



Summary of Independent Assessments of **TRENTON WATER WORKS**

a community water system under the direct operational oversight of NJDEP



NEW JERSEY
DEPARTMENT OF
ENVIRONMENTAL
PROTECTION

January 27, 2025

Background

Safe Drinking Water in New Jersey

Trenton Water Works

DEP Direct Oversight Update

January 27, 2025

- DEP enforces the Safe Drinking Water Act to ensure New Jersey communities receive reliably clean and safe drinking water from their utilities
- DEP monitors hundreds of community water systems
 - evaluates the quality of drinking water systems deliver
 - performs inspections to ensure their proper operation and maintenance
 - takes enforcement action necessary to assure compliance
 - provides funding to help water systems update and improve water infrastructure

New Jersey has one of the strongest drinking water quality programs in the United States.



Background

The Trenton Water Works System

Trenton Water Works

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- TWW is a component of the City of Trenton itself, controlled by the City's governing body; it is not an independent public utility
- TWW serves drinking water to 220,000+ people throughout Trenton and Ewing, as well as in parts of Hamilton, Hopewell, and Lawrence
- TWW also sells to Aqua NJ, a privately owned water utility that serves TWW drinking water in Hamilton and Lawrence Townships
- Majority of TWW customers (55%) reside outside the City of Trenton
- Other municipalities in TWW's service area have no formal role in TWW's governance or authority over TWW's operations

***TWW is classified as a
“very large” water system
under federal law.***

Background

Trenton Water Works Compliance Challenges

- For many years, TWW has experienced recurring operational, maintenance, and infrastructure improvement deficiencies
- Led to repeated noncompliance with the Safe Drinking Water Act
- DEP asserted direct oversight of TWW due to recurring struggles to
 - properly operate and maintain the system
 - cover or adequately treat its uncovered reservoir
 - the potential for Legionella and lead risks within system
 - the system's inability to advance capital improvements critical to its stability

Trenton Water Works

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***Compliance information
is available online at
dep.nj.gov/trentonwater***



DEP Direct Operational Oversight

Goal: Help Ensure the Immediate Stability of TWW

- DEP water professionals are a regular presence at TWW to oversee certain operations and provide added technical and managerial assistance to supplement TWW personnel
- DEP also utilizes State funding to procure limited equipment and engineering support for TWW to ensure its stability
- Over the last two years, DEP professionals have worked with TWW personnel to triage critical matters of imminent public health concern, helping to stabilize TWW's routine operations

DEP stability support has ensured that water distributed by TWW meets clean drinking water safety standards

Trenton Water Works

DEP Direct Oversight Update

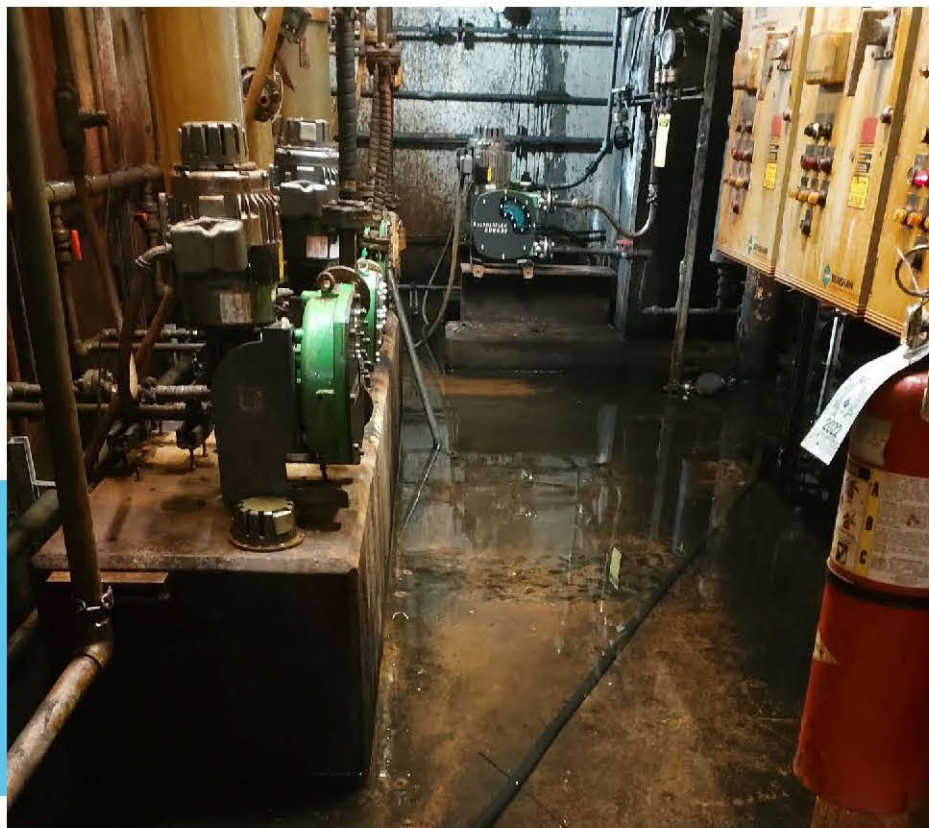
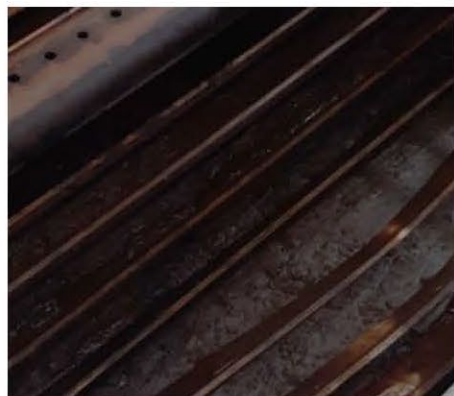
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***DEP does not operate
Trenton Water Works.***

*DEP provides a higher level
of regulatory oversight and
technical support than is
customary of a regulator.*



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Initial Conditions *TWW* *Treatment Plant*



Initial Conditions (Superpulsator Units)

*superpulsators remove
turbidity and contaminants
from source water*



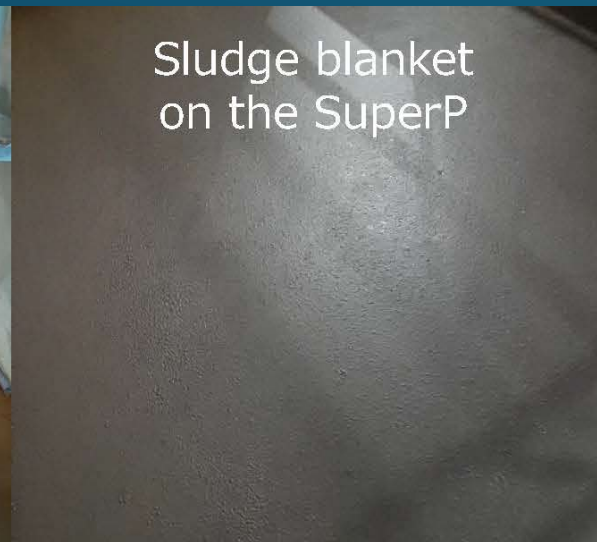
- DEP stability support has been effective in addressing critical matters of immediate public health concern
- Long-term solutions to maintain standard operating protocols and ensure proper maintenance are necessary



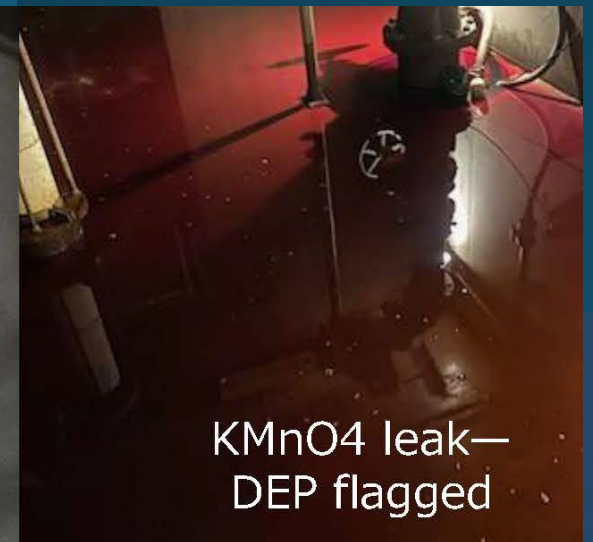
Ceiling condition



Stagnant water



Sludge blanket
on the SuperP



KMnO₄ leak—
DEP flagged



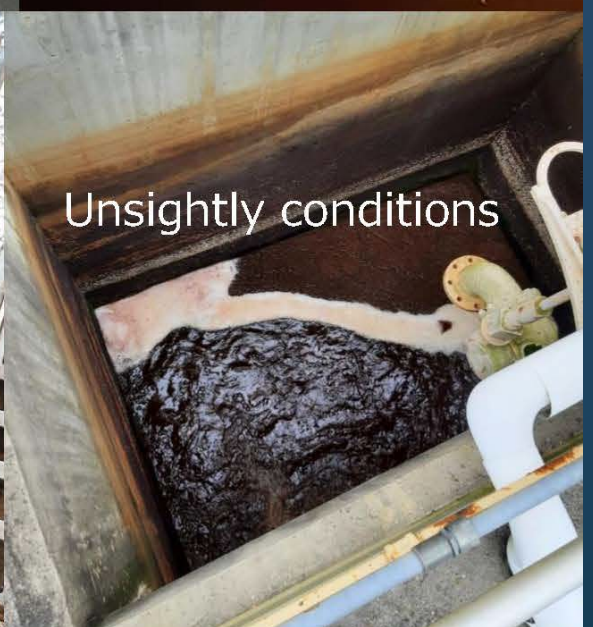
PAC not feeding
--DEP flagged



Sodium Hypochlorite
corrosion



KMnO₄ spill



Unsightly conditions

DEP Observed Conditions at TWW 2023 - 2024

External Review Independent of DEP

Independent Assessments by Water Sector Professionals

Trenton Water Works

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- To inform long-term solutions for TWW, independent assessments:
 - objectively appraise the technical, managerial, and financial condition of TWW (by H2M Engineers)
 - present comparative analysis of alternative governance and financial models (by Black & Veatch, American Public Infrastructure)
- Assessments were sought with the input and support of all TWW service area mayors and legislators (LD-14 and LD-15)
- After 14+ months of substantial data and engineering review, on-site inspections, and interviews with TWW personnel, the independent assessments are now complete

***Independent assessments
examine TWW capacities
and restructuring options.***

Overview of Independent Assessments

Risk of Systemic Failure Warrants Restructuring

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- Independent reviews reflect conditions as previously understood, confirm TWW suffers from historic neglect and underinvestment resulting in an “Extremely High Risk” of “Systemic Failure” that Trenton alone cannot repair, even with DEP’s stabilization support
- Assessments **do not** recommend the privatization or sale of TWW
- Comparative analysis of alternative governance options show that
 - TWW can be successful if restructured as a public utility independent of municipal government
 - TWW can maintain safe drinking water compliance and ensure the long-term asset sustainability if its governance, management, and operations are fully modernized and professionalized at every level of its organization

Extremely high risk of systemic failure warrants restructuring TWW as a publicly-owned regional utility modernized and professionalized at every level of its organization.



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DEP Reactions to Assessments

Transformation of TWW is Worthwhile & Achievable

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- Assessments reflect what many area leaders have acknowledged as an inescapable reality—that restructuring the governance and management of TWW is necessary to ensure its long-term viability
- With legislative support, TWW could be restructured as an independent public regional utility that preserves the interests of the City of Trenton, invests in its future, best serves the needs of all the service area communities, and most importantly—consistently delivers reliably safe, clean drinking water at affordable rates
- Restructuring strategies are presented in the 360° Review, which provides leaders in the TWW service area with critical tools to help the City and its neighbors chart a course forward that best serves the nearly quarter-million people who rely on TWW for water service

DEP has committed to work with service area leaders to chart an expeditious path forward and will continue to provide direct oversight and financial support to TWW in the near-term.

Technical, Managerial and Financial Capacity Evaluation

Trenton Water Works

DEP Direct Oversight Update

January 27, 2025

Non-Compliance with Safe Drinking Water Regulatory Requirements

Chronic Lack of Proper Asset Management and Maintenance

Operational Continuity and Reliability Concerns

Poor Management Practices

Complacent Staff and Leadership

H 2 architects + engineers
M

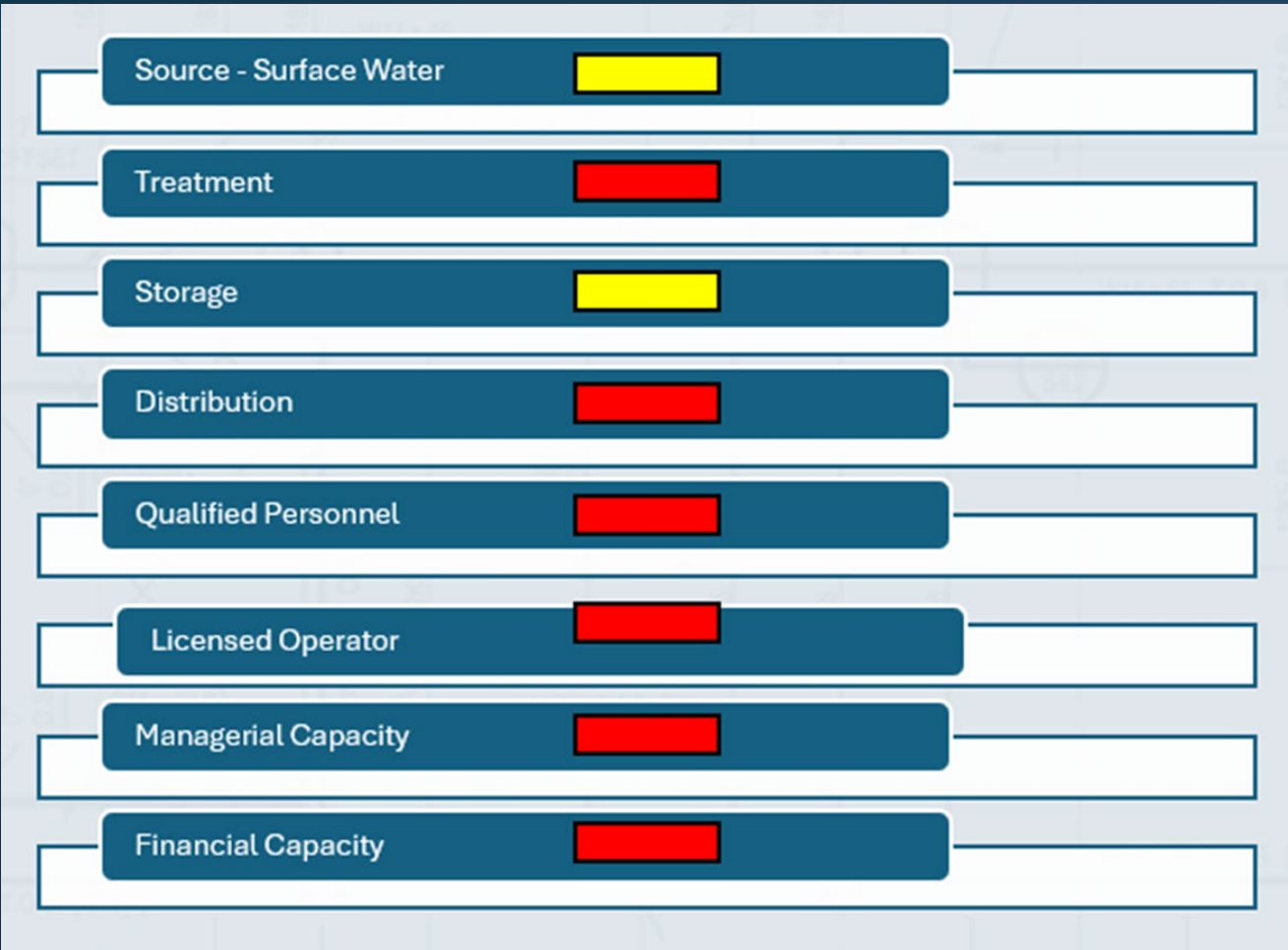
TMF
Deficiencies
Identified



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Technical, Managerial and Financial Capacity Evaluation

Trenton Water Works
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H 2 architects + engineers
M

TMF Benchmark Criteria Rankings



Technical, Managerial and Financial Capacity Evaluation

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- Absence of consistent, proficient executive leadership and capable management
- Failure to recruit, train, and retain personnel of sufficient expertise and number
- Inability to effectuate and supervise standard operating procedures within and across divisions
- Failure to follow recommended equipment operation and maintenance practices
- Chronic lack of proper asset management
- Failure to collect on delinquent accounts
- Culture of complacency throughout the organization

H 2 architects + engineers
M

“TWW’s primary deficiency is its management and organizational structure.”



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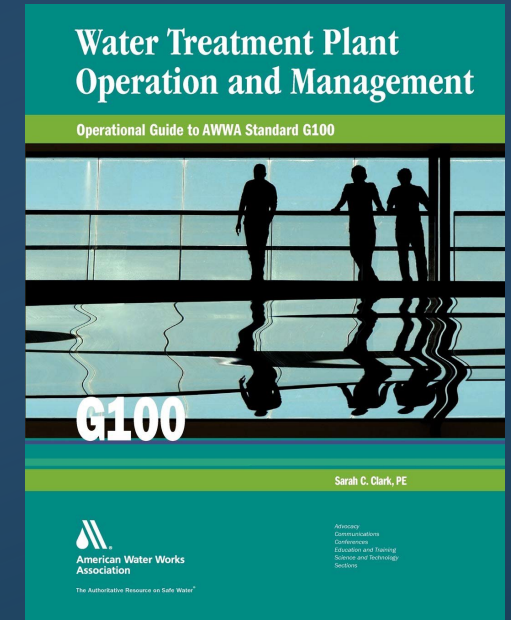
Technical, Managerial and Financial Capacity Evaluation

Trenton Water Works
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January 27, 2025

AWWA Manual G100 defines complacency as:

H 2 architects + engineers
M

“Failure to maintain a culture focused on both routine attainment of water quality goals and an awareness of operational risks that threaten attainment of those goals. For example, **inadequate effort, planning, or provision of capital and human resources to maintain acceptable water quality** is evidence of complacency”.



360 Degree Review of TWW

A Comparative Analysis of Alternative Governance and Asset/Liability Optimization

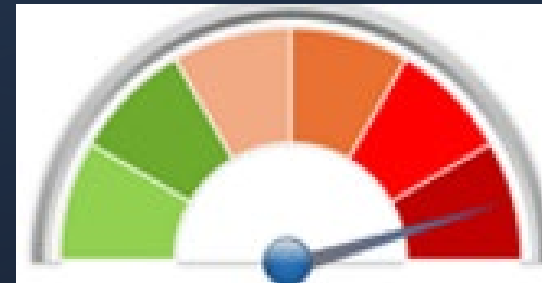
Trenton Water Works

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- The 360 further analyzes and makes independent observations about TWW technical, managerial and financial capacities
- Offers an in-depth qualitative and quantitative review of TWW's performance as compared to alternative water system governance models, including implications for TWW's assets and liabilities

Concludes that TWW is “an **Extremely High Risk** overall with **Systemic Failures** for capacity indicators under the current governance and management structure.”



360 Degree Review of TWW

A Comparative Analysis of Alternative Governance and Asset/Liability Optimization

- “
- The City of Trenton is incapable of mitigating the operational and infrastructure risks of the water system which poses a threat to the public health and ratepayer affordability.
 - TWW has severe technical, managerial and financial challenges which in total represents systemic deficiencies that are beyond TWW's capacity to correct independently.
 - TWW does not have the financial capacity to meet a ten-year, \$570 million, inflation-adjusted capital improvement plan (CIP), which requires immediate attention.
 - There is no evidence that, absent NJDEP's direct oversight and considerable assistance, the City could transform TWW into a utility that consistently meets regulatory requirements to provide customers with safe, reliable drinking water.

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“TWW is an Extremely High Risk as TWW's system, management, and financial challenges are serious and systemic.”



360 Degree Review of TWW

A Comparative Analysis of Alternative Governance and Asset/Liability Optimization

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Governance models are examined from three vantage points:

- Qualitative Assessment focuses on Governance, Management and Optimization strengths, scoring each using five underlying factors to explore how alternative models can most expeditiously transform TWW into a high performance-driven utility
- Quantitative Analysis takes advantage of the inherent strengths of each model and optimizes their Assets and Liabilities to bolster the model's potential public benefits as well as stakeholder support for change
- Reviews TWW Creditworthiness and Credit Rating Prospects under the various Alternative Models to provide the perspective of rating agencies, lenders, and investors



A qualitative and quantitative evaluation of TWW governance alternatives, including benefits for asset and liability optimization.



360 Degree Review of TWW

A Comparative Analysis of Alternative Governance and Asset/Liability Optimization

GOVERNANCE MODELS

- TWW STATUS QUO – Municipal or Muni Model
MUA – Mercer County Municipal Utilities Authority
SPE – Special Purpose Entity – a Hybrid Model
TWW P3 – Public Private Partnership
IOU – Privatization or Private-Owner Model

| GOVERNANCE ALTERNATIVES | |
|---------------------------------|------------|
| Critical Qualitative Assessment | |
| TWW | |
| GOVERNANCE | WEAK |
| Governance | ✗ |
| Framework | ★ |
| Execution | ✗ |
| Stakeholders | ☆☆☆ |
| Social Impact | ★ |
| MANAGEMENT | CHALLENGED |
| Independence | ✗ |
| Leadership | ✗ |
| Operations | ✗ |
| Capital | ✗ |
| Risk | ✗ |
| OPTIMIZATION | FAIR |
| Optimize Assets | ☆☆☆ |
| Optimize Liabilities | ☆☆☆ |
| Rate Setting | ☆☆☆ |
| Ratings | ✗ |
| Financial Aid | ★★ |

| GOVERNANCE ALTERNATIVES | |
|---------------------------------|-----------|
| Critical Qualitative Assessment | |
| MUA | |
| GOVERNANCE | EXCELLENT |
| Governance | ★ |
| Framework | ★★★ |
| Execution | ★★ |
| Stakeholders | ★★★ |
| Social Impact | ★★ |
| MANAGEMENT | GOOD |
| Independence | ★ |
| Leadership | ★★ |
| Operations | ★ |
| Capital | ★ |
| Risk | ★ |
| OPTIMIZATION | GOOD |
| Optimize Assets | ★ |
| Optimize Liabilities | ★★ |
| Rate Setting | ★★ |
| Ratings | ★★ |
| Financial Aid | ★★★ |

| GOVERNANCE ALTERNATIVES | |
|---------------------------------|-----------|
| Critical Qualitative Assessment | |
| SPE | |
| GOVERNANCE | GOOD |
| Governance | ★★★ |
| Framework | ★★★ |
| Execution | ★ |
| Stakeholders | ★★ |
| Social Impact | ★ |
| MANAGEMENT | EXCELLENT |
| Independence | ★★★ |
| Leadership | ★★ |
| Operations | ★★★ |
| Capital | ★★★ |
| Risk | ★★★ |
| OPTIMIZATION | EXCELLENT |
| Optimize Assets | ★★ |
| Optimize Liabilities | ★★★ |
| Rate Setting | ★★ |
| Ratings | ★★★ |
| Financial Aid | ★★★ |

| GOVERNANCE ALTERNATIVES | |
|---------------------------------|------|
| Critical Qualitative Assessment | |
| TWW P3 | |
| GOVERNANCE | FAIR |
| Governance | ★★ |
| Framework | ★★ |
| Execution | ★ |
| Stakeholders | ☆☆☆ |
| Social Impact | ☆☆☆ |
| MANAGEMENT | GOOD |
| Independence | ★ |
| Leadership | ★★ |
| Operations | ★★ |
| Capital | ★★ |
| Risk | ★★★ |
| OPTIMIZATION | GOOD |
| Optimize Assets | ★ |
| Optimize Liabilities | ★ |
| Rate Setting | ★★ |
| Ratings | ★ |
| Financial Aid | ★★★ |

| GOVERNANCE ALTERNATIVES | |
|---------------------------------|------|
| Critical Qualitative Assessment | |
| IOU | |
| GOVERNANCE | FAIR |
| Governance | ★★ |
| Framework | ☆☆☆ |
| Execution | ☆☆☆ |
| Stakeholders | ☆☆☆ |
| Social Impact | ☆☆☆ |
| MANAGEMENT | GOOD |
| Independence | ★★ |
| Leadership | ★★ |
| Operations | ★ |
| Capital | ★★ |
| Risk | ★★★ |
| OPTIMIZATION | GOOD |
| Optimize Assets | ★ |
| Optimize Liabilities | ★ |
| Rate Setting | ★ |
| Ratings | ★★ |
| Financial Aid | ★ |

For general discussion purposes only. Information provided is pre-decisional and does not constitute a final agency decision or action.

360 Degree Review of TWW

A Comparative Analysis of Alternative Governance and Asset/Liability Optimization

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1

TWW is a High Risk as TWW’s system, management, and financial challenges are serious and systemic.

2

MUA & SPE Models score high in Qualitative Assessment followed by TWW P3 – Models preserved Nonprofit & Super Tax-Exempt Structures.

3

Quantitative Analysis – Asset Optimization - MUA, SPE & TWW P3 Models perform best in minimizing water rate increases to through 2044.

SPE - Liability Optimization generates \$140 million in Local Tax & Budget Relief for \$732 million in Total Public Benefits

4

MUA, SPE & IOU Models alleviate Trenton’s downgrade risk

5

Taxes Drive the IOU rates, If eliminated IOU rates are competitive.



Key Findings of the 360 Review

