

From: [n.o](#)
To: [Council](#)
Subject: [EXTERNAL] BPD
Date: Thursday, January 29, 2026 7:36:31 PM



Mayor, council:

Billings police department IS NOT and HAS NOT been honest, truthful, honorable, transparent or accountable for years. They don't have to be (even though they take oaths regarding ethics & the constitution and have an obligation to serve & protect) because so-called leadership has turned a blind eye and not required it and residents have remained deluded, complacent & culpable if they have not been affected personally. Why would any aware, informed individual TRUST BPD??

From: [Karen Bowers](#)
To: [Council](#)
Subject: [EXTERNAL] ICE
Date: Thursday, January 29, 2026 10:11:34 AM

Council members,

Please continue to support the ICE efforts in Billings. Keep our city safe! Do not bow down to those who have come here from states and cities of chaos! We need law enforcement here more now than ever. You know that. Thanks for representing me and family. I also hope you reach out to Billings citizens instead of relying on those few who contact you. Get a better representation of the community, and not the few who protest. The media is completely biased, and so unreliable. My entire family and most of my friends, who all live in Billings, supports this effort, but how would you know that? Maybe because we voted for Trump and want safety in our communities in MT. I'm especially concerned for those who live on the reservation, the drug use there, and the human trafficking issues all around <https://url.us.m.mimecastprotect.com/s/pgP9CW6lmLu6GZBPU6f2HoNUZO?domain=us.it> affects us in Billings. Thank you to the police officers, and please continue to support their hard work!

Thank you, Karen Bowers

Sent from my iPhone

From: [Connie Purcell](#)
To: [Council](#)
Subject: [EXTERNAL] To all concerned;
Date: Thursday, January 29, 2026 9:34:31 AM

Please I beg of you all, DONOT give in to the anti ICE rhetoric !! We need to support ALL our state and federal law enforcement!

These brave individuals need us as much as we need them!!!

We don't call a floraist when someone is breaking in our homes or threatening our safety.

Let Billings Montana not give into the nonsense !!! Let us be an example of patriotism

Thank you for your service, and May we never have to defend your positions in this same way!

Sincerely, Connie M Purcell

From: [Kukulski, Chris](#)
To: [.MayorAndCouncil](#)
Cc: jeff.essmann@heightswaterdistrict.com; [Iffland, Kevin](#); [Engels, Louis](#); [Fogelsong, Mac](#); [Duray, Jennifer](#)
Subject: CWDBH Consolidation Information
Date: Thursday, January 29, 2026 7:50:16 PM
Attachments: [WO 24-41 Heights Water - Consolidation Study 11-2025 \(002\).pdf](#)
[Memo - 10 year CIP.pdf](#)

Mayor and City Council,

As most of you are aware, we've been working on a study with the County Water District of Billings Heights (CWDBH) to evaluate the potential for consolidation of the water system. Morrison Maierle Inc (MMI) was hired as the consultant to gather data and provide some analysis of the impacts of consolidation. MMI submitted the Final Consolidation Study Memo (attached) which contains five technical memos with information about operations, capital needs, rate impacts, staff impacts and more. The report is high-level and does not give all the necessary information to determine if consolidation should be pursued by us or the CWDBH. Note in the executive summary that MMI states that additional studies and reports may be necessary and provides recommendations for further analysis which includes 14 items that need more analysis and consideration. CWDBH will be releasing the report to the public tomorrow.

City staff and CWDBH has been working to use the information contained in the report to develop a plan with associated impacts for consideration by the City Council and the CWDBH board and customers. City staff developed the attached memo with a capital improvement plan for the CWDBH should consolidation occur. The CIP that we developed is based on our recommendations for the CWDBH water system which eliminates many of the projects that were originally recommended by their engineering consultant due to the fact that they will not be needed if consolidation occurs.

The next step is to determine three rates; 1) city rates with or without consolidation, 2) CWDBH rates without consolidation and 3) CWDBH rates with consolidation. Staff has been working from the premise that If consolidation results in higher rates for city water customers it will be difficult to gain city support. This is why the city rate is the same with or without consolidation.

It is important that the MMI report is not considered a final recommendation for consolidation. The report is a great source of data but additional work is necessary to develop an implementable plan for consolidation. These two documents are being shared with CWDBH customers by the Board. We will continue to keep you up to date as this process progresses. As soon as rates are developed, staff will present information to the City Council at a work session.

CWDBH is working with the City to schedule a meeting in the library community room where both boards and the public can review the information gathered to date.



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W.O. 24-41: Heights Water-Consolidation Study

November 2025

City of Billings and
County Water District of Billings Heights



**County Water District
of Billings Heights**



Billings Office
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CONSOLIDATION STUDY REPORT
FOR
W.O. 24-41 HEIGHTS WATER CONSOLIDATION STUDY

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November 2025


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W.O. 24-41: HEIGHTS WATER – CONSOLIDATION STUDY

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TECHNICAL MEMORANDUM 0

Executive Summary

City of Billings

W.O. 24-41: Heights Water – Consolidation Study

Prepared by: Craig Nowak, PE

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Reviewed by: Kurtis DeShaw, PE

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Date: November 14, 2025

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The City of Billings (City) and the County Water District of Billings Heights (CWDBH) are evaluating a potential consolidation. Under this arrangement, CWDBH's infrastructure, assets, facilities, and personnel would be integrated into the City of Billings' ownership, operations, and maintenance framework. Several factors must be considered when determining whether to move forward with consolidation. Both the City of Billings and CWDBH will jointly review and analyze these factors through mutual evaluation and study. This report provides data and insights to support these discussions. Additional studies and reports may be necessary before a final decision is reached. Recommendations for further analysis are outlined at the conclusion of this executive summary.

0.1 CWDBH SYSTEM INVENTORY

The CWDBH system inventory is based solely on the recent *County Water District of Billings Heights Water System Preliminary Engineering Report (PER)*, Interstate Engineering, December 11, 2024.

CWDBH water delivery infrastructure generally consists of storage reservoirs, piping and associated appurtenances, pump stations, and a chlorine booster station. The City of Billings supplies water to CWDBH via direct supply to the Lanier Reservoir and the Hilltop Reservoir. The Oxbow Reservoir is the third CWDBH reservoir. The total nominal storage volume is 8.0 million gallons, and the total calculated volume is 7.36 million gallons. However, effective volume is lower due to operational constraints required to maintain adequate service pressure in the distribution system. According to the 2024 CWDBH PER, it was determined that there are volume shortages under both current and projected 2046 conditions.

Transmission and distribution piping ranges in size from 6-inch pipe to 24-inch pipe. There are over 557,000 feet, or approximately 105 miles, of this piping. Types of pipe include asbestos-cement (AC), cast iron (CI), ductile iron (DI), and polyvinyl chloride (PVC). Over half of this pipe, 51 percent, is AC pipe, with 37 percent of the pipe being PVC. CI pipe and DI pipe comprise 6 percent of each throughout the piping system. There are 6,159 water meters inventoried in the CWDBH system, classified as commercial, irrigation, and residential meters, and they range in size from 5/8-inch to 8-inch. 5,556, or 90 percent of these, are residential meters. The CWDBH GIS database lists 2,522 valves in the system, with the majority being isolation valves, including gate valves and butterfly valves. There are also air release valves and blowoff valves. There are 933 fire hydrants located throughout the service area.

The system has seven pump stations. One pump station has been disconnected and is offline, one is out of service, and one serves as a standby pump station.

A chlorine booster station, also known as a free chlorine management system, is located at the Oxbow Reservoir to maintain minimum chlorine residual requirements at the far end of the associated service area.

0.2 PROPERTY OWNERSHIP

It is reported that all system infrastructure, administrative facilities, and operation and maintenance facilities are located within easements held by CWDBH, within rights-of-way, and District-owned parcels. The CWDBH main (administrative) office, active pump stations, and reservoirs are on District-owned properties. The Rolling Hills Pump Station (adjacent to Lake Elmo), which is inactive, had a lease agreement with Montana Fish, Wildlife, and Parks. The previous agreement, dated March 17, 1992, expired in 2017. During a meeting on September 8, 2025, with CWDBH and Montana Fish, Wildlife and Parks, CWDBH was informed that a new 25-year agreement is in progress and expected to be mailed soon. As of the date of this writing, the new lease had not been finalized. No other issues regarding easements and rights-of-way were reported.

0.3 PHYSICAL INTEGRATION

Evaluation of the potential physical integration of the CWDBH and City of Billings water systems required identifying and assessing planned CWDBH capital improvement projects, determining whether and to what extent the City of Billings would implement each of the CWDBH projects, and identifying additional projects specifically required under the Consolidation scenario.

The CWDBH 2024 PER, 2023 Rate Study, and current budget were reviewed for planned projects and equipment purchases, and from this information, a resulting listing of projects and purchases was developed. This listing included the scheduled year for each project or equipment purchase, along with the associated cost and inflation escalations for the respective year. This cost data was used in the financial consideration model for both consolidation and non-consolidation scenarios. In some cases, a CWDBH project or equipment purchase was modified or deleted for the consolidation scenario since the City would take a different approach or not pursue the project/purchase.

The CWDBH Supervisory Control and Data Acquisition (SCADA) system monitors and controls pump stations and reservoir water levels; however, it is incompatible with the City of Billings' SCADA system. Therefore, under the consolidation scenario, the City would replace the CWDBH SCADA system with compatible equipment in two phases.

As with the SCADA system, CWDBH customer water meters are not compatible with City of Billings water meters; meter compatibility is necessary because water meters are read remotely via radio equipment. Over 6,300 meters would be replaced, and new radio equipment would be positioned to read these meters throughout the CWDBH service area.

0.4 STAFFING CONSIDERATIONS

In evaluating the organizational and staffing aspects of a consolidation, internal documents from City and CWDBH were reviewed, and interviews were conducted with key leadership from both utilities, focusing specifically on the workforce transition aspects of a potential consolidation. The assessment of each utility's organizational structure and staffing reveals:

- Strategic Alignment: Both utilities share a strong mission focused on providing safe, reliable water and excellent customer service.
- Operations: The CWDBH's operational standards are largely compatible with the City's, with shared licensing requirements and similar equipment.
- Personnel and Cultural Divide: Cultural and structural differences between CWDBH's non-union workforce and the City's unionized employees could present challenges during consolidation, particularly regarding alignment, salary, and seniority integration.
- Staffing and Flexibility: The CWDBH operates a lean, flexible workforce where employees perform diverse "other duties," in contrast to a more formalized structure and responsibilities of the union job classifications within the City organization.

Consolidation of the utilities would offer a unique set of opportunities and challenges. While strategic and operational alignments are strong, the critical hurdle lies in workforce integration, particularly navigating the cultural differences between the utilities and the impact of the City's unionized workforce on CWDBH's non-union employees. Recommendations for developing a transition plan and related activities are outlined in Technical Memorandum 4.

0.5 FINANCIAL CONSIDERATIONS

To determine whether consolidating the two utilities could yield financial benefits in terms of lower costs for customers, financial forecasts were developed for both utilities under "status quo" conditions and compared to a "consolidated" scenario, in which the City would absorb the CWDBH, including its service area and customers. Key findings of the analysis include:

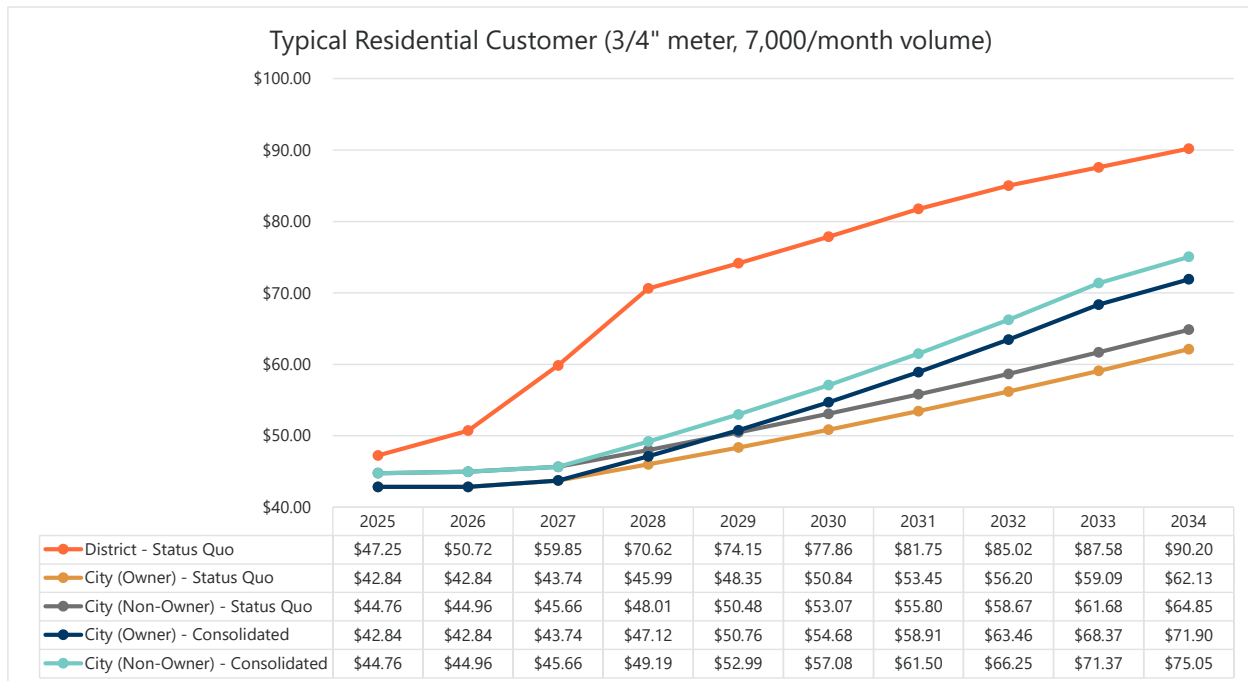
- As of FY 2025, CWDBH rates result in a slightly higher monthly bill for a typical residential customer¹ compared to City rates. However, CWDBH implemented a rate increase for FY 2026, and it is anticipated that 18% annual increases will be required in FY 2027 and FY 2028, followed by annual increases ranging from 3-5%/year
- City rates for retail sales are projected to increase between 2.5-3.0% per year over the study period under the "status quo" conditions. The Resale-District rate is projected to increase 19% in FY 2028, followed by 2.5% annual increases.
- Under consolidation:
 - The City's revenues under existing rates (including adopted rates through FY 2027) are projected to be approximately the same as under status quo conditions, as the revenue from customers in the CWDBH service area, at City retail rates, is projected to be approximately the same as the revenue the City is projecting to receive from CWDBH for purchased water under the status quo.
 - The City's operating expenses are projected to increase, reflecting increased personnel costs as the City takes on existing CWDBH staff, and increased non-personnel costs due to the increase in service area size.

¹ Based on a ¾ inch meter and 7,000 gallons/month volume.

- The City's capital expenditures will increase as it takes on the CWDBH system.
- Due to the increase in expenditures and relatively similar revenue levels, projected retail rate increases are higher under a consolidation than under the status quo.
- While the consolidation scenario indicates potentially higher rates than under the status quo, it should be noted that the results discussed herein reflect a single set of assumptions that were established to provide a comparison with as few variables as possible. In practice, the City could consider several actions that could mitigate the impact on rates, including:
 - An alternative approach to capital funding, including low-interest loans from the State Revolving Fund, to reduce annual expenditures and lower required rate increases.
 - Consider a separate rate structure or surcharge for customers in the CWDBH service area for a period of time to recover certain CWDBH-specific expenses, to allow a phase-in period to City rates.

Figure 5-1 from Technical Memorandum 5 shows a comparison of monthly bills over the Study Period for a typical Residential customer with a ¾" meter and 7,000 gallons per month of water usage.

Figure 5-1 – Residential Typical Monthly Bill Comparison



0.6 NEXT STEPS CONSIDERATIONS

While the Consolidation Feasibility Study provides a high-level, preliminary indication that consolidation could offer efficiencies and lower bills for CWDBH customers, several issues could be further evaluated to refine the financial comparison and address questions related to operational, capital, and financial considerations. The following are areas for potential further

evaluation/development as the City and CWDBH evaluate whether to pursue a consolidation of the utilities.

0.6.1 Physical Integration

- Contact Neptune meter representative to determine if/how Badger meters can be integrated into a Neptune metering system.
- Prepare a hydraulic analysis of a consolidated system.
 - Verify that the list of projects recommended for inclusion in TM 3 is required under a hydraulically modeled system.
 - Conduct further study and analysis to determine if deferment or elimination of Fox #1 Reservoir is feasible under a consolidated scenario.
 - Conduct further study and analysis to determine if the Zone 1 Reservoir can be eliminated.
 - Conduct a storage analysis to determine the effects of existing Heights reservoirs on the storage of a consolidated water system.

0.6.2 Staffing Considerations

0.6.2.1 Additional Detailed Workforce Analysis

While this initial assessment provided a high-level overview, a successful and seamless consolidation will require a more granular understanding of specific workforce elements. Key areas for deeper, subsequent analysis include:

- Detailed Role, Skill, and Competency Evaluation: Beyond high-level organizational review, a mapping of specific roles, skills, and competencies at the individual employee level should be conducted to inform optimal placement and development needs.
- Detailed Workforce Transition Plan Development: Crafting specific, actionable plans for the transition of the CWDBH employees, including identifying precise new organizational placements and reporting structures.
- Full Training Needs Assessment and Professional Development Plans: A comprehensive analysis of all required training, certification updates, and professional development pathways necessary for the newly integrated staff.

0.6.2.2 Confirm Compensation and Benefit Comparisons

- Conduct an exhaustive analysis of both organizations' compensation packages to quantify the financial impact of transferring employees and potential costs to the City. Explore options like buyouts, benefit bridging, or enhanced contributions to mitigate any perceived loss of benefits.
- Clarify with the union whether the CWDBH employees, upon consolidation, will be considered "new hires" for the purpose of longevity pay. Attempt to negotiate for existing CWDBH employee tenure to be recognized for longevity pay purposes to avoid a loss of benefits.

0.6.2.3 Confirm Employment Options for THE HEIGHTS Team Members within the City (Beyond Direct Transfer)

- Clearly define and communicate any options for CWDBH employees to transfer to other City departments if they are unwilling to join the union or if their skills do not align with the consolidated water utility's needs.
- If the City and District decide to move forward with Consolidation, develop a detailed transition plan, robustly addressing all stakeholders, but especially transitioning CWDBH employees and customers.

0.6.3 Financial Considerations

- Determine how CWDBH customers will be charged – both near-term and long-term:
 - Determine whether the City will bring CWDBH customers into the existing rate ordinance, assessing Inside City rates (Owner) to customers within City limits and Outside City rates (Non-Owner) to customers outside City limits (generally, excluding a near-term decision regarding recovery of the new West End Water Treatment Plant costs incurred to date).
 - Determine whether the City will assess a separate charge(s) during a phase-in period to bring CWDBH customers on par with City customers as it relates to historical funding of increased system treatment capacity. Assess advantages/challenges with alternative funding approaches, including:
 - Separate rate schedule – same structure as City rates but with different rates for each component, phasing to City rates by the last year of the phase-in period.
 - Surcharge – could be a fixed charge/month based on meter size or a separate volumetric charge. Allows visibility into the reason for the charge and maintains core rates at the same level as City rates.
 - Impact fee – an up-front fee, which would bring CWDBH customers immediately on par, but could be difficult for customers to afford.
- Based on work conducted under System Considerations, if system needs in the CWDBH are greater than those for the current City system, determine whether the City would include such additional costs in the calculation of the CWDBH phase-in rates discussed above. Note that CWDBH fund balances flowing to the City Water Utility would fund at least a portion of such projects/costs, if not used to reduce or eliminate the need for a separate rate to recover historical funding of expansion of treatment capacity.
- Incorporation of any refined cost estimates due to Staffing Considerations and System Considerations work elements into an updated City Consolidated financial plan.
- Develop public outreach materials (e.g., poster boards, presentation slides, etc.) to support the City/District team in public outreach.

0.7 CONCLUSION

The Consolidation Study evaluated each of the core elements (physical system, staffing, and financial) to consider when determining the potential feasibility of consolidating the CWDBH system into the City of Billings Water Utility. Based on the results of the assessments outlined in this Report, it appears that consolidation is physically feasible and could provide increased affordability and rate stability for CWDBH customers. However, based on the assumptions incorporated in the projection of revenues and expenses for a consolidated system, a consolidation would require higher annual increases in user charge revenues, which in turn would result in higher rates for current City customers.

At the time of consolidation, it is expected that CWDBH customers could see a rate decrease, which could allow the City, if it chooses, to assess a separate rate or surcharge to recover any difference in historical funding of the West End Water Treatment Plant Project and/or any incremental differences in capital spending in the CWDBH service area compared to the City service area, to bring CWDBH customers on par with existing City customers over a period of several years, without negatively impacting CWDBH customers.

It is estimated that consolidation would occur in Fiscal Year (FY) 2028, allowing time for the identified additional studies/evaluations outlined in Section 6 of this Executive Summary, and to transition to a consolidated system.

The consolidation of the two utilities presents an opportunity for streamlined service delivery, offering “one bill” for citizens and integrating a growing service area where a large percentage of the CWDBH customers are located within City limits. Consolidation would enable increased economies of scale and improved coordination of drinking water services for the greater Billings region.

TECHNICAL MEMORANDUM 1

System Inventory

City of Billings

W.O. 24-41: Heights Water – Consolidation Study

Prepared by: Craig Nowak, PE

Reviewed by: Kurtis DeShaw, PE
Zane Green, PE

Date: March 12, 2025

Morrison-Maierle
Billings Office
315 North 25th Street, Suite 102
Billings, MT 59101



This Technical Memorandum (Tech Memo) entails an inventory of the County Water District of Billings Heights (CWDBH) water system infrastructure assets, i.e., a basic inventory summary of the distribution system, equipment to operate and maintain the system, and documentation on the system. General conditions and/or age are provided for the infrastructure assets and equipment. These inventories were compiled from six primary sources, including:

- County Water District of Billings Heights Water System Preliminary Engineering Report (PER), Interstate Engineering, December 11, 2024.
- Interviews with CWDBH management staff.
- Site visit and discussions with management staff.
- Asbestos-Cement Pipe Integrity Test conducted by JDH Corrosion Consultants.
- Condition Assessment and Leak Detection report by Mueller Echologics.
- CWDBH GIS database

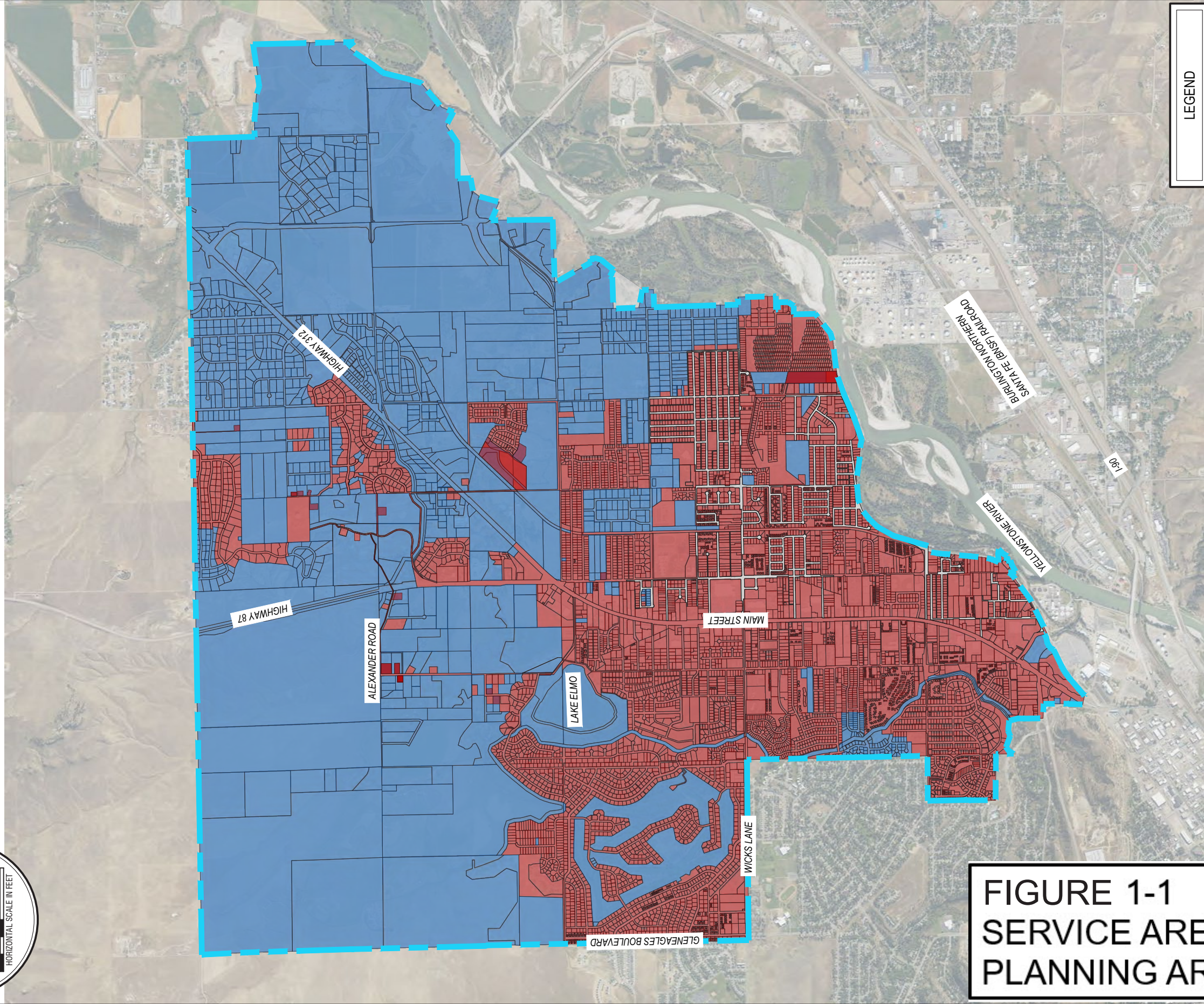
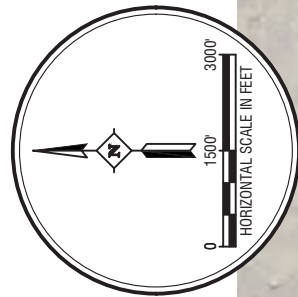
1.1 INFRASTRUCTURE

Water system infrastructure is separated into four primary components: 1) Storage, 2) Distribution system piping and appurtenances, 3) Pump stations, and 4) A chlorine booster station at the Oxbow Reservoir. Figure 1-1 is Chapter 1 Figure 1 of the PER which illustrates the CWDBH planning area and service area. Figure 1-2 is Chapter 2 Figure 1 of the PER and is the overall system layout showing distribution system piping, reservoirs, and pump stations.

1.1.1 Storage

The CWDBH's potable water source is the City of Billings. Water is supplied to two storage reservoirs, the Lanier Reservoir and the Hilltop Reservoir. A pump station at the Lanier Reservoir supplies the Oxbow Reservoir. These three tanks provide a total nominal storage volume of 8.0 million gallons and a total calculated volume of 7.36 million gallons. However, the effective storage volume is less since certain water levels must be maintained in two of the tanks to provide adequate service pressures to the respective service areas. All three tanks are of concrete construction, with the Hilltop Tank being semi-buried and the two other tanks being ground surface reservoirs. Table 1-1 provides information and condition assessments for the three tanks.

Each of these three reservoirs was evaluated in the Water System PER with respect to adequate volume under current conditions and for the projected design year of 2046. Projecting the future 2046 water demands entailed current demand in conjunction with population growth trends and is detailed in the PER. Volume requirement assessments considered average day demand, maximum day demand, and fire flow demand, which are also detailed in the PER. In addition, the PER assessed tank volume requirements regarding two criteria: 1) Storage to meet average day demand plus fire flow and 2) Storage plus the water source (City of Billings supply) to meet maximum day demand plus fire flow. Table 1-2, Table 1-3, and Table 1-4 summarize volume adequacy for each reservoir under current and projected 2046 conditions and regarding the two stated criteria. Volume adequacy under each condition was with respect to effective volume, not total volume; certain water levels must be maintained in each tank to provide adequate pressure to the respective service area. Maintaining any water level above the bottom level of the tank reduces the volume available to meet demands including fire flow demands.



LEGEND

SERVICE AREA

PLANNING AREA

SERVICE BOUNDARY

FIGURE 1-1
SERVICE AREA AND
PLANNING AREA

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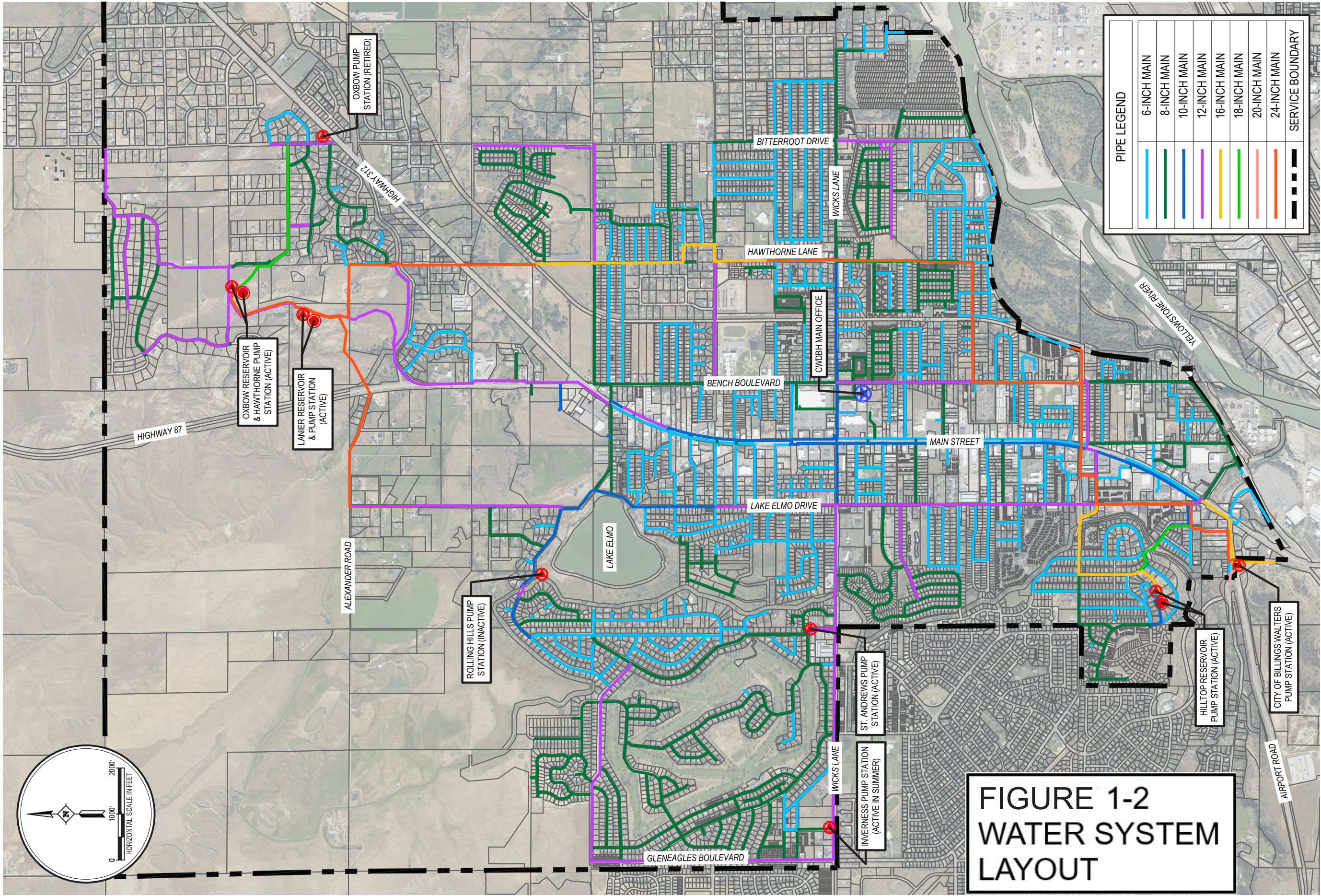
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COUNTY WATER DISTRICT OF BILLINGS' HEIGHTS (CWDBH)
SYSTEMWIDE PRELIMINARY ENGINEERING REPORT (PER)
BILLINGS, MONTANA

CWDBH SERVICE AND PLANNING AREA MAP

DRAWN BY: WJS SURVEYED BY: N/A PROJECT NO: WR23-00-069
CHECKED BY: GCB DESIGNED BY: N/A DATE: SEPTEMBER 2024

REV	DATE	BY	DESCRIPTION



REV	DATE	BY	DESCRIPTION

COUNTY WATER DISTRICT OF BILLINGS' HEIGHTS (CWDBH) SYSTEMWIDE PRELIMINARY ENGINEERING REPORT (PER) BILLINGS, MONTANA			
CWDBH OVERALL WATER SYSTEM LAYOUT			
DRAWN BY: WJS	SURVEYED BY: N/A	PROJECT NO.: WR23-00-069	DATE: SEPTEMBER 2024
CHECKED BY: GCB	DESIGNED BY: N/A		

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Table 1-1 – CWDBH Reservoirs

RESERVOIR ¹			
	Hilltop	Lanier	Oxbow
Type	Reinforced Concrete	Reinforced Concrete	Concrete
Capacity			
Nominal	2,000,000 Gallons	2,000,000 Gallons	4,000,000 Gallons
Calculated	1,848,205 Gallons	1,894,969 Gallons	3,613,224 Gallons
Effective ²	1,137,357 Gallons	866,271 Gallons	1,354,959 Gallons
Year Constructed	1960	1980s	2018
Condition and Comments	Internal inlet/outlet pipe structures corroded. Internal overflow pipe corroded. ³ Internal ladder extremely corroded. ⁴ OSHA deficiencies	Cell corrosion on interior ladder, inlet pipe, and outlet pipe. OSHA deficiencies.	OSHA deficiencies.

1. Source: County Water District of Billings Heights Water System Preliminary Engineering Report (PER), Interstate Engineering, December 11, 2024.
2. Effective volumes are with respect to minimum operating level to maintain adequate system pressure.
3. 2018 inspection
4. 2023 inspection

Table 1-2 – Hilltop Reservoir Volume Adequacy

HILLTOP TANK STORAGE		
Demand Scenario	Storage to Meet Average Day Demand plus Fire Flow	Storage + Source to Meet Maximum Day Demand + Fire Flow
Existing Conditions	Adequate Storage Volume	Adequate Storage Volume
Projected 2046 Conditions	247,923-gallon shortage with respect to effective volume, i.e., 16-foot operating level	630,833-gallon shortage

Table 1-3 – Lanier Reservoir Volume Adequacy

LANIER TANK STORAGE		
Demand Scenario	Storage to Meet Average Day Demand plus Fire Flow	Storage + Source to Meet Maximum Day Demand + Fire Flow
Existing Conditions	Adequate Storage Volume (7809-gal. shortage with respect to 19-foot operating level)	Adequate Storage Volume
Projected 2046 Conditions	408,129-gallon shortage with respect to effective volume, i.e., 19-foot operating level.	203,519-gallon shortage with respect to effective volume, i.e., 19-foot operating level.

Table 1-4 – Oxbow Reservoir Volume Adequacy

OXBOW TANK STORAGE		
Demand Scenario	Storage to Meet Average Day Demand plus Fire Flow	Storage + Source to Meet Maximum Day Demand + Fire Flow
Existing Conditions	Adequate Storage Volume	659,601-gallon shortage with respect to effective volume, i.e., 25-foot operating level.
Projected 2046 Conditions	Adequate Storage Volume (30,321-gal. shortage with respect to 25-foot operating level)	1,716,561-gallon shortage with respect to effective volume, i.e., 25-foot operating level.

All three reservoirs have adequate effective volume to meet current demands under one of two criteria, i.e., storage capacity to meet average day plus fire flow demand. However, there are various caveats due to effective tank volumes due to minimum required water levels to maintain adequate service pressure. These caveats are more prevalent when considering projected 2046 water demands. Under a second criteria, i.e., storage capacity plus source to meet maximum day plus fire flow demands, there are additional cases where storage capacity does not meet the required storage capacity.

1.1.2 Distribution System – Piping and Appurtenances

1.1.2.1 Piping

The distribution system consists of pipe and appurtenances such as valves (gate valves and butterfly valves), fire hydrants, mainline meters, service lines, and service line meters. The CWDBH

is responsible for service line meters but not the service line piping. Over 105 miles of pipe consist of four types and range from 6 inches to 24 inches in size. Table 1-5 below provides a listing of the sizes, types, and approximate footage of transmission and distribution piping in the CWDBH system.

Table 1-5 – Distribution System Piping

DISTRIBUTION PIPE INVENTORY (FEET)						
	Asbestos-Cement (AC)	Cast Iron (CI)	Ductile Iron (DI)	Polyvinyl Chloride (PVC)	Total	Percent of Total
6-Inch	184,745	12,024	1,184	24,546	222,499	40%
8-Inch	55,259	678	1,104	120,847	177,888	32%
10-Inch	15,850	9,553	1,345	2,077	28,825	5%
12-Inch	23,202	9,184	1,667	43,807	77,860	14%
16-Inch	7,303	2,837	0	2,519	12,659	2%
18-Inch	0	0	1,724	3,852	5,576	1%
20-Inch	0	429	0	0	429	0%
24-Inch	0	0	24,071	7,404	31,475	6%
Total	286,359	34,705	31,095	205,052	557,211	10%
Percent of Total	51%	6%	6%	37%	100%	100%

Over 50 percent of this piping is asbestos-cement pipe, and it has been in service for over 50 years. This prompted two studies specific to the condition of this pipe, as discussed hereinafter.

JDH Corrosion Consultants conducted an Asbestos-Cement Pipe Integrity Test on a 55-year-old, 6-inch segment of pipe associated with a main break. Testing included crushing the sample to test the pipe pressure rating. As reported in the Water System PER, test results showed that the pipe met the minimum requirements for new Class 150 AC pipe per ASTM C296. In other words, the pipe meets the 150-psi design pressure. Another test measured the leaching of cement mortar and, thus, pipe deterioration; results showed that 37 percent of the pipe was leaching the cement mortar. An additional test focused on pipe wall thickness. The average wall thickness loss for the sample tested was 0.061 inch on the outside wall and 0.219 inch on the inside wall.

The CWDBH also contracted with Mueller Echologics in 2024 to conduct a pipe assessment study. A selected 26 sections of pipe for testing included 10,590 feet of pipe. However, no test results were obtained for 30 percent of the test group. This resulted in a cumulative length of approximately 7400 feet of pipe being tested. The test results indicate that based on the remaining pipe wall thickness, seven of the test sections have a remaining life of one to nine years and that ten of the tested sections are in poor condition. Countering this assessment is an observation of

the CWDBH relative to pipe breaks, of which there were only 12 from 2007 to 2020. The test group and associated test results can be viewed from differing aspects, from the test report and from system experience. No conclusions and/or recommendations are inferred herein regarding the pipe's condition or need for immediate attention.

The Water System PER notes that "There are multiple locations within the CWDBH's water system lacking looping and having dead-end water mains." The extent of this situation is not quantified in the PER; however, further assessment and analysis could be conducted on a case-by-case basis to determine costs versus benefits. There may be service areas where looping a dead-end main would mitigate the issues caused by dead-end piping.

1.1.2.2 Meters

The CWDBH has over 6,000 meters throughout the system on service lines to its customers. These meters range from 5/8-inch to 8-inch in size. Meters are further tracked by customer class, including commercial, irrigation, and residential. Table 1-6 lists meters by size and customer class.

Table 1-6 – CWDBH Meters

METER BY SIZE AND CUSTOMER CLASS				
Meter Size	Commercial Meters	Irrigation Meters	Residential Meters	Total Meters
5/8-Inch	11	2	262	275
3/4-Inch	182	52	4,971	5,205
1-Inch	149	22	313	484
1 1/2-Inch	82	12	3	97
2-Inch	45	3	5	53
3-Inch	9	0	1	10
4-Inch	19	0	1	20
6-Inch	12	0	0	12
8-Inch	3	0	0	3
Total	512	91	5,556	6,159

1.1.2.3 Valves

There are over 2500 valves throughout the CWDBH water distribution system; the GIS database lists 2522 valves. At least eight are air release valves and at least eight are blowoff valves. The remainder are assumed to be isolation valves, either gate valves or butterfly valves. It is common for butterfly valves to be on larger pipe such as 12-inch or 14-inch and larger.

1.1.2.4 Fire Hydrants

There are 933 fire hydrants in the distribution system per the CWDBH database with ownership divided primarily between CWDBH ownership and private ownership with two owned by the City of Billings. Hydrant manufacturers include Mueller, Waterous, and Kennedy with less than ten percent being of an unknown manufacturer. Table 1-7 is a listing of the fire hydrants.

Table 1-7 – Fire Hydrants

FIRE HYDRANTS					
	Hydrant Manufacturer				
Hydrant Owner	Mueller	Waterous	Kennedy	Unknown	Total
CWDBH	497	138	121	77	833
Private	2	1	4	94	98
City of Billings	1	0	0	1	2
Total	500	139	125	169	933

1.1.3 Pump Stations

Seven pump stations are located throughout the CWDBH distribution system, in active, standby, or retired status. Standby pump stations are activated as needed to maintain pressure zone pressures. The pump stations, status, and construction year are listed below.

- Lanier – constructed 2017, active.
- Hawthorne – constructed 2018, active.
- Hilltop – constructed 2014, active.
- St. Andrews – constructed 1973, active.
- Rolling Hills – constructed 1992, connected, out of service 2018.
- Inverness – constructed 2004, standby/activated July 2024.
- Oxbow - constructed 1986, disconnected and off-line 2020. .

Table 1-8 through Table 1-14 provide information on the pumps and pumping capacity for each of the seven pump stations.

Table 1-8 – Lanier Pump Station

LANIER PUMP STATION PUMP DATA						
Pump Number	Manufacturer	Flow Rate (gpm)	TDH (feet)	Horsepower	RPM	Voltage
1	Cornell	500	160	40	Variable	480
2	Cornell	500	160	40	Variable	480
3	Cornell	500	160	40	Variable	480
Total		1,500	-	120	-	-

Table 1-9 – Hawthorne Pump Station

HAWTHORNE PUMP STATION PUMP DATA						
Pump Number	Manufacturer	Flow Rate (gpm)	TDH (feet)	Horsepower	RPM	Voltage
1 (Jockey)	Grundfos	63	125	5	3,496	480
2	Cornell	180	125	10	3,600	480
3	Cornell	180	125	10	3,600	480
4	Cornell	180	125	10	3,600	480
5 (Future)	NA	180	130	15	3,600	480
6	Cornell	1,320	130	60	1,800	480
Total		2,103	-	110	-	-

Table 1-10 – Hilltop Pump Station

HILLTOP PUMP STATION PUMP DATA						
Pump Number	Manufacturer	Flow Rate (gpm)	TDH (feet)	Horsepower	RPM	Voltage
1	Cornell	2,700	100	100	1,800	480
2	Cornell	2,700	100	100	1,800	480
3	Grundfos	425	100	20	3,500	480
4	Grundfos	425	100	20	3,500	480
5 (Jockey)	Grundfos	165	100	7.5	3,500	480
Total		6,415	-	248	-	-

Table 1-11 – St. Andrews Pump Station

ST. ANDREWS PUMP STATION PUMP DATA						
Pump Number	Manufacturer	Flow Rate (gpm)	TDH (feet)	Horsepower	RPM	Voltage
1 (Jockey)	Peerless	60	115	10	Variable	480
2	Peerless	500	178	40	3,530	480
3	Peerless	500	178	40	3,525	480
4	Sulzer	2000	185	125	Variable	480
Total		3,060	-	215	-	-

Table 1-12 – Rolling Hills Pump Station

ROLLING HILLS PUMP STATION PUMP DATA						
Pump Number	Manufacturer	Flow Rate (gpm)	TDH (feet)	Horsepower	RPM	Voltage
1 (Jockey)	Peerless	125	56	5	Variable	480
2	Peerless	500	56	15	1,745	480
3	Peerless	500	56	15	1,745	480
Total		1,125	-	35	-	-

Table 1-13 – Inverness Pump Station

INVERNESS PUMP STATION PUMP DATA						
Pump Number	Manufacturer	Flow Rate (gpm)	TDH (feet)	Horsepower	RPM	Voltage
1	Peerless	850	75	25	1,750	480
2	Peerless	850	75	25	1,750	480
Total		1,700	-	50	-	-

Table 1-14 – Oxbow Pump Station

OXBOW PUMP STATION PUMP DATA						
Pump Number	Manufacturer	Flow Rate (gpm)	TDH (feet)	Horsepower	RPM	Voltage
1 (Jockey)	Peerless	190	197	15	Variable	480
2	Peerless	620	189	40	Variable	480
3	Peerless	600	177	40	Variable	480
Total		1,410	-	95	-	-

1.1.4 Chlorine Booster Station

A chlorine booster station, a.k.a. a free chlorine management system, was constructed at the Oxbow Reservoir to address chlorine residuals falling below the required minimum in the far end of the respective service area. This chlorine management system continuously monitors chlorine levels and adjusts the amount of chlorine added to the distribution system. This facility was constructed in 2018. In conjunction with construction of this chlorine booster station, mixers were installed in all three reservoirs.

1.1.5 Sanitary Survey

The Montana Department of Environmental Quality (DEQ) conducted a sanitary survey of the system in September 2021 and documented this survey in a letter report dated October 1, 2021. These surveys are intended to be an avenue for DEQ to note sanitary deficiencies that could cause water system contamination and also note operation and maintenance concerns. The report included an overall assessment of the system infrastructure and provided minimal recommendations. Assessments and recommendations are briefly summarized below.

- Distribution System: Recommend 1) Routinely exercise fire hydrants, 2) Formalize cross connection control program (Article 11.2 of the CWDBH Standard Rules and Regulations addresses customer cross-connections, specifically prevention and consequences thereof), and 3) Replace problematic reduced pressure principle assemblies remaining in vaults (CWDBH does not own these assemblies) .
- Storage: Recommend improvement modifications to vents and overflows to meet current standards.

According to the DEQ report, the system is in good working order; "Overall, the system appears to be very well maintained and managed."

TECHNICAL MEMORANDUM 2

Property Ownership

City of Billings

W.O. 24-41: Heights Water – Consolidation Study

Prepared by: Craig Nowak, PE

Reviewed by: Kurtis DeShaw, PE
Zane Green, PE

Date: November 14, 2025

Morrison-Maierle
Billings Office
315 North 25th Street, Suite 102
Billings, MT 59101

This Technical Memorandum (Tech Memo) entails a summary of CWDBH easement, right-of-way, and land ownership relative to infrastructure and assets.

2.1 CWDBH PROPERTIES

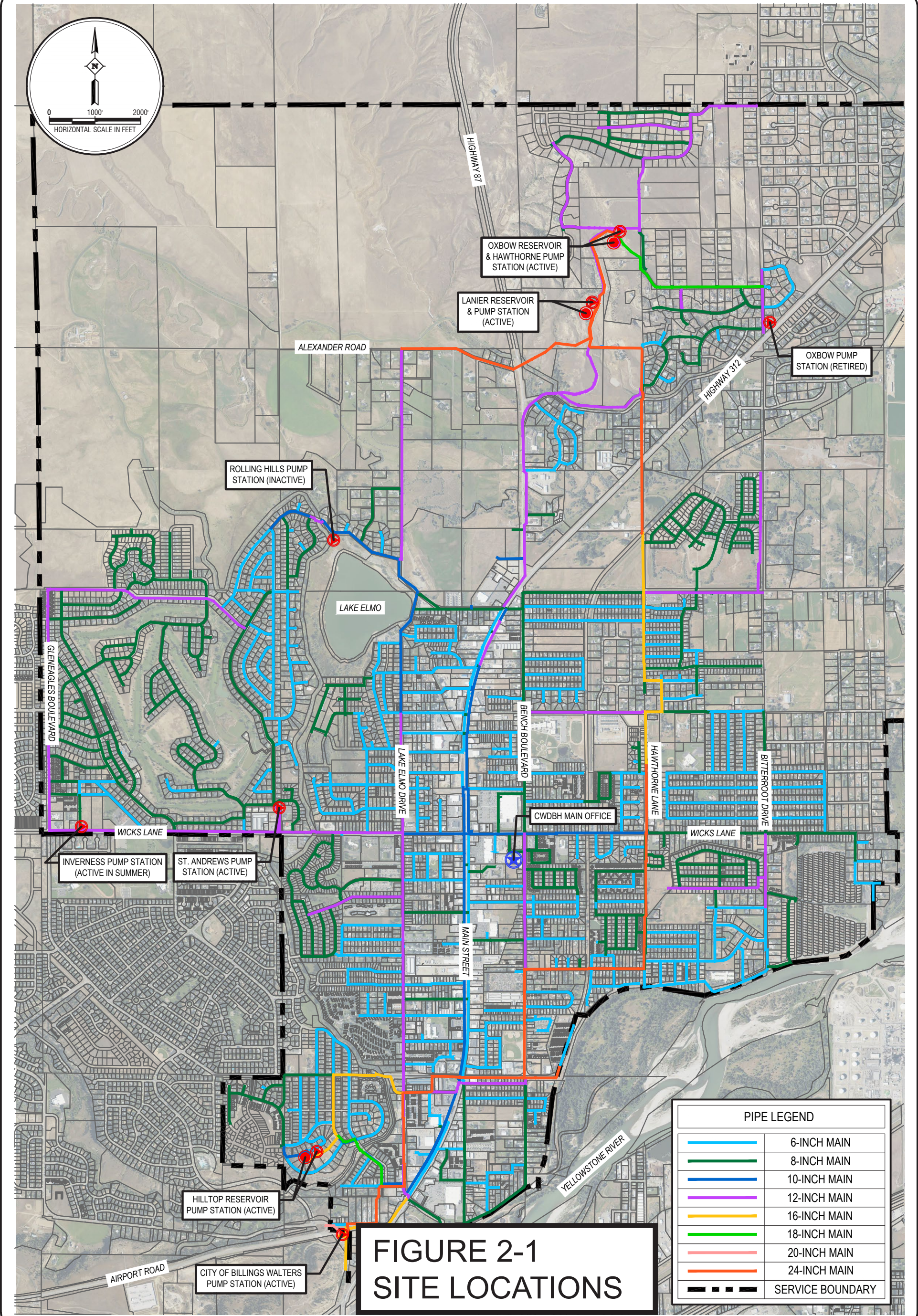
CWDBH reports that all water system infrastructure, as well as administrative and operation and maintenance (O&M) facilities, are located within CWDBH-held easements and rights-of-way or on District-owned properties. The Rolling Hills Pump Station (adjacent to Lake Elmo), which is inactive, had a lease agreement with Montana Fish, Wildlife, and Parks. The previous agreement, dated March 17, 1992, expired in 2017. During a meeting on September 8, 2025, with CWDBH and Montana Fish, Wildlife & Parks, CWDBH was informed that a new 25-year agreement is in progress and expected to be mailed soon. As of the date of this writing, the new lease had not been finalized. No other issues regarding easements and rights-of-way were reported. Table 2-1 lists owned property parcels on which are located the main office/O&M facility, storage reservoirs, and pump stations.

Table 2-1 – CWDBH Land Parcel Ownership/Lease Agreement

CWDBH PROPERTY OWNERSHIP				
Site ¹	Facility	Parcel Size	(Partial) Legal Description	Geocode
1	CWDBH Main Office	1.89 AC	Popelka Heights View Subd. S22,T01N,R26E	03103322150010000
2	Inverness PS	0.08 AC	Lake Hills Subd. 2 nd Filing S16,T01N,R26E	03103316303100000
3	St. Andrews PS	0.13 AC	Eagle Ridge Subd. S16,T01N, R26E	03103316408010000
4	Hilltop Reservoir & PS	0.92 AC	COS 841 S27, T01N, R26E	03103327207010000
5	Lanier Reservoir & PS	1.00 AC	Lanier Reservoir Subd. S02,T01N,R26E	03103302304010000
6	Oxbow Reservoir and Hawthorne PS	19.86 AC	COS 2012, Parcel 6 S02,T01N,R26E	03103302311010000
7	Oxbow PS	0.04 AC	Oxbow Subd. 211 S01,T01N,R26E	03103301310500000
8 ¹	Rolling Hills PS	0.14 AC	Portion of Tract 2, COS 1561 S10, T1N, R26E	03103315215016000

1. See Figure 2-1 for site location

2. Lease Agreement with State of Montana, Montana Fish, Wildlife and Parks



TECHNICAL MEMORANDUM 3

Physical Integration Evaluation

City of Billings

W.O. 24-41: Heights Water – Consolidation Study

Prepared by: Craig Nowak, PE

Reviewed by: Kurtis DeShaw, PE
Zane Green, PE

Date: July 23, 2025

Morrison-Maierle
Billings Office
315 North 25th Street, Suite 102
Billings, MT 59101

This Technical Memorandum (Tech Memo) entails an evaluation of the physical integration of pertinent and identified infrastructure elements of both the County Water District of Billings Heights (CWDBH) water system and the City of Billings water system with respect to a potential system consolidation. More specifically, this evaluation focuses on the CWDBH infrastructure, including its storage reservoirs, distribution system, and SCADA system. The basis for evaluation of the storage reservoirs and distribution system is primarily proposed projects as identified in the County Water District of Billings Heights Water System Preliminary Engineering Report (PER), Interstate Engineering, December 11, 2024. The basis of evaluation of the SCADA system is a collection of notes provided by the City from a meeting between the City of Billings staff, CWDBH staff, and Micro-Comm.

3.1 INFRASTRUCTURE, OPERATIONS, AND PLANNING PROJECTS

The 2024 PER identified a total of 26 capital improvement projects to upgrade the CWDBH water system, specifically storage reservoirs and distribution piping over the timeframe of 2025 to 2050. Whereas a PER typically lists recommended system improvements, a utility system budget is more definitive with what projects are planned for implementation. In this particular case projects identified in the CWDBH 2023 Rate Study and the current budget were also reviewed and assessed for inclusion in the financial consideration modeling. Table 3-1 is a compilation of those projects, operations equipment, and planning effort intended for implementation to the year 2034.

For each project or equipment purchase, the schedule year thereof and the estimated capital cost are provided. Costs are at the upper end of the cost range and are with respect to cost escalation relative to the year listed. Also included for some listings are a brief project/purchase description and general comments relative to the evaluation. Many of these comments are relative to the consolidation scenario, i.e., the City of Billings may not pursue the project and/or pursue the project under a modified approach. In some cases, the project or purchase would occur in the near future prior to a potential consolidation. In yet other cases, it is assumed that a project wouldn't be required under a consolidation scenario. These comments and assumptions were based on discussions and collaboration with both the CWDBH and City of Billings.

3.2 SCADA (SUPERVISORY CONTROL AND DATA ACQUISITION) AND METERS

Modifications, updates, and replacements would be required relative to the CWDBH SCADA system and to the customer water meters under the consolidation scenario. These are summarized below with estimated costs included.

3.2.1 Existing SCADA Systems

3.2.1.1 SCADA System Modifications

CWDBH utilizes Micro-Comm for its SCADA system to monitor and control pump station operation and reservoir water levels. This consists of a web-based interface and Micro-Comm PLCs (programmable logic controllers). Communications are transmitted with a radio at each pump station and reservoir site, communicated to the CWDBH office without repeaters.

Table 3-1 – CWDBH Infrastructure, Operations, and Planning Projects

INFRASTRUCTURE, OPERATIONS, AND PLANNING PROJECTS						
Start Year	Project	Source	Additional Description	General Comments	Non-Consolidation Total Capital Cost	Consolidation Total Capital Cost
2025	Engineering	FY25 Budget	-	-	\$438,600	N/A ¹
2025	Chlorination Plant	FY25 Budget	-	-	\$454,800	N/A ¹
2026	New CWDBH Meter Reader & PC	FY26 Budget	-	-	\$15,000	N/A ¹
2026	Residential Cellular Meters (180 Units)	FY26 Budget	-	-	\$30,600	N/A ¹
2026	Water Tank Inspection & Repair	FY26 Budget	-	-	\$20,000	N/A ¹
2026	Service Truck (New)	FY26 Budget	-	-	\$30,000	N/A ¹
2026	Service Truck (Repaint)	FY26 Budget	-	-	\$15,000	N/A ¹
2026-2031	AC Water Main Replacement Project	FY26 District budget/AC workbook	Replaces AC water main with PVC	Only 2028-2031 is included in the consolidation total, and is revised per City comments to assume a 100-year replacement schedule.	\$7,137,100	\$7,198,000

INFRASTRUCTURE, OPERATIONS, AND PLANNING PROJECTS

Start Year	Project	Source	Additional Description	General Comments	Non-Consolidation Total Capital Cost	Consolidation Total Capital Cost
2026-2034	Miscellaneous	FY26 Budget	-	Only 2028-2031 is included in the consolidation total.	\$250,400	\$200,900
2026	NW Pressure Zone (Design, TO28)	FY26 Budget	-	This item combines with the NW or Lake Hills Pressure Zone Selected Solution below.	\$225,000	N/A ¹
2027	Update GIS Attributes	2023 CWDBH Rate Study	-	²	\$158,100	\$ -
2027	Equipment Storage Building	2023 CWDBH Rate Study	-	²	\$913,400	\$ -
2027	Rate Study	2023 CWDBH Rate Study	-	²	\$146,400	\$ -
2027	NW or Lake Hills Pressure Zone Selected Solution	CWDBH 2024 PER	Addresses health and safety issues from low pressure in Lake Hills Zone.	This item combines with the NW Pressure Zone (Design, TO28) above.	\$789,300	N/A ¹
2027	Hilltop Reservoir Improvements	CWDBH 2024 PER	Add discharge line, meters, automated valves, and SCADA upgrades.	City unlikely to add discharge line; may upgrade valves.	\$1,400,400	\$ -
2028	Emergency Generation	2023 CWDBH Rate Study	-	²	\$83,000	\$ -
2028	5-year CIP	2023 CWDBH Rate Study	-	²	\$95,100	\$ -

INFRASTRUCTURE, OPERATIONS, AND PLANNING PROJECTS

Start Year	Project	Source	Additional Description	General Comments	Non-Consolidation Total Capital Cost	Consolidation Total Capital Cost
2029	GIS: Digital Workflows	2023 CWDBH Rate Study	-	²	\$173,300	\$ -
2030	Lanier Reservoir Improvements	CWDBH 2024 PER	Add 24-inch discharge line, meters, automated valves, SCADA upgrades.	City does not meter tanks and is unlikely to add discharge lines.	\$1,463,000	\$ -
2030	Shop Addition with 2-Ton Bridge Crane	2023 CWDBH Rate Study	-	²	\$417,300	\$ -
2031	GIS Support/Data Workflow Maintenance	2023 CWDBH Rate Study	-	²	\$800,000	\$ -
2032-2034	AC Water Main Replacement Project	CWDBH 2024 PER	Replaces AC water main with PVC	The consolidation total is revised per City comments to assume a 100-year replacement schedule.	\$15,073,700	\$7,323,000
TOTALS					\$30,129,500	\$14,721,900

City of Billings staff assessed the CWDBH to determine system modifications and upgrades that would probably be required should the CWDBH SCADA system be consolidated with the City of Billings SCADA system. Below is a summary listing of anticipated modifications and upgrades as determined by City of Billings staff to consolidate the CWDBH SCADA system into the City SCADA system, which would likely be implemented in two phases.

Phase I SCADA System Modifications/Upgrades

- Establish a communications link from the CWDBH office to the City's WTP via a new Hilltop repeater.
- Develop data tables and pages within City SCADA system to establish SCADA interface screens and data tables to allow City operators to view CWDBH system data.
- Integrate CWDBH's Access-based reporting database into the City's SQL-based reporting platform.
- All control functions remain under CWDBH's supervision during this phase.

Phase II SCADA System Modifications/Upgrades

- Replace all CWDBH site PLCs with City-standard PLCs.
- Replace existing radios with equipment compatible with the City's SCADA radio system.
- Install or upgrade control wiring at each pump station, from PLC to each pump.
- Program new PLCs and configure SCADA communication protocols.
- Aggregate radio signals at the Hilltop Reservoir, which provides a high-elevation relay point and existing control infrastructure.

3.2.2 SCADA Modification/Upgrade Cost Estimates

The City of Billings developed cost estimates for the SCADA-related work previously summarized based on its experience with similar work for its own SCADA system. Estimates are based on the assumption that work is contracted out to contractors; it is presumed that these costs would be less should City of Billings staff implement the modifications and upgrades. Table 3-2 provides the range of cost estimates for each general component of the work described. Ranges of cost estimates are provided in current, 2025 dollars and in escalated 2028 dollars to coincide with the anticipated timeframe of installation and implementation under the consolidation scenario. Cost escalations are based on 3 percent annual inflation for two years.

Table 3-2 – SCADA System Modification/Upgrade Cost Estimates

SCADA Component	Estimated Cost Range 2025 \$\$\$	Estimated Cost Range 2028 \$\$\$
PLC Replacement – 6 Sites	\$780,000 to \$1,100,000	\$852,300 to \$1,202,000
Control Wiring – 6 sites	\$120,000 to \$180,000	\$131,100 to \$196,700
Radio Systems/Communications	\$150,000	\$163,900
Subtotal	\$1,050,000 to \$1,430,000	\$1,147,300 to \$1,562,600
Contingency	20%	20%
Total	\$1,260,000 to \$1,716,000	\$1,376,800 to \$1,875,100

3.2.2.1 Customer Water Meter Replacement

Individual customer water meters would be replaced under the consolidation scenario. This would be necessary to make CWDBH meters compatible with the City of Billings' metering and billing system. A projected 6,329 water meters would be replaced should consolidation occur. In addition, three "gateways" would likely be required to allow for remote meter reading. For the financial model and per information and data provided by CWDBH and City of Billings, it was assumed the meter replacement cost was \$200 each and the gateway cost was estimated at \$15,000 each, in current 2025 dollars. Escalating these costs three years to 2028 using a three percent annual inflation rate and growing the water meter count by one percent annual growth yields a total 2028 estimated cost of \$1,444,600.

TECHNICAL MEMORANDUM 4

Staffing Considerations

City of Billings

W.O. 24-41: Heights Water – Consolidation Study

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4.1 EXECUTIVE SUMMARY

The City of Billings (City) and the County Water District of Billings Heights (CWDBH) are exploring the potential feasibility of consolidating the two utilities into the City's utility and service area. This technical memorandum, developed through a review of internal documents and interviews with key leadership from both entities, focuses specifically on the workforce transition aspects of a potential consolidation.

Our assessment reveals a complex, yet manageable, integration challenge primarily centered on the significant cultural and structural differences between the City's unionized (Teamsters Local 190) workforce and the CWDBH's non-union employee base.

4.1.1 Key Findings:

Strategic Alignment: A consolidation presents a clear opportunity for streamlined service delivery, offering "one bill" for citizens and integrating a growing service area where a large percentage of the CWDBH customers are within City limits. Both entities share a strong mission focused on providing safe, reliable water and excellent customer service.

Operations: The CWDBH's operational standards are largely compatible with the City's with shared licensing requirements and similar equipment.

Personnel & Cultural Divide: This is a key area where cultural differences between the two organizations will require thoughtful alignment to support a successful consolidation. The CWDBH non-union employees could potentially struggle integrating culturally with the City union employees. In addition, a consolidation could potentially face structural problems integrating the CWDBH's workforce into the union with regards to salary and seniority considerations.

Staffing & Flexibility: The CWDBH operates a lean, flexible workforce where employees perform diverse "other duties," in contrast to the more formalized structure and responsibilities of the union job classifications within the City organization.

4.1.2 Recommendations if Consolidation Were to Occur:

Based on the review of staffing considerations, a potential consolidation of the CWDBH into the City Utility presents a unique set of opportunities and challenges. While strategic and operational alignments are strong, the critical hurdle lies in workforce integration, particularly navigating the cultural differences between the utilities and the impact of the City's unionized environment on the CWDBH non-union employees. Key elements identified, and the general timing of a transition effort, are as follows. A complete list of recommended actions if a consolidation were to occur can be found in Section 5 of the technical memorandum.

- **Early-Transaction:**
 - Prioritize transparent and consistent communication between the City and CWDBH
 - Lead a total compensation review to confirm compensation and benefits
 - Review constraints and potential possibilities around seniority concerns
 - Engage with the CWDBH workforce to understand roles and build trust, directly addressing their union concerns
- **Transaction:**
 - Formalize a "seniority bridge" or specific integration agreement
 - Implement a comprehensive onboarding program
- **Post-Transaction:**
 - Launch cross-training initiatives leveraging both organizations' strengths
 - Evaluate the organizational structure for optimal service delivery
 - Establish a joint labor-management committee focused on post-consolidation cultural assimilation

Successful integration hinges on proactive communication, empathetic management of employee concerns, and collaborative problem-solving to navigate the significant cultural and structural differences.

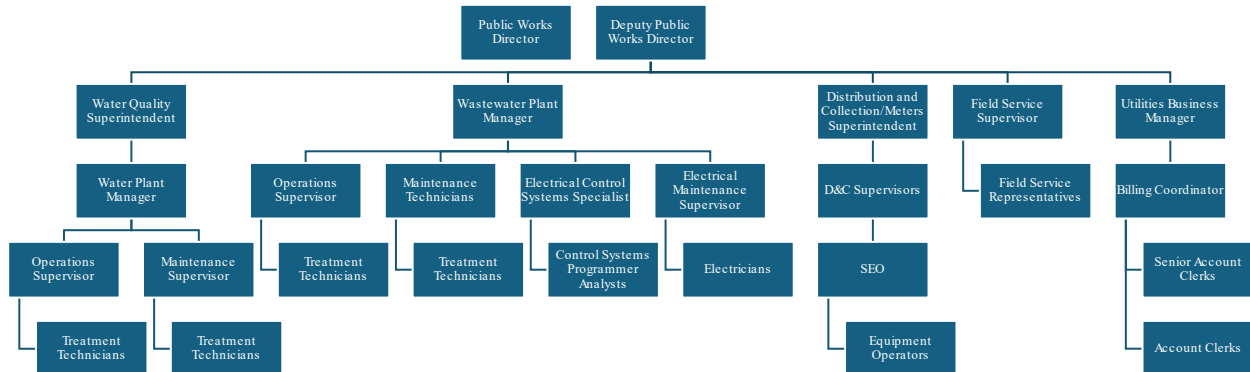
4.2 ORGANIZATIONAL PROFILES

This section provides a brief overview of the City and the CWDBH, with a focus on their current structures and strategic objectives relevant to workforce integration.

4.2.1 City of Billings Water Utility

The City operates a comprehensive municipal water utility as part of its Public Works Department. It serves a large and growing population, with existing infrastructure that includes approximately 500 miles of pipe, plants, and reservoirs. The City demonstrates a proactive approach to infrastructure management through annual pipe replacement programs and has established financial plans for future growth.

The City's workforce within the Public Works Department is unionized. Key operational roles, such as Maintenance Workers, Equipment Operators, Field Service Representatives, and Account Clerks, are part of the Teamsters bargaining unit. Supervisory and higher-level management positions, including the Public Works Director, Distribution and Collection Superintendent, Field Service Manager, Systems Maintenance Supervisor, and Billing Office Coordinator, are non-bargaining.

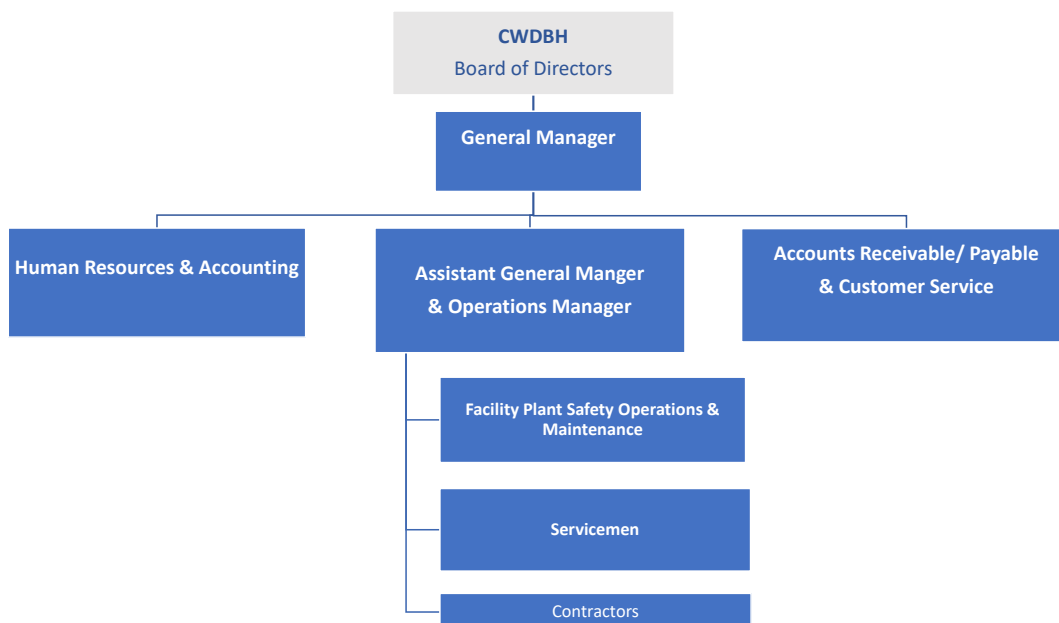


4.2.2 County Water District of Billings Heights

The CWDBH was established in 1958 as a local governmental utilities' services organization to provide water supply and distribution to the "Billings Heights" area northeast of Billings. Over the years, it has expanded to serve over 6,100 service connections, impacting approximately 13,950 residents. The CWDBH anticipates continued growth over the next ten years.

The CWDBH is governed by a six-member Board of Directors, with five elected members and one appointed by the City of Billings. Day-to-day operations are managed by a General Manager. The CWDBH's mission emphasizes providing "safe, clean, and reliable water services" with a focus on "public health, environmental sustainability, and exceptional customer care."

The CWDBH currently operates with a non-union workforce of 10 employees, including a General Manager, Assistant Manager/Operations Manager, Human Resources & Accounting, Accounts Receivable/Payable & Customer Service, Facility Plant Safety Operations & Maintenance, and five Servicemen. Their average employee longevity is 10.2 years, with low turnover.



4.3 WORKFORCE TRANSITION OBJECTIVES

To guide any consolidation effort and address potential challenges, we recommend the following workforce transition objectives if a consolidation were to occur. These objectives aim to ensure a successful integration that benefits both the City and CWDBH employees and customers.

- Critically evaluate the “fit” of existing CWDBH staff in terms of major services, workload, and culture. This involves a detailed understanding of current roles, responsibilities, and operational practices to identify alignment with City needs and potential gaps.
- Create incentives for CWDBH team members to move to the City. Recognizing the non-union background of their workforce, developing tailored incentives (beyond just wage parity) is crucial to retain valuable talent.
- Support seamless transition of CWDBH staff to the City. Design and execute an efficient onboarding and integration plan to minimize disruption to services and employee morale.
- Designate an integration leadership team, including senior City team members. Engaged leadership is paramount for any successful change initiative. A dedicated leadership framework will ensure consistent oversight and timely decision-making.
- Maintain high levels of City workforce capability through comprehensive onboarding and training of new staff. CWDBH employees joining the City must quickly adapt to City procedures, systems, and ways of working, including union rules.
- Enable workforce flexibility and promote cultural assimilation through cross-training and embedding new employees with current City staff. Leveraging the existing skills of CWDBH employees and strategically integrating them throughout the existing City teams will enhance overall workforce resilience, foster a unified culture, and improve efficiency in managing the expanded water utility assets.
- Engage new and existing employees in active communication around integration requirements and expectations. Consistent, two-way communication is vital for building support, addressing anxieties, and fostering a cohesive organizational culture across both legacy City employees and new (former CWDBH) employees.

4.4 ELEMENTS OF THE WORKFORCE TRANSITION ANALYSIS AND PLAN

The comprehensive workforce transition analysis focused on several key areas, integrating information from job descriptions, organizational charts, and leader interviews.

4.4.1 Current State Analysis

The analysis began with understanding the current employee landscape and operational context of both the City and the CWDBH organizations.

- The CWDBH Employee Roster: The CWDBH currently has 10 employees, including a General Manager, Assistant Manager/Operations Manager, Human Resources & Accounting, Accounts Receivable/Payable & Customer Service, Facility Plant Safety Operations & Maintenance, and five Servicemen.

- City of Billings Structure: The City's Public Works Department includes Water Quality Operations and Maintenance, Wastewater Operations, Electrical Maintenance, Electrical Control, and Electrical Maintenance, Distribution and Collection (including Meters), Field Services, and Business functions. Key union roles are Equipment Operators, Field Service Representatives, Senior Account Clerks, and Account Clerks. Non-bargaining roles include Superintendents and Supervisors overseeing these unionized groups.

4.4.2 Role and Skill Review

A high-level review of job applications and descriptions of roles was conducted to understand the background, skills, and certifications of CWDBH employees and to compare them to similar roles within the City.

4.4.2.1 CWDBH Roles:

- The General Manager is responsible for all aspects of operations, administration, budget, rates, and personnel matters (including hiring, firing, discipline, evaluations, and ensuring certifications). A degree in engineering is preferred and at least five years of progressively responsible experience involving the management of materials, personnel, budgets, rates, and purchasing in a water system.
- The Assistant Manager/Operations Manager conducts supervisory and technical work in water distribution system operation. Oversees daily operations and maintenance, manages inventory, repairs meters/hydrants/valves, taps water mains, conducts inspections, and may oversee contractor repairs. May be on 24-hour emergency call. Supervises servicemen. Requires high school and five years water distribution experience, and a Class II A Water Distribution System Certificate.
- The Human Resources & Accounting (Clerk/Treasurer) is responsible for general ledger, payroll, meter reading, billing, customer service, and general office duties. Requires proficiency in Microsoft Office, Excel, QuickBooks, and five plus years of bookkeeping/payroll experience (accounting degree preferred). No supervisory responsibilities.
- The Accounts Receivable/Payable & Customer Service (Water Clerk) provides customer service, takes service orders, posts payments, coordinates office activities, and performs record keeping. Handles collections and clerical work for the manager. Requires a high school diploma and two to three years secretarial experience. No supervisory responsibilities.
- The Serviceman maintains and repairs water distribution system, responds to calls, repairs meters, finds/marks water lines, turns water service on/off, operates equipment (dump truck, vac trailer, backhoe/track-hoe occasionally), maintains pump stations/reservoirs, collects water samples, conducts chlorine testing, and reads meters. Requires one to two years experience in water distribution/utility construction. Requires Class II Water Operator Certification (within 12 months) and Class B - Type II CDL (within six months). Non-supervisory role.

4.4.2.2 City of Billings Equivalent Roles:

The following is not intended to be a comprehensive list of all the roles within the City, but rather highlights positions that have the greatest potential for a fit for the CWDBH workforce.

- Account Clerk II (Teamsters, Grade 143) & Senior Account Clerk (Teamsters, Grade 154): Perform clerical accounting, financial record keeping, accounts payable, accounts receivable, and customer service. The Senior Account Clerk has more complex duties including financial analysis and reconciliation. These align with the Heights Clerk/Treasurer and Water Clerk roles.
- Systems Maintenance Supervisor (Non-Bargaining, Grade N03): Supervises staff for water and wastewater systems maintenance, repair, and replacement. Handles planning, work verification, and equipment oversight. Requires specific water distribution and crane operator licenses, and a Class A, Type 1 CDL. This is a potential alignment for the Heights Assistant Manager/Operator.
- Field Service Representative (Teamsters, Grade 156): Installs, maintains, tests, repairs, and replaces water meters. Responds to customer complaints, investigates unauthorized water use, and makes collections on delinquent accounts. Requires valid Montana driver's license. This also aligns with the Heights Serviceman duties.
- Maintenance Worker / Equipment Operator (Teamsters, Grade 154/163): Performs maintenance and operates various equipment including dump trucks, sewer jets, front-end loaders, snowplows, and cranes. Maintains/inspects water lines, wastewater lines, manholes, hydrants, valves, and lift stations. Requires Class A, Type 1 CDL (with varying timelines for acquisition). This aligns closely with the Heights Serviceman duties.

4.4.2.3 Skills & Certifications Gaps/Alignments:

Both entities require relevant water operator certifications and Commercial Driver's Licenses (CDLs) for their operational staff. However, the City concretely separates the roles of Equipment Operators/Maintenance Workers (who operate heavy equipment and maintain water/wastewater lines) from Field Service Representatives (who primarily focus on meter services and customer interactions). In contrast, the CWDBH Servicemen perform both types of roles, operating various equipment, conducting meter repairs, and customer service tasks. This mismatch could result in a reluctance among CWDBH employees to take roles with perceived less flexibility or a narrower scope of responsibilities within the City's unionized structure.

4.4.3 Organizational Design Assessment

Integrating the CWDBH employees into the City's Public Works structure presents opportunities to leverage existing frameworks while necessitating careful consideration of cultural and operational integration.

4.4.3.1 Current Structures:

- CWDBH: A relatively flat structure reporting to the General Manager, with roles such as Serviceman and Clerk/Treasurer directly involved in day-to-day operations and customer interaction. The Assistant Manager acts as a supervisor for servicemen.
- The City: Operates with a more extensive organizational structure, which naturally includes various superintendents and supervisors overseeing distinct functional areas (e.g., Distribution and Collection/Meters, Field Service, etc.). This increased hierarchy becomes necessary to manage the complexities and broader scope of a larger municipal utility.

4.4.3.2 Potential Future State:

The exploration of potential future organizational structures for a consolidated entity presents a spectrum of integration strategies. On one end lie approaches favoring complete assimilation, while on the other are models emphasizing a continuation of existing team structures. The three courses of action outlined below represent these fundamental boundaries and a hybrid approach, illustrating distinct philosophies for workforce integration. It is crucial to recognize that numerous hybrid options exist between these poles, and the optimal path for the City and the CWDBH will likely involve exploring these middle-ground solutions through collaborative discussion and negotiation.

- **Course of Action 1: Full Integration**

- CWDBH employees would be strategically integrated and assigned to existing City teams.
- Rationale: This aims to prevent cultural disconnect and foster a unified organizational culture. By embedding new hires directly within existing City teams, it facilitates quicker familiarization with City equipment, standard operating procedures, and established ways of working. This approach also directly supports cross-training initiatives, ensuring new employees gain broad exposure to the City's water utility operations and that existing City employees benefit from the skills and knowledge of the CWDBH employees. It also aligns with the City's current operational model, where crews are not geographically focused.

- **Course of Action 2: Geographical Focus**

- Under this alternative, the CWDBH employees would largely remain together, forming a geographically focused "Heights Water Operations Team" under the City's Public Works umbrella. This unit would primarily be responsible for maintaining and servicing customers within the former CWDBH service territory.
- Rationale: This course of action could capitalize on the CWDBH's strong existing team cohesion, low turnover, and direct rapport with their customer base. It could potentially ease the transition for CWDBH employees reluctant to join the City by maintaining a sense of continuity and a familiar work environment.

- **Course of Action 3: Hybrid**

- This blended approach proposes an initial period where the CWDBH operational teams largely remain intact, geographically focused on servicing the Heights area

under the City's oversight for a defined duration (e.g., one year). This allows for continuity of service and gradual adaptation for employees. Following this, a structured transition period would commence. During this phase, CWDBH -based personnel would rotate through various City operational crews, gaining exposure to different equipment and workflows across the broader City system. Concurrently, City crews would rotate into the CWDBH geographical region, fostering mutual understanding of infrastructure specifics and customer needs. After this rotational period, full integration would occur, with all personnel deployed based on operational need across the entire consolidated service area.

- Rationale: This time-based approach addresses both cultural assimilation and potential resistance to immediate, full integration. The initial period of stability can help build trust and allow for knowledge transfer. The subsequent rotational phase provides practical cross-training and exposure, encouraging inter-team collaboration and breaking down perceived "separate and other" identities. This gradual embedding fosters a more organic cultural assimilation, preparing both groups for a fully unified operational model while ensuring no interruption to service.

4.5 CONCLUSIONS AND RECOMMENDATIONS

A potential consolidation of the CWDBH into the City Utility could present a unique set of opportunities and challenges related to staffing. While strategic and operational alignments are strong, a critical hurdle lies in workforce integration, particularly navigating the cultural differences between the two utilities and the impact of the City's unionized environment on the CWDBH non-union employees.

The following are recommendations that the CWDBH and City may wish to consider if there is a decision to proceed with a consolidation of the utilities. These recommendations are presented in timeline-dependent "buckets" to guide both organizations through what would be a complex transition. The prioritization and sequence of these activities will need to be further investigated and incorporated into a time-phased roadmap, with a strong emphasis on proactive and transparent communication.

4.5.1 Early-Transaction

This period would start as soon as the transaction is approved.

4.5.1.1 Additional Detailed Workforce Analysis:

While this initial assessment provided a high-level overview, a successful and seamless consolidation will require a more granular understanding of specific workforce elements. Key areas for deeper, subsequent analysis include:

- Detailed Role, Skill, and Competency Evaluation: Beyond a high-level organizational review, specific roles, skills, and competencies should be mapped at the individual employee level to inform optimal placement and development needs.

- Detailed Workforce Transition Plan Development: Crafting specific, actionable plans for the transition of the CWDBH employees, including identifying precise new organizational placements and reporting structures.
- Full Training Needs Assessment and Professional Development Plans: A comprehensive analysis of all required training, certification updates, and professional development pathways necessary for the newly integrated staff.

These in-depth analyses are crucial for moving from strategic understanding to operational execution, minimizing unforeseen challenges, and ensuring the long-term success of the consolidated water utility. They will provide the necessary details to inform equitable decisions and precise implementation.

4.5.1.2 Confirm Compensation and Benefit Comparisons

- Conduct an exhaustive analysis of both organizations' compensation packages to quantify the financial impact on transferring employees and potential costs to the City. Explore options like buyouts, benefit bridging, or enhanced contributions to mitigate any perceived loss of benefits.
- Clarify with the union whether the CWDBH employees, upon consolidation, will be considered "new hires" for the purpose of longevity pay. Attempt to negotiate for existing CWDBH employee tenure to be recognized for longevity pay purposes to avoid a loss of benefit.

Compensation and benefits are significant drivers of employee satisfaction and retention. Addressing these disparities transparently and equitably is paramount to attracting and retaining valuable experience in the CWDBH staff.

4.5.1.3 Design Communication(s) / Talking Points for Immediate Outreach to the CWDBH team:

- Develop a joint communication strategy with City HR, Public Works leadership, and a designated, trusted CWDBH representative to deliver clear, consistent, and empathetic messages.
- Messages must directly address employee concerns about the union transition, job security, benefits, and seniority, offering realistic expectations while highlighting potential opportunities. Acknowledge and validate their concerns about cultural change.

Lack of communication and uncertainty will negatively impact morale. Proactive and transparent communication is critical to counter negative perceptions and build trust.

4.5.1.4 Conduct Comprehensive and Structured Interviews with the CWDBH Team:

- Conduct in-depth, one-on-one interviews with each CWDBH employee. Focus on understanding their full skill sets, experience, certifications, career aspirations, and specific concerns about the transition.

This will provide crucial data for role mapping, training needs assessment, and identifying "best-fit" individuals. It also serves as a direct engagement mechanism to gather feedback and begin building rapport.

4.5.1.5 Confirm Employment Options for CWDBH Team Members within the City (Beyond Direct Transfer):

- Clearly define and communicate any options for CWDBH employees to transfer to other City departments if they are unwilling to join the union or if their skills do not align with the consolidated water utility's needs.

Formalizing alternative pathways may alleviate some anxiety for those strongly opposed to unionization, while managing the risk of losing valuable talent.

4.5.2 Transaction

This period is defined as activities that can start with confirmation of the successful transaction.

4.5.2.1 Negotiate a "Seniority Bridge" or Specific Integration Agreement with Teamsters Local 190:

- Work with the Teamsters to define how the CWDBH employees' prior years of service will be recognized within the City's seniority system. Options might include grandfathering their service, a pro-rata calculation, or a specific agreement for placement on seniority lists that mitigates the "bottom of the pile" impact for overtime and vacation picks.

Failure to address the seniority issue equitably will likely result in significant talent loss, morale, and negatively impact post-consolidation operational capability.

4.5.2.2 Create and Launch a Comprehensive Onboarding Program Tailored for the CWDBH Employees:

- This program must go beyond basic HR onboarding. It should specifically cover:
 - Detailed review of the Teamsters Agreement (relevant articles on work rules, overtime, grievance procedures, shifts, breaks, benefits).
 - City-specific operational procedures, safety protocols, and equipment.
 - Training on City billing systems and customer service protocols.
 - Clarification of roles and responsibilities within the City's organizational structure.

This onboarding program is critical to ensure the CWDBH personnel quickly understand the City ways of working and integrate efficiently, avoiding operational disruptions.

4.5.2.3 Conduct Public Outreach to Educate Former CWDBH Customers on City Payment Systems:

- Develop a targeted public outreach campaign to proactively inform former CWDBH customers about the City's payment methods, emphasizing the benefits of the City's system (e.g., online payment convenience, streamlined billing for multiple utilities, etc.).

This campaign should address the discontinuation of the drive-through window location and provide clear alternatives for cash payments.

Billing and customer service are primary customer touchpoints. A seamless transition here is critical for maintaining public trust and avoiding customer frustration.

4.5.2.4 Confirm the Day 1 Organizational Structure, Role Definitions, and Salary Levels:

- Based on the detailed interviews, finalize how each CWDBH role will map to existing (or potentially new) City job classifications.

Provides clarity for incoming employees and ensures proper integration into the City's pay structure.

4.5.3 Post-Transaction

This period is defined as activities that can kick off once initial actions have been taken and the new organization begins to stabilize.

4.5.3.1 Launch Cross-Training Curriculum for All City Water Utility Team Members (Legacy and New):

- Develop comprehensive cross-training programs that leverage the strengths of both workforces. For example, the CWDBH Servicemen's dual role in water operations and meter services could inform cross-training for City meter servicemen. City's specialized crews could cross-train the Heights staff on specific functional areas.

To enable workforce flexibility and manage the new portfolio of assets in a more optimal manner. It also helps break down cultural barriers.

4.5.3.2 Establish a Joint Labor-Management Committee Focused on Cultural Assimilation:

- Create a dedicated committee with representatives from City management, Teamsters Local 190, and former CWDBH employees. This committee should explicitly focus on addressing ongoing cultural integration challenges, work ethic differences, and fostering a unified team identity.

This provides a formal forum for ongoing dialogue and problem-solving beyond initial integration.

4.5.3.3 Evaluate and Optimize the Organizational Structure Over Time:

- Continuously assess the effectiveness of the integrated organizational structure, adjusting reporting lines, team compositions, and division of labor as skills develop and operational efficiencies are identified.

The best organizational design will change over time as more is learned about the Heights team and collaborative training with City employees occurs. This iterative approach ensures long-term excellence.

4.6 REFERENCES - DOCUMENTS REVIEWED

4.6.1 City of Billings Documents:

- Account Clerk II revised 11162018.pdf (Job Description)
- Billing Office Coordinator 102015.doc (Job Description)
- Distribution and Collection Superintendent 082306.doc (Job Description)
- Field Service Manager Revised May 2019.doc (Job Description)
- Field Service Representative 022017 formatted 01-2023.doc (Job Description)
- Maintenance Worker Equip. Operator-MW Revised 06-2021 FINAL.doc (Job Description)
- Org chart.docx (City of Billings Public Works Organizational Chart)
- Senior Account Clerk-PUD 091006 Revised 11-25-15.doc (Job Description)
- Senior Equipment Operator Revised 08-2020 FINAL.docx (Job Description)
- Systems Maintenance Supervisor Revised 02-2020 FINAL.doc (Job Description)
- Teamster Agreement.pdf (Teamsters - Local 190 and City of Billings Agreement)
- Treatment Plant Technician III-WTP Revised 12-16-2021 - draft JD VR LE chngs 01-27-22.doc (Job Description)
- Water Treatment Manager WTP - LE Review 8-1-22.doc (Job Description)

4.6.2 County Water District of Billings Heights Documents:

- 2022.02.16 Signed General Manager contract.docx (Employment Agreement)
- Assistant Manager Job Description.doc (Job Description)
- Clerk Treasurer Job Description.pdf (Job Description)
- CWDBH Financial Targets and Goals Policy Draft Rev 02-04-2025.pdf (Financial Policies and Targets)
- CWDBH History Rev 01-102925.pptx (History and Operational Details)
- CWDBH Mission Statement Draft 12-13-2024.docx (Mission Statement)
- Serviceman Job Description.pdf (Job Description)
- Vision Mission Strategies Goals CWDBH Rev 03-06-2025.pdf (Vision, Mission, Strategies, Goals)
- Water Clerk Job Description.pdf (Job Description)
- CWDBH Organization Chart 11-01-2024_for TM4.ppt

TECHNICAL MEMORANDUM 5

Financial Considerations

City of Billings

W.O. 24-41: Heights Water – Consolidation Study

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5.1 INTRODUCTION

The City of Billings (City) and the County Water District of Billings Heights (CWDBH) are exploring the potential feasibility of consolidating the CWDBH into the City's utility and service area. The purpose of this Study is to provide a high-level indication of whether a consolidated utility could offer opportunities for cost savings, and therefore, reduced costs to customers served by both utilities. This technical memorandum summarizes the results of an analysis of the City's and CWDBH's projected revenues and expenses under current (Status Quo) conditions compared to a high-level projection of potential revenues and costs under a hypothetical "Consolidated Utility". The financial feasibility analysis was initiated during the City's and CWDBH's fiscal year (FY) 2025, and therefore, FY 2025 is shown as the initial year of the analysis. The analysis reflects a 10-year study period (Study Period), FY 2025 – FY 2034, with a conceptual transition to a Consolidated Utility beginning FY 2028 (for the City – Consolidated scenario).

5.2 SUMMARY OF ANALYSIS

The Financial Considerations analysis summarized herein allows the comparison of the cashflows of CWDBH and the City over a 10-year Study Period, including projected revenue increases required to fund all costs with a City – Consolidated scenario, whereby the City would absorb the CWDBH, including the service area and customers, utility system, and assets, including available cash reserves. The purpose of the analysis is to determine whether, based upon this hypothetical analysis, a consolidation of the two utilities could feasibly allow for the provision of service at a lower cost to customers.

Key results include:

- **CWDBH - Status Quo:** Rates are projected to be required to increase 18% per year in FY 2027 and FY 2028, followed by additional annual increases ranging from 3 – 5% per year for FY 2029 – FY 2034.
- **City – Status Quo:** The City's adopted rates through FY 2027 are reflected in the Study. For FY 2028 and beyond, based on the City's 10-year financial plan, the City's projected Retail rate increases of 2.5% - 3.0% per year will be adequate to fund their projected expenses over the Study Period. Projected increases also include a 19% projected increase in FY 2028 for Resale-District, followed by 2.5% annual increases.
- **City – Consolidated:** Under a consolidation, the City's revenues under existing rates (adopted rates through FY 2027) would be nearly the same as under the City – Status Quo scenario. However, due to the additional costs projected to be incurred in serving a larger service area, projected revenue increases in FY 2028 – 2034 would be higher than under City-Status Quo.
 - **User Charge Revenues:** Retail customer revenue would increase due to the increase in customer base, but the City would also have a revenue offset as it would no longer be selling treated water to the CWDBH on a wholesale basis under the existing agreement between the two utilities. In total, revenue under existing rates (including the City's adopted rates through FY 2027) is projected to be

approximately the same under a consolidation as under existing conditions. Table 5-1 shows a comparison of user charge revenue under existing rates for the City – Status Quo and City – Consolidated scenarios.

Table 5-1 – Comparison of City User Charge Revenue Under Adopted Rates
(Adopted through FY 2027) - Status Quo and Consolidated

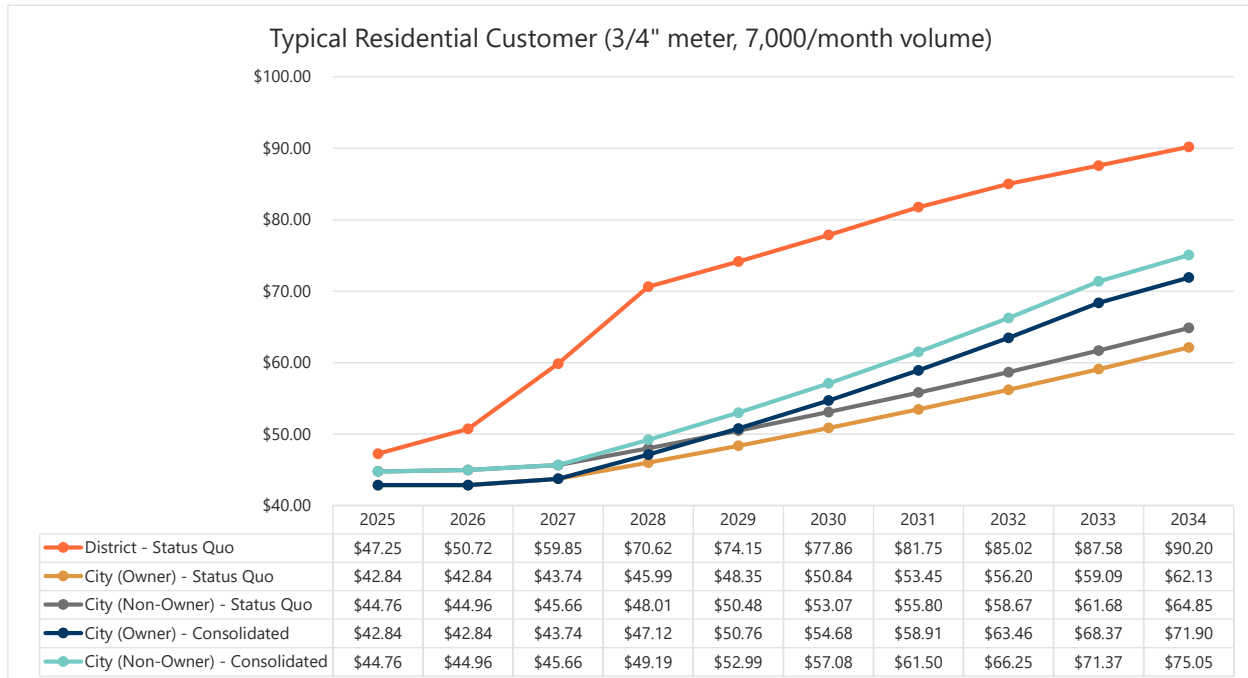
Line No.		City User Charge Rev. (Status Quo)	City User Charge Rev. (Consolidation)	Incr. / (Decr.) over Status Quo
1	2025	\$ 32,093,000	32,093,000	\$ -
2	2026	\$ 33,726,000	33,726,000	\$ -
3	2027	\$ 35,567,000	35,567,000	\$ -
4	2028	\$ 35,741,200	35,773,700	\$ 32,500
5	2029	\$ 35,892,700	35,943,700	\$ 51,000
6	2030	\$ 36,044,900	36,115,100	\$ 70,200
7	2031	\$ 36,198,000	36,286,800	\$ 88,800
8	2032	\$ 36,352,000	36,459,800	\$ 107,800
9	2033	\$ 36,506,600	36,633,200	\$ 126,600
9	2034	\$ 36,662,000	36,807,900	\$ 145,900

- **Operation & Maintenance Expenses:** The City would experience increased costs due to the expanded service area. This analysis has assumed a conservative assumption that all CWDBH employees would join the City as utility employees, an annual cost provided by the City, that reflects bringing all employees into the City at the highest City rate. In reality, it is possible that some employees may choose not to make the transition. The City may also choose not to replace existing City and/or District employees who may retire or otherwise leave the utility, and/or some employees may find opportunities elsewhere within the City. As such, the operating costs reflected in the City – Consolidated scenario may be higher than those experienced over the Study Period. To the extent costs may be lower than projected, the operating results under this scenario would be further improved.
- **Capital Improvement Program:** The City's CIP would increase compared to the City – Status Quo CIP. It would not be required to complete all the projects in the CWDBH – Status Quo scenario, but would require increased investment in main replacement to be consistent with the City's replacement policy. In addition, the City would be required to complete a SCADA modification/upgrade and replace meters in the CWDBH service area to allow compatibility with the City's systems.
- **Increased Debt:** To provide an apples/apples comparison with the City – Status Quo scenario, no additional debt is assumed. This results in an increase in cash required to fund the increase in capital costs.

- **Projected Rate Increases:** The City – Consolidated scenario requires higher rate increases than projected under the City – Status Quo scenario, to provide adequate funding of all operating and capital costs, with 5.1% annual increases in FY 2028 – FY 2033, and a 2.6% increase in FY 2034.

Figure 5-1 shows a comparison of monthly bills over the Study Period for a typical Residential customer with a ¾" meter and 7,000 gallons per month of water usage.

Figure 5-1 – Residential Typical Monthly Bill Comparison



5.2.1 Partial Consolidation

The consolidation of the two utilities, reflecting a scenario whereby the City would serve all the customers within the City's jurisdictional boundaries, and the CWDBH would continue to serve customers outside City limits, was considered at a conceptual level. Because the majority of CWDBH's customers are within the City, a partial consolidation would result in the CWDBH serving a very small, less densely populated service area, losing approximately 87% of the customer base and associated user charge revenue, while experiencing only a small reduction in operating costs, due to the loss of economies of scale, in order to maintain the same level of service to remaining customers. For the City, a partial consolidation would allow all citizens within City limits to be served by the same water provider, consistent with a full consolidation scenario. The City and CWDBH would maintain or enter into a new agreement for the provision of purchased water to serve the smaller CWDBH. Overall, given the loss of economies of scale and the resulting impact on revenues and expenses of the CWDBH, it does not appear that a partial consolidation would be in the best financial interest of customers.

5.3 CWDBH - STATUS QUO

The CWDBH - Status Quo financial plan assumes no changes to CWDBH ownership or operation, and is based on billing data, revenue, and expense data provided by the CWDBH. Assumptions have been made to project revenues and expenses, along with projected revenue increases necessary to maintain the CWDBH's existing financial condition, based on key financial metrics and the CWDBH's fiscal year (FY) ending June 30. The initial year for the CWDBH Status Quo financial plan is FY 2025 and reflects a FY 2025 – FY 2034 study period (Study Period).

5.3.1 Projected Revenue

Revenue from user charges and other miscellaneous sources of revenue was projected based on the following data and assumptions:

- **User Charge Revenue**
 - **Customer Growth:** 1.0%/year, all customer classes
 - **Average Volume per Customer:** 5% reduction in volume/customer in FY26, anticipating increased conservation considering increased rates to recover the increased cost of purchased water in FY 2026 and FY 2027. No further change in volume/customer is projected, assuming a leveling off of customer impact thereafter.
 - **Rate Structure:** Projected revenues reflect the CWDBH's existing rates, effective December 1, 2023 and FY 2026 rate structure, effective August 1, as shown in Tables 5-2 and 5-3, respectively.
 - **User Charge Revenue Under Existing Rates:** Projected user charge revenue under existing rates is summarized on Table 5-4.
- **Other Revenue:** Revenue from sources other than user charges includes the following.
 - **Miscellaneous Revenue:** Revenue from miscellaneous fees and charges is escalated at 1.0%/year, as shown in Table 5-5.
 - **Interest Income:** Calculated based on average fund balance and 1.0% interest rate.

5.3.2 Projected Revenue Requirements

CWDBH expenses, including operation and maintenance expenses and funding of the capital improvement program were projected, utilizing the following data and assumptions:

- **Operation & Maintenance (O&M) Costs:** Projected O&M expenses are shown in Table 5-6. O&M is based on the CWDBH's FY 2025 and FY 2026 operating budgets. FY 2027 – FY 2034 reflects cost escalation in alignment with the City's assumed cost escalation (discussed later in this technical memorandum). Purchased Water cost reflects the City's projected increases for the Resale/CWDBH rate.
- **Capital Improvement Program (CIP):** The CIP shown on Table 5-7 reflects capital projects, costs, and schedule based on the CWDBH's FY 2026 budget, Technical Memorandum 3 (TM3), the CWDBH's 2023 Rate Study, the CWDBH's analysis of AC Pipe Replacement and discussions with CWDBH management. Capital costs are escalated by 3.0% per year.

- **Existing and Proposed Debt Service:** Shown on Table 5-8, principal and interest on outstanding debt include 2011 B Series, 2016 C Series, and 2017 A Series debt issuances. Future debt service assumes the issuance of State Revolving Fund (SRF) loans through the Montana Department of Natural Resources and Conservation, reflecting a 30-year life, 2.0% interest cost, 1% issuance cost, and equal annual principal and interest (P&I) payments.
- **Capital Funding:** Table 5-9 summarizes the sources of funding projected for use in funding the CIP. As shown, \$10,962,100 in SRF loans are projected over the Study Period to finance a portion of the CIP. The remainder of the CIP is projected to be funded from available cash from annual revenues and Investment funds available at the beginning of the Study Period (discussed below).

5.3.3 CWDBH - Status Quo Cashflow

The projected cashflow reflecting the CWDBH – Status Quo scenario is shown in Table 5-10.

- **Revenues:**
 - **User charge revenue:** Revenue under existing rates is shown on Line 1. Line 2 reflects additional revenue projected based on assumed rate increases each year, as shown on Line 27. All projected increases are assumed to become effective July 1.
 - **Other revenues:** Other revenues include Investment Earnings, reflecting 1% earnings on average fund balance, and miscellaneous revenue as shown in Table 5-5.
- **Uses of Funds:** Uses of funds include O&M and Debt Service on existing and proposed debt, as shown on Lines 8-15.
- **FY 2025 Beginning Balance:** Beginning fund balance shown on Line 17 of Table 5-10 includes FY 2024 End of Year Cash and Cash Equivalents = \$1,062,537 plus Non-Current Assets, including Cash & Cash Equivalents-Restricted and Investments = \$7,013,924. Non-Current Assets were included to allow calculation of interest income on investment fund balance. Investment funds are assumed to be available, or will become available, for funding capital projects over the Study Period.
- **Projected Required Revenue Increases:** Line 27 summarizes the annual increase in revenue required from user charge revenues to fund all operating costs and the CIP, and maintain targeted fund balance. Because the CWDBH has little outstanding debt, debt service coverage (DSC) shown on Line 26 does not influence the projected revenue increases. As shown, 18% increases are projected for FY 2027 and FY 2028. 5% increases are projected annually in FY 2029 – 2031, a 4% increase in FY 2032, and 3% increases in FY 2033-2034. The cumulated increase in revenues from user charges over the Study Period is 77.8%.

Table 5-2 – CWDBH FY 2025 User Charge Rates

FY 2025 Rates									
Monthly Meter Charge *		Volumetric Rates (\$/1,000 gal)							
		Residential		Commercial		Irrigation		Bulk Resale	
		Volume Charge (\$/1,000 gal)		Volume Charge (\$/1,000 gal)		Volume Charge (\$/1,000 gal)		Volume Charge (\$/1,000 gal)	
5/8"	\$ 19.70	Tier 1 (0-4kgal)	\$ 3.25	Tier 1 (0-10kgal)	\$ 4.20	Irrigation-Only	\$ 7.50	Bulk Resale	\$ 6.30
3/4"	19.70	Tier 2 (4.01-20kgal)	4.85	Tier 2 (10.01-100kgal)	4.60				
1"	28.10	Tier 3 (20.01-40kgal)	7.10	Tier 3 (100.01-500kga	5.00				
1 1/2"	51.20	Tier 4 (>40 kgal)	9.50	Tier 4 (>500kgal)	5.30				
2"	78.50								
3"	152.00								
4"	152.00								
6"	464.90								
8"	740.00								

Table 5-3 – CWDBH FY 2026 User Charge Rates

FY 2026 Rates									
Monthly Meter Charge *		Volumetric Rates (\$/1,000 gal)							
		Residential		Commercial		Irrigation		Bulk Resale	
		Volume Charge (\$/1,000 gal)		Volume Charge (\$/1,000 gal)		Volume Charge (\$/1,000 gal)		Volume Charge (\$/1,000 gal)	
5/8"	\$ 19.70	Tier 1 (0-4kgal)	\$ 3.66	Tier 1 (0-10kgal)	\$ 4.73	All Usage	\$ 8.44	All Usage	\$ 7.09
3/4"	19.70	Tier 2 (4.01-20kgal)	5.46	Tier 2 (10.01-100kgal)	5.18				
1"	28.10	Tier 3 (20.01-40kgal)	7.99	Tier 3 (100.01-500kga	5.63				
1 1/2"	51.20	Tier 4 (40.01-75kgal)	10.69	Tier 4 (>500kgal)	5.96				
2"	78.50	Tier 5 (>75kgal)	11.37						
3"	152.00								
4"	152.00								
6"	464.90								
8"	740.00								

Table 5-4 – CWDBH Historical and Projected Accounts, Volume, & Revenue Under Existing Rates

Line No.	Actual	Projected									
	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Estimated Number of Accounts											
Residential	5,543	5,595	5,648	5,701	5,754	5,809	5,863	5,919	5,974	6,031	6,088
Commercial	441	444	447	450	453	457	460	463	466	470	473
Irrigation	60	60	61	62	63	63	64	65	65	66	67
Bulk Resale	6	6	6	6	6	6	6	6	6	6	6
Fire Line	106	108	109	110	111	112	113	114	116	117	118
Total Accounts	6,156	6,213	6,270	6,329	6,387	6,447	6,506	6,567	6,628	6,689	6,751
Billed Volume (1,000 gal)											
Residential	523,629	528,549	506,841	511,605	516,421	521,282	526,188	531,146	536,157	541,212	546,320
Commercial	259,288	261,102	249,817	251,587	253,404	255,221	257,037	258,854	260,671	262,487	264,304
Irrigation	11,222	11,356	10,916	11,043	11,171	11,299	11,426	11,554	11,681	11,809	11,936
Bulk Resale	11,141	11,141	10,584	10,584	10,584	10,584	10,584	10,584	10,584	10,584	10,584
Total Billed Volume	805,280	812,149	778,158	784,819	791,580	798,385	805,235	812,138	819,093	826,092	833,144
User Charge Revenue Under Existing Rates											
1 Residential	\$ 3,628,404	\$ 3,854,600	\$ 4,053,900	\$ 4,110,000	\$ 4,148,300	\$ 4,187,000	\$ 4,226,100	\$ 4,265,600	\$ 4,305,500	\$ 4,345,700	\$ 4,386,400
2 Commercial	1,620,680	1,535,600	1,625,400	1,645,200	1,657,100	1,669,100	1,681,100	1,693,100	1,705,100	1,717,100	1,729,000
3 Irrigation	95,963	101,400	108,000	109,800	111,100	112,400	113,700	115,000	116,300	117,500	118,800
4 Bulk Resale	76,525	76,500	81,000	81,400	81,400	81,400	81,400	81,400	81,400	81,400	81,400
5 Fire Line	71,171	71,900	72,500	73,300	74,000	74,800	75,500	76,200	76,900	77,600	78,300
6 Total User Charge Revenue	\$ 5,492,743	\$ 5,640,000	\$ 5,940,800	\$ 6,019,700	\$ 6,071,900	\$ 6,124,700	\$ 6,177,800	\$ 6,231,300	\$ 6,285,200	\$ 6,339,300	\$ 6,393,900

Table 5-5 – CWDBH Miscellaneous Revenue

Line No.	Projected									
	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Other Revenue										
1 Hydrant Rental	\$ 2,500	\$ 4,033	\$ 4,100	\$ 4,100	\$ 4,100	\$ 4,100	\$ 4,100	\$ 4,100	\$ 4,100	\$ 4,100
2 Service Line Fee	95,800	102,400	105,100	106,100	107,000	108,000	109,000	110,000	111,100	112,100
3 Misc. Water Revenue	14,500	10,795	10,900	11,000	11,100	11,200	11,300	11,400	11,500	11,600
4 Buy-In Fees	-	10,623	10,700	10,800	10,900	11,000	11,100	11,200	11,300	11,400
5 Misc. Charges for Services	25,000	4,943	5,000	5,100	5,200	5,300	5,400	5,500	5,600	5,700
6 Inspection Fees	4,200	25,465	25,700	26,000	26,300	26,600	26,900	27,200	27,500	27,800
7 Total Other Revenue	\$ 142,000	\$ 158,259	\$ 161,500	\$ 163,100	\$ 164,600	\$ 166,200	\$ 167,800	\$ 169,400	\$ 171,100	\$ 172,700

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Table 5-6 – CWDBH Historical, Budgeted, and Projected Operation & Maintenance Expense

Line No.	Historical			Budget	Projected							
	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
1 Water Purchased	\$ 3,026,106	\$ 2,692,003	\$ 2,925,130	\$ 3,715,841	\$ 4,772,800	\$ 5,679,600	\$ 5,821,600	\$ 5,967,100	\$ 6,116,300	\$ 6,269,200	\$ 6,425,900	\$ 6,586,500
2 Salary	286,199	278,159	291,928	349,637	356,600	363,700	371,000	378,400	386,000	393,700	401,600	409,600
3 Directors Fees	23,776	9,780	8,400	9,600	9,800	10,000	10,200	10,400	10,600	10,800	11,000	11,200
4 FICA - SS/Medicare	21,894	20,615	21,635	25,732	26,200	26,700	27,200	27,700	28,300	28,900	29,500	30,100
5 Unemployment	908	918	963	1,165	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200
6 Retirement Benefits	20,575	19,889	20,874	18,969	19,300	19,700	20,100	20,500	20,900	21,300	21,700	22,100
7 Employee Insurance	100,134	90,391	94,865	89,532	91,300	93,100	95,000	96,900	98,800	100,800	102,800	104,900
8 Salary Water	320,449	296,077	310,733	342,279	349,100	356,100	363,200	370,500	377,900	385,500	393,200	401,100
9 FICA - SS/Medicare Water	23,713	22,623	23,743	25,932	26,500	27,000	27,500	28,100	28,700	29,300	29,900	30,500
10 Unemployment Water	3,000	1,446	1,518	1,333	1,400	1,400	1,400	1,400	1,400	1,400	1,400	1,400
11 Workers Comp	10,313	7,354	7,718	8,152	8,300	8,500	8,700	8,900	9,100	9,300	9,500	9,700
12 Retirement Benefits Water	28,105	27,724	29,096	28,060	28,600	29,200	29,800	30,400	31,000	31,600	32,200	32,800
13 Employee Insurance Water	112,546	115,019	120,712	118,856	121,200	123,600	126,100	128,600	131,200	133,800	136,500	139,200
14 Payroll Taxes	4,596	75	-	1,075	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100
15 Office Supplies & Equip	4,596	15,024	7,200	1,619	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700
16 Operating Supplies	4,789	2,196	2,300	6,619	6,800	6,900	7,000	7,100	7,200	7,300	7,400	7,500
17 Lab and Medical Supplies	317	362	380	1,647	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700
18 Clothing & Uniforms	1,946	-	600	779	800	800	800	800	800	800	800	800
19 Gas, Oil, Fuel	18,875	15,589	16,500	11,797	12,000	12,200	12,400	12,600	12,900	13,200	13,500	13,800
20 Machinery & Equip Parts	17,285	9,920	10,500	11,283	11,500	11,700	11,900	12,100	12,300	12,500	12,800	13,100
21 Water Main & Line Repair	23,140	19,219	20,310	22,220	22,700	23,200	23,700	24,200	24,700	25,200	25,700	26,200
22 Consumable Tools	1,817	6,171	6,522	1,484	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500
23 Safety Supplies	127	3,261	3,446	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400
24 Communication & Postage	28,441	28,294	30,076	29,811	30,400	31,000	31,600	32,200	32,800	33,500	34,200	34,900
25 Printing & Forms	1,879	2,420	2,572	2,676	2,700	2,800	2,900	3,000	3,100	3,200	3,300	3,400
26 Subscriptions & Legal	855	1,129	1,200	412	400	400	400	400	400	400	400	400
27 Memberships & Dues	2,055	3,830	3,950	3,632	3,700	3,800	3,900	4,000	4,100	4,200	4,300	4,400
28 Certification Renewals	1,070	491	500	425	400	400	400	400	400	400	400	400
29 Electricity	49,096	54,129	58,000	65,786	67,100	68,400	69,800	71,200	72,600	74,100	75,600	77,100
30 Gas	3,699	2,589	2,752	2,315	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400
31 Sewer	1,516	1,325	1,409	2,337	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400
32 Telephone & Internet	3,395	3,702	3,935	3,567	3,600	3,700	3,800	3,900	4,000	4,100	4,200	4,300
33 Cell Phone	2,373	2,151	2,287	2,167	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200
34 Elm-Utilities Underground	5,254	7,046	7,490	4,674	4,800	4,900	5,000	5,100	5,200	5,300	5,400	5,500
35 Permits	103	243	15,000	16,952	17,300	17,600	18,000	18,400	18,800	19,200	19,600	20,000

Table 5-7 – CWDBH Historical, Budgeted, and Projected Operation & Maintenance Expense *(continued)*

Line No.	Historical			Budget	Projected							
	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
36 Billings Alarm	655	936	975	1,205	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200
37 Quality Testing	7,196	9,056	9,840	9,341	9,500	9,700	9,900	10,100	10,300	10,500	10,700	10,900
38 Legal Fees	22,771	43,119	46,853	21,150	21,600	22,000	22,400	22,800	23,300	23,800	24,300	24,800
39 Accounting Fees	14,956	14,000	14,500	22,403	22,900	23,400	23,900	24,400	24,900	25,400	25,900	26,400
40 Engineering Fees	-	26,895	10,000	133,550	136,200	138,900	141,700	144,500	147,400	150,300	153,300	156,400
41 Data Processing Services	49,578	53,599	55,000	32,729	33,400	34,100	34,800	35,500	36,200	36,900	37,600	38,400
42 Repair & Maint. Contract	21,801	78,314	82,000	38,987	39,800	40,600	41,400	42,200	43,000	43,900	44,800	45,700
43 Meters Repair & Maintenance	51,593	45,016	52,000	117,773	120,100	122,500	125,000	127,500	130,100	132,700	135,400	138,100
44 Building Maintenance	-	-	-	646	700	700	700	700	700	700	700	700
45 Travel & Lodging	1,355	1,350	1,500	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400
46 Training & Tuition	1,392	1,974	2,500	2,734	2,800	2,900	3,000	3,100	3,200	3,300	3,400	3,500
47 Concrete	5,351	6,720	7,000	16,068	16,400	16,700	17,000	17,300	17,600	18,000	18,400	18,800
48 Gravel & Sand	3,203	2,609	3,000	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500
49 Asphalt & Cold Mix	15,660	17,275	18,400	16,012	16,300	16,600	16,900	17,200	17,500	17,900	18,300	18,700
50 Business Insurance	81,132	96,557	103,000	102,954	105,000	107,100	109,200	111,400	113,600	115,900	118,200	120,600
51 Equipment Rental	-	900	1,000	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200
52 Bank Service Charges	8,178	11,868	12,000	3,900	4,000	4,100	4,200	4,300	4,400	4,500	4,600	4,700
53 Taxes	7,897	15,595	16,500	8,881	9,100	9,300	9,500	9,700	9,900	10,100	10,300	10,500
54 DEQ Service Connection Fee	11,962	12,030	12,752	12,300	12,500	12,800	13,100	13,400	13,700	14,000	14,300	14,600
55 Interest	104,470	85,111	75,000	-	-	-	-	-	-	-	-	-
56 Losses (Bad Debt)	-	-	-	-	-	-	-	-	-	-	-	-
57 Miscellaneous	-	-	-	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400
58 Bank Reconciliation-Cash	(3,776)	1,102	1,200	-	-	-	-	-	-	-	-	-
59 Total O&M	\$ 4,560,316	\$ 4,285,190	\$ 4,579,264	\$ 5,478,895	\$ 6,570,900	\$ 7,513,100	\$ 7,691,400	\$ 7,873,700	\$ 8,060,600	\$ 8,252,200	\$ 8,448,300	\$ 8,649,000

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Table 5-8 – CWDBH Capital Improvement Plan (Escalated)

Line No.	Projected										Total
	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	
1 New CWDBH Meter Reaer & PC	\$ -	\$ 15,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 15,000
2 Residential Cellular Meters (180 Units)	-	30,600	-	-	-	-	-	-	-	-	30,600
3 Water Tank Inspection & Repair	-	20,000	-	-	-	-	-	-	-	-	20,000
4 Service Truck (New)	-	30,000	-	-	-	-	-	-	-	-	30,000
5 Service Truck (Repaint)	-	15,000	-	-	-	-	-	-	-	-	15,000
6 Phase I, AC Water Main Replacement Project	-	70,000	1,318,700	1,206,400	1,176,200	1,879,200	1,486,600	-	-	-	7,137,100
7 Miscellaneous	-	24,000	25,500	26,200	27,000	27,800	28,700	29,500	30,400	31,300	250,400
8 NW Pressure Zone (Design, TO28)	-	225,000	-	-	-	-	-	-	-	-	225,000
9 NW or Lake Hills Pressure Zone Selected Solution	-	-	789,300	-	-	-	-	-	-	-	789,300
10 Hilltop Reservoir Improvements	-	-	1,400,400	-	-	-	-	-	-	-	1,400,400
11 Lanier Reservoir Improvements	-	-	-	-	-	1,463,000	-	-	-	-	1,463,000
12 AC Water Main Replacement Project	-	-	-	-	-	-	-	4,876,800	-	-	4,876,800
13 AC Water Main Replacement Project	-	-	-	-	-	-	-	-	5,023,100	-	5,023,100
14 AC Water Main Replacement Project	-	-	-	-	-	-	-	-	-	5,173,800	5,173,800
15 Update GIS Attributes	-	-	158,100	-	-	-	-	-	-	-	158,100
16 GIS: Digital Workflows	-	-	-	-	173,300	-	-	-	-	-	173,300
17 GIS Support/Data Wkflow Maint	-	-	-	-	-	-	800,000	-	-	-	800,000
18 Emergency Generation	-	-	-	83,000	-	-	-	-	-	-	83,000
19 Equipment Storage Building	-	-	913,400	-	-	-	-	-	-	-	913,400
20 Shop Addition with 2-Ton Bridge Crane	-	-	-	-	-	417,300	-	-	-	-	417,300
21 5-year CIP	-	-	-	95,100	-	-	-	-	-	-	95,100
22 Rate Study	-	-	146,400	-	-	-	-	-	-	-	146,400
23 Engineering	438,600	-	-	-	-	-	-	-	-	-	438,600
24 Chlorination Plant	454,800	-	-	-	-	-	-	-	-	-	454,800
25 Total CIP - Escalated	\$ 893,400	\$ 429,600	\$ 4,751,800	\$ 1,410,700	\$ 1,376,500	\$ 3,787,300	\$ 2,315,300	\$ 4,906,300	\$ 5,053,500	\$ 5,205,100	\$ 30,129,500

Table 5-9 – CWDBH Existing & Projected Debt Service

Line No.	Projected									
	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Existing Debt										
1 2011 B	\$ 35,715	\$ 36,800	\$ 35,840	\$ 36,865	\$ 35,845	\$ 36,810	\$ -	\$ -	\$ -	\$ -
2 2016 C	190,638	189,975	190,225	190,375	190,425	190,375	190,225	189,975	191,613	191,113
3 2017 A	139,863	140,263	140,600	139,863	141,063	140,175	141,225	140,188	141,088	139,900
4 Total Existing Debt Service	\$ 366,215	\$ 367,038	\$ 366,665	\$ 367,103	\$ 367,333	\$ 367,360	\$ 331,450	\$ 330,163	\$ 332,700	\$ 331,013
Proposed Debt										
5 SRF Loans	\$ -	\$ -	\$ -	\$ -	\$ 102,000	\$ 102,000	\$ 102,000	\$ 102,000	\$ 102,000	\$ 232,800
6 Revenue Bonds	-	-	-	-	-	-	-	-	-	-
7 Total Proposed Debt Service	\$ -	\$ -	\$ -	\$ -	\$ 102,000	\$ 102,000	\$ 102,000	\$ 102,000	\$ 102,000	\$ 232,800
8 Total Debt Service	\$ 366,215	\$ 367,038	\$ 366,665	\$ 367,103	\$ 469,333	\$ 469,360	\$ 433,450	\$ 432,163	\$ 434,700	\$ 563,813

Table 5-10 – CWDBH Capital Flow of Funds

Line No.	Projected									
	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
1 Beginning Balance - Capital Fund	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Sources of Funds:										
2 SRF Loan Proceeds	\$ -	\$ -	\$ 2,262,100	\$ -	\$ -	\$ -	\$ -	\$ 2,900,000	\$ 2,900,000	\$ 2,900,000
3 Revenue Bond Proceeds	-	-	-	-	-	-	-	-	-	-
4 Other Funding	-	-	-	-	-	-	-	-	-	-
5 Transfer from Operations ¹	893,400	429,600	2,489,700	1,410,700	1,376,500	3,787,300	2,315,300	2,006,300	2,153,500	2,305,100
6 Total Sources of Funds	\$ 893,400	\$ 429,600	\$ 4,751,800	\$ 1,410,700	\$ 1,376,500	\$ 3,787,300	\$ 2,315,300	\$ 4,906,300	\$ 5,053,500	\$ 5,205,100
Uses of Funds:										
7 Total CIP	\$ 893,400	\$ 429,600	\$ 4,751,800	\$ 1,410,700	\$ 1,376,500	\$ 3,787,300	\$ 2,315,300	\$ 4,906,300	\$ 5,053,500	\$ 5,205,100
8 Total Uses of Funds	\$ 893,400	\$ 429,600	\$ 4,751,800	\$ 1,410,700	\$ 1,376,500	\$ 3,787,300	\$ 2,315,300	\$ 4,906,300	\$ 5,053,500	\$ 5,205,100
9 Ending Balance - Capital Fund	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

¹ Includes Investment Funds available for funding capital projects.

Table 5-11 – CWDBH Operating Flow of Funds

Line No.	Projected									
	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Operating Flow of Funds										
1 User Charge Revenue / Existing Rates	\$ 5,640,000	\$ 5,940,800	\$ 6,019,700	\$ 6,071,900	\$ 6,124,700	\$ 6,177,800	\$ 6,231,300	\$ 6,285,200	\$ 6,339,300	\$ 6,393,900
2 Total Projected Additional Revenue	-	-	1,083,500	2,382,600	2,829,700	3,305,900	3,812,700	4,251,000	4,606,400	4,977,300
3 Total Projected User Charge Revenue	\$ 5,640,000	\$ 5,940,800	\$ 7,103,200	\$ 8,454,500	\$ 8,954,400	\$ 9,483,700	\$ 10,044,000	\$ 10,536,200	\$ 10,945,700	\$ 11,371,200
Non-Rate Revenue										
4 Other Revenue	\$ 142,000	\$ 158,300	\$ 161,500	\$ 163,100	\$ 164,600	\$ 166,200	\$ 167,800	\$ 169,400	\$ 171,100	\$ 172,700
5 Investment Earnings	87,200	84,600	84,000	65,200	60,200	58,400	36,100	32,000	33,500	35,100
6 Total Other Revenue	\$ 229,200	\$ 242,900	\$ 245,500	\$ 228,300	\$ 224,800	\$ 224,600	\$ 203,900	\$ 201,400	\$ 204,600	\$ 207,800
7 Total Revenues	\$ 5,869,200	\$ 6,183,700	\$ 7,348,700	\$ 8,682,800	\$ 9,179,200	\$ 9,708,300	\$ 10,247,900	\$ 10,737,600	\$ 11,150,300	\$ 11,579,000
Uses of Funds										
8 Operation & Maintenance Expense	\$ 4,579,300	\$ 5,478,900	\$ 6,570,900	\$ 7,513,100	\$ 7,691,400	\$ 7,873,700	\$ 8,060,600	\$ 8,252,200	\$ 8,448,300	\$ 8,649,000
9 Incremental Additional O&M	-	-	-	-	-	-	-	-	-	-
10 Total O&M	\$ 4,579,300	\$ 5,478,900	\$ 6,570,900	\$ 7,513,100	\$ 7,691,400	\$ 7,873,700	\$ 8,060,600	\$ 8,252,200	\$ 8,448,300	\$ 8,649,000
Debt Service										
11 Existing SRF Loans	\$ 366,200	\$ 367,000	\$ 366,700	\$ 367,100	\$ 367,300	\$ 367,400	\$ 331,500	\$ 330,200	\$ 332,700	\$ 331,000
12 Proposed Revenue Bonds	-	-	-	-	-	-	-	-	-	-
13 Proposed SRF Loans	-	-	-	-	102,000	102,000	102,000	102,000	102,000	232,800
14 Total Debt Service	\$ 366,200	\$ 367,000	\$ 366,700	\$ 367,100	\$ 469,300	\$ 469,400	\$ 433,500	\$ 432,200	\$ 434,700	\$ 563,800
15 Total Revenue Requirements	\$ 4,945,500	\$ 5,845,900	\$ 6,937,600	\$ 7,880,200	\$ 8,160,700	\$ 8,343,100	\$ 8,494,100	\$ 8,684,400	\$ 8,883,000	\$ 9,212,800
16 Annual Operating Balance	\$ 923,700	\$ 337,800	\$ 411,100	\$ 802,600	\$ 1,018,500	\$ 1,365,200	\$ 1,753,800	\$ 2,053,200	\$ 2,267,300	\$ 2,366,200
Fund Balance Sources and Uses										
17 Beginning Balance - Operating Fund ¹	\$ 8,260,800	\$ 8,291,100	\$ 8,199,300	\$ 6,120,700	\$ 5,512,600	\$ 5,154,600	\$ 2,732,500	\$ 2,171,000	\$ 2,217,900	\$ 2,331,700
18 Annual Operating Balance	923,700	337,800	411,100	802,600	1,018,500	1,365,200	1,753,800	2,053,200	2,267,300	2,366,200
19 Transfer (to)/from Capital Fund	(893,400)	(429,600)	(2,489,700)	(1,410,700)	(1,376,500)	(3,787,300)	(2,315,300)	(2,006,300)	(2,153,500)	(2,305,100)
20 Ending Balance - Operating Fund	\$ 8,291,100	\$ 8,199,300	\$ 6,120,700	\$ 5,512,600	\$ 5,154,600	\$ 2,732,500	\$ 2,171,000	\$ 2,217,900	\$ 2,331,700	\$ 2,392,800
21 Ending Balance - # Days OM	661	546	340	268	245	127	98	98	101	101
22 EOY Balance - Target (Days) (excl. restricted \$)	90	90	90	90	90	90	90	90	90	90
23 EOY Balance - Target (\$) ²	\$ 1,313,483	\$ 1,535,383	\$ 1,804,583	\$ 2,036,883	\$ 2,080,883	\$ 2,125,883	\$ 2,171,883	\$ 2,219,183	\$ 2,267,483	\$ 2,316,983
24 Variance (\$)	\$ 6,977,617	\$ 6,663,917	\$ 4,316,117	\$ 3,475,717	\$ 3,073,717	\$ 606,617	\$ (883)	\$ (1,283)	\$ 64,217	\$ 75,817
Debt Service Coverage										
25 Revenues Available for Debt Service	\$ 1,289,900	\$ 704,800	\$ 777,800	\$ 1,169,700	\$ 1,487,800	\$ 1,834,600	\$ 2,187,300	\$ 2,485,400	\$ 2,702,000	\$ 2,930,000
26 Total Debt Service Coverage	3.52	1.92	2.12	3.19	3.17	3.91	5.05	5.75	6.22	5.20
27 Projected Annual Retail Rate Increase ²			18%	18%	5%	5%	5%	4%	3%	3%
28 Months Effective			12	12	12	12	12	12	12	12

¹ Includes Cash & Cash Equivalents and Total Non-Current Assets.

² Includes 90 days O&M plus Non-Current Cash & Cash Equivalents - Restricted.

³ FY 2025 and FY 2026 User Charge Revenue reflects adopted rates.

5.4 CITY - STATUS QUO

The City Status Quo financial plan assumes no change to the City's Service Area and is based on the City's projected Water Utility financial plan provided to 1898 & Co. on June 11, 2025. 1898 & Co. replicated the projections in developing a cashflow to be used in developing the City – Consolidated scenario. The projected financial plan incorporates assumptions developed by the City for the Study Period. The following sections summarize key assumptions used in developing the City – Status Quo cashflow.

5.4.1 Projected Revenue

Revenue from user charges and other miscellaneous sources of revenue was projected based on the following data and assumptions, as provided by the City.

- **User Charge Revenue**
 - **Rate Schedule:** The City's FY 2025, FY 2026, and FY 2027 user charges are summarized in Tables 5-11, 5-12, and 5-13, respectively.
 - **Customer/Volume Growth:** Customers and annual sales volume are projected based on 0.5% per year growth for the Residential, Seasonal, Outside, and Multi-Family customer classes. Non-Residential and Private Fire Hydrant customer classes are projected to remain at the current customer volume value. Resale (CWDBH) volume is projected to increase 1.0% in FY 2028 and 0.5% per year thereafter. Growth rates for all customer classes were provided by the City.
 - **Rate Increases:** Revenue under existing user charges, shown in Table 5-14, reflects the City's adopted rates through FY 2027. The adopted rates reflect an increase in meter charges in FY 2026 of approximately 2% and no change in FY 2027. Single Family Residential volumetric charges in FY 2026 remain at FY 2025 levels, and increase 2.0% in FY 2027. The Commercial volumetric rate increases 2.6% in FY 2026 with no further adjustment in FY 2027. The Resale-District volumetric charge increases 12.2% increase in FY 2026 and 28.4% increase in FY 2027. For FY 2028 and beyond, annual projected rate increases, as shown in the financial plan, are estimated to result in projected total revenue approximately equal to the projected revenue presented in the City's financial plan. Annual 2.6% increases in Retail revenue increases are projected, and for Resale-District, the financial plan includes a 19% expected rate increase followed by annual 2.5% increases thereafter.
- **Interest Income:** Revenue from interest earnings is calculated based on a 2% interest rate (per City) and the average fund balance.
- **Projected Revenue:** Table 5-14 summarizes projected revenue from all sources.

5.4.2 Projected Revenue Requirements

City expenses, including operation and maintenance expenses and funding of the capital improvement program, were projected, utilizing the following data and assumptions:

- **Operation & Maintenance (O&M) Expenses:** Projected O&M expenses were provided by the City for the Study Period. Projected O&M is shown in Table 5-15 and reflects the

City's FY 2025 and FY 2026 operating budgets. FY 2027 – 2034 costs were escalated by the City as follows:

- **Personnel:** 4.0% per year. FY2027 reflects a 5.0% increase over FY 2026 for Service Center Personnel
- **Administration, Distribution Non-Personnel, and Meter Shop Non-Personnel:** 2.0% per year
- **Water Plant Non-Personnel:** 2.0% per year. In addition, adjustments to costs were projected separately as incremental O&M to reflect one-time costs in FY 2026 that would not continue in FY 2027 and beyond, and to reflect increased costs beginning in FY 2027 as the new treatment plant comes online.
- **Service Center Non-Personnel:** Costs escalated 1.0% per year
- **Water Service Line Repair:** Costs escalated 1.0% per year
- **Capital Improvement Program (CIP):** The City-provided CIP, shown in Table 5-16, summarizes projected projects for FY 2026 – 2034. The total projected CIP cost for FY 2025 is shown on Line 22. All costs reflect escalated costs.
- **Existing and Proposed Debt Service:** Shown on Table 5-17, principal and interest on outstanding debt (Lines 1-2) and proposed future debt (Lines 3-5). The proposed debt service reflects the issuance of \$40 million in revenue bonds in FY 2026, with a 20-year life, a 4.4% interest cost, and 1% issuance cost, as provided by the City.
- **Capital Funding:** Table 5-18 summarizes the sources and uses of funding projected for use in funding the CIP. As shown, \$40 million in revenue bond proceeds is projected in FY 2026. Other funding sources include SDF revenues, interest earnings on the capital fund balance, and transfers from Operations.

5.4.3 City - Status Quo Cashflow

The projected cashflow reflecting the City – Status Quo scenario is shown on Table 5-19.

- **Revenues:**
 - **User charge revenue:** Projected Retail User Charge revenues under existing rates, as previously discussed, are shown on Line 1 of Table 5-19. Line 2 reflects additional revenue projected to be required, and is estimated to produce similar increased revenues as the City has projected in its financial plan. Projected annual revenue increases are shown on Line 32. Projected Resale-District revenue under existing rates is shown on Line 4, estimated based on the City's financial plan. Line 5 presents revenue from anticipated rate increases, as shown on Line 35.
 - **Other Revenues:** Other revenues calculated interest earnings and projected miscellaneous revenues provided by the City, as shown on Lines 4-6.
- **Uses of Funds:** Uses of funds include O&M and Debt Service on existing and proposed debt, as shown on Lines 8-16.
- **FY 2025 Beginning Balance:** Total funds available at the beginning of FY 2025, per the City, is \$140.6 million, reflecting both operating and capital reserves. The Operating beginning fund balance shown on Line 18 of Table 5-19 reflects 27% of O&M, in compliance with the City's policy to maintain 27% of O&M in the Operating Fund balance.

All other water utility funds available at the beginning of FY 2025 are shown on Line 1 of Table 5-18.

- **Projected Required Revenue Increases:** As previously stated, Line 28 indicates that no further adjustment to user charge revenue, beyond that projected by the City and reflected in Line 1, is projected to be necessary.

Table 5-12 – City FY 2025 User Charge Rates

FY 2025 Rates			
Inside City		Outside City	
Base Charge by Meter Size (Monthly)		Base Charge by Meter Size (Monthly)	
3/4"	\$ 8.75	3/4"	\$ 9.55
1"	9.95	1"	10.80
1 1/2"	12.05	1 1/2"	13.05
2"	17.20	2"	18.75
3"	53.60	3"	58.25
4"	69.80	4"	75.90
6"	104.70	6"	113.85
8"	143.10	8"	155.55
10"	208.50	10"	231.20
Single Family Residential Volume Charge (\$/1,000 gal)		Single Family Residential Volume Charge (\$/1,000 gal)	
Tier 1 (0-10kgal)	\$ 4.87	Tier 1 (0-10kgal)	\$ 5.03
Tier 2 (11-32kgal)	5.82	Tier 2 (11-32kgal)	6.04
Tier 3 (33-75kgal)	7.57	Tier 3 (33-75kgal)	7.87
Tier 4 (>75kgal)	11.37	Tier 4 (>75kgal)	11.79
Volume Charge (\$/1,000 gal)		Volume Charge (\$/1,000 gal)	
Multi-Family Residential	\$ 4.78	Commercial	\$ 4.22
Commercial	3.97	Resale	3.04
Industrial	4.91		
Seasonal	6.88		

Table 5-13 – City FY 2026 User Charge Rates

FY 2026 Rates			
Inside City		Outside City	
Base Charge by Meter Size (Monthly)		Base Charge by Meter Size (Monthly)	
3/4"	\$ 8.75	3/4"	\$ 9.75
1"	9.95	1"	11.00
1 1/2"	12.05	1 1/2"	13.30
2"	17.20	2"	19.15
3"	53.60	3"	59.40
4"	69.80	4"	77.40
6"	104.70	6"	116.15
8"	143.10	8"	158.65
10"	208.50	10"	235.80
Single Family Residential Volume Charge (\$/1,000 gal)		Single Family Residential Volume Charge (\$/1,000 gal)	
Tier 1 (0-10kgal)	\$ 4.87	Tier 1 (0-10kgal)	\$ 5.03
Tier 2 (11-32kgal)	5.82	Tier 2 (11-32kgal)	6.04
Tier 3 (33-75kgal)	7.57	Tier 3 (33-75kgal)	7.87
Tier 4 (>75kgal)	11.37	Tier 4 (>75kgal)	11.79
Volume Charge (\$/1,000 gal)		Volume Charge (\$/1,000 gal)	
Multi-Family Residential	\$ 4.78	Commercial	\$ 4.33
Commercial	4.07	Resale	3.41
Industrial	5.03		
Seasonal	7.05		

Table 5-14 – City FY 2027 User Charge Rates

FY 2027 Rates			
Inside City		Outside City	
Base Charge by Meter Size (Monthly)		Base Charge by Meter Size (Monthly)	
3/4"	\$ 8.95	3/4"	\$ 9.75
1"	10.15	1"	11.00
1 1/2"	12.30	1 1/2"	13.30
2"	17.55	2"	19.15
3"	54.65	3"	59.40
4"	71.20	4"	77.40
6"	106.80	6"	116.15
8"	145.95	8"	158.65
10"	212.65	10"	235.80
Single Family Residential Volume Charge (\$/1,000 gal)		Single Family Residential Volume Charge (\$/1,000 gal)	
Tier 1 (0-10kgal)	\$ 4.97	Tier 1 (0-10kgal)	\$ 5.13
Tier 2 (11-32kgal)	5.94	Tier 2 (11-32kgal)	6.16
Tier 3 (33-75kgal)	7.72	Tier 3 (33-75kgal)	8.03
Tier 4 (>75kgal)	11.60	Tier 4 (>75kgal)	12.03
Volume Charge (\$/1,000 gal)		Volume Charge (\$/1,000 gal)	
Multi-Family Residential	\$ 4.78	Commercial	\$ 4.33
Commercial	4.07	Resale	4.38
Industrial	5.03		
Seasonal	7.80		

Table 5-15 – City Projected Revenue Under Existing Rates (Includes City Adopted Rate Increases Through FY 2027)

	Projected									
	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
User-Charge Revenue ¹										
Non-Residential Sales	\$ 4,850,000	\$ 4,820,000	\$ 4,850,000	\$ 4,850,000	\$ 4,850,000	\$ 4,850,000	\$ 4,850,000	\$ 4,850,000	\$ 4,850,000	\$ 4,850,000
Residential Sales	17,100,000	16,100,000	16,502,500	16,585,000	16,667,900	16,751,200	16,835,000	16,919,200	17,003,800	17,088,800
Seasonal Sales	2,550,000	2,290,000	2,500,000	2,512,500	2,525,100	2,537,700	2,550,400	2,563,200	2,576,000	2,588,900
Outside Sales	900,000	3,335,000	3,368,350	3,385,200	3,402,100	3,419,100	3,436,200	3,453,400	3,470,700	3,488,100
Multi-Family Sales	3,053,000	3,053,000	3,070,000	3,085,400	3,100,800	3,116,300	3,131,900	3,147,600	3,163,300	3,179,100
Private Fire Hydrant	540,000	545,000	583,150	583,200	583,200	583,200	583,200	583,200	583,200	583,200
Total Retail Sales Revenue	\$ 28,993,000	\$ 30,143,000	\$ 30,874,000	\$ 31,001,300	\$ 31,129,100	\$ 31,257,500	\$ 31,386,700	\$ 31,516,600	\$ 31,647,000	\$ 31,778,100
Resale - Bulk Sale ²	-	-	-	-	-	-	-	-	-	-
Resale - District	3,100,000	3,583,000	4,693,000	4,739,900	4,763,600	4,787,400	4,811,300	4,835,400	4,859,600	4,883,900
Total Resale Sales Revenue	\$ 3,100,000	\$ 3,583,000	\$ 4,693,000	\$ 4,739,900	\$ 4,763,600	\$ 4,787,400	\$ 4,811,300	\$ 4,835,400	\$ 4,859,600	\$ 4,883,900
Total User Charge Revenue	\$ 32,093,000	\$ 33,726,000	\$ 35,567,000	\$ 35,741,200	\$ 35,892,700	\$ 36,044,900	\$ 36,198,000	\$ 36,352,000	\$ 36,506,600	\$ 36,662,000
Other Revenue										
Non-Rate Revenues	\$ 1,442,300	\$ 995,000	\$ 1,024,900	\$ 1,055,600	\$ 1,087,300	\$ 1,119,900	\$ 1,153,500	\$ 1,188,100	\$ 1,223,700	\$ 1,260,400
Interest Revenues ³	1,920,700	781,000	664,900	570,900	472,400	374,800	344,300	319,600	287,500	271,200
Total Other Revenue	\$ 3,363,000	\$ 1,776,000	\$ 1,689,800	\$ 1,626,500	\$ 1,559,700	\$ 1,494,700	\$ 1,497,800	\$ 1,507,700	\$ 1,511,200	\$ 1,531,600

¹ Revenue reflects adopted rates through FY 2027. Projected revenue for FY 2028 and beyond reflects projected growth and FY 2027 rates.

² Included in Non-Residential.

³ Calculated based on average operating fund balance plus average capital fund balance, 2% interest earnings rate.

Technical Memorandum 5 – Financial Considerations

Table 5-16 – City Projected O&M

Line No.	Projected									
	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
1 Administration O&M	\$ 3,330,600	\$ 3,229,100	\$ 2,943,700	\$ 3,002,600	\$ 3,062,700	\$ 3,123,900	\$ 3,186,400	\$ 3,250,100	\$ 3,315,100	\$ 3,381,400
2 Service Center Personnel	73,300	75,500	79,300	82,500	85,800	89,200	92,800	96,500	100,400	104,400
3 Service Center O&M	229,100	219,400	221,600	223,800	226,000	228,300	230,600	232,900	235,200	237,600
4 Water Plant Personnel	2,661,700	3,015,800	3,136,400	3,261,900	3,392,400	3,528,100	3,669,200	3,816,000	3,968,600	4,127,300
5 Water Plant O&M	4,861,600	7,904,400	6,020,900	7,491,300	7,641,100	7,794,000	7,949,900	8,108,900	8,271,000	8,436,400
6 Distribution Personnel	1,551,100	1,764,800	1,835,400	1,908,800	1,985,200	2,064,600	2,147,200	2,233,100	2,322,400	2,415,300
7 Distribution O&M	1,147,400	1,101,000	1,123,000	1,145,500	1,168,400	1,191,800	1,215,600	1,239,900	1,264,700	1,290,000
8 Meter Shop Personnel	825,800	863,400	897,900	933,800	971,200	1,010,000	1,050,400	1,092,400	1,136,100	1,181,500
9 Meter Shop O&M	1,245,700	1,338,900	1,365,700	1,393,000	1,420,900	1,449,300	1,478,300	1,507,900	1,538,100	1,568,900
10 Water Service Line Repair	442,600	350,000	353,500	357,000	360,600	364,200	367,800	371,500	375,200	379,000
11 BBWA Contribution	-	-	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000
12 Total O&M	\$ 16,368,900	\$ 19,862,300	\$ 18,127,400	\$ 19,950,200	\$ 20,464,300	\$ 20,993,400	\$ 21,538,200	\$ 22,099,200	\$ 22,676,800	\$ 23,271,800

Table 5-17 – City Capital Improvement Plan (Escalated)

Line No.	Projected										Total
	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	
1 West End Reservoir	\$ -	\$ 50,000,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 50,000,000
2 Water Main Replacements	-	6,315,000	6,320,000	7,740,000	8,000,000	8,800,000	9,270,000	9,548,000	9,800,000	10,094,000	75,887,000
3 Compensation Agreements (oversized lines)	-	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	2,700,000
4 Equipment Replacements	-	1,134,377	556,000	874,000	874,000	220,000	778,000	191,000	195,000	1,256,000	6,078,377
5 New Equipment	-	80,000	80,000	80,000	80,000	80,000	80,000	400,000	80,000	1,400,000	2,360,000
6 Water Plant Electrical Improvements	-	200,000	500,000	315,000	325,000	250,000	350,000	325,000	325,000	350,000	2,940,000
7 Waterline extensions	-	1,000,000	1,000,000	1,000,000	-	-	-	-	-	-	3,000,000
8 Daniels to Moore Ln Water extension	-	85,000	720,000	-	-	-	-	-	-	-	805,000
9 Water Treatment Plant Air Scour Line Replacement	-	1,050,000	-	-	-	-	-	-	-	-	1,050,000
10 Water Treatment Plant Post Chlorination Improvements	-	105,000	-	-	-	-	-	-	-	-	105,000
11 Zone 1 Water Storage Improvements	-	-	7,200,000	-	-	-	-	-	-	-	7,200,000
12 Grand Avenue Water Extension	-	-	700,000	-	-	-	-	-	-	-	700,000
13 Water Treatment Plant Leaks Mitigation	-	-	-	2,200,000	-	-	-	-	-	-	2,200,000
14 Zone 6 Storage and Looping Improvements	-	-	-	1,100,000	10,400,000	-	-	-	-	-	11,500,000
15 Skyway Drive Water Line Loop	-	-	-	-	300,000	2,900,000	-	-	-	-	3,200,000
16 Water Treatment Plant 750kW Solar PV Generation	-	-	-	-	-	1,010,000	-	-	-	-	1,010,000
17 South 32nd St W/I-90/S Frontage Loop	-	-	-	-	-	325,000	-	3,300,000	-	-	3,625,000
18 Water - Fox Reservoir #1 Replacement	-	-	-	-	-	440,000	4,050,000	-	-	-	4,490,000
19 Water Treatment Plant Facility Plan	-	-	-	-	-	-	-	350,000	-	-	350,000
20 Staples	-	-	-	-	-	-	-	700,000	6,300,000	-	7,000,000
21 Water Storage Improvements Zone 4	-	-	-	-	-	-	-	-	-	1,600,000	1,600,000
22 FY 2025 CIP	124,289,262	-	-	-	-	-	-	-	-	-	124,289,262
23 Total CIP	\$ 124,289,262	\$ 60,269,377	\$ 17,376,000	\$ 13,609,000	\$ 20,279,000	\$ 14,325,000	\$ 14,828,000	\$ 15,114,000	\$ 17,000,000	\$ 15,000,000	\$ 312,089,639

Table 5-18 – City Existing & Projected Debt Service

Line No.	Projected									
	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Existing Debt										
1 Existing Principal & Interest	\$ 6,334,100	\$ 6,334,100	\$ 6,331,200	\$ 6,332,300	\$ 6,334,900	\$ 6,331,700	\$ 6,331,800	\$ 6,333,700	\$ 6,333,200	\$ 6,334,200
2 Total Existing Debt Service	\$ 6,334,100	\$ 6,334,100	\$ 6,331,200	\$ 6,332,300	\$ 6,334,900	\$ 6,331,700	\$ 6,331,800	\$ 6,333,700	\$ 6,333,200	\$ 6,334,200
Proposed Debt										
3 Proposed Revenue Bonds	\$ -	\$ 1,485,000	\$ 2,973,000	\$ 2,973,000	\$ 2,973,000	\$ 2,973,000	\$ 2,973,000	\$ 2,973,000	\$ 2,973,000	\$ 2,973,000
4 Proposed G.O. Bonds	-	-	-	-	-	-	-	-	-	-
5 Proposed SRF Loans	-	-	-	-	-	-	-	-	-	-
6 Total Proposed Debt Service	\$ -	\$ 1,485,000	\$ 2,973,000	\$ 2,973,000	\$ 2,973,000	\$ 2,973,000	\$ 2,973,000	\$ 2,973,000	\$ 2,973,000	\$ 2,973,000
7 Total Debt Service	\$ 6,334,100	\$ 7,819,100	\$ 9,304,200	\$ 9,305,300	\$ 9,307,900	\$ 9,304,700	\$ 9,304,800	\$ 9,306,700	\$ 9,306,200	\$ 9,307,200

Table 5-19 – City Capital Flow of Funds

Line No.	Projected									
	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
1 Beginning Balance - Capital Fund	\$ 136,177,500	\$ 36,025,300	\$ 26,033,300	\$ 20,364,900	\$ 17,503,500	\$ 8,880,200	\$ 6,788,000	\$ 4,853,700	\$ 3,319,200	\$ 600,700
Sources of Funds:										
2 SRF Loan Proceeds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3 Revenue Bond Proceeds	-	40,000,000	-	-	-	-	-	-	-	-
4 G.O. Bond Proceeds	-	-	-	-	-	-	-	-	-	-
5 Grants/Donations	10,024,100	2,000,000	-	-	-	-	-	-	-	-
6 SDF Revenues	1,360,000	1,400,000	1,414,000	1,428,100	1,442,400	1,456,800	1,471,400	1,486,100	1,501,000	1,516,000
7 Interest Earnings	1,722,000	620,600	464,000	378,700	263,800	156,700	116,400	81,700	39,200	12,200
8 Transfer from Operations	11,031,000	6,256,800	9,829,600	8,940,800	9,949,500	10,619,300	11,305,900	12,011,700	12,741,300	13,490,700
9 Total Sources of Funds	\$ 160,314,600	\$ 86,302,700	\$ 37,740,900	\$ 31,112,500	\$ 29,159,200	\$ 21,113,000	\$ 19,681,700	\$ 18,433,200	\$ 17,600,700	\$ 15,619,600
Uses of Funds										
10 Total CIP	\$ 124,289,300	\$ 60,269,400	\$ 17,376,000	\$ 13,609,000	\$ 20,279,000	\$ 14,325,000	\$ 14,828,000	\$ 15,114,000	\$ 17,000,000	\$ 15,000,000
11 Total Uses of Funds	\$ 124,289,300	\$ 60,269,400	\$ 17,376,000	\$ 13,609,000	\$ 20,279,000	\$ 14,325,000	\$ 14,828,000	\$ 15,114,000	\$ 17,000,000	\$ 15,000,000
12 Ending Balance - Capital Fund	\$ 36,025,300	\$ 26,033,300	\$ 20,364,900	\$ 17,503,500	\$ 8,880,200	\$ 6,788,000	\$ 4,853,700	\$ 3,319,200	\$ 600,700	\$ 619,600

Table 5-20 – City Operating Flow of Funds

Line No.		Projected									
		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Operating Flow of Funds											
1	Retail User Charge Revenue - Existing	\$ 28,993,000	\$ 30,143,000	\$ 30,874,000	\$ 31,001,300	\$ 31,129,100	\$ 31,257,500	\$ 31,386,700	\$ 31,516,600	\$ 31,647,000	\$ 31,778,100
2	Total Projected Additional Revenue	-	-	-	798,900	1,625,100	2,479,300	3,362,300	4,275,000	5,218,300	6,192,900
3	Total Retail Use Charge with Adjustments	\$ 28,993,000	\$ 30,143,000	\$ 30,874,000	\$ 31,800,200	\$ 32,754,200	\$ 33,736,800	\$ 34,749,000	\$ 35,791,600	\$ 36,865,300	\$ 37,971,000
4	Resale - District Revenue - Existing	\$ 3,100,000	\$ 3,583,000	\$ 4,693,000	\$ 4,739,900	\$ 4,763,600	\$ 4,787,400	\$ 4,811,300	\$ 4,835,400	\$ 4,859,600	\$ 4,883,900
5	Total Projected Additional Revenue	-	-	-	900,600	1,046,800	1,198,000	1,354,300	1,516,100	1,683,300	1,856,100
6	Total Resale-District Use Charge w/ Adj.	\$ 3,100,000	\$ 3,583,000	\$ 4,693,000	\$ 5,640,500	\$ 5,810,400	\$ 5,985,400	\$ 6,165,600	\$ 6,351,500	\$ 6,542,900	\$ 6,740,000
7	Total Projected User Charge Revenue	\$ 32,093,000	\$ 33,726,000	\$ 35,567,000	\$ 37,440,700	\$ 38,564,600	\$ 39,722,200	\$ 40,914,600	\$ 42,143,100	\$ 43,408,200	\$ 44,711,000
Other Revenue											
8	Non-Rate Revenues	\$ 1,442,300	\$ 995,000	\$ 1,024,900	\$ 1,055,600	\$ 1,087,300	\$ 1,119,900	\$ 1,153,500	\$ 1,188,100	\$ 1,223,700	\$ 1,260,400
9	Interest Revenues	198,700	160,400	200,900	192,200	208,600	218,100	227,900	237,900	248,300	259,000
10	Total Other Revenue	\$ 1,641,000	\$ 1,155,400	\$ 1,225,800	\$ 1,247,800	\$ 1,295,900	\$ 1,338,000	\$ 1,381,400	\$ 1,426,000	\$ 1,472,000	\$ 1,519,400
11	Total Revenues	\$ 33,734,000	\$ 34,881,400	\$ 36,792,800	\$ 38,688,500	\$ 39,860,500	\$ 41,060,200	\$ 42,296,000	\$ 43,569,100	\$ 44,880,200	\$ 46,230,400
Uses of Funds											
12	Operation & Maintenance Expense	\$ 16,368,900	\$ 19,862,300	\$ 20,519,000	\$ 21,039,700	\$ 21,575,600	\$ 22,126,900	\$ 22,694,300	\$ 23,278,400	\$ 23,879,600	\$ 24,498,700
13	Incremental Additional O&M	-	-	(2,391,600)	(1,089,500)	(1,111,300)	(1,133,500)	(1,156,100)	(1,179,200)	(1,202,800)	(1,226,900)
14	Total O&M	\$ 16,368,900	\$ 19,862,300	\$ 18,127,400	\$ 19,950,200	\$ 20,464,300	\$ 20,993,400	\$ 21,538,200	\$ 22,099,200	\$ 22,676,800	\$ 23,271,800
Debt Service											
15	Existing Debt Service	\$ 6,334,100	\$ 6,334,100	\$ 6,331,200	\$ 6,332,300	\$ 6,334,900	\$ 6,331,700	\$ 6,331,800	\$ 6,333,700	\$ 6,333,200	\$ 6,334,200
16	Proposed Revenue Bonds	-	1,485,000	2,973,000	2,973,000	2,973,000	2,973,000	2,973,000	2,973,000	2,973,000	2,973,000
17	Proposed G.O. Bonds	-	-	-	-	-	-	-	-	-	-
18	Proposed SRF Loans	-	-	-	-	-	-	-	-	-	-
19	Total Debt Service	\$ 6,334,100	\$ 7,819,100	\$ 9,304,200	\$ 9,305,300	\$ 9,307,900	\$ 9,304,700	\$ 9,304,800	\$ 9,306,700	\$ 9,306,200	\$ 9,307,200
20	Total Revenue Requirements	\$ 22,703,000	\$ 27,681,400	\$ 27,431,600	\$ 29,255,500	\$ 29,772,200	\$ 30,298,100	\$ 30,843,000	\$ 31,405,900	\$ 31,983,000	\$ 32,579,000
21	Annual Operating Balance	\$ 11,031,000	\$ 7,200,000	\$ 9,361,200	\$ 9,433,000	\$ 10,088,300	\$ 10,762,100	\$ 11,453,000	\$ 12,163,200	\$ 12,897,200	\$ 13,651,400
Fund Balance Sources and Uses											
22	Beginning Balance - Operating Fund	\$ 4,419,600	\$ 4,419,600	\$ 5,362,800	\$ 4,894,400	\$ 5,386,600	\$ 5,525,400	\$ 5,668,200	\$ 5,815,300	\$ 5,966,800	\$ 6,122,700
23	Annual Operating Balance	11,031,000	7,200,000	9,361,200	9,433,000	10,088,300	10,762,100	11,453,000	12,163,200	12,897,200	13,651,400
24	Transfer (to)/from Capital Fund	(11,031,000)	(6,256,800)	(9,829,600)	(8,940,800)	(9,949,500)	(10,619,300)	(11,305,900)	(12,011,700)	(12,741,300)	(13,490,700)
25	Ending Balance - Operating Fund	\$ 4,419,600	\$ 5,362,800	\$ 4,894,400	\$ 5,386,600	\$ 5,525,400	\$ 5,668,200	\$ 5,815,300	\$ 5,966,800	\$ 6,122,700	\$ 6,283,400
26	Ending Balance - % O&M	27%	27%	27%	27%	27%	27%	27%	27%	27%	27%
27	EOY Balance - Target (% O&M)	27%	27%	27%	27%	27%	27%	27%	27%	27%	27%
28	EOY Balance - Target (\$)	\$ 4,419,600	\$ 5,362,800	\$ 4,894,400	\$ 5,386,600	\$ 5,525,400	\$ 5,668,200	\$ 5,815,300	\$ 5,966,800	\$ 6,122,700	\$ 6,283,400
29	Variance (\$)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Debt Service Coverage											
30	Revenues Available for Debt Service	\$ 17,365,100	\$ 15,019,100	\$ 18,665,400	\$ 18,738,300	\$ 19,396,200	\$ 20,066,800	\$ 20,757,800	\$ 21,469,900	\$ 22,203,400	\$ 22,958,600
31	Total Debt Service Coverage	2.74	1.92	2.01	2.01	2.08	2.16	2.23	2.31	2.39	2.47
32	Projected Annual Retail Rate Increase				2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%
33	Months Effective				12	12	12	12	12	12	12
34	Projected Annual Resale-District Rate Increase				19.0%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
35	Months Effective				12	12	12	12	12	12	12

5.5 CITY - CONSOLIDATED

The City-Consolidated financial plan assumes that the City would absorb the CWDBH's water assets, customers, outstanding debt, and all reserve funds. For this analysis, the transition is assumed to occur beginning FY 2028.

5.5.1 CWDBH Financial Position at End of Year FY 2027

Under the City-Consolidated scenario, at the end of FY 2027, the CWDBH would be absorbed into the City's water utility. As shown in Table 5-10, CWDBH is projected to have implemented an 18% system-wide revenue increase in FY 2027 (an 18% across-the-board rate increase has been assumed for this analysis) to provide adequate funding for operating costs (including increased water purchase costs from the City) and capital costs. Projected Debt Service Coverage (DSC) is projected to be over 2.0¹x at the end of FY 2027.

Approximately \$370,000 in annual debt service on three State Revolving Fund (SRF) loans is assumed to be transferred to the City at the time of consolidation. For the City to receive approval to assume the outstanding loans, the City would likely be required to show adequate debt service coverage and fund balances to meet the State's requirements for funding.

At the end of FY 2027, CWDBH is projected to have an ending operating balance of \$6,121,000, reflecting CWDBH's total unencumbered investments and fund balances, which would flow into the City's operating fund balance at the beginning of FY 2028. To the extent CWDBH has any additional long-term funding from non-current assets (investments) that are not reflected in the operating fund balance, such funding could be used to offset any surcharge or rate structure to bring CWDBH customers on par with existing City customers, related to prior funding of the West End Project.

Per CWDBH's FY 2024 financial statements, as of the end of FY 2024, CWDBH had approximately \$25 million in total capital assets, with accumulated depreciation of \$12.1 million for a net capital assets of approximately \$12.9 million. By the end of FY 2027, at the time of projected consolidation, net capital assets will increase due to completion of capital projects between FY 2025 and FY 2027, offset by additional depreciation and any retirements of existing assets. All assets are assumed to be transferred to the City at the time of consolidation at the beginning of FY 2028.

¹ Debt service coverage is a ratio that compares net operating income to total annual debt service.

5.5.2 User Charge Revenue

Under consolidation, the City has indicated that the CWDBH customers located within the City limits would pay Owner (Inside City) rates². CWDBH customers located outside City limits would pay Non-Owner (Outside City) rates. For the purpose of this analysis, 13% of the CWDBH Residential customers are assumed to be outside the City³. All other customers are assumed to be inside the City. Under consolidation, revenue from Resale-CWDBH is excluded, as CWDBH customers would be billed as retail customers, and the City would no longer sell treated water wholesale to CWDBH. Table 5-20 provides a summary of projected user charge revenue under the City – Consolidated scenario.

Table 5-20 also shows other revenue for the City – Consolidated scenario, including a projected increase in Miscellaneous Revenue, reflecting an increase in Service Line Fee revenue based on the City's existing \$1.30/month rate and projected CWDBH bills.

5.5.3 Operating Expenses

Under a consolidation scenario, the City's operating budget is expected to increase, reflecting the additional costs incurred to serve the expanded service area. Table 5-21 summarizes the City's existing projected O&M, as well as the incremental additional O&M resulting from the consolidation. The incremental O&M reflects the estimated total Personnel cost of CWDBH's existing employees who become City employees, at City labor rates, as provided by the City. In addition, a 14% increase in the City's Distribution O&M (Non-Personnel) and Meter Services O&M (non-personnel) costs was included to reflect an expected increase in Non-Personnel costs the City may incur in serving a larger service area. This reflects a conservatively high increase in O&M, as in reality, it is possible that changes will occur, including:

- 1) some CWDBH employees may choose not to join the City,
- 2) the City choosing not to replace other employees that retire/leave,
- 3) the City and/or employee choosing to join a different City department and/or
- 4) changes to Personnel costs (salaries/benefits) based on further evaluation and/or changes to union contracts before the time of consolidation.

Changes such as those indicated as examples could reduce the City's O&M from that projected for the City – Consolidated scenario.

² The City has indicated that it may assess a surcharge, impact fee, or alternative rate structure for a period of time to recover the cost of investment in the West End Water Treatment Plant and Reservoir Projects that existing City customers will have paid at the time of consolidation, as well as any increased capital costs within the CWDBH service area that is above and beyond that anticipated within the existing City service area, net of any CWDBH funds coming to the City at the time of consolidation. Any such additional fees/charges are not included in this analysis.

³ Estimate provided by CWDBH.

5.5.4 Capital Improvement Program

Table 5-22 provides a summary of the potential CIP under a consolidation scenario. The CIP includes the City's CIP under the City – Status Quo scenario, as well as some of the projects projected for the CWDBH – Status Quo scenario. In addition, two additional projects are included, per TM3:

- SCADA Modification/Upgrade project
- Meter replacement project, including associated gateways within the CWDBH services area, providing compatibility with the City's meters/system.

This analysis assumes the upper end of the cost range for the SCADA upgrade discussed in TM3, and \$200/meter plus \$15,000 each for three gateways (2025 dollars).

Under consolidation, the annual capital expenditure for water main replacement in the CWDBH service area has been adjusted to align with the City's 100-year replacement schedule by FY 2033 and includes 3% annual cost escalation, as provided by the City.

To the extent any City projects may be changed or eliminated under a full consolidation, the result could be a reduction in future capital funding requirements.

5.5.5 Capital Financing and Existing/Proposed Debt Service

Table 5-23 summarizes the projected debt service under the City – Consolidated scenario, reflecting the City's existing debt, assumption of the CWDBH outstanding debt, and projected future new debt issuances, based on the capital financing plan summarized in Table 5-24.

Table 5-24 summarizes the capital flow of funds under a consolidation scenario. As shown, the City - Consolidated capital financing has been projected to reflect the same projected debt issuances as in the City – Status Quo scenario. The increased capital financing required to fund the City – Consolidated CIP is provided through additional cash financing via increased rates. While it would be possible for the City to issue additional debt to fund a portion of the increased CIP and potentially lower the rate increases shown in Table 5-25, for the purpose of this Study, to provide a comparison of scenarios with fewer variables, no additional debt is projected. Transfers from Operations (Line 10) reflect the availability of CWDBH funds at the end of FY 2027, transferring to the City (Line 7 of Table 5-24) and becoming available to fund capital projects.

5.5.6 Operating Cashflow

Table 5-25 summarizes the City's operating cashflow for the City – Consolidated scenario. Line 1 summarizes revenue from the City's existing customer base. Line 2 summarizes revenue from the current CWDBH customers under projected City rates, as previously discussed. As shown on Line 4, no additional revenue is projected beyond the rate increases included in the City's projections and reflected in Lines 1-3. In FY 2027, the CWDBH funds available at the beginning of the year are assumed to transfer to the City, as shown on Line 7.

Lines 11-20 summarize the O&M and Debt Service projections discussed previously. Net revenues above that required to maintain the City's Operating Fund balance of 27% are transferred for use in funding capital projects, as shown in Line 24.

To maintain the same debt issuances as projected for the City – Status Quo scenario, it is necessary to increase retail rates from FY 2028 through FY 2033 above that projected for the City – Status Quo scenario, to provide adequate funding of the Consolidated CIP.

5.5.7 Key Uncertainties for Policy Consideration and/or Further Refinement

The analysis of a potential consolidated utility is based on the best data and assumptions available at this time. Critical input was provided by both the City and CWDBH. While the resulting projections are reasonable, there are several uncertainties that could result in changed conditions, including:

- It is uncertain whether the CWDBH's 51% AC pipe composition and condition are such that replacement at the City's 100-year schedule is appropriate, or if a more accelerated replacement is needed.
- The CWDBH's PER identified unlooped segments within the CWDBH system. Capital projects to address these segments are not included in the City-Consolidated CIP.
- The City may determine that certain CWDBH assets, specifically the CWDBH main office and certain equipment, may be unnecessary and could be sold. Any revenues received through the sale of unneeded assets would offset a portion of unknown capital costs.
- Other changes to the CIP (new projects or elimination of currently projected City or CWDBH projects) based on a holistic hydraulic analysis of the consolidated system could result in changes to the forecast outlined herein.
- Final decisions regarding how existing CWDBH customers will be billed, to ensure equity with existing City customers, given the investment existing City customers have made to date for the West End Water Treatment Plant and Reservoir Projects through increasing rates, could result in different projected bill impacts than shown.

Technical Memorandum 0, Executive Summary, includes a more detailed list of considerations for next steps for further analysis.

Table 5-21 – Consolidated Projected Revenue Under Existing Rates

Line No.	Projected									
	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
User Charge Revenues - Existing City Customers ¹										
1 Non-Residential Sales	\$ 4,850,000	\$ 4,820,000	\$ 4,850,000	\$ 4,850,000	\$ 4,850,000	\$ 4,850,000	\$ 4,850,000	\$ 4,850,000	\$ 4,850,000	\$ 4,850,000
2 Residential Sales	17,100,000	16,100,000	16,502,500	16,585,000	16,667,900	16,751,200	16,835,000	16,919,200	17,003,800	17,088,800
3 Seasonal Sales	2,550,000	2,290,000	2,500,000	2,512,500	2,525,100	2,537,700	2,550,400	2,563,200	2,576,000	2,588,900
4 Outside Sales	900,000	3,335,000	3,368,350	3,385,200	3,402,100	3,419,100	3,436,200	3,453,400	3,470,700	3,488,100
5 Multi-Family Sales	3,053,000	3,053,000	3,070,000	3,085,400	3,100,800	3,116,300	3,131,900	3,147,600	3,163,300	3,179,100
5 Resale - Bulk Sale	-	-	-	-	-	-	-	-	-	-
6 Resale - District	3,100,000	3,583,000	4,693,000	-	-	-	-	-	-	-
7 Private Fire Hydrant	540,000	545,000	583,150	583,200	583,200	583,200	583,200	583,200	583,200	583,200
8 Total User Charge Rev. - City Cust.	\$ 32,093,000	\$ 33,726,000	\$ 35,567,000	\$ 31,001,300	\$ 31,129,100	\$ 31,257,500	\$ 31,386,700	\$ 31,516,600	\$ 31,647,000	\$ 31,778,100
User Charge Revenues - Existing District Customers ²										
9 Water - Residential	\$ -	\$ -	\$ -	\$ 3,500,900	\$ 3,533,900	\$ 3,567,100	\$ 3,600,600	\$ 3,634,500	\$ 3,668,700	\$ 3,703,300
10 Water - Commercial	-	-	-	1,124,500	1,132,500	1,140,600	1,148,700	1,156,800	1,164,900	1,173,000
11 Irrigation	-	-	-	92,100	93,100	94,200	95,300	96,300	97,400	98,400
12 Bulk Resale (Water Retailer)	-	-	-	55,200	55,200	55,200	55,200	55,200	55,200	55,200
13 Total User Charge Rev. - District Cust.	\$ -	\$ -	\$ -	\$ 4,772,700	\$ 4,814,700	\$ 4,857,100	\$ 4,899,800	\$ 4,942,800	\$ 4,986,200	\$ 5,029,900
14 Total User Charge Revenue	\$ 32,093,000	\$ 33,726,000	\$ 35,567,000	\$ 35,774,000	\$ 35,943,800	\$ 36,114,600	\$ 36,286,500	\$ 36,459,400	\$ 36,633,200	\$ 36,808,000
Other Revenue										
15 Miscellaneous Revenue	\$ 1,442,300	\$ 995,000	\$ 1,024,900	\$ 1,055,600	\$ 1,087,300	\$ 1,119,900	\$ 1,153,500	\$ 1,188,100	\$ 1,223,700	\$ 1,260,400
16 Increase/Decrease in Misc. Revenue	-	-	-	97,500	98,400	99,300	100,200	101,100	102,100	103,000
17 Interest Revenues	198,700	160,400	200,900	243,500	212,800	233,000	254,600	277,200	301,000	313,800
18 Total Other Revenue	\$ 1,641,000	\$ 1,155,400	\$ 1,225,800	\$ 1,396,600	\$ 1,398,500	\$ 1,452,200	\$ 1,508,300	\$ 1,566,400	\$ 1,626,800	\$ 1,677,200
19 Total Revenue	\$ 33,734,000	\$ 34,881,400	\$ 36,792,800	\$ 37,170,600	\$ 37,342,300	\$ 37,566,800	\$ 37,794,800	\$ 38,025,800	\$ 38,260,000	\$ 38,485,200

¹ Revenue from existing City customers includes the City's adopted rates through FY 2027.

² Revenue from existing CWDBH customers is projected based on the City's adopted FY 2027 rates.

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Table 5-22 – Consolidated O&M

Line No.		Projected									
		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
	City Status Quo										
1	Administration O&M	\$ 3,330,600	\$ 3,229,100	\$ 2,943,700	\$ 3,002,600	\$ 3,062,700	\$ 3,123,900	\$ 3,186,400	\$ 3,250,100	\$ 3,315,100	\$ 3,381,400
2	Service Center Personnel	73,300	75,500	79,300	82,500	85,800	89,200	92,800	96,500	100,400	104,400
3	Service Center O&M	229,100	219,400	221,600	223,800	226,000	228,300	230,600	232,900	235,200	237,600
4	Water Plant Personnel	2,661,700	3,015,800	3,136,400	3,261,900	3,392,400	3,528,100	3,669,200	3,816,000	3,968,600	4,127,300
5	Water Plant O&M	4,861,600	7,904,400	6,020,900	7,491,300	7,641,100	7,794,000	7,949,900	8,108,900	8,271,000	8,436,400
6	Distribution Personnel	1,551,100	1,764,800	1,835,400	1,908,800	1,985,200	2,064,600	2,147,200	2,233,100	2,322,400	2,415,300
7	Distribution O&M	1,147,400	1,101,000	1,123,000	1,145,500	1,168,400	1,191,800	1,215,600	1,239,900	1,264,700	1,290,000
8	Meter Shop Personnel	825,800	863,400	897,900	933,800	971,200	1,010,000	1,050,400	1,092,400	1,136,100	1,181,500
9	Meter Shop O&M	1,245,700	1,338,900	1,365,700	1,393,000	1,420,900	1,449,300	1,478,300	1,507,900	1,538,100	1,568,900
10	Water Service Line Repair	442,600	350,000	353,500	357,000	360,600	364,200	367,800	371,500	375,200	379,000
11	BBWA Contribution	-	-	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000
12	Total O&M - City-Status Quo	\$ 16,368,900	\$ 19,862,300	\$ 18,127,400	\$ 19,950,200	\$ 20,464,300	\$ 20,993,400	\$ 21,538,200	\$ 22,099,200	\$ 22,676,800	\$ 23,271,800
	Incremental Increase / (Decrease)										
13	Personnel	\$ -	\$ -	\$ -	\$ 640,000	\$ 659,000	\$ 679,000	\$ 700,000	\$ 721,000	\$ 743,000	\$ 765,000
14	Distribution Non-Personnel	-	-	-	160,000	164,000	167,000	170,000	174,000	177,000	181,000
15	Meter Non-Personnel	-	-	-	131,000	136,000	141,000	147,000	153,000	159,000	165,000
16	Total Incremental O&M	\$ -	\$ -	\$ -	\$ 931,000	\$ 959,000	\$ 987,000	\$ 1,017,000	\$ 1,048,000	\$ 1,079,000	\$ 1,111,000
17	Total O&M - Consolidation	\$ 16,368,900	\$ 19,862,300	\$ 18,127,400	\$ 20,881,200	\$ 21,423,300	\$ 21,980,400	\$ 22,555,200	\$ 23,147,200	\$ 23,755,800	\$ 24,382,800

Table 5-23 – Consolidated Capital Improvement Plan

Line No.		Projected										Total
		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	
CIP - Original City Service Area												
1	West End Reservoir	\$ -	\$ 50,000,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 50,000,000
2	Water Main Replacements	-	6,315,000	6,320,000	7,740,000	8,000,000	8,800,000	9,270,000	9,548,000	9,800,000	10,094,000	75,887,000
3	Compensation Agreements (oversized lines)	-	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	2,700,000
4	Equipment Replacements	-	1,134,400	556,000	874,000	874,000	220,000	778,000	191,000	195,000	1,256,000	6,078,400
5	New Equipment	-	80,000	80,000	80,000	80,000	80,000	80,000	400,000	80,000	1,400,000	2,360,000
6	Water Plant Electrical Improvements	-	200,000	500,000	315,000	325,000	250,000	350,000	325,000	325,000	350,000	2,940,000
7	Waterline extensions	-	1,000,000	1,000,000	1,000,000	-	-	-	-	-	-	3,000,000
8	Daniels to Moore Ln Water extension	-	85,000	720,000	-	-	-	-	-	-	-	805,000
9	Water Treatment Plant Air Scour Line Replacement	-	1,050,000	-	-	-	-	-	-	-	-	1,050,000
10	Water Treatment Plant Post Chlorination Improvemen	-	105,000	-	-	-	-	-	-	-	-	105,000
11	Zone 1 Water Storage Improvements	-	-	7,200,000	-	-	-	-	-	-	-	7,200,000
12	Grand Avenue Water Extension	-	-	700,000	-	-	-	-	-	-	-	700,000
13	Water Treatment Plant Leaks Mitigation	-	-	-	2,200,000	-	-	-	-	-	-	2,200,000
14	Zone 6 Storage and Looping Improvements	-	-	-	1,100,000	10,400,000	-	-	-	-	-	11,500,000
15	Skyway Drive Water Line Loop	-	-	-	-	300,000	2,900,000	-	-	-	-	3,200,000
16	Water Treatment Plant 750kW Solar PV Generation	-	-	-	-	-	1,010,000	-	-	-	-	1,010,000
17	South 32nd St W/I-90/S Frontage Loop	-	-	-	-	-	325,000	-	3,300,000	-	-	3,625,000
18	Water - Fox Reservoir #1 Replacement	-	-	-	-	-	440,000	4,050,000	-	-	-	4,490,000
19	Water Treatment Plant Facility Plan	-	-	-	-	-	-	-	350,000	-	-	350,000
20	Staples	-	-	-	-	-	-	-	700,000	6,300,000	-	7,000,000
21	Water Storage Improvements Zone 4	-	-	-	-	-	-	-	-	-	1,600,000	1,600,000
22	FY 2025 CIP	124,289,000	-	-	-	-	-	-	-	-	-	124,289,000
22	Total City CIP	\$ 124,289,000	\$ 60,269,400	\$ 17,376,000	\$ 13,609,000	\$ 20,279,000	\$ 14,325,000	\$ 14,828,000	\$ 15,114,000	\$ 17,000,000	\$ 15,000,000	\$ 312,089,400

Technical Memorandum 5 – Financial Considerations

Table 5-24 – Capital Improvement Plan (Continued)

Line No.		Projected										Total
		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	
CIP - Original District Service Area												
23	New CWDBH Meter Reaser & PC	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
24	Residential Cellular Meters (180 Units)	-	-	-	-	-	-	-	-	-	-	-
25	Water Tank Inspection & Repair	-	-	-	-	-	-	-	-	-	-	-
26	Service Truck (New)	-	-	-	-	-	-	-	-	-	-	-
27	Service Truck (Repaint)	-	-	-	-	-	-	-	-	-	-	-
28	Water Main Replacement	-	-	-	1,549,000	1,713,000	1,876,000	2,059,000	2,265,000	2,492,000	2,566,000	14,520,000
29	Miscellaneous	-	-	-	26,200	27,000	27,800	28,700	29,500	30,400	31,300	200,900
30	NW Pressure Zone (Design, TO28)	-	-	-	-	-	-	-	-	-	-	-
31	NW or Lake Hills Pressure Zone Selected Solution	-	-	-	-	-	-	-	-	-	-	-
32	Hilltop Reservoir Improvements	-	-	-	-	-	-	-	-	-	-	-
33	Lanier Reservoir Improvements	-	-	-	-	-	-	-	-	-	-	-
34	AC Water Main Replacement Project	-	-	-	-	-	-	-	-	-	-	-
35	AC Water Main Replacement Project	-	-	-	-	-	-	-	-	-	-	-
36	AC Water Main Replacement Project	-	-	-	-	-	-	-	-	-	-	-
37	Update GIS Attributes	-	-	-	-	-	-	-	-	-	-	-
38	GIS: Digital Workflows	-	-	-	-	-	-	-	-	-	-	-
39	GIS Support/Data Wkflow Maint	-	-	-	-	-	-	-	-	-	-	-
40	Emergency Generation	-	-	-	-	-	-	-	-	-	-	-
41	Equipment Storage Building	-	-	-	-	-	-	-	-	-	-	-
42	Shop Addition with 2-Ton Bridge Crane	-	-	-	-	-	-	-	-	-	-	-
43	5-year CIP	-	-	-	-	-	-	-	-	-	-	-
44	Rate Study	-	-	-	-	-	-	-	-	-	-	-
45	Engineering	-	-	-	-	-	-	-	-	-	-	-
46	Chlorination Plant	-	-	-	-	-	-	-	-	-	-	-
47	SCADA Modification / Upgrade Under Consolidation	-	-	-	1,875,100	-	-	-	-	-	-	1,875,100
48	Meter Repl. / Addit. Gateways Under Consolidation	-	-	-	1,444,600	-	-	-	-	-	-	1,444,600
49	Total District CIP (Under Consolidation)	\$ -	\$ -	\$ -	\$ 4,894,900	\$ 1,740,000	\$ 1,903,800	\$ 2,087,700	\$ 2,294,500	\$ 2,522,400	\$ 2,597,300	\$ 18,040,600
50	Total CIP - Consolidation	\$ 124,289,000	\$ 60,269,400	\$ 17,376,000	\$ 18,503,900	\$ 22,019,000	\$ 16,228,800	\$ 16,915,700	\$ 17,408,500	\$ 19,522,400	\$ 17,597,300	\$ 330,130,000

Table 5-25 – Consolidated Existing & Projected Debt Service

Line No.	Projected									
	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Existing Debt										
District Debt										
1 2011 B				\$ 36,900	\$ 35,800	\$ 36,800	\$ -	\$ -	\$ -	\$ -
2 2016 C				190,400	190,400	190,400	190,200	190,000	191,600	191,100
3 2017 A				139,900	141,100	140,200	141,200	140,200	141,100	139,900
4 Total District Debt	\$ -	\$ -	\$ -	\$ 367,200	\$ 367,300	\$ 367,400	\$ 331,400	\$ 330,200	\$ 332,700	\$ 331,000
City Debt										
5 Total City Debt	\$ 6,334,100	\$ 6,334,100	\$ 6,331,200	\$ 6,332,300	\$ 6,334,900	\$ 6,331,700	\$ 6,331,800	\$ 6,333,700	\$ 6,333,200	\$ 6,334,200
6 Total City Debt	\$ 6,334,100	\$ 6,334,100	\$ 6,331,200	\$ 6,332,300	\$ 6,334,900	\$ 6,331,700	\$ 6,331,800	\$ 6,333,700	\$ 6,333,200	\$ 6,334,200
7 Total Existing Debt Service	\$ 6,334,100	\$ 6,334,100	\$ 6,331,200	\$ 6,699,500	\$ 6,702,200	\$ 6,699,100	\$ 6,663,200	\$ 6,663,900	\$ 6,665,900	\$ 6,665,200
Proposed Debt										
8 District Debt (New) ¹	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
9 City Revenue Bonds	-	1,485,000	2,973,000	2,973,000	2,973,000	2,973,000	2,973,000	2,973,000	2,973,000	2,973,000
10 City G.O. Bonds	-	-	-	-	-	-	-	-	-	-
11 City SRF Loans	-	-	-	-	-	-	-	-	-	-
12 Total Proposed Debt Service	\$ -	\$ 1,485,000	\$ 2,973,000	\$ 2,973,000	\$ 2,973,000	\$ 2,973,000	\$ 2,973,000	\$ 2,973,000	\$ 2,973,000	\$ 2,973,000
13 Total Debt Service	\$ 6,334,100	\$ 7,819,100	\$ 9,304,200	\$ 9,672,500	\$ 9,675,200	\$ 9,672,100	\$ 9,636,200	\$ 9,636,900	\$ 9,638,900	\$ 9,638,200

¹ Debt service on bonds/loans issued prior to consolidation.

Table 5-26 – Consolidated Capital Flow of Funds

Line No.	Projected									
	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
1 Beginning Balance - Capital Fund	\$ 136,177,500	\$ 36,025,600	\$ 26,033,600	\$ 20,365,200	\$ 17,486,098	\$ 7,011,465	\$ 3,925,805	\$ 1,977,755	\$ 1,466,793	\$ 910,393
Sources of Funds:										
2 District Capital Funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3 SRF Loan Proceeds	-	-	-	-	-	-	-	-	-	-
4 Revenue Bond Proceeds	-	40,000,000	-	-	-	-	-	-	-	-
5 G.O. Bond Proceeds	-	-	-	-	-	-	-	-	-	-
6 SRF Principal Forgiveness	-	-	-	-	-	-	-	-	-	-
7 Grants/Donations	10,024,100	2,000,000	-	-	-	-	-	-	-	-
8 SDF Revenues	1,360,000	1,400,000	1,414,000	1,428,100	1,442,400	1,456,800	1,471,400	1,486,100	1,501,000	1,516,000
9 Interest Earnings	1,722,000	620,600	464,000	378,500	245,000	109,400	59,000	34,400	23,800	41,700
10 Transfers from Operations	11,031,000	6,256,800	9,829,600	13,818,698	9,856,968	11,576,640	13,436,750	15,377,438	17,440,900	18,385,388
11 Total Sources of Funds	\$ 160,314,600	\$ 86,303,000	\$ 37,741,200	\$ 35,990,498	\$ 29,030,465	\$ 20,154,305	\$ 18,892,955	\$ 18,875,693	\$ 20,432,493	\$ 20,853,480
Uses of Funds:										
12 Total CIP	\$ 124,289,000	\$ 60,269,400	\$ 17,376,000	\$ 18,504,400	\$ 22,019,000	\$ 16,228,500	\$ 16,915,200	\$ 17,408,900	\$ 19,522,100	\$ 17,597,800
13 Total Uses of Funds	\$ 124,289,000	\$ 60,269,400	\$ 17,376,000	\$ 18,504,400	\$ 22,019,000	\$ 16,228,500	\$ 16,915,200	\$ 17,408,900	\$ 19,522,100	\$ 17,597,800
14 Ending Balance - Capital Fund	\$ 36,025,600	\$ 26,033,600	\$ 20,365,200	\$ 17,486,098	\$ 7,011,465	\$ 3,925,805	\$ 1,977,755	\$ 1,466,793	\$ 910,393	\$ 3,255,680

Table 5-27 – Consolidated Operating Flow of Funds

Line No.	Projected									
	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Operating Flow of Funds										
1 City Customer Base	\$ 32,093,000	\$ 33,726,000	\$ 35,567,000	\$ 31,001,000	\$ 31,129,000	\$ 31,258,000	\$ 31,387,000	\$ 31,517,000	\$ 31,647,000	\$ 31,778,000
2 District Customer Base	-	-	-	4,772,700	4,814,700	4,857,100	4,899,800	4,942,800	4,986,200	5,029,900
3 Total User Charge Revenue	32,093,000	33,726,000	35,567,000	35,773,700	35,943,700	36,115,100	36,286,800	36,459,800	36,633,200	36,807,900
4 Total Proposed Additional Retail Revenue	-	-	-	1,824,500	3,759,700	5,812,200	7,988,300	10,295,100	12,740,000	14,090,600
5 Total Retail Use Charge with Adjustments	\$ 32,093,000	\$ 33,726,000	\$ 35,567,000	\$ 37,598,200	\$ 39,703,400	\$ 41,927,300	\$ 44,275,100	\$ 46,754,900	\$ 49,373,200	\$ 50,898,500
Other Revenue										
6 Non-Rate Revenues	\$ 1,442,300	\$ 995,000	\$ 1,024,900	\$ 1,153,100	\$ 1,185,700	\$ 1,219,200	\$ 1,253,700	\$ 1,289,200	\$ 1,325,800	\$ 1,363,400
7 District Operating Balance In	-	-	-	6,121,000	-	-	-	-	-	-
8 Interest Revenues	198,700	160,400	200,900	243,500	212,800	233,000	254,600	277,200	301,000	313,800
9 Total Other Revenue	\$ 1,641,000	\$ 1,155,400	\$ 1,225,800	\$ 7,517,600	\$ 1,398,500	\$ 1,452,200	\$ 1,508,300	\$ 1,566,400	\$ 1,626,800	\$ 1,677,200
10 Total Revenues	\$ 33,734,000	\$ 34,881,400	\$ 36,792,800	\$ 45,115,800	\$ 41,101,900	\$ 43,379,500	\$ 45,783,400	\$ 48,321,300	\$ 51,000,000	\$ 52,575,700
Uses of Funds										
11 Operation & Maintenance Expense	\$ 16,368,900	\$ 19,862,300	\$ 18,127,400	\$ 19,950,200	\$ 20,464,300	\$ 20,993,400	\$ 21,538,200	\$ 22,099,200	\$ 22,676,800	\$ 23,271,800
12 Incremental Additional O&M	-	-	-	931,000	959,000	987,000	1,017,000	1,048,000	1,079,000	1,111,000
13 Total O&M	\$ 16,368,900	\$ 19,862,300	\$ 18,127,400	\$ 20,881,200	\$ 21,423,300	\$ 21,980,400	\$ 22,555,200	\$ 23,147,200	\$ 23,755,800	\$ 24,382,800
Debt Service										
14 Existing - City	\$ 6,334,100	\$ 6,334,100	\$ 6,331,200	\$ 6,332,300	\$ 6,334,900	\$ 6,331,700	\$ 6,331,800	\$ 6,333,700	\$ 6,333,200	\$ 6,334,200
15 Existing - District	\$ -	\$ -	\$ -	\$ 367,103	\$ 367,333	\$ 367,360	\$ 331,450	\$ 330,163	\$ 332,700	\$ 331,013
16 Proposed Revenue Bonds	\$ -	\$ 1,485,000	\$ 2,973,000	\$ 2,973,000	\$ 2,973,000	\$ 2,973,000	\$ 2,973,000	\$ 2,973,000	\$ 2,973,000	\$ 2,973,000
17 Proposed G.O. Bonds	-	-	-	-	-	-	-	-	-	-
18 Proposed SRF Loans	-	-	-	-	-	-	-	-	-	-
19 Total Debt Service	\$ 6,334,100	\$ 7,819,100	\$ 9,304,200	\$ 9,672,403	\$ 9,675,233	\$ 9,672,060	\$ 9,636,250	\$ 9,636,863	\$ 9,638,900	\$ 9,638,213
20 Total Revenue Requirements	\$ 22,703,000	\$ 27,681,400	\$ 27,431,600	\$ 30,553,603	\$ 31,098,533	\$ 31,652,460	\$ 32,191,450	\$ 32,784,063	\$ 33,394,700	\$ 34,021,013
21 Annual Operating Balance	\$ 11,031,000	\$ 7,200,000	\$ 9,361,200	\$ 14,562,198	\$ 10,003,368	\$ 11,727,040	\$ 13,591,950	\$ 15,537,238	\$ 17,605,300	\$ 18,554,688
Fund Balance Sources and Uses										
22 Beginning Balance - Operating Fund	\$ 4,419,600	\$ 4,419,600	\$ 5,362,800	\$ 4,894,400	\$ 5,637,900	\$ 5,784,300	\$ 5,934,700	\$ 6,089,900	\$ 6,249,700	\$ 6,414,100
23 Annual Operating Balance	11,031,000	7,200,000	9,361,200	14,562,198	10,003,368	11,727,040	13,591,950	15,537,238	17,605,300	18,554,688
24 Transfer (to)/from Capital Fund	(11,031,000)	(6,256,800)	(9,829,600)	(13,818,698)	(9,856,968)	(11,576,640)	(13,436,750)	(15,377,438)	(17,440,900)	(18,385,388)
25 Ending Balance - Operating Fund	\$ 4,419,600	\$ 5,362,800	\$ 4,894,400	\$ 5,637,900	\$ 5,784,300	\$ 5,934,700	\$ 6,089,900	\$ 6,249,700	\$ 6,414,100	\$ 6,583,400
26 Ending Balance - % O&M	27%	27%	27%	27%	27%	27%	27%	27%	27%	27%
27 EOY Balance - Target (% O&M)	27%	27%	27%	27%	27%	27%	27%	27%	27%	27%
28 EOY Balance - Target (\$)	\$ 4,419,600	\$ 5,362,800	\$ 4,894,400	\$ 5,637,900	\$ 5,784,300	\$ 5,934,700	\$ 6,089,900	\$ 6,249,700	\$ 6,414,100	\$ 6,583,400
29 Variance (\$)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Debt Service Coverage										
30 Revenues Available for Debt Service	\$ 17,365,100	\$ 15,019,100	\$ 18,665,400	\$ 24,234,600	\$ 19,678,600	\$ 21,399,100	\$ 23,228,200	\$ 25,174,100	\$ 27,244,200	\$ 28,192,900
31 Total Debt Service Coverage	2.74	1.92	2.01	2.51	2.03	2.21	2.41	2.61	2.83	2.93
32 Projected Annual Retail Rate Increase				5.1%	5.1%	5.1%	5.1%	5.1%	5.1%	2.6%
33 Months Effective				12	12	12	12	12	12	12

5.6 COMPARISON OF STATUS QUO AND CONSOLIDATED SCENARIOS

The City is projected to require higher revenues than projected under the City – Status Quo scenario, to fund increased O&M and avoid the issuance of additional debt to fund a portion of the increased CIP under the City – Consolidated scenario. This will require higher system-wide rate increases, as shown in Table 5-26. While in practice, an alternative cashflow for City – Consolidated could be developed that would mitigate rate increases by issuing some additional debt, for the purpose of this Study, to allow an easier apples/apples comparison between Status Quo and Consolidated, no additional debt was included, resulting in the need for higher rate increases.

In addition, the City may consider phasing in CWDBH customers to the City rate schedule over time, by assessing a different rate structure, a surcharge, or an impact fee that would help ensure equity between existing City customers and new customers in the CWDBH service area. Such a differential rate would provide funding to bring the CWDBH customers on par with the level of investment existing City customers have made for the West End Water Treatment Plant and Reservoir Projects. This could also help address the incremental capital difference required in the CWDBH system compared to the City's CIP. Such an analysis and establishment of differential rates would allow the City to maintain rate increases for existing City customers at the level projected in the City – Status Quo scenario.

Table 5-27 summarizes a comparison of revenues and expenses under the City – Status Quo and City – Consolidated scenarios.

Table 5-28 – Comparison of Revenues and Expenses Under City – Status Quo and City – Consolidated

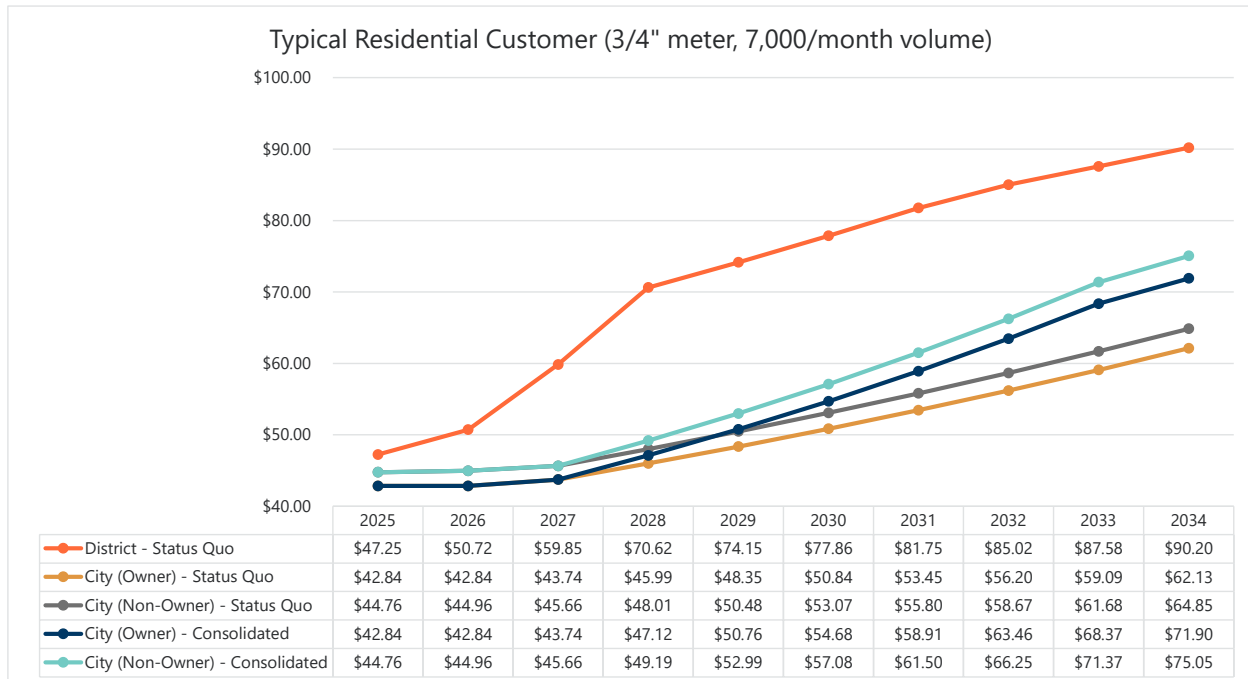
Line No.	2028	2029	2030	2031	2032	2033	2034	Total (2028-2034)
City - Status Quo								
1 Total Revenue	\$ 38,688,500	\$ 39,860,500	\$ 41,060,200	\$ 42,296,000	\$ 43,569,100	\$ 44,880,200	\$ 46,230,400	\$ 296,584,900
Revenue Requirements								
2 O&M	19,950,200	20,464,300	20,993,400	21,538,200	22,099,200	22,676,800	23,271,800	150,993,900
3 Debt Service	9,305,300	9,307,900	9,304,700	9,304,800	9,306,700	9,306,200	9,307,200	65,142,800
4 Total Revenue Requirements	\$ 29,255,500	\$ 29,772,200	\$ 30,298,100	\$ 30,843,000	\$ 31,405,900	\$ 31,983,000	\$ 32,579,000	\$ 216,136,700
5 Transfers to Capital	\$ 8,940,800	\$ 9,949,500	\$ 10,619,300	\$ 11,305,900	\$ 12,011,700	\$ 12,741,300	\$ 13,490,700	\$ 79,059,200
City - Consolidated								
6 Total Revenue ¹	\$ 45,115,800	\$ 41,101,900	\$ 43,379,500	\$ 45,783,400	\$ 48,321,300	\$ 51,000,000	\$ 52,575,700	\$ 327,277,600
Revenue Requirements								
7 O&M	\$ 20,881,200	\$ 21,423,300	\$ 21,980,400	\$ 22,555,200	\$ 23,147,200	\$ 23,755,800	\$ 24,382,800	158,125,900
8 Debt Service	\$ 9,672,403	\$ 9,675,233	\$ 9,672,060	\$ 9,636,250	\$ 9,636,863	\$ 9,638,900	\$ 9,638,213	67,569,920
9 Total Revenue Requirements	\$ 30,553,603	\$ 31,098,533	\$ 31,652,460	\$ 32,191,450	\$ 32,784,063	\$ 33,394,700	\$ 34,021,013	\$ 225,695,820
10 Transfers to Capital	\$ 13,818,698	\$ 9,856,968	\$ 11,576,640	\$ 13,436,750	\$ 15,377,438	\$ 17,440,900	\$ 18,385,388	\$ 99,892,780
Annual Difference (\$)								
11 Total Revenue	\$ 6,427,300	\$ 1,241,400	\$ 2,319,300	\$ 3,487,400	\$ 4,752,200	\$ 6,119,800	\$ 6,345,300	\$ 30,692,700
Revenue Requirements								
12 O&M	\$ 931,000	\$ 959,000	\$ 987,000	\$ 1,017,000	\$ 1,048,000	\$ 1,079,000	\$ 1,111,000	\$ 7,132,000
13 Debt Service	\$ 367,103	\$ 367,333	\$ 367,360	\$ 331,450	\$ 330,163	\$ 332,700	\$ 331,013	\$ 2,427,120
14 Total Revenue Requirements	\$ 1,298,103	\$ 1,326,333	\$ 1,354,360	\$ 1,348,450	\$ 1,378,163	\$ 1,411,700	\$ 1,442,013	\$ 9,559,120
15 Transfers to Capital	\$ 4,877,898	\$ (92,533)	\$ 957,340	\$ 2,130,850	\$ 3,365,738	\$ 4,699,600	\$ 4,894,688	\$ 20,833,580

¹ Includes transfer of unencumbered, unrestricted District funds at the beginning of FY 2028.

5.7 COMPARISON OF TYPICAL CWDBH RESIDENTIAL BILLS

Figure 5-2 illustrates a comparison of a typical CWDBH Residential bill for each scenario, reflecting a ¾" meter and volume of 7,000 gallons per month.

Figure 5-2 – Comparison of Typical Monthly Residential Bill *



* The rates, and therefore typical bills, for the City – Status Quo and City – Consolidated scenarios are the same; therefore, City – Status Quo series are not visible on the chart, but are summarized in the data table at the bottom of the chart.

5.8 RESIDENTIAL BILL COMPARISON (FY 2034)

The following figures present a comparison of Residential bills in the last year of the Study Period (FY 2034), assuming a ¾" meter, and volume from 0 gallons to 75 thousand (Kgal) per month. Each figure also includes vertical lines indicating the volumetric tier breaks for both the CWDBH and City.

Figure 5-3 – Comparison of CWDBH Status Quo and City – Consolidated (Owner and Non-Owner) Residential Typical Bills (FY 2034)

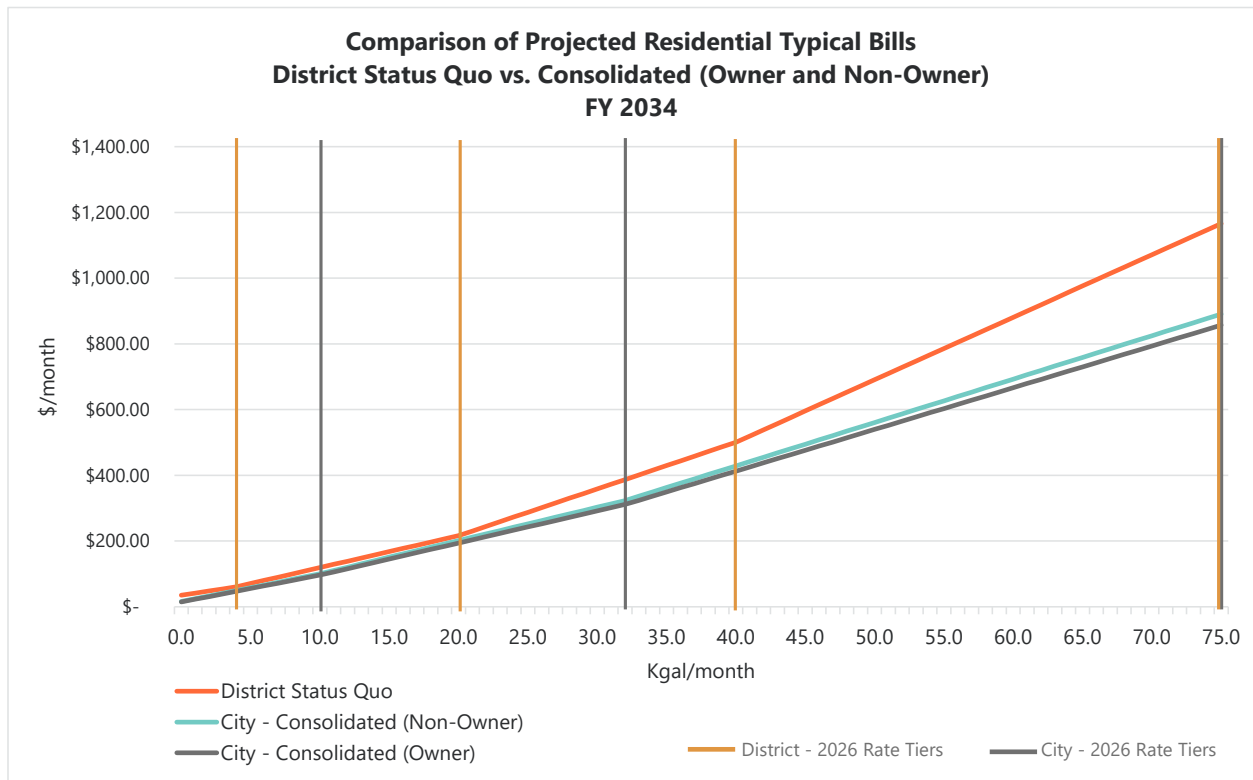
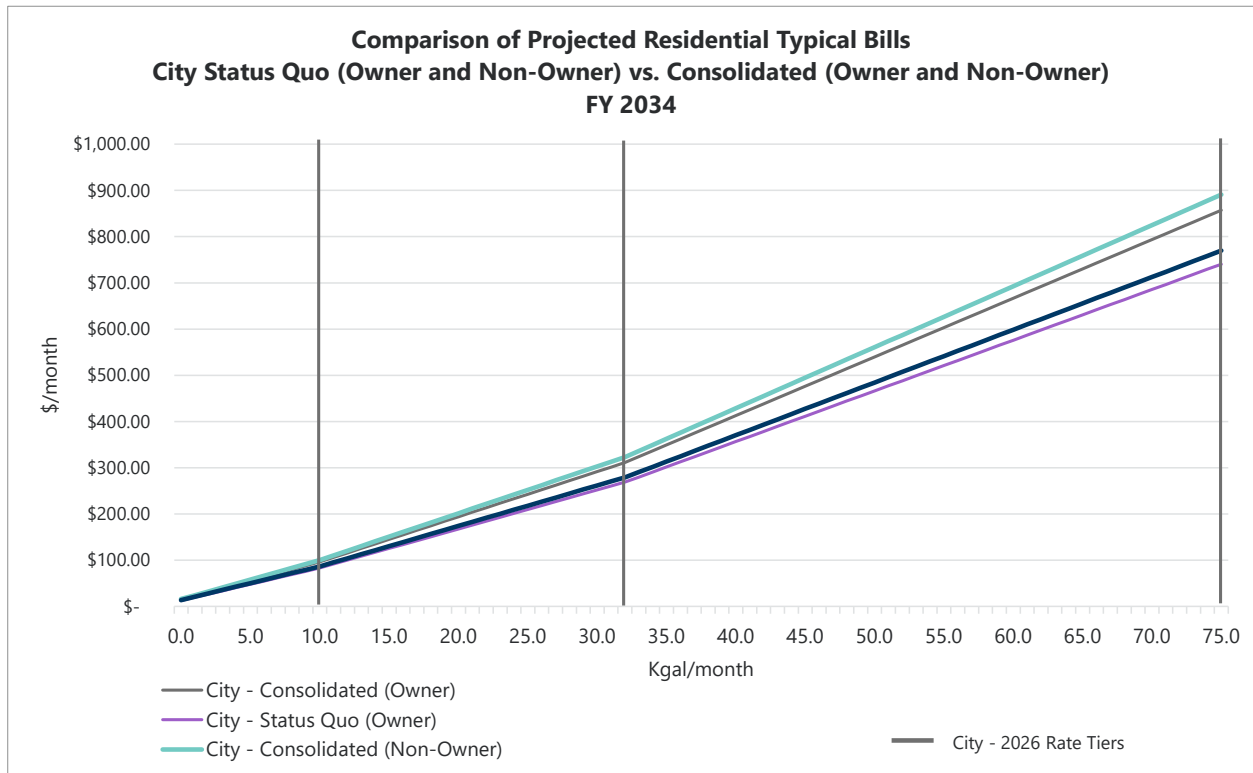


Figure 5-4 – Comparison of City Status Quo (Owner and Non-Owner) and City – Consolidated (Owner and Non-Owner) Residential Typical Bills (FY 2034)



5.9 PARTIAL CONSOLIDATION

The previous discussion summarizes the analyses and results reflecting a scenario whereby the City absorbs the entirety of the CWDBH service area. An alternative to a full consolidation of the two utilities within the City is a partial consolidation scenario, whereby the City would serve all of the customers within the City's jurisdictional boundaries, and the CWDBH would continue to serve customers outside City limits. Because the majority of CWDBH's customers are within the City, a partial consolidation would result in the CWDBH serving a very small, less densely populated service area.

The CWDBH customer base would be approximately 87% smaller than the current customer base, resulting in significant reduction in revenues under a partial consolidation. While a detailed analysis of revenues for the remaining service area was not conducted, given the CWDBH's customer base, it is reasonable to assume that revenues would decrease by approximately the same amount.

While the CWDBH service area would be smaller, it would continue to require sufficient staff to operate and maintain the utility, and the decrease in personnel and non-personnel costs required to operate the CWDBH would be expected to be less than the reduction in revenue. Therefore, it is expected that the CWDBH would likely need to increase rates to remaining customers to maintain financial stability and fund all necessary operations, maintenance, and renewal of the utility system.

For the City, a partial consolidation would allow all citizens within City limits to be served by the same water provider, consistent with a full consolidation scenario. The City and CWDBH would maintain or enter into a new agreement for the provision of purchased water to serve the smaller CWDBH.

Overall, given the loss of economies of scale and the resulting impact on revenues and expenses of the CWDBH, it does not appear that a partial consolidation would be in the best financial interest of customers. Therefore, a full financial forecast of revenues and expenses of the City and CWDBH under a partial consolidation scenario was not conducted.

**MEMORANDUM**

To: Debi Meling – Public Works Director; Jennifer Duray – Deputy Public Works Director
From: Travis Harris – Staff Engineer II; Louis Engels - Water Quality Superintendent
Date: 1/08/26
Re: CWDBH CIP RECOMMENDATION

Recommendation

The attached 10-year CIP is provided after review of the CWDBH Preliminary Engineering Report (PER), Morrison Mairle's CIP recommendations from the Consolidation Study, review of CWDBH AC (asbestos cement) pipe tests, consultation with other Montana communities with AC pipe and industry reports related to AC pipe. Most of the CIP cost is associated with replacing AC pipe and cast-iron pipe within the CWDBH system. The recommended 10-year CIP assumes consolidation occurs in FY28. Any CWDBH CIP projects prior to FY28 (e.g. CWDBH 2nd connection) are assumed to have been completed. **High break areas with cast-iron pipe are recommended to be replaced in the next 10 years and all AC pipe replaced before the 90-year mark.** Remaining cast iron pipe is recommended to be removed on a 25-year schedule. Other CWDBH PER projects related to reservoir improvements were not included because they aren't necessary for integration into the City of Billings system, should consolidation be pursued.

HWD AC Pipe Summary

The County Water District Billings Heights (CWDBH) operates approximately 286,500 feet of Asbestos Cement (AC) water main installed between 1960 and 1980, with 6-inch and 8-inch pipes comprising 72% of the system. Although smaller-diameter AC pipes typically experience higher failure rates, HWD currently reports fewer than one break per year—well below the industry average of 5.57 annual breaks expected for a system of this size. This strong performance is likely attributable to favorable installation conditions, including bedding in alluvial gravels and a non-aggressive (non-soft) water supply.

In the Water Main Break Rates in the USA and Canada: A comprehensive Study that included 800 water utilities and 400,000 miles of pipe, the average Break Rate (breaks/(100-mi-yr)) for AC pipe was 10.3 Breaks. This means the CWDBH should be experiencing 5.57 breaks a year on its AC water mains. According to the CWDBH they have less than 1 break per year on the whole system. This is well below the industry average. However, even in favorable bedding conditions, the CWDBH AC water mains are now beginning to be near the end of their expected service life. It is expected that between the 60 – 90-year mark, failure rates will start increasing. Additionally, there is limited documented performance data for AC pipes beyond 90 years, as the material was first installed in the 1920s.



Background on AC pipe

Asbestos Cement (AC) water mains were widely installed across North America, Europe, and Australia from the late 1920s through the early 1980s and still make up a significant portion of many municipal water systems. Like other pipe materials, AC pipe failure is influenced by a combination of factors related to the pipe's physical properties, the surrounding environment, and operational practices. These include pipe strength and elasticity, soil and groundwater conditions, climate, water quality, and maintenance procedures. The relative importance of each factor varies by location, making AC pipe performance highly site-specific. Chemical corrosion has been a major concern since the 1980s. Both the water inside the pipe and the surrounding soil can chemically attack AC materials. Substances such as acids, sulfates, magnesium salts, alkaline hydroxides, and soft water can weaken the cement matrix by leaching. Externally, soil and groundwater chemistry—particularly pH, alkalinity, and sulfate content—can cause similar damage. Visible pinholes in pipe walls are often signs of this chemical degradation. Physical factors such as pipe age and diameter also strongly affect failure rates. Studies consistently show that smaller-diameter pipes experience higher break rates than larger ones. Research from Regina, Canada, for example, found that the smallest pipes had the highest failure rates and that break frequency increased steadily with age. These trends highlight the vulnerability of aging AC infrastructure, especially where smaller pipes dominate the system.

Environmental and operational conditions further contribute to failures, particularly in clay soils. In these areas, most breaks occur during dry summer months when soil shrinks, or during wet periods when soils expand. This movement applies bending stresses to the brittle AC pipes, leading to circumferential (ring-shaped) fractures. Because AC is weak in tension, it fractures when bending stresses exceed its tensile strength. Studies show that the vast majority of AC pipe failures are circumferential and often associated with soil movement. Poor construction practices, such as uneven bedding or inadequate compaction, can worsen these stresses. Overall, AC pipe failures are most likely when environmental and operational loads act on pipes already weakened by corrosion, aging, or installation defects. AC water mains that have been in service for more than five decades generally exhibit increasing break rates and are considered higher-risk assets within water distribution systems. In many cities, AC mains have now been in service 60–90+ years, well beyond their original design life. At that age, failure rates typically increase due to material degradation, chemical attack, and cumulative stress.

Conclusion

With the break history well below the industry average break rate, favorable installation conditions, and non-aggressive water supply, it's estimated that the 90-year mark is a reasonable assumption for useful life of CWDBH AC pipe. The CIP below, therefore, recommends that all AC pipe in the CWDBH be replaced before the 90-year mark. Other CIP projects are related to the physical integration of the CWDBH system and replacement of cast-iron water mains.

CWDBH 10 YEAR CIP (FY28-37) ALL VALUES IN 2025 DOLLARS

[illegible]

AC Pipe	
Installation Years	Length
1960-1969	200,000
1970-1979	47,200
Unknown	38,300
Total	285,500

90 year Replacement Schedule				
Year	AC Replacement Per year (LF)	Total AC Replaced	Replacement Cost Per Year	
2028	8696	8696	\$	4,565,400
2029	8696	17392	\$	4,565,400
2030	8696	26088	\$	4,565,400
2031	8696	34784	\$	4,565,400
2032	8696	43480	\$	4,565,400
2033	8696	52176	\$	4,565,400
2034	8696	60872	\$	4,565,400
2035	8696	69568	\$	4,565,400
2036	8696	78264	\$	4,565,400
2037	8696	86960	\$	4,565,400
2038	8696	95656	\$	4,565,400
2039	8696	104352	\$	4,565,400
2040	8696	113048	\$	4,565,400
2041	8696	121744	\$	4,565,400
2042	8696	130440	\$	4,565,400
2043	8696	139136	\$	4,565,400
2044	8696	147832	\$	4,565,400
2045	8696	156528	\$	4,565,400
2046	8696	165224	\$	4,565,400
2047	8696	173920	\$	4,565,400
2048	8696	182616	\$	4,565,400
2049	8696	191312	\$	4,565,400
2050	8696	200008	\$	4,565,400
2051	8550	208558	\$	4,488,750
2052	8550	217108	\$	4,488,750
2053	8550	225658	\$	4,488,750
2054	8550	234208	\$	4,488,750
2055	8550	242758	\$	4,488,750
2056	8550	251308	\$	4,488,750
2057	8550	259858	\$	4,488,750
2058	8550	268408	\$	4,488,750
2059	8550	276958	\$	4,488,750
2060	8550	285508	\$	4,488,750
Total Cost			\$	149,891,700

From: [Dahl, Gina](#)
To: [Council](#)
Cc: [Kukulski, Chris](#); [Iffland, Kevin](#); [Bohlman, Denise](#)
Subject: RE: YVAS Facility Tour
Date: Thursday, January 29, 2026 2:35:37 PM

Mayor and Council,

Yellowstone Valley Animal Shelter (YVAS) has reached out to the City through its attorneys with an invitation for Council to tour YVAS's new space on Jellison Road. This would be an opportunity for City Council to see where YVAS is now performing the services being provided to the City pursuant to the services agreement. This would not be a time for any discussion related to pending issues, damages, etc., related to the incinerator incident in September.

Please let me know if you would be interested in a tour and then YVAS can find an appropriate date and time. Depending on the number of Council members in attendance, it may be considered a meeting if a quorum is present so we would need to make sure proper notice is provided to the public.

Let me know if you have any questions. Thanks!

Gina

	<i>Gina Dahl</i> City Attorney dahlg@billingsmt.gov
billingsmt.gov	P.O. Box 1178 Billings, MT 59103 P 406.657.8202

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From: [Aguirre, Amy](#)
To: [Dahl, Gina](#); [Council](#)
Cc: [Kukulski, Chris](#); [Iffland, Kevin](#); [Bohlman, Denise](#)
Subject: Re: YVAS Facility Tour
Date: Thursday, January 29, 2026 8:03:22 PM

I am definitely interested in a tour, please keep me in the loop!

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From: Dahl, Gina <dahlg@billingsmt.gov>
Sent: Thursday, January 29, 2026 2:35:33 PM
To: Council <council@billingsmt.gov>
Cc: Kukulski, Chris <kukulskic@billingsmt.gov>; Iffland, Kevin <ifflandk@billingsmt.gov>; Bohlman, Denise <bohlmand@billingsmt.gov>
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Let me know if you have any questions. Thanks!

Gina



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City Attorney
dahlg@billingsmt.gov

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