785	$38,730	$39,698	$40,690	$41,708	$42,750
Ending Balance without Interest				$461,100	$497,246	$535,263	$574,535	$615,101	$656,811	$699,696	$743,786	$789,111	$835,702
Interest				$2,226	$2,401	$2,587	$2,781	$2,981	$3,187	$3,399	$3,617	$3,841	$4,072

Town of Jackson, Wyoming

Comprehensive Water and Sewer Rate and Capacity Fee Study

Final Report / June 2022

RAFTELIS

Table of Contents

1.1. List of Tables

1.2. List of Figures

1.3. List of Appendices

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1. Executive Summary

The Town of Jackson (Town) retained Raftelis Financial Consultants, Inc. (Raftelis) in 2019 to complete a comprehensive water financial plan, rate, and capacity fee study (Study). The purpose of the Study was to develop financial plans from Fiscal Year (FY[1]) 2020 through FY 2029 (Study Period) and water and wastewater rate and capacity fee structures consistent with Town objectives which maintain a stand-alone water and wastewater enterprise fund over the Study Period. The Town requested that Raftelis complete the following major objectives:

- Develop separate water and sewer fund financial plans for the 10-year Study Period.
- Evaluate separate water and sewer rate revenue adjustments for the Study Period necessary to fund annual revenue requirements, maintain adequate cash reserves, and provide appropriate debt service coverage.
- Complete a separate water and sewer class cost-of-service analysis using a single (FY 2022) test-year.
- Propose water and sewer rates by customer class for FY 2022 effective July 1, 2021.
- Complete a comprehensive evaluation of the Town's water and sewer capacity fees, including alternative assessment approaches.
- Propose water and sewer capacity fees effective July 1, 2021, with proposed annual adjustments for inflation as reflected within the Engineering News Record Construction Cost Index (ENR-CCI).

Our report to the Town contains nine sections as follows:

- Section 1 – Executive Summary
- Section 2 – Introduction
- Section 3 – Utility Background, Customer Data, & Growth
- Section 4 – Financial Plan
- Section 5 – Water Cost-of-Service and Rate Recommendations
- Section 6 – Sewer Cost-of-Service and Rate Recommendations
- Section 7 – Rate Survey Comparison
- Section 8 – Capacity Fees
- Section 9 – Capacity Fee Survey

The report contains nine appendices including the water and wastewater financial plan, FY 2022 test-year cost-of-service analysis, FY 2022 water and sewer rate design recommendations, water and sewer capacity fee calculations, rate, and capacity fee survey information.

- Appendix A contains water fund financial plan results and related data inputs and assumptions.
- Appendix B contains the water capacity fee calculations, inputs, and recommendations.
- Appendix C contains the water cost-of-service results for the FY 2022 test-year.
- Appendix D contains the water rate design recommendations.
- Appendix E contains wastewater fund financial plan results and related data inputs and assumptions.

[1] Refers to the year at the end of the fiscal year (e.g., FY 2022 is the period ending June 30, 2022).

- Appendix F contains the wastewater capacity fee calculations, inputs, and recommendations.
- Appendix G contains the wastewater cost-of-service results for a FY 2022 test-year.
- Appendix H contains the wastewater rate design recommendations.
- Appendix I contains the Citizen Rate Committee (CRC) Report.

The water and sewer utility financial plans are organized around a total fund with separate operations and capital improvement subfunds. The respective water and sewer rate revenue requirements represent the cost of providing service and include O&M expenses, debt service obligations, and other cash inflows and outflows.

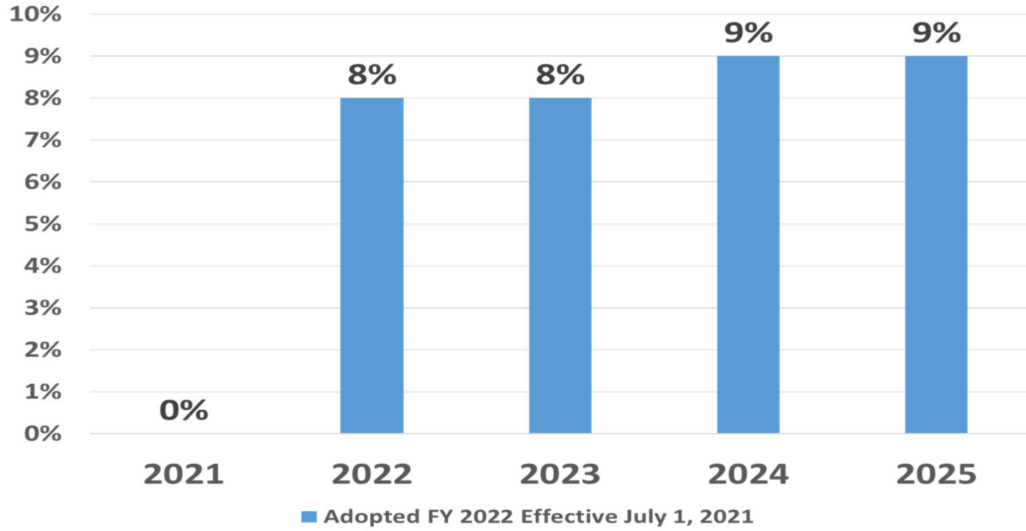
All capital costs are assigned to the water and sewer capital improvement subfunds, where funding is provided from capacity fee revenues, interest income, and transfers from the operations subfund, net bond proceeds, and grants (subject to award). The only expenses in the capital improvement subfund are capital improvement expenditures.

The financial plan evaluates the adequacy of system revenues (adjusted for customer and demand-related growth) to:

- Fund annual O&M expenses, debt service and capital expenditures, and
- Maintain the following financial performance thresholds or targets:
    - Exceed debt service coverage (DSC) ratio of at least 1.30 times annual debt service.
    - Exceed water fund cash reserve targets of
        - 50% (180 days) of annual O&M expenses PLUS
        - the average annual cash-funded capital project expenses separated set for FY 2020 through FY 2024 and FY 2025 through FY 2029.
    - Exceed sewer fund cash reserve targets of
        - 50% (180 days) of annual O&M expenses PLUS
        - the average annual cash-funded capital project expenses separated set for FY 2020 through FY 2024 and FY 2025 through FY 2029.

Figure 1-1 summarizes proposed sewer rate revenue increases during the Study Period that are necessary to fund annual expenditures and meet financial performance criteria.

Figure 1-1: Projected Annual Water Rate Revenue Increases



The financial plan and capital funding incorporate the inflated CIP amounts based on the anticipated timing of the projects and an assumed capital inflation rate of 7.0% applied starting in 2022. Figure 1-2 shows the Study Period water capital projects totaling $22.41 million comprised of $10.07 in projected new debt and $12.34 million cash-funded CIP by year.

Figure 1-2: Water Capital Projects and Projected Capital Funding

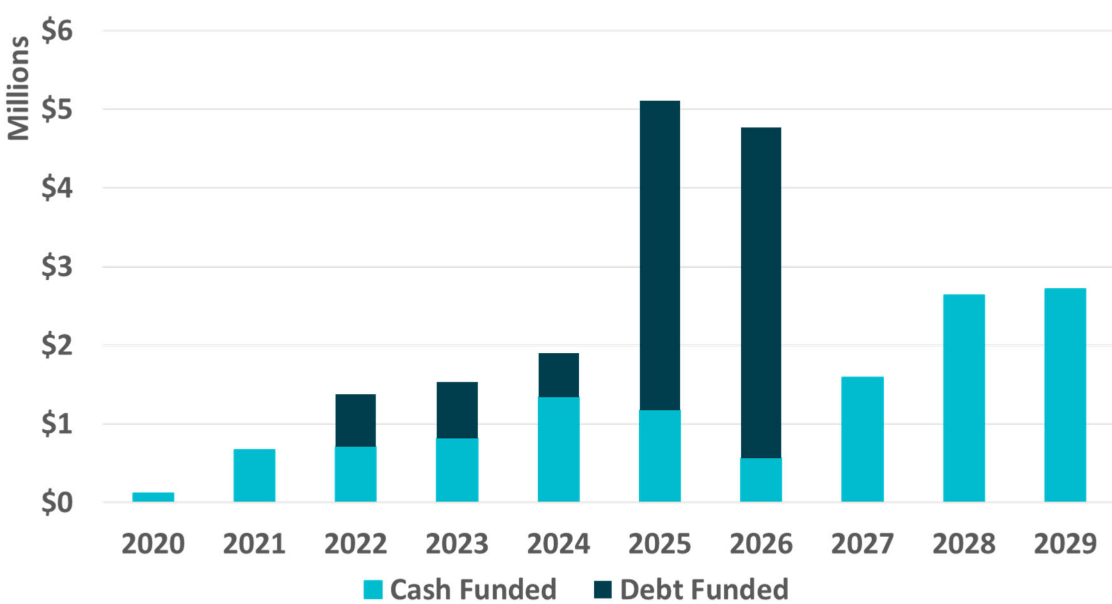
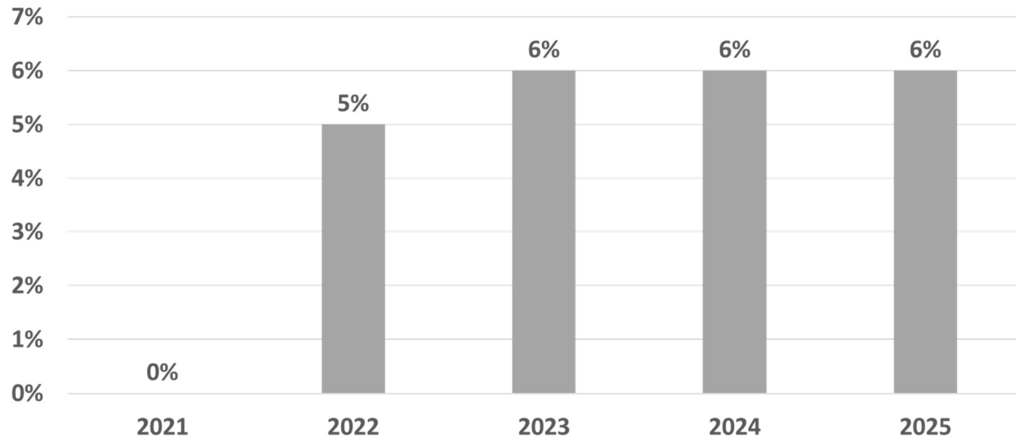


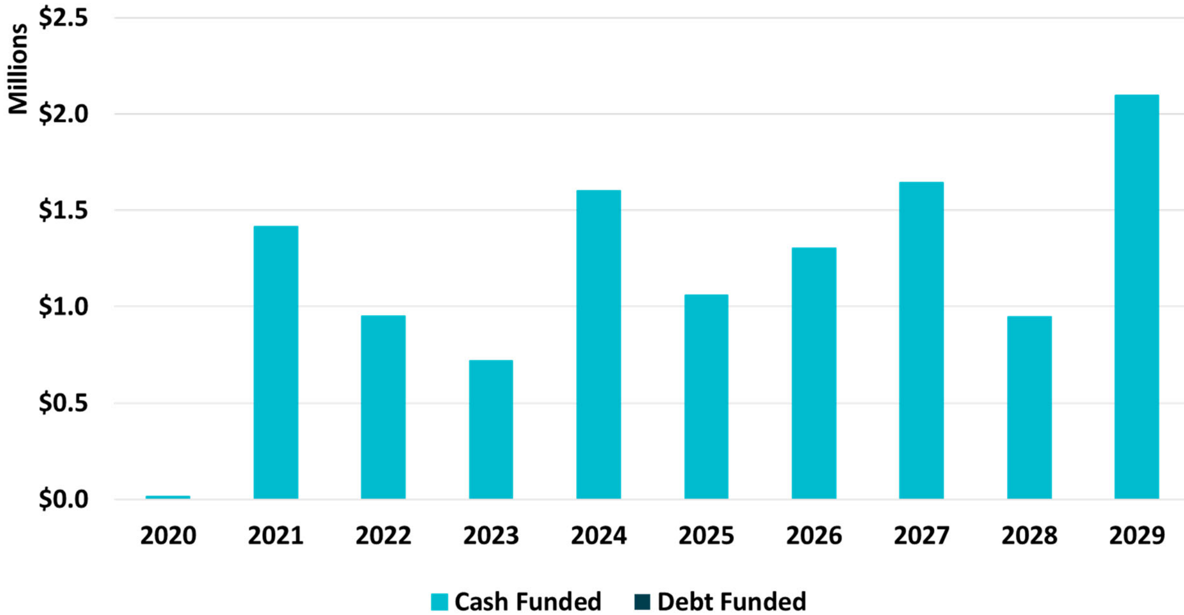
Figure 1-3 summarizes proposed sewer rate revenue increases during the Study Period that are necessary to fund annual expenditures and meet financial performance criteria.

Figure 1-3: Projected Annual Sewer Rate Revenue Increases



The financial plan and capital funding incorporate the inflated CIP amounts based on the anticipated timing of the projects and an assumed capital inflation rate of 7.0% applied starting in FY 2022. Figure 1-4 shows the Study Period sewer capital projects totaling $11.75 million anticipated to be fully cash funded.

Figure 1-4: Sewer Capital Projects and Projected Capital Funding



Raftelis worked with Town staff and the CRC to evaluate the rate structure alternatives and recommend monthly rate and one-time capacity fee structures. The adopted rates maintain the existing monthly base rates increasing by meter size and include different volumetric rate by customer classes for Residential, Commercial, and Irrigation-Only which transition closer to customer class cost of service while increasing overall user charges by 8%.

Appendix D contains additional detail related to the recommended Town rates. Tables 1-1 and 1-2 summarize current adopted base and residential volume rates effective July 1, 2021. Separate Commercial and Irrigation-Only customer volume rates reflect a minimum allowance of 2,000 gallons per account and varying uniform volume rates for use over 2,000 gallons. Commercial includes Multi-Family Residential and all Non-Residential customer classes (e.g., Commercial, School, and Government).

Table 1-1: Adopted FY 2022 Water Base Charges

Meter Size	Current	Adopted
¾-inch and less	$ 7.22	$ 11.00
1-inch	9.93	16.39
1 ½-inch	17.41	28.54
2-inch	18.98	43.61
3-inch	54.54	86.39
4-inch	86.26	132.65
6-inch	159.34	259.66
8-inch	N/A	414.33

Table 1-2: Adopted FY 2022 Residential Volume Water Rates

Description	Water Allocation	Current	Adopted
Tier 1	0 – 2,000	$2.12	$ 0.00
Tier 2	2,001 – 6,000	2.12	1.24
Tier 3	6,001 – 25,000	2.12	2.48
Tier 4	Over 25,000	2.12	3.72

Figure 1-5 summarizes monthly bills for four residential customer profiles with a ¾-inch meter size and 2,000 to 30,000 gallons of water use under the current and adopted FY 2022 rates.

Figure 1-5: Typical Monthly Water Residential Bill Impact

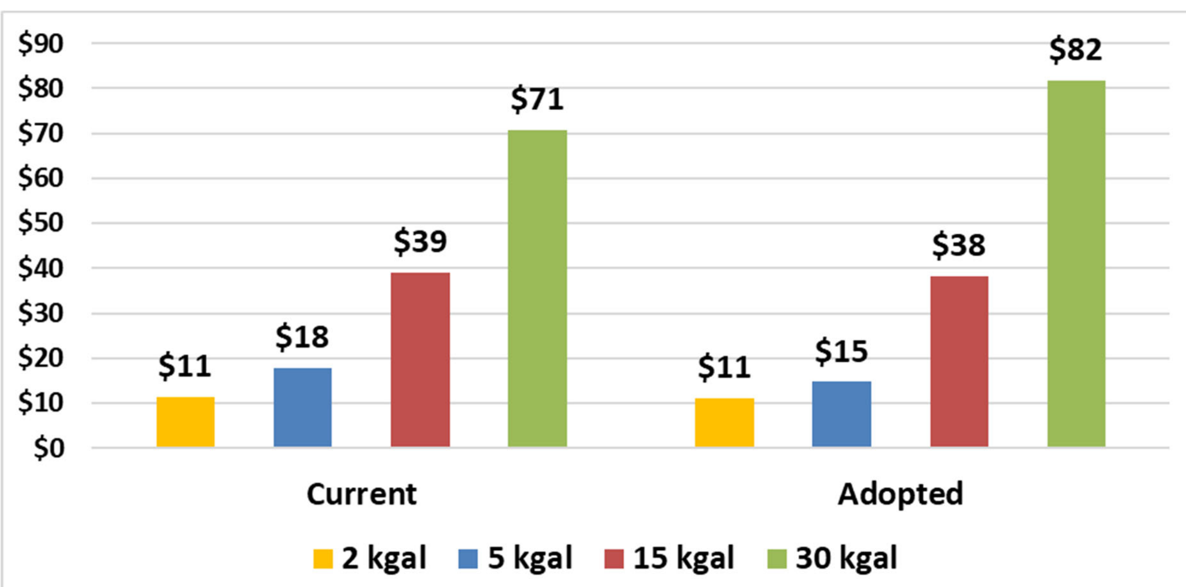


Table 1-3 summarizes current and adopted non-residential volume rates.

Table 1-3: Adopted FY 2022 Multi-Family and Non-Residential Volume Rates

Description	Water Allocation	Current	Adopted
Tier 1	0 – 2,000	$2.12	$ 0.00
Tier 2	Over 2,000	2.12	2.12

Figure 1-6 shows the monthly water bills for six Non-Residential customer profiles with a 1-inch meter using 10,000 to 100,000 gallons per month under the current and adopted rates.

Figure 1-6: Monthly Commercial 1-inch Water Meter Customer Bill Comparison

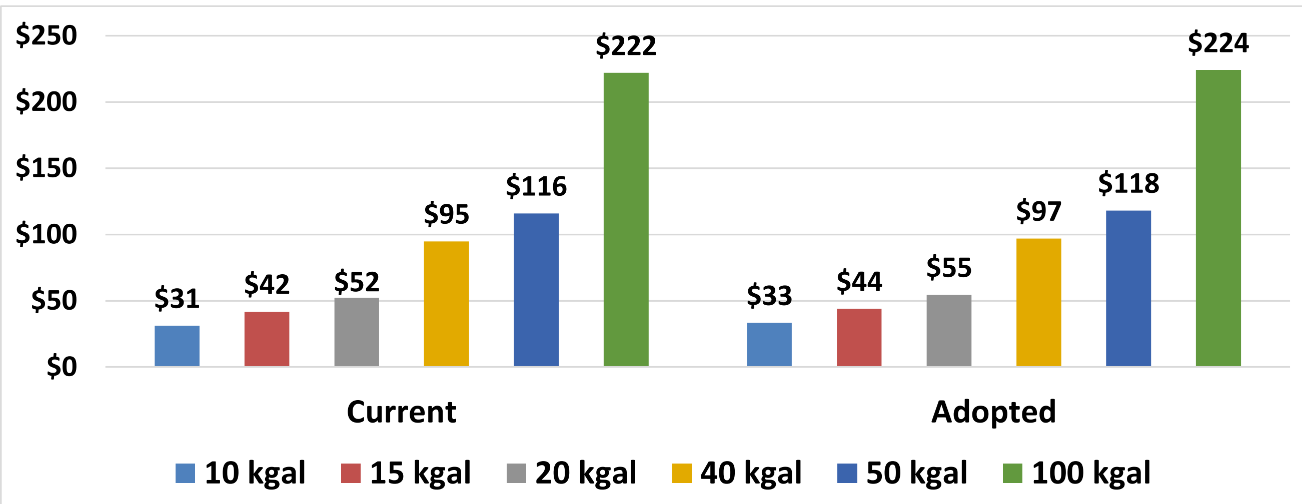


Table 1-4 summarizes current adopted Irrigation-Only customer volume rates.

Table 1-4: Adopted FY 2022 Irrigation-Only Volume Rates

Description	Water Allocation	Current	Adopted
Tier 1	0 – 2,000	$2.12	$ 0.00
Tier 2	Over 2,000	2.12	2.48

Figure 1-7 shows the monthly water bills for three Irrigation-Only customer profiles with a 1-inch meter using 20,000 to 50,000 gallons per month under the current and adopted rates.

Figure 1-7: Monthly Irrigation-Only 1-inch Water Meter Customer Bill Comparison

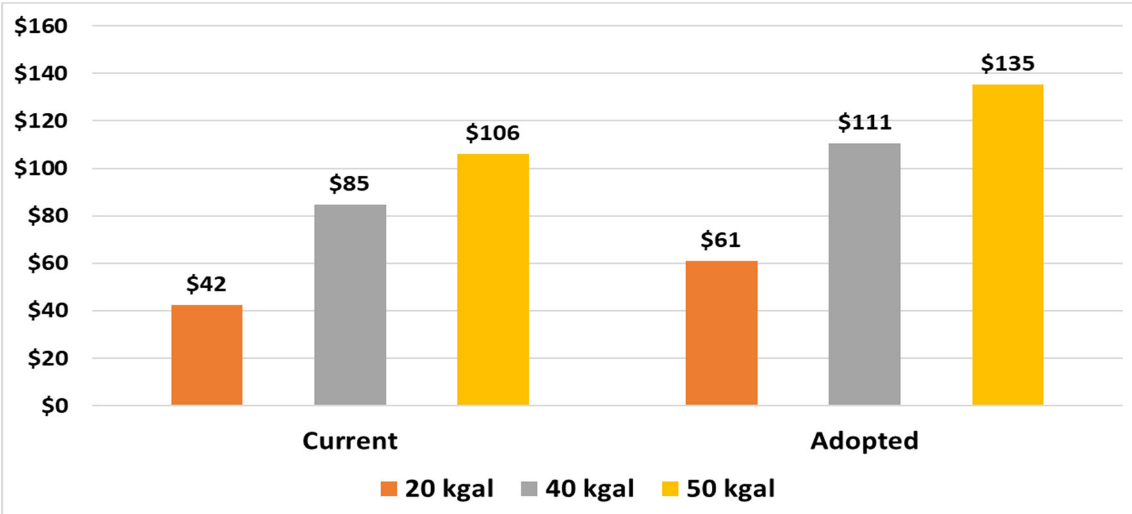


Table 1-5 summarizes existing and adopted base charges by meter size. Table 1-6 summarizes FY 2022 residential volume rates. Adopted base charges and volume rates went into effect July 1, 2021.

Table 1-5: Adopted FY 2022 Sewer Base Charges

Meter Size	Current	Adopted
¾-inch and less	$ 7.00	$ 11.55
1-inch	9.80	14.61
1 ½-inch	17.11	23.61
2-inch	25.20	31.64
3-inch	52.76	53.34
4-inch	81.24	81.02
6-inch	153.23	146.34
8-inch	N/A	224.97

Table 1-6: Adopted FY 2022 Residential Volume Rates

Description	Water Allocation	Current	Adopted
Tier 1	0 – 2,000	$2.27	$ 0.00
Tier 2	Over 2,000	2.27	2.27

Table 1-7 summarizes non-residential volume rates that apply to all other Class 1 sewer customers and those with "domestic" strength discharges. Class 1 sewer customers have biological oxygen demand (BOD) and total suspended solids (TSS) strengths below 250 milligrams per liter or what is considered "domestic" strength discharges. The $2.27 per kgal is comprised of a portion for volume or flow irrespective of strength equal to $1.67 per kgal charges for BOD and TSS strength of $0.36 and $0.24 per kgal respectively.

Table 1-7: Adopted FY 2022 Class 1 Non-Residential Volume Rates

Description	Water Allocation	Current	Adopted
Tier 2	0 – 2,000	$2.27	$ 0.00
Tier 2	Over 2,000	2.27	2.27

Figure 1-8 summarizes the current and adopted monthly bills for four customer profiles with a ¾-inch meter size and billed wastewater volumes ranging from 2,000 to 30,000 gallons.

Figure 1-8: Monthly ¾-Inch Water Meter Customer Sewer Bill Impact

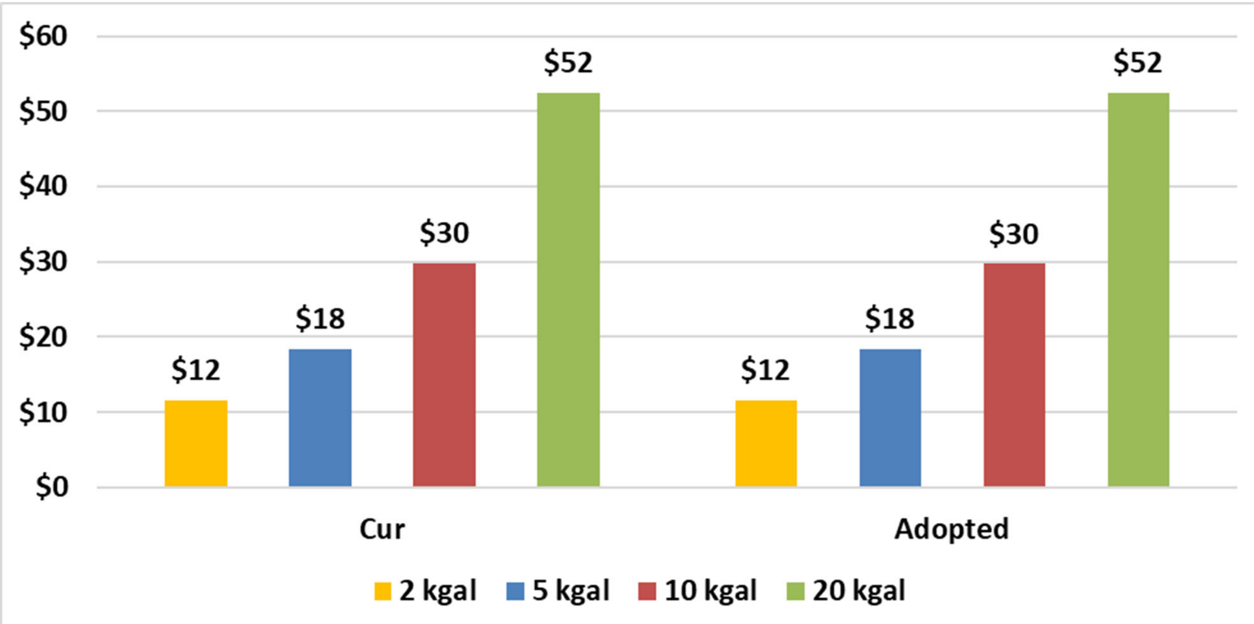
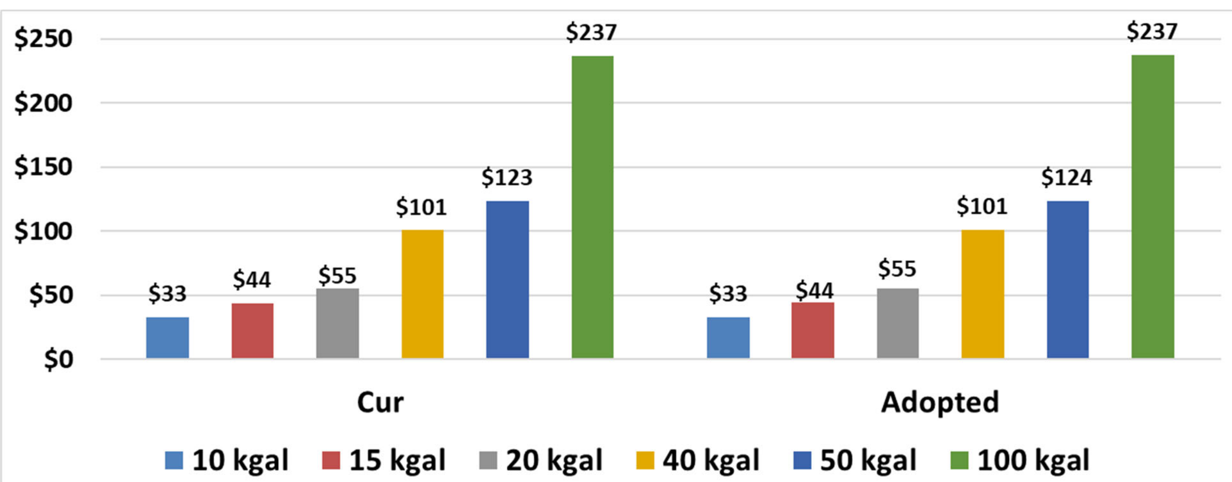


Figure 1-9 summarizes a monthly customer bill for a customer with 1-inch water meter and five profiles with billed volumes 10,000 gals. to 100,000 gals.

Figure 1-9: Monthly 1-Inch Water Meter Customer Sewer Bill Impact



Raftelis worked with Town staff to evaluate the rate structure alternatives and recommend adopting 3 Creek customer rates which mirror the adopted Town rates while recovering the cost-of-service of providing contract retail services to 3 Creek customers. The rates reflect the cost-of-service to provide 3 Creek water and sewer services. 3 Creek customers are sited on large lots and many exert more significant peak usage ratios than Town Residential customers on a per account basis.

Also, as part of the update, Raftelis reviewed the 3 Creek Water and Sewer Capital Replacement Charge. Raftelis and Town Staff, and 3 Creek representatives met to review preliminary 3 Creek base and volume rates. Following the meeting, the Town and 3 Creek agreed to remove some of the pipelines from the Capital Replacement Charge calculation for purposes of calculating the Capital Replacement Charge. This amount is the “adjustment” reference in Table 1-7. The Town has updated the Capital Replacement Charge annually since 2007. The charge is calculated as the annual replacement value per 3 Creek lot and is assessed in addition to the 3 Creek base rate.

Table 1-8 summarizes existing and adopted 3 Creek base rates and Capital Replacement Charge by meter size. Tables 1-9, 1-10, and 1-11 summarize FY 2022 3 Creek volume rates effective July 1, 2021 for Residential, Commercial, and Irrigation-Only customers respectively.

Table 1-8: Adopted FY 2022 3 Creek Water Base and Capital Replacement Charges

Meter Size	Current Base	Current Cap. Rep.	Current Total	Adopted Base	Adopted Cap. Rep.	Adopted Total
¾-inch and less	$ 118.97	$24.56	$ 143.53	$ 13.56	$17.77	$31.33
1-inch	118.97	24.56	143.53	20.16	17.77	37.93
1 ½-inch	118.97	24.56	143.53	35.18	17.77	52.95
2-inch	118.97	24.56	143.53	53.76	17.77	71.53
3-inch	118.97	24.56	143.53	106.50	17.77	124.27
4-inch	118.97	24.56	143.53	163.52	17.77	181.29
6-inch	118.97	24.56	143.53	320.09	17.77	337.86
8-inch	N/A	N/A	N/A	510.76	17.77	528.53

Table 1-9: Adopted FY 2022 Residential 3 Creek Water Volume Rates

Description	Water Allocation	Current	Adopted
Tier 1	0 – 2,000	$1.11	$ 0.00
Tier 2	2,001 – 6,000	1.11	2.02
Tier 3	6,001 – 25,000	1.11	4.04
Tier 4	Over 25,000	1.11	6.06

Table 1-10: Adopted FY 2022 Commercial 3 Creek Water Volume Rates

Description	Water Allocation	Current	Adopted
Tier 1	0 – 2,000	$1.11	$ 0.00
Tier 2	Over 2,000	1.11	2.02

Table 1-11: Adopted FY 2022 Irrigation-Only 3 Creek Water Volume Rates

Description	Water Allocation	Current	Adopted
Tier 1	0 – 2,000	$2.12	$ 0.00
Tier 2	2,001 – 25,000	2.12	4.04
Tier 3	Over 25,000	2.12	6.06

Table 1-12 summarizes existing and adopted 3 Creek sewer base and Capital Replacement Charges by meter size. Table 1-13 summarizes the FY 2022 3 Creek sewer volume rates effective July 1, 2021, which are the same as other volume rates.

Table 1-12: Adopted FY 2022 3 Creek Sewer Base and Capital Replacement Charges

Meter Size	Current Base	Current Cap. Rep.	Current Total	Adopted Base	Adopted Cap. Rep.	Adopted Total
¾-inch and less	$ 70.71	$24.01	$ 94.72	$ 17.75	$16.50	$34.25
1-inch	70.71	24.01	94.72	22.45	16.50	38.95
1 ½-inch	70.71	24.01	94.72	36.28	16.50	52.78
2-inch	70.71	24.01	94.72	48.62	16.50	65.12
3-inch	70.71	24.01	94.72	81.97	16.50	98.47
4-inch	70.71	24.01	94.72	124.51	16.50	141.01
6-inch	70.71	24.01	94.72	224.89	16.50	241.39
8-inch	N/A	N/A	N/A	345.73	16.50	362.23

Table 1-13: Adopted FY 2022 Commercial 3 Creek Sewer Volume Rates

Description	Water Allocation	Current	Adopted
Tier 1	0 – 2,000	$1.88	$ 0.00
Tier 2	Over 2,000	1.88	2.27

As with adopted Town volume rates, 3 Creek volume rates summarized in Table 1-12 reflect Class 1 sewer customers with domestic (BOD) and (TSS) strengths. Also consistent with Town volume rates, Class 2 through Class 6 sewer customers with higher than domestic strengths are assessed higher volume rates for each respective strength class.

Raftelis completed a survey of comparable resort utilities to compare to the Town's current and adopted monthly bills using 5,000 gallons per month for water and billed wastewater. Figure 1-10 shows a typical monthly under the current and adopted July 1, 2021, rates compared to the survey group.

Figure 1-10: Residential Monthly Water Bill Survey

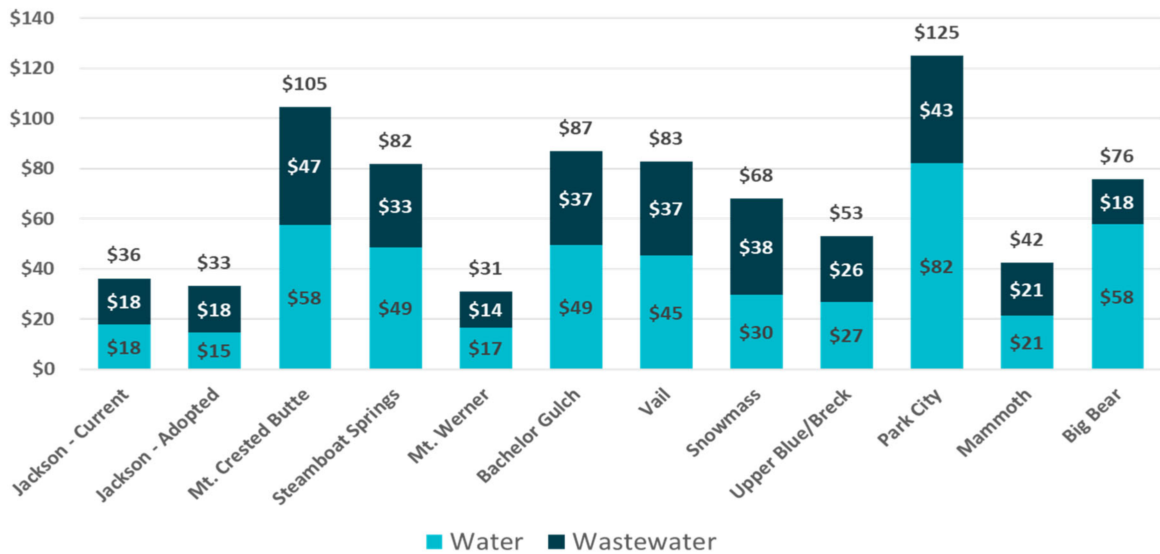
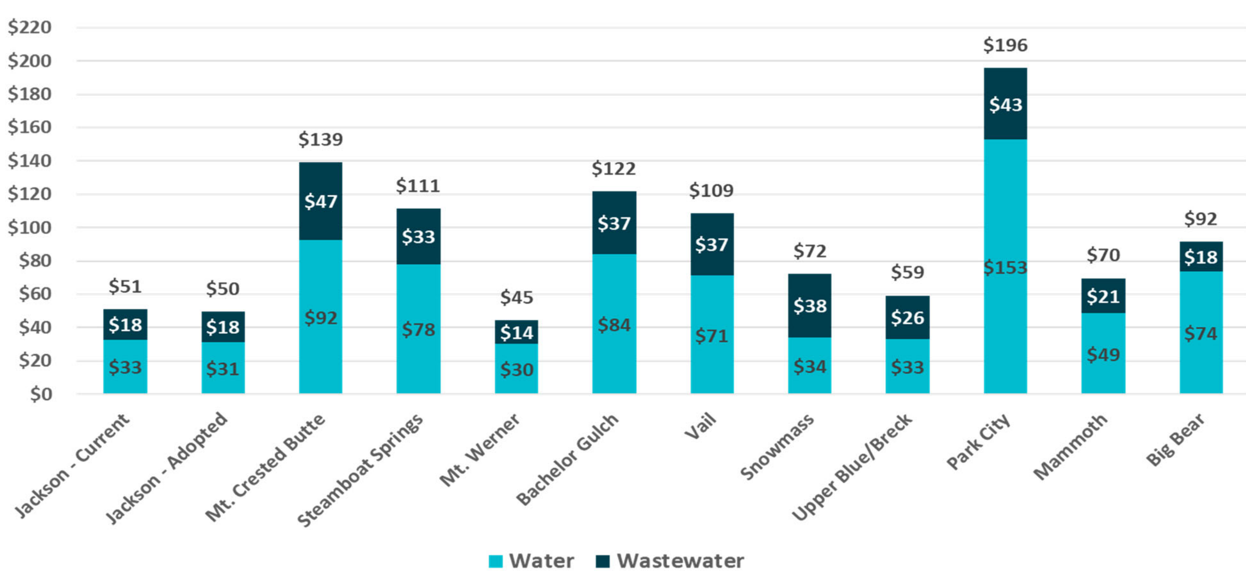


Figure 1-11 shows the monthly bill for a commercial customer with a 1-inch water meter using 12,000 gallons per month water and 5,000 gallons per month billed wastewater under the current rates and adopted July 1, 2021, rates compared to the survey group.

Figure 1-11: Commercial 1-inch Meter Monthly Water Bill Survey



In growing communities such as the Town, capacity fee receipts can provide a significant portion of required CIP funding and/or debt repayment of external debt financing providing upfront funding.

Table 1-14 summarizes the existing water capacity fee compared to the alternative 1 capacity fee assessment schedule – both by meter size. Raftelis recommends meter size-based capacity fees for non-residential and irrigation-only developments.

Table 1-14: Current and Adopted FY 2022 Non-Residential and Irrigation-Only Customer Water Capacity Fee by Meter Size

Meter Size	Current	Adopted
¾-inch	$690	$2,793
1-inch	1,227	4,664
1 ½-inch	2,761	9,301
2-inch	4,909	14,887
3-inch	11,044	29,801
4-inch	19,633	46,559
6-inch	44,176	93,091
8-inch	N/A	148,951

For residential and multi-family customers, the adopted assessment is intended to correct an apparent disparity within the current meter sized based fee assessment. The adopted assessment approach will:

- Enable the Town to fully recover costs development places on the water system
- Provide more scalable fees and resulting impacts to the range of bedroom (and related housing sizes) resulting from new development and redevelopment.

Separating indoor and outdoor water use requirements will also enable the Town to assess capacity fees separately for the two main drivers of residential water use (people and landscaping), but as separately assessed rather than combined within the requirements sizing the meter.

In developing the modified capacity fee structure, Raftelis, Nelson Engineering and Town staff evaluated indoor water use for different bedrooms as the basis for the residential indoor fees by type and per bedroom.

- Irrigation-only water use reflects efficient irrigation systems and resulting water use per day in the peak period per irrigated square foot[2].
- The indoor portion of the assessment schedules reflect peak water demands per bedroom.
- The outdoor portion of reflects peak irrigation season water use per square foot of landscaped area for all residential and irrigation-only customers.
    - Landscaped areas reflect the greater of the:
        - Minimum Land Development Regulation (LDR) Landscape Ratio (LSR) requirements, or
        - Actual landscaped areas.

[2] Annual irrigation requirements developed using *Guidelines for Estimating Unmetered Landscaping Water Use*, Federal Energy Management Program, USDOE, July 2010. Peak period monthly irrigation use is assumed to be 20% of annual requirement.

Table 1-15 summarizes the adopted residential water capacity fee assessment schedule. A 3 bedroom is assessed the same fee as ¾-inch meter and is considered one Equivalent Residential User (ERU).

Table 1-15: Adopted FY 2022 Residential and Landscaped Area Water Capacity Fee Assessment

Type	GPD (1)	$ / GPD	Adopted Fee
1 Bedroom	140	$4.52	$633
2 Bedroom	210	4.52	949
3 Bedroom	280	4.52	1,265
Each Add' l Bedroom (1)	70 / BR	4.52	316
Per 1,000 Sq. Ft. of Landscaped Area (2)			365

(1) Per Nelson Engineering staff including kitchen, bathroom, and laundry.
(2) Assumes 10 gallons per year per sq. ft. of irrigable area with 25% in peak-month or 0.08 gallons per day applied to the $4.52 per gallon per day.

Raftelis developed two alternative wastewater capacity fee assessment alternatives as follows:

- Alternative 1
  - Maintains existing assessment categories and updates the anticipated gallon per day use in the peak day; applies the updated unit cost of $16.24 per gallon per day of wastewater facility capacity.
  - 2 bedroom and greater per dwelling unit updated
  - Apartment and 1-bedroom unit fees with and without laundry per dwelling unit updated.
- Alternative 2
  - Establishes a separate assessment schedule for residential (including multi-family).
  - Residential assessment includes fee based on the number of bedrooms through 3 bedrooms and an incremental fee for each additional bedroom
  - Non-residential assessment of fees same as Alternative 1

In developing the adopted capacity fees, Raftelis, Nelson Engineering and Town staff evaluated indoor water use for different residential and non-residential land uses. Note that there are additional categories proposed where an existing category did not exist, but where the Town is anticipating future development.

Table 1-16 summarizes the existing wastewater capacity fees and assessment criteria by development type. The assumed gallon per day by type reflects a review of assessment categories updating previously assumed water use and for many categories, the expected use per day has been modified. The previous assumptions have been in place for several years. The adopted wastewater capacity fee assesses residential customers solely based on the number of bedrooms regardless of the type of residential unit.

Table 1-16: Adopted FY 2022 and Current Wastewater Capacity Fee Assessment Schedule

Description	GPD	Assessment	Current	Adopted
Apartment, Studio or 1 BR	**140**	**Per Unit**	**$1,088**	**$2,274**
Residential Unit (2BR)	**210**	**Per Unit**	**2,172**	**3,410**
Residential Unit (3BR)	**280**	**Per Unit**	**2,172**	**4,547**
Residential Unit Each Additional BR	**70**	**Per Add' 1 BR**	**N/A**	**1,137**
Unfinished Habitable Space	70	Per 400 sq. ft.	**N/A**	**1,137**
Bars, Tavern and Lounge (no food)	20	Per 15 sq. ft.	297	325
Restaurants (full service)	64	Per Seat (1)	399	1,039
Restaurants (paper service only – no dishes)	50	Per 100 sq. ft.	N/A	812
Restaurants (single service)	30	Per Seat (1)	N/A	487
Caterers	80	Per 100 sq. ft.	N/A	1,299
Motels and Hotels	140	Per Room	985	2,274
Bed and Breakfast	140	Per Room	1,116	2,274
Assembly (no food)	3	Per 5 sq. ft. Net	24	49
Assembly (w/ food)	5	Per 15 sq. ft. Net	36	81
RV Parks (w ind. Sewer hookups)	100	Per Site	493	1,624
Camps, Parks, Campgrounds (w/ comfort station)	75	Per Site	369	1,218
Mobile Home Park	210	Per Site	2,174	3,410
Laundry (self service)	450	Per Machine	1,486	7,308
Laundry (commercial 100#pp capacity)	1,000	Min./Machine	5,435	16,240
Breweries (per annual production 1 barrel is 31 gals.	20	Per Gal. Ann. Capacity	ICB	325
Fitness (Gyms, Dance Studies, Yoga, Karate)	50	Per 100 sq. ft.	N/A	812
Medical Offices and Dentists	250	Per Practitioner	614	4,060
Veterinary Offices (not including boarding)	250	Per Practitioner	N/A	4,060
Animal Boarding	20	Per Cage	N/A	325
Offices	15	Per Employee	147	244
Retail Stores	5	Per 1,000 sq. ft.	24	81
Unfinished Commercial Space	5	Per 1,000 sq. ft.	N/A	81
Public Access Restrooms	325	Per Fixture		5,278
Service Stations	220	Per Pump	1,088	3,573
Car Washes	1,000	Per Bay	4,927	16,240
Public Spas, Pools or Hot Tubs (Per kgal capacity)	10	Per 50 sq. ft. Gross	N/A	162
Schools (w/ Cafeteria, Gym, and Showers)	20	Per Student	98	325
Schools (w/ Cafeteria, No Gym)	15	Per Student	N/A	244
Schools (without Cafeteria and Gym)	10	Per Student	N/A	162
Day Care and Pre School	20	Per Student	98	325
Others Not Listed Wastewater Service		Avg. Max GPD x $16.24		

(1) 15 square feet per seat net anticipated for full service or single service restaurants.

Raftelis completed a variety of capacity fee impacts comparing the adopted to the current fees. Tables 1-17 and 1-18 summarize residential water and wastewater capacity fees under current and adopted fees by customer profile. Residential development profiles include:

- Home A: 3 bedroom, 7,500 sq. ft. lot, 60% LSR, and ¾-inch water meter.
- Home B: 4 bedroom, 12,500 sq. ft. lot, 60% LSR, and 1-inch water meter.
- Home C: 5 bedroom, 15,000 sq. ft. lot, 60% LSR, and 1-inch water meter.
- Home D: 2 bedroom, 5,000 sq. ft. lot, 60% LSR, and ¾-inch water meter.

Table 1-17: Example Current and Adopted Residential Water Capacity Fees by Customer Profile

Type	Current	Indoor	Outdoor	Adopted
Home A	$ 690	$1,266	$1,640	$2,906
Home B	1,227	1,582	2,734	4,316
Home C	1,227	1,898	3,281	5,179
Home D	690	949	1,094	2,043

Table 1-18: Example Current and Adopted Residential Wastewater Capacity Fees by Customer Profile

Type	Current	Adopted
Home A	$ 2,172	$4,547
Home B	2,172	4,547
Home C	2,172	4,547
Home D	2,172	4,547

2. Introduction

2.1. Study Overview

The Town retained Raftelis to complete a financial plan, cost-of-service, and rate study for the Town's water and sewer utilities. Raftelis and Town staff evaluated a 10-year financial planning period spanning from Fiscal Year (FY[3]) 2020 through FY 2029 (Study Period). The scope of service included the following major deliverables:

- Develop separate water and sewer fund financial plans for the 10-year Study Period.
- Evaluate separate water and sewer rate revenue adjustments for the Study Period necessary to fund annual revenue requirements, maintain adequate cash reserves, and provide appropriate debt service coverage.
- Complete a separate water and sewer class cost-of-service analysis using a single (FY 2022) test-year.
- Propose water and sewer rates by customer class for FY 2022 effective July 1, 2021.
- Complete a comprehensive evaluation of the Town's water and sewer capacity fees, including alternative assessment approaches.
- Propose water and sewer capacity fees effective July 1, 2021, with proposed annual adjustments for inflation as reflected within the Engineering News Record Construction Cost Index (ENR-CCI) for Denver thereafter.

In addition to updating the implementation date to July 1, 2021, estimated actual financial results from FY 2020 was incorporated into the financial planning and cost-of-service models adjusted for inflation starting in FY 2021.

The multi-year water financial plan, supporting worksheets and calculations, revenue projections, and assumptions are detailed in Appendix A. The multi-year sewer financial plan, supporting worksheets and calculations, revenue projections, and assumptions are detailed in Appendix E.

2.2. Citizen Rate Committee

The Town established a Citizen Rate Committee (CRC) to assist Town Council in the review of study findings and recommendations. The CRC assisted Raftelis, Nelson Engineering and Town Staff to review, develop, and refine preliminary and final study findings and recommendations as part of the study. For example, Raftelis initially proposed a uniform seasonal water volume rate structure as a more gradual step into tiered rate structures, but the CRC and Town staff preferred inclining block tiered rate approaches for residential customers.

There were a total of seven meetings with the CRC and a report discussing the process and outcomes is included in Appendix I.

[3] Refers to the year at the end of the fiscal year (e.g., FY 2022 is the period ending June 30, 2022).

2.3. Acknowledgements

On behalf of the project team, we would like to acknowledge the commitment and contributions provided by several members of the Town in completing this project. In particular, we would like to recognize the Town staff of Brian Lenz, Johnny Ziem, and Kelly Thompson and Nelson Engineering team members Bob Norton and Matt Bowers and Nelson Engineering sub-consultant Alex Norton for their support, data development, insights, interim reviews, and overall assistance as part of the Study.

2.4. Reliance on Town Provided Data

During this project, the Town, Nelson Engineering, and the Nelson Engineering sub-consultant provided Raftelis with a variety of technical information from capital improvement program, assets, operational to audited and unaudited financial reports, meter, billing data, and revenue data. Raftelis assessed the information for errors and reasonableness but did not independently assess or test for the accuracy of such data, historic or projected. We have relied on this data in the formulation of our findings and subsequent recommendations, as well as in the preparation of this report.

As is often the case, there will be differences between actual and projected data. Some of the assumptions used in this report will not be realized and unanticipated events and circumstances may occur. Therefore, there are likely to be differences between the data or results projected in this report and actual results achieved; these differences may be material. As such, we take no responsibility for the accuracy of data or projections provided by or prepared on behalf of the Town, nor do we have any responsibility for updating this report for events occurring after the date of this report.

3. Utility Background, Water Use & Growth

3.1. Water System Overview

The Town maintains a water system which consists of:

- 7 active wells
- Network of water transmission and distribution pipelines with diameter sizes ranging from 4-inches to 18-inches
- 3 pump stations
- 3 treated water storage tanks

Nelson Engineering completed a capacity study evaluation of the Towns water system documented within the Town of Jackson Water / Sewer Systems Evaluation report dated June 2021.

For the cost-of-service evaluation the inventory of linear feet by diameter size was converted to inch-feet and used in development of the unit cost by service category and customer class. Raftelis separated the Town's water transmission and distribution system into common-to-all and local categories.

- Transmission (Common-to-all): 10-inch and larger
- Distribution (Local): 8-inch and smaller

3.2. Water Accounts & Billed Usage

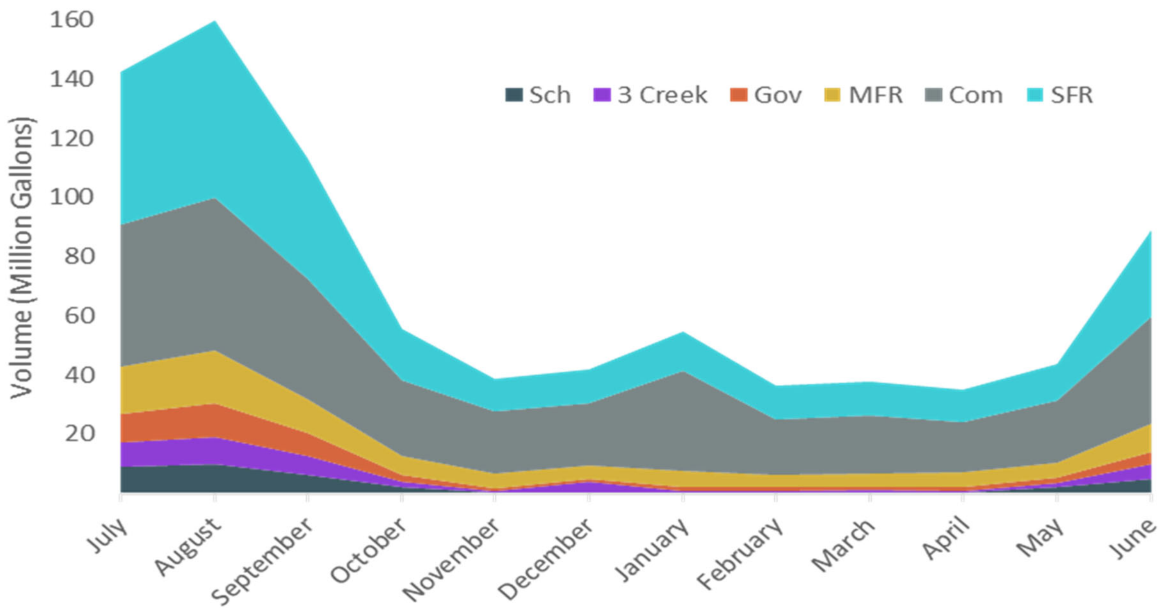
The Town currently served an estimated 3,927 water customers amongst Residential, Multi-Family, Commercial, Irrigation-Only, Government, Schools and those located within 3 Creek in FY 2020. Table 3-1 summarizes FY 2020 customer accounts and water use by customer class.

Table 3-1: FY 2020 Water Customer Data

Customer Class	Accounts	Billed Use (KGAL)
Residential	2,738	276,412
Multi Family	187	91,390
Commercial	790	354,454
Irrigation Only	10	74,589
Government	74	21,698
Schools	25	6,404
3 Creek	113	42,620
Total	**3,927**	**872,277**

Customer classes that have the highest ratio of peak season water use to winter period water use are more expensive to serve as they require infrastructure to be installed for only a portion of the year which is idle capacity the remainder of the year. Figure 3-1 summarizes FY 2019 monthly water use consumption by customer class.

Figure 3-1: FY 2019 Monthly Water Use by Customer Class



3.3. Sewer System Overview

The Town maintains a sewer system which consists of:

- Wastewater treatment plant
- Network of sewer interceptor and collection system pipelines with diameter sizes ranging from 6-inches to 18-inches
- 7 lift stations
- Over 1,400 manholes

For the cost-of-service evaluation the inventory of linear feet by diameter size was converted to inch-feet and used in development of the unit cost by service category and customer class. Raftelis separated the Town's water transmission and distribution system into common-to-all and local categories.

- Interceptor (Common-to-all): 10-inch and larger
- Collection (Local): 8-inch and smaller

The Town currently serves approximately 4,610 sewer customers amongst Residential, Multi-Family, Commercial, Government, School and customers located within Melody Ranch, Rafter J, Adams Canyon Sewer District, Valley View, 3 Creek, or developments served wholesale services by the Town.

Table 3-1 summarizes projected FY 2020 accounts and billed wastewater volume for each customer class. Outside Town customers are grouped based on location and service type.

Table 3-2: FY 2020 Sewer Customer Data

Customer Class	Number of Accounts	Billed Wastewater (kgal)
Residential	2,740	120,769
Multi Family	161	53,483
Commercial	767	304,472
Government	58	19,547
School	21	6,807
Melody (1)	356	18,688
Rafter J (1)	446	47,001
3 Creek (1)	108	10,973
Contract (2)	17	63,858
Sewer Only (1)	13	5,601
Total	**4,691**	**651,578**

(1) Outside Town customers provided full service.
(2) Outside Town provided wholesale service.

Sewer volumes per user have declined compared to levels experienced as recent as a decade ago for many utilities because of multiple factors including an increasing prevalence of higher-efficiency water-using fixtures and overall conservation efforts by the utility and the utility's water and sewer customers. The use of overly optimistic demand forecast based on outdated assumptions regarding customer water consumption characteristics and/or future customer account growth can result in unrealistic revenue projections and severe utility financial distress. We projected a continued downward annual adjustment of 1.0% to Residential, Multi-Family Residential, and other full-service customer billed wastewater volume use per account annually throughout the Study Period.

Table 3-3 summarizes the Biological Oxygen Demand (BOD) and Total Suspended Solids (TSS) Class designation by customer type. Class 1 is "domestic" and Class II through VII include higher concentrations assessed an additional surcharge per 1,000 gallons of billed wastewater. The assumed strength for Class I through Class VII and by customer class in milligrams per liter (mg / l) are detailed in Appendix H.

Table 3-3: Town BOD and TSS Class Designations by Customer Type

Customer Type	BOD Class	TSS Class
Residential	1	1
Non-Residential / Default	1	1
Dry Cleaning	Sampling	Sampling
Meat Processing	4	3
Restaurant and Bakeries	3	3
Commercial Laundry	3	2
Fast Food and Canning	2	2
Hotel / Motel w/ Food Service	2	3
Market w/ Deli	2	2
Kennels and Mortuary	2	2
Commercial Printing	2	1
Auto Service Repair	2	1
School Café	2	1
Hotel / Motel w/o Food Service	2	1
Photo Processing	2	1
Car Washes	1	2
Hospital w/o Food Service	1	2
Hospital w Food Service	2	3
Breweries	6	3

3.4. Growth Assumptions

Annual water and sewer customer growth for Town residential, multi-family, and commercial customers are projected to grow 2.2% annually in FY 2020 and FY 2021, declining to 1.1% annually in FY 2022 through FY 2030.

3 Creek water customer account growth was estimated at 6.6% in FY 2020 and projected to be 3.5% in FY 2021 declining to 1.7% per year FY 2022 through FY 2030. No growth is expected for other customers located outside the Town. 3 Creek customer account growth is 1.0% in FY 2020, 4.0% in FY 2021 declining to 1.1% per year FY 2022 through FY 2030. Many 3 Creek water customers install irrigation-only metering devices to separate meter water used outdoor as well as install irrigation-only services in advance of home construction which accounts for the difference in customer account growth.

Town staff completed an audit of 3 Creek customers as growth continued during the COVID-19 pandemic and usage per account can be significant. The rate design and cost of service analysis reflect the more recent 3 Creek water customer information by meter size. Table 3-4 summarizes the accounts by meter size and customer class.

Table 3-4: 3 Creek Water Customers by Meter Size September 2020

Customer Type	Residential	Non-Residential	Irrigation-Only	Total
¾-inch and less	12	2	3	17
1-inch	39	1	69	109
1 ½-inch	56	1	13	70
2-inch	1	1	1	3
Total	108	5	86	199

4. Financial Plan

The multi-year water financial plan, supporting worksheets and calculations, revenue projections, and assumptions are detailed in Appendix A. The multi-year sewer financial plan, supporting worksheets , revenue projections and assumptions are detailed in Appendix E.

The water and sewer utility financial plans are organized around a total fund with separate operations and capital improvement subfunds. The respective water and sewer rate revenue requirements represent the cost of providing service and include O&M expenses, debt service obligations, and other cash inflows and outflows.

All capital costs are assigned to the water and sewer capital improvement subfunds, where funding is provided from capacity fee revenues, interest income, and transfers from the operations subfund, net bond proceeds, and grants (subject to award). The only expenses in the capital improvement subfund are capital improvement expenditures.

The financial plan evaluates the adequacy of system revenues adjusted for customer and demand-related growth to:

- Fund annual O&M expenses, debt service, and capital expenditures, and
- Maintain the following financial performance thresholds:
  - Exceed DSC ratio of at least 1.30 times annual debt service,
  - Exceed water fund cash reserve targets of
    - 50% (180 days) of annual O&M expenses PLUS
    - the average annual cash-funded capital project expenses separated set for FY 2020 through FY 2024 and FY 2025 through FY 2029.
  - Exceed sewer fund cash reserve targets of
    - 50% (180 days) of annual O&M expenses PLUS
    - the average annual cash-funded capital project expenses separated set for FY 2020 through FY 2024 and FY 2025 through FY 2029.

Raftelis recommends that the Town establish rates to exceed a DSC ratio of at least 1.30 times annual debt service. The DSC ratio target is applied to outstanding debt and debt projected to be issued over the Study Period to fund capital projects. At present, the Town is required to maintain a minimum debt service coverage of 1.00 times annual debt service on the outstanding water debt obligations. This requirement is based on the gross revenues of the system which include all income, charges, and revenues derived directly or indirectly by the Town from the operation and use of the water and sewer systems, including rates, charges, and other fees such as capacity fees less annual O&M expenses. For planning purposes, as revenues include both one-time SDFs and weather and growth dependent sales that may fluctuate year-over-year, Raftelis recommends the more conservative DSC ratio target minimum for rate setting purposes. Furthermore, the Town’s water and sewer demands are affected by seasonal visitors and subject to additional fluctuations.

Raftelis recommends that the Town maintain cash reserve target equal to 50% of O&M expenses plus capital reserves calculated based on the average annual cash-funded capital. The Town should review cash reserve policies periodically and adjust reserve policies when warranted to mitigate the risk of unplanned operational contingencies, capital expenses, and potential fluctuations in volume sales revenue.

If system revenues are not adequate to fund annual expenditures and exceed financial performance requirements, the following four variables are used to balance the financial plan:

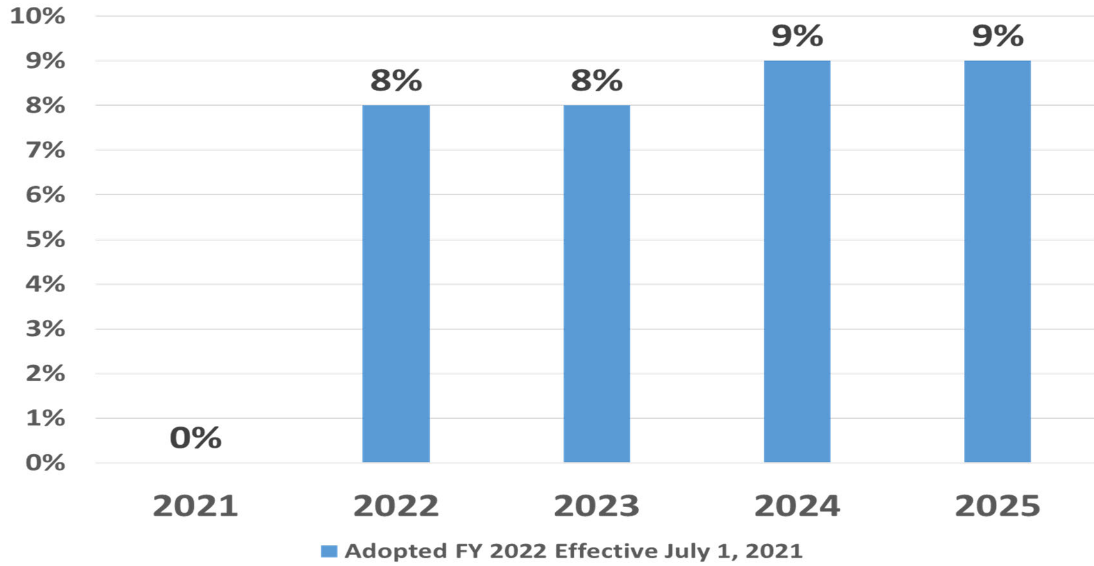
- Draw down accumulated reserves to fund annual expenditures until funds are depleted.
- Issue debt to fund a portion of annual capital improvements.
- Increase user charges.
- Delay and defer annual capital improvements.

While rate revenue increases are currently projected annually over the Study Period, adjustments may be necessary depending on future CIP expenditures, system growth, water use patterns, inflation, and regulatory requirements. At a minimum, annual reviews as part of the budget process should be used to periodically assess the condition of the water and sewer funds to determine the necessity of future rate revenue adjustments. A comprehensive update is recommended every three to five years unless a major event dictates more frequent updates.

4.1. Water Fund Financial Plan Results

Water user charge revenue is projected to be $2.37 million in FY 2020 and is projected to increase to $5.15 million by FY 2029. Figure 4-1 summarizes proposed water rate revenue increases during the Study Period that are necessary to fund annual expenditures and meet financial performance criteria. The proposed FY 2022 water rates, which are based on an 8.0% overall rate revenue adjustment, are detailed in Section 5.2 of this report. It should be noted that these increases do not necessarily equate to the overall rate revenue increases for a specific customer class or individual customer.

Figure 4-1: Projected Annual Water Rate Revenue Increases



Water rate increases are anticipated to be effective July 1st of each year. Figure 4-2 shows the end-of-fiscal year cash balance and reserves for the water fund. The cash reserve targets are exceeded throughout the Study Period. The cash reserve targets are exceeded throughout the Study Period with projected end-of-year cash balances just above the target in FY 2029.

Figure 4-2: Projected Total Water Fund End-of-Year Cash Balances and Reserve Targets

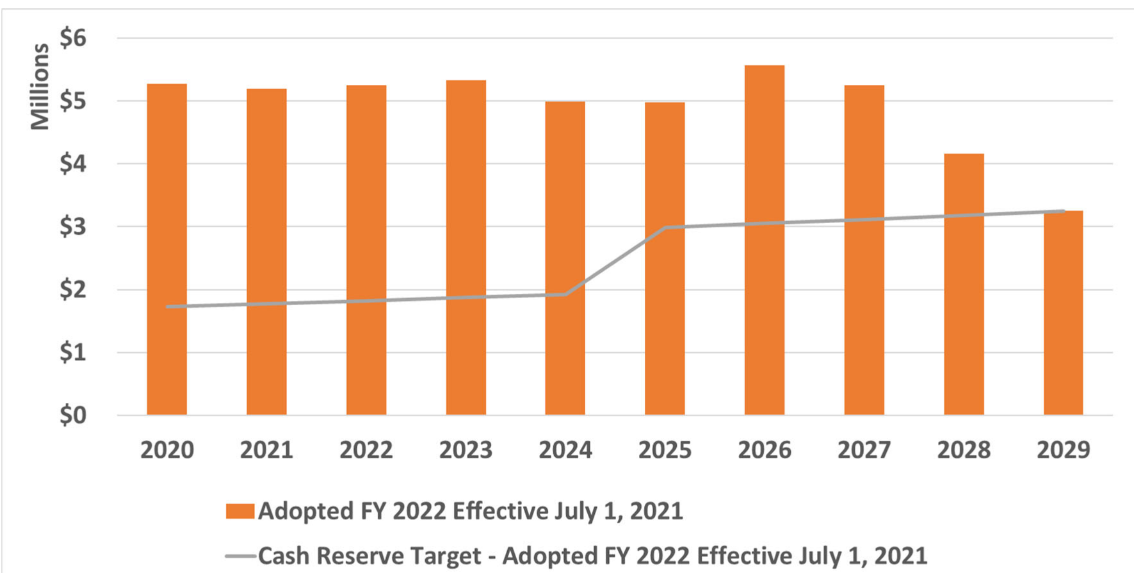
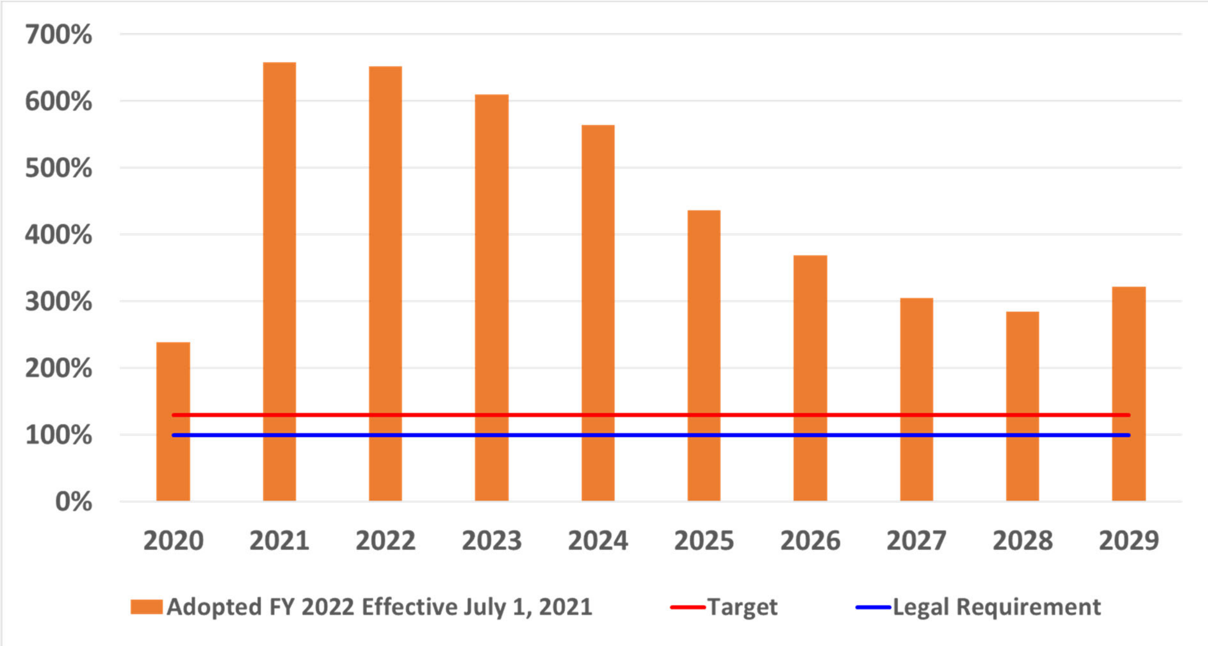


Figure 4-3 shows the projected water fund legal and target DSC ratios compared to the target which are exceeded each year of the Study Period.

Figure 4-3: Projected Annual Water Fund DSC



4.1.1.1. Total Water Fund

All water fund revenues and expenditures are summarized on page A-1. For financial planning purposes, Raftelis developed two different subfunds within the water fund: an operations subfund and a capital improvement subfund as previously discussed.

A total water fund balance of approximately $4.78 million was available as of July 1, 2020, including an operating cash reserve minimum of $1.00 million, leaving $3.78 million as unrestricted. Raftelis proposes creating a new capital reserve effective in FY 2022 equal to the average annual cash-funded capital project outlay. To mitigate the effect of this recommendation, the reserve is calculated in two 5-year increments of FY 2020 through FY 2024 and FY 2025 through FY 2029.

- Operations subfund is summarized on page A-2,
- Capital improvement subfund is summarized on page A-4.

4.1.1.2. Revenues

Water user charge revenues in FY 2021 were projected by Raftelis using historic billing data from FY 2018 and FY 2019, adjusted for growth. Projections for the remainder of the study period are adjusted based on customer growth and developed in a variety of worksheets included in pages A-5 through A-25.

Water user charge revenue is projected to range from $2.37 million in FY 2020 to $5.15 million in FY 2029. Proposed water rates are discussed in Section 5.2.

Capacity fees are one-time capital recovery fees assessed to new or increased development. The water capacity fees are expected to make a significant contribution to the funding of growth-related capital improvement program expenditures. The forecasted capacity fee receipts reflect the customer account growth assumptions previously discussed. Proposed water capacity fees are discussed in greater detail in Section 8 of this report. Capacity fee revenue is projected to range from $0.12 million in FY 2020 to $0.21 million in FY 2029 incorporating proposed changes to capacity fees effective July 1, 2021 and adjusted annually for inflation. Capacity fees were evaluated and Study recommendations are detailed in Section 8.

The water fund has other miscellaneous fee and charge revenues such as new account charges, non-payment turnoff fees, water meter charges, carriage fees, hydrant, and construction sale of water, and interest earnings. Interest earnings are projected based on the average annual cash balance and an interest earnings rate of 2.5%. Combined miscellaneous revenues average $60.920 per year adjusted for 2.0% inflation throughout the Study Period. The water fund miscellaneous revenues are listed in detail on page A-25.

4.1.1.3. Operations and Maintenance

Page A–8 summarizes projected utility O&M expenditures over the Study Period. Projected O&M expenditures are based on the Town's line-item 2020 and 2021 budgets and adjusted for anticipated cost increases and inflation, ranging from $1.99 million in FY 2020 to $3.02 million by FY 2029.

The following annual cost inflations are assumed for O&M expense categories over the Study Period.

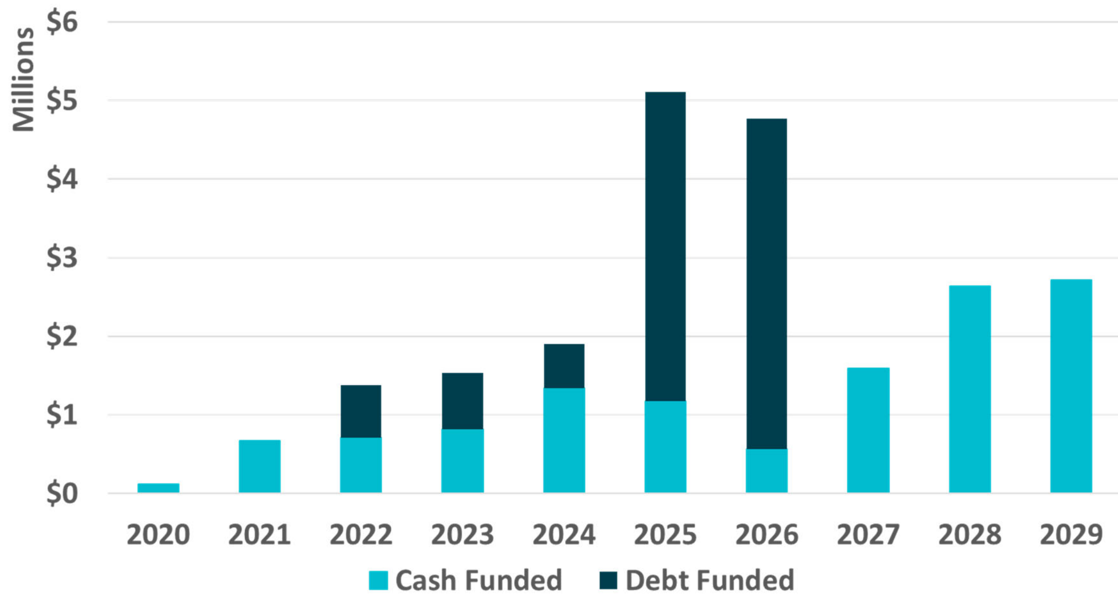
- Materials: 5.0%
- Personnel: 5.0%
- Benefits: 5.0%
- Supplies: 5.0%
- Operating: 5.0%
- Utility: 5.0%
- Services: 3.0%
- Other: 3.0%
- Indirect Costs: 5.0%
- Capital: 7.0%

4.1.1.4. Capital Improvement Projects

The projects listed in the CIP were provided by Town staff in 2021 dollars for the years FY 2020 through FY 2029. The CIP totals $22.41 million, adjusted for inflation. The detailed project listing on pages A-9 through A-10 includes the dollar amount in current year and inflated dollars based on the anticipated year expended over the Study Period.

The financial plan and capital funding incorporate the inflated CIP amounts based on the anticipated timing of the projects and an assumed capital inflation rate of 7.0% applied starting in FY 2022. Figure 4-4 shows the Study Period water capital projects totaling $22.41 million comprised of $10.07 in project new debt and $12.34 million cash-funded CIP by year.

Figure 4-4: Water Capital Projects and Projected Capital Funding



Major CIP projects include:

- Well #9 - $1.38 million design and construction (FY 2022 to FY 2023)
- Gregory Lane - $1.17 million design and construction (FY 2022 to FY 2024)
- Zone 3 Tank - $8.70 million design and construction (FY 2024 to FY 2026)
- Powderhorn - $1.25 million design and construction (FY 2027 to FY 2029)
- Snow King - $1.51 million design and construction (FY 2027 to FY 2029)

4.1.1.5. Debt and Debt Service

The water fund has two existing debt obligations associated with a 1997 loan to be repaid in FY 2023 and a 2010 note to be repaid in FY 2010. Three additional debt issues are projected in FY 2022, FY 2024 and FY 2026 as summarized below.

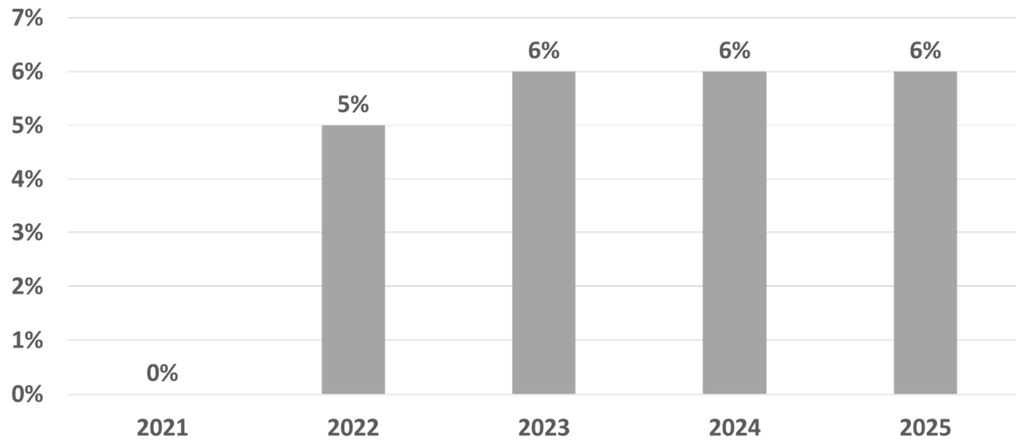
- FY 2022 – FY 2023 bundled into one $1.38 million debt issue in 2022.
- FY 2024 – FY 2025 bundled into one $4.50 million debt issue in 2024.
- FY 2026 – FY 2027 bundled into one $4.20 million debt issue in 2026.

Projected debt is assumed at a 30-year term and includes issuance costs of 2.0% funded from the proceeds of the debt issue, and 4.0% interest rates.

4.2. Sewer Fund Financial Plan Results

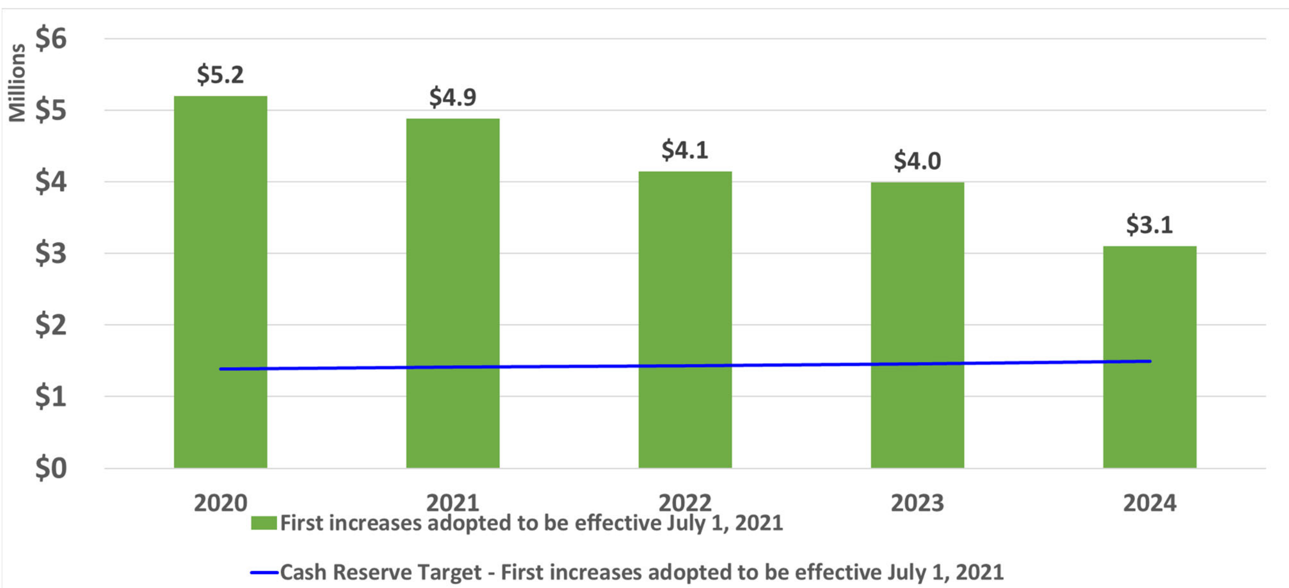
FY 2020 sewer user charge revenue is projected to be $2.45 million. Figure 4-1 summarizes proposed sewer rate revenue increases during the Study Period that are necessary to fund annual expenditures and meet financial performance criteria. The proposed 2022 sewer rates based on 5.0% overall rate revenue adjustments are detailed in Section 6.2 of this report.

Figure 4-5: Projected Annual Sewer Rate Revenue Increases



Sewer rate increases are also effective July 1st of each year. Figure 4-2 shows the end-of-year cash balance and reserves for the sewer combined fund. The cash reserve targets are exceeded throughout the Study Period.

Figure 4-6: Projected Total Sewer Fund End-of-Year Cash Balances and Reserve Targets



No sewer debt is outstanding or anticipated to be issued over the Study Period.

4.2.1.1. Total Sewer Fund

All water fund revenues and expenditures are summarized on page E-1. For financial planning purposes, Raftelis developed two different subfunds within the sewer fund: an operations subfund and a capital improvement subfund as previously discussed.

A total water fund balance of approximately $4.74 million was available as of July 1, 2020, including an operating cash reserve minimum of $1.02 million, leaving $3.72 million as unrestricted. Raftelis proposes creating a new capital reserve effective in FY 2022 equal to the average annual cash-funded capital project outlay. To mitigate the effect of this recommendation, the reserve is calculated in two 5-year increments of FY 2020 through FY 2024 and FY 2025 through FY 2029.

- Operations subfund is summarized on page E-2 and
- Capital improvement subfund is summarized on page E-4.

4.2.1.2. Revenues

FY 2020 user charge revenues were adjusted based on estimated actual results provided in July 2020. FY 2021 user charge revenues were projected by Raftelis using historic FY 2018 and FY 2019 billing data from, adjusted for projected growth. Projections for the remainder of the study period are adjusted based on customer growth and developed in a variety of worksheets included in pages E-4 through E-8. Sewer user charge revenue is projected to range from $2.45 million in FY 2020 to $3.99 million in FY 2029. Proposed sewer rates are discussed in Section 5.2.2.

Capacity fees are one-time capital recovery fees assessed to new or increased development to recover the cost of system capacity necessary to serve customers. Proposed sewer capacity fees are discussed in Section 8 of this report. Capacity fee revenue is projected to range from $0.43 million in 2020 to $1.74 million in FY 2029.

The sewer fund has only a few miscellaneous fee and charge revenues listed on page E-2. Miscellaneous revenues were budgeted to be $60,000 in FY 2020 and projected to increase at 1.0% per year. Interest earnings are projected based on the average annual cash balance and an interest earnings rate of 2.5%.

4.2.1.3. Operations and Maintenance

Page E–8 summarizes projected utility O&M expenditures over the Study Period. Projected O&M expenditures are based on the Town's line-item 2020 and 2021 budgets and adjusted for anticipated cost increases and inflation, ranging from $2.04 million in FY 2020 to $2.97 million by FY 2029.

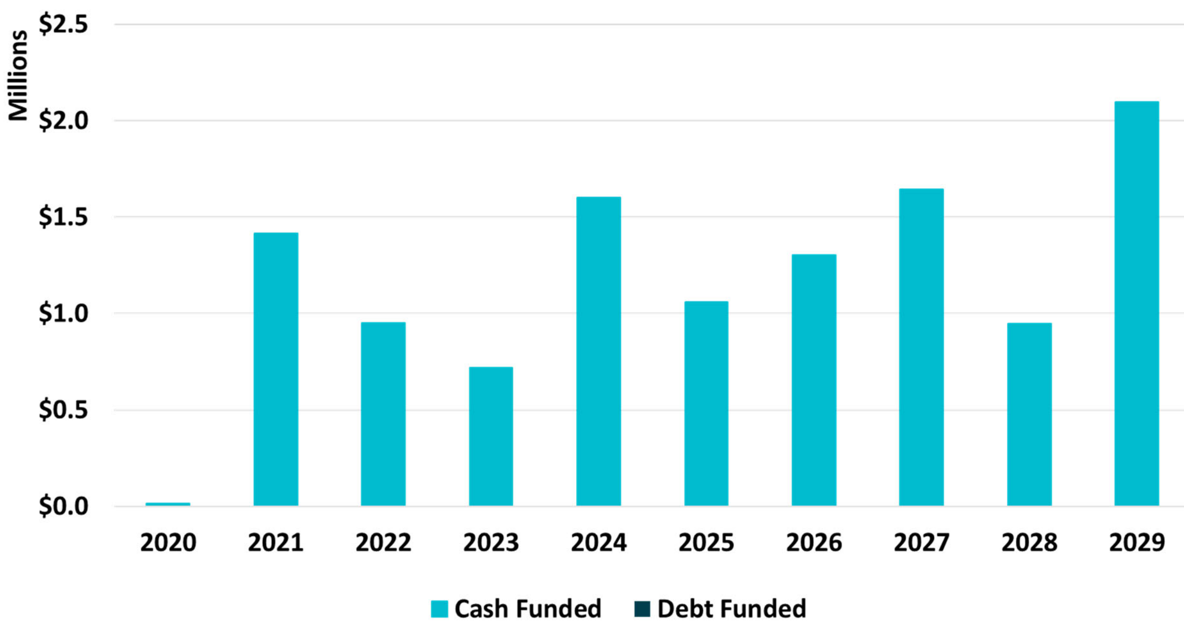
- Materials: 5.0%
- Personnel: 5.0%
- Benefits: 5.0%
- Supplies: 5.0%
- Operating: 5.0%
- Utility: 5.0%
- Services: 3.0%
- Other: 3.0%
- Indirect Costs: 5.0%
- Capital: 7.0%

4.2.1.4. Capital Improvement Projects

The projects listed in the CIP were provided by Town staff in 2020 dollars for the years FY 2020 through FY 2029. The CIP totals $8.90 million, adjusted for inflation. The detailed project listing on pages E-9 and E-10 includes the dollar amount in current year and inflated dollars based on the anticipated year expended over the Study Period.

The financial plan and capital funding incorporate the inflated CIP amounts based on the anticipated timing of the projects and an assumed capital inflation rate of 7.0% applied starting in FY 2021. Figure 4-4 shows the annual sewer capital projects broken down by funding source.

Figure 4-7: Sewer Capital Projects and Projected Capital Funding



Major CIP projects include:

- Gregory Lane Sewer - $1.21 million design and construction (FY 2022 through FY 2024)
- West Cache - $0.58 million design (FY 2021)
- Hillside Townhomes - $0.84 million design and construction (FY 2023 through FY 2025)
- Powderhorn Lane - $1.09 million (FY 2027 through FY 2029)

4.2.1.5. Debt and Debt Service

The Town has no outstanding sewer fund debt. No additional debt is anticipated to be issued over the Study Period to fund identified capital improvements.

5. Water Cost-of-Service Analysis and Rate Recommendations

5.1. Cost-of-Service

Raftelis completed a cost-of-service analysis for a FY 2022 test-year to identify customer, base, and extra capacity costs. Detailed calculations are presented in Appendix C.

5.1.1. OVERVIEW OF THE WATER COST-OF-SERVICE PROCESS

The purpose of a cost-of-service study is to allocate the water utility revenue requirement to each customer class in direct proportion to the demands they impose on the utility system. To accomplish this objective, Raftelis conducted a detailed analysis of customer water consumption characteristics and engaged in a multi-step cost allocation process. The procedures followed by Raftelis were based on the industry standard "base-extra capacity method" of cost allocations as published by the American Water Works Association in the Seventh Edition of the Manual of Water Supply Practices M1, Principles of Water Rates, Fees, and Charges.

The primary steps in the water cost-of-service study process include the following which essentially functionalize, allocate and distribute the defined or net revenue requirements of the water utility:

» **Costs and Demand:** Determining the test-year revenue requirement and forecast billed water consumption.

» **Cost Functionalization:** Functionalizing the O&M, capital, and non-rate revenue components of the revenue requirement. This process results in the assignment of costs to the specific water utility functional activities they are incurred to perform.

» **Cost Allocation:** Allocating the functionalized O&M, capital, and non-rate revenue components of the revenue requirement to specific cost parameters such as base demand, maximum day demand, and maximum hour demand. This process results in the assignment of costs to the specific types of water service they are incurred to serve.

» **Units of Service:** Determining the customer class units of service for each cost parameter based on metrics such as annual average day billed usage, maximum day and maximum hour extra capacity demand, the number of equivalent meters, and annual number of water bills.

» **Unit Cost-of-Service:** Determining the utility-wide unit cost-of-service for each cost parameter. The unit cost-of-service is determined by dividing the revenue requirement assigned to each cost parameter by its associated utility-wide units of service.

- **<u>Customer Class Revenue Requirements:</u>** Distributing the total revenue requirement by multiplying the customer class specific units of service for each cost parameter by the associated utility-wide unit cost-of-service.

5.1.2. WATER UTILITY FY 2022 REVENUE REQUIREMENT

The total 2022 financial plan revenue requirement of $3.71 million consists of $2.18 million in O&M expenses and $1.53 million in capital costs. These costs are partially offset by $0.96 in non-rate revenues, reserves, and external debt proceeds. Water user charge revenues of $2.75 million are required to fund the remaining revenue requirements as summarized in Table 5-1 and detailed on page C-1.

Table 5-1: Water Fund Revenue Requirements

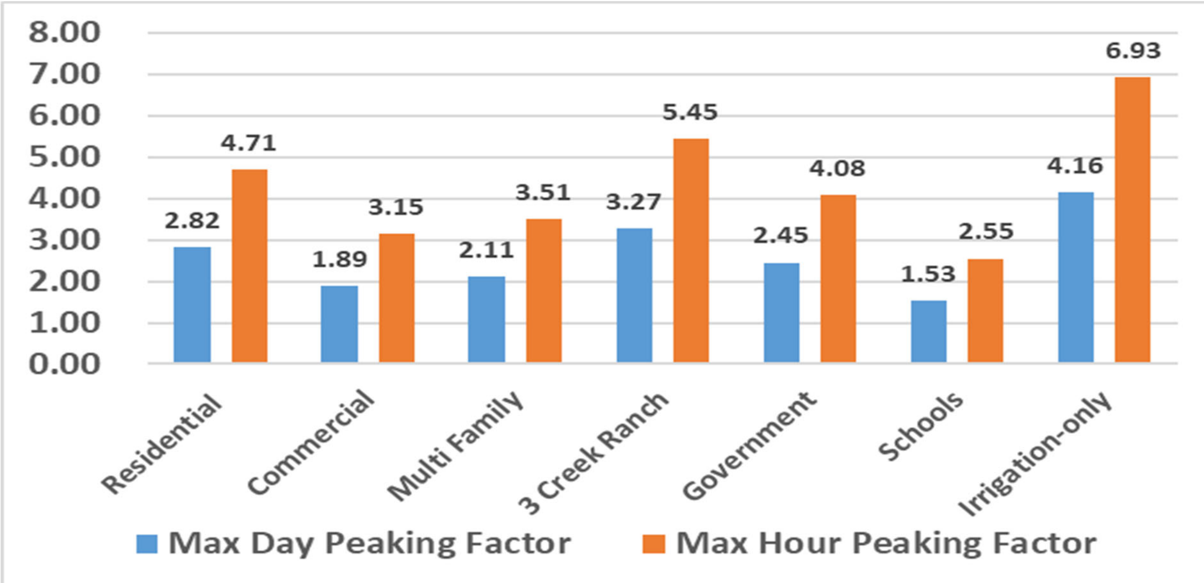
Description	FY 2022 Cost-of- Service
O&M Expenses	$2.18 M
Capital Costs	1.53 M
Other Cash (Inflows) / Outflows	(1.73 M)
Increase (Decrease) in Cash Reserves	<u>0.77 M</u>
Water User Charge Revenues	$2.75 M

5.1.3. CUSTOMER CLASS PEAKING FACTORS

A water utility system cannot be designed, constructed, or operated merely to meet the average day demands imposed by customers. Instead, it must be designed, constructed, and operated to meet total system maximum day and maximum hour peak demands imposed by customers. These peak demands occur on a single day or during a single hour each year and are significantly greater than typical average day demands. The maximum day to average day demand peaking factor of 2.40 and a maximum hour to average day demand peaking factor of 4.00 based on 10% above actual FY 2019 peaking factors. This was reviewed with Town and Nelson Engineer staff and was deemed reasonable.

The approach used by Raftelis to estimate customer maximum day and maximum hour peaking factors is like that described in Appendix A of the AWWA Manual M1. Raftelis utilized 2019 billing data, adjusted as previously discussed, and the results of this process are shown in Figure 5-1. These estimated peaking factors were used by Raftelis to establish the maximum day and maximum hour extra capacity units of service for each customer class as used in the cost-of-service study. These extra capacity units of service are a key driver of the allocation of the revenue requirement for each customer class.

Figure 5-1: Customer Class Peaking Factors FY 2019 Water Use



Due to the peak demands they impose on a water utility system, customer classes that have higher maximum day and maximum hour peaking factors generally make a large proportional contribution to the coincident peak demands experienced by a utility, i.e., place greater summer season demands on the system. As a result, through of the cost-of-service process, they are allocated a larger proportional share of the water utility revenue requirement.

5.1.4. RESULTS OF THE COST-OF-SERVICE STUDY

The goal of a cost-of-service study is to implement user charges that equitably recover the cost of providing service to each customer class. Thus, the critical question the cost-of-service study process attempts to answer is: do the user charge revenues collected from each customer class correspond to the cost of providing service? If the answer to this question is no, it indicates that one or more customer classes are not making a fair and equitable contribution to the utility's overall revenue recovery.

Customer classes include additional separated customer groupings of customers were evaluated (e.g., irrigation-only) separately for the cost-of-service analysis. Some of these customer groupings were consolidated for purposes of rate setting.

As shown in Table 5-2, the projected FY 2022 user charge revenue recovery for each water customer class does not match the calculated FY 2022 cost-of-service. Specifically, residential, schools, irrigation-only, and 3 Creek customers are paying too little and commercial and multi-family customers are paying too much relative to the indicated cost-of-service. There are several reasons such an outcome can occur. Typically, if a water utility has not adjusted its cost-of-service user charges for a significant period, a misalignment between revenue recovery and the actual cost of providing service can occur due to changes in customer class water consumption characteristics or changes in the composition of the overall utility-wide revenue requirements. The Town also instituted system-wide water volume rates irrespective of customer class except for 3 Creek contract water customers.

Table 5-2 shows the results of the FY 2022 cost-of-service analysis aggregating the classes into their respective current rate structure designations.

Table 5-2: FY 2022 Cost-of-Service Results

Customer Class	Cost-of-Service	Revenue Under Existing Rates	Difference Revenue ($)	Difference in Revenue (%)
Residential	$1,159,457	$863,851	$295,606	34%
Multi-Family	222,276	236,280	(14,004)	(6%)
Commercial	789,649	973,904	(184,255)	(19%)
Irrigation-Only	223,913	158,129	65,785	42%
School	23,639	11,187	12,452	111%
3 Creek	318,950	271,012	47,938	18%
Outside Town	9,114	11,502	(2,388)	(21%)
Total	**2,746,998**	**$2,525,865**	**$221,133**	**9%**

5.2. Rate Design

The water user charge design process allows utility governing bodies to determine how they wish to recover the cost-of-service study-derived revenue requirement from rates from each customer class. Generally, utility governing bodies have significant discretion to achieve specific financial, water conservation or public policy objectives via the water rate design process. Raftelis and Town staff reviewed various rate design alternatives that achieve the required revenue requirement for the water utility. The recommended rates achieve system-wide cost-of-service rates in FY 2022 and improve customer class cost-of-service recovery for each customer class and future rate adjustments will be necessary to achieve full customer class cost-of-service recovery. Appendix D includes more detailed information related to the recommended rates.

5.2.1. EXISTING RATES

The Town's current water user charges have been in place since January 1, 2015 and are shown in Tables 5-3 and 5-4. The existing water rate structure includes inside and outside city rates, a monthly service charge that increases by meter size that is applicable to all customer classes and system-wide uniform volumetric charges.

5.2.2. RATE STRUCTURE ALTERNATIVES

Raftelis developed three rate alternatives for the FY 2022 test-year that are calculated to be "revenue-neutral", meaning the same level of revenue as calculated in the financial plan is projected to be generated under each alternative. However, the revenue will be recovered differently between classes under each alternative.

Raftelis worked with Town staff to develop three water rate alternatives. The following recommendations are integrated within one or more alternatives:

- Establish a stand-alone customer class for Irrigation-only customers. Irrigation-only customers as a class typically exert the highest peak demands; creating a separate class is consistent with providing pricing signals for the efficient use of water.
- Assess a monthly base charge by meter size to Irrigation-only customers. Irrigation-only customers incur meter reading, meter replacement, customer service, and billing like other accounts and assessing a base charge recovers these costs.
- Incorporate a minimum volume allowance for all customers to provide more guaranteed revenue stream for low volume uses and when accounts are otherwise using little or no water. This promotes equity amongst all users as utility infrastructure needs to be maintained and replaced whether the account is an active user.
- Adopt a tiered volumetric rate, where higher water users pay more for higher volumes of water used; this will improve the conservation pricing signal to promote more efficient water use for discretionary purposes.
- Apply the same rate structures to 3 Creek as proposed for in-Town Residential customers, while setting unit prices to recover the higher cost of providing service to serve 3 Creek customers.
- Begin to rebalance the way costs to serve specific customer classes are recovered to make sure everyone is paying their fair share but do this more gradually to avoid rate shock in a single year.

The following table summarizes, compares, and contrasts each final water rate alternative.

Table 5-4: Water Rate Objective Matrix Summary

Attribute	Current	Alt. 1	Alt. 2	Adopted
Irrigation-Only Customer Class	N	Y	Y	Y
Irrigation-Only Pays Base Charge	N	Y	Y	Y
System-Wide Rates	Y	Y	Y	N
Increase Revenue Recovery Via Base Charge	N	Y	Y	Y
Minimum Use Included in Base Charge	N	N	Y	Y
Conservation Pricing Signal Increased	N	N	Y	Y
Class Cost of Service Recovery	N	N	N	N
3 Creek Customer Full Cost Recovery	Y	Y	Y	Y

5.2.3. ADOPTED JULY 1, 2021, TOWN RATES

Raftelis worked with Town staff and the CRC to evaluate the rate structure alternatives and recommend adopting the alternative 3 rates presented above. The adopted rates maintain the existing monthly base rates increasing by meter size and include different volumetric rate by customer classes for Residential, Commercial, and Irrigation-Only which transition closer to customer class cost of service while increasing overall user charges by 8.0%. Table 5-4 presents the current water rates compared to the recommended In-Town rates which are proposed to go into effect July 1, 2021. Separate Commercial and Irrigation-Only customer volume rates reflect a minimum allowance of 2,000 gallons per account and varying uniform volume rates for use over 2,000 gallons. Commercial includes Multi-Family Residential and all Non-Residential customer classes (e.g., Commercial, School, and Government).

Tables 5-3 and 5-4 summarize current adopted base charges and residential volume water rates.

Table 5-3: Adopted FY 2022 Water Base Charges

Meter Size	Current	Adopted
¾-inch and less	$ 7.22	$ 11.00
1-inch	9.93	16.39
1 ½-inch	17.41	28.54
2-inch	18.98	43.61
3-inch	54.54	86.39
4-inch	86.26	132.65
6-inch	159.34	259.66
8-inch	N/A	414.33

Table 5-4: Adopted FY 2022 Residential Volume Water Rates

Description	Water Allocation	Current	Adopted
Tier 1	0 – 2,000	$2.12	$ 0.00
Tier 2	2,001 – 6,000	2.12	1.24
Tier 3	6,001 – 25,000	2.12	2.48
Tier 4	Over 25,000	2.12	3.72

Figure 5-1 summarizes monthly bills for four residential customer profiles with a 3/4-inch meter size and 2,000 to 30,000 gallons of water use under the current and adopted FY 2022 rates.

Figure 5-2: Typical Monthly Water Residential Bill Impact

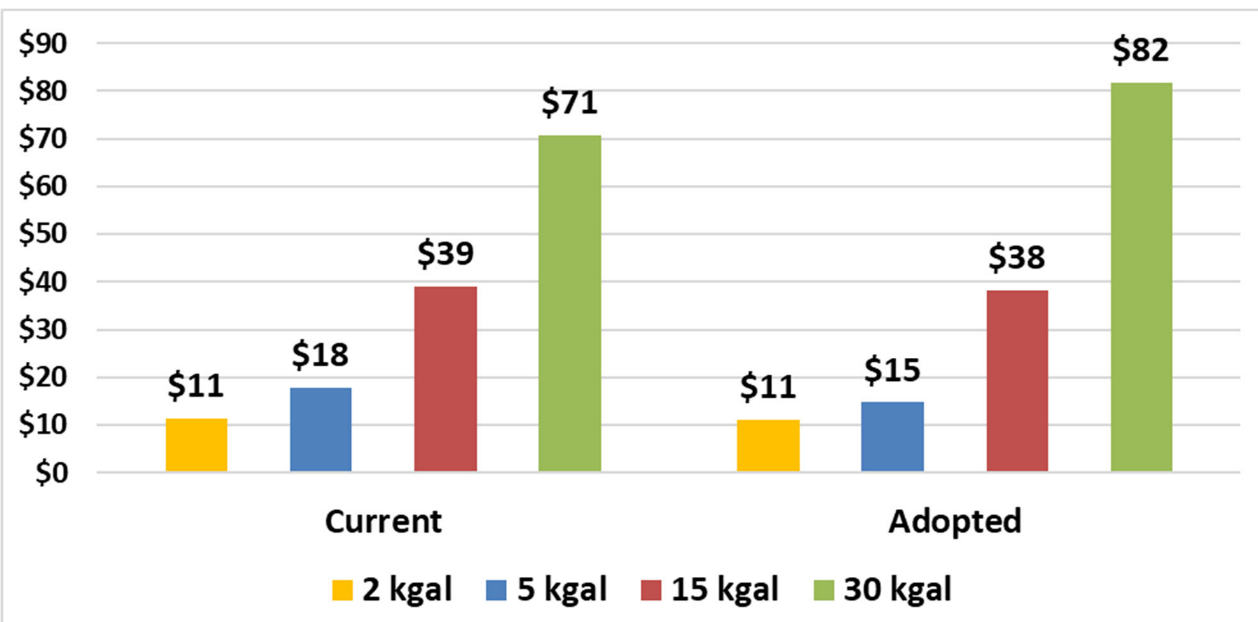


Figure 5-3 shows the monthly water bills for a ¾-inch Residential using 0 to 30,000 gallons per month under the current and adopted rates.

Figure 5-3: Monthly Residential Customer Bill Comparison

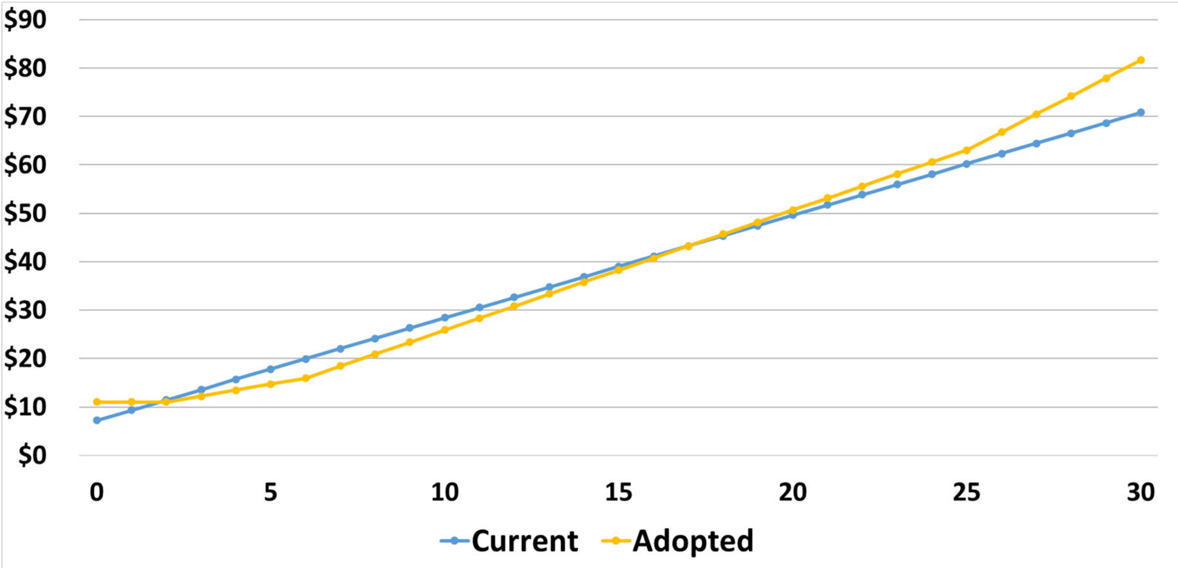


Table 5-5 summarizes current adopted multi-family and non-residential volume rates.

Table 5-5: Adopted FY 2022 Multi-Family and Non-Residential Volume Rates

Description	Water Allocation	Current	Adopted
Tier 1	0 – 2,000	$2.12	$ 0.00
Tier 2	Over 2,000	2.12	2.12

Figure 5-4 shows the monthly water bills for five Non-Residential customer profiles with a 1-inch meter using 10,000 to 100,000 gallons per month under the current and adopted rates.

Figure 5-4: Monthly Commercial 1-inch Water Meter Customer Bill Comparison

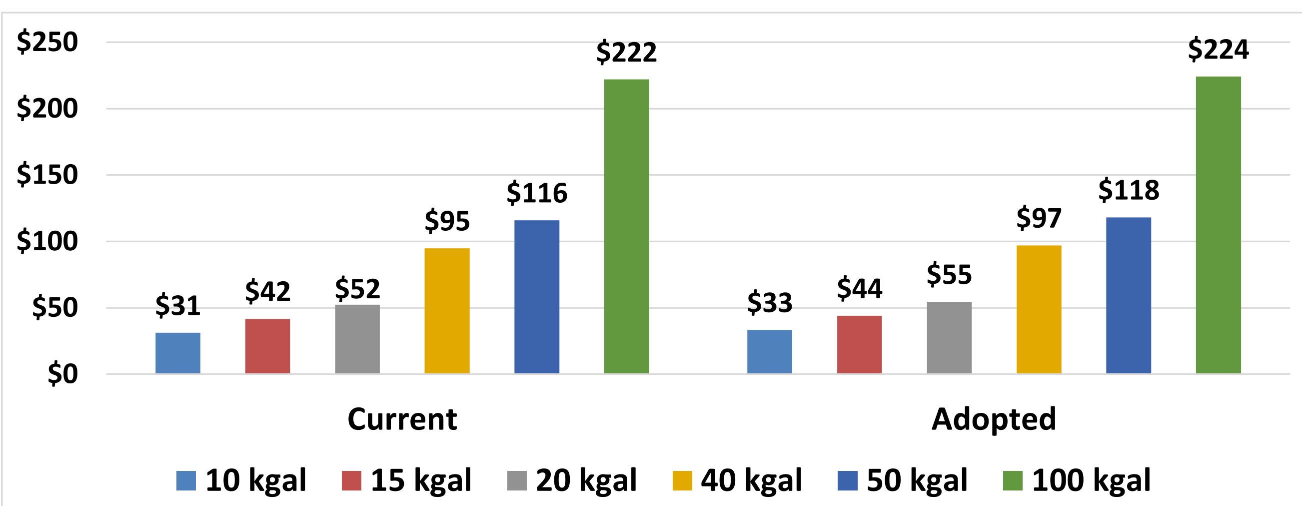


Figure 5-5 shows the monthly water bills for Irrigation-Only customer with a 1-inch water meter from 0 to 60,000 gallons of billed consumption under current and adopted monthly service charge and volume rates.

Figure 5-5: Monthly Non-Residential 1- inch Water Meter Customer Bill Comparison

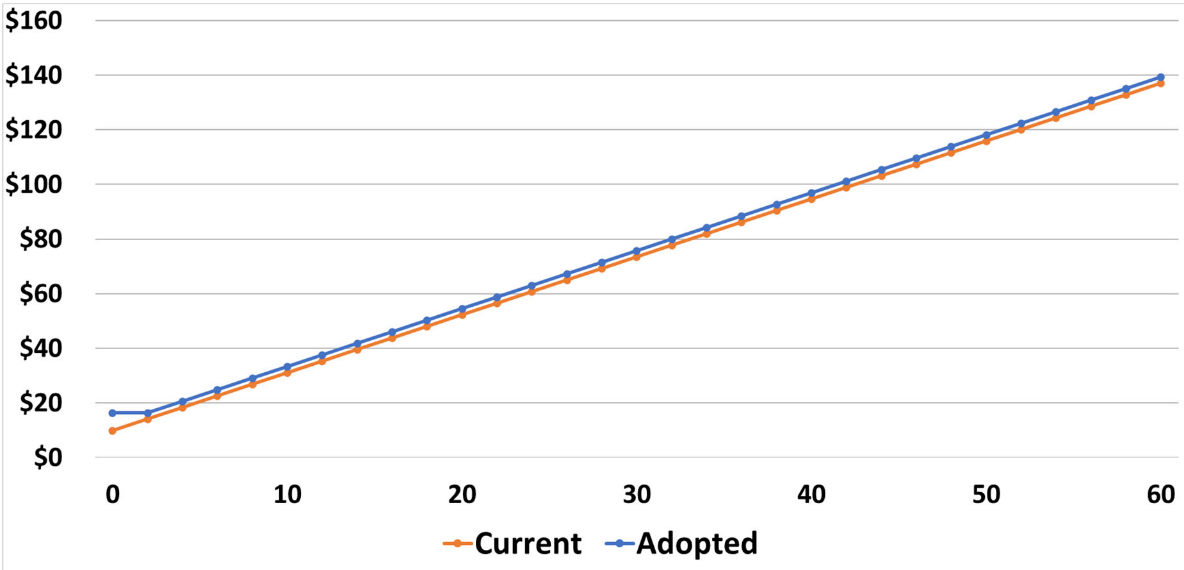


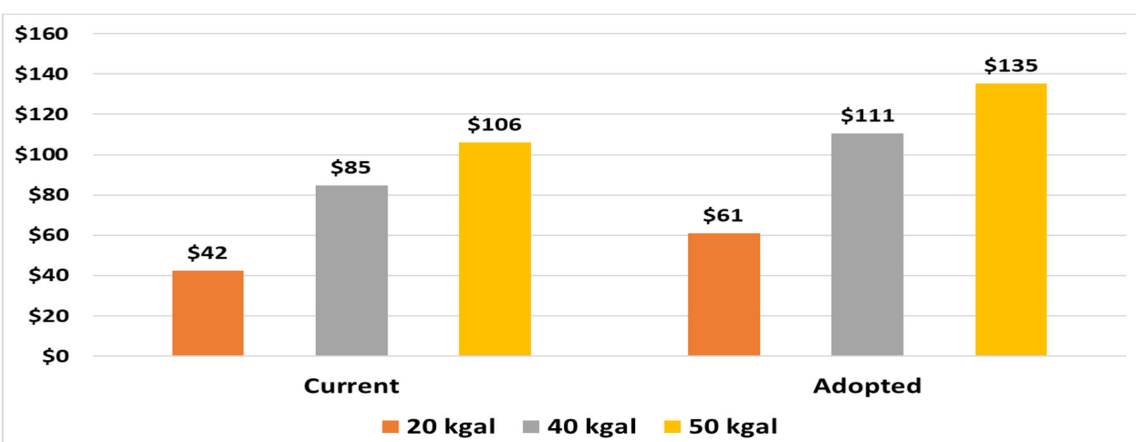
Table 5-6 summarizes current adopted Irrigation-Only customer volume rates.

Table 5-6: Adopted FY 2022 Irrigation-Only Volume Rates

Description	Water Allocation	Current	Adopted
Tier 1	0 – 2,000	$2.12	$ 0.00
Tier 2	Over 2,000	2.12	2.48

Figure 5-6 shows the monthly water bills for three Irrigation-Only customer profiles with a 1-inch meter using 20,000 to 50,000 gallons per month under the current and adopted rates.

Figure 5-6: Monthly Irrigation-Only 1-inch Water Meter Customer Bill Comparison



6. Sewer Cost-of-Service Analysis and Rate Recommendations

6.1. Cost of Service

Raftelis completed a cost-of-service analysis for a 2022 test-year to identify customer, volume, and extra strength costs. Detailed calculations are presented in Appendix G.

6.1.1. REVENUE REQUIREMENTS

The total FY 2022 financial plan revenue requirement of $3.11 million consists of $2.16 million in O&M expenses and $0.95 million in capital costs. These costs are partially offset by $0.40 million from other revenue sources as well as $0.18 million decrease in the cash balance of the operations subfund. Sewer user charges revenues of $2.53 million are required to fund the remaining revenue requirements as summarized in Table 6-1 and detailed on page G-1.

Table 6-1: Sewer Fund Revenue Requirements

Description	FY 2022 Cost of Service
O&M Expenses	$ 2.16 M
Capital Costs	0.95 M
Other Cash (Inflows) / Outflows	(0.40 M)
Increase (Decrease) in Cash Reserves	(0.18 M)
Sewer User Charge Revenues	$ 2.53 M

6.1.2. UNITS OF SERVICE

Service requirements for each class are based on contributed wastewater volume, accounts, metering, and billing requirements. Page G-8 summarizes estimated FY 2022 class units of service.

Wastewater volume consists of two elements: contributed wastewater flow and infiltration/inflow (I/I) from stormwater runoff, snow melt, and/or groundwater that seeps into the wastewater collection and interceptor system. I/I is allocated equally between volume and equivalent meters to reflect that these parameters are dependent on the size of the system and size of pipelines.

Contributed wastewater flow is a portion of the annual water use that enters the sanitary wastewater system. Estimates of the contributed volume are based on annualized AWC water use. Annualized wastewater volumes for each customer classification, adjusted for estimated I/I, are summarized on page G-7; values across all service categories used in the cost-of-service analysis are located on page G-8.

The Town also incurs customer costs related to local wastewater collectors, meters and services, and billing. Local wastewater collection lines are allocated based on the number of equivalent meters using meter capacity. Meters and services costs are based on equivalent meter replacement costs that vary based on water meter size. Billing costs are the same for each bill regardless of service requirements.

6.1.3. ALLOCATION TO COST COMPONENTS

There are three basic wastewater system cost components evaluated: volume, strength, and customer costs. Volume costs are directly related to the quantity of billed wastewater flow. Strength costs include three categories of wastewater strength: BOD, TSS, and TKN. Customer costs include a portion of local collection system costs, meters and services, and customer accounting and billing.

6.1.4. ALLOCATION TO FUNCTIONAL COST COMPONENTS

Various functions or processes are involved in conveying and treating wastewater influent to meet environmental standards that apply to both operating and capital costs. The following functional cost categories were evaluated as part of the sewer cost of service analysis:

- Treatment: includes wastewater treatment plant-related assets
- Interceptor: includes constructed water lines that are 10-inches and greater in diameter
- Collector: includes constructed water lines that are less than 10-inches in diameter
- Meters & Services: includes meter reading costs
- Customer Accounting, Meter, and Billing: includes billing and customer service-related costs

Raftelis grouped existing assets into similar functions for the cost-of-service analysis. The approach included summarizing the original cost of existing sewer system assets by function as well as projected CIP by function added through improvements to a FY 2022 test-year. Page G-15 summarizes existing assets by function and the projected cumulative system improvements by functional designation. The total of the existing system assets and projected CIP as of the FY 2022 test-year is included by functional area on page G-4.

Adjustments to cost of service include a variety of miscellaneous operating revenues and expenditures and capital expenditures (including cash inflows and outflows) as summarized on page G-6.

Page G-9 shows the results of the allocation of revenue requirements to cost components. The cost-of-service process consists of two main steps. The first step allocates revenue requirements to the functional cost components. The second step allocates the functional costs among service characteristics. For example, collection system expense is allocated to volume and customer costs (based on the proportion of interceptors and location of collection lines) because a portion of the local collection lines provide available capacity to customers regardless of wastewater flows. Interceptors, or the system lines that are 10 inches or greater, which convey wastewater effluent to the wastewater treatment plant are allocated based on the volume of wastewater flows.

There are two basic wastewater flow-based components: volume and customer. Volume costs vary with the quantity of wastewater contributed. Customer costs vary in proportion to the number of customer equivalents and monthly bills.

Administration and general expenses are identified with system facilities or activities to the extent possible to simplify the allocation process. Those expenses that are not specifically assigned are allocated in proportion to all other operating expenses.

Once operating and capital facilities are organized by function, the functional costs are allocated among service demand categories based on the service provided. This process is summarized in Appendix G-5 through G-9.

6.1.5. UNIT COST OF SERVICE

Unit cost of service forms the basis for class cost of service and is equal to the net cost of service divided by the applicable units of service in a customer class. The unit cost of service, or unit cost, is based on the proportional demands of all customers. Lines 26 and 27 of page G-9 summarize the FY 2022 test-year units of service and unit costs of service, respectively. Class cost of service is the product of unit cost and class units detailed on pages G-10 and G-11.

Table 6-2 summarizes the cost of service for each customer classification compared to the projected FY 2022 revenues generated at current rates. Overall, the system revenue increases required by FY 2022 total 5.0%. The differences between the cost of service and revenue generated from the current rates provides the indicated adjustments to user charges necessary to achieve cost of service results by FY 2022.

Table 6-2: FY 2022 Cost of Service Compared to Revenue Under Existing Rates

Customer Class	2022 Test-year Cost of Service	2022 Revenue at Existing Rates	Indicated Revenue Increase / (Decrease)
Residential	$567,788	$528,524	7%
Multi-Family	163,330	152,930	7%
Commercial	1,234,087	1,098,407	12%
3 Creek	64,287	91,121	(29%)
Full Service	254,767	270,936	(6%)
Wholesale	156,100	144,180	8%
Septage Haulers	87,516	112,744	(22%)
Total	2,527,875	2,398,572	5%

Residential, Multi-Family Residential, Commercial, and Wholesale Contract customers are paying under their class cost-of-service for the evaluated FY 2022 test-year. Conversely, 3 Creek[4], Full Service contract, and Septage Hauler customers are paying over their class cost-of-service for the evaluated FY 2022 test-year.

6.2. Rate Design

Raftelis and Town staff reviewed various rate design alternatives that achieve the required revenue requirement for the sewer utility. The recommended rates achieve system-wide cost of service rates in FY 2022. Appendix H includes more detailed information related to the recommended rates.

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[4] Excludes Capital Replacement Fee.

6.2.1. EXISTING RATES

The existing sewer rate structure includes a monthly service charge that increases by meter size. The Town's rate classes include:

- Residential
- Multi-Family
- Commercial Class I – Class VI
- 3 Creek
- Full Service[5]
- Wholesale Contract[6]

All customers are assessed a volume rate per kgal based on water use during the AWC period. The Town's existing rates vary amongst residential, multi-family, and commercial customer classes. Town rates were last adjusted July 1, 2015.

6.2.2. ADOPTED FY 2022 SEWER RATES

Raftelis worked with Town staff to evaluate rate structure alternatives which recover the cost of providing sewer services from customers. The recommended rates consist of system-wide cost-of-service monthly service charges increasing by meter size with the same volume rate per kgal for all customers in FY 2022.

Raftelis worked with Town staff to develop two sewer rate alternatives based on the existing rate structure. The Town bills water customers monthly. The current rate structure includes a monthly base charge increasing by meter size and a system-wide volume rate per 1,000 gallons of AWC[7] for residential customers and metered water use for all other customers.

The Town maintains a separate rate schedule for 3 Creek that is typically updated annually. All sewer customers outside of 3 Creek pay the same base charges and volume rates today as inside Town.

The following recommendations are integrated within one or more alternatives:

- Incorporate a minimum volume allowance for all customers to provide more guaranteed revenue stream for low volume uses and when accounts are otherwise using little or no water.
- 3 Creek customers to have the same rate structure as in-Town Residential customers, but unit prices are set to recover the cost of service to serve 3 Creek customers as a stand-alone and separate customer classification.
- Begin to rebalance the way costs to serve specific customer classes are recovered to make sure everyone is paying their fair share but do this gradually to avoid rate shock in a single year.
- Update strength-based wastewater rates and assessment approaches to equitably recover the cost of higher strength discharges from excess-strength customers.

[5] Melody Ranch, Rafter J, Teton School, and other.
[6] Wilson, Airport, Gros Ventre, Saddle Butte, and Spring Creek.
[7] The average of monthly metered water use in January through March is the basis for residential customer sewer billings for the other month.

Table 6-3 summarizes different aspects of the existing and alternative rates which include common and differing aspects.

Table 6-3: Wastewater Rate Objectives Matrix Summary

Attribute	Current	Alt. 1	Adopted
System-Wide Rates	**Y**	**Y**	**Y**
Increase Revenue Recovery Via Base Charge	N	Y	Y
Minimum Use Included in Base Charge	**N**	**N**	**Y**
Class Cost of Service Recovery	N	N	N
3 Creek Customer Full Cost Recovery	**Y**	**Y**	**Y**

Raftelis has developed two alternative rates which include varying base charge and/or volume rate structure elements. The two alternatives include:

- Alternative 1:
  - Base charge increasing by meter size without minimum use of 2,000 gallons
  - System-wide volume rate per 1,000 gallons
  - Updated surcharges for excess-strength customers
  - Increased septage hauler rate increased
- Alternative 2 (Adopted):
  - Base charge increasing by meter size with minimum use of 2,000 gallons
  - System-wide volume rate per 1,000 gallons
  - Updated surcharges for excess-strength customers
  - Increased septage hauler rate increase of 9% proposed

Table 6-4 summarizes existing and proposed base rates by meter size. Table 6-5 summarizes FY 2022 volume rates effective July 1, 2021. Rates apply for all sewer customers except 3 Creek.

Table 6-4: Adopted FY 2022 Sewer Base Rates

Meter Size	Current	Adopted
¾-inch and less	$ 7.00	$ 11.55
1-inch	9.80	14.61
1 ½-inch	17.11	23.61
2-inch	25.20	31.64
3-inch	52.76	53.34
4-inch	81.24	81.02
6-inch	153.23	146.34
8-inch	N/A	224.97

Table 6-5: Recommended FY 2022 Residential and Non-Residential Volume Rates

Description	Water Allocation	Current	Adopted
Tier 1	0 – 2,000	$2.27	$ 0.00
Tier 2	Over 2,000	2.27	2.27

Monitored customers are proposed to be assessed the “domestic” rate per kgal plus a surcharge per pound of BOD, TSS, and/or TKN above “domestic” strengths consistent with current rates and surcharges. Excess strength surcharges as calculated to be assessed for the monitored strengths above “domestic” levels by class as detailed in Table 6-6. Raftelis recommends that the Town consider implementing increased BOD and TSS surcharges in FY 2023 delayed due to the large potential impacts to individual customers.

Table 6-6: Calculated FY 2022 Class 2 through Class 6 Volume Rates

Description	Flow	BOD	TSS	Total
Class II	$1.32	$0.87	$1.08	$3.27
Class III	1.32	1.53	2.00	4.85
Class IV	1.32	2.19	2.92	6.43
Class V	1.32	2.84	3.84	8.00
Class VI	1.32	3.50	4.76	9.58

The recommendation reflects the BOD and TSS classification summarized in Section 3 and strengths by customer type detailed in Table 6-7. While Raftelis evaluated TKN within the sewer cost of service analysis, all customers are anticipated to have the same “domestic” strength discharge of TKN and absent a higher than domestic strength for a particular customer, a TKN specific rate element was not proposed as part of this study. The Town should continue to track TKN and consider potential modifications to TKN surcharges or rate components as part of a future rate evaluation and as circumstances warrant.

Table 6-7: MG / L BOD, TSS, and TKN by Customer Type

Description	BOD	TSS	TKN
Residential / Class I	225	150	48
Class II	400	350	48
Class III	700	650	48
Class IV	1,000	950	48
Class V	1,300	1,250	48
Class VI	1,600	1,550	48

Figure 6-1 summarizes monthly residential bills for four customer profiles with a 3/4-inch meter size and billed wastewater volumes of 2,000 to 20,000 gallons under the current and adopted FY 2022 rates.

Figure 6-1: Monthly ¾-Inch Water Meter Customer Sewer Bill Impact

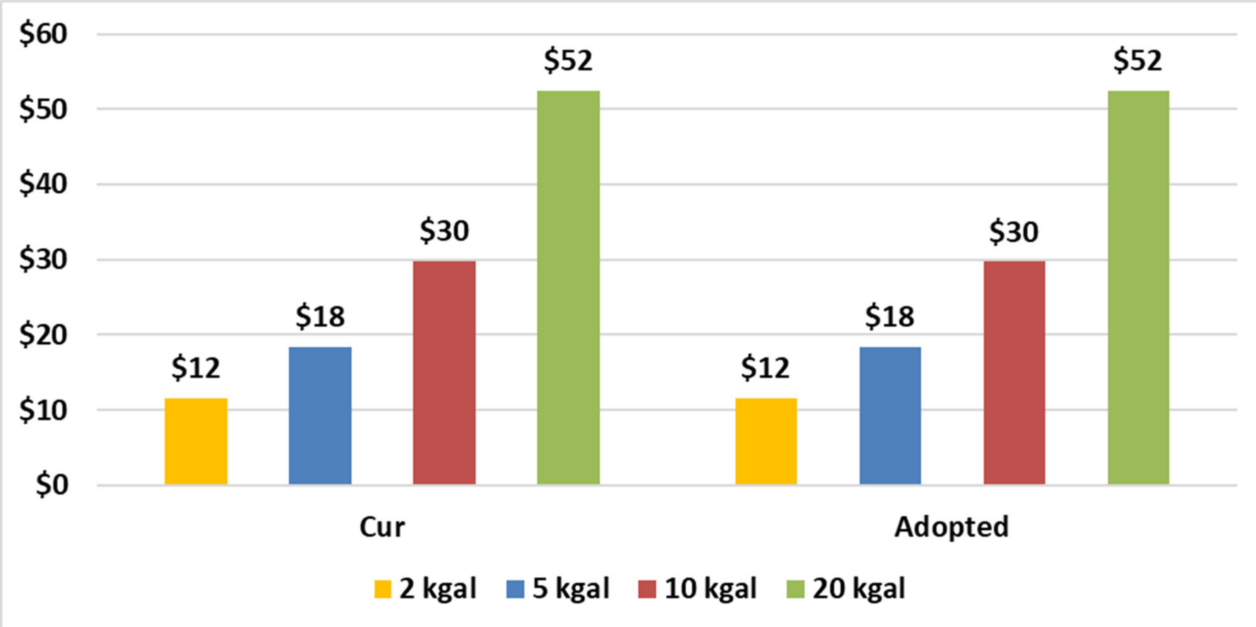
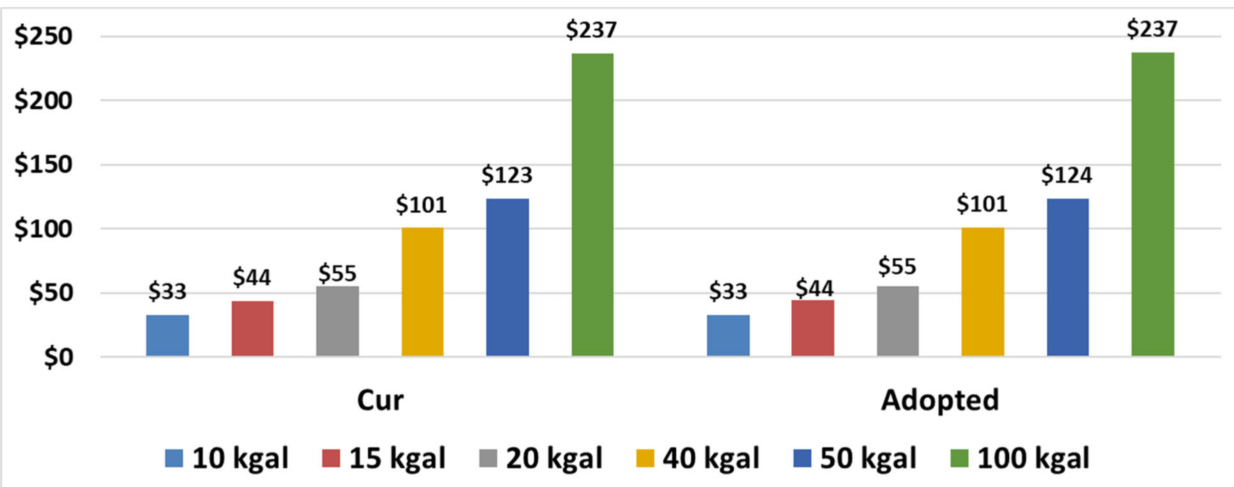


Figure 6-2 summarizes monthly customer bills for six customer profiles with 1-inch water meter and billed wastewater volumes of 10,000 gals. to 100,000 gallons.

Figure 6-2: Monthly 1-Inch Water Meter Customer Sewer Bill Impact



6.3. 3 Creek Rates July 1, 2021

Raftelis worked with Town staff to evaluate the rate structure alternatives and recommend adopting 3 Creek customer rates which mirror the adopted Town rates while recovering the cost-of-service of providing contract retail services to 3 Creek customers. The rates reflect the cost-of-service to provide 3 Creek water and sewer services. 3 Creek customers are sited on large lots and many exert more significant peak usage ratios than Town Residential customers on a per account basis.

Raftelis reviewed the 3 Creek Water and Sewer Capital Replacement Charge detailed in Table 6-8. Raftelis and Town Staff, and 3 Creek representatives met to review preliminary 3 Creek base and volume rates. Following the meeting, the Town and 3 Creek agreed to remove some of the pipelines for purposes of calculating the Capital Replacement Charge as other customers are receiving sewer services. This amount is the "adjustment" reference in Table 6-7. The Town has updated the Capital Replacement Charge annually since 2007. The charge is calculated as the annual replacement value per 3 Creek lot and is assessed in addition to the 3 Creek base charge.

Table 6-8: 3 Creek FY 2022 Capital Replacement Charge Calculation

Description	Water	Sewer	Total
3 Creek Infrastructure	$1.84 M	$1.80 M	$3.64 M
ENR-CCI Ratio 2020/2007	1.43	1.43	1.43
Replacement Cost	2.63 M	1.69 M	5.20 M
Adjustment	(0.81 M)	(0.88 M)	(1.70 M)
Subtotal	$1.82 M	$1.69 M	$3.50 M
Use Full Life - Years	60	60	
Annual Replacement Cost	$30,273	$28,117	
Lots at Build-Out	142	142	
Capital Replacement Fee	$17.77	$16.50	$34.27
Current	$24.56	$24.01	$48.57
Change - $	($6.79)	($7.51)	($14.30)
Change - %	(38%)	(46%)	(42%)

The adopted 3 Creek rates maintain the existing monthly base rates increasing by meter size. 3 Creek customers are assessed an additional Capital Replacement Charge for 3 Creek only infrastructure and this additional charge is proposed to be decreased. The adopted rates include different volumetric rate by customer classes for Residential, Commercial, and Irrigation-Only which more fairly recover additional costs from customers with larger outdoor water use. Tables 6-9, 6-10, 6-11, and 6-12 present the current water rates compared to the recommended adopted rates which are proposed to go into effect July 1, 2021. Separate Commercial and Irrigation-Only customer volume rates reflect a minimum allowance of 2,000 gallons per account and varying uniform volume rates for use over 2,000 gallons. Commercial includes Multi-Family Residential and all Non-Residential customer classes (e.g., Commercial, School, and Government).

Appendix H contains additional detail related to the recommended 3 Creek rates.

Table 6-9: Adopted FY 2022 3 Creek Water Base and Capital Replacement Charge

Meter Size	Current Base	Current Cap. Rep.	Current Total	Adopted Base	Adopted Cap. Rep.	Adopted Total
¾-inch and less	$ 118.97	$24.56	$ 143.53	$ 13.56	$17.77	$31.33
1-inch	118.97	24.56	143.53	20.16	17.77	37.93
1 ½-inch	118.97	24.56	143.53	35.18	17.77	52.95
2-inch	118.97	24.56	143.53	53.76	17.77	71.53
3-inch	118.97	24.56	143.53	106.50	17.77	124.27
4-inch	118.97	24.56	143.53	163.52	17.77	181.29
6-inch	118.97	24.56	143.53	320.09	17.77	337.86

Table 6-10: Adopted FY 2022 Residential 3 Creek Volume Water Rates

Description	Water Allocation	Current	Adopted
Tier 1	0 – 2,000	$1.11	$ 0.00
Tier 2	2,001 – 6,000	1.11	2.02
Tier 3	6,001 – 25,000	1.11	4.04
Tier 4	Over 25,000	1.11	6.06

Table 6-11: Adopted FY 2022 Commercial 3 Creek Volume Water Rates

Description	Water Allocation	Current	Adopted
Tier 1	0 – 2,000	$1.11	$ 0.00
Tier 2	Over 2,000	1.11	2.02

Table 6-12: Adopted FY 2022 3 Creek Irrigation-Only Volume Water Rates

Description	Water Allocation	Current	Adopted
Tier 1	0 – 2,000	$2.12	$ 0.00
Tier 2	2,001 – 25,000	2.12	4.04
Tier 3	Over 25,000	2.12	6.06

Table 6-13 summarizes existing and adopted 3 Creek sewer base and Capital Replacement Charges by meter size. Table 6-14 summarizes the FY 2022 3 Creek sewer volume rates effective July 1, 2021, which are the same as other volume rates.

Table 6-13: Adopted FY 2022 3 Creek Sewer Base and Capital Replacement Charges

Meter Size	Current Base	Current Cap. Rep.	Current Total	Adopted Base	Adopted Cap. Rep.	Adopted Total
¾-inch and less	$ 70.71	$24.01	$ 94.72	$ 17.75	$16.50	$34.25
1-inch	70.71	24.01	94.72	22.45	16.50	38.95
1 ½-inch	70.71	24.01	94.72	36.28	16.50	52.78
2-inch	70.71	24.01	94.72	48.62	16.50	65.12
3-inch	70.71	24.01	94.72	81.97	16.50	98.47
4-inch	70.71	24.01	94.72	124.51	16.50	141.01
6-inch	70.71	24.01	94.72	224.89	16.50	241.39
8-inch	N/A	N/A	N/A	345.73	16.50	362.23

Table 6-14: Adopted FY 2022 Commercial 3 Creek Sewer Volume Rates

Description	Water Allocation	Current	Adopted
Tier 1	0 – 2,000	$1.88	$ 0.00
Tier 2	Over 2,000	1.88	2.27

7. Rate Survey Comparisons

Raftelis completed a survey of comparable resort utilities to compare to the Town's current and adopted monthly bills using 5,000 gallons per month for water and billed wastewater. Figure 7-1 shows a typical monthly under the current and adopted July 1, 2021, rates compared to the survey group. Figure 7-2 shows the monthly bill for a commercial customer with a 1-inch water meter using 12,000 gallons per month water and 5,000 gallons per month billed wastewater under the current rates and adopted July 1, 2021, rates compared to the survey group.

Figure 7-1: Residential Monthly Water Bill Survey

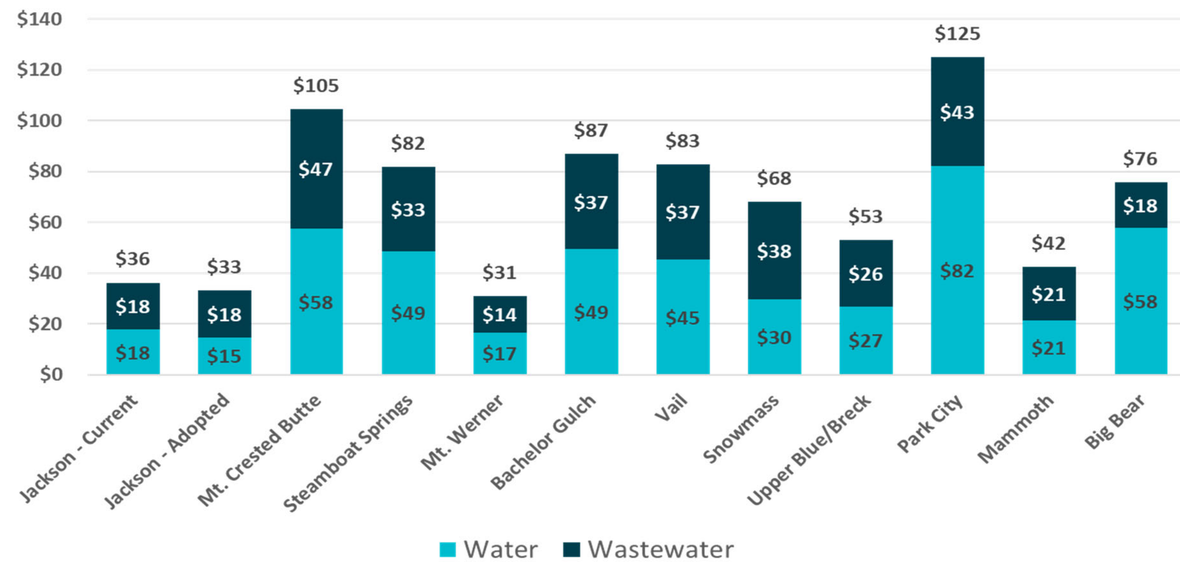
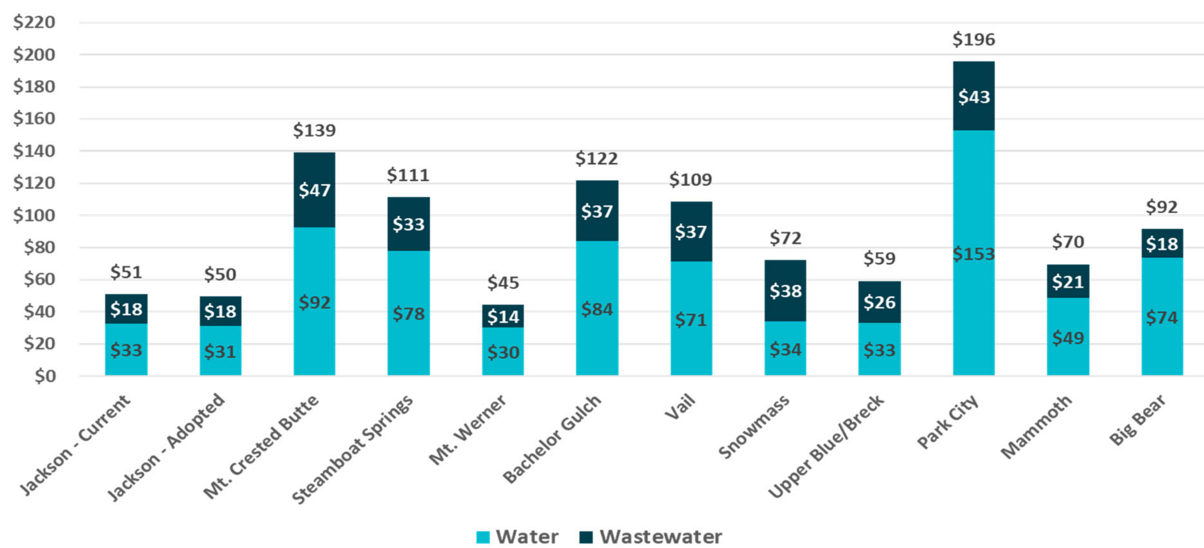


Figure 7-2: Commercial 1-inch Meter Monthly Water Bill Survey



8. Capacity Fees

8.1. Capacity Fee Description

The primary funding sources used by water utilities to pay for required CIP expenditures are operating revenues from water rates and capacity fee receipts. In growing communities such as the Town, capacity fee receipts can provide a significant portion of required CIP funding and/or debt repayment of external debt financing providing upfront funding. As a result, the determination of capacity fees and the projection of the future capacity fee receipts is a critical part of the financial planning process discussed in Section 4 of this Report.

Capacity fees are also referred to as system development charges, plant investment fees, capacity fees, tap fees, and a variety of other terms. As described in the AWWA M1, these fees compensate a community for the cost of acquiring, constructing, and extending infrastructure to support new development:

> "A system development charge (SDC) is a one-time charge paid by a new water system customer for system capacity. It is also assessed to existing customers requiring increased system capacity. The receipts from this charge are used to finance the development of capacity-related water facilities and are an important funding/financing source for growth-related or capacity-related water facilities."

There are several legal standards that define the design and application of capacity fees. For example, capacity fees cannot pay for O&M expenses but may fund capital and repay debt service obligations. There must also be a rational nexus between the capacity fees paid by new development and the costs such fees are used to pay for. This means that capacity fee receipts are dedicated for infrastructure expansion required by new development. In addition, capacity fees must be proportional to a new development's share of growth-related infrastructure costs.

8.2. Calculation Methodologies

The three primary industry accepted methodologies for calculating water capacity fees are the Equity Buy-In, Incremental Cost, and Hybrid or Combined approaches. Depending on the unique circumstances of the utility in question, the use of one or more of these approaches results in a conceptually defensible and fundamentally equitable method for recovering the cost of system capacity additions required to serve new development. Not only can different methods be used between utilities of the same entity, but different methods can be used within the same utility. For example, in the case of the Town, depending on the circumstances it would be appropriate to use different methods for the water infrastructure versus sewer infrastructure.

8.2.1. BUY-IN METHODOLOGY

The buy-in method is typically used by utility systems with existing available capacity to meet the long-term demands imposed by new development. This method estimates the value of a unit of system capacity based upon customer equity in existing capacity-related assets. Thus, the resulting capacity fee reflects the proportional cost of new customer's share of existing system capacity. Under the buy-in method, the cost of existing capacity-related facilities is generally estimated using based on current replacement cost. However, some utilities, depending on their unique circumstances, choose to value existing capacity-related assets at original cost, net book value, or replacement cost less depreciation.

8.2.2. INCREMENTAL COST METHODOLOGY

The incremental cost method focuses on the cost of the additional capacity-related assets required to serve new customers. The incremental cost method is most appropriate for utility systems that do not have existing available capacity to serve growth. The resulting capacity fee reflects the proportional cost of each new customer's share of future system capacity. As such, the incremental cost method is most appropriately used when a utility has a well-defined capital improvement program or utility master plan.

8.2.3. HYBRID METHODOLOGY

In addition to the equity buy-in and incremental cost methods, it is also common for many water utilities to use a combination of these two approaches. This combined "hybrid" approach is often used when a utility has some existing system capacity to accommodate growth but will also be required to construct additional new capacity in the future. For example, assume that a water utility has adequate treatment capacity to accommodate long-term demand growth but that it has a shortage of backbone transmission main and pumping capacity. In such a situation, it may be appropriate to utilize the equity buy-in method to calculate that portion of the capacity fees associated with existing facilities and the incremental cost method to calculate that portion of the capacity fees related to planned capacity additions.

8.2.4. STEPS IN THE WATER CAPACITY FEE CALCULATION PROCESS

Calculating a capacity fee requires a multi-step process which begins with the valuation of capacity-related facilities. The second step in the capacity fee calculation process is to determine the appropriate units of capacity to use in the calculation. In many cases, the fundamental unit of capacity is defined as single family residential maximum day or annual average day water demand. This is the approach used by Raftelis to calculate the Town's capacity fees.

The third step in the capacity fee calculation process is to determine the unit cost of capacity. This is achieved by dividing capacity-related costs by the appropriate units of capacity. Finally, an assessment schedule is developed to reflect the demand relationships between various types of customers, land uses and meter sizes. Table 8-1 summarizes these steps for each capacity fee calculation methodology.

Table 8-1: Steps in the Water Capacity fee Calculation Process

Step	Buy-In	Incremental Cost	Hybrid
#1: Asset Valuation	Estimate value of existing assets	Estimate value of future growth-related asset additions	Estimate value of existing assets and future growth-related asset additions
#2: Units of Capacity	Determine units of existing capacity	Estimate future capacity unit additions	Determine existing units of capacity and future capacity unit additions
#3: Unit Cost of Capacity	Calculate unit cost of existing capacity	Calculate unit cost of incremental capacity additions	Calculate unit cost of combined existing and future capacity additions
#4: Assessment Schedule	Determine the capacity fee assessment schedule		

8.3. Capacity Fee Recommendation

Raftelis calculated the unit cost of water infrastructure and resources for recovery from the water capacity fee using all three industry standard calculation methodologies. Our recommendation is that the Town base the water infrastructure component of the capacity fee on the hybrid methodology and the sewer fee using the buy-in methodology. The Town has anticipated expansionary water capital improvements of $3.95 million over the Study Period in addition to available capacity within existing water infrastructure. Conversely, the wastewater utility has sufficient capacity to serve anticipated development over the Study Period with existing infrastructure. The approaches result in the maximum supportable contribution to reimburse current customers for the cost of capacity-related infrastructure.

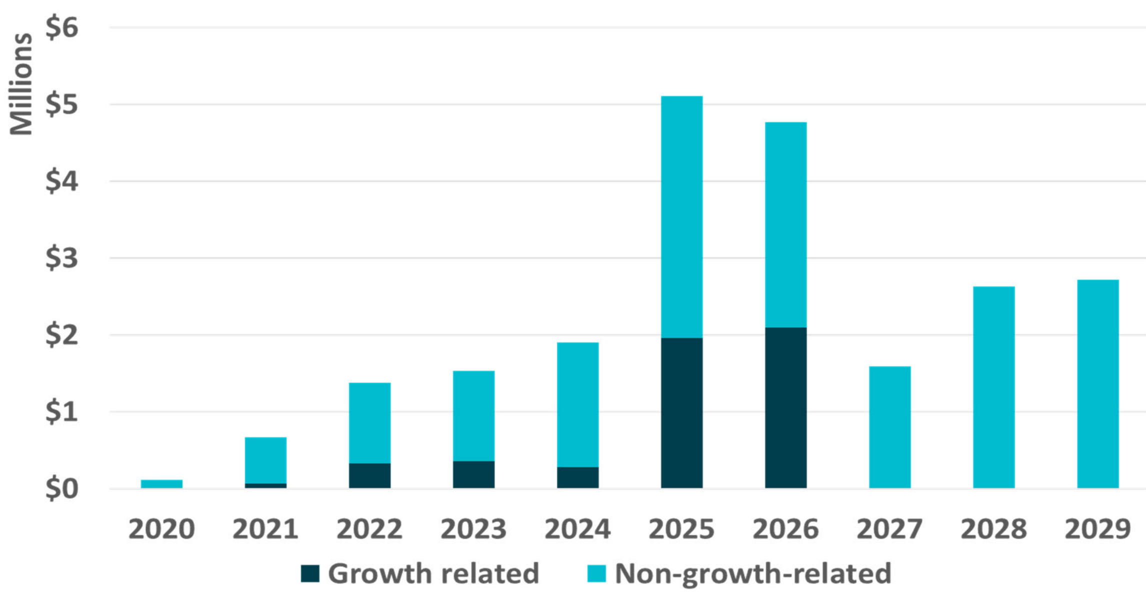
Our recommendations are also consistent with input collected from the Town of Jackson's CRC. To summarize guidance provided by this group of stakeholders representing a diverse set of community perspectives, capacity fees should:

- Adequately recover costs that development places on the utility systems
- Account for redevelopment of properties where square footage (and thus impact) increases while meter size remains the same
- Not disincentivize the development of affordable housing

The Buy-In value of the existing wastewater system represents the replacement cost new (RCN) of the water system components. This RCN is determined by escalating original facility asset values based on the Engineering New Record – Construction Cost Index (ENR-CCI). The value of minor assets, miscellaneous improvements and older assets that are reserved were contributed by developers, or were contributed by other parties, are excluded from the Buy-In value of facilities available to serve new ERUs. By including the RCN of the water facilities available to serve new ERUs, the City can use water capacity fee revenues to pay annual payments on, or retire debt issued to fund the existing portion water facilities.

Town and Nelson Engineering Staff developed the multi-year CIP and prioritized capital improvements. The growth-related water facilities include 50% of Well 9 and the Zone 3 Water Storage Tank. Figure 8-1 shows annual improvements by year over the Study Period.

Figure 8-1: FY 2020 through FY 2029 Growth and Non-Growth Related Water CIP



8.4. Water Capacity Fees

Raftelis calculated maximum supportable water capacity fees per ERU. Table 8-2 summarizes the maximum supportable water capacity fee of $2,793 per ERU. The current water capacity fee, at $690 for new connections with a ¾-inch water meter. The existing water capacity fee has not been substantially updated in many years and does not reflect the impact new users place on the water system.

Table 8-2: Maximum Supportable Water Capacity Fee Calculation

Description	Calculation
Water System RCN (1)	$95.23 M
Distribution System RCN (1) (2)	(31.71M)
Growth-Related Capital FY 2020 – FY 2029	3.95 M
Net Present Value of Future Interest	1.93 M
Total for Capacity Fee Calculation	$69.41 M
Total for Capacity Fee Calculation	$69.41 M
Treatment Capacity – MGD	15.26 M
Unit Cost of Capacity - $ / gal.	$4.52
Unit Cost of Capacity - $ / gal.	$ 4.52
Peak Day Design Capacity – gal / ERU	X 617
Capacity Fee per ERU	$2,793

(1) Per Nelson Engineering estimates provided in May 2020.
(2) Excludes 8-inch and smaller distribution system pipelines.
(3) FY 2019 Water Use per ERU.

Raftelis developed two alternative water capacity assessment alternatives as follows:

- Alternative 1
  - Maintains meter size-based fees for all customers and adjusts the fees to the maximum supportable fee of $2,793 for a ¾-inch customer.
  - Fees increase by meter size using proposed capacity ratios by meter size per AWWA M18.
- Alternative 2 (adopted)
  - Establishes a separate assessment schedule for residential (including multi-family) and all other customer types.
  - Residential assessment includes:
  - Fee based on the number of bedrooms through 3 bedrooms and an incremental fee per bedroom for each additional bedroom
  - Fee based on the Land Development Regulation (LDR) Landscape Ratio (LSR), representing the cost per square foot of landscaped square feet.
- Non-residential and irrigation-only customer assessment of fees by meter size as summarized in Table 8-3

Table 8-3 summarizes the existing water capacity fee compared to the alternative 1 capacity fee assessment schedule – both by meter size. The same capacity fees are proposed for non-residential developments under Alternative 2.

[8] Flow in gallons per minute is based on meter capacity standards published in the American Water Works Association (AWWA) Manual M1, Principles of Water Rates, Fees, and Charges, 7th Edition.

Table 8-3: Current and Adopted FY 2022 Non-Residential and Irrigation-Only Water Capacity Fee by Meter Size

Meter Size	Current	Adopted
3/4-inch	$690	$2,793
1-inch	1,227	4,664
1 ½-inch	2,761	9,301
2-inch	4,909	14,887
3-inch	11,044	29,801
4-inch	19,633	46,559
6-inch	44,176	93,091
8-inch	N/A	148,951

For residential and multi-family customers, the adopted assessment is intended to correct an apparent disparity within the current meter sized based fee assessment. The adopted assessment approach will:

- Enable the Town to fully recover costs development places on the water system
- Provide more scalable fees and resulting impacts to the range of bedroom (and related housing sizes) resulting from new development and redevelopment.

Separating indoor and outdoor water use requirements will also enable the Town to assess capacity fees separately for the two main drivers of residential water use (people and landscaping), but as separately assessed rather than combined within the requirements sizing the meter.

In developing the modified capacity fee structure, Raftelis, Nelson Engineering and Town staff evaluated indoor water use for different bedrooms as the basis for the residential indoor fees by type and per bedroom.

- Irrigation-only water use reflects efficient irrigation systems and resulting water use per day in the peak period per irrigated square foot[9].
- The indoor portion of the assessment schedules reflect peak water demands per bedroom.
- The outdoor portion of reflects peak irrigation season water use per square foot of landscaped area for all residential and irrigation-only customers.
    - Landscaped areas reflect the greater of the
        - Minimum LDR LSR requirements, or
        - Actual landscaped areas.

Table 8-4 summarizes the Alternative 2 (adopted) residential water capacity fee assessment schedule. A 3 bedroom is assessed the same fee as ¾-inch meter and is considered one ERU.

[9] Annual irrigation requirements developed using *Guidelines for Estimating Unmetered Landscaping Water Use*, Federal Energy Management Program, USDOE, July 2010. Peak period monthly irrigation use is assumed to be 20% of annual requirement.

Table 8-4: Adopted FY 2022 Residential and Landscaped Area Water Capacity Fee Assessment

Type	GPD (1)	$ / GPD	Adopted Fee
1 Bedroom	140	$4.52	$633
2 Bedroom	210	4.52	949
3 Bedroom	280	4.52	1,265
Each Add' l Bedroom (1)	70 / BR	4.52	316
Per 1,000 Sq. Ft. of Landscaped Area (2)			365

(1) GPD or gallon per day. Per Nelson Engineering staff including kitchen, bathroom, and laundry.
(2) Assumes 10 gallons per year per sq. ft. of irrigable area with 25% in peak-month or 0.08 gallons per day applied to the $4.52 per gallon per day.

8.5. Wastewater Capacity fees

Raftelis worked with Town staff to update the Sewer Capacity Fee as well as evaluate the assessment schedule. Raftelis calculated maximum supportable Wastewater Capacity Fee per ¾-inch wastewater meter ERU. Table 8-5 summarizes the maximum supportable Wastewater Capacity Fee of $4,547 per ERU. The current Wastewater Capacity Fee is $2,172 per residential dwelling unit with 2 or more bedrooms. The existing sewer capacity fee has not been substantially updated in many years and does not reflect the impact new users place on the sewer system.

Table 8-5: Maximum Supportable Wastewater Fee Calculation

Description	Calculation
Wastewater System RCN (1)	$113.97 M
Collection System RCN (1) (2)	(32.09M)
Total for Capacity Fee Calculation	$81.20 M
Total for Capacity Fee Calculation	$81.20 M
Treatment Capacity – MGD (1)	5.00
Unit Cost of Capacity - $ / gal.	$16.24
Unit Cost of Capacity - $ / gal.	$ 16.24
Peak Day Design Capacity – gal / ERU (3)	X 280
Capacity Fee per ERU	$4,547

(1) Per Nelson Engineering estimates provided in May 2020.
(2) Excludes 8-inch and smaller distribution system pipelines.
(3) Indoor water use Per ERU or 3-bedroom residential unit .

Raftelis developed two alternative wastewater capacity fee assessment alternatives as follows:

- Alternative 1
  - Maintains existing assessment categories and updates the anticipated gallon per day use in the peak day; applies the updated unit cost of $16.24 per gallon per day of wastewater facility capacity.
  - 2 bedroom and greater per dwelling unit updated
  - Apartment and 1-bedroom unit fees with and without laundry per dwelling unit updated.
- Alternative 2 (adopted)
  - Establishes a separate assessment schedule for residential (including multi-family).
  - Residential assessment includes fee based on the number of bedrooms through 3 bedrooms and an incremental fee for each additional bedroom
  - Non-residential assessment of fees same as Alternative 1

Table 8-6 summarizes the existing wastewater capacity fees and assessment criteria by development type. The assumed gallon per day (GPD) by type reflects a review of assessment categories updating previously assumed water use and for many categories, the expected use per day has been modified. The previous assumptions have been in place for several years. As previously discussed, the differences between Alternatives 1 and 2 are entirely for residential and multi-family residential customers and are proposed to be solely based on the number of bedrooms regardless of the type of residential unit.

In developing the adopted capacity fees, Raftelis, Nelson Engineering and Town staff evaluated indoor water use for different residential and non-residential land uses. Note that there are additional categories proposed where an existing category does not exist.

Table 8-6: Adopted FY 2022 and Current Wastewater Capacity Fee Assessment Schedule

Description	GPD	Assessment	Current	Adopted
Apartment, Studio or 1 BR	**140**	**Per Unit**	**$1,088**	**$2,274**
Residential Unit (2BR)	**210**	**Per Unit**	**2,172**	**3,410**
Residential Unit (3BR)	**280**	**Per Unit**	**2,172**	**4,547**
Residential Unit Each Additional BR	**70**	**Per Add' 1 BR**	**N/A**	**316**
Unfinished Habitable Space	70	Per 400 sq. ft.	**N/A**	**N/A**
Bars, Tavern and Lounge (no food)	20	Per 15 sq. ft.	297	325
Restaurants (full service)	64	Per Seat (1)	399	1,039
Restaurants (paper service only – no dishes)	50	Per 100 sq. ft.	N/A	812
Restaurants (single service)	30	Per Seat (1)	N/A	487
Caterers	80	Per 100 sq. ft.	N/A	1,299
Motels and Hotels	140	Per Room	985	2,274
Bed and Breakfast	140	Per Room	1,116	2,274
Assembly (no food)	3	Per 5 sq. ft. Net	24	49
Assembly (w/ food)	5	Per 15 sq. ft. Net	36	81
RV Parks (w ind. Sewer hookups)	100	Per Site	493	1,624
Camps, Parks, Campgrounds (w/ comfort station)	75	Per Site	369	1,218
Mobile Home Park	210	Per Site	2,174	3,410
Laundry (self service)	450	Per Machine	1,486	7,308
Laundry (commercial 100#pp capacity)	1,000	Min./Machine	5,435	16,240
Breweries (per annual production 1 barrel is 31 gals.	20	Per Gal. Ann. Capacity	ICB	325
Fitness (Gyms, Dance Studies, Yoga, Karate)	50	Per 100 sq. ft.	N/A	812
Medical Offices and Dentists	250	Per Practitioner	614	4,060
Veterinary Offices (not including boarding)	250	Per Practitioner	N/A	4,060
Animal Boarding	20	Per Cage	N/A	325
Offices	15	Per Employee	147	244
Retail Stores	5	Per 1,000 sq. ft.	24	81
Unfinished Commercial Space	5	Per 1,000 sq. ft.	N/A	81
Public Access Restrooms	325	Per Fixture		5,278
Service Stations	220	Per Pump	1,088	3,573
Car Washes	1,000	Per Bay	4,927	16,240
Public Spas, Pools or Hot Tubs (Per kgal capacity)	10	Per 50 sq. ft. Gross	N/A	162
Schools (w/ Cafeteria, Gym, and Showers)	20	Per Student	98	325
Schools (w/ Cafeteria, No Gym)	15	Per Student	N/A	244
Schools (without Cafeteria and Gym)	10	Per Student	N/A	162
Day Care and Pre School	20	Per Student	98	325
Others Not Listed Wastewater Service		Avg. Max GPD x $16.24		

(1) 15 square feet per seat net anticipated for full service or single service restaurants.

8.6. Capacity Fee Customer Impacts

Raftelis completed a variety of capacity fee impacts comparing the adopted to the current fees.

Tables 8-7 and 8-8 summarize residential water and wastewater capacity fees under current and adopted fees by customer profile. Residential customer profiles include:

- Home A: 3-bedroom, 7,500 sq. ft. lot, 60% LSR, and ¾-inch water meter.
- Home B: 4-bedroom, 12,500 sq. ft. lot, 60% LSR, and 1-inch water meter.
- Home C: 5-bedroom, 15,000 sq. ft. lot, 60% LSR, and 1-inch water meter.
- Home D: 2-bedroom, 5,000 sq. ft. lot, 60% LSR, and ¾-inch water meter.

Table 8-7: Example Residential Water Capacity Fees by Customer Profile

Type	Current	Indoor	Outdoor	Adopted
Home A	$ 690	$1,266	$1,640	$2,906
Home B	1,227	1,582	2,734	4,316
Home C	1,227	1,898	3,281	5,179
Home D	690	949	1,094	2,043

Table 8-8: Example Residential Wastewater Capacity Fees by Customer Profile

Type	Current	Adopted
Home A	$ 2,172	$4,547
Home B	2,172	4,547
Home C	2,172	4,547
Home D	2,172	4,547

Tables 8-9 and 8-10 summarize Multi-Family Residential water and wastewater capacity fees under current and adopted fees by customer profile. Multi-Family Residential development profiles include:

- MF A: 7, 1-bedroom unit, 2,000 sq. ft. irrigable, and 1-inch water meter.
- MF B:13, 1-bedroom units, 5,000 sq. ft. irrigable, and 1 ½-inch water meter.

Table 8-9: Example Multi-Family Residential Water Capacity Fees by Customer Profile

Type	Current	Indoor	Outdoor	Adopted
MF A	$ 1,227	$4,430	$730	$5,160
MF B	2,761	8,229	1,825	10,054

Table 8-10: Example Multi-Family Residential Wastewater Capacity Fees by Customer Profile

Type	Current	Adopted
MF A	$7,616	$21,160
MF B	14,144	45,940

Tables 8-11 and 8-12 summarize Office and Retail customer water and wastewater capacity fees under current and adopted fees by customer profile. The following profiles were used for commercial connections:

- Office space: 50 employees and 1-inch water meter.
- Retail store: 10,000 sq. ft indoor and 1-inch water meter.

Table 8-11: Example Office and Retail Water Capacity Fees by Customer Profile

Type	Current	Adopted
Office	$1,227	$4,664
Retail	1,227	4,664

Table 8-12: Example Office and Retail Wastewater Capacity Fees by Customer Profile

Type	Current	Adopted
Office	$7,350	$12,200
Retail	1,470	2,440

Tables 8-13 and 8-14 summarize Restaurant customer water and wastewater capacity fees under current and adopted fees by customer profile. The following profiles were used for restaurant connections:

- Restaurant A: 2,000 sq. ft indoor and 1-inch water meter.
- Restaurant B: 4,000 sq. ft indoor and 1 ½-inch water meter.

Table 8-13: Example Restaurant Water Capacity Fees by Customer Profile

Type	Current	Adopted
Office	$1,227	$4,664
Retail	2,761	9,301

Table 8-14: Example Restaurant Wastewater Capacity Fees by Customer Profile

Type	Current	Adopted
Office	$53,200	$138,533
Retail	106,400	277,067

Tables 8-15 and 8-16 summarize Lodging customer water and wastewater capacity fees under current and adopted fees by customer profile. The following profiles were used for lodging connections:

- Lodging A: 15 rooms and 1 ½-inch water meter. Excludes separately calculated components of water and sewer capacity fees associated with laundry, pools, spas and/or restaurants.
- Lodging B: 30 rooms and 2-inch water meter. Excludes separately calculated components of water and sewer capacity fees associated with laundry, pools, spas and/or restaurants.

Table 8-15: Example Lodging Water Capacity Fees by Customer Profile

Type	Current	Adopted
Office	$2,761	$9,301
Retail	4,909	14,887

Table 8-16: Example Lodging Wastewater Capacity Fees by Customer Profile

Type	Current	Adopted
Office	$14,775	$31,110
Retail	29,550	68,220

Table 8-17 summarizes Irrigation-Only customer water and wastewater capacity fee under current and adopted fees for a single customer profile. Fee comparison reflects an Irrigation-Only connection assuming 20,000 sq. ft. irrigable area and a 1 ½-inch water meter.

Table 8-17: Example Irrigation-Only Water Capacity Fees by Customer Profile

Type	Current	Adopted
Home A	$2,761	$9,301

9. Capacity Fee Survey Comparison

Figure 9-1 shows the results of a survey Raftelis completed of comparable ski resort to compare to the Town's current and adopted water and wastewater capacity fees of "House A". House A includes 3 bedrooms, 2 bathrooms, 2,000 sq. ft. home, and a 4,500 sq. ft. irrigable area as part of a 7,500 sq. ft. lot. Figure 9-2 shows the results of the same survey group comparing water capacity fees to "House B". House B includes 4 bedrooms, 3 bathrooms, 3,000 sq. ft. home, and a 7,500 sq. ft. irrigable area as part of a 12,500 sq. ft. lot.

Figure 9-1: Residential Capacity Fee Survey House A

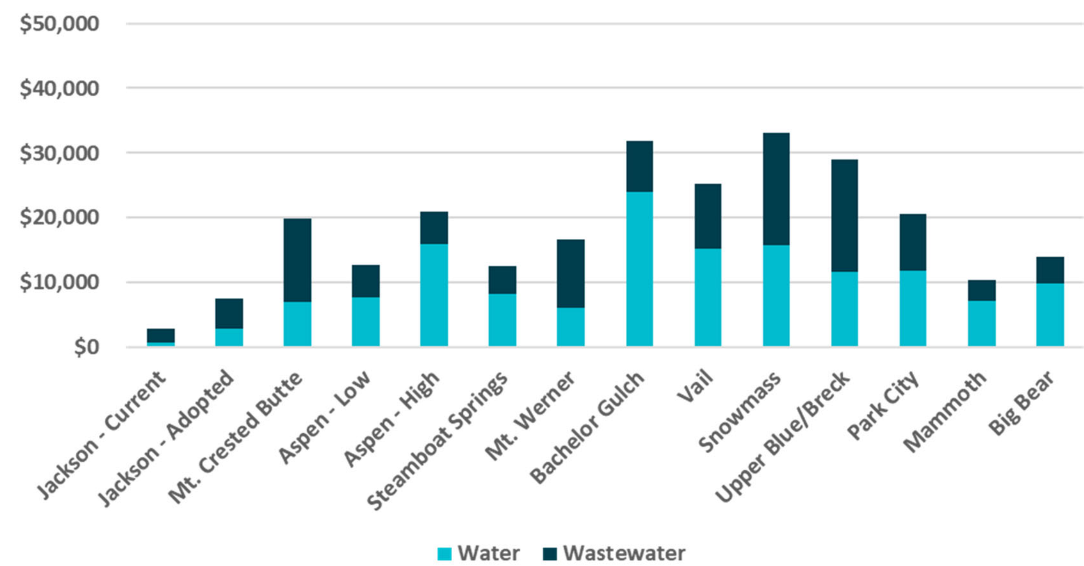
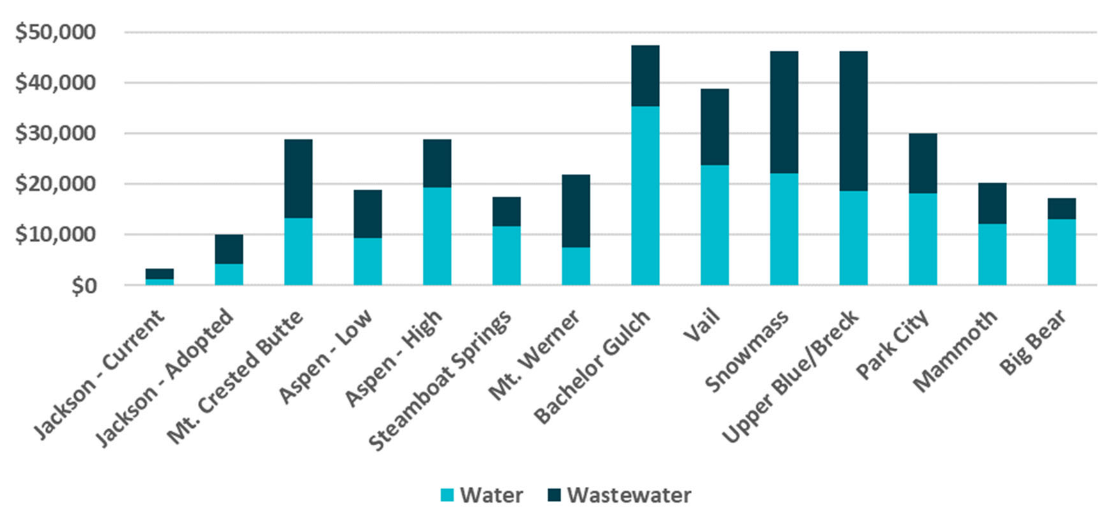


Figure 9-2: Residential Capacity Fee Survey House B



APPENDIX A:
WATER FUND FINANCIAL PLAN

APPENDIX B:

WATER CAPACITY FEE CALCULATIONS

Town of Jackson, WY | **FILE:** | **JAWY_W**
Water and Sewer Financial Plan and Rate Study | **SCHEDULE:** | **W_Cap_Fee**
Water Capacity Fee Calculation

Description	**RCN**
Total System Replacement Cost (1)	$95,232,915
Less: Distribution System (2)	($31,707,945)
Plus: NPV of Existing Borrowing Cost	0
Growth Related CIP FY 2020 - 2029	3,949,300
Plus: NPV of Future Borrowing Cost	1,931,438
Total Cost for Capacity Fee Calculation	$69,405,708
Total Treatment Capacity (MGD) (3)	15.34
Water System Unit Cost of Capacity (gpd)	$4.52
Residential Customer Peak Water Use (GPD) (4)	617
Value per 3/4" Equivalent Meter	$2,793
Current Fee per 3/4" Equivalent Meter	690
Difference - $	$2,103
Difference - %	304.84%

(1) RCN is the water system inventory and replacement cost per unit per Nelson Engineering May 2020.
(2) Excludes 8-inch and smaller collection system pipelines.
(3) Per Nelson Engineering, 11.74 MGD (Current) and 3.60 MGD (Future) capacity.
(4) August 2018 Residential customer use per ERU.

Town of Jackson, WY
Water and Sewer Financial Plan and Rate Study
Water Assets as of 6/30/2019 (From Nelson Engineering)

FILE: **JAWY_W**
SCHEDULE: **W_RCNAssets**

Line No	Item	Quantity	Unit	Unit Cost	Replacement Cost New
1	4" DIP Water Main	10,969	Linear Foot	$125.00	$1,371,125
2	6" DIP Water Main	47,666	Linear Foot	150.00	7,149,900
3	8" DIP Water Main	115,398	Linear Foot	200.93	23,186,920
4	10" DIP Water Main	21,566	Linear Foot	255.07	5,500,900
5	12" DIP Water Main	100,104	Linear Foot	310.42	31,074,164
6	14" DIP Water Main	11,385	Linear Foot	329.67	3,753,288
7	16" DIP Water Main	3,045	Linear Foot	385.02	1,172,372
8	18" DIP Water Main	0	Linear Foot	454.80	0
9	Fire Hydrant	385	Hydrant	10,251.23	3,946,722
10	Air Valve / PRV Vault	11	Vault	8,450.00	92,950
11	Well #1		Each		1,135,000
12	Well #2		Each		1,135,000
13	Well #3		Each		1,135,000
14	Well #5		Each		1,121,000
15	Well #6		Each		1,127,000
16	Well #7		Each		1,127,000
17	Well #8		Each		1,127,000
18	Broadway Pump Station		Each		446,107
19	Spruce Dr. Pump Station		Each		334,580
20	Snow King Estates Pump Station		Each		356,886
21	Snow King Estates Tank		Each		540,000
22	Elk Refuge Tank		Each		3,900,000
23	Virginian Tank		Each		4,500,000
24	**Total**				**$95,232,915**

Town of Jackson, WY
Water and Sewer Financial Plan and Rate Study
Water CIP & Debt

FILE: JAWY_W
SCHEDULE: W_CIP_DEBT
RANGE: Water_Debt

Water Capital Projects - CIP 2

Line No	Description	Function	Growth	Non-Growth	Before Inflation Funding Source	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	Total
1	N. King Street Water Design	1	0%	100%	Cash	$11,900										$11,900
2	High School/South Park PRV Design	4	0%	100%	Cash	9,700										9,700
3	Well #7	2	0%	100%	Cash	75,000										75,000
4	Rancher Street Water Design	6	0%	100%	Cash		44,400									44,400
5	Well #9 Design	2	50%	50%	Cash		100,000									100,000
6	Flat Creek South Water Replacement Design	6	0%	100%	Cash		26,400									26,400
7	N. King Street Water Construction	6	0%	100%	Cash		33,638									33,638
8	High School/South Park PRV Construction	6	0%	100%	Cash		130,000									130,000
9	Zone 3 Tank and Supply Study	3	50%	50%	Cash		100,000									100,000
10	Gregory Lane Water Replacement Design	6	0%	100%	Cash			74,000								74,000
11	Rancher Street Water Construction	6	0%	100%	Cash			270,250	270,250							540,500
12	Well #9 Construction	2	50%	50%	Debt1			621,000	621,000							1,242,000
13	Flat Creek South Water Replacement Construction	6	0%	100%	Cash			343,800								343,800
14	Vine Street Water Replacement Design	6	0%	100%	Cash				23,000							23,000
15	Snow King Avenue Water Replacement Design	6	0%	100%	Cash				40,800							40,800
16	Gregory Lane Water Replacement Construction	6	0%	100%	Cash				480,950	480,950						961,900
17	W. Aspen Street Water Replacement Design	6	0%	100%	Cash					19,000						19,000
18	Spruce Drive Water Replacement Design	6	0%	100%	Cash					13,600						13,600
19	Zone 3 Tank Design	3	50%	50%	Debt1					461,200						461,200
20	Pine Drive Water Replacement Design	6	0%	100%	Cash					12,300						12,300
21	Vine Street Water Replacement Construction	6	0%	100%	Cash					299,600						299,600
22	Snow King Avenue Water Replacement Construction	6	0%	100%	Cash					264,950	264,950					529,900
23	N. Millward Phase 1 Design	6	0%	100%	Cash						47,700					47,700
24	W. Aspen Street Water Replacement Construction	6	0%	100%	Cash						247,100					247,100
25	Spruce Drive Water Replacement Construction	6	0%	100%	Cash						177,000					177,000
26	Zone 3 Tank Construction	3	50%	50%	Debt1						2,997,700	2,997,700				5,995,400
27	Pine Drive Water Replacement Construction	6	0%	100%	Cash						160,500					160,500
28	East Broadway Water Replacement Design	6	0%	100%	Cash							57,700				57,700
29	N. Millward Phase 2 Design	6	0%	100%	Cash							34,500				34,500
30	N. Millward Phase 1 Construction	6	0%	100%	Cash							309,950	309,950			619,900
31	S. Millward Water Replacement Design	6	0%	100%	Cash								32,800			32,800
32	Powerhorn Lane Water Replacement Design	6	0%	100%	Cash								54,000			54,000
33	Snow King Drive Water Line and Pump Station Design	6	0%	100%	Cash								65,500			65,500
34	N. Millward Phase 2 Construction	6	0%	100%	Cash								224,150	224,150		448,300
35	East Broadway Water Replacement Construction	6	0%	100%	Cash								375,050	375,050		750,100
36	Upper Cache Creek Drive Phase 1 Water Replacemer	6	0%	100%	Cash									33,400		33,400
37	Broadway Hwy 22 to Animal Hospital Water Replacem	6	0%	100%	Cash									18,700		18,700
38	S. Millward Water Replacement Construction	6	0%	100%	Cash									213,550	213,550	427,100
39	Powerhorn Lane Water Replacement Construction	6	0%	100%	Cash									351,300	351,300	702,600
40	Snow King Drive Water Line and Pump Station Constru	6	0%	100%	Cash									425,550	425,550	851,100
41	Upper Cache Creek Drive Phase 2 Water Replacemer	6	0%	100%	Cash										42,700	42,700
42	Crabtree Lane Water Replacement Design	6	0%	100%	Cash										68,800	68,800
43	Berger Lane Water Replacement Design	6	0%	100%	Cash										20,700	20,700
44	Upper Cache Creek Drive Phase 1 Water Replacemer	6	0%	100%	Cash										217,450	217,450
45	Broadway Hwy 22 to Animal Hospital Water Replacem	6	0%	100%	Cash										242,900	242,900
46	Upper Cache Creek Drive Phase 2 Water Replacemer	6	0%	100%	Cash											0
47	Crabtree Lane Water Replacement Construction	6	0%	100%	Cash											0
48	Berger Lane Water Replacement Construction	6	0%	100%	Cash											0
49	Well House SCADA Update	2	0%	100%	Cash											0
50	Hydrant Flow Test	6	0%	100%	Cash											0
51	Well House Flow Meter Replacement	2	0%	100%	Cash	5,000	222,600									227,600
52	Calibrate Hydraulic Model	6	0%	100%	Cash	15,000	10,000									25,000
53	Virginian Lane Water Replacement Design	6	0%	100%	Cash											0
54	South Gros Ventre Water Replacement Design	6	0%	100%	Cash											0
55	Virginian Lane Water Replacement Construction	6	0%	100%	Cash											0
56	South Gros Ventre Water Replacement Construction	6	0%	100%	Cash											0
57	Snow King Loop Water Replacement Design	6	50%	50%	Cash											0
58	Snow King Loop Water Replacement Construction	6	50%	50%	Cash											0
59	Snow King Loop Water Replacement Design	6	50%	50%	Cash											0
60	Snow King Loop Water Replacement Construction	6	50%	50%	Cash											0
61	**Total**					**$116,600**	**$667,038**	**$1,309,050**	**$1,436,000**	**$1,551,600**	**$3,894,950**	**$3,399,850**	**$1,061,450**	**$1,641,700**	**$1,582,950**	**$19,932,438**

Town of Jackson, WY | **FILE:** | **Jackson, WY Model.xls**
Water and Sewer Financial Plan and Rate St | **SCHEDULE:** | **Water_NPV_Future**
Water - NPV of Interest
Water Bond Issues

Line No.	Fiscal Year	Original Principal	NPV of Interest	Growth Allocation	Allocated NPV of Interest
1	2020	0	0		0
2	2021	0	0		0
3	2022	1,375,453	582,315	50.00%	291,157
4	2023	0	0		0
5	2024	4,494,363	1,759,207	50.00%	879,604
6	2025	0	0		0
7	2026	4,204,429	1,521,354	50.00%	760,677
8	2027	0	0		0
9	2028	0	0		0
10	2029	0	0		0
11	**Total**	**$10,074,245**	**$3,862,876**		**$1,931,438**

Bond Amortization Schedule
2022

Borrowing Rate	**4.00%**	Discount Rate	
Years	**30**	4.00%	
Annual Payment	$79,543		
Principal Amount	**1,375,453**	NPV of	
Year of Issue	2022	Interest Payments	
		$582,315	

Fiscal Year	EOY Principal Balance	Principal	Interest	Total
2020	$0	$0	$0	$0
2021	0	0	0	0
2022	0	0	0	0
2023	1,363,190	12,263	27,509	39,772
2024	1,338,175	25,015	54,528	79,543
2025	1,312,159	26,016	53,527	79,543
2026	1,285,102	27,057	52,486	79,543
2027	1,256,963	28,139	51,404	79,543
2028	1,227,699	29,264	50,279	79,543
2029	1,197,264	30,435	49,108	79,543
2030	1,165,612	31,652	47,891	79,543
2031	1,132,693	32,919	46,624	79,543
2032	1,098,458	34,235	45,308	79,543
2033	1,062,853	35,605	43,938	79,543
2034	1,025,824	37,029	42,514	79,543
2035	987,314	38,510	41,033	79,543
2036	947,264	40,050	39,493	79,543
2037	905,612	41,652	37,891	79,543
2038	862,293	43,319	36,224	79,543
2039	817,242	45,051	34,492	79,543
2040	770,389	46,853	32,690	79,543
2041	721,662	48,727	30,816	79,543
2042	670,985	50,677	28,866	79,543
2043	618,281	52,704	26,839	79,543
2044	563,469	54,812	24,731	79,543
2045	506,465	57,004	22,539	79,543
2046	447,181	59,284	20,259	79,543
2047	385,525	61,656	17,887	79,543
2048	321,403	64,122	15,421	79,543
2049	254,716	66,687	12,856	79,543
2050	185,362	69,354	10,189	79,543
2051	113,233	72,129	7,414	79,543
2052	38,219	75,014	4,529	79,543
2053	0	38,718	1,054	39,772
2054				
2055				
Total		**$1,375,951**	**$1,010,339**	**$2,386,290**

Bond Amortization Schedule
2024

Borrowing Rate	4.00%	Discount Rate	
Years	30		4.00%
Annual Payment	$259,909		
Principal Amount	4,494,363	NPV of	
Year of Issue	2024	Interest Payments	
		$1,759,207	

Fiscal Year	EOY Principal Balance	Principal	Interest	Total
2020	$0	$0	$0	$0
2021	0	0	0	0
2022	0	0	0	0
2023	0	0	0	0
2024	0	0	0	0
2025	4,454,296	40,067	89,888	129,955
2026	4,372,559	81,737	178,172	259,909
2027	4,287,552	85,007	174,902	259,909
2028	4,199,145	88,407	171,502	259,909
2029	4,107,202	91,943	167,966	259,909
2030	4,011,581	95,621	164,288	259,909
2031	3,912,135	99,446	160,463	259,909
2032	3,808,711	103,424	156,485	259,909
2033	3,701,150	107,561	152,348	259,909
2034	3,589,287	111,863	148,046	259,909
2035	3,472,949	116,338	143,571	259,909
2036	3,351,958	120,991	138,918	259,909
2037	3,226,127	125,831	134,078	259,909
2038	3,095,263	130,864	129,045	259,909
2039	2,959,165	136,098	123,811	259,909
2040	2,817,623	141,542	118,367	259,909
2041	2,670,419	147,204	112,705	259,909
2042	2,517,327	153,092	106,817	259,909
2043	2,358,111	159,216	100,693	259,909
2044	2,192,526	165,585	94,324	259,909
2045	2,020,318	172,208	87,701	259,909
2046	1,841,222	179,096	80,813	259,909
2047	1,654,962	186,260	73,649	259,909
2048	1,461,251	193,711	66,198	259,909
2049	1,259,792	201,459	58,450	259,909
2050	1,050,275	209,517	50,392	259,909
2051	832,377	217,898	42,011	259,909
2052	605,763	226,614	33,295	259,909
2053	370,085	235,678	24,231	259,909
2054	124,979	245,106	14,803	259,909
2055	0	126,511	3,444	129,955
Total		**$4,495,895**	**$3,301,376**	**$7,797,270**

Bond Amortization Schedule
2026

Borrowing Rate	4.00%	Discount Rate	
Years	30		4.00%
Annual Payment	$243,143		
Principal Amount	4,204,429	NPV of	
Year of Issue	2026	Interest Payments	
		$1,521,354	

Fiscal Year	EOY Principal Balance	Principal	Interest	Total
2020	$0	$0	$0	$0
2021	0	0	0	0
2022	0	0	0	0
2023	0	0	0	0
2024	0	0	0	0
2025	0	0	0	0
2026	0	0	0	0
2027	4,166,946	37,483	84,089	121,572
2028	4,090,481	76,465	166,678	243,143
2029	4,010,957	79,524	163,619	243,143
2030	3,928,252	82,705	160,438	243,143
2031	3,842,239	86,013	157,130	243,143
2032	3,752,786	89,453	153,690	243,143
2033	3,659,754	93,032	150,111	243,143
2034	3,563,001	96,753	146,390	243,143
2035	3,462,378	100,623	142,520	243,143
2036	3,357,730	104,648	138,495	243,143
2037	3,248,896	108,834	134,309	243,143
2038	3,135,709	113,187	129,956	243,143
2039	3,017,994	117,715	125,428	243,143
2040	2,895,571	122,423	120,720	243,143
2041	2,768,251	127,320	115,823	243,143
2042	2,635,838	132,413	110,730	243,143
2043	2,498,129	137,709	105,434	243,143
2044	2,354,911	143,218	99,925	243,143
2045	2,205,964	148,947	94,196	243,143
2046	2,051,060	154,904	88,239	243,143
2047	1,889,959	161,101	82,042	243,143
2048	1,722,414	167,545	75,598	243,143
2049	1,548,168	174,246	68,897	243,143
2050	1,366,952	181,216	61,927	243,143
2051	1,178,487	188,465	54,678	243,143
2052	982,483	196,004	47,139	243,143
2053	778,639	203,844	39,299	243,143
2054	566,642	211,997	31,146	243,143
2055	346,165	220,477	22,666	243,143
2056	116,869	229,296	13,847	243,143
2057	0	119,234	2,338	121,572
2058				
Total		**$4,206,794**	**$3,087,496**	**$7,294,290**

APPENDIX C:

WATER COST-OF-SERVICE RESULTS

APPENDIX D:

FY 2022 WATER RATE RECOMMENDATIONS

APPENDIX E:

WASTEWATER FUND FINANCIAL PLAN

APPENDIX F:
WASTEWATER CAPACITY FEE CALCULATIONS

Town of Jackson, WY — **FILE:** **JAWY_WW**
Water and Sewer Financial Plan and Rate Study — **SCHEDULE:** **WW_Cap_Fee**
Wastewater Capacity Fee Calculation
Buy-In Approach

Description	Capacity	RCN
Total System Replacement Cost (1)		$113,291,543
Less: Small Main Collection System (2)		(32,094,540)
Plus: NPV of Borrowing Cost		0
Total Cost for Capacity Fee Calculation		$81,197,003
Treatment Plant Capacity (MGD) (3)		5.0
Value per 3/4" Equivalent Meter		$16.24
Residential ERU Indoor Water Use (GPD) (4)		280
Calculated Fee per 3/4" Equivalent Meter		4,547
Current Fee per 3/4" Equivalent Meter		2,172
Difference - $		$2,375
Difference - %		109%

(1) RCN is the water system inventory and replacement cost per unit per Nelson Engineering May 2020.
(2) Excludes 8-inch and smaller collection system pipelines.
(3) Per Nelson Engineering, 5 MGD wastewater treatment plant capacity.
(4) Indoor water use per ERU or 3-bedroom residential unit.

Town of Jackson, WY **FILE: JAWY_WW**
Water and Sewer Financial Plan and Rate Study **SCHEDULE: WW_Cap_Fee**
Sewer Assets as of 6/30/2019 (From Nelson Engineering)

Line No	Item	Quantity	Unit	Unit Cost	Total
1	6" PVC Sewer Main	13,194	Linear Foot	$122.07	$1,610,571
2	8"PVC Sewer Main	176,157	Linear Foot	173.05	30,483,969
3	10" PVC Sewer Main	6,893	Linear Foot	271.42	1,870,918
4	12" PVC Sewer Main	11,274	Linear Foot	301.58	3,400,023
5	15" PVC Sewer Main	15,296	Linear Foot	351.84	5,381,812
6	18" PVC Sewer Main	9,298	Linear Foot	394.93	3,672,035
7	48" dia. Manhole	1,405	Each	3,860.50	5,424,003
8	Lift Stations:				
9	Small Lift Stations	5	Each	419,642.56	2,098,213
10	Large Lift Stations	2	Each	1,400,000.00	2,800,000
11	Wastewater Treatment Plant	6,500,000	GPD	8.70	56,550,000
12	**Total**				**$ 113,291,543**

APPENDIX G:

WASTEWATER COST OF SERVICE ANALYSIS

APPENDIX H:

WASTEWATER RATE RECOMMENDATIONS

CITY OF CASPER

System Investment Charge Study

Final Report

RAFTELIS
FINANCIAL CONSULTANTS, INC.

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1. EXECUTIVE SUMMARY

On February 7, 2017, the City of Casper (City) retained Raftelis Financial Consultants (Raftelis) to update their schedule of System Investment Charges. This report describes study assumptions, calculations, findings, and recommendations.

A system investment charge (SIC) is a one-time charge paid by new or enlarged connections to a utility system that recovers the cost of capacity-related infrastructure required to serve growth. The City receives treated water from the Central Wyoming Regional Water System (CWRWS), which charges its own SIC to recover the costs of water supply and treatment. The City collects a SIC to recover the costs of its water transmission and distribution system. The City also collects two SICs for its wastewater system, an SIC for its sewer collection system and an SIC for its wastewater treatment plant (WWTP) system. This report describes results for all three water and wastewater SICs charged by the City.

1.1 SYSTEM INVESTMENT CHARGE METHODS

Fundamentally, the SIC is calculated by dividing the value of the utility system by the system's capacity, which results in a cost per unit of capacity. There are several industry-accepted methods for calculating SICs. The SIC calculation method selected depends on the specific circumstances of the utility. There are four industry accepted methods used to calculate SICs: the equity buy-in method, the capacity buy-in method, the incremental method, and the hybrid method.

The equity buy-in method is designed to calculate SICs that recover the cost of existing capacity. The cost of future capacity additions is not considered in the equity buy-in method. The equity buy-in calculation is based upon the system capacity used to serve current customers. The equity buy-in method is often appropriate when a utility has a large amount of excess capacity and a relatively slow rate of growth that will not consume that excess capacity for an extended period of time. This best approximates the current conditions of the City system.

The capacity buy-in method is also designed to calculate SICs that recover the cost of existing capacity. The cost of future capacity additions is not considered in the capacity buy-in method. The capacity buy-in calculation is based upon the system's total capacity to serve current and future customers. The capacity buy-in method is often appropriate when a utility has a large amount of excess capacity and the excess capacity is expected to be consumed relatively quickly.

The incremental method reflects the cost of expanding the system's capacity to serve new customers. This method is typically used by utilities who must make investments in additional capacity-related infrastructure because they have inadequate capacity to serve new customers. The City has the capacity to accommodate the demands of new customers and no significant capacity expansions are included in its 10-year Capital Improvement Plan (CIP). Thus, the incremental method is not appropriate for the City at this time.

The hybrid method is a combination of the incremental method and either the capacity buy-in methods. The hybrid method was also not considered for the City, due to its reliance on the incremental method.

1.2 CALCULATED SYSTEM INVESTMENT CHARGES

Raftelis calculated SICs for City using the equity buy-in method and the capacity buy-in method. Table 1-1 summarizes the calculated SICs for new connections to the water distribution system with a 3/4-inch water meter. Charges for larger meters are proportional to the capacity of the meter. Table 1-2 summarizes the calculated SICs for new connections to the City's sewer system with a 3/4-inch water meter. Table 1-3 summarizes the calculated SICs for new connections to the City's WWTP with a 3/4-inch water meter.

Table 1-1: Summary of Calculated Water System Investment Charges

Calculation Method	Existing SIC for 3/4-inch meter	Calculated SIC for 3/4-inch meter
Equity Buy-In	$1,010	$949
Capacity Buy-In	$1,010	$506

Table 1-2: Summary of Calculated Sewer System Investment Charges

Calculation Method	Existing SIC for 3/4-inch meter	Calculated SIC for 3/4-inch meter
Equity Buy-In	$285	$282
Capacity Buy-In	$285	$262

Table 1-3: Summary of Calculated WWTP System Investment Charges

Calculation Method	Existing SIC for 3/4-inch meter	Calculated SIC for 3/4-inch meter
Equity Buy-In	$500	$1,516
Capacity Buy-In	$500	$1,404

1.3 SURVEY OF SIMILAR COMMUNITIES' SICS

Raftelis conducted a survey of SICs in other Wyoming communities and the surrounding region. A new customer connecting to the City of Casper's water distribution system pays an SIC to buy into their distribution infrastructure and an SIC to buy into the supply and treatment infrastructure of the CITY. The average SIC of $2,639 for a 3/4-inch meter excludes the City and City of Casper's SICs and only includes SICs that are inclusive of supply, treatment, and distribution infrastructure.

Figure 1-1: Survey of SICs for 3/4-inch meters

2. INTRODUCTION

2.1 STUDY OVERVIEW

The City purchases treated water from the CWRWS and delivers it to its approximately 22,000 retail customers through its distribution system. The CWRWS has a capacity to provide up to 39 million gallons per day (MGD) of treated water. The City of Casper represents approximately 90% of the demand placed on the system.

The City has not adjusted its SICs for approximately 20 years. As a result, past capital expenditures and the growth in the replacement value of its existing infrastructure are not reflected in its current SICs. To the extent that SICs may not recover an appropriate amount of growth-related capital expenditures, the water rates paid by the City's customers must be higher than would otherwise be the case.

2.2 REPORT ORGANIZATION

Our report to the District contains six sections as follows:

- Section 1 – Executive Summary
- Section 2 – Introduction
- Section 3 – Methodology
- Section 4 – System Investment Charge Calculations
- Section 5 – Conclusions and Recommendations

The report contains an appendix containing further information on the system’s fixed assets and equivalent meters.

2.3 ACKNOWLEDGEMENTS

On behalf of the project team, we would like to acknowledge the commitment and contributions provided by the staff of the City of Casper, including Mr. Andrew Beamer, Mr. Bruce Martin, Ms. Connie Arnold, and Ms. Marlene Atkins.

2.4 RELIANCE ON CITY OF CASPER DATA

During this project, the City of Casper provided Raftelis with a variety of technical information including master plans, audited and unaudited financial results, cost data, and customer billing information. Raftelis cannot confirm the accuracy of such data – historic or projected. We have relied on this data in the formulation of our findings and subsequent recommendations, as well as in the preparation of this report.

3. METHODOLOGY

3.1 SYSTEM INVESTMENT CHARGE OVERVIEW

A system investment charge (SIC) is a one-time charge paid by new or enlarged connections to a utility system that recovers the cost of capacity-related infrastructure required to serve growth. Fundamentally, the SIC is calculated by dividing the value of the utility system by the system's capacity, which results in a cost per unit of capacity. There are several industry-accepted methods for calculating SICs. The SIC calculation method selected depends on the specific circumstances of the utility. There are four industry accepted methods used to calculate SICs: the equity buy-in method, the capacity buy-in method, the incremental method, and the hybrid method.

If a utility does not recover, or significantly under-recovers, the cost of serving new development through its SIC, the cost of serving new development is at the expense of existing ratepayers. Proper calculation of SICs is an exercise that attempts to achieve equity between existing customers and new development. Different calculation methodologies will result in different SIC values. These methods are described and accepted by the American Water Works Association (AWWA) in the publication, *Manual M1, Principles of Water Rates, Fees and Charges, Seventh Edition* and the Water Environment Federation publication, *Manual of Practice No. 27, Financing and Charges for Wastewater Systems, Third Edition*. In addition to following these industry standards, Raftelis reviewed Wyoming statutes to assess the legal basis of SICs in Wyoming. Raftelis found that the State has no specific statutes with regards to SICs which would place limits on SIC calculations beyond industry-accepted norms.

There are four industry accepted methods used to calculate SICs: the equity buy-in method, the capacity buy-in method, the incremental method, and the hybrid method. These methods are discussed below.

- **Equity Buy-In**: This method is often appropriate when a utility has a large amount of excess capacity and a relatively slow rate of growth that will not consume that excess capacity for an extended period of time. Under this method, the SIC is based upon the existing capacity that is served by the system. Here, the estimated value of system assets is divided by the current number of 3/4-inch equivalent residential connections on the system to calculate the SIC. This best approximates the current conditions of the City's water and wastewater systems.

- **Capacity Buy-In**: The capacity buy-in method is often appropriate when a utility has a large amount of excess capacity and the excess capacity is expected to be consumed relatively quickly. Here, the estimated value of the system assets is divided by the system's capacity to serve the actual demands imposed by 3/4-inch equivalent residential connections.

- **Incremental**: This method is typically used by utilities who must make investments in additional capacity-related infrastructure because they have inadequate capacity to serve new customers (i.e., existing customers consume nearly all the existing system capacity). Here, the SIC is calculated by dividing the incremental cost of new capacity-related infrastructure required to serve growth by the projected demands that will be imposed by new customers.

- **Hybrid**: This method is most appropriate when the utility has some capacity to serve new customers but also has plans to expand capacity. It thus considers both the existing and future systems. This method is a combination of the hybrid and the capacity buy-in methods.

The City has sufficient wastewater treatment capacity to serve many more customers without expanding additional capacity. The City's water system does not have significant capacity-related infrastructure expansions planned. As such, the incremental and hybrid methods were not considered by Raftelis for this study.

There are two components of an SIC calculation: a valuation of the system and an assessment of capacity. There are two primary valuation methods:

- **Replacement Cost New (RCN)**: This method inflates the original cost of the assets into today's dollars. Raftelis uses the Construction Cost Index that is published by the Engineering News Record, which is a common pricing tool used within the industry. To calculate an asset's value in today's dollars, one takes the current index value and divides it by the index value for the year in which the asset was purchased. This ratio is then multiplied by the original cost of the asset to produce an estimate of the asset's value in today's dollars.

- **Replacement Cost New Less Depreciation (RCNLD)**: This method is conducted just as the RCN method, but is adjusted for the accumulated depreciation. The accumulated depreciation that is used in RCNLD is not the same as the accumulated depreciation listed in the utility's fixed asset records. The fixed asset records list the original cost of an asset, and depreciation is calculated in terms of the original cost. Here, the accumulated depreciation is calculated in current dollar terms, just as is the value of the asset.

This report presents the system valuation using the RCNLD method. RCN was not used because it would require new development to buy into existing assets at a full replacement cost value without recognizing the fact that these assets have incurred some level of depreciation.

System capacity is measured using the number of equivalent residential units (EQRs) that are either connected to the system or which can be served by the system. The number of EQRs that a water treatment system can serve is defined based on design standards or the actual usage patterns of existing 3/4-inch residential water meters.

4. SYSTEM INVESTMENT CHARGE CALCULATIONS

4.1 WATER DISTRIBUTION SYSTEM

A water utility is commonly composed of a water treatment plant and a distribution network. Such a system's capacity to serve customers in terms of EQRs is calculated by dividing the treatment plant's capacity by the defined usage of one EQR. In the City's case, this calculation is complicated by the fact that it does not own treatment capacity. It is nearly impossible to determine the capacity of a city-wide distribution network to serve customers. Metrics that quantify the capacity of a distribution network such as pumping capacity or storage capacity are inadequate to describe the number of EQRs that the distribution network can serve. However, it is known that the City uses approximately 90% of the water produced by the CWRWS. A proxy for the capacity of the water distribution network to serve customers is thus calculated by multiplying the CWRWS's treatment plant capacity by the percentage of demand the City places on it (i.e., approximately 90%).

4.1.1 Assumptions

Raftelis made the following assumptions in the development of the proposed SIC for water distribution:

- The City does not own or operate a water treatment system. Its assets are solely related to the distribution of purchased treated water.

- The CWRWS's treatment plant capacity is 39.0 MGD. The City consumes 90.89% of the CWRWS's produced water. Thus, the City's "water treatment plant capacity" is 35.45 MGD.

- Raftelis was provided a meter inventory and billing data for the City. The City provides wholesale service to several customers, some of which use CWRWS transmission assets and some which use City transmission assets. Only the wholesale customers using City transmission infrastructure are included in the meter inventory.

- The following meter equivalency schedule was used to develop the SIC assessment schedule. The maximum flows are industry-standard references that can be found in the AWWA publication, *Manual M6, Water Meters: Selection, Installation, Testing and Maintenance, Fifth Edition.*

Table 4-1: Meter Equivalency Schedule

Meter Size (inches)	Max Flow (gpm)	Equivalent Meters
3/4	25	1.0
1	40	1.6
1 1/2	50	2.0
2	160	6.4
3	320	12.8
4	500	20.0
6	1,000	40.0
8	1,600	64.0
10	2,300	92.0
12	5,000	200.0

4.1.2 Calculation

Table 4-2 summarizes the calculation of the system value. The RCNLD valuation of the system's assets is adjusted for developer contributed assets and any outstanding debt principal. This system value is used in both Equity Buy-In and Capacity Buy-In methods.

Table 4-2: System Valuation

Description	Amount
Total System Replacement Cost (RCNLD)	$74,147,091
Less: Developer Contributed Assets	(40,183,559)
Less: Current Outstanding Debt Principal	(7,247,274)
Total System Cost for SIC Calculation	$26,716,258

The City currently serves 28,158 EQRs through its water distribution system.

Table 4-3 summarizes the calculation of the number of EQRs that can be served with the existing treatment capacity of the City. This information is used in the capacity buy-in method.

Table 4-3: Number of EQRs That Can Be Served by the City

Description	Amount
EQR Demand	
Average Consumption of Casper EQR (gpd)	263.6
Coincident System Max Day Demand	2.55
Estimated EQR Peak Day Water Use (gpd)	672.1
System Capacity	
City's Share of Treatment Capacity (MGD)	35.4
Estimated EQR Peak Day Water Use (gpd)	672.1
System EQR Capacity	52,747

Table 4-4 details the calculation of the SIC using the equity buy-in and capacity buy-in methods.

Table 4-4: Water SIC Calculation

Description	Equity Buy-In	Capacity Buy-In
Total System Cost	$26,716,258	$26,716,258
Number of EQRs	28,158	52,747
SIC per EQR	$949	$506

Table 4-5 presents the SIC assessment schedule produced using the meter equivalency schedule in Table 4-1.

Table 4-5: Water SIC Assessment Schedules

Meter Size (inches)	Existing SIC	Equity Buy-In	Capacity Buy-In
¾	$1,010	$949	$506
1	1,690	1,518	810
1 ½	3,360	1,898	1,012
2	5,385	6,074	3,238
3	10,775	12,147	6,477
4	21,210	18,980	10,120
6	47,135	37,960	20,240
8	80,800	60,736	32,384

4.2 SEWER SYSTEM

The City's wastewater system is operated somewhat like the water system, in that there is a separation between the sewer collection component and the wastewater treatment component. This section will develop SICs for the sewer collection system. The sewer collection system has the same issues in determining its capacity to serve as does the water distribution system. Here again, the treatment plant's capacity is used to estimate the sewer system's capacity to serve. While the City owns the WWTP, it also serves wholesale customers. The City provides 84.4% of the flows into the plant.

4.2.1 Assumptions

Raftelis made the following assumptions in the development of the proposed SIC for sewer collection:

- The City owns and operates a wastewater treatment system. Its assets are solely related to the treatment of wastewater and will be considered as part of the WWTP SIC.
- The City's WWTP capacity is 10.0 MGD. The City produces 84.4% of the WWTP's influent. Thus, the City's "WWTP capacity" is 8.44 MGD.
- Raftelis was provided a meter inventory and billing data for the City. The City provides wholesale service to several customers, some of which use CWRWS transmission assets and some which use City transmission assets. Only the wholesale customers using City transmission infrastructure are included in the meter inventory.

- The same meter equivalency schedule used in 4.1.1 is used to calculate the sewer SIC. The City serves 26,360 EQRs using their inventory and the meter equivalency schedule.

4.2.2 Calculation

Table 4-6 summarizes the calculation of the system value. The RCNLD valuation of the system's assets is adjusted for developer contributed assets and any outstanding debt principal. This system value is used in both Equity Buy-In and Capacity Buy-In methods.

Table 4-6: Sewer System Valuation

Description	Amount
Total System Replacement Cost (RCNLD)	$22,352,585
Less: Developer Contributed Assets	(14,906,718)
Less: Current Outstanding Debt Principal	0
Total System Cost for SIC Calculation	$7,445,867

Table 4-7 summarizes the calculation of the number of EQRs that can be served with the existing treatment capacity of the City. This information is used in the capacity buy-in method.

Table 4-7: Number of EQRs That Can Be Served by the City

Description	Amount
EQR Demand	
Average Consumption of Casper EQR (gpd)	134.8
Coincident System Max Day Demand	2.2
Estimated EQR Peak Day Water Use (gpd)	296.6
System Capacity	
City's Share of Treatment Capacity (MGD)	8.44
Estimated EQR Peak Day Water Use (gpd)	296.6
System EQR Capacity	28,460

Table 4-8 details the calculation of the SIC using the equity buy-in and capacity buy-in methods.

Table 4-8: Sewer SIC Calculation

Description	Equity Buy-In	Capacity Buy-In
Total System Cost	$7,445,867	$7,445,867
Number of EQRs	26,360	28,460
SIC per EQR	$282	$262

Table 4-9 presents the SIC assessment schedule produced using the meter equivalency schedule in Table 4-1.

Table 4-9: Sewer SIC Assessment Schedules

Meter Size (inches)	Existing SIC	Equity Buy-In	Capacity Buy-In
¾	$285	$282	$262
1	475	451	419
1 ½	945	564	524
2	1,520	1,805	1,677
3	3,040	3,610	3,354
4	5,985	5,640	5,240
6	13,300	11,280	10,480
8	12,800	18,048	16,768

4.3 WWTP SYSTEM

The City's WWTP operates similarly to the CWRWS's water treatment plant in that Casper consumes the bulk of the plant's treatment services while a minority of treatment services are consumed by entities outside of the City. The City's meter inventory is known, but the outside entities' meter inventories are unknown. To estimate the total number of EQRs on the WWTP system, the number of the City's EQRs is divided by the percentage of wastewater flows provided by the City.

4.3.1 Assumptions

Raftelis made the following assumptions in the development of the proposed SIC for wastewater treatment:

- The City owns and operates a wastewater treatment system. No collection system assets are included in this calculation, and there are no developer-contributed assets.
- The City's WWTP capacity is 10.0 MGD. The City produces 84.4% of the WWTP's influent.
- The same meter equivalency schedule used in 4.1.1 is used to calculate the WWTP SIC. The City serves 26,360 EQRs using their inventory and the meter equivalency schedule.

4.3.2 Calculation

Table 4-10 summarizes the calculation of the system value. The RCNLD valuation of the system's assets is adjusted for developer contributed assets and any outstanding debt principal. This system value is used in both Equity Buy-In and Capacity Buy-In methods.

Table 4-10: WWTP System Valuation

Description	Amount
Total System Replacement Cost (RCNLD)	$58,305,585
Less: Developer Contributed Assets	0
Less: Current Outstanding Debt Principal	(10,967,594)
Total System Cost for SIC Calculation	$47,337,594

Table 4-11 summarizes the calculation of the number of EQRs that can be served with the existing treatment capacity of the City. This information is used in the capacity buy-in method.

Table 4-11: Number of EQRs That Can Be Served by the City

Description	Amount
EQR Demand	
Average Consumption of Casper EQR (gpd)	134.8
Coincident System Max Day Demand	2.2
Estimated EQR Peak Day Water Use (gpd)	296.6
System Capacity	
City's Share of Treatment Capacity (MGD)	10.00
Estimated EQR Peak Day Water Use (gpd)	296.6
System EQR Capacity	33,720

Table 4-12 details the calculation of the SIC using the equity buy-in and capacity buy-in methods.

Table 4-12: WWTP SIC Calculation

Description	Equity Buy-In	Capacity Buy-In
Total System Cost	$47,337,594	$47,337,594
Number of EQRs	31,222	33,720
SIC per EQR	$1,516	$1,404

presents the SIC assessment schedule produced using the meter equivalency schedule in Table 4-1.

Table 4-13: WWTP SIC Assessment Schedules

Meter Size (inches)	Existing SIC	Equity Buy-In	Capacity Buy-In
¾	$500	$1,516	$1,404
1	835	2,426	2,246
1 ½	1,670	3,032	2,808
2	2,665	9,702	8,986
3	5,335	19,405	17,971
4	10,500	30,320	28,080
6	23,335	60,460	56,160
8	40,000	97,024	89,856

5. CONCLUSIONS AND RECOMMENDATIONS

Raftelis has presented two methods of SIC calculation for each of the three SICs. The equity buy-in and capacity buy-in methods are both defensible methods to calculate and justify the City's SICs. The equity and capacity buy-in methods are commonly used by utilities with sufficient excess capacity to serve new growth. The equity buy-in method is most appropriate when there is a large amount of excess capacity and a relatively slow rate of growth that will not consume that excess capacity for an extended period of time. The capacity buy-in method is most appropriate when there is a large amount of excess capacity and the excess capacity is expected to be consumed relatively quickly.

The existing customers of the City have paid for the construction of a significant quantity of excess treatment capacity that will serve growth well into the future. From the perspective of Raftelis, the SICs developed under the equity buy-in method best reflect the amount that new connections should pay to purchase their proportionate share of capacity at the cost incurred by existing customers. As noted previously, the capacity buy-in method is also an industry accepted approach for calculating SICs. However, given the excess capacity on the City's water and wastewater systems, the capacity buy-in method results in SICs that may not fully recover the unit cost of capacity funded by existing customers.

Raftelis is aware that the amount of the SICs has not been adjusted for a considerable period and that the City may experience a certain amount of "rate shock" at the calculated WWTP SICs. The state of Wyoming provides utilities with wide latitude as to the setting of SICs. The calculated SICs represent the "maximum supportable" amount that the City may defensibly charge. The City may elect to charge less than the amounts calculated or may transition to one of these calculated SIC amounts over a period of time.

APPENDIX A:

2017 Rate and Fee Study
RWS Assets as of December 31, 2016
Asset Summary

Function	Description	Asset Count	Original Cost	Replacement Cost New	RCNLD
1	Land	6	$580,874	$580,874	$580,874
2	Water Rights	0	$0	$0	$0
3	Treated Water Storage	17	$4,727,628	$8,765,632	$2,886,346
4	Misc/Administration	60	$112,535	$179,817	$12,347
5	Treatment	366	$43,694,964	$108,590,036	$29,969,770
6	Distribution	63	$24,223,030	$50,932,998	$32,591,882
7	Vehicles and Equipment	18	$191,430	$253,222	$57,952
8	Source of Supply / Raw Water	69	$5,388,798	$10,101,797	$3,380,854
9	W - TBD	0	$0	$0	$0
	Total	599	78,919,259	179,404,376	69,480,024

2017 Rate and Fee Study
CWRWS Assets

FUNCTION	FUNCTION DESCRIPTION	CLASS ID	CATEGORY	ASSET DESCRIPTION	YEAR ACQUIRED	ACQUISITION COST	LIFE TO DATE DEPRECIATION	DEPRECIABLE LIFE IN YRS	Replacement Cost New (RCN)	RCN Less Depreciation
5	Treatment	LIGHT	TREATMENT	V-7409 SETTLED WATER VFD#2	2015	$12,469.57	$3,117.45	5	$13,085	$9,813
1	Land	LAND	TREATMENT	FORT CASPAR WELLFIELD PROPERTY	1957	102,261.95	0.00	0	102,262	102,262
1	Land	LAND	TREATMENT	DEMPSEY ACRES WELLFIELD/WTP PR	1972	453,832.76	0.00	0	453,833	453,833
1	Land	LAND	TRANSMISSION	AIRPORT BOOSTER STATION	1978	821.48	0.00	0	821	821
1	Land	LAND	TRANSMISSION	PIONEER BOOSTER STATION PROPER	1998	688.00	0.00	0	688	688
1	Land	LAND	TRANSMISSION / STORAGE	MOUNTAIN VIEW TANK & BOOSTER S	1998	4,290.00	0.00	0	4,290	4,290
1	Land	LAND	TREATMENT	LOT 5 BLOCK 20 STEWART ADDITIO	2008	18,979.83	0.00	50	18,980	18,980
6	Distribution	BUILD	TRANSMISSION	WARDWELL BOOSTER STATION STRUC	1969	13,769.00	13,120.92	50	114,253	5,378
6	Distribution	BUILD	TRANSMISSION	WARDWELL BOOSTER STN PUMP #1	1975	4,517.00	4,517.00	25	21,503	0
6	Distribution	BUILD	TRANSMISSION	WARDWELL BOOSTER STN PUMP #2	1975	4,517.00	4,517.00	25	21,503	0
6	Distribution	BUILD	TRANSMISSION	WARDWELL BOOSTER STN SPARE PU	1975	3,705.00	3,705.00	25	17,637	0
6	Distribution	BUILD	TRANSMISSION	WARDWELL BOOSTER STN CHLORINE	1975	4,574.00	4,574.00	30	21,774	0
6	Distribution	BUILD	TRANSMISSION	WARDWELL BOOSTER STN ELEC/MEC	1975	35,694.00	35,694.00	30	169,918	0
6	Distribution	BUILD	TRANSMISSION	AIRPORT BOOSTER STN STRUCTURE	1978	33,833.00	26,160.68	50	128,336	29,103
6	Distribution	BUILD	TRANSMISSION	AIRPORT BOOSTER STN PUMP #1	1978	5,784.00	5,784.00	25	21,940	0
6	Distribution	BUILD	TRANSMISSION	AIRPORT BOOSTER STN PUMP #2	1978	5,784.00	5,784.00	25	21,940	0
6	Distribution	BUILD	TRANSMISSION	AIRPORT BOOSTER STN ELEC/MEC	1978	46,041.00	41,062.58	45	174,644	18,884
6	Distribution	BUILD	TRANSMISSION	PIONEER BOOSTER STN STRUCTURE	1996	92,105.06	74,759.49	25	172,574	32,500
6	Distribution	BUILD	TRANSMISSION	MOUNTAIN VIEW BOOSTER STN BLD	1998	888,052.00	332,982.49	50	1,579,592	987,311
6	Distribution	BUILD	TRANSMISSION	PIONEER BOOSTER STN BID PACKA	1998	42,712.00	16,021.26	50	75,973	47,475
6	Distribution	BUILD	TRANSMISSION	BID PACKAGE #2	1998	7,618.82	2,780.77	50	13,552	8,606
6	Distribution	BUILD	TRANSMISSION	AIRPORT BOOSTER STN SCDA UPG	1999	49,200.00	49,200.00	10	85,505	0
6	Distribution	BUILD	TRANSMISSION	MTN VIEW BOOSTER SCADA UPGRA	1999	49,200.00	49,200.00	10	85,505	0
6	Distribution	BUILD	TRANSMISSION	PIONEER W&S BOOSTER SCADA UPGR	1999	49,200.00	49,200.00	10	85,505	0
6	Distribution	BUILD	TRANSMISSION	SALT CREEK BOOSTER STN SCADA	1999	49,200.00	49,200.00	10	85,505	0
6	Distribution	BUILD	TRANSMISSION	SANDY LAKE ESTATES BOOSTER STN	2000	211,553.72	71,921.15	50	358,087	236,350
5	Treatment	BUILD	TREATMENT	RAW WATER INTAKE & PUMP STN S	1972	214,589.00	191,655.38	50	1,289,003	137,759
5	Treatment	BUILD	TREATMENT	RAW WATER TRAVELING SCREEN #1	1972	14,306.00	14,306.00	20	85,934	0
5	Treatment	BUILD	TREATMENT	RAW WATER TRAVELING SCREEN #2	1972	22,823.00	22,823.00	20	137,094	0
5	Treatment	BUILD	TREATMENT	RAW WATER PUMP #3	1972	3,576.00	3,576.00	25	21,480	0
5	Treatment	BUILD	TREATMENT	RAW WATER INTAKE & PUMP STN E	1972	338,817.00	338,817.00	42	2,035,221	0
5	Treatment	BUILD	TREATMENT	RAW WATER PUMP #6	1997	9,605.00	8,700.92	25	17,360	1,634
5	Treatment	BUILD	TREATMENT	RAW WATER INTAKE & PUMP STN S	1999	19,000.00	6,617.72	50	33,020	21,519
5	Treatment	BUILD	TREATMENT	RAW WATER INTAKE & PUMP STN M	1999	254,600.00	147,772.12	30	442,472	185,657
5	Treatment	BUILD	TREATMENT	RAW WATER PUMP #1	1999	76,400.00	53,203.02	25	132,776	40,314
5	Treatment	BUILD	TREATMENT	RAW WATER PUMP #5	1999	27,300.00	19,011.08	25	47,445	14,405
5	Treatment	BUILD	TREATMENT	RAW WATER PUMP #4	1999	76,400.00	53,203.02	25	132,776	40,314
5	Treatment	BUILD	TREATMENT	RAW WATER PUMP #2 UPGRADES	1999	10,300.00	7,172.56	25	17,900	5,435
5	Treatment	BUILD	TREATMENT	RAW WATER PUMP #3 UPGRADES	1999	2,000.00	1,392.74	25	3,476	1,055
5	Treatment	BUILD	TREATMENT	RAW WATER PUMP #6 UPGRADES	1999	2,000.00	1,392.74	25	3,476	1,055
5	Treatment	BUILD	TREATMENT	WATER TREATMENT PLANT TANK MEC	1972	400,851.87	400,851.87	35	2,407,855	0
3	Treated Water Storage	BUILD	STORAGE	AIRPORT LINE TANK MECH & ELEC	1975	212,545.00	212,545.00	35	1,011,799	0
3	Treated Water Storage	BUILD	STORAGE	BAR NUNN TANK MECH & ELECTRICA	1979	572,650.16	572,650.16	35	2,007,994	0
3	Treated Water Storage	BUILD	STORAGE	PIONEER TANK	1996	75,359.13	43,574.75	35	141,198	59,553
3	Treated Water Storage	BUILD	STORAGE	MOUNTAIN VIEW TANK	1998	514,283.00	275,458.82	35	914,764	424,800
3	Treated Water Storage	BUILD	STORAGE	AIRPORT LINE TANK ADJUSTMENT	1998	122,638.00	65,394.94	35	218,138	101,819
3	Treated Water Storage	BUILD	STORAGE	AIRPORT TANK	1999	208,226.95	107,564.41	35	361,880	174,942
3	Treated Water Storage	BUILD	STORAGE	AIRPORT LINE TANK SCADA UPGRAD	1999	44,600.00	44,600.00	10	77,511	0
3	Treated Water Storage	BUILD	STORAGE	BAR NUNN TANK SCADA UPGRADES	1999	44,600.00	44,600.00	10	77,511	0

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3	Treated Water Storage	BUILD	STORAGE	PIONEER TANK SCADA UPGRADES	1999	44,600.00	44,600.00	10	77,511	0
3	Treated Water Storage	BUILD	STORAGE	MOUNTAIN VIEW TANK SCADA UPGRA	1999	44,600.00	44,600.00	10	77,511	0
3	Treated Water Storage	BUILD	STORAGE	SUNRISE III TANK REPEATER STN	1999	44,700.00	44,700.00	10	77,685	0
3	Treated Water Storage	BUILD	STORAGE	SANDY LAKE ESTATES TANK	2000	333,999.00	162,198.97	35	565,345	290,798
3	Treated Water Storage	BUILD	STORAGE	PIONEER TANK COATING & MISC UP	2001	77,770.00	77,770.00	15	129,106	0
3	Treated Water Storage	BUILD	STORAGE	BAR NUNN TANK COATING & MISC U	2001	211,538.00	211,538.00	15	351,174	0
3	Treated Water Storage	BUILD	STORAGE	AIRPORT LINE TANK COATING & MI	2001	289,173.00	289,173.00	15	480,055	0
5	Treatment	BUILD	TREATMENT	CAISSON #1 CAISSON ONLY	1958	50,000.00	38,288.55	67	693,676	162,479
5	Treatment	BUILD	TREATMENT	CAISSON #2 CAISSON ONLY	1958	50,000.00	38,288.55	67	693,676	162,479
5	Treatment	BUILD	TREATMENT	CAISSON #3 CAISSON ONLY	1958	50,000.00	38,288.55	67	693,676	162,479
5	Treatment	BUILD	TREATMENT	GALLERY #1 STRUCTURE	1980	17,866.00	13,100.40	50	58,118	15,503
5	Treatment	BUILD	TREATMENT	GALLERY PIPE	1980	450,227.00	220,102.06	75	1,464,594	748,599
5	Treatment	BUILD	TREATMENT	GALLERY #1 MECHANICAL/ELECTRIC	1980	30,542.73	22,033.70	50	99,356	27,680
5	Treatment	BUILD	TREATMENT	GALLERY PIPE SITEWORK GENERAL	1980	183,980.07	132,724.65	50	598,489	166,734
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #4 STRUCTURE	1983	6,013.00	4,048.16	50	15,572	5,088
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #5 STRUCTURE	1983	6,013.00	3,828.10	50	15,572	5,658
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #6 STRUCTURE	1983	6,013.00	4,048.16	50	15,572	5,088
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #4 WELL ONLY	1983	7,700.00	5,466.70	50	19,941	5,784
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #5 WELL ONLY	1983	7,700.00	5,466.70	50	19,941	5,784
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #6 WELL ONLY	1983	7,700.00	5,466.70	50	19,941	5,784
8	Source of Supply / Raw Water	BUILD	TREATMENT	MONITORING WELLS	1999	2,440.00	1,723.48	25	4,241	1,245
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #5 WELL, STRUCTURE, MECH	1999	141,100.00	98,258.58	25	245,219	74,455
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #5 PUMP	1999	25,000.00	14,510.15	30	43,448	18,230
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #6 WELL, STRUCTURE, MECH	1999	141,100.00	98,258.58	25	245,219	74,455
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #6 PUMP	1999	25,000.00	14,510.15	30	43,448	18,230
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #7 WELL, STRUCTURE, MECH	1999	141,100.00	98,258.58	25	245,219	74,455
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #7 PUMP	1999	25,000.00	14,510.15	30	43,448	18,230
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #8 WELL, STRUCTURE, MECH	1999	141,100.00	98,258.58	25	245,219	74,455
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #8 PUMP	1999	25,000.00	14,510.15	30	43,448	18,230
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #9 WELL, STRUCTURE, MECH	1999	141,100.00	98,258.58	25	245,219	74,455
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #9 PUMP	1999	25,000.00	14,510.15	30	43,448	18,230
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #10 WELL, STRUCTURE, MECH	1999	141,100.00	98,258.58	25	245,219	74,455
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #10 PUMP	1999	25,000.00	14,510.15	30	43,448	18,230
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #11 WELL, STRUCTURE, MECH	1999	141,100.00	98,258.58	25	245,219	74,455
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #11 PUMP	1999	25,000.00	14,510.15	30	43,448	18,230
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #12 WELL, STRUCTURE, MECH	1999	141,100.00	98,258.58	25	245,219	74,455
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #12 PUMP	1999	25,000.00	14,510.15	30	43,448	18,230
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #14 WELL, STRUCTURE, MECH	1999	141,100.00	98,258.58	25	245,219	74,455
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #14 PUMP	1999	25,000.00	25,000.00	16	43,448	0
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #15 WELL, STRUCTURE, MECH	1999	141,100.00	98,258.58	25	245,219	74,455
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #15 PUMP	1999	25,000.00	25,000.00	16	43,448	0
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #19 WELL, STRUCTURE, MECH	1999	196,000.00	136,489.52	25	340,630	103,424
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #19 PUMP	1999	25,000.00	14,510.15	30	43,448	18,230
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #20 WELL, STRUCTURE, MECH	1999	196,000.00	136,489.52	25	340,630	103,424
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #20 PUMP	1999	25,000.00	25,000.00	16	43,448	0
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #21 WELL, STRUCTURE, MECH	1999	196,000.00	136,489.52	25	340,630	103,424
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #21 PUMP	1999	25,000.00	14,510.15	30	43,448	18,230
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #22 WELL, STRUCTURE, MECH	1999	196,000.00	136,489.52	25	340,630	103,424
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #22 PUMP	1999	25,000.00	14,510.15	30	43,448	18,230

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8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL RECHARGE PUMP	1999	21,000.00	12,188.64	30	36,496	15,313
5	Treatment	BUILD	TREATMENT	CAISSON #1 PUMP	1999	25,000.00	14,510.15	30	43,448	18,230
5	Treatment	BUILD	TREATMENT	CAISSON #1 STRUCTURE, MECH, EL	1999	160,300.00	111,628.80	25	278,587	84,586
5	Treatment	BUILD	TREATMENT	CAISSON #2 STRUCTURE, MECH, EL	1999	160,300.00	111,628.80	25	278,587	84,586
5	Treatment	BUILD	TREATMENT	CAISSON #2 PUMP	1999	25,000.00	14,510.15	30	43,448	18,230
5	Treatment	BUILD	TREATMENT	CAISSON #3 STRUCTURE, MECH, EL	1999	160,300.00	111,628.80	25	278,587	84,586
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #2R PUMP	1999	25,000.00	14,510.15	30	43,448	18,230
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #3R PUMP	1999	25,000.00	14,510.15	30	43,448	18,230
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #2R WELL, STRUCTURE, MECH	1999	196,000.00	136,489.52	25	340,630	103,424
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #3R WELL, STRUCTURE, MECH	1999	196,000.00	136,489.52	25	340,630	103,424
5	Treatment	BUILD	TREATMENT	GALLERY #1 MECH, ELECTR, I&C U	1999	82,300.00	71,586.88	20	143,030	18,618
5	Treatment	BUILD	TREATMENT	GALLERY #1 PUMP	1999	66,500.00	38,597.21	30	115,571	48,493
5	Treatment	BUILD	TREATMENT	GALLERY #4 MECH, ELECTR, I&C U	1999	29,300.00	25,486.08	20	50,921	6,628
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #4 PUMP	1999	25,000.00	14,510.15	30	43,448	18,230
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #5 PUMP	1999	25,000.00	14,510.15	30	43,448	18,230
5	Treatment	BUILD	TREATMENT	GALLERY #5 MECH, ELECTR, I&C U	1999	29,300.00	25,486.08	20	50,921	6,628
5	Treatment	BUILD	TREATMENT	GALLERY #6 MECH, ELECTR, I&C U	1999	29,300.00	25,486.08	20	50,921	6,628
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #6 PUMP	1999	25,000.00	14,510.15	30	43,448	18,230
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #7 PUMP	1999	25,000.00	14,510.15	30	43,448	18,230
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #8 PUMP	1999	25,000.00	14,510.15	30	43,448	18,230
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #9 PUMP	1999	25,000.00	14,510.15	30	43,448	18,230
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #10R PUMP	1999	25,000.00	14,510.15	30	43,448	18,230
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #11 PUMP	1999	25,000.00	14,510.15	30	43,448	18,230
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #12R PUMP	1999	25,000.00	14,510.15	30	43,448	18,230
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #13 PUMP	1999	25,000.00	14,510.15	30	43,448	18,230
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #7 WELL, STRUCTURE, MECH	1999	196,000.00	136,489.52	25	340,630	103,424
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #8 WELL, STRUCTURE, MECH	1999	196,000.00	136,489.52	25	340,630	103,424
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #9 WELL, STRUCTURE, MECH	1999	196,000.00	136,489.52	25	340,630	103,424
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #10R WELL, STRUCTURE, MEC	1999	196,000.00	136,489.52	25	340,630	103,424
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #11 WELL, STRUCTURE, MECH	1999	196,000.00	136,489.52	25	340,630	103,424
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #12R WELL, STRUCTURE, MEC	1999	196,000.00	136,489.52	25	340,630	103,424
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELL #13 WELL, STRUCTURE, MECH	1999	196,000.00	136,489.52	25	340,630	103,424
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELLFIELD ROADWAYS	1999	155,200.00	54,056.04	50	269,724	175,779
8	Source of Supply / Raw Water	BUILD	TREATMENT	WELLFIELD ROADWAYS	1999	155,200.00	54,056.04	50	269,724	175,779
8	Source of Supply / Raw Water	BUILD	TREATMENT	30 WELL TURBIDIMETERS	2002	51,926.58	51,926.58	15	83,632	0
8	Source of Supply / Raw Water	BUILD	TREATMENT	CONDUIT/WIRING FOR INSTL WELL	2002	6,852.24	6,781.19	15	11,036	114
5	Treatment	BUILD	TREATMENT	GALLERY MECH, ELECTRICAL, PANE	2003	4,570.00	2,573.50	25	7,189	3,141
8	Source of Supply / Raw Water	BUILD	TREATMENT	SPARE WELL RADIO	2004	816.00	816.00	7	1,208	0
5	Treatment	BUILD	TREATMENT	ACTIFLO STRUCTURE FORMER FLOC1	1972	126,087.00	112,611.72	50	757,385	80,944
5	Treatment	BUILD	TREATMENT	ACTIFLO STRUCTURE FORMER SED1-	1972	191,613.00	171,134.94	50	1,150,990	123,009
5	Treatment	BUILD	TREATMENT	FILTERS CLEARWELL 1&2 MECH/ELE	1972	412,200.00	368,147.23	50	2,476,022	264,618
5	Treatment	BUILD	TREATMENT	FILTERS CLEARWELL 1&2 STRUCTUR	1972	47,283.00	42,229.58	50	284,022	30,355
5	Treatment	BUILD	TREATMENT	MAIN WTP STRUCTURE FORMER CHEM	1972	185,261.00	165,461.68	50	1,112,834	118,931
5	Treatment	BUILD	TREATMENT	MAIN WTP STRUCTURE FORMER OFFI	1972	110,728.00	98,893.74	50	665,126	71,087
5	Treatment	BUILD	TREATMENT	FLOC 2/SED 3-4 STRUCTURE ALLOW	1972	298,118.00	298,118.00	42	1,790,749	0
5	Treatment	BUILD	TREATMENT	FLOC 2 SED 3-4 EQUIP MECH/EL	1972	138,100.00	138,100.00	42	829,545	0
5	Treatment	BUILD	TREATMENT	ACTIFLO FORMER FLOC SED 1-2 ME	1972	72,500.00	64,751.68	50	435,496	46,543
5	Treatment	BUILD	TREATMENT	FLOC 2/SED 3-4 STRUCTURE	1972	19,582.00	17,489.33	50	117,626	12,570
5	Treatment	BUILD	TREATMENT	FILTERS/CLEARWELL 1&2 STRUCTUR	1972	13,343.00	11,917.00	50	80,149	8,566

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5	Treatment	BUILD	TREATMENT	NORTH CHEMICAL STRUCTURE ALLOW	1972	271,573.00	271,573.00	42	1,631,297	0
5	Treatment	BUILD	TREATMENT	NORTH CHEMICAL MECH/ELECTR ALL	1972	174,500.00	174,500.00	42	1,048,195	0
5	Treatment	BUILD	TREATMENT	MAIN WTP STRUCTURE ALLOWANCE	1972	370,511.00	370,511.00	42	2,225,602	0
5	Treatment	BUILD	TREATMENT	MAIN WTP MECH/ELECTR ALLOWANCE	1972	801,500.00	801,500.00	42	4,814,487	0
5	Treatment	BUILD	TREATMENT	HIGH SERVICE PUMP#5 ALLOWANCE	1972	20,009.00	20,009.00	42	120,191	0
5	Treatment	BUILD	TREATMENT	FILTERS/CLEARWELL 1&2 STRUCTUR	1972	412,174.00	412,174.00	42	2,475,865	0
5	Treatment	BUILD	TREATMENT	FILTERS/CLEARWELL 3-6 STRUCTUR	1972	989,672.00	989,672.00	42	5,944,807	0
5	Treatment	BUILD	TREATMENT	FILTERS/CLEARWELL 3-6 MECH/ELE	1972	109,603.00	109,603.00	42	658,368	0
5	Treatment	BUILD	TREATMENT	NORTH CHEM STRUCTURE FORMER FL	1978	164,442.00	127,152.32	50	623,766	141,448
5	Treatment	BUILD	TREATMENT	NORTH CHEM STRUCTURE FORMER SE	1978	328,885.00	254,305.63	50	1,247,536	282,897
5	Treatment	BUILD	TREATMENT	FILTERS/CLEARWELL 3-6 MECH/ELE	1978	1,151,097.00	890,069.50	50	4,366,373	990,137
5	Treatment	BUILD	TREATMENT	FILTERS/CLEARWELL 3-6 STRUCTUR	1978	109,628.00	84,767.95	50	415,844	94,300
5	Treatment	BUILD	TREATMENT	HIGH SERVICE PUMP#5 (CS) (P-10	1978	18,191.00	14,065.98	50	69,003	15,647
5	Treatment	BUILD	TREATMENT	DEWATERING PUMP STATION STRUCT	1978	40,600.00	18,350.52	50	154,005	84,397
5	Treatment	BUILD	TREATMENT	DEWATERING PUMP MECH/ELECTR	1999	15,100.00	13,134.40	20	26,242	3,416
5	Treatment	BUILD	TREATMENT	DEWATERING PUMP (P-2471)	1999	46,300.00	40,273.07	20	80,465	10,474
5	Treatment	BUILD	TREATMENT	ACTIFLO STRUCTURE - UPGRADES	1999	844,700.00	294,208.52	50	1,468,013	956,705
5	Treatment	BUILD	TREATMENT	ACTIFLO MECHANICAL/ELECTRICAL	1999	614,100.00	534,162.07	20	1,067,251	138,925
5	Treatment	BUILD	TREATMENT	ACTIFLO PROCESS EQUIPMENT (KRU	1999	1,584,500.00	1,378,244.21	20	2,753,719	358,454
5	Treatment	BUILD	TREATMENT	ACTIFLO DISTRIBUTION TANK MIXE	1999	27,700.00	24,094.31	20	48,140	6,266
5	Treatment	BUILD	TREATMENT	ACTIFLO MICROSAND FEED #1 (M-0	1999	2,250.00	1,957.04	20	3,910	509
5	Treatment	BUILD	TREATMENT	ACTIFLO MICROSAND FEED #2 (M-0	1999	2,250.00	1,957.04	20	3,910	509
5	Treatment	BUILD	TREATMENT	ACTIFLO FORK LIFT TRUCK	1999	33,000.00	33,000.00	15	57,351	0
5	Treatment	BUILD	TREATMENT	NORTH CHEMICAL STRUCTURE UPGRA	1999	872,100.00	303,752.04	50	1,515,632	987,738
5	Treatment	BUILD	TREATMENT	NORTH CHEMICAL MECHANICAL/ELEC	1999	715,412.00	622,286.17	20	1,243,322	161,844
5	Treatment	BUILD	TREATMENT	NORTH CHEM CORROSION INHIBITOR	1999	8,100.00	8,100.00	10	14,077	0
5	Treatment	BUILD	TREATMENT	NORTH CHEM CORROISON INHIBITOR	1999	8,100.00	8,100.00	10	14,077	0
5	Treatment	BUILD	TREATMENT	NORTH CHEM CORROSION INHIBITOR	1999	8,100.00	8,100.00	10	14,077	0
5	Treatment	BUILD	TREATMENT	NORTH CHEM CORROSION INHIBITOR	1999	16,900.00	9,808.86	30	29,371	12,324
5	Treatment	BUILD	TREATMENT	NORTH CHEM CORROSION INHIBITO	1999	16,900.00	9,808.86	30	29,371	12,324
5	Treatment	BUILD	TREATMENT	NORTH CHEM CORROSION INHIBITOR	1999	13,850.00	12,047.16	20	24,070	3,133
5	Treatment	BUILD	TREATMENT	NORTH CHEM CORROSION INHIBITOR	1999	13,850.00	12,047.16	20	24,070	3,133
5	Treatment	BUILD	TREATMENT	NORTH CHEM H202 TANK (T-2010)	1999	40,600.00	23,564.60	30	70,559	29,606
5	Treatment	BUILD	TREATMENT	NORTH CHEM PUMP #1(P2071-01)	1999	7,900.00	7,900.00	10	13,729	0
5	Treatment	BUILD	TREATMENT	NORTH CHEM PUMP #1(P2071-02)	1999	7,900.00	7,900.00	10	13,729	0
5	Treatment	BUILD	TREATMENT	NORTH CHEM PUMP #1(P2071-03)	1999	7,900.00	7,900.00	10	13,729	0
5	Treatment	BUILD	TREATMENT	NORTH CHEM PUMP #1(P2071-04)	1999	7,900.00	7,900.00	10	13,729	0
5	Treatment	BUILD	TREATMENT	NORTH CHEM NAOCL TANK#1 (T-211	1999	33,700.00	19,559.75	30	58,568	24,574
5	Treatment	BUILD	TREATMENT	NORTH CHEM NAOCL TANK#2 (T-211	1999	33,700.00	19,559.75	30	58,568	24,574
5	Treatment	BUILD	TREATMENT	NORTH CHEM NH4 TANK (T-2210)	1999	18,000.00	10,447.38	30	31,282	13,126
5	Treatment	BUILD	TREATMENT	NORTH CHEM NH4 PUMP #1 SPARE R	1999	4,900.00	4,900.00	10	8,516	0
5	Treatment	BUILD	TREATMENT	NORTH CHEM NH4 PUMP #2 SPARE P	1999	4,900.00	4,900.00	10	8,516	0
5	Treatment	BUILD	TREATMENT	NORTH CHEM NH4 SPARE PUM	1999	4,900.00	4,900.00	10	8,516	0
5	Treatment	BUILD	TREATMENT	NORTH CHEM POLYMERN FEEDER (M-	1999	26,100.00	26,100.00	10	45,359	0
5	Treatment	BUILD	TREATMENT	FILTERS 1-6 PROCESS MECH UPGRA	1999	870,800.00	757,447.20	20	1,513,373	196,997
5	Treatment	BUILD	TREATMENT	FILTER UNDERDRAINS	1999	271,080.00	235,793.32	20	471,113	61,325
5	Treatment	BUILD	TREATMENT	FILTER MEDIA	1999	249,300.00	249,300.00	10	433,261	0
5	Treatment	BUILD	TREATMENT	FILTER SWEEP ARMS	1999	95,000.00	82,633.76	20	165,102	21,491
5	Treatment	BUILD	TREATMENT	FILTER WASH TROUGHS	1999	85,700.00	49,741.03	30	148,939	62,493

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5	Treatment	BUILD	TREATMENT	MAIN WTP STRUCTURE EXPANSION U	1999	709,200.00	247,014.10	50	1,232,526	803,238
5	Treatment	BUILD	TREATMENT	MAIN WTP EXPANSION MECH/ELECTR	1999	2,057,525.59	1,789,695.69	20	3,575,795	465,464
5	Treatment	BUILD	TREATMENT	SURFACE WATER HIGH SVC PUMP #1	1999	175,500.00	101,861.74	30	305,003	127,977
5	Treatment	BUILD	TREATMENT	SURFACE WATER HIGH SVC PUMP #2	1999	175,500.00	101,861.74	30	305,003	127,977
5	Treatment	BUILD	TREATMENT	SURFACE WATER HIGH SVC PUMP #3	1999	50,300.00	29,194.57	30	87,417	36,679
5	Treatment	BUILD	TREATMENT	SURFACE WATER HIGH SVC PUMP 4	1999	50,300.00	29,194.57	30	87,417	36,679
5	Treatment	BUILD	TREATMENT	SURFACE WATER HIGH SVC PUMP #5	1999	50,300.00	29,194.57	30	87,417	36,679
5	Treatment	BUILD	TREATMENT	WELL WARTER HIGH SVC PUMP #1	1999	71,800.00	41,673.37	30	124,782	52,357
5	Treatment	BUILD	TREATMENT	WELL WATER HIGH SVC PUMP #2	1999	71,800.00	41,673.37	30	124,782	52,357
5	Treatment	BUILD	TREATMENT	WELL WATER HIGH SVC PUMP #3	1999	176,100.00	102,210.14	30	306,046	128,414
5	Treatment	BUILD	TREATMENT	WELL WATER HIGH SVC PUMP #4	1999	71,800.00	41,823.32	30	124,782	52,097
5	Treatment	BUILD	TREATMENT	SOUTH CHEMICAL STRUCTURE	1999	394,900.00	137,543.42	50	686,301	447,263
5	Treatment	BUILD	TREATMENT	SOUTH CHEMICAL BLDG MECH/ELEC	1999	473,400.00	411,777.12	20	822,727	107,095
5	Treatment	BUILD	TREATMENT	SOUTH CHEM ANIONIC POLY FDR #1	1999	26,200.00	26,200.00	10	45,533	0
5	Treatment	BUILD	TREATMENT	SOUTH CHEM ANIONIC POLY FDR #2	1999	26,200.00	26,200.00	10	45,533	0
5	Treatment	BUILD	TREATMENT	SOUTH CHEM ANIONIC POLY FDR #3	1999	26,200.00	26,200.00	10	45,533	0
5	Treatment	BUILD	TREATMENT	SOUTH CHEM CAT POLY FEEDER (M1	1999	25,600.00	25,600.00	10	44,491	0
5	Treatment	BUILD	TREATMENT	SOUTH CHEM FECL3 PUMP #1 (P-16	1999	8,100.00	8,100.00	10	14,077	0
5	Treatment	BUILD	TREATMENT	SOUTH CHEM FECL3 PUMP #2 (P-16	1999	8,100.00	8,100.00	10	14,077	0
5	Treatment	BUILD	TREATMENT	SOUTH CHEM FECL3 SPARE PUMP	1999	8,100.00	8,100.00	10	14,077	0
5	Treatment	BUILD	TREATMENT	SOUTH CHEM FECL3 TANK #1 (T-16	1999	38,050.00	22,084.68	30	66,127	27,746
5	Treatment	BUILD	TREATMENT	SOUTH CHEM FECL3 TANK#2 (T-161	1999	38,050.00	22,084.68	30	66,127	27,746
5	Treatment	BUILD	TREATMENT	SOUTH CHEM H2SO4 SPARE PUMP	1999	6,500.00	6,500.00	10	11,296	0
5	Treatment	BUILD	TREATMENT	SOUTH CHEM H2SO4 TANK#1 (T-171	1999	97,650.00	56,677.01	30	169,707	71,207
5	Treatment	BUILD	TREATMENT	SOUTH CHEM H2SO4 TANK#2 (T-171	1999	97,650.00	56,677.01	30	169,707	71,207
5	Treatment	BUILD	TREATMENT	SOUTH CHEM IN-LINE MIXER (P-10	1999	48,600.00	42,273.76	20	84,462	10,994
5	Treatment	BUILD	TREATMENT	OZONE STRUCTURE	1999	3,675,000.00	1,280,000.36	50	6,386,821	4,162,295
5	Treatment	BUILD	TREATMENT	OZONE BLDG MECHANICAL/ELECTRIC	1999	2,765,000.00	2,405,077.60	20	4,805,323	625,513
5	Treatment	BUILD	TREATMENT	COOLING WATER AIR SEPARATOR TA	1999	1,900.00	1,652.67	20	3,302	430
5	Treatment	BUILD	TREATMENT	COOLING WATER EXP TANK (T-154	1999	2,000.00	1,739.68	20	3,476	452
5	Treatment	BUILD	TREATMENT	COOLING WATR HEAT EXCHANGR #1	1999	8,700.00	7,567.45	20	15,120	1,968
5	Treatment	BUILD	TREATMENT	COOLING WATR HEAT EXHANGR #2	1999	8,700.00	7,567.45	20	15,120	1,968
5	Treatment	BUILD	TREATMENT	COOLING WATER PUMP #1 (P-1572-	1999	4,500.00	3,914.24	20	7,821	1,018
5	Treatment	BUILD	TREATMENT	COOLING WATER PUMP #2 (P-1572-	1999	4,500.00	3,914.24	20	7,821	1,018
5	Treatment	BUILD	TREATMENT	COOLING WATER PUMP #3 (P-1572-	1999	4,500.00	3,914.24	20	7,821	1,018
5	Treatment	BUILD	TREATMENT	DO STRIPPING BLOWER #1 (P-1271	1999	82,600.00	57,520.58	25	143,551	43,586
5	Treatment	BUILD	TREATMENT	DO STRIPPING BLOWER #2 (P-1271	1999	82,600.00	57,520.58	25	143,551	43,586
5	Treatment	BUILD	TREATMENT	DO STRIPPING BLOWER #3 (P-1271	1999	82,600.00	57,520.58	25	143,551	43,586
5	Treatment	BUILD	TREATMENT	DO COARSE BUBBLE DIFFUSERS	1999	14,300.00	8,299.80	30	24,852	10,428
5	Treatment	BUILD	TREATMENT	HEAT REJ PUMP #1 (P-1571-01)	1999	6,300.00	5,479.96	20	10,949	1,425
5	Treatment	BUILD	TREATMENT	HEAT REJ PUMP #2 (P-1571-02)	1999	6,300.00	5,479.96	20	10,949	1,425
5	Treatment	BUILD	TREATMENT	HEAT REJ PUMP #3 (P-1571-03)	1999	6,300.00	5,479.96	20	10,949	1,425
5	Treatment	BUILD	TREATMENT	LOX TANK #1 (T-1305-01)	1999	165,300.00	128,003.52	20	287,277	64,818
5	Treatment	BUILD	TREATMENT	LOX TANK 32 (T-1305-02)	1999	165,300.00	128,003.52	20	287,277	64,818
5	Treatment	BUILD	TREATMENT	NONIONIC POLYMER FEEDER #1 (M-	1999	19,100.00	19,100.00	10	33,194	0
5	Treatment	BUILD	TREATMENT	NONIONIC POLYMER FEEDER #2 (M-	1999	19,100.00	19,100.00	10	33,194	0
5	Treatment	BUILD	TREATMENT	OXYGEN VAPORIZER #1 (T-0321-01	1999	35,400.00	35,400.00	15	61,522	0
5	Treatment	BUILD	TREATMENT	OXYGEN VAPORIZER #2 (T-0321-02	1999	35,400.00	35,400.00	15	61,522	0
5	Treatment	BUILD	TREATMENT	OZONE GENERATOR & PSU #1 (M-14	1999	498,650.00	431,898.21	20	866,609	116,009

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5	Treatment	BUILD	TREATMENT	OZONE GENERATOR & PSU #2 (M-14	1999	498,650.00	431,898.21	20	866,609	116,009
5	Treatment	BUILD	TREATMENT	OZONE GENERATOR & PSU #3 (M-14	1999	498,650.00	431,898.21	20	866,609	116,009
5	Treatment	BUILD	TREATMENT	OZONE GENERATOR & PSU #4 (M-14	1999	498,650.00	431,898.21	20	866,609	116,009
5	Treatment	BUILD	TREATMENT	OZONE DESTRUCTOR & BLOWER #1 (	1999	67,000.00	58,278.56	20	116,440	15,157
5	Treatment	BUILD	TREATMENT	OZONE DESTRUCTOR & BLOWER #2 (	1999	67,000.00	58,278.56	20	116,440	15,157
5	Treatment	BUILD	TREATMENT	OZONE DESTRUCTOR & BLOWER #3	1999	67,000.00	58,278.56	20	116,440	15,157
5	Treatment	BUILD	TREATMENT	SETTLED WATER INJECTOR PUMP #1	1999	26,650.00	23,181.02	20	46,315	6,029
5	Treatment	BUILD	TREATMENT	SETTLED WATER INJECTOR PUMP #2	1999	26,650.00	23,181.02	20	46,315	6,029
5	Treatment	BUILD	TREATMENT	SETTLED WATER INJECTOR PUMP #3	1999	26,650.00	23,181.02	20	46,315	6,029
5	Treatment	BUILD	TREATMENT	SETTLED WATER INJECTOR #1	1999	19,400.00	16,874.72	20	33,715	4,389
5	Treatment	BUILD	TREATMENT	SETTLED WATER INJECTOR #2	1999	19,400.00	16,874.72	20	33,715	4,389
5	Treatment	BUILD	TREATMENT	SETTLED WATER INJECTOR #3	1999	19,400.00	16,874.72	20	33,715	4,389
5	Treatment	BUILD	TREATMENT	SETTLED WATER INJECTOR #4	1999	19,400.00	16,874.72	20	33,715	4,389
5	Treatment	BUILD	TREATMENT	SETTLED WATER PUMP #1 (VS)	1999	65,900.00	38,248.92	30	114,528	48,055
5	Treatment	BUILD	TREATMENT	SETTLED WATER PUMP #2 (VS)	1999	65,900.00	38,248.92	30	114,528	48,055
5	Treatment	BUILD	TREATMENT	SETTLED WATER PUMP #3 (VS)	1999	45,100.00	26,176.51	30	78,380	32,887
5	Treatment	BUILD	TREATMENT	SETTLED WATER PUMP #4 (VS)	1999	45,100.00	26,176.51	30	78,380	32,887
5	Treatment	BUILD	TREATMENT	SETTLED WATER PUMP #5 (VS)	1999	45,100.00	26,176.51	30	78,380	32,887
5	Treatment	BUILD	TREATMENT	WELL WATER INJECTOR PUMP #1	1999	26,650.00	23,181.02	20	46,315	6,029
5	Treatment	BUILD	TREATMENT	WELL WATER INJECTOR PUMP #2	1999	26,650.00	23,181.02	20	46,315	6,029
5	Treatment	BUILD	TREATMENT	WELL WATER INJECTOR PUMP #3	1999	26,650.00	23,181.02	20	46,315	6,029
5	Treatment	BUILD	TREATMENT	WELL WATER INJECTOR #1 (M-0971	1999	15,500.00	13,482.29	20	26,938	3,507
5	Treatment	BUILD	TREATMENT	WELL WATER INJECTOR #2 (M-0971	1999	15,500.00	13,482.29	20	26,938	3,507
5	Treatment	BUILD	TREATMENT	WELL WATER INJECTOR #3 (M-0971	1999	15,500.00	13,482.29	20	26,938	3,507
5	Treatment	BUILD	TREATMENT	WELL WATER INJECTOR #4 (M-0971	1999	15,500.00	13,482.29	20	26,938	3,507
5	Treatment	BUILD	TREATMENT	WELL WATER RECIRCULATION PUMP	1999	26,100.00	15,148.72	30	45,359	19,032
5	Treatment	BUILD	TREATMENT	WELL WATER DEGAS TANK STRUCTUR	1999	159,700.00	55,623.44	50	277,544	180,876
5	Treatment	BUILD	TREATMENT	WELL WATER DEGAS TANK PIPING	1999	497,300.00	173,209.22	50	864,263	563,241
5	Treatment	BUILD	TREATMENT	WELL WATER DEGAS COARSE BUBBLE	1999	5,300.00	3,076.23	30	9,211	3,865
5	Treatment	BUILD	TREATMENT	BACKWASH & SLUDGE LAGOONS STRU	1999	1,164,200.00	405,490.06	50	2,023,275	1,318,570
5	Treatment	BUILD	TREATMENT	BACKWASH & SLUDGE LAGOONS - ME	1999	113,600.00	98,812.64	20	197,427	25,699
5	Treatment	BUILD	TREATMENT	DECANT PUMP #1 (P-1171-01)	1999	27,400.00	23,833.32	20	47,619	6,199
5	Treatment	BUILD	TREATMENT	DECANT PUMP #3 (P-1171-03)	1999	27,400.00	23,833.32	20	47,619	6,199
5	Treatment	BUILD	TREATMENT	SITE UPGRADES-GRADING,STORMWAT	1999	163,500.00	56,947.00	50	284,148	185,180
5	Treatment	BUILD	TREATMENT	SITE ROADWAYS	1999	395,100.00	343,669.44	20	686,648	89,382
5	Treatment	BUILD	TREATMENT	YARD ELECTRICAL SYSTEMS	1999	550,200.00	319,341.28	30	956,198	401,212
5	Treatment	BUILD	TREATMENT	OZONE DESTRUCTOR & BLOWER #4	1999	67,000.00	58,278.56	20	116,440	15,157
5	Treatment	BUILD	TREATMENT	MAIN WTP BLDG EXPANSION & ADDL	2001	43,161.30	19,932.87	35	71,652	38,561
5	Treatment	BUILD	TREATMENT	OZONE BLDG (ADDL MECH/ELECT SY	2001	43,161.30	19,932.87	35	71,652	38,561
5	Treatment	BUILD	TREATMENT	POLYMER SYSTEMS	2001	72,470.00	72,470.00	10	120,307	0
5	Treatment	BUILD	TREATMENT	ACTIFLO ADDL UPGRADES BID PACK	2001	26,414.00	20,345.00	20	43,850	10,075
5	Treatment	BUILD	TREATMENT	SITE SECURITY UPGRADE FENCE SE	2002	6,376.09	4,725.51	20	10,269	2,658
5	Treatment	BUILD	TREATMENT	YARD ELECTRICAL SYSTEM UPGRADE	2002	883.00	426.61	30	1,422	735
5	Treatment	BUILD	TREATMENT	TRAVELING SCREENS	2002	106,210.00	60,871.77	25	171,060	73,021
5	Treatment	BUILD	TREATMENT	TRAVELING SCREENS MECH & ELEC	2002	11,465.80	6,571.31	25	18,467	7,883
5	Treatment	BUILD	TREATMENT	WELL WATER HIGH SVC PUMP #5 GW	2003	23,337.74	10,952.92	30	36,711	19,482
5	Treatment	BUILD	TREATMENT	MAIN WTP STRUCTURE UPGRADE ACT	2003	53,315.00	49,331.50	15	83,867	6,266
5	Treatment	BUILD	TREATMENT	NORTH CHEM NH4 PUMP #1	2003	1,417.32	1,417.32	10	2,230	0
5	Treatment	BUILD	TREATMENT	NORTH CHEM NH4 PUMP #2	2003	1,417.31	1,417.31	10	2,230	0

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5	Treatment	BUILD	TREATMENT	NH4 MAG METERS	2003	10,255.30	10,255.30	10	16,132	0
5	Treatment	BUILD	TREATMENT	GWHS #5 20" BUTTERFLY VALVE	2003	2,311.13	1,039.74	30	3,636	2,000
5	Treatment	BUILD	TREATMENT	SETTLED WATER PUMP #1 UPGRADES	2003	2,425.00	1,605.44	20	3,815	1,289
5	Treatment	BUILD	TREATMENT	RAW WATER IN-LINE MIXER UPGRAD	2004	1,745.71	1,745.71	5	2,584	0
5	Treatment	BUILD	TREATMENT	SPARE PLC	2004	1,199.00	1,199.00	10	1,774	0
6	Distribution	BUILD	TRANSMISSION	SCADA UPGRADE - BOOSTERS & TAN	2007	180,000.00	180,000.00	7	237,936	0
6	Distribution	BUILD	TRANSMISSION	MSDS RADIOS - AIRPORT BOOSTER	2010	5,322.88	4,963.39	7	6,370	430
6	Distribution	BUILD	TRANSMISSION	WARDWELL BOOSTER	2011	755,672.00	88,142.89	50	877,313	774,981
5	Treatment	BUILD	TREATMENT	RAW WATER UNIT HEATER	2005	817.50	817.50	10	1,156	0
5	Treatment	IMPROV	TREATMENT	RAW WATER METER FOR DSCHG PERM	2005	832.00	832.00	10	1,177	0
5	Treatment	IMPROV	TREATMENT	RAW WTR PUMP #2 REPLACEMENT	2009	41,913.59	13,127.50	25	51,499	35,370
5	Treatment	IMPROV	TREATMENT	RAW WTR ELECTRICAL UPGRADE	2012	23,161.35	4,398.23	25	26,202	21,226
6	Distribution	IMPROV	TRANSMISSION	SCADA REPEATER SYSTEM UPGRADES	2005	26,408.48	26,408.48	5	37,346	0
5	Treatment	IMPROV	STORAGE	PIONEER TANK NITRIFICATION MXR	2010	31,754.62	10,445.95	20	38,002	25,501
3	Treated Water Storage	IMPROV	STORAGE	AIRPORT TANK EXTERIOR PAINTING	2010	180,696.48	38,634.91	30	216,244	170,009
5	Treatment	IMPROV	TREATMENT	S LOX TANK & TELEMETRY UPGRADE	2010	9,414.22	5,948.55	10	11,266	4,147
5	Treatment	IMPROV	TREATMENT	N LOX TANK & TELEMETRY UPGRADE	2011	7,293.93	4,184.59	10	8,468	3,610
3	Treated Water Storage	IMPROV	STORAGE	WARDWELL ZONE 3-B TANK	2011	1,705,649.00	272,000.33	35	1,980,208	1,664,423
5	Treatment	IMPROV	STORAGE	SANDY LAKE NITRIFICATION MIXER	2011	31,531.35	8,664.98	20	36,607	26,547
5	Treatment	IMPROV	STORAGE	AIRPORT TANK NITRIFICATION MXR	2012	45,531.55	10,426.22	20	51,509	39,714
5	Treatment	IMPROV	TREATMENT	GALLERY UNIT HEATER	2005	956.96	956.96	10	1,353	0
8	Source of Supply / Raw Water	IMPROV	TRANSMISSION	WELL REHAB - MORADS 3, 4 & 5	2005	55,348.02	55,348.02	10	78,272	0
8	Source of Supply / Raw Water	IMPROV	TREATMENT	WEL 14 BOWL ASSEMBLY	2006	10,977.33	10,977.33	10	14,913	0
8	Source of Supply / Raw Water	IMPROV	TREATMENT	WELL 20, 21 & 22 REHABILITATIO	2007	55,697.86	52,169.50	10	73,625	4,664
8	Source of Supply / Raw Water	IMPROV	TREATMENT	WELL PUMPS WELLS 14, 20 MORAD	2007	10,193.88	10,193.88	7	13,475	0
5	Treatment	IMPROV	TREATMENT	WELLFIELD FLUSHING SYSTEM	2010	18,111.62	17,505.64	7	21,675	725
8	Source of Supply / Raw Water	IMPROV	TREATMENT	WELL RECHARGE PUMP REPAIR	2010	8,513.00	8,228.17	7	10,188	341
5	Treatment	IMPROV	TREATMENT	MORAD 6 & 8 REHABILITATION	2013	53,722.93	21,439.78	10	59,254	35,607
5	Treatment	IMPROV	TREATMENT	SITE SECURITY - SECURITY CAMER	2005	14,717.26	14,717.26	5	20,813	0
5	Treatment	IMPROV	TREATMENT	30" FILTER VALVES	2005	30,306.58	13,835.20	25	42,859	23,294
5	Treatment	IMPROV	TREATMENT	20" FILTER VALVES & ACTUATORS	2005	16,082.30	7,288.07	25	22,743	12,437
5	Treatment	IMPROV	TREATMENT	DECANT PUMP #2 OVERHAUL	2005	8,890.55	8,890.55	5	12,573	0
5	Treatment	IMPROV	TREATMENT	6" SCREENWASH VALVE ACTUATORS	2006	7,579.95	3,258.31	25	10,298	5,871
5	Treatment	IMPROV	TREATMENT	24" BACKWASH VALVE ACTUATORS	2006	9,817.95	4,220.21	25	13,338	7,605
5	Treatment	IMPROV	TREATMENT	FILTER #3 INFLUENT VALVE	2007	7,227.64	7,227.64	10	9,554	0
5	Treatment	IMPROV	TREATMENT	HVAC CONTROL SYSTEM	2007	27,300.00	27,300.00	7	36,087	0
5	Treatment	IMPROV	TREATMENT	SHC TANK #1 & VENT LINE REPAIR	2011	7,211.00	2,881.44	15	8,372	5,026
5	Treatment	IMPROV	TREATMENT	DECANT PUMP #2 REPLACEMENT	2007	17,238.52	17,238.52	7	22,787	0
5	Treatment	IMPROV	TREATMENT	SPARE DEWATERING PUMP	2007	10,628.05	10,628.05	5	14,049	0
5	Treatment	IMPROV	TREATMENT	SRIPPING COMPRESSOR UPGRADES	2007	5,761.35	5,761.35	5	7,616	0
5	Treatment	IMPROV	TREATMENT	BOILER UPGRADES	2007	11,900.00	11,146.12	10	15,730	997
5	Treatment	IMPROV	TREATMENT	ELEVATOR VALVE REPLACEMENT	2007	18,688.00	8,638.35	20	24,703	13,284
5	Treatment	IMPROV	TREATMENT	HVAC COIL REPLACEMENT	2008	9,060.24	9,060.24	5	11,481	0
5	Treatment	IMPROV	TREATMENT	VFD PUMP & MOTOR UPGRADES	2008	15,474.01	15,474.01	5	19,608	0
5	Treatment	IMPROV	TREATMENT	SO. CHEM HEATER	2008	11,599.00	9,632.95	10	14,698	2,491
5	Treatment	IMPROV	TREATMENT	SW HIGH SERVICE #5 PUMP & MOTO	2009	7,428.21	7,428.21	7	9,127	0
5	Treatment	IMPROV	TREATMENT	FILTER TURBIDIMETERS	2009	22,030.65	22,030.65	7	27,069	0
5	Treatment	IMPROV	TREATMENT	ACTIFLO SCREENS	2009	5,000.00	5,000.00	7	6,144	0
5	Treatment	IMPROV	TREATMENT	FILTER #4 VALVE ACTUATOR	2009	22,096.77	6,847.23	25	27,150	18,737

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5	Treatment	IMPROV	TREATMENT	UPGRADES TO SHC SYSTEM	2010	10,618.29	10,618.29	7	12,707	0
5	Treatment	IMPROV	TREATMENT	FILTER #3 & #4 VALVES & ACTUAT	2010	9,695.92	9,480.45	7	11,603	258
5	Treatment	IMPROV	TREATMENT	WTP SCADA UPGRADE	2010	316,337.00	301,875.90	7	378,569	17,306
5	Treatment	IMPROV	TREATMENT	FILTER #2 VALVE ACTUATORS	2011	27,906.70	6,880.49	25	32,399	24,411
5	Treatment	IMPROV	TREATMENT	HVAC COLL	2007	8,850.55	8,850.55	5	11,699	0
5	Treatment	IMPROV	TREATMENT	HIGH SERVICE PUMP #3 IMPELLER	2011	11,467.68	11,467.68	5	13,314	0
5	Treatment	IMPROV	TREATMENT	RAW WATER VALVE	2011	8,870.62	2,474.74	20	10,299	7,425
5	Treatment	IMPROV	TREATMENT	ENERGY CONSERVATION IMPROVEMEN	2011	82,920.00	8,981.00	50	96,268	85,841
5	Treatment	IMPROV	TREATMENT	SETTLED WATER PUMP VARIABLE FR	2011	6,725.00	1,792.04	20	7,808	5,727
5	Treatment	IMPROV	TREATMENT	FILTER #1 VALVE	2011	17,561.95	4,679.86	20	20,389	14,956
5	Treatment	IMPROV	TREATMENT	SHC PERISTALTIC PUMPS (2)	2012	15,415.32	14,935.73	5	17,439	543
5	Treatment	IMPROV	TREATMENT	ELECTRICAL UPGRADE FILTERS 1&2	2012	24,493.72	4,814.41	25	27,709	22,263
5	Treatment	IMPROV	TREATMENT	SAND PUMP REPAIRS	2012	11,255.41	10,550.07	5	12,733	798
5	Treatment	IMPROV	TREATMENT	OZONE MONITOR REPAIRS	2012	9,096.52	8,381.75	5	10,291	809
5	Treatment	IMPROV	TREATMENT	WTP HEATING PLANT REPLACEMENT	2012	95,197.08	43,535.26	10	107,695	58,444
5	Treatment	IMPROV	TREATMENT	SAND PUMP REBUILD	2012	5,083.28	4,521.08	5	5,751	636
5	Treatment	IMPROV	TREATMENT	DECANT PUMP #2 MOTOR REBUILD	2012	6,592.28	5,650.63	5	7,458	1,065
5	Treatment	IMPROV	TREATMENT	OZONE HEAT EXCHANGER	2012	7,483.32	2,117.59	15	8,466	6,070
5	Treatment	IMPROV	TREATMENT	SECURITY GATE CONTROLLER	2013	13,893.58	5,197.90	10	15,324	9,591
5	Treatment	BUILD	TREATMENT	ROOF REPAIRS & REPLACEMENT	2014	19,568.20	2,620.20	20	21,013	18,199
5	Treatment	IMPROV	TREATMENT	WCP INFILTRATION GALLERY TO MA	1957	20,500.00	14,844.69	75	298,156	82,252
5	Treatment	IMPROV	TREATMENT	WCP WELL #15 TO COLLECTOR	1957	17,900.00	12,965.41	75	260,341	71,770
5	Treatment	IMPROV	TREATMENT	WCP CAISSON WELLS TO MORAD INT	1959	43,100.00	30,368.96	75	569,439	168,203
6	Distribution	IMPROV	TRANSMISSION	TP AIRPORT WTP TO AIRPORT BOOS	1963	98,394.81	62,373.77	75	1,149,942	420,978
5	Treatment	IMPROV	TREATMENT	WCP MORAD #2 TO MORAD #3 12"	1965	11,900.00	7,722.71	75	129,049	45,301
5	Treatment	IMPROV	TREATMENT	WCP MORAD #3 TO CAISON INTERCE	1965	62,800.00	40,756.77	75	681,034	239,048
6	Distribution	IMPROV	TRANSMISSION	TP AIRPORT WTP TO AIRPORT BOOS	1965	277,900.00	170,978.64	75	3,013,684	1,159,508
6	Distribution	IMPROV	TRANSMISSION	YP AIRPORT SUPPLY LINE	1972	125,871.00	74,959.64	75	756,088	305,817
8	Source of Supply / Raw Water	IMPROV	TREATMENT	YP-RAW WATER LINE	1972	182,000.00	108,386.92	75	1,093,246	442,182
6	Distribution	IMPROV	TRANSMISSION	YP-BROOKS SUPPLY	1972	146,500.00	87,244.88	75	880,003	355,936
5	Treatment	IMPROV	TREATMENT	YP-TRANSFER PUMP DISCHARGE PIP	1972	78,000.00	46,451.84	75	468,534	189,505
5	Treatment	IMPROV	TREATMENT	YP-TRANSFER PUMP DISCHARGE PIP	1972	48,500.00	28,883.08	75	291,332	117,836
5	Treatment	IMPROV	TREATMENT	YP-HIGH SVC PUMP DISCHARGE PI	1972	127,400.00	75,871.13	75	765,272	309,526
5	Treatment	IMPROV	TREATMENT	YP-WELLFIELD TREATED WATER	1972	52,900.00	31,503.38	75	317,762	128,526
5	Treatment	IMPROV	TREATMENT	YP-WELLFIELD TREATED WATER	1972	25,300.00	15,066.77	75	151,973	61,469
6	Distribution	IMPROV	TRANSMISSION	TP-WARDWELL TO BAR NUNN	1972	109,900.00	60,709.42	75	660,152	295,480
6	Distribution	IMPROV	TRANSMISSION	TP-WARDWELL TO BAR NUNN	1972	195,800.00	108,165.55	75	1,176,140	526,407
6	Distribution	IMPROV	TRANSMISSION	TP-AIRPORT BOOSTER TO AIRPORT	1980	1,472,500.00	711,486.21	75	4,790,060	2,475,587
6	Distribution	IMPROV	TRANSMISSION	TP-AIRPORT BOOSTER TO AIRPORT	1980	51,400.00	24,835.50	75	167,205	86,415
6	Distribution	IMPROV	TRANSMISSION	TP-WARDWELL TO BAR NUNN	1981	859,600.00	408,009.47	75	2,560,562	1,345,190
6	Distribution	IMPROV	TRANSMISSION	TP-WARDWELL TO BAR NUNN	1981	628,200.00	298,174.95	75	1,871,272	983,073
6	Distribution	IMPROV	TRANSMISSION	TP-CASPER WTP TO BROOKS WTP	1982	193,200.00	90,057.12	75	531,868	283,946
6	Distribution	IMPROV	TRANSMISSION	TP-CASPER WTP TO BROOKS WTP	1982	822,600.00	383,445.42	75	2,264,569	1,208,967
6	Distribution	IMPROV	TRANSMISSION	TP-PIONEER 14"	1982	66,100.00	30,811.93	75	181,969	97,146
5	Treatment	IMPROV	TREATMENT	WCP-MORAD #5 TO MORAD #4	1985	37,200.00	17,731.66	75	93,377	48,868
5	Treatment	IMPROV	TREATMENT	WCP-MORAD #4 TO MORAD/CAISSON	1985	215,900.00	102,911.31	75	541,937	283,616
5	Treatment	IMPROV	TREATMENT	WCP-MORAD/CAISSON INTERCEPT TO	1985	184,900.00	88,131.43	75	464,123	242,902
6	Distribution	IMPROV	TRANSMISSION	TP-AIRPORT WTP TO AIRPORT BOOS	1992	29,200.00	11,153.45	75	61,680	38,120

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6	Distribution	IMPROV	TRANSMISSION	TP-PIONEER 14",12",10",8"-AC	1996	419,600.00	146,257.64	75	786,190	512,152
5	Treatment	IMPROV	TREATMENT	TP-BID PACKAGE NO. 1	1997	1,362,059.18	351,090.49	75	2,461,806	1,827,240
6	Distribution	IMPROV	TRANSMISSION	TP-LINE L-4 BROOKS MILLS BID P	1998	514,239.92	128,553.09	75	914,687	686,027
6	Distribution	IMPROV	TRANSMISSION	TP-PIONEER 14",12",10",8" AC	1998	686,900.00	246,503.56	75	1,221,800	783,340
6	Distribution	IMPROV	TRANSMISSION	TP-LINE L-4 BROOKS MILLS BID P	1999	9,256.00	2,180.16	75	16,086	12,297
6	Distribution	IMPROV	TRANSMISSION	TP-LINE L-17 METER SCADA UPGRA	1999	44,600.00	10,356.47	75	77,511	59,512
6	Distribution	IMPROV	TRANSMISSION	TP-POISON SPIDER METER SCADA U	1999	44,600.00	10,356.47	75	77,511	59,512
6	Distribution	IMPROV	TRANSMISSION	TP-SALT CREEK METER SCADA UPGR	1999	44,600.00	10,356.47	75	77,511	59,512
6	Distribution	IMPROV	TRANSMISSION	TP-WARDWELL NORTH METER SCADA	1999	44,600.00	10,356.47	75	77,511	59,512
6	Distribution	IMPROV	TRANSMISSION	WCP-CAISSON #1 10" PIPE BP5	1999	7,573.00	1,758.36	75	13,161	10,105
6	Distribution	IMPROV	TRANSMISSION	WCP-30" TRANSMISSION PIPELINE	1999	283,730.00	65,884.94	75	493,097	378,595
6	Distribution	IMPROV	TRANSMISSION	WCP-ABOVE GROUND PIPING FOR RA	1999	17,731.00	4,117.14	75	30,815	23,660
5	Treatment	IMPROV	TREATMENT	WCP-INFILTRATION GALLER PIPE (	1999	11,820.00	2,744.66	75	20,542	15,772
5	Treatment	IMPROV	TREATMENT	WCP-CAISSON #3 10" PIPE BP5	1999	6,858.00	1,592.50	75	11,919	9,151
5	Treatment	IMPROV	TREATMENT	WCP-MORAD #11 I" PIPE BP5	1999	5,223.00	1,212.86	75	9,077	6,969
5	Treatment	IMPROV	TREATMENT	WCP-MORAD #12 8" PIPE BP5	1999	4,701.00	1,091.77	75	8,170	6,273
5	Treatment	IMPROV	TREATMENT	WCP-MORAD #13 8" PIPE BP5	1999	51,084.00	11,862.20	75	88,779	68,164
5	Treatment	IMPROV	TREATMENT	WCP-CAISSON #2 10" PIPE BP5	1999	7,639.00	1,773.98	75	13,276	10,193
5	Treatment	IMPROV	TREATMENT	WCP-MORAD #10 8" PIPE BP5	1999	22,356.00	5,191.18	75	38,853	29,831
5	Treatment	IMPROV	TREATMENT	WCP-MORAD #2R 8" PIPE BP5	1999	17,028.00	3,953.92	75	29,593	22,722
5	Treatment	IMPROV	TREATMENT	WCP-MORAD #3R 8" PIPE BP5	1999	2,298.00	533.62	75	3,994	3,066
5	Treatment	IMPROV	TREATMENT	WCP-MORAD #7 8" PIPE BP5	1999	43,771.00	10,164.02	75	76,070	58,406
5	Treatment	IMPROV	TREATMENT	WCP-MORAD #8 8" PIPE BP5	1999	8,880.00	2,061.94	75	15,433	11,849
5	Treatment	IMPROV	TREATMENT	WCP-MORAD #9 8" PIPE BP5	1999	14,521.00	3,371.82	75	25,236	19,376
5	Treatment	IMPROV	TREATMENT	WCP-10" PIPE FOR RANNEY COLLEC	1999	18,322.00	4,254.53	75	31,842	24,448
6	Distribution	IMPROV	TRANSMISSION	WCP-16" TRANSMISSION PIPELINE	1999	226,713.00	52,644.77	75	394,007	302,515
6	Distribution	IMPROV	TRANSMISSION	WCP-24" TRANSMISSION PIPELINE	1999	334,743.00	77,730.61	75	581,753	446,665
5	Treatment	IMPROV	TREATMENT	WCP-CASPAR #19 8" PIPE BP5	1999	40,324.00	9,363.53	75	70,080	53,807
5	Treatment	IMPROV	TREATMENT	WCP-CASPAR #21 8" PIPE BP5	1999	32,384.00	7,519.83	75	56,280	43,212
5	Treatment	IMPROV	TREATMENT	WCP-CASPAR #22 8" PIPE BP5	1999	14,103.00	3,274.93	75	24,510	18,818
5	Treatment	IMPROV	TREATMENT	WCP-CASPAR #20 12" PIPE BP5	1999	28,228.00	6,554.73	75	49,058	37,666
5	Treatment	IMPROV	TREATMENT	WCP-CASPAR #5 8" PIPE BP5	1999	59,128.00	13,729.97	75	102,759	78,898
5	Treatment	IMPROV	TREATMENT	YP-84" SETTLED WATER OZONE CON	1999	548,200.00	127,297.11	75	952,723	731,492
5	Treatment	IMPROV	TREATMENT	YP-84" WELL WATER OZONE CONTAC	1999	406,600.00	94,416.17	75	706,634	542,548
5	Treatment	IMPROV	TREATMENT	YP-84" SETTLED WATER BP5	1999	12,400.00	2,879.39	75	21,550	16,546
5	Treatment	IMPROV	TREATMENT	YP-48" FILTERED INFLUENT BP5	1999	20,500.00	4,760.43	75	35,627	27,354
5	Treatment	IMPROV	TREATMENT	YP-48" OVERFLOW BP5	1999	43,900.00	10,193.99	75	76,294	58,578
5	Treatment	IMPROV	TREATMENT	YP-48" WELL WATER BP5	1999	35,800.00	8,313.01	75	62,217	47,770
5	Treatment	IMPROV	TREATMENT	YP-42" FILTERED INFLUENT BP5	1999	67,000.00	15,557.97	75	116,440	89,402
5	Treatment	IMPROV	TREATMENT	YP-42" OVERFLOW BP5	1999	24,700.00	5,735.71	75	42,926	32,958
5	Treatment	IMPROV	TREATMENT	YP-42" OZONATED WELL WATER BP5	1999	27,800.00	6,455.35	75	48,314	37,095
5	Treatment	IMPROV	TREATMENT	YP-36" FINISHED WATER BP5	1999	15,100.00	3,506.26	75	26,242	20,149
5	Treatment	IMPROV	TREATMENT	YP-36" RAW WATER BP5	1999	40,600.00	9,427.77	75	70,559	54,175
5	Treatment	IMPROV	TREATMENT	YP-36" WELL WATER BP5	1999	199,000.00	46,209.77	75	345,844	265,536
5	Treatment	IMPROV	TREATMENT	YP-30" BACKWASH WASTE BP5	1999	194,200.00	45,095.01	75	337,502	259,131
5	Treatment	IMPROV	TREATMENT	YP-30" WELL WATER BP5	1999	113,500.00	26,355.69	75	197,253	151,449
5	Treatment	IMPROV	TREATMENT	YP-24" FILTERED TO WASTE BP5	1999	114,600.00	26,611.14	75	199,165	152,917
5	Treatment	IMPROV	TREATMENT	YP-24" WELL WATER BP5	1999	129,800.00	30,140.97	75	225,581	173,198
5	Treatment	IMPROV	TREATMENT	YP-18" FINISHED WATER & PVC VA	1999	103,700.00	24,080.29	75	180,221	138,372

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5	Treatment	IMPROV	TREATMENT	YP-18" DECANT RECYCLE BP5	1999	269,600.00	62,603.79	75	468,541	359,741
5	Treatment	IMPROV	TREATMENT	YP-18" FILTERED TO WASTE BP5	1999	23,400.00	5,433.56	75	40,667	31,224
5	Treatment	IMPROV	TREATMENT	YP-16" DECANT RECYCLE BP5	1999	10,900.00	2,530.91	75	18,943	14,545
5	Treatment	IMPROV	TREATMENT	YP-16" FINISHED WATER BP5	1999	133,100.00	30,907.19	75	231,316	177,602
5	Treatment	IMPROV	TREATMENT	YP-16" WELL WATER BP5	1999	35,900.00	8,336.27	75	62,391	47,903
5	Treatment	IMPROV	TREATMENT	YP-14" OZONATED WELL WATER BYP	1999	36,000.00	8,359.52	75	62,565	48,037
5	Treatment	IMPROV	TREATMENT	MISC PIPING LESS THAN 12" DIAM	1999	463,800.00	107,698.74	75	806,043	618,872
6	Distribution	IMPROV	TRANSMISSION	TP-LINE L-10 BP6	1999	226,267.58	52,541.48	75	393,233	301,920
6	Distribution	IMPROV	TRANSMISSION	TP-LINE L-6 BP6	1999	222,934.78	51,767.51	75	387,441	297,473
6	Distribution	IMPROV	TRANSMISSION	TP-LINE L-7 BP6	1999	924,710.14	214,726.45	75	1,607,064	1,233,888
6	Distribution	IMPROV	TRANSMISSION	TP-LINE L-8 BP6	1999	290,131.45	67,371.31	75	504,223	387,137
6	Distribution	IMPROV	TRANSMISSION	TP-VISTA WEST HIGHWAY BORE	2000	60,000.00	13,665.89	75	101,559	78,428
6	Distribution	IMPROV	TRANSMISSION	TP-LINE L-16 SANDY LAKES BP7	2000	681,336.00	154,427.60	75	1,153,266	891,874
6	Distribution	IMPROV	TRANSMISSION	400' LINE REPLACEMENT WTP TO A	2001	117,615.14	24,436.26	75	195,253	154,686
6	Distribution	IMPROV	TRANSMISSION	TP-LINE L-1 CROSSTOWN PIPELINE	2001	8,752,316.43	1,798,979.01	75	14,529,701	11,543,220
6	Distribution	IMPROV	TRANSMISSION	TP - WARDWELL BOOSTER	2011	575,612.00	44,763.80	75	668,268	616,299
8	Source of Supply / Raw Water	IMPROV	TREATMENT	RAW WATER LINE IMPROVEMENTS	2012	22,494.51	1,374.37	75	25,448	23,893
5	Treatment	IMPROV	TREATMENT	OZONE GEN MAINT	2014	5,375.00	2,224.08	5	5,772	3,384
5	Treatment	IMPROV	TREATMENT	OZONE GEN MAINT	2014	5,375.00	2,224.08	5	5,772	3,384
5	Treatment	IMPROV	TREATMENT	OZONE GEN MAINT	2014	5,375.00	2,224.08	5	5,772	3,384
5	Treatment	IMPROV	TREATMENT	OZONE GEN MAINT	2014	5,375.00	2,224.08	5	5,772	3,384
5	Treatment	IMPROV	TREATMENT	WTP RAW WATER AREA PROJECT	2016	250,000.00	8,333.36	20	254,643	246,155
5	Treatment	IMPROV	TREATMENT	4160 V SWITCHGEAR UPGRADES	2016	744,316.79	24,810.56	20	758,140	732,869
5	Treatment	IMPROV	TREATMENT	PARKING LOT IMPROVEMENTS	2016	25,599.00	853.28	20	26,074	25,205
5	Treatment	LIGHT	TREATMENT	GRDWTR CHLORAMINE ANALYZER	2016	19,021.00	161.20	20	19,374	19,210
5	Treatment	LIGHT	TREATMENT	SURFACE WT CHLORAMINE ANALYZER	2016	19,021.00	161.20	20	19,374	19,210
5	Treatment	LIGHT	TREATMENT	NORTH CHEM HVAC SYSTEM	2016	89,214.00	752.86	20	90,871	90,104
5	Treatment	IMPROV	TREATMENT	WELL TURBIDIMETER DISPLAY & HD	2014	2,500.00	334.74	20	2,685	2,325
5	Treatment	IMPROV	TREATMENT	WELL TURBIDIMETER DISPLAY & HD	2014	2,500.00	334.74	20	2,685	2,325
5	Treatment	IMPROV	TREATMENT	WELL TURBIDIMETER DISPLAY & HD	2014	2,500.00	334.74	20	2,685	2,325
5	Treatment	IMPROV	TREATMENT	WELL TURBIDIMETER DISPLAY & HD	2014	2,500.00	334.74	20	2,685	2,325
5	Treatment	IMPROV	TREATMENT	SHC TANK #1 REPAIRS	2014	6,000.00	803.32	20	6,443	5,580
5	Treatment	IMPROV	TREATMENT	FY14 WTP SECURITY IMPROVEMENTS	2014	131,836.77	17,530.24	20	141,571	122,746
5	Treatment	IMPROV	TREATMENT	FY14 WTP SCADA UPGRADES	2014	30,567.29	16,094.66	5	32,824	15,541
6	Distribution	IMPROV	TRANSMISSION	FY15 INFRASTRUCTURE - ZONE IIB	2015	2,017,347.88	168,112.40	20	2,116,858	1,940,453
5	Treatment	IMPROV	TREATMENT	V-7187 RAW WATER PUMP	2014	65,422.33	8,760.14	20	70,253	60,846
5	Treatment	IMPROV	TREATMENT	CAISSON 3 PUMP	2014	29,395.08	2,964.24	20	31,565	28,382
5	Treatment	IMPROV	TREATMENT	V-7334 WTP BACK GATE	2015	14,165.60	1,185.40	20	14,864	13,620
6	Distribution	IMPROV	TRANSMISSION	WARDWELL BOOSER PUMP #3 VFD	2016	13,803.90	116.98	20	14,060	13,941
4	Misc/Administration	COMP	EQUIPMENT	LAPTOP TOSHIBA TECRA 81	2003	530.00	530.00	5	834	0
4	Misc/Administration	COMP	EQUIPMENT	4 OPERATIONS COMPUTERS	2013	6,893.28	5,122.61	5	7,603	1,953
4	Misc/Administration	IMPROV	EQUIPMENT	T-1 DATA CABLING & CONDUIT	2004	8,031.26	6,548.69	15	11,886	2,194
4	Misc/Administration	LIGHT	EQUIPMENT	FURNITURE	1996	8,532.85	8,532.85	8	15,988	0
4	Misc/Administration	LIGHT	EQUIPMENT	FURNITURE	1996	701.00	701.00	8	1,313	0
4	Misc/Administration	LIGHT	EQUIPMENT	LAMPS	1996	564.00	564.00	8	1,057	0
4	Misc/Administration	LIGHT	EQUIPMENT	GLASS FOR DESKTOPS	1996	218.00	218.00	8	408	0
4	Misc/Administration	LIGHT	EQUIPMENT	FURNITURE	1996	390.00	390.00	8	731	0
4	Misc/Administration	LIGHT	EQUIPMENT	MICROPHONES	1997	460.00	460.00	10	831	0
4	Misc/Administration	LIGHT	EQUIPMENT	CHAIRS - 2 CONFERENCE ROOM	1997	550.00	550.00	5	994	0

2017 Rate and Fee Study
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FUNCTION	FUNCTION DESCRIPTION	CLASS ID	CATEGORY	ASSET DESCRIPTION	YEAR ACQUIRED	ACQUISITION COST	LIFE TO DATE DEPRECIATION	DEPRECIABLE LIFE IN YRS	Replacement Cost New (RCN)	RCN Less Depreciation
4	Misc/Administration	LIGHT	EQUIPMENT	CHAIRS-STACKING-CONFERENCE RM	1997	1,246.00	1,246.00	7	2,252	0
4	Misc/Administration	LIGHT	EQUIPMENT	BOOK SHELF	1997	594.00	594.00	7	1,074	0
4	Misc/Administration	LIGHT	EQUIPMENT	FILE - LATERAL	1997	471.00	471.00	7	851	0
4	Misc/Administration	LIGHT	EQUIPMENT	MAP STAND & CLAMPS	1998	829.00	829.00	7	1,475	0
4	Misc/Administration	LIGHT	EQUIPMENT	DISPLAY UNIT	1999	317.75	317.75	7	552	0
4	Misc/Administration	LIGHT	EQUIPMENT	COMPUTER PROJECTOR-EPSON	1999	5,363.00	5,363.00	7	9,320	0
4	Misc/Administration	LIGHT	EQUIPMENT	TALL BOOKCASE UNIT 1 OF 5	1999	553.95	553.95	7	963	0
4	Misc/Administration	LIGHT	EQUIPMENT	TALL BOOKCASE UNIT 2 OF 5	1999	553.95	553.95	7	963	0
4	Misc/Administration	LIGHT	EQUIPMENT	TALL BOOKCASE UNIT 3 OF 5	1999	553.95	553.95	7	963	0
4	Misc/Administration	LIGHT	EQUIPMENT	TALL BOOKCASE UNIT 4 OF 5	1999	553.95	553.95	7	963	0
4	Misc/Administration	LIGHT	EQUIPMENT	TALL BOOKCASE UNIT 5 OF 5	1999	553.95	553.95	7	963	0
4	Misc/Administration	LIGHT	EQUIPMENT	COMPUTER WORKSTATION	1999	7,504.36	7,504.36	7	13,042	0
4	Misc/Administration	LIGHT	EQUIPMENT	EXECUTIVE DESK UNIT	1999	2,869.05	2,869.05	7	4,986	0
4	Misc/Administration	LIGHT	EQUIPMENT	U-SHAPE WORKSTATION 1 OF 3	1999	2,008.62	2,008.62	7	3,491	0
4	Misc/Administration	LIGHT	EQUIPMENT	U-SHAPE WORKSTATION 2 OF 3	1999	2,008.62	2,008.62	7	3,491	0
4	Misc/Administration	LIGHT	EQUIPMENT	U-SHAPE WORKSTATION 3 OF 3	1999	2,008.62	2,008.62	7	3,491	0
4	Misc/Administration	LIGHT	EQUIPMENT	L-SHAPE DESK UNIT	1999	1,140.24	1,140.24	7	1,982	0
4	Misc/Administration	LIGHT	EQUIPMENT	4-DRAWER LATERIAL FILE 1 OF 3	1999	430.53	430.53	7	748	0
4	Misc/Administration	LIGHT	EQUIPMENT	4-DRAWER LATERIAL FILE 2 OF 3	1999	430.53	430.53	7	748	0
4	Misc/Administration	LIGHT	EQUIPMENT	4-DRAWER LATERIAL FILE 3 OF 3	1999	430.53	430.53	7	748	0
4	Misc/Administration	LIGHT	EQUIPMENT	EXECUTIVE CHAIR	1999	395.02	395.02	7	687	0
4	Misc/Administration	LIGHT	EQUIPMENT	HIGH BK MANAGEMNT CHAIR 1 OF 3	1999	312.17	312.17	7	543	0
4	Misc/Administration	LIGHT	EQUIPMENT	HIGH BK MANAGEMNT CHAIR 2 OF 3	1999	312.17	312.17	7	543	0
4	Misc/Administration	LIGHT	EQUIPMENT	EXECUTIVE CONF CHAIR 1 OF 10	1999	308.75	308.75	7	537	0
4	Misc/Administration	LIGHT	EQUIPMENT	EXECUTIVE CONF CHAIR 2 OF 10	1999	308.75	308.75	7	537	0
4	Misc/Administration	LIGHT	EQUIPMENT	EXECUTIVE CONF CHAIR 3 OF 10	1999	308.75	308.75	7	537	0
4	Misc/Administration	LIGHT	EQUIPMENT	EXECUTIVE CONF CHAIR 4 OF 10	1999	308.75	308.75	7	537	0
4	Misc/Administration	LIGHT	EQUIPMENT	EXECUTIVE CONF CHAIR 5 OF 10	1999	308.75	308.75	7	537	0
4	Misc/Administration	LIGHT	EQUIPMENT	EXECUTIVE CONF CHAIR 6 OF 10	1999	308.75	308.75	7	537	0
4	Misc/Administration	LIGHT	EQUIPMENT	EXECUTIVE CONF CHAIR 7 OF 10	1999	308.75	308.75	7	537	0
4	Misc/Administration	LIGHT	EQUIPMENT	EXECUTIVE CONF CHAIR 8 OF 10	1999	308.75	308.75	7	537	0
4	Misc/Administration	LIGHT	EQUIPMENT	EXECUTIVE CONF CHAIR 9 OF 10	1999	308.75	308.75	7	537	0
4	Misc/Administration	LIGHT	EQUIPMENT	EXECUTIVE CONF CHAIR 10 OF 10	1999	308.75	308.75	7	537	0
4	Misc/Administration	LIGHT	EQUIPMENT	TASK STOOL 1 OF 3	1999	604.46	604.46	7	1,050	0
4	Misc/Administration	LIGHT	EQUIPMENT	TASK STOOL 2 OF 3	1999	604.46	604.46	7	1,050	0
4	Misc/Administration	LIGHT	EQUIPMENT	TASK STOOL 3 OF 3	1999	604.46	604.46	7	1,050	0
4	Misc/Administration	LIGHT	EQUIPMENT	ADJUSTABLE HEIGHT TABLE	1999	628.87	628.87	7	1,093	0
4	Misc/Administration	LIGHT	EQUIPMENT	COOKING RANGE	1999	604.80	604.80	7	1,051	0
4	Misc/Administration	LIGHT	EQUIPMENT	REFRIGERATOR	1999	932.40	932.40	7	1,620	0
5	Treatment	LIGHT	EQUIPMENT	LAB SCALE	1999	1,140.00	1,140.00	7	1,981	0
5	Treatment	LIGHT	EQUIPMENT	CALIBRATION WEIGHTS	1999	476.00	476.00	7	827	0
5	Treatment	LIGHT	EQUIPMENT	STAINLESS FILTER HOLDER	1999	583.70	583.70	7	1,014	0
5	Treatment	LIGHT	EQUIPMENT	MANIFOLD	1999	673.00	673.00	7	1,170	0
5	Treatment	LIGHT	EQUIPMENT	INCUBATOR	1999	1,695.00	1,695.00	7	2,946	0
5	Treatment	LIGHT	EQUIPMENT	WATER BATH	1999	1,855.00	1,855.00	7	3,224	0
5	Treatment	LIGHT	EQUIPMENT	DR/890 COLORIMETER	1999	749.00	749.00	7	1,302	0
5	Treatment	LIGHT	EQUIPMENT	PH METER	1999	650.00	650.00	7	1,130	0
5	Treatment	LIGHT	EQUIPMENT	VACUUM PUMP	1999	345.00	345.00	7	600	0
7	Vehicles and Equipment	LIGHT	EQUIPMENT	V3085, 2001 FORD SUPER DUTY	2001	32,161.00	32,161.00	5	53,390	0

2017 Rate and Fee Study
CWRWS Assets

FUNCTION	FUNCTION DESCRIPTION	CLASS ID	CATEGORY	ASSET DESCRIPTION	YEAR ACQUIRED	ACQUISITION COST	LIFE TO DATE DEPRECIATION	DEPRECIABLE LIFE IN YRS	Replacement Cost New (RCN)	RCN Less Depreciation
4	Misc/Administration	LIGHT	EQUIPMENT	CONFERENCE TABLE OPS	2001	825.00	825.00	7	1,370	0
4	Misc/Administration	LIGHT	EQUIPMENT	OPS CONFERENCE CHAIR 1 OF 6	2001	127.50	127.50	7	212	0
4	Misc/Administration	LIGHT	EQUIPMENT	OPS CONFERENCE CHAIR 2 OF 6	2001	127.50	127.50	7	212	0
4	Misc/Administration	LIGHT	EQUIPMENT	OPS CONFERENCE CHAIR 3 OF 6	2001	127.50	127.50	7	212	0
4	Misc/Administration	LIGHT	EQUIPMENT	OPS CONFERENCE CHAIR 4 OF 6	2001	127.50	127.50	7	212	0
4	Misc/Administration	LIGHT	EQUIPMENT	OPS CONFERENCE CHAIR 5 OF 6	2001	127.50	127.50	7	212	0
4	Misc/Administration	LIGHT	EQUIPMENT	OPS CONFERENCE CHAIR 6 OF 6	2001	127.50	127.50	7	212	0
7	Vehicles and Equipment	LIGHT	EQUIPMENT	MAGNETIC LINE LOCATOR	2001	800.00	800.00	10	1,328	0
7	Vehicles and Equipment	LIGHT	EQUIPMENT	PORTABLE VALVE OPERATOR	2001	4,961.04	4,961.04	10	8,236	0
7	Vehicles and Equipment	LIGHT	EQUIPMENT	UTILITY BOX FOR TRUCK	2001	6,227.96	6,227.96	10	10,339	0
7	Vehicles and Equipment	LIGHT	EQUIPMENT	CUMMINS-ONAN PRO 500E ELEC STA	2001	1,500.00	1,500.00	10	2,490	0
7	Vehicles and Equipment	LIGHT	EQUIPMENT	SNOW PLOW MODEL L25108DP	2001	4,365.00	4,365.00	10	7,246	0
7	Vehicles and Equipment	LIGHT	EQUIPMENT	LIFTMOORE CRANE MODEL 3200REE-	2001	9,439.00	9,439.00	10	15,670	0
7	Vehicles and Equipment	LIGHT	EQUIPMENT	1996 FORD RANGER 4X4	2002	6,078.00	6,078.00	5	9,789	0
7	Vehicles and Equipment	LIGHT	EQUIPMENT	LINE LOCATOR	2002	2,463.76	2,463.76	10	3,968	0
7	Vehicles and Equipment	LIGHT	EQUIPMENT	TRUCK TOOL BOX	2003	227.70	227.70	10	358	0
7	Vehicles and Equipment	LIGHT	EQUIPMENT	INFRARED THERMOMETER	2004	89.10	89.10	5	132	0
7	Vehicles and Equipment	LIGHT	EQUIPMENT	DIGITAL THERMOMETER	2004	152.10	152.10	5	225	0
7	Vehicles and Equipment	LIGHT	EQUIPMENT	GEO-VISION DOWN HOLE CAMERA	2004	2,858.00	2,858.00	10	4,230	0
5	Treatment	LIGHT	EQUIPMENT	TURIDIMETER	1994	2,695.00	2,695.00	15	5,247	0
5	Treatment	LIGHT	EQUIPMENT	JAR TESTER	1994	1,300.00	1,300.00	15	2,531	0
5	Treatment	LIGHT	EQUIPMENT	MISC LAB EQUIPMENT	1994	4,000.00	4,000.00	15	7,788	0
7	Vehicles and Equipment	LIGHT	EQUIPMENT	2004 FORD RANGER 4WD	2004	18,752.00	18,752.00	5	27,752	0
4	Misc/Administration	LIGHT	EQUIPMENT	TOOL TIME PM SOFTWARE	2005	2,500.00	2,500.00	3	3,535	0
4	Misc/Administration	LIGHT	EQUIPMENT	RADIOS - BASE & MOBILES	2006	18,020.00	18,020.00	5	24,481	0
4	Misc/Administration	LIGHT	EQUIPMENT	OFFICE & LAB & AUTOS ALLOWANCE	1994	15,461.00	15,461.00	7	30,104	0
5	Treatment	LIGHT	TREATMENT	SO CHEM SAND PUMP	2014	6,631.10	1,768.32	5	7,121	5,222
7	Vehicles and Equipment	LIGHT	EQUIPMENT	2016 FORD EXPLORER	2015	31,434.17	9,185.81	5	32,985	23,346
5	Treatment	LIGHT	TREATMENT	DESTRUCT #3 OZONE MONITOR	2015	6,666.13	1,755.51	5	6,995	5,153
5	Treatment	LIGHT	TREATMENT	DESTRUCT #1 OZONE MONITOR	2015	6,666.13	1,629.59	6	6,995	5,285
5	Treatment	LIGHT	TREATMENT	POLYMER UNIT #2	2015	9,870.51	2,171.54	5	10,357	8,079
5	Treatment	LIGHT	TREATMENT	POLYMER UNIT #1	2016	9,870.51	1,974.12	5	10,054	8,043
5	Treatment	LIGHT	TREATMENT	DESTRUCT #4 OZONE MONITOR	2015	6,666.13	1,755.51	5	6,995	5,153
5	Treatment	LIGHT	TREATMENT	DESTRUCT #2 OZONE MONITOR	2015	6,666.13	1,629.59	6	6,995	5,285
5	Treatment	LIGHT	TREATMENT	POLYMER UNIT #3	2015	9,870.51	2,171.54	5	10,357	8,079
5	Treatment	LIGHT	TREATMENT	V-7495 CASPER19 WELL PUMP	2016	10,863.49	1,629.54	5	11,065	9,405
5	Treatment	LIGHT	TREATMENT	SAND PUMP	2014	10,117.65	5,454.39	5	10,865	5,008
5	Treatment	LIGHT	TREATMENT	SAND PUMP	2014	10,117.65	5,454.39	5	10,865	5,008
4	Misc/Administration	LIGHT	TREATMENT	V-7268 HVAC IMPROVEMENTS	2014	9,586.00	1,949.76	10	10,294	8,200
5	Treatment	LIGHT	TREATMENT	SETTLED WATER VFD	2015	11,955.80	4,782.26	5	12,546	7,527
5	Treatment	LIGHT	TREATMENT	OZONE MONITOR	2015	6,896.57	2,758.56	5	7,237	4,342
5	Treatment	LIGHT	TREATMENT	OZONE MONITOR	2015	6,896.57	2,758.56	5	7,237	4,342
5	Treatment	LIGHT	TREATMENT	OZONE MONITOR	2015	6,896.57	2,758.56	5	7,237	4,342
5	Treatment	LIGHT	TREATMENT	OZONE MONITOR	2015	6,896.57	2,758.56	5	7,237	4,342
5	Treatment	LIGHT	TREATMENT	V-7336 SCREEN WASH PUMP	2015	6,446.00	2,185.06	5	6,764	4,471
5	Treatment	LIGHT	TREATMENT	V-7336 CAISSON RECHARGE PUMP	2015	48,346.62	16,388.66	5	50,731	33,534
5	Treatment	LIGHT	TREATMENT	V-7408 CAISSON #1 PUMP	2015	15,626.93	3,906.75	5	16,398	12,298
5	Treatment	LIGHT	TREATMENT	V-7411 CAISSON #2 PUMP	2015	15,626.93	3,906.75	5	16,398	12,298
5	Treatment	LIGHT	TREATMENT	V-7470 WELL RECHARGE PUMP	2016	46,280.40	7,713.40	5	47,140	39,283

2017 Rate and Fee Study
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5	Treatment	LIGHT	TREATMENT	V-7496 CASPER6 WELL PUMP	2016	12,396.92	1,859.56	5	12,627	10,733
5	Treatment	LIGHT	TREATMENT	V-7497 MORAD9 WELL PUMP	2016	10,863.49	1,629.54	5	11,065	9,405
6	Distribution	TECH	TRANSMISSION	FIELD COMMUNICATOR	2015	6,693.48	2,722.80	5	7,024	4,167
7	Vehicles and Equipment	LIGHT	EQUIPMENT	2014 FORD TRUCK	2014	23,307.00	12,564.66	5	25,028	11,535
7	Vehicles and Equipment	LIGHT	EQUIPMENT	V-7165 2014 FORD TRUCK	2014	23,307.00	12,564.66	5	25,028	11,535
7	Vehicles and Equipment	LIGHT	EQUIPMENT	V-7165 2014 FORD TRUCK	2014	23,307.00	12,564.66	5	25,028	11,535
5	Treatment	LIGHT	TREATMENT	REPLACE POWERFLEX 700 VFD @	2016	8,863.76	316.56	5	9,028	8,706
5	Treatment	LIGHT	TREATMENT	SETTLED WATER PUMP	2015	68,102.55	20,430.82	5	71,462	50,023
6	Distribution	LIGHT	TRANSMISSION	V-7463 MT. VIEW BST PUMP	2016	13,746.67	2,552.96	5	14,002	11,402
5	Treatment	LIGHT	EQUIPMENT	V-7517 AUTOCLAVE	2016	5,949.60	793.28	5	6,060	5,252
5	Treatment	LIGHT	TREATMENT	V-7573 16" FILTER MAG METER	2016	9,243.90	318.76	5	9,416	9,091
5	Treatment	LIGHT	EQUIPMENT	V-7535 FLUKE 754 CALIBRATOR	2016	8,303.00	296.54	5	8,457	8,155
	Totals						$41,192,525		$179,404,376	$69,480,024

(1) Based Upon ENR Index December 2016: 10,530

2017 Rate and Fee Study
Casper Equivalent Meters / RWS Estimated Equivalent Meters

Meter Size	5/8-inch	3/4-inch	1-inch	1 1/2-inch	2-inch	3-inch	4-inch	6-inch	8-inch	10-inch	12-inch	Total
Meter Capacity (gpm)	15	25	40	50	160	320	500	1,000	1,600	2,300	5,000	
Meter Capacity Ratio	0.6	1.0	1.6	2.0	6.4	12.8	20.0	40.0	64.0	92.0	200.0	
RWAI	12	17,072	2,048	100	105	5	5			1	1	19,349
RWAO		436	41	5	2							484
CWAI	2	788	344	160	289	39	18	3	1			1,644
CWAO		70	29	4	13	2	1					119
IRRWA		44	59	27	96	10	15	2	1			254
FLWA		8	1		1							10
Air Base Acres							1					1
Ardon			1					1				2
Natrona Co Intl Airport			1									
Pleasant View			1					6				
Vista West			1									
Equivalent 3/4" Meters	8	18,418	4,037	592	3,238	717	800	240	128	92	200	28,178

Casper share of RWS flows: 90.5%
RWS Eq. Meters: 31,136

2017 Rate and Fee Study
RWS – NPV of Borrowing Cost

RWS Debt Issues	Original Principal	% Growth	NPV of Interest	Interest
City of Casper Loan	$15,905,000	0%	$0	$0
DWSRF #115	2,600,000	100%	516,003	608,195
Unused	0	0%	0	0
Unused	0	0%	0	0
Total	$18,505,000		$516,003	$608,195

Bond Amortization Schedule
City of Casper Loan

Borrowing Rate	2.50%	Discount Rate	2.50%
Years	12	NPV of Interest Payments	$957,731
Principal Amount	$15,905,000	Avg. Annual Payment	$1,550,533
Year of Issue	2011		

Fiscal Year	EOY Principal Balance	Principal	Interest	Total
2017	$8,985,534	$1,293,306	$242,219	$1,535,525
2018	7,659,522	1,326,012	209,513	1,535,525
2019	6,299,978	1,359,545	175,980	1,535,525
2020	4,906,052	1,393,925	141,599	1,535,525
2021	3,476,877	1,429,176	106,349	1,535,525
2022	2,011,559	1,465,317	70,208	1,535,525
2023	509,187	1,502,373	33,152	1,535,525
2024	0	509,187	2,655	511,841
2025				
2026				
2027				
2028				
2029				
2030				
2031				
2032				
2033				
Total		$10,278,840	$981,675	$11,260,515

Bond Amortization Schedule
DWSRF #115

Borrowing Rate	2.50%	Discount Rate	2.50%
Years	20	NPV of Interest Payments	$516,003
Principal Amount	$2,600,000	Avg. Annual Payment	$166,783
Year of Issue	2015		

Fiscal Year	EOY Principal Balance	Principal	Interest	Total
2017	$2,286,955	$106,935	$59,847	$166,783
2018	2,177,346	109,609	57,174	166,783
2019	2,064,998	112,349	54,434	166,783
2020	1,949,840	115,158	51,625	166,783
2021	1,831,803	118,037	48,746	166,783
2022	1,710,816	120,987	45,795	166,783
2023	1,586,804	124,012	42,770	166,783
2024	1,459,691	127,112	39,670	166,783
2025	1,329,401	130,290	36,492	166,783
2026	1,195,854	133,548	33,235	166,783
2027	1,058,967	136,886	29,896	166,783
2028	918,659	140,308	26,474	166,783
2029	774,843	143,816	22,966	166,783
2030	627,432	147,411	19,371	166,783
2031	476,335	151,097	15,686	166,783
2032	321,461	154,874	11,908	166,783
2033	162,715	158,746	8,037	166,783
2034	0	162,715	4,068	166,783
2035				
Total		$2,393,890	$608,195	$3,002,086

RAFTELIS

Town of Alpine

Development Impact & Capacity Fees Study and Analysis

PROPOSAL / OCTOBER 15, 2024

RAFTELIS

October 15, 2024

Monica Chenault
Town of Alpine Clerk
Town of Alpine
250 River Circle
Alpine, WY 83128

Subject: Proposal for Development Impact and Capacity Fees Study and Analysis

Dear Monica Chenault:

The Town of Alpine (Town) is evaluating the costs to expand its water and wastewater facilities to build out. Conducting an impact fee study is timely to ensure you can recover these costs and maintain equity between new and existing customers.

Raftelis was established in 1993 to provide financial, rate, and management consulting services to water and wastewater utilities with the highest levels of quality and customer service. We have offices nationwide with regional expertise located in the Mountain West. Our project team comes with years of experience, ready to listen and develop actionable options that Town officials can enact to achieve their unique goals. We can support you in several areas, including:

We Know Wyoming

Raftelis has recently partnered with utilities in Wyoming such as in the Cities of Sheridan, Casper, Cheyenne and Laramie as well as the Towns of Jackson and Pinedale. In fact, the Cities of Laramie, Casper, and Jackson have retained Raftelis over the years to provide financial consulting services. Todd Cristiano, Project Manager for this engagement, is the current Project Director of the City of Laramie's water and wastewater rate study.

We Develop Legally Defensible Impact Fees

One of Raftelis' specialties is impact fees—we regularly complete these studies for several states in the West. The development of impact fees goes beyond a simple calculation. Rather, we understand the delicate balancing act of recovering cost while fostering development in a thriving community. To that end, we will evaluate different methodologies and fee structure alternatives that best align with the needs of the Town and the community.

You're in Good Hands

Raftelis consists of a diverse set of consultants who specialize in all elements of utility finance, including our team for this project. This versatile line-up ensures you receive the most comprehensive solutions to achieve financial sustainability.

Issue Prevention
With our services, you are investing in reduced risks, less rework, and higher compliance with industry standards. The potential pitfalls of choosing less experienced consultants can lead to costly mistakes that we help you avoid. To accomplish this, we believe in exploring all ideas and collaborating with you to identify the most actionable and politically viable solutions that serve both the utility and its customers.

I will serve as the Project Manager on this engagement. I have 25 years of experience in the utility financial sector, including six years as Rates Manager for Denver Water. I understand the challenges that rate studies bring from both the utility and consulting perspectives. Additionally, I am actively engaged with the American Water Works Association (AWWA). I am leading the eighth edition update of AWWA's *Manual M1, Principles of Water Rates, Fees and Charges (Manual M1)* and am a co-instructor for AWWA's Rate Setting Essentials seminar, the longest running seminar hosted by the AWWA.

Andrew Rheem will assist me with this study and provide technical review services. Andrew has over 20 years of experience with utility financial consulting specifically in the Mountain West. Finally, Nicki Bartak, in our Colorado office, brings the background needed for a successful technical analysis.

I am proud of the resources that we can offer and ask for the opportunity to assist the Town of Alpine on this engagement. Thank you very much for your consideration.

Sincerely,

Todd Cristiano

Todd Cristiano, *Vice President*
383 N. Corona Street, Denver, CO 80218
P: 303.305.1136 / E: tcristiano@raftelis.com

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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FIRM OVERVIEW

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 700 organizations in the last year alone.

Choosing the right partner is about more than just the initial cost; it's about ensuring the best possible outcome for your utilities. We are committed to delivering unmatched value and sustainable results that justify the investment in our services.

We believe that Raftelis is the *right fit* for this project. We provide several key factors that will benefit the Town 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 180 consultants nationwide, 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. More importantly, we have local resources in the Front Range—10 consultants working in the Denver Office serving communities in the Mountain West. These consultants are supported by consultants from other areas to assist with local projects. ***Our Project Manager in located in Denver***.

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 AWWA and the Water Environment Federation (WEF) and co-authoring many industry-standard books regarding utility finance and rate setting, which allows us to keep the Town informed of emerging trends and issues and to be confident that our recommendations are insightful and founded on sound industry principles. ***In addition, Raftelis is registered as a Municipal Advisor, which means 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 1,700+ local governments and 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 Town and will provide validation for our proposed methodology ensuring that industry best practices are incorporated. ***Our Project Manager recently completed projects for the Cities of Sheridan, Casper, and Laramie as well as the Town of Pinedale.***

SUCCESSFUL OUTCOMES: For the study to be a success, rates must be successfully approved and implemented. A strong technical study demonstrating the need for changes to a financial plan or rates is only as effective as the ability to communicate the outcome to governing bodies. Todd Cristiano is a seasoned presenter and has presented results under a variety of circumstances. We also have an in-house strategic communications group to assist with outreach to your utility's customers, which includes open houses, social media communication, and traditional paper communication. ***This collective group of skills ensures that changes to rates are effectively communicated and understood by customers and Town leaders***.

How we stack up

OUR TEAM INCLUDES

180+ 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

RAFTELIS HAS PROVIDED ASSISTANCE FOR

1,700+ public agencies and utilities

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

including the agencies serving **41** of the nation's 50 largest cities

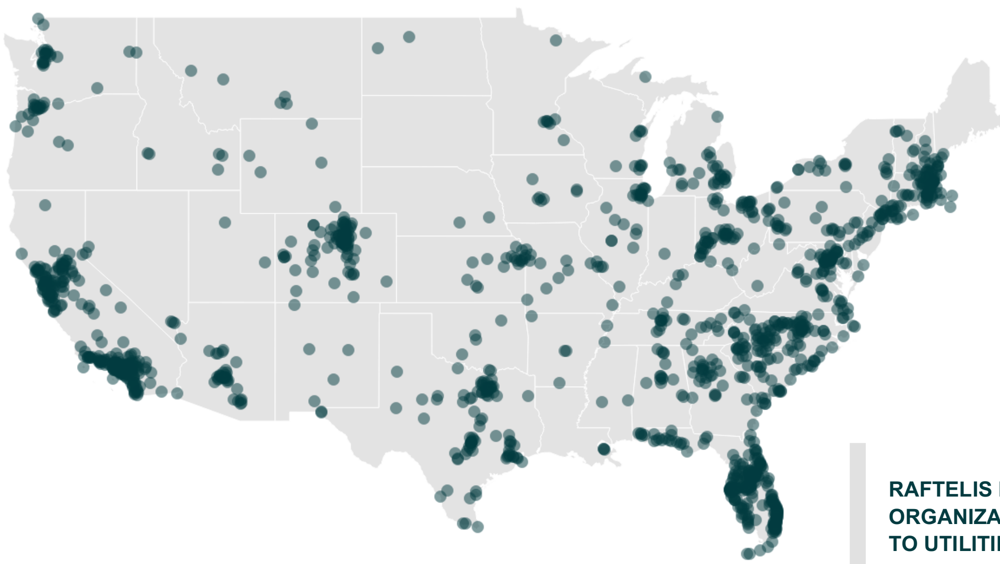
in the past year alone, we worked on **1,300+** projects for **700+** agencies in **47** states

EXPERIENCE

Experience

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

Our staff has assisted more than 1,700 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 1,300 financial, organizational, and/or technology consulting projects for over 700 agencies in 47 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 Casper WY

Reference: Tom Bauer, Chief Operations Officer
123 W. 1st Street, Casper WY / P: 307.235.8205 / E: tbrauer@casperwy.com

The City of Casper (City) retained Raftelis in 2023 to complete a comprehensive water and wastewater rate study. The last study which included connection fees and a rate study was completed in 2018. The City has an ongoing capital repair and replacement program and what to ensure that revenue from rates was sufficient to meet these increasing expenditures over the 10-year study period. The City receives a 1% Streets tax to assist with funding however, that is anticipated to end in 2029. At over $1.0 million per year for the water and wastewater utility, the ending of this revenue stream would have a material impact on cash flow. Raftelis developed a financial plan cash flow that would assist the utility in continuing to fund expenditures without resulting in rate shock to its customers.

The City also wanted to revise their rate structures. The primary objectives were to encourage conservation and maintain equity between customer classes. Raftelis developed a 4-tiered rate structure for residential and separate uniform rates for commercial, irrigation, and City parks. Rates were adopted in 2024.

I n 2018, the City retained Raftelis to complete a comprehensive update to their water and wastewater system investment fees (SIFs). The City has a water SIF to recover the costs to connect to the water distribution system and two wastewater SIFs; one to recover costs of the collection system and the other for the regional wastewater treatment plant. Raftelis evaluated the utilities' system assets, outstanding debt, and equivalent connections develop the fee. The fees were adopted for 2018.

City of Laramie WY

Reference: Brooks Webb, Public Works Director
P.O. Box C, Laramie, WY 82073 / P: 307.721.5241 / E: bwebb@cityoflaramie.org

The City of Laramie (City) has a population of approximately 30,000 and is home to the University of Wyoming. In addition to retail customers located within its jurisdictional boundaries, Laramie also provides service to both retail and wholesale customers located outside the City. Raftelis has served Laramie since 2014 when it prepared an update of the City's water and wastewater user charges. In 2016, Raftelis completed comprehensive rate studies for the water and wastewater enterprise funds. The financial planning components of these rate studies included an update of forecast billed consumption and a review/verification of the assumptions and output produced by the City's 10-year water and wastewater enterprise fund financial planning models. After establishing the test-year revenue requirement from rates for the water and wastewater enterprise funds, Raftelis conducted comprehensive water and wastewater cost of service studies to determine the revenue requirement for each customer class served by the City. These cost-of-service studies were conducted using AWWA and WEF cost of service principles and included the development of forecast rates for the period 2024. Rates recommended by Raftelis were adopted in May of 2024.

Town of Jackson WY

Reference: Johnny Ziem, Wastewater Manager/Assistant Public Works Director
P: 307.733.4203 / E: jziem@jacksonwy.gov

In 2020, Raftelis presented study finding and recommendations to the Town of Jackson (Town) Council regarding a comprehensive rate and plant investment fee study. The Town also completed an update of the utility facility plan identifying expansionary, rehabilitation and replacement improvements for the water and wastewater utility. Raftelis financial and communication staff facilitated seven meetings with a Citizen Rate Committee (CRC) comprised of a diverse group of citizens and business leaders assisting Raftelis and Town staff to assess the compatibility of rate and fee recovery strategies. Raftelis recommended equitable adjustments to the Town's plant investment fees aligned with community goals and objectives. Water rate recommendations included tiered

"Overall, I thought the process was professionally handled, well thought out and came to a conclusion that helped our community achieve their goal of reevaluating water rates. I enjoyed the process from many aspects, but primarily from the learning angle. The detail and volume of information seems to be overwhelming, however TOJ staff and Raftelis handled it well. Also, the meeting agendas were well thought out and the meetings were facilitated professionally, and the data was presented in a thoughtful manner for the committee members to digest."

– **Bill Wotkyns**, *Citizen Review Committee Member, Town of Jackson, WY* water rates to communicate conservation pricing signals, increasing the amount of revenue through the fixed charges, and sustaining affordable access to essential utility services while increasing overall revenue recovery.

Raftelis assisted the Town in addressing the cost of providing wastewater services to the original Town as well as residents within Teton County. Raftelis facilitated meetings with representatives of 3 Creek Ranch following the cost-of-service study to review recommended rates and fees modifying the rate structure. As part of this study, Raftelis assisted in the development of a long-range financial plan completing multiple capital funding scenarios in support of anticipated debt issuances to fund capital expansions and improvements.

Following the adoption of recommended rates and fees, Raftelis is providing additional assistance to the Town in support of effectively communicating the necessity of increased revenues supporting the economic and environmental vitality of the region.

WYOMING & COLORADO EXPERIENCE

This matrix shows a sample of some of the utilities throughout Wyoming and Colorado that Raftelis staff has assisted and the services performed for these utilities.

Client	Benchmarking	Cost-of-Service Analysis	Debt Issuance Report	System Development Fees	Financial & Capital Improvements Planning	Public Education and Outreach	Rate Case Support	Rate Structure Development	Rate Study	Stakeholder Process Development & Facilitation
WYOMING										
Casper, City of		●		●	●				●	
Jackson, Town of		●		●	●				●	
Laramie, City of				●	●				●	
Pinedale, Town of					●				●	
Sheridan, City of		●		●	●				●	
COLORADO										
Arapahoe County Water and Wastewater Authority		●			●			●	●	
Aspen, City of		●	●		●			●	●	
Basalt, Town of										
Berthoud, Town of				●	●			●	●	
Boxelder Sanitation District		●		●	●			●	●	
Cañon City		●	●	●	●			●	●	●
Castle Rock, Town of		●			●	●		●	●	●
Crestview Water & Sanitation District		●	●		●	●		●	●	●
Denver, City and County of		●	●		●	●		●	●	●
Denver Water						●		●	●	●
Durango, City of		●		●	●			●	●	●
Eagle River Water & Sanitation District						●		●	●	
East Larimer County Water District		●		●	●	●		●	●	
Eaton, Town of		●			●			●	●	
Englewood, City of	●	●			●	●		●	●	●
Evans, City of					●				●	
Fort Collins, City of		●			●			●	●	
Fort Collins - Loveland Water District		●	●	●	●	●	●	●	●	●
Fort Morgan, City of				●	●			●	●	●
Fraser, Town of		●		●	●			●		
Golden, City of		●		●	●			●	●	●
Grand Junction, City of	●	●	●	●	●	●		●	●	●
Greeley, City of		●	●	●	●			●	●	●
Idaho Springs, City of		●	●	●	●	●	●	●	●	●
Ken-Caryl Ranch Water & Sanitation District		●			●			●	●	
Lakewood, City of		●			●			●	●	
Left Hand Water District		●		●	●			●	●	
Littleton, City of	●	●				●	●	●		●
Lochbuie, Town of				●	●			●	●	●
Mead, Town of		●		●	●			●	●	
Mount Crested Butte Water & Sanitation District	●	●	●	●				●	●	●
Mount Werner Water & Sanitation District	●	●		●	●			●	●	●

Client	Benchmarking	Cost-of-Service Analysis	Debt Issuance Report	System Development Fees	Financial & Capital Improvements Planning	Public Education and Outreach	Rate Case Support	Rate Structure Development	Rate Study	Stakeholder Process Development & Facilitation
Nederland, Town of		●		●	●			●	●	
Pueblo, City of	●	●		●	●	●		●	●	●
Pueblo Water		●		●	●					
Pueblo West Metropolitan District	●	●		●	●	●		●	●	●
Rifle, City of				●				●	●	
St. Vrain Sanitation District		●		●	●			●	●	●
Steamboat Springs, City of		●	●	●	●			●	●	●
Superior, Town of				●	●			●		
Thornton, City of	●	●	●	●	●	●		●	●	●
Three Lakes Water & Sanitation District		●		●	●			●	●	
Trinidad, City of	●	●		●	●			●	●	●
Triview Metropolitan District				●	●			●	●	
Upper Eagle Regional Water Authority					●			●	●	●
Upper Thompson Sanitation District		●			●			●	●	
Westminster, City of	●	●	●	●	●			●	●	
Woodmoor Water & Sanitation District No. 1				●	●			●	●	●

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 TOWN'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 Town 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.

Town of Alpine

PROJECT MANAGER
Todd Cristiano
25 years of experience

TECHNICAL REVIEWER
Andrew Rheem
20 years of experience

STAFF CONSULTANT
Nicki Bartak
6 years of experience

Todd Cristiano Project Manager | Vice President

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.*

Career/Experience Highlights:

- 25 years of experience with water, wastewater, and electric cost of service and rates
- Former Rates Manager for Denver Water
- Instructor for AWWA's biannual Rate-Setting Essential seminar
- Lead for the update of AWWA's *Manual M1, Principles of Rates, Fees and Charges*

Representative Projects:

- Casper (WY), Laramie (WY), Sheridan (WY), Cheyenne (WY), Pinedale (WY)
- Erie (CO), Wellington (CO), Johnstown (CO), Eaton (CO), Fraser (CO), Breckenridge (CO), Rifle (CO), Basalt (CO), Denver Water (CO), Dacono (CO), Firestone (CO)
- Laurel (MT), Big Fork (MT)

Andrew Rheem Technical Reviewer | Senior Manager

Role: *Andrew will review of draft and final work products and provide insight on impact fees issues related to the project.*

Career/Experience Highlights:

- 20 years of consulting experience with water, wastewater, and stormwater financial plan, impact fee/plant investment fee, cost of service, and rate studies
- Completed over 300 studies for communities in Colorado, Arizona, Texas, New Mexico, Montana, Wyoming, and Utah
- Growth Infrastructure Consortium (GIC) Board member and 2018 conference president
- Water Environment Association Technical Advisory Committee member since 2012

Representative Projects:

- Jackson (WY), Thornton (CO), Lafayette (CO), Mt. Crested Butte (CO), Grand Junction (CO), Nederland (CO), Berthoud (CO), Greeley (CO)

Nicki Bartak Water Lead Analyst | Consultant

Role: *Nicki will serve as the Lead Analyst for the water portions of this project and will work at the direction of Andrew in conducting analyses and preparing deliverables for the project.*

Career/Experience Highlights:

- 6 years of experience in the water industry in both the private and public sectors
- Previously worked at San Francisco Public Utilities Commission as a utilities analyst

Representative Projects:

- Eaton (CO), Fort Collins Loveland Water District (CO), Dacono (CO), Firestone (CO)

Project Approach

The purpose of this study is to update the Town's water and wastewater impact fees (referred to as connection fees in the Town ordinances) to reflect the cost to serve new development with the capacity they require. The fees developed in this study will be based on industry-standard methodologies and Raftelis' experience working with other communities like Alpine. Our study consists of four tasks:

1. ***Project initiation***. Establish the goals and expectations for the study
2. ***Impact fee analysis***. Develop fees to meet the needs of the Town
3. ***Financial plan cash flow analysis***. Cash flow analysis to demonstrate the ability of the fees to fund capital projects and the impact on potential user rate increases
4. ***Presentations and reports***. Council presentations and study report

Given its historically low growth rates, Wyoming has little case law and no direct statutory authority regarding impact fees. However, Wyoming planning statutes[1] grant authority to municipalities to govern land use matters. The statutes further specify that municipalities are given the express authority to construct, maintain, and provide for sewer and water facilities; and create a fund for which financial activities can be managed. A legal point of reference for Wyoming impact fees includes the 1983 case *Coulter v. City of Rawlins* where the court held that a municipality can assess fees to connect to the water and sewer systems under Wyoming planning statutes. Raftelis will follow the elements of this court case, the provisions in the State planning statutes, and guidelines in developing legally defensible fees for the Town.

Task 1: Project Initiation/Management and Data Management

This task highlights the project management tasks, data review process, and the contents of the project initiation or project kick-off meeting.

- **Project Initiation:** Finalize study scope, milestones, set up regular project conference calls, and determine primary points of contact. Finalize project goals and objectives to establish guiding principles for the study against which we will measure results. Our project schedule can be found in the Schedule section of this proposal. With every major milestone meeting or regular project meeting, we will produce and circulate an email summarizing the key points of the discussion.
- **Data Request:** Prior to the meeting we will submit a data request list for the information needed for this study.
- **Project Initiation Meeting:** We will facilitate a meeting with Town staff to review the key aspects of the study, current challenges, as well as discuss the current political environment and how that may influence our approach in this study. We will also review the data we received to date, get clarification on certain items where needed, and present our initial model populated with the validated data.

MEETINGS:

- Virtual project kick-off meeting
- Regularly scheduled project check-in meetings (30 minutes)

[1] Wyo. Stat. Ann. 15-1-601(d)(i)

DELIVERABLES:

- Data request list
- Tech memo summarizing the key points of the meeting

Task 2: Impact Fee Analysis

This task will ensure that new development funds their share of system needs thereby maintaining equity between existing and new customers. We will develop separate water and wastewater connection fees using the following approach

- Evaluate the water and wastewater system's existing available capacity to serve growth and the capacity anticipated to be added with the 10-year capital improvement program to determine best methodology for calculating PIFs. The basic methodologies include
    - ***Buy-in***: Historical perspective. Existing available capacity with nominal future growth
    - ***Incremental***: Forward-looking. Little to no capacity available with large expansions projects in the new future
    - ***Hybrid***: Combination of buy-in and incremental. Some existing capacity available with future expansion projects anticipated in the near future.

Guidelines for Wyoming Legally Defensible Impact Fees

- **Impact fees may be enacted for a broad range of public facilities (i.e. water and sewer systems)**
- **Regardless of the name of the fee, ensure it is not a tax**
- **A formula-based impact fee should be based on the implied authority from statute for "harmonious development…which will best promote the general welfare as well as efficiency and economy*"**

Wyo. Stat. Ann. 15-1-1504

- Calculate the current value of available capacity and planned growth-related costs. We will evaluate the valuation of existing assets:
    - Value of existing system facilities at current replacement costs using Engineering News Record Construction Cost Index (ENR-CCI) or other similar construction-related index
    - The unit replacement cost of the water system's backbone facilities (treatment plant. Large transmission mains, pump stations, treated storage, etc.).
- For the incremental method, identify growth-related projects with assistance from Town staff.
- Estimate the remaining capacity in existing facilities and capacity to be added with future facilities (e.g. growth-related CIP)
- Apply adjustments such as developer contributions and outstanding loans currently paid through rates
- Determine the remaining existing capacity and future capacity to be added for the water system. Estimate buildout land use categories and parcel square footage.
- Establish peak water demand and peak wastewater flow for a 1.0 SFE or ¾" water meter calculate fee by multiplying the unit cost of capacity by the SFE demand requirement

DELIVERABLES:

- TM summarizing results of water and wastewater connection fee analysis
- Peer survey of connection fees

Optional Task 3: Financial Plan Cash Flow Analysis

The financial plan task will forecast the revenue from proposed fees along with the Town's operating revenues and expenditures to determine the ability of the fees to fund proposed capital projects and the need for user rate revenue increases to fund O&M, debt, and other capital expenditures. We will develop separate cash flows for the water and wastewater utilities. ***This task is beneficial as it will provide the Town with a future roadmap for planning rate adjustments and establishing adequate reserves to finance essential long-term projects.***

- Forecast revenue under existing rates, the calculated connection fees from Task 2 and other miscellaneous revenues. Connection fee revenues will be projected based on the growth estimates of infill and new development.
- Forecast operations and maintenance (O&M), repair and replacement (R&R) capital, expansion capital (based on master plan results or other engineering reports), and existing and proposed debt service. Incorporate new positions, changes in operating efficiencies, etc.
- Identify the projects eligible for bond or state loans based on timing, duration, and the amount of the project. Raftelis can present financial plan alternatives considering specific projects financed through state loans or grants that have been secured by the Town.
- Develop 'optimal' revenue requirement financial plan balancing a mix of cash funding and debt financing capital projects (if applicable) while meeting reserve targets, debt service coverage requirements, while maintaining conservative debt capacity levels and minimizing revenue increases. Calculate annual rate revenue adjustments needed through the study period.

DELIVERABLES:

- Financial plan alternative cash flows
- Virtual meeting with Staff to review and finalize cash flows for use in the cost of service and rate design analysis
- Technical memorandum summarizing results of the financial plan alternatives.

Task 4: Council Meetings and Draft/Final Reports

Raftelis will create, with guidance from Town staff, a PowerPoint presentation summarizing the results of the study. We will attend one on-site Council meeting to present the results and one virtual meeting.

Raftelis will provide a draft report to Town staff for review and comment. We will then incorporate any revisions into the final report. A final report will be prepared following the presentation of the results to Town Council.

MEETINGS:

- Attendance at one on-site Town Council meeting and one virtual Town Council meeting

DELIVERABLES:

- Draft report, final report, and PowerPoint presentation Town Council

Project Fee and Schedule

The following table provides a breakdown of our proposed fee for this project. This table includes the estimated level of effort required for completing each task and total fees and expenses per task.

Task	Hours	Fee and Expenses
Task 1: Project Initiation/Management and Data Management	20	$5,260
Task 2: Impact Fee Analysis	58	13,060
Optional Task 3: Financial Plan Cash Flow Analysis	36	8,420
Task 4: Council Meetings and Draft/Final Reports	18	5,065
Expenses		1,000
Total Including Optional Task	**130**	**$32,805**
Total Excluding Optional Task	***94***	***$24,385***

Raftelis can complete this study in approximately four months or less. The depends on the availability of Town staff during the project, availability of data, and timing of Council meetings. We will keep Town staff up to date with budget and schedule with our regularly scheduled project meetings.

SUNRISE ENGINEERING

Star Valley Office
770 S. Washington St., Ste. A, Afton, Wyoming 83110 | Tel: 307.885.8500 | Fax: 307.885.8501

December 20, 2024

Mayor Eric Green
Town of Alpine
250 River Circle
PO Box 3070
Alpine, WY 83128

Subject: Alpine Capacity and Impact Fee Study

Dear Mayor Green,

Below is our response to the request for additional information received via email from Monica, dated November 20, 2024.

As outlined in our proposal, we have successfully completed numerous impact fee studies for towns similar to Alpine. For smaller towns with limited full-time staff, involving an engineering team for impact fee studies can be especially effective. Our familiarity with water and wastewater systems enables us to collaborate efficiently with your staff to gather the demand and capacity data that form the foundation of these studies.

Examples of Relevant Projects

The most recent impact fee studies by our Star Valley office were for Afton and Thayne. Although Alpine is a unique community with different challenges, Afton and Thayne are similar in population and region. Smaller communities often require a personalized approach to studies. We will work with the your staff and the data you have available, filling in the information gaps where needed, to make the study successful.

Thayne Impact Fee Analysis (2023)
With increased development pressure in the Town of Thayne, the Town Council authorized Sunrise Engineering to prepare this study. We analyzed both the wastewater and water systems. Our existing knowledge of Thayne's infrastructure from previous engineering projects was key to developing an accurate and defensible study.

Afton Impact Fee Analysis (2024)
Similar to the Thayne study, this project focused on both the water and wastewater systems. With Afton's recent growth and development, the Town Council aimed to ensure that new water and wastewater users contributed fairly to system improvements, preventing undue financial burdens on existing users.

Please provide the list that you utilize for the initial data collection process.

Data Management

Water System

- Map of the water system in GIS format (if available)
- Capacity and age of each major component (tanks, wells, booster pumps, etc.)
- Water system demand data
- Existing water system loan data

Wastewater System

- Map of the wastewater system in GIS format (if available)
- Capacity and age of each major component (lift stations, wastewater treatment plant)
- Wastewater system flow data
- Existing wastewater system loan data

What if the data requested isn't available or easily accessible?

The necessary water system data will be available through the inventory and evaluation phase of the WWDC water study, which we are currently conducting.

We are less familiar with the wastewater system and will collaborate with town staff and Jorgenson to obtain the required data. If GIS data is unavailable, paper maps or as-built drawings will suffice. We will work with Craig to address any data gaps. Our final delivery will include system maps for both the water and wastewater systems, as stated in our proposal.

Do you anticipate involvement by the Town Engineers?

Anticipated Involvement of Town Engineers

We will coordinate with Jorgenson, Craig, and Monica to gather wastewater system data. Before our meetings, we can review available documents and drawings and then clarify any gaps with their assistance. We are also open to field visits with Craig to collect specific data if needed, such as lift station details.

Outline typical data collection issues that you anticipate.

Typical Data Collection Issues

One challenge with the water system that we are finding with the WWDC study is the limited flow data. Since meters are read annually, peak summer usage data is unavailable. Additionally, the primary flow meter in the well house estimates the total gallons pumped based on assumed well flow rates. As part of the WWDC study, we are analyzing tank fill rates to accurately estimate pumping rates. This will allow us to "back into" the well pumping rates. Through this process we will develop our best estimate of water use in Alpine. This information can then be used for the impact fee study.

We do not anticipate these same issues with getting accurate wastewater flows because the plant has a modern flow measurement system with reliable data logging.

Please outline the communication plan for the study.

Communication Plan

Meetings

- Kick-off meeting (in person)
- Coordination and data collection meetings (in person or virtual)
- Presentation of the draft study (in person)

Correspondence

- Monthly progress reports submitted with invoices
- Informal communication with Town staff as needed

Optional Task – Financial Plan Cash Flow Analysis

*Note**The Town of Alpine anticipates receipt of a Water Master Plan (Sunrise Engineering) in August of 2025. The Water Master Plan that may address some of the following items. Please determine the deliverables for the water master plan funded by the Wyoming Water Development Commission to avoid duplication of effort and submit or resubmit pricing information for a Financial Plan Cash Flow Analysis. Please delineate water vs. sewer within the submittal.*

- *Forecast revenue under existing rates, the calculated connection fees from Task 2 and other miscellaneous revenues. Connection fee revenues will be projected based on the growth estimates of infill and new development.*
- *Forecast operations and maintenance (O&M), repair and replacement (R&R) capital, expansion capital (based on master plan results or other engineering reports), and existing and proposed debt service. Incorporate new positions, changes in operating efficiencies, etc.*
- *Identify the projects eligible for bond or state loans based on timing, duration, and the amount of the project. Present financial plan alternatives considering specific projects financed through state loans or grants that have been secured by the Town.*
- *Develop 'optimal' revenue requirement financial plan balancing a mix of cash funding and debt financing capital projects (if applicable) while meeting reserve targets, debt service coverage requirements, while maintaining conservative debt capacity levels and minimizing revenue increases. Calculate annual rate revenue adjustments needed through the study period.*

The WWDC Water Master Plan contains the necessary data and analysis for this task. We will incorporate the WWDC data into the Capacity and Impact Fee Study at no additional cost.

Proposed Fee Summary

- **Alpine Development Impact and Capacity Fee Study:** $27,800
- **Optional Task – Financial Plan Cash Flow Analysis (Water):** $0
- **Optional Task – Financial Plan Cash Flow Analysis (Wastewater):** $4,700

Thank you for considering our proposal. We look forward to working with you and your team to ensure a successful outcome for the Town of Alpine.

Sincerely,

Robert V Hood

Robert Hood, P.E.
Service Center Manager
rhood@sunrise-eng.com

Alpine Development Impact & Capacity Fees Study Proposal

Town of Alpine, Wyoming

October 15, 2024

SUNRISE ENGINEERING

Star Valley Office
770 S. Washington St., Suite A, Afton, Wyoming 83110 | TEL 307.885.8500

October 15, 2024

Town of Alpine
Attn: Mayor Eric Green
250 River Circle
Alpine, WY 83128

RE: TOWN OF ALPINE DEVELOPMENT IMPACT & CAPACITY FEES STUDY AND ANALYSIS

Dear Mayor Green,

Sunrise Engineering is pleased to present the following proposal to provide engineering services for the Town of Alpine Development Impact and Capacity Fees Study and Analysis. We plan to work closely with you in developing solutions to develop equitable and defensible impact fees for the water and wastewater systems in Alpine. Some of the advantages in choosing our team are:

- *Over 30 years of experience working with Star Valley municipalities. We are a local company that understands the needs of Alpine.*
- *We are water and wastewater engineering experts. Impact fee studies are an engineering exercise that require a strong understanding of water and wastewater system operations, capacities, costs, and improvements.*
- *Many aspects of the WWDC Alpine Water Master Plan, which is currently underway by Sunrise Engineering, will dovetail with the impact fee analysis. Working with our team ensures maximum efficiency and cost savings for Alpine.*

Sunrise Engineering is offering a proven team that is excited to make this project successful and cost effective. Ryan Erickson will serve as the project manager. He has over 20 years of experience in Civil and Municipal Engineering with an emphasis on water and wastewater. Ryan also has extensive experience with Town of Alpine systems.

Sunrise is committed to providing exceptional client service. We maintain the conviction that our long-term success must be rooted in the success of our clients, and we would love the opportunity to serve Alpine on this very important project. I commit to you the same level of service that we provide our other clients. If you have any questions about this proposal, please contact me at 307.885.8500.

Sincerely,

Robert V Hood

Robert Hood, P.E.
Service Center Manager
Sunrise Engineering

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Sunrise Engineering Firm Profile

Our name speaks to one of our main focuses—engineering. Big or small, public or private, it doesn't matter—we're here to plan or improve it. We'll take you from initial funding, study, and design all the way to permitting, construction administration, and closeout.

Our true reward is the enduring partnerships we forge with our clients. We are your advocate and will not rest until your project is a success. This commitment to your success is reflected in the optimum balance we achieve between cost and operational performance. The majority of our work is performed for repeat clients, a testament to their trust and satisfaction in our services.

For over 45 years, Sunrise Engineering has been guided by an Executive Management Team who collectively shape the firm's vision and operations. Their collaborative approach and exemplary leadership have consistently delivered success to our clients and our 503 employees.

PSMJ's PREMIER AWARD FOR CLIENT SATISFACTION

In recognition of Sunrise's commitment to quality customer service, we have been awarded the PSMJ Premier Client Satisfaction Award for eight years. This award is based solely upon anonymous client feedback and honors only those A/E/C firms that provide their clients with top-quality communications, impressive performance, and cost-effective solutions.

For the past nine years, we have also been recognized as one of ENR's Top 500 Design Firms and ENR's Southwest Top 50. Our client's confidence in our engineers has led to multiple long-term relationships and years of successful projects.

2024 ENR TOP 500 DESIGN FIRMS Ranked #328 Nationally

Principal Office

Star Valley
770 S. Washington St., Suite A
Afton, WY 83110

TEL 307.885.8500

WYOMING
Star Valley
Cheyenne
Laramie
Kemmerer

ARIZONA
Phoenix Metro
Prescott
Kingman

COLORADO
Fort Collins
Steamboat Springs

IDAHO
Pocatello

NEVADA
North Las Vegas

UTAH
Cache Valley
Cedar City
Fillmore
Nephi
Richfield North
Richfield South
Roosevelt
Salt Lake City
South Ogden
St. George
Utah County
Vernal

Scan this QR code to visit our website and learn more about Sunrise Engineering, our expertise, and our many services.

Technical Areas of Expertise

ENGINEERING	WATER/ WASTEWATER	LAND DEVELOPMENT	ENVIRONMENTAL	TRANSPORTATION	DRAINAGE/ FLOOD CONTROL
	CONSTRUCTION MANAGEMENT	IRRIGATION	ELECTRICAL	PARKS & RECREATION	STRUCTURAL
SURVEY	3D IMAGING	TOPOGRAPHIC	CONSTRUCTION LAYOUT	LAND BOUNDARY/EASEMENTS/ RIGHT-OF-WAY	
GIS	UTILITY MAPPING	CEMETERY MANAGEMENT	TRAILS & TRANSPORTATION	LAND USE MANAGEMENT	
	FIELD COLLECTION & INSPECTIONS	MAPPING, MANAGEMENT, & ANALYTICAL SERVICES		CLOUD SMART GIS	
NATURAL GAS	TRAINING & QUALIFICATION	COMPLIANCE & STUDIES	PIPELINE ENGINEERING	3RD PARTY INSPECTIONS	AS-BUILT MAPPING
BUILDING CODE SERVICES	BUILDING INSPECTION	PLAN REVIEW	3RD PARTY INSPECTIONS	PEER REVIEWS & CODE CONSULTING	
COMMUNITY DEVELOPMENT	COMMUNITY PLANNING	ECONOMIC DEVELOPMENT	PLANNING	PUBLIC INVOLVEMENT	

Project Understanding

In recent years, the Town of Alpine has experienced increased growth. This accelerated pace of growth has increased demand for municipal services including water and wastewater. Recognizing that each of these services, as now constructed, contains a finite capacity, the Town of Alpine seeks to complete an impact fee analysis for the water and wastewater systems.

The purpose of this study is to preserve the existing levels of service these systems represent to current users, and to establish equitable fees to ensure future growth will maintain the established level of service. In other words, the fees represent the “fair share” that new development should pay to “buy-in” to existing capacity available in the systems or to fund improvements needed to accommodate the growth.

The study must be equitable to existing users and new development. It must be defensible if challenged, and it must be transparent in its methodology and calculation of fees.

Impact fees are not a connection fee. The Town should charge a connection fee that covers the cost of physically connecting to the system and for the administrative time needed to add the new account.

Impact fees do not cover the cost of operation, maintenance, or the replacement of system components if the capacity of the component is not increased (e.g. rebuilding an existing wastewater lift station). Revenue generated from monthly user fees covers these costs.

Accounting practices should separate impact fees from connection and user fees.

Project Approach

An impact fee study is a financial exercise, but it is also an engineering exercise. The data that feeds the study are best derived by a strong understating of municipal water and wastewater systems. At Sunrise we are experts in water and wastewater engineering. Much of the needed data and analysis for the water portion of the impact fee calculation will come from the WWDC Alpine Water Master Plan that we are currently preparing. Accurate calculations of the following bullet points are critical to a defensible final study:

- System demands on a per Equivalent Residential User (ERU) basis,
- Capacity of each component of the system (each well, each storage tank, each transmission line, etc.)
- Value in 2024 dollars of each component of the system
- Estimated service life and remaining life expectancy of each component

At Sunrise we use a combination of two methods to calculate impact fees.

1) EQUITY BUY-IN METHOD

The Equity Buy-In Method calculates the value of the existing excess capacity of the system, and determines the cost to “buy-in” and obtain an equity position in the existing facilities. This method is best applied where excess capacity has been built in and will not be immediately and completely consumed by new growth. The Alpine Wastewater Treatment plant is a good example where the Equity Buy-In Method should be used.

2) INCREMENTAL COST METHOD

The Incremental Cost Method is best applied to systems with limited existing capacity where growth has an immediate and direct impact on the ability of the facility to maintain it’s level of service. Using this method, fees charged to new growth are based on a capital improvement plan for needed improvements. Over time a fund is accumulated that must be dedicated to the stated purpose of improving the system to handle the new growth.

EXAMPLE OF USING BOTH METHODS IN FEE CALCULATION

An example of how the two methods are used together can be related to the Mega-Well. The Mega Well has excess capacity that is available to help meet the water demands of new users. The value of this excess capacity on a per ERU basis would be calculated with the Equity Buy-In Method and factored into the impact fee. However, since the Mega-Well is not tied into the main system, the cost per ERU to connect the Mega Well to the main system as a capital improvement project should be calculated using the Incremental Cost Method and factored into the impact fee also. This is one aspect of what will be factored into the final water system impact fee.

Proposed Scope of Services

Below is a list of proposed tasks to complete the impact fee for the Alpine Water and Wastewater systems. As discussed above, some of these task's dovetail with the water master plan effort currently underway by Sunrise Engineering and being funded by the Wyoming Water Development Commission. **This will be a cost savings to the Town.**

- In person kick off meeting with Town staff and mayor
- Monthly progress reports
- Using existing data, inventory both systems and prepare overall system maps to be included in the report
- Review and analyze demand data to determine per ERU demands.
- Analyze each system component to determine the existing capacity (e.g. gpm for each well, gallons stored for each tank, capacity of each sewer lift station, max flow rate in each transmission line, etc.)
- Perform impact fee analysis using Equity Buy-In method and Incremental Cost method
- Prepare a draft written report and submit it to Town staff and officials for review
- Present the results of the draft report at a public meeting to receive comments, feedback, and answer questions
- Make final edits based on feedback and submit the final report
- Continue to be available to answer questions and provide support to the Town

Creating solutions that work
and relationships that last.

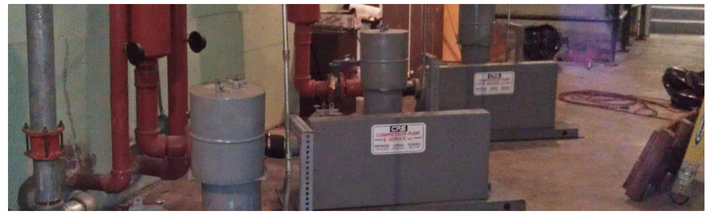
Project Experience

Impact Fee Studies and Capital Improvement Plans

Afton Impact Fee Study | Afton, WY
Client: Town of Afton

Description of Services:
- Water and wastewater impact fee calculations
- Written report and presentation to council
- Comparison of proposed fee to surrounding communities
- Provided options for timing of collection of fees
- Afton passed an impact fee resolution and is successfully collecting fees now

Thayne Impact Fee Study | Thayne, WY
Client: Town of Thayne



Description of Services:
- Water and wastewater impact fee calculations
- Cost of delivering water to customers on a per/unit basis
- Comparison of proposed fee to surrounding communities
- Provided options for timing of collection of fees
- Public meetings to present results and receive comments

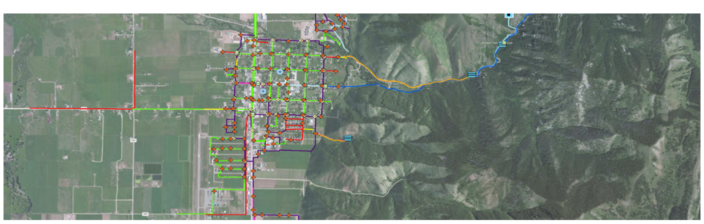
Thayne Wastewater Facility Plan | Thayne, WY
Client: Town of Thayne

Description of Services:
- 30-year plan for Treatment & Collection Systems
- Sunrise performed a four year update in 2012
- Plan was critical to receiving funding for Wastewater Treatment Plant Project
- Complete treatment upgrade project was completed

Star Valley Regional Water Master Plan | Lincoln County, WY
Client: Wyoming Water Development Commission

Description of Services:
- Analyzed all public water systems in Star Valley
- Water rights review and system mapping
- Water demand and source capacity review
- Water quality analysis
- Regionalization concepts and cost estimates

Afton Capital Improvements Plan | Afton, WY
Client: Town of Afton



Description of Services:
- Evaluation of water, sewer, roads and pathways, storm drainage
- Identification of needs
- Economic Development
- Project prioritization and funding

Bedford Water System Cost of Services Study | Bedford, WY
Client: Bedford Water and Sewer District

Description of Services:
- Used data from WWDC Water Masterplan
- Cost of delivering water to customers on a per/unit basis
- Comparison of proposed fee to surrounding communities
- Helped client understand the total cost of delivering water
- Public meetings to present results and receive comments

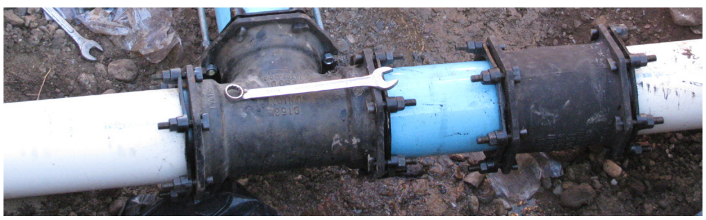
Bridger Valley Water Master Plan | Uinta County, WY
Client: Bridger Valley Joint Powers Board

Description of Services:
- Water Treatment Review
- Water Transmission and Water Distribution Modeling
- GIS Mapping
- Stand by Generation
- Water Source Analysis

Montpelier Wastewater Facility Plan | Montpelier, ID
Client: City of Montpelier

Description of Services:
- Evaluated collection & treatment system condition & capacities
- Analyzed population growth and projected system demands
- Analyzed alternatives for improvements and expansion
- Estimated costs for proposed preferred alternatives & provided funding options with calculated rate impacts

Nordic Ranches Cost of Services Study | Etna, WY
Client: Nordic Ranches Subdivision



Description of Services:
- Requires Public Service Commission approvals
- Evaluated the total value of the system
- Evaluated system operation costs and maintenance costs
- Determined cost of water delivery on a per customer basis
- Written report and presentation to system owners

Paris Wastewater Facility Study | Paris, ID
Client: City of Paris

Description of Services:
- 20-year planning study
- Population growth analysis and projections
- Analysis of the existing system capacities and condition
- Capital Improvements Plan with recommended alternatives
- Funding plan for recommended alternatives

Bedford Water Supply Master Plan | Bedford, WY
Client: Bedford Water and Sewer District

Description of Services:
- 20 year Water System Master Plan
- Water Modeling and Calibration
- Flow Testing and Leakage Analysis
- Hydrogeologic Investigation
- GIS Mapping

Afton 2nd Avenue Project | Afton, WY
Client: Town of Afton

Description of Services:
- New roads and sidewalks
- Design, bidding, and construction administration
- Wyoming Business Council Grant funds
- Pathways comply with ADA
- Replaced all sewer lines in the town's right of way

Section 4, Itemi.

Project Experience

Town of Alpine Projects

Alpine Water Master Plan | Alpine, WY
Client: Town of Alpine

Description of Services:
- Plan includes recently added water facilities
- Thorough review of existing water wells
- Investigation and testing of recently acquired Excel Well #1 (aka Mega Well)
- Creation of GIS base map with growth & demand projections

Alpine Water Storage Tank | Alpine, WY
Client: Town of Alpine

Description of Services:
- 20,000 lineal feet of piping with service connections and fire hydrants
- Pumping facility and SCADA communication system
- Two concrete storage tanks
- Funding from WWDC, USDA, State Loan and Investment

Alpine Sewer Expansion | Alpine, WY
Client: Town of Alpine

Description of Services:
- Expand sewer service for the Town of Alpine
- American Recovery and Reinvestment Act funding
- 9,200 feet gravity sewer
- Sewer lift station
- 2,200 feet of sewer forcemain

Alpine TAP | Alpine, WY
Client: Town of Alpine

Description of Services:
- Assisted with grant application
- Studied pedestrian and bicycle facilities and needs
- Compiled data from various resources
- Gathered public input
- Probable costs were created

Alpine Street Enhancement | Alpine, WY
Client: Town of Alpine

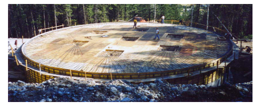
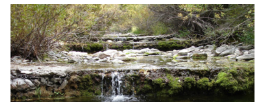
Description of Services:
- Town enhancements along Highway 89
- Decorative street lighting
- Landscaping
- Irrigation system
- Three phase project

Alpine Water Dist. Replacement | Alpine, WY
Client: Town of Alpine

Description of Services:
- Upgraded inefficient water distribution
- 4,000 lineal feet of piping
- 8-inch piping, service connections, valves and hydrants
- Funding from SRF loan and Mineral Royalty Grant

Additional Relevant Experience



Richmond Water Impact Fee Update
Santa Clara City Impact Fee Analysis
Gunlock Special Service District Impact Fee Analysis
Salina City Impact Fees & Rates Study
Bear Lake Special Service District Facility Plan & Impact Fee Study
Grand Water and Sewer Service Agency Culinary Water Impact Fee Update
Panguitch City Impact Fees
Salem City Culinary Water/Wastewater Impact and Capital Facility Plan Update
Mona Sewer Impact Fee Study
Hildale City Culinary Water Master Plan & Impact Fee Facilities Plan Update
Plymouth Water Impact Fee Analysis
Minersville Impact Fee Updates
Neola Water and Sewer Water Impact Fee Analysis
Redmond Irrigation Water Impact Study
Clarkston Impact Fee Facility Plan Analysis - Culinary Water & Roadway
Ephraim Water Master Plan and Impact Fee Facilities Plan Analysis
Ogden City Culinary Water Master Plan Update
Nephi City Secondary Water Study
Nephi City Culinary Water Master Plan
Enoch Culinary Water and Wastewater Impact Fee Plan Analysis
Moroni Impact Fee Analysis
Angell Springs SSD Culinary Water Master Plan & Impact Fee Facilities Plan
Fillmore City Water Master Plan Update and Impact Fee Analysis
Toquerville Culinary Water Master Plan and Impact Fee Facilities Plan
Kanarraville Town Culinary Water Master Plan, Impact Fee Facilities Plan and Impact Fee Analysis
Orderville Culinary Water Master Plan, Impact Fee Facilities Plan, & Impact Fee Analysis
Spring City Impact Fees 2024
Grand Water and Sewer Service Agency Secondary Water Impact Fee
Santa Clara City Culinary Water Impact Fee Facilities Plan & Impact Fee Analysis
Coyote Springs Wastewater Capital Improvement Plan
Springdale Town Wastewater Master Plan
Washington City Wastewater Master Plans
Colorado City Wastewater Capital Facilities Plan

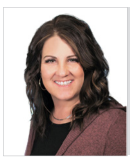
Organization Chart

We believe that the success of a project is dictated by the selection of a team that has a long history of working together on comparable projects. As we have demonstrated in our project experience, each of our key team members have worked on Impact Fee, Facility Planning Studies, and Capital Improvement Plans. A project like this requires specialized team members and we have selected our key team members based on their strengths and experience, and to serve a specific role to complete the necessary tasks for your project. The team will operate as a cohesive unit under the direction of our Project Manager, Ryan Erickson, PE.

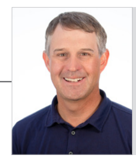
ALPINE
WYOMING

ERIC GREEN
Mayor

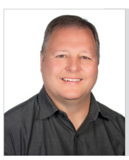
MONICA CHENAULT
Clerk/Treasurer



HEIDI ERICKSON
Project Coordinator

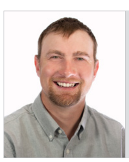


ROBERT HOOD, PE
Point of Contact



RYAN ERICKSON, PE
Project Manager

KAMILLA SCHULTZ, PE
Project Engineer



KADE SMITH, EIT
Assistant Project Engineer

DAVE KENNINGTON, PE
QA/QC

Sunrise is always there when I need them. I love our working relationship. They impress me with the overall experience they have with our Town and their vast knowledge of our infrastructure. I have been employed with the Town for over 20 years, and Sunrise has supported us in every aspect. It is a privilege to have them by our side, as we have progressed together instead of reinventing the wheel with another engineering firm.

Josh Peavler, Utilities Director
Town of Afton

Resumes

RYAN ERICKSON, PE | Project Manager

EDUCATION	YEARS IN PROFESSION	REGISTRATIONS	OFFICE LOCATION
MS - Civil Engineering	27; 27 with Sunrise	PE WY #9225	Afton, WY

Ryan has 27 years of civil engineering experience with projects in Wyoming and Idaho. He has worked with the Town of Alpine for over 15 years, providing valuable engineering support and guidance on various projects that enhance the community's infrastructure. His projects include the design and construction management of various water systems, with extensive experience in water rights, residential development, and city engineering projects. Ryan has significant expertise in development impact and fees studies, as well as master planning for municipal projects, helping communities plan for future growth and efficiently manage resources. He has designed wells, storage tanks, booster pumps, transmission lines, and distribution systems. Additionally, he has also managed a varied array of water resource projects including river basin plans and studies of municipal and irrigation systems.

- Alpine Water Master Plan
- Alpine General Engineering
- Alpine Airpark Subdivision
- Alpine RV Park Project
- Alpine Landscaping and Lighting Project
- Alpine TAP
- Alpine Meadows Drive Water Replacement
- Alpine Valley Resort Water Design
- Alpine Valley Resort Wastewater Design
- Alpine Retreat Lot 25 Wastewater Design
- Alpine Phase II Sewer Expansion
- Afton Capital Improvements Project
- Afton Wastewater Study
- Lincoln County Infrastructure Master Plan
- Star Valley Regional Master Plan
- Darway Subdivision Water Adequacy Study
- Rock Bridge Water Study
- Lost Creek Meadows Feasibility Water Study
- The Reserve Subdivision
- The Shire Development Water and Wastewater
- Trail Ridge Subdivision Project
- Etna Wastewater Analysis Study

KAMILLA SCHULTZ, PE | Project Engineer

EDUCATION	YEARS IN PROFESSION	REGISTRATIONS	OFFICE LOCATION
MS - Civil Engineering	14; 2 with Sunrise	PE WY #20549	Kemmerer, WY

Kamilla joined Sunrise Engineering in 2022 as a seasoned Civil Engineer, bringing over 14 years of industry experience. Since joining Sunrise, she has been instrumental in city engineering projects, specializing in fee studies, planning studies, and capital improvement plans. Her expertise in project planning, design, and execution has made her a key contributor to improving public utilities and infrastructure.

Before Sunrise, Kamilla worked for the City of Logan and Clearfield City, Utah, where she managed inspections, capital improvement projects, and designs for water, sewer, stormwater, and transportation systems. Kamilla's dedication to delivering sustainable, high-quality solutions has earned her a strong reputation within her team and the communities she serves.

- Hyde Park Culinary Water Master Plan
- Hyde Park Storm Water Master Plan
- Hyde Park Transportation Master Plan
- Virgin Town Wastewater Study Update 2021
- North Logan City Culinary Water Master Plan
- North Logan Water Master Plan
- Birch Creek Culinary Water Company Facility Plan
- Champlin Homes - UDOT Traffic Impact Study - Hwy 165 and 300 South in Providence
- Champlin Homes - Level 3 UDOT Traffic Impact Study - US-91 Between 1600-1800 North
- GR-RS-SC JPWB Eastside Zone, Level II Study
- Green River Rock Springs Sweetwater County (JPWB) - Crossroads Pump Station & Transmission Line
- Kemmerer Diamondville WWJPD General On-Call Services
- LF Redevelopment - North Salt Lake Basic Concept Plan - 460 W 100 North
- Rocky Mountain Tactical Group - Training Facility Feas. Study
- Kemmerer Diamondville WWJPB Nations Avenue Waterline
- Kemmerer Diamondville WWJPB Water System Improvement
- Logan City 200 North & 400 North Sewer Improvements
- Upper Blacks Fork Watershed - Wall Reservoir Project
- USU - Millville Waterline
- Rock Springs 2024 Sanitary Sewer and Storm Lining Project

ROBERT HOOD, PE | Point of Contact

EDUCATION	YEARS IN PROFESSION	REGISTRATIONS	OFFICE LOCATION
MS - Civil Engineering	21; 19 with Sunrise	PE WY #11066	Afton, WY

Robert is the Service Center Manager of the Star Valley office. His career focus has been working with rural municipalities and districts to address infrastructure challenges and enhance essential services. As an expert in federal and state funding, Robert has successfully helped rural clients secure project funding and navigate complex government application and approval processes. He finds great satisfaction in guiding clients through every project stage, from conducting master plans and impact studies to securing funding, completing designs, and managing construction. His engineering expertise spans several specialties, including hydrology and water resources engineering, wastewater engineering, site planning and development, parks and pathways, street design and restoration, and stormwater management.

- Thayne Wastewater Facility Plan and Impact Fee Analysis
- Thayne Water System Fee Study
- Jamestown Rio Vista Water and Wastewater Master Plan
- Bedford Water Supply Master Plan
- Bloomington Water System Facility Plan
- Star Valley Regional Master Plan
- Bloomington Wastewater Plan - Treatment Alternatives
- Bloomington 2015 Wastewater Study
- Montpelier Wastewater Facility Plan
- Turnerville Water Supply PER
- Thayne Main Street Waterline Replacement
- Thayne North Waterline Replacement
- Thayne Booster Pump House and Transmission Line
- Thayne Storage PER and ER
- Thayne Water Meters Project
- Thayne Water Storage Preliminary Engineering Report
- Thayne Water Storage Tank
- Thayne, Wright and Park Roadways and Utilities
- Bedford Water Meter Replacement
- Thayne Wastewater Treatment Facility Upgrade

DAVE KENNINGTON, PE | QA/QC

EDUCATION	YEARS IN PROFESSION	REGISTRATIONS	OFFICE LOCATION
BS - Civil Engineering	30; 30 with Sunrise	PE WY #9585	Afton, WY

Dave is experienced with water resource projects, including water and wastewater system design, hydrology and stormwater design, hydroelectric projects, master planning, and impact fee analysis. He has helped communities plan and manage infrastructure costs effectively while working on projects throughout the intermountain west for municipalities, private clients, and institutions. His proficiency spans all aspects of water and wastewater design, from studies and planning to detailed design, funding, and construction administration. Dave's expertise in quality assurance and quality control (QA/QC), ensures projects meet the required standards. He has completed a wide range of projects involving storage tanks, new production wells, and extensive transmission and distribution systems. He has also designed booster pump stations and interconnection metering stations, integrating them with existing and new infrastructure.

- Afton Capital Improvements Plan
- Afton Capital Improvements Project
- Afton Distribution Replacement Project
- Afton Impact Fee Study
- Afton North Waterline Spring Overflow Project
- Afton Water System Study
- Afton Wastewater Study
- Afton Stormwater Drainage Study
- Bridger Valley Water Master Plan - Level I Study
- Cordell Critchell Subdivision Water Adequacy Study
- Eagar Culinary Water Master Plan
- Star Valley Springs Water Adequacy Study
- Star Valley Springs Wastewater Adequacy Study
- Star Valley Trailer Court Wastewater System Design
- Sundance Properties – The Flats, Alpine Junction WW
- Green River/Rock Springs/Sweetwater County JPWB Pump Station and Transmission Line Study
- Green River/Rock Springs/Sweetwater County JPWB Wind River Zone Level II Study
- Minidoka Hydrologic and Hydraulic Study
- Bridger Valley Water Master Plan - Level I Study
- Town of Eagar Water Master Plan
- Willwood and Shoshone Irrigation District Hydropower Level II Study

HEIDI ERICKSON | Project Coordinator

EDUCATION	YEARS IN PROFESSION	REGISTRATIONS	OFFICE LOCATION
Business Administration	25; 13 with Sunrise		Afton, WY

Heidi joined the Sunrise team 13 years ago, bringing expertise in project coordination, proposal writing, and multitasking. As a key coordinator, she facilitates seamless communication and collaboration among clients, engineers, inspectors, and contractors, ensuring projects stay on track and progress efficiently. Her background in running a personal and family-owned business, has honed her organizational abilities and emphasized the importance of clear, proactive communication. This diverse background gives her a unique perspective on managing complex projects, making her an asset to the Sunrise team. Heidi's commitment to excellence and her ability to balance multiple responsibilities consistently contribute to the success of each project she's involved in.

- Afton Capital Improvements Plan
- Afton Wastewater Study
- Afton Impact Fee Study
- Afton Water System Study
- Alpine Water Master Plan
- Bedford Water Supply Master Plan Level I Study
- Bridger Valley Water Master Plan - Level I Study
- Broken Wheel Ranch Master Plan Level I Study
- Austin/Wall Canals Level I Study
- Austin/Wall Watershed Study
- Green River/Rock Springs/Sweetwater County JPWB Water Pump Station and Transmission Level II Study
- Green River/Rock Springs/Sweetwater County JPWB Wind River Zone Level II Study
- Dry Creek Irrigation Pipe Replacement Project Phases 1-4
- Quiet Cove Estates Water System
- Parker Subdivision Water Study
- Poinsett Subdivision Water Study
- Ridge View Estates Water Study Update
- Bear River Watershed Level I Study

KADE SMITH, EIT | Assistant Project Engineer

EDUCATION	YEARS IN PROFESSION	REGISTRATIONS	OFFICE LOCATION
BS - Civil Engineering	3; 3 with Sunrise	EIT WY #6876	Afton, WY

Kade brings a fresh perspective and a wealth of hands-on experience to the team. Having transitioned from a two-year internship to a full-time role at the Star Valley Office, Kade's commitment to his work is evident. A graduate of the University of Wyoming with a degree in Civil Engineering specializing in transportation and water, Kade's passion for problem-solving and his dedication to addressing clients' unique needs make him a valuable asset. Proficient in AutoCAD Civil 3D, he also demonstrates a proactive approach to problem-solving, emphasizing personalized solutions through close collaboration with clients. Kade enjoys working on master planning and impact studies, finding great fulfillment in helping the community plan for future growth and improve infrastructure.

- Afton North Waterline Spring Overflow Project
- Airstream Wyoming Water System Design
- Bedford ARPA Water Project
- Bridger Valley Water Master Plan - Level I Study
- Bitter Creek Ranches Water Adequacy Study
- Cordell Critchell Subdivision Water Adequacy Study
- Danna Investments Water Adequacy Study
- Earling Development Water Adequacy Study
- GR-RS-SC JPWB Eastside Zone, Level II Study
- Harmon Subdivision Water Adequacy Study
- Houghton Water Adequacy Study
- Montpelier City Water Facility Plan Update
- Painted Hills Subdivision Water Adequacy Study
- Star Valley Springs Water Adequacy Study
- Valley of the Burm Water Adequacy Study
- Paris Wastewater System Facility Planning Study
- Montpelier City Wastewater Facility Plan Update
- Schrader Subdivision Wastewater Adequacy Study
- Self Subdivision Wastewater Study
- West Afton/Nield String Master Plan, Level I Study
- Rocky Mountain Tactical Group - Training Facility Feas. Study
- Gil Crozes Valley Springs Lots 2 & 3 - Master Plan

References

Devin Simpson
Mayor
Town of Thayne, Wyoming
307.883.2668
thaynemayor@silverstar.com

Violet Sanderson
Town Administrator
Town of Afton, Wyoming
307.885.9831
vsanderson@aftonwyoming.gov

Dale Cottam
Attorney
Bailey | Stock | Harmon | Cottam | Lopez LLP
307.885.7745
dale@performance-law.com

Our Promise To You...

We have a saying in Sunrise Engineering: "You are only as good as your last project." With this in mind, we have handpicked the resources shown throughout this proposal that we believe are necessary to complete this project and meet or exceed your expectations. If we identify that more resources are required as we work through the needs of the project, we have other resources that can be added to the team to accomplish your goals. We GUARANTEE your satisfaction with our service and will always meet our commitments.

WHAT OUR CLIENTS SAY:

"I take great pleasure in endorsing Sunrise Engineering as an ideal choice for your engineering requirements. The company has consistently demonstrated a commendable level of professionalism and a prompt responsiveness to inquiries and concerns."

- Shawna Adams | Minidoka Irrigation District

"Sunrise is known for their professionalism, integrity, and dedication to client satisfaction. They work closely with their clients to understand their needs and goals and to develop tailored solutions that meet their unique requirements. Their excellent communication skills ensure that clients are informed throughout the project lifecycle and that any issues are promptly and effectively addressed."

- Jeremy Besbris | Victor City

"The attributes the Sunrise professionals displayed by their open door policy and sticking with us during the construction demonstrated Sunrise really cares about the relationship with the customer and the success of the project and is not just trying to make a buck and leave. This type of business is very refreshing to be affiliated with."

- James R. Webb | Lower Valley Energy

"We have worked alongside Sunrise Engineering the last couple years as they have completed our Feasibility Study funded by the Wyoming Water Development Commission (WWDC). They have been excellent to work with. They've done a great job in answering our questions and being available to help not only with the Study, but, over the years as we have worked through plans and repairs on our aging irrigation system. Their help and support is invaluable."

– Jody Kennington | West Afton Pipeline Co.

Price Proposal

Alpine Development Impact and Capacity Fees Study: $27,800

See Proposed Scope of Services for detailed scope.

Project Schedule

ALPINE DEVELOPMENT IMPACT AND CAPACITIES FEE STUDY

WORK SCHEDULE

SCOPE OF SERVICES	2024												2025							
	Nov				Dec				Jan				Feb				Mar			
Project Award / Engineering Agreement																				
Kick-off meeting																				
Review growth rates and demand data																				
System inventory and mapping																				
System capacity analysis																				
Impact fee analysis																				
Draft report submittal to staff and officials																				
Draft report presentation public meeting																				
Final report submittal																				