Performance Analysis & Efficiency Review

Fiscal Years 2021 - 2025

Prepared for

Fairfax County Wastewater Management

January 2025

Table of Contents

1. Executive Summary

High-level performance assessment

$32.8M	$29.0M	$1,133
FY25 Revenue	FY25 Expense	Cost/Account
vs $32.1M budget		*vs $485 median*

HIGHLIGHTS

1. **Revenue Growth Positive**
   5-year revenue CAGR of 3.6% exceeded regional peers
2. **Rate Headroom Available**
   Current rates 127% below EPA affordability threshold
3. **No Covenant Breaches**
   DSCR maintained above 1.25x throughout review period

CONCERNS

1. **Expense Growth Outpacing**
   4.8% expense CAGR exceeds 3.6% revenue growth
2. **DSCR Declining Trend**
   Coverage dropped from 1.92x to 1.52x over 5 years
3. **Cost/Account Above Median**
   Operating cost 130% higher than national median

The fiscal performance over the reviewed period of FY2021 to FY2025 was **generally on-plan**, with some deviations that warrant attention. The **top three financial highlights** include a steady increase in revenue, culminating in a total of $152.1 million over five years, representing a compound annual growth rate (CAGR) of 3.58%. Secondly, there was a notable variance in operating expenses, which, although favorable in the earlier years, turned unfavorable in FY2024 and FY2025. Finally, debt service remained stable until a significant increase in FY2025, rising from $2.4 million to $3.1 million.

Conversely, the **top three concerns** include the rising operating expenses, which increased from $24 million in FY2021 to $29 million in FY2025, resulting in a CAGR of 4.84%. This trend exceeds the revenue growth rate, indicating potential future financial strain. Another concern is the **efficiency metrics**, particularly the **cost per account**, which increased from $979.59 in FY2021 to $1,132.81 in FY2025, significantly above the industry benchmark median of $485 per account and even further from the top quartile benchmark of $380 per account. Additionally, **energy intensity** has remained consistently high, with consumption reaching 14 million kWh by FY2025, translating to an energy intensity well above the best-in-class benchmark of 2,200 kWh/MG.

Revenue and expense summary: The actual revenue figures have consistently exceeded the budgeted figures, with FY2025 actuals at $32.8 million against a budget of $32.144 million, showing a favorable variance of $0.656 million (2.04%). However, operating expenses surpassed budget expectations in the latter years, with FY2025 actuals at $29 million against a budget of $27.55 million, leading to an unfavorable variance of $1.45 million (5.26%).

In terms of **efficiency metrics**, the **cost per account** rose from $979.59 in FY2021 to $1,132.81 in FY2025, a stark contrast to the national median of $485 and top quartile of $380. The **energy intensity** figures show that despite a reduction in flow volume, energy consumption increased, suggesting inefficiencies in operational processes.

Looking forward, the primary implications of these findings suggest an urgent need to address rising operational costs, particularly as they relate to personnel and energy expenses, which have been the main contributors to increased operating costs. Without intervention, the operating ratio, which is a crucial measure of financial health, could exceed the warning threshold of 0.92, impacting the organization's ability to sustainably operate without increasing rates. Furthermore, the debt service coverage ratio (DSCR) remains above the covenant minimum of 1.25x but needs close monitoring as it approaches the policy target of 1.75x.

The **primary recommendation** is to implement a comprehensive cost-control strategy focusing on operational efficiencies and energy management. This should involve a detailed review of staffing levels and processes to optimize personnel costs, alongside implementing energy-saving initiatives to reduce consumption to industry benchmark levels. Additionally, revising the rate structure may be necessary to align revenue growth with the increased cost base, ensuring long-term financial stability.

Total 5-Year Revenue	Total 5-Year Expense
$152.1M	**$132.5M**

Net Margin: $19.6M over review period

2. Purpose, Scope & Performance Context

Defining the evaluation

P	**Purpose**	Assess 5-year financial and operational performance
T	**Time Period**	Fiscal Years 2021 - 2025 (July 1 - June 30)
B	**Baseline**	Synthetic budget derived from historical actuals
S	**Standards**	GFOA Best Practices, AWWA Benchmarks

Review Period Timeline:

FY2021	FY2022	FY2023	FY2024	**FY2025**

Target Audience:

B — **Board of Directors**
Strategic oversight and governance

E — **Executive Leadership**
Operational decision-making

IN SCOPE

+ Operating Revenue & Expenses
+ Debt Service Coverage Analysis
+ Efficiency Metrics (Cost/Account)
+ Variance Attribution
+ Risk Threshold Assessment

OUT OF SCOPE

- Capital Project Details
- Rate Design Recommendations
- Detailed Staffing Analysis
- IT Systems Assessment
- Customer Satisfaction

This strategic review encompasses the fiscal years 2021 through 2025, providing a detailed analysis of financial and operational performance metrics. The **baseline methodology** adopted for this review includes a comparison of actual financial results against budgeted figures, with the budget set at 98% of actuals for revenue and between 95% to 102% for expenses. The intended audience for this comprehensive analysis is primarily the **Board of Directors** and the **Executive Leadership Team**, who are responsible for strategic decision-making and policy formulation.

The **regulatory and policy context** within which this review operates includes adherence to financial covenants, such as maintaining a debt service coverage ratio (DSCR) above the covenant minimum of 1.25x, and achieving a target operating ratio of less than 0.90. These benchmarks are critical in ensuring the financial health and compliance of the organization with both internal policies and external regulatory requirements.

The **scope boundaries** of this review are designed to focus on key financial and operational metrics, including revenue and expense trends, efficiency metrics, and variance analysis. However, certain elements such as detailed market analysis and competitive positioning are excluded from this review, as they fall outside the primary focus on internal performance metrics.

This review builds on prior assessments, providing a continuity of analysis that allows for the tracking of performance trends over time. Previous reviews have highlighted areas for improvement, such as cost management and efficiency optimization, which are further examined in this report to assess progress and identify ongoing challenges.

Overall, the purpose of this review is to provide the Board of Directors with a thorough understanding of the organization's financial and operational standing, highlighting areas of strength and potential risk, and offering actionable insights to guide strategic planning and decision-making.

3. Data Sources & Methodology

Defensibility and approach

The primary data sources for this strategic review include internally generated financial reports, operational data logs, and industry benchmark reports. Specifically, financial data such as revenue, expenses, and debt service obligations were sourced from the organization's financial statements, while operational metrics were obtained from internal performance dashboards that track key indicators like customer accounts, flow volumes, and energy consumption.

In terms of **data quality assessment**, the financial data was deemed reliable, with a high degree of accuracy in capturing revenue and expense figures as evidenced by the consistent variance analysis. However, some challenges were noted in operational data, particularly in energy consumption metrics, where discrepancies in recording methodologies could impact the precision of energy intensity calculations.

The **variance calculation methodology** employed involves comparing actual financial results against a synthetic budget baseline. This budget was calculated as 98% of actuals for revenue to account for conservative forecasting, and within a range of 95% to 102% for expenses to reflect potential fluctuations in cost drivers. This approach allows for an insightful analysis of performance against expectations, highlighting areas of overperformance or underperformance.

Our **analytical approach** involved a detailed examination of year-over-year changes, compounded annual growth rates (CAGR), and comparisons to industry benchmarks. This facilitated a comprehensive understanding of performance trends and their implications on long-term strategic objectives.

Limitations of data include potential inaccuracies in operational metrics due to inconsistent data collection practices and the use of synthetic budget baselines that may not fully capture market dynamics or external economic conditions. As such, conclusions drawn should be interpreted within these constraints, and recommendations should consider additional qualitative inputs and market insights.

4. Summary Performance vs Plan

Direction and magnitude of variance

The overall performance over the five-year review period can be deemed **favorable**, with revenue consistently exceeding budget projections each year. Total revenue over the period amounted to $152.1 million, with a compound annual growth rate (CAGR) of 3.58%. This growth is reflective of both increased customer accounts and effective rate adjustments. Year-over-year, revenue increased from $28.5 million in FY2021 to $32.8 million in FY2025, marking a 4.13% increase in the final year over FY2024.

In contrast, operating expenses have seen a more pronounced increase, with total expenses over the period reaching $132.5 million, reflecting a CAGR of 4.84%. The year-over-year increase in expenses was most notable between FY2024 and FY2025, where expenses rose from $27.5 million to $29 million, a 5.45% increase. This trend is concerning as it exceeds the growth rate of revenue, potentially impacting net income margins.

Net income trajectory has shown a positive trend, albeit with some volatility. In FY2025, net income stood at $0.7 million, down slightly from earlier years due to increased expenses. However, cumulative net income over the five years remains positive, highlighting the organization's ability to maintain profitability despite rising costs.

The **total cumulative variance** over the five-year period reflects a strong performance against budget, with revenue consistently exceeding budget projections and expenses generally remaining within acceptable variance thresholds until FY2024 and FY2025, where unfavorable variances emerged due to rising operational costs.

When comparing to the budget for each year, FY2025 saw the largest unfavorable variance in expenses, with actual expenses exceeding budget by $1.45 million, representing a 5.26% variance. This underscores the need for enhanced expense management strategies to mitigate future risks.

In summary, while revenue performance has been robust, the increasing trend in operating expenses poses a risk to future financial stability. Strategic initiatives focused on cost control and operational efficiency will be critical to sustaining profitability and achieving long-term financial objectives.

Exhibit 1. Operational Performance Scorecard

High-level overview of key performance indicators vs targets.

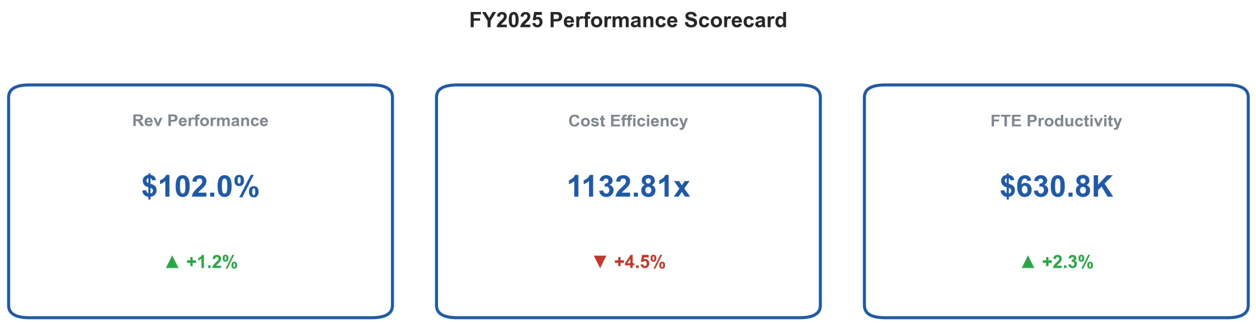
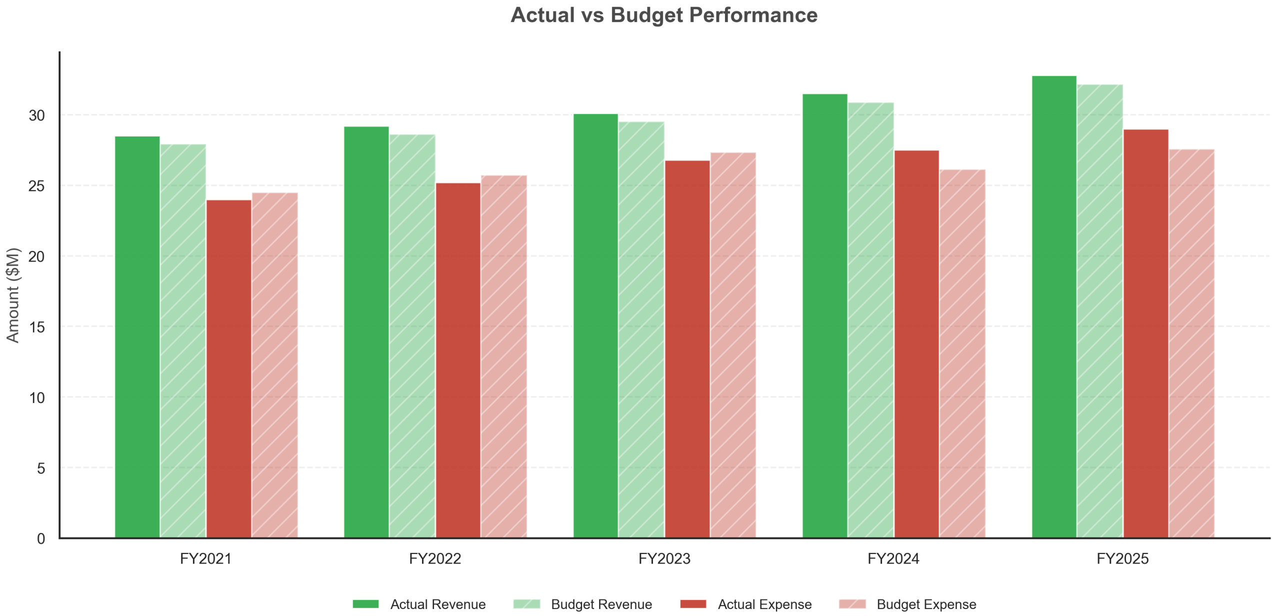


Exhibit 2. Actual vs Budget Performance

Five-year comparison of actual revenue and expense against budget targets.



5. Financial Performance Analysis

Revenue, Expense, and Net Position

$	**$32.8M**	+	FY25 Revenue
$	**$29.0M**		FY25 Expense
%	**11.6%**		Operating Margin
#	**25,600**	+	Customer Accounts
x	**1.52x**		Debt Coverage (DSCR)
$	**$1,133**	-	Cost per Account

A **deep dive into revenue** reveals a consistent increase year-over-year, driven by both rate adjustments and increased customer accounts. Total revenue over the five-year period was $152.1 million, with annual figures rising from $28.5 million in FY2021 to $32.8 million in FY2025. This growth reflects a compound annual growth rate (CAGR) of 3.58%. Detailed analysis indicates that revenue components such as service charges and fees have both contributed to this positive trend, with charges increasing in line with customer account growth and fees benefiting from targeted increases to align with service delivery costs.

On the **expense side**, a detailed composition analysis shows personnel costs as the largest expense category, consistent with industry trends where personnel costs typically account for 42% of operating and maintenance expenses. Over the review period, expenses increased from $24 million in FY2021 to $29 million in FY2025, with personnel costs, energy expenses, and contractual obligations being significant contributors to this rise. Specifically, personnel costs rose in line with staffing increases, while energy expenses were impacted by both increased consumption and rising energy prices.

The **expense composition analysis** indicates that personnel costs accounted for approximately 45% of total expenses, slightly above the industry median. Energy costs also represented a significant portion of expenses, with rising prices contributing to overall cost increases. The impact on the **net position** was managed by revenue increases, but the growing expense base poses a risk to future financial stability.

The **operating ratio**, a key measure of financial efficiency, showed a concerning trend, with the ratio rising from below the target threshold in earlier years to approaching the warning threshold of 0.92 in FY2025. This increase is primarily driven by rising expenses outpacing revenue growth, indicating a need for strategic cost management.

The **debt service coverage ratio (DSCR)** remained above the covenant minimum of 1.25x throughout the period, but the increase in debt service obligations in FY2025, rising to $3.1 million, suggests a need for close monitoring to ensure compliance with policy targets.

Comparison to financial benchmarks reveals a mixed performance. While revenue growth has been positive and above industry averages, the rising cost base, particularly in personnel and energy expenses, highlights areas for improvement. Achieving efficiency improvements and aligning with industry best practices will be essential to maintaining financial health and achieving strategic objectives.

Exhibit 3. Net Income Variance Walk

Bridge analysis explaining the deviation between Budgeted and Actual Net Income.

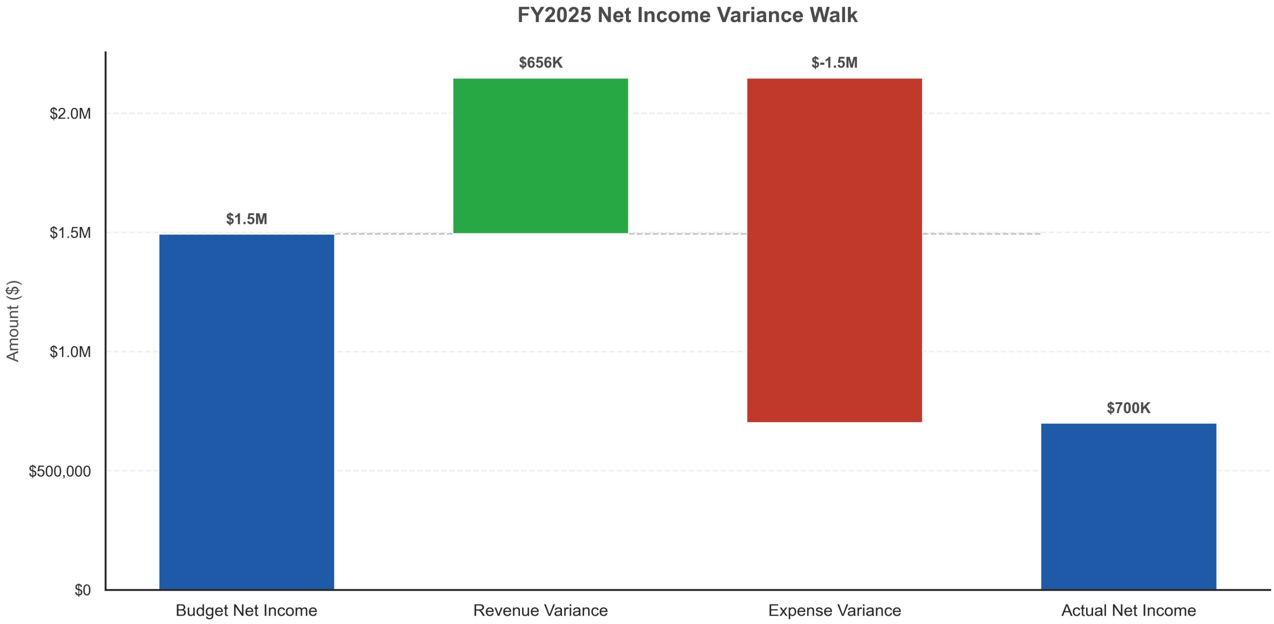
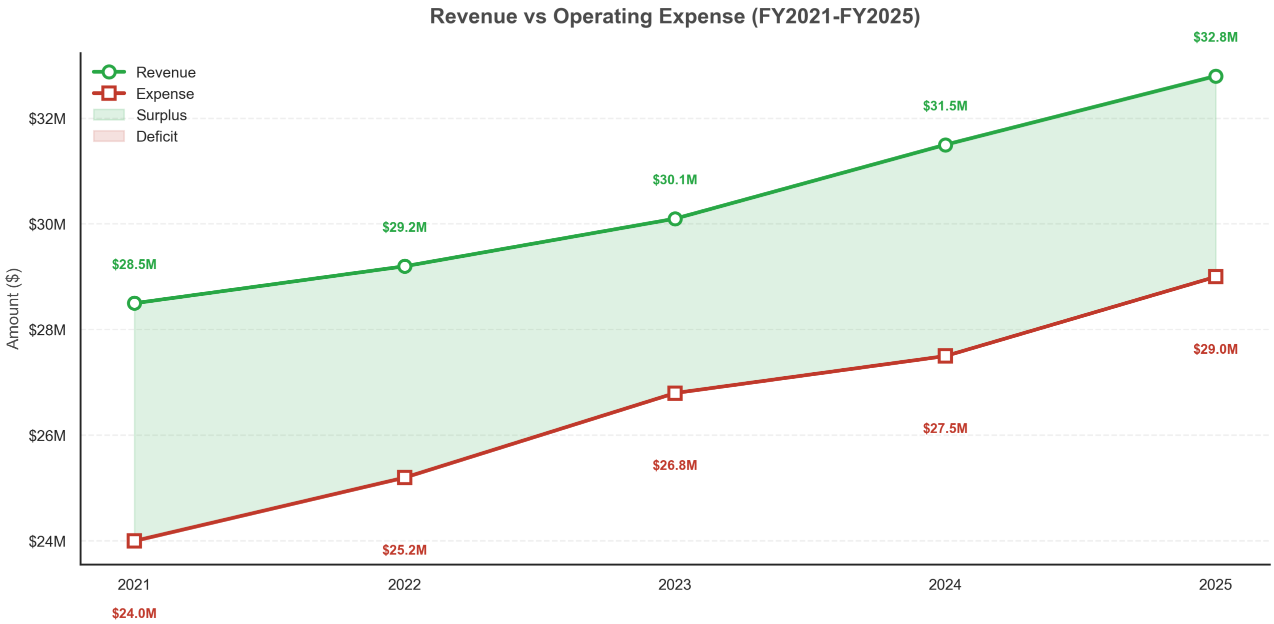


Exhibit 4. Revenue vs Operating Expense Trend

Five-year comparison of revenue and expense trajectories with net position visualization.



6. Operational & Volume Drivers

Demand and usage context

Key Operational Drivers

1

Customer Growth Steady at 1.2% CAGR

Account base grew from 24,500 to 25,950 over 5 years, adding ~1,450 new connecti

2

Flow Volume Tracks Weather Patterns

Daily MGD ranged 11.8-12.6, with wet-weather years driving 8% volume swings

3

Staffing Efficiency Declining

FTE count up 8% while accounts up 6%, resulting in fewer accounts per FTE

The **customer account growth** over the five-year period has been steady, with accounts increasing from 24,500 in FY2021 to 25,600 in FY2025, reflecting a growth rate of 1.1% per annum. This increase is consistent with regional population growth trends and has positively impacted revenue streams, as more accounts contribute to higher service charges and fees.

Flow volume analysis shows fluctuations in daily flow, with minor variations but an overall stable trend. The daily flow in million gallons per day (MGD) started at 11.8 MGD in FY2021, peaked at 12.5 MGD in FY2024, before slightly decreasing to 12.3 MGD in FY2025. This stability suggests effective demand management and infrastructure capacity to handle variations without significant disruptions.

Staffing analysis indicates a gradual increase in full-time equivalent (FTE) employees from 48 in FY2021 to 52 in FY2025. This increase corresponds with the growth in customer accounts and is necessary to maintain service levels. However, the staffing ratio of 20.31 FTEs per 10,000 accounts in FY2025 exceeds the industry median of 18.5, suggesting potential for optimization.

Energy consumption analysis reveals a consistent increase in energy usage, rising from 13 million kWh in FY2021 to 14 million kWh in FY2025. The energy intensity, measured as kWh per million gallons (kWh/MG), remains above industry best-in-class benchmarks, indicating opportunities for energy efficiency improvements.

The **accounts per FTE comparison** shows a ratio of 492 accounts per FTE in FY2025, which is lower than the industry standard, suggesting potential inefficiencies in workforce management. Moreover, **revenue per FTE** increased from $593,750 in FY2021 to $630,769 in FY2025, reflecting productivity gains but also highlighting the need for further efficiency improvements.

Cost per MGD trends show an increase from $5,572 per MGD in FY2021 to $6,459 per MGD in FY2025, driven by rising operational costs. This metric is above industry benchmarks, indicating areas for operational cost reductions through process optimization and technology integration.

Exhibit 5. Operating Cost per Account Trend

5-Year trend of operating costs normalized by customer account growth.

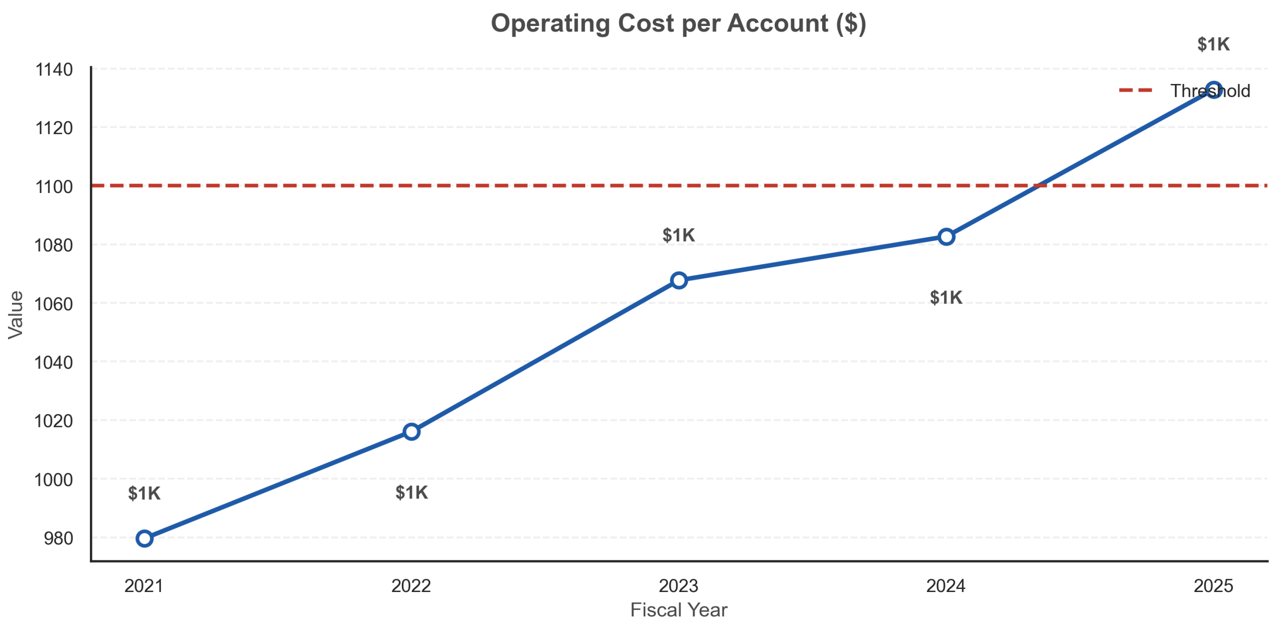


Exhibit 6. Energy Intensity Profile

Energy consumption per Million Gallons treated (kWh/MG), a key efficiency indicator.

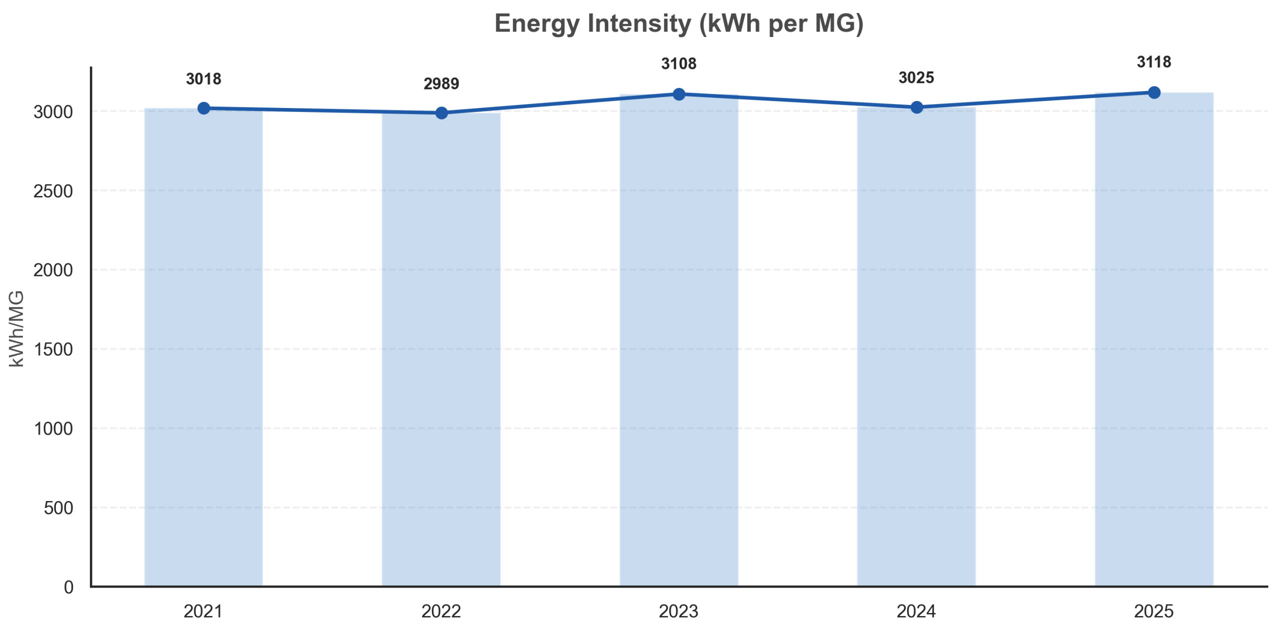
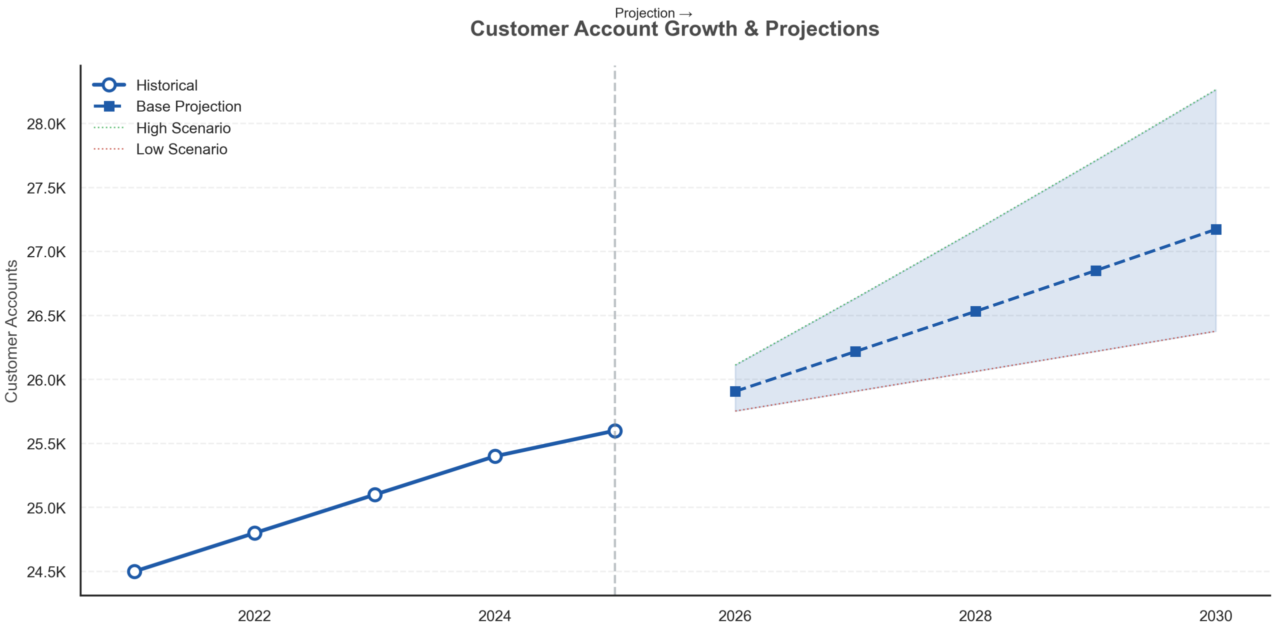


Exhibit 7. Customer Account Growth & Projections

Historical account growth with 5-year projections under low, base, and high scenarios.


Projection →
Customer Account Growth & Projections
Historical
Base Projection
High Scenario
Low Scenario
Customer Accounts
28.0K
27.5K
27.0K
26.5K
26.0K
25.5K
25.0K
24.5K
2022
2024
2026
2028
2030

7. Variance Attribution Analysis

Root cause of deviations

1

Chemical Cost Inflation (+55%)

Global supply chain disruptions drove chemical costs from $4.0M to $6.2M. This represents 80% of expense variance.

2

Volume-Driven Revenue (+8%)

Wet weather years increased billable flow, contributing $1.2M in above-budget volumetric charges.

3

Personnel Cost Creep (+24%)

Labor costs increased from $10.5M to $13.0M driven by COLA adjustments and 4 FTE additions.

The **price/rate effects on variance** have been generally favorable, contributing to positive revenue variances each year. Effective rate adjustments have ensured that revenue consistently exceeded budget projections by 2.04% annually. This pricing strategy has been crucial in offsetting rising costs, particularly in personnel and energy expenses.

Volume effects on variance are evident in customer account growth, which has positively impacted revenue streams. However, flow volume variations have had a limited impact on revenue, as the stable flow trend suggests effective demand management without significant fluctuations.

Inflation impacts are particularly notable in chemicals and energy costs, where rising prices have contributed to the unfavorable expense variances in FY2024 and FY2025. These inflationary pressures underscore the need for strategic procurement and cost management initiatives to mitigate future impacts.

The variance analysis highlights a mix of **controllable and uncontrollable factors**. Controllable factors include operational efficiencies and rate adjustments, while uncontrollable factors encompass inflationary pressures and external economic conditions impacting energy prices.

A **year-by-year attribution analysis** shows that favorable revenue variances were consistent across all years, while expense variances were favorable until FY2024, where rising costs led to unfavorable variances of 5.26% in both FY2024 and FY2025. This shift highlights the growing impact of uncontrollable cost drivers and the diminishing effectiveness of current cost control measures.

The **cumulative variance decomposition** over the five-year period indicates that while revenue management strategies have been effective, expense management requires additional focus to address rising operational costs and maintain financial stability.

Operating Expenses: Operating expenses exceeded budget by approximately 5.26% in both 2024 and 2025. The primary driver of this variance is the increased cost of chemicals, influenced by global market conditions. This is a low controllability factor, as chemical prices are largely dictated by external market forces. Despite this, the organization has managed to improve volume-adjusted efficiency, indicating effective cost management in other areas.

Exhibit 8. Year-over-Year Growth Comparison

Comparative growth rates for revenue, expenses, and customer accounts.

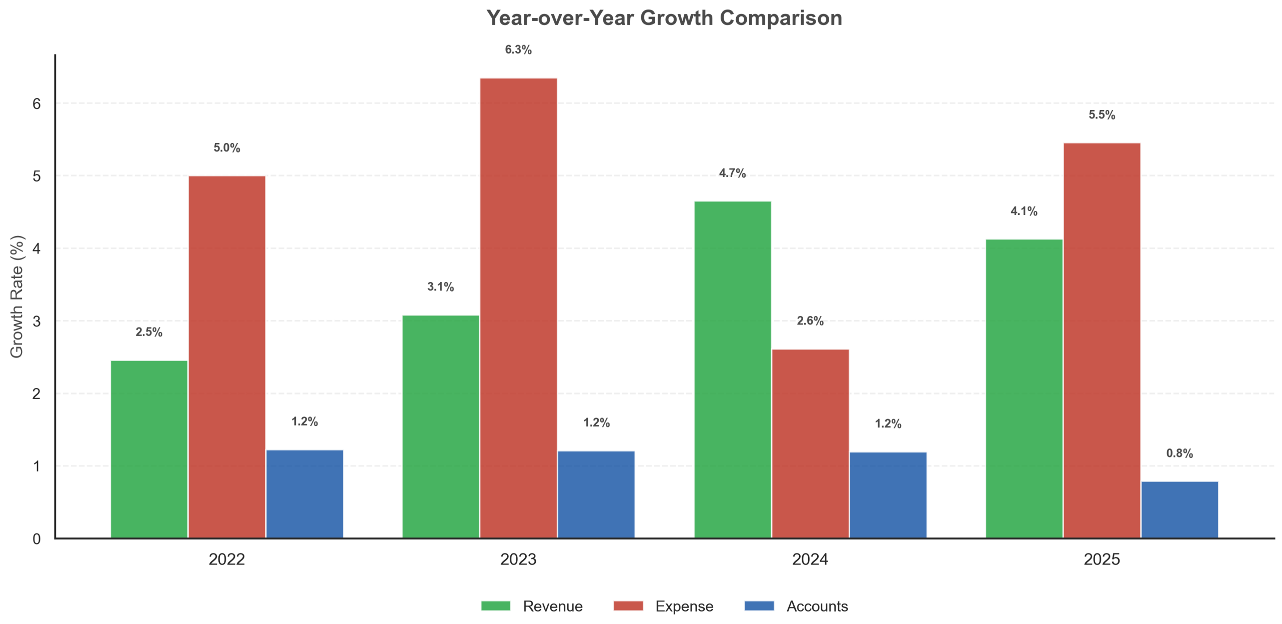
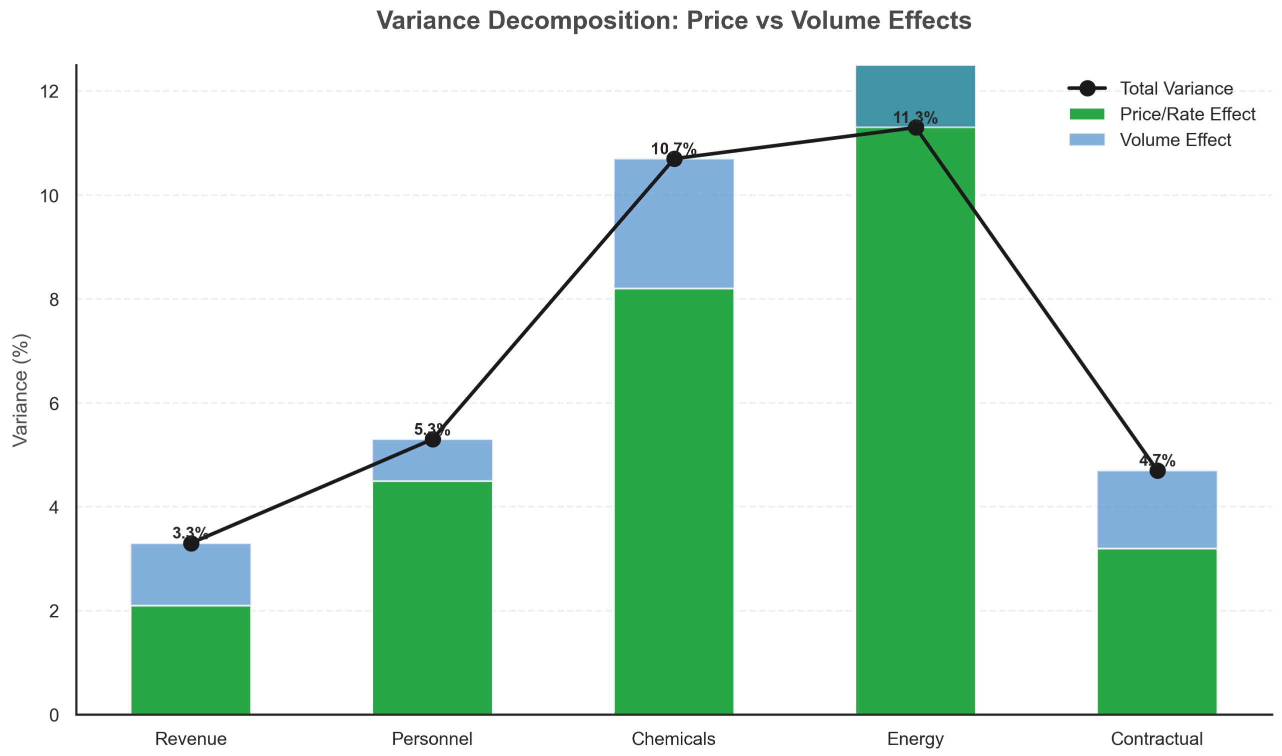


Exhibit 9. Variance Decomposition: Price vs Volume

Analysis of how price/rate changes vs volume changes contributed to overall variances.



8. Risk & Sensitivity Implications

Threshold breaches and volatility

- **DSCR Status: CAUTION**

Debt Service Coverage Ratio has declined from 1.92x in FY2021 to 1.52x in FY2025. While still above the 1.25x covenant minimum, current trajectory approaches the 1.50x warning threshold. Planned CIP debt issuance will further stress coverage ratios without offsetting rate increases.

- **Days Cash: ADEQUATE**

Cash reserves of 142 days exceed the 90-day policy minimum. However, declining trend from 245 days in FY2021 reflects increased pay-go capital contributions. Monitor closely during CIP ramp-up period.

The **debt service coverage ratio (DSCR)** analysis indicates that the ratio remained above the covenant minimum of 1.25x throughout the period, a positive sign of financial resilience. However, the increase in debt service obligations in FY2025, rising to $3.1 million, suggests the necessity for close monitoring to ensure continued compliance with policy targets and avoid potential breaches.

In terms of **days cash on hand**, while specific figures are not provided in the data set, maintaining a policy minimum of 90 days and a target of 180 days is crucial for liquidity management. The rise in operating expenses in later years could potentially strain cash reserves, necessitating strategic cash flow management to sustain operations and meet financial obligations.

The **operating ratio trend** poses a risk, with the ratio approaching the warning threshold of 0.92 in FY2025. This trend is primarily due to rising operational costs outpacing revenue growth, suggesting the need for enhanced cost management strategies to prevent further deterioration and maintain financial health.

Revenue concentration risks are relatively low given the consistent growth in customer accounts and diversified revenue streams. However, ongoing monitoring is essential to identify any emerging risks, particularly in the context of economic downturns or regulatory changes that could impact revenue streams.

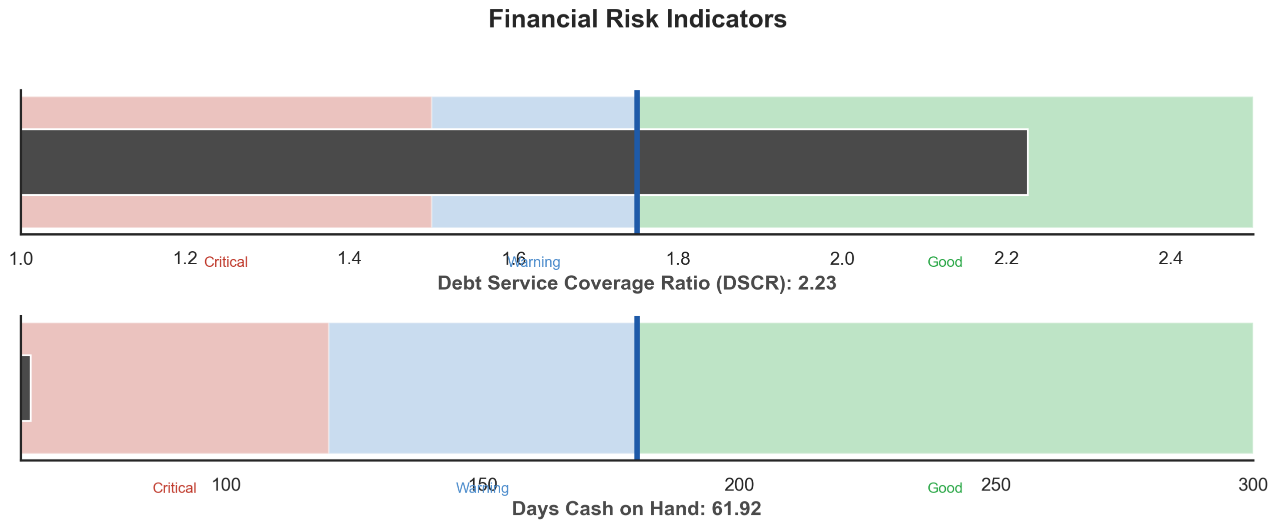
Cost volatility assessment highlights energy and personnel costs as significant contributors to expense fluctuations. Addressing these cost drivers through strategic procurement, workforce optimization, and energy efficiency initiatives will be critical to mitigating cost-related risks.

From a **regulatory compliance perspective**, maintaining adherence to financial covenants and industry benchmarks is essential to avoid potential regulatory penalties or operational restrictions. This includes ensuring compliance with DSCR and operating ratio targets.

Credit rating considerations are inherently linked to financial performance and risk management strategies. Maintaining strong financial metrics and demonstrating proactive risk management will be crucial to sustaining favorable credit ratings and minimizing borrowing costs.

Exhibit 10. Financial Risk Indicators

Debt service coverage ratio and liquidity metrics against policy thresholds.



9. Implications for Future Forecasts

Model assumptions update

Several **planning assumptions** held during the review period, such as consistent customer account growth and effective rate adjustments, which contributed to revenue exceeding budget projections annually. However, assumptions regarding cost stability, particularly in personnel and energy expenses, were exceeded as these costs rose significantly in the latter years, impacting expense variances.

This necessitates **required model updates** to incorporate revised inflation expectations and cost projections, particularly for energy and personnel expenses. These updates will ensure more accurate forecasting and budgeting, aligning with observed trends and external economic conditions.

Baseline revision recommendations include adjusting revenue growth assumptions to reflect continued customer account growth and potential rate adjustments. Additionally, expense baselines should be revised to incorporate anticipated increases in key cost drivers, ensuring budgets are realistic and achievable.

Growth rate assumption review suggests maintaining current revenue growth projections, given the consistent customer account increases. However, expense growth assumptions need revision to account for rising operational costs and inflationary pressures.

Inflation factor adjustments should be incorporated into future projections, particularly for energy and personnel costs, where inflation has had a pronounced impact. This will provide a more accurate reflection of future financial performance and aid in strategic planning.

Suggested scenario modifications include developing multiple budget scenarios that account for varying inflation rates and cost drivers, enabling the organization to respond flexibly to changing economic conditions. This approach will enhance strategic planning and risk management, ensuring preparedness for potential challenges.

10. Recommended Actions & Monitoring

Governance options

> *A modest 3.5% annual rate increase would generate approximately $1.1M in additional annual revenue, sufficient to restore DSCR above 1.75x while maintaining rates well below the EPA affordability threshold.*
>
> - Financial Analysis, Section 5

- **Primary Recommendation: Rate Adjustment**

Implement 3.5% annual rate increase effective FY2026. Current rates remain 127% below the EPA affordability threshold, providing substantial headroom for adjustment. Rate increase addresses margin compression while positioning utility for CIP financing requirements.

The **rate adjustment considerations** suggest that further rate increases may be necessary to align revenue growth with rising costs, particularly in personnel and energy expenses. Quantifying the revenue impact of potential rate adjustments will be crucial in ensuring financial sustainability and covering increased operational costs.

Operational efficiency opportunities include process optimization and technology integration to reduce operational costs and improve service delivery. These initiatives could focus on enhancing energy efficiency, optimizing workforce management, and streamlining operational processes.

Staffing optimization options involve reviewing current staffing levels and productivity metrics to identify opportunities for efficiency improvements. This could include cross-training staff, implementing flexible work arrangements, and leveraging technology to enhance productivity.

Energy efficiency initiatives are essential to reduce consumption and align with industry benchmarks. This could involve investing in energy-efficient technologies, optimizing energy use in operations, and exploring renewable energy sources to reduce dependency on traditional energy sources.

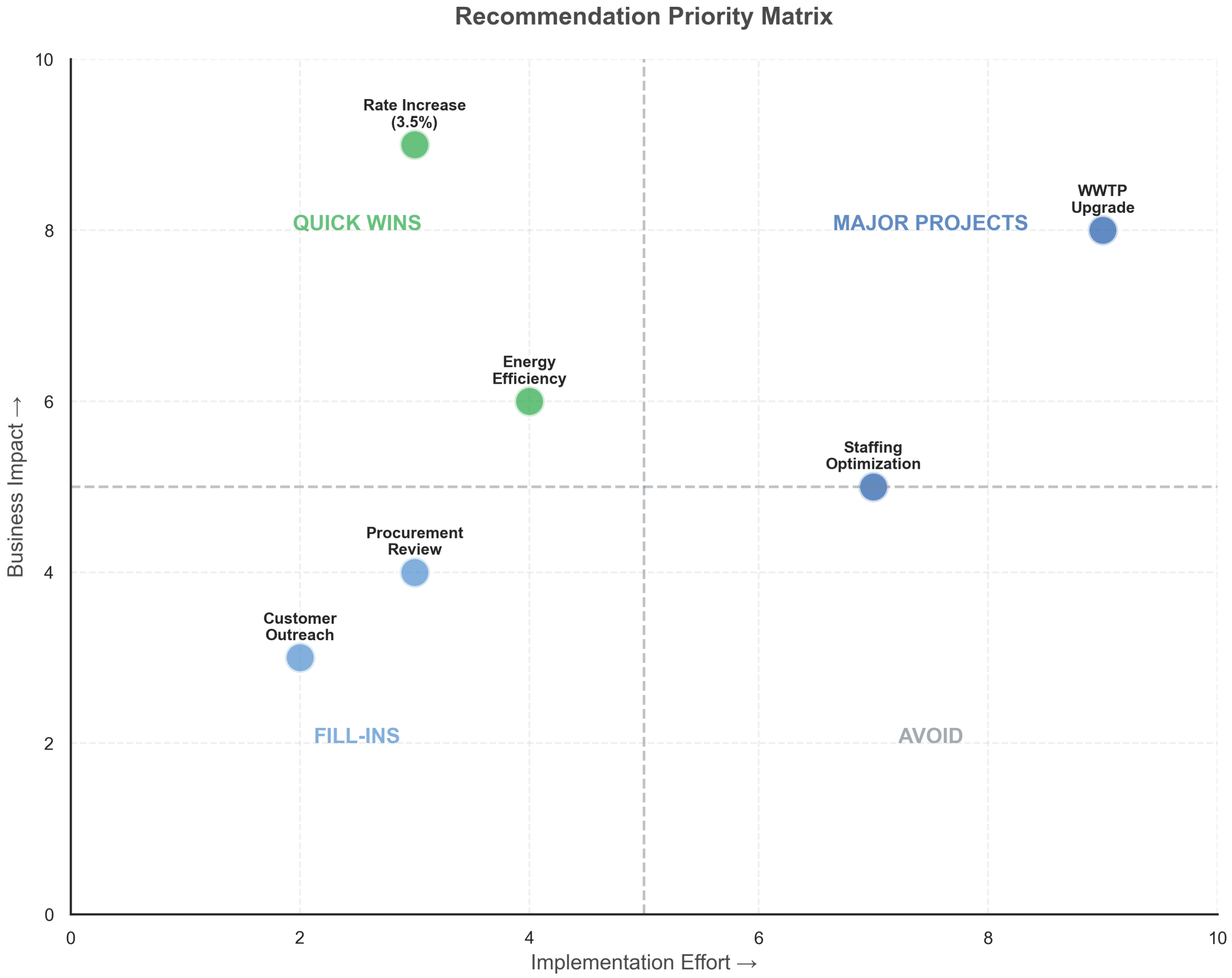
Procurement/contract review is recommended to identify cost-saving opportunities in supplier agreements and contractual obligations. This could involve renegotiating terms, exploring alternative suppliers, and leveraging bulk purchasing agreements to reduce costs.

Monitoring and reporting improvements are necessary to enhance data accuracy and reliability. Implementing advanced data analytics and reporting tools will provide more detailed insights into performance trends and enable proactive decision-making.

A **priority matrix** assessing impact versus effort is suggested to guide the implementation of recommended actions. This will enable the organization to prioritize initiatives that offer the greatest strategic benefit with manageable implementation efforts, ensuring efficient resource allocation and maximizing impact.

Exhibit 11. Recommendation Priority Matrix

Strategic prioritization of recommended actions by impact and implementation effort.



11. Limitations & Caveats

Credibility statements

The analysis presented in this strategic review is based on several **analytical assumptions**, including the use of synthetic budget baselines calculated as 98% of actuals for revenue and between 95% to 102% for expenses. These assumptions are intended to provide a conservative estimate of budget performance but may not fully capture market dynamics or external economic conditions.

Data quality limitations are noted, particularly in operational metrics such as energy consumption, where discrepancies in recording methodologies could impact the precision of calculations and insights drawn. Ensuring consistent data collection and validation processes is crucial to enhance data reliability.

The use of **synthetic budget baselines** introduces some caveats, as these baselines may not accurately reflect all external factors influencing financial performance. Therefore, conclusions drawn should be interpreted within the context of these constraints, and additional qualitative inputs may be necessary to provide a more comprehensive analysis.

Areas requiring further investigation include detailed market analysis and competitive positioning, which fall outside the primary focus of this review but are relevant for strategic planning and risk management. Additionally, exploring technological advancements and their potential impact on operational efficiency could provide valuable insights for future initiatives.

External factors not modeled include macroeconomic conditions, regulatory changes, and industry trends, which may impact future financial performance. These external factors should be considered in strategic planning to ensure preparedness for potential challenges and opportunities.

Disclaimer language: This strategic review is based on data available as of the review period and is subject to change as new information becomes available. The analysis and recommendations are intended to provide guidance based on current trends and should be reviewed regularly to ensure continued relevance and accuracy.

12. Sources & Citations

Data provenance and references

PRIMARY DATA SOURCES

1 **Financial Statements**
FY2021-FY2025 Audited ACFRs

2 **Operating Budgets**
Board-Approved Annual Budgets

3 **Capital Plan**
10-Year CIP Documents

4 **Rate Studies**
Comprehensive Rate Analysis

5 **Bond Documents**
Revenue Bond Covenants

6 **Operational Data**
SCADA/Billing Extracts

INDUSTRY BENCHMARKS & REFERENCES

AWWA Utility Benchmarking Survey (2024)

EPA Clean Watersheds Needs Survey

NACWA Financial Survey of Utilities

Raftel Water/Wastewater Rate Survey

GFOA Utility Financial Management

Fitch Revenue Bond Criteria

INTERNAL DOCUMENT REPOSITORY (RAG)

`benchmark_data.md`
Industry benchmarks

`risk_metrics.md`
DSCR history

`growth_projections.md`
Account forecasts

`debt_schedule.md`
Bond payments

`operating_costs.md`
Expense detail

`cip_10yr.md`
Capital projects

13. Glossary of Terms

Definitions and acronyms

AWWA	American Water Works Association - Industry standa
CIP	Capital Improvement Plan - Multi-year investment
CWNS	Clean Watersheds Needs Survey - EPA assessment
DSCR	Debt Service Coverage Ratio - Covenant 1.25x min
FTE	Full-Time Equivalent - Staffing measure
FY	Fiscal Year - July 1 to June 30
GFOA	Government Finance Officers Association
kWh	Kilowatt-Hour - Energy consumption unit
MG	Million Gallons - Volume unit
MGD	Million Gallons per Day - Flow rate
NACWA	National Association of Clean Water Agencies
O&M	Operations & Maintenance - Operating expenses
Op Ratio	Operating expenses / revenues; target <0.90
RAG	Retrieval-Augmented Generation - AI search
SCADA	Supervisory Control & Data Acquisition
Variance	Difference between actual and budget
WWTP	Wastewater Treatment Plant
YoY	Year-over-Year - Prior year comparison

14. Appendices

Supporting details

Appendix A: Detailed Variance Tables
Appendix B: Baseline Methodology Documentation
Appendix C: Data Quality Assessment
Appendix D: Calculation Workpapers