



# Strategic Water Stewardship for Gregory-Portland ISD

Understanding Regional Challenges and  
Planning for Our Operational Future

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# A Proactive Roadmap for Operational Resilience



## Context

Understand regional water supply constraints and impending curtailment measures.



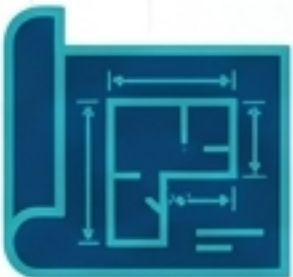
## Current Stewardship

Review the highly effective reduction measures already active in GPISD facilities.



## Chain of Supply

Map how GPISD receives its water allocation.



## Proactive Planning

Identify future optimization opportunities to navigate challenges responsibly.

# Our Local Operations Depend on a Four-Tiered Regional Network



Our localized water access is fully dependent on this multi-tiered regional distribution network. Any constraints upstream directly impact our campuses.

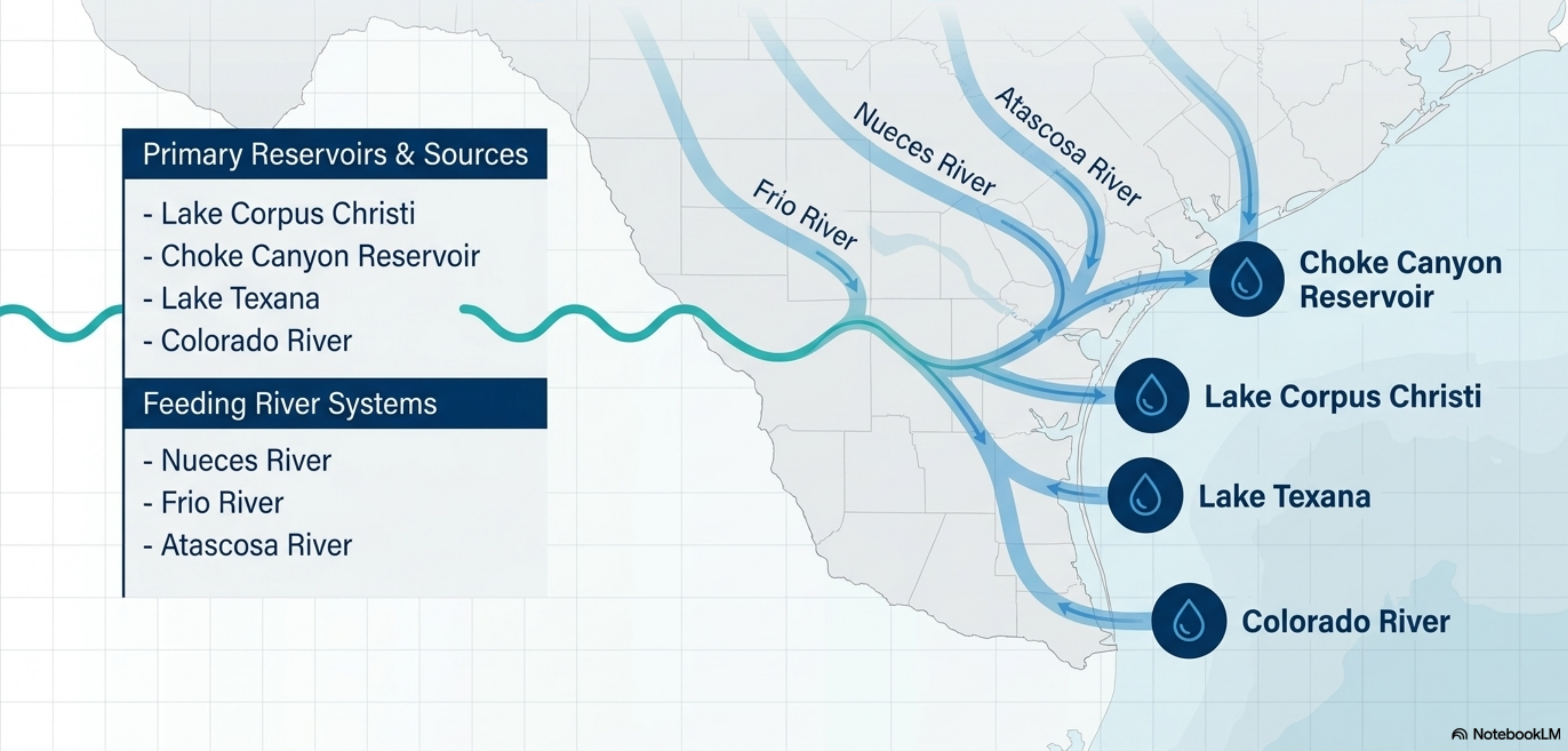
# The Natural Origins of Our Regional Water Supply

## Primary Reservoirs & Sources

- Lake Corpus Christi
- Choke Canyon Reservoir
- Lake Texana
- Colorado River

## Feeding River Systems

- Nueces River
- Frio River
- Atascosa River



# Three Converging Forces Are Driving Long-Term Systemic Demand

## Sustained Regional Drought

Extended lack of adequate rainfall is failing to replenish key surface reservoirs.



## Population Growth

Continued rapid residential expansion across the Coastal Bend region.



## Industrial Expansion

Rapid growth of heavy manufacturing and industry requiring significant water allocations.

**Result:** Increased systemic stress requires comprehensive conservation across all public entities.

# Regional Advisory Requires Significant Operational Adjustments

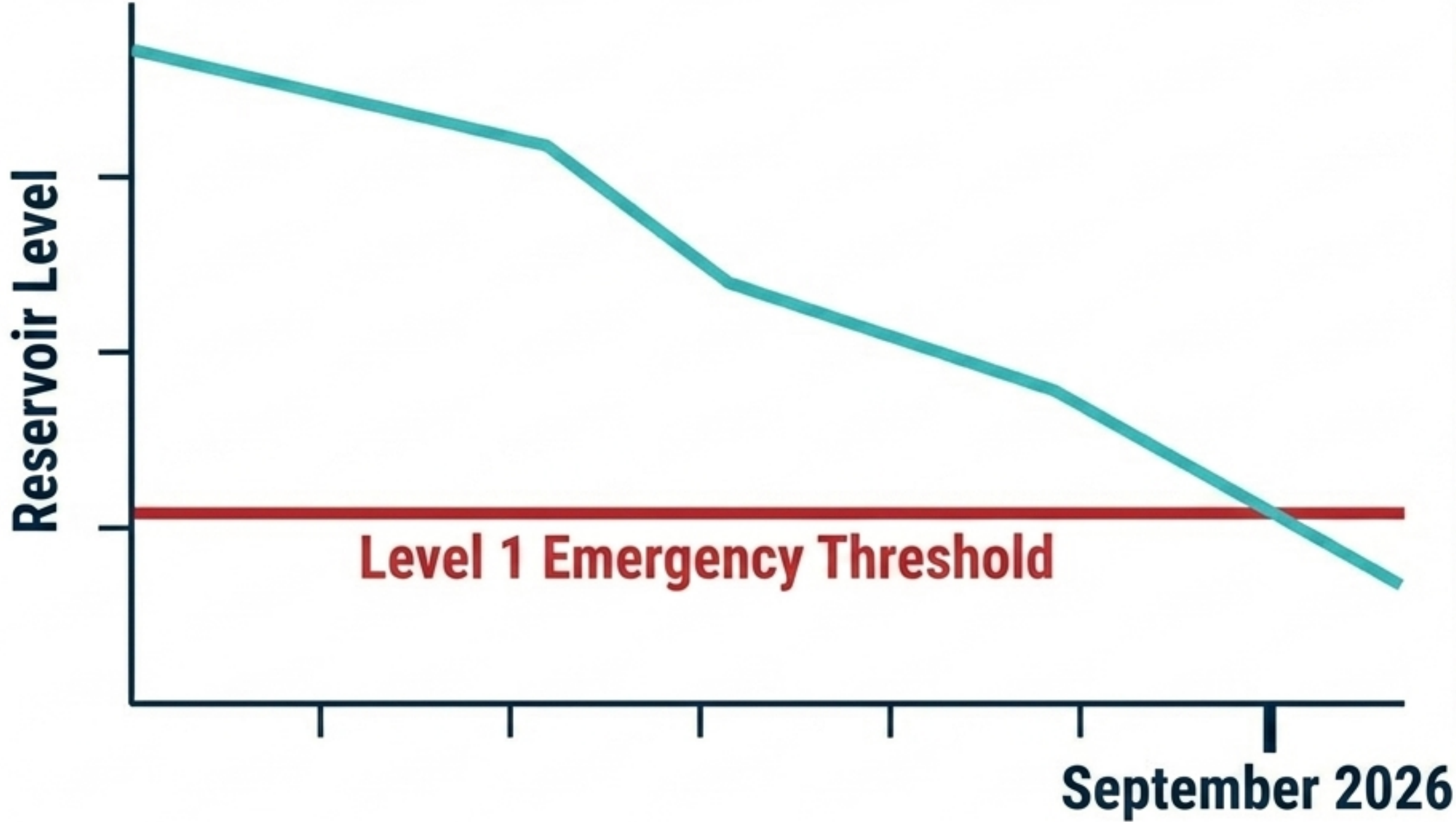
**25%**  
**Target Reduction**

**Source:** Recent advisory from the regional Education Service Center convening.

**Impact:** A region-wide mandate affecting municipalities, industry, and multi-campus public school districts.

**September 2026**

# City of Corpus Christi Modeling Projects a Level 1 Emergency



Status
Projected Level 1 Water Emergency by September 2026.
Trigger Mechanism
Initiated precisely 180 days before total supply cannot meet total demand.
Variables Modeled
Lack of significant rainfall events, Lake Texana curtailment, and increasing regional demand.

# GPISD Has Already Captured Primary Baseline Conservation Opportunities

## ✓ Modern Facilities

The majority of district buildings are under 10 years old, built to efficient standards.



## ✓ Synthetic Turf Fields

Eliminates massive outdoor athletic irrigation demands.



## ✓ Low-Flow Fixtures

Toilets, urinals, sensor faucets, and aerators are built to modern Texas codes.

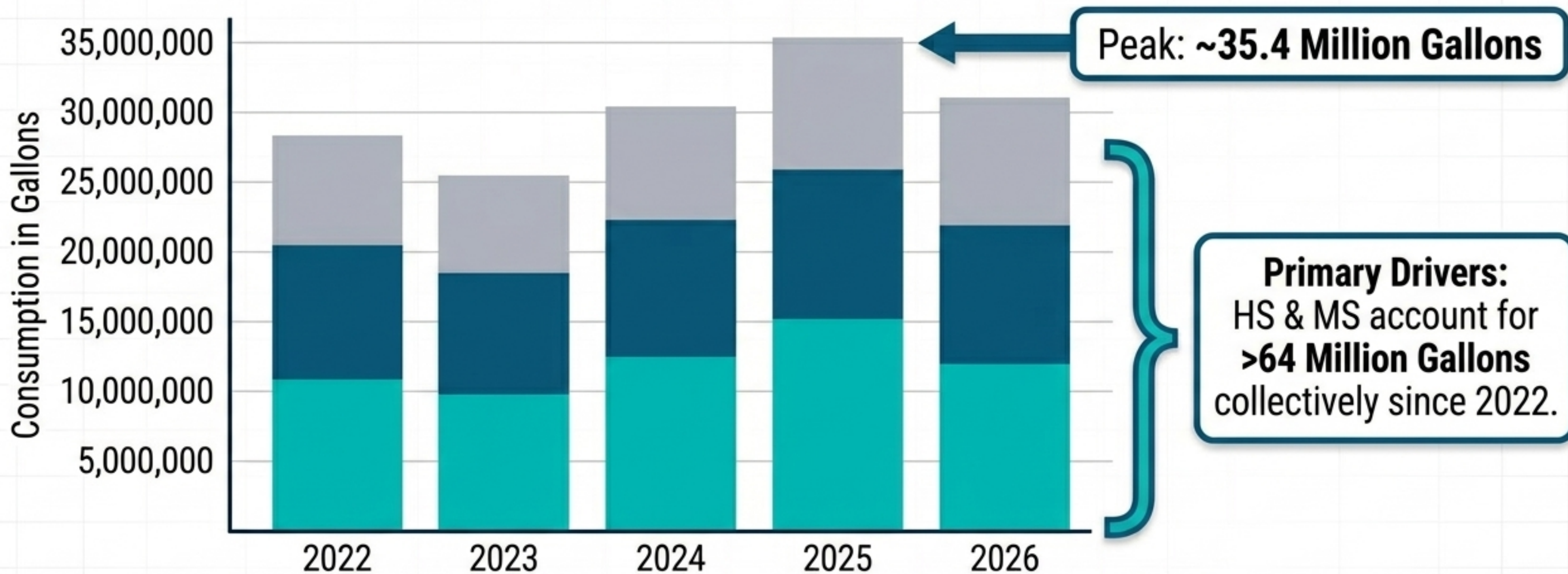


## ✓ Efficient HVAC Systems

Variable Frequency Drives (VFDs) and advanced Building Automation Systems (BAS) are already active.

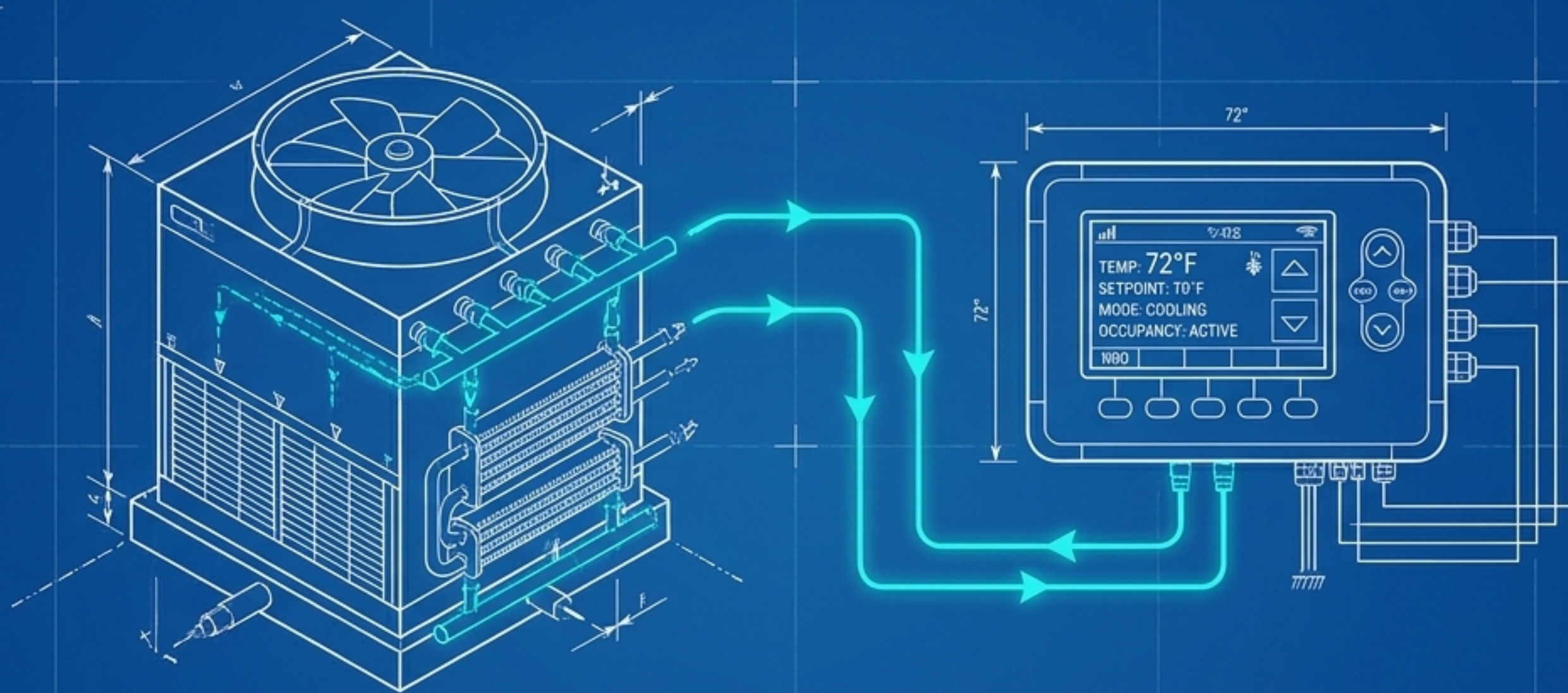


# Historical Water Consumption Emphasizes the Need for Analytics



**Insight:** Year-over-year fluctuations highlight the critical need for continuous, data-driven utility benchmarking.

# Optimization Focus Area 2: Advanced HVAC Systems



## Cooling Tower Optimization:

Enhancing the efficiency of evaporation cycles in our largest mechanical water consumers.

## BAS Fine-Tuning:

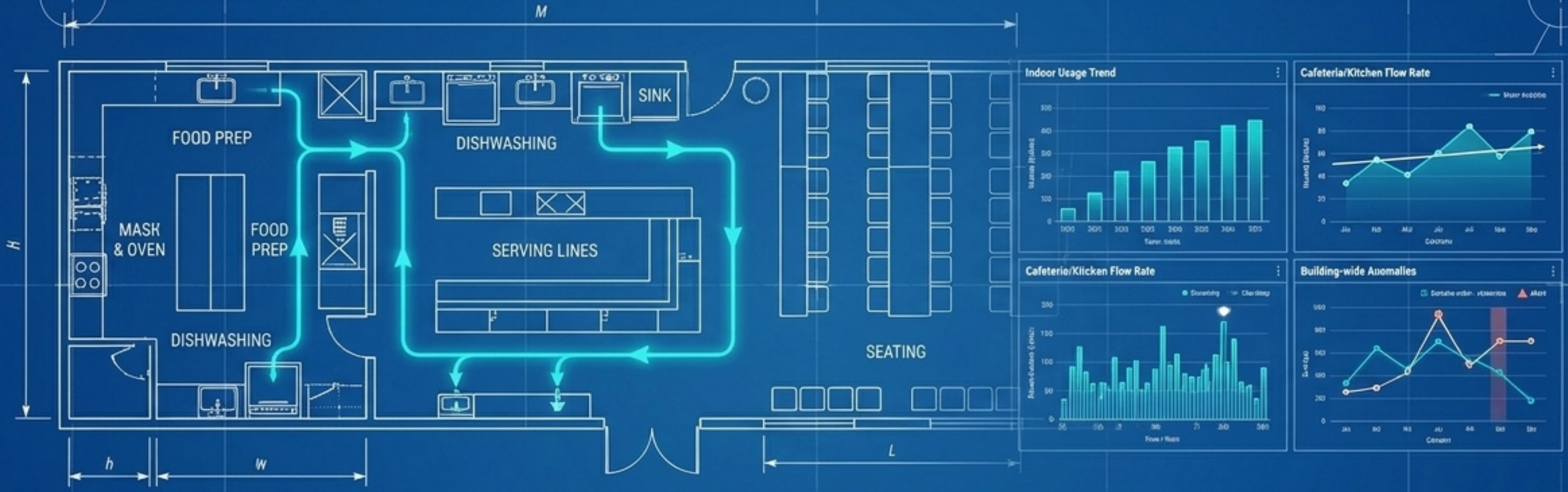
Tightening Building Automation Systems to precisely match true occupancy schedules and eliminate ghost cooling.

## Condensate Recovery:

Testing innovative systems to capture and reuse AC condensation for non-potable facility needs.

# Optimization Focus Area 3: Holistic Operational Stewardship

*With major outdoor irrigation eliminated via turf fields, our focus shifts entirely indoors.*



## Kitchen & Cafeteria Strategy:

Implementing operational changes to food service water utilization and prep areas.

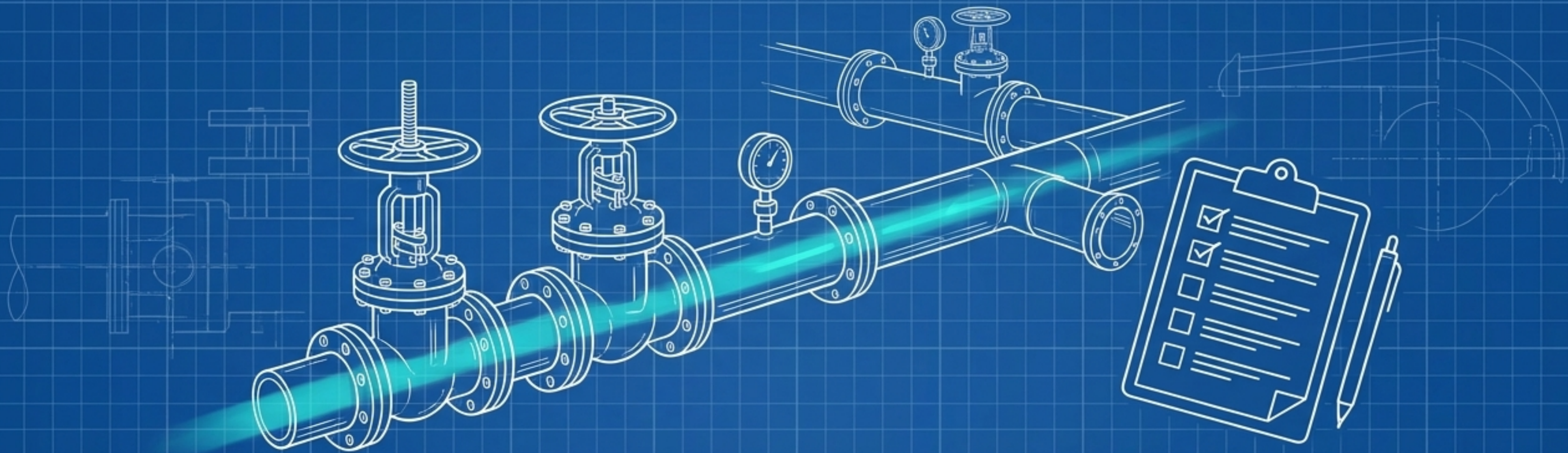
## Behavioral Stewardship:

Cultivating an active culture of conservation among our staff and student populations.

## Utility Analytics:

Deploying advanced benchmarking across all buildings to identify usage anomalies instantly.

# Optimization Focus Area 1: General Infrastructure Systems



## General System Maintenance:

Ensuring all physical plumbing assets operate to their exact engineered specifications.

## Standard Leak Detection Protocols:

Implementing rigorous, scheduled manual visual inspections of high-risk facility nodes.

## Preventative Maintenance Schedules:

Catching mechanical fatigue and replacing seals before they result in passive water loss.

# Balancing Efficiency Upgrades with Educational Environments



## Capital Investment

Achieving a further 25% reduction will require targeted mechanical technology upgrades and infrastructure retrofits.

## Long-Range Planning

Integrating strict water efficiency standards into all future bond developments and facility planning.

## The Priority Balance

Maximizing utility savings while strictly maintaining optimal student comfort, health, safety, and learning environments.

# Recommended Strategic Action Plan

1

## Districtwide Water Management Planning

Formalize a long-term conservation blueprint to guide operations through 2026 and beyond.

2

## Comprehensive Cooling Tower Studies

Assess and optimize our largest mechanical water consumers immediately.

3

## Commitment to Transparency

**Commitment to Transparency**  
Regularly share utility findings and progress metrics at future Board Meetings.

4

## Operational Awareness

Engage staff and students in opportunities to actively reduce operational usage campus-wide.



The logo for GPISD, featuring the letters 'GPISD' in a bold, white, sans-serif font. A small, white, curved line above the 'I' suggests a stylized 'G' or a wave.

**GPISD**

# **Navigating Our Future, Together.**

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**GPISD remains a highly responsible steward of both taxpayer resources and regional utilities.**

**We will proactively evaluate all opportunities to reduce consumption ahead of the 2026 mandates.**

**Our commitment to excellent, safe, and effective student environments remains our highest priority.**