Performance Audit of Solid Waste Transfer Station Capital Projects

King County Auditor's Office

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Government Accountability & Oversight Committee

What was the audit mandate?

- Rate proposal/financial plan sustainability
  - On the whole, the financial plan is comprehensive, sound, and based on reasonable assumptions.
- Transfer station project cost effectiveness
  - Policy decisions added to project cost and weren’t systematically analyzed.

Why are these important issues?

Five stations to support system needs:

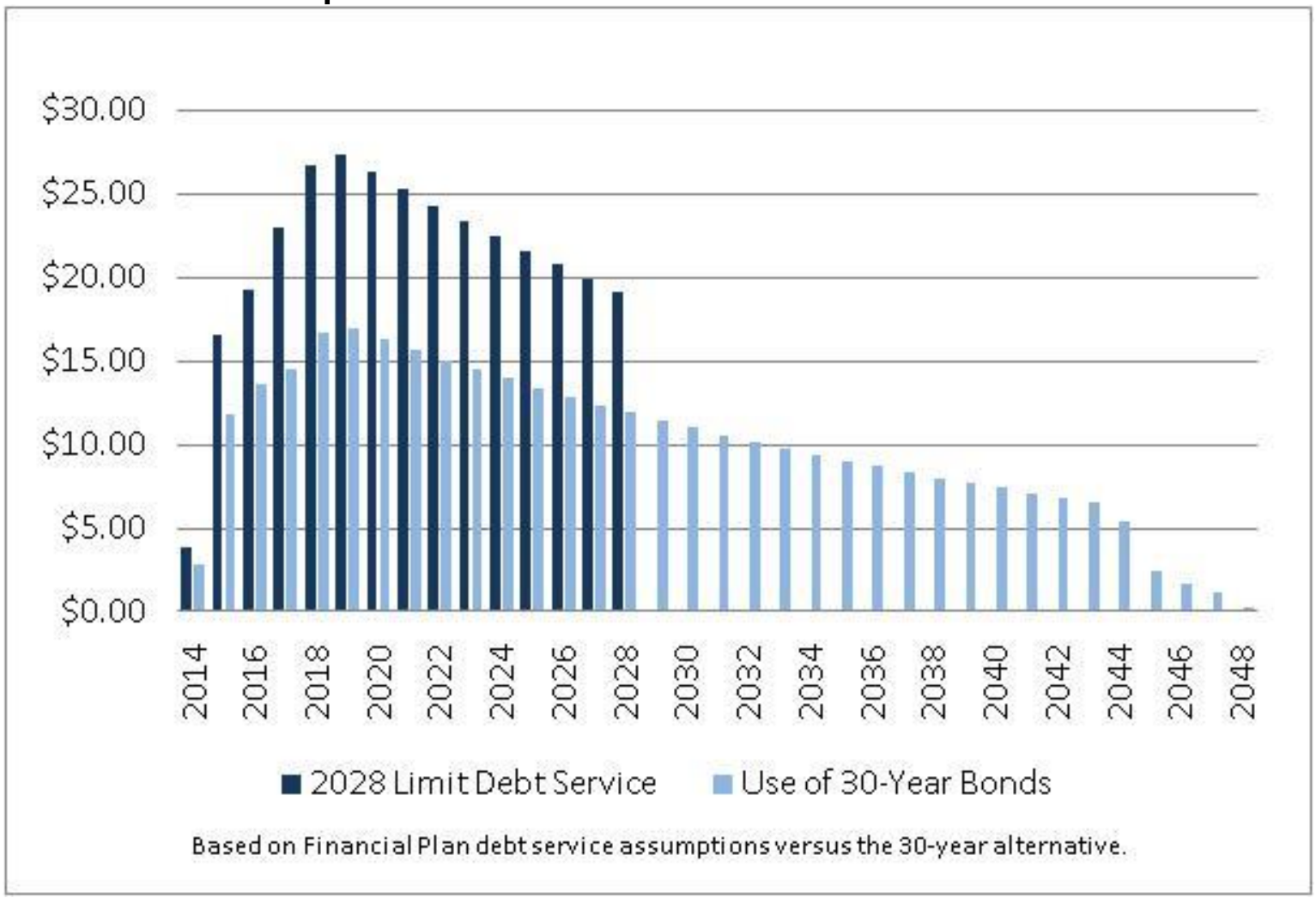
Shoreline, Bow Lake, Factoria, Northeast, and South

Two major factors driving rate increases:

1. Transfer station costs
2. Relative short periods of financing

Relative Short Periods of Financing

Debt Service per Ton of Waste



Part 1: Financial Plan Findings

- ✓ On the whole, the SWD's financial plan is comprehensive, sound, and based on reasonable financial assumptions.
- ✓ Where we identified opportunities to improve the plan, SWD has taken or has begun to take appropriate actions.
- ✓ We also found opportunities for revenue enhancement and cost savings.

SWD Addressing Issues Raised

Adjusted cost estimates in Capital Equipment Recovery Program (CERP) model

- Effect: reduces needed transfer to CERP

Making inflation and fund balance interest earnings assumptions consistent

- Effect: raises the estimate of reserves needed for Cedar Hills Landfill post closure monitoring

Standardizing inclusion of contingencies in cost estimates

- Effect: makes financial plan more complete and precise

Enhanced Revenue

Landfill Reserve Fund (LRF) investment strategy

- Long investment horizon
- Currently invested short term
- Executive Finance Committee would consider alternative approach

Recommendation:

SWD should review new approach.

Cost Savings

Life-cycle cost analysis (LCCA) for equipment replacement

- Value of Capital Equipment Recovery Program assets =$51 million
- LCCA facilitates cost-effective replacement
- SWD piloting LCCA

Recommendation:

Adopt a formal life-cycle cost analysis approach.

Part 2: Project Cost Findings

- ✓ The transfer plan was developed through an iterative and collaborative process.
- ✓ Decisions made through the collaborative process have, in some cases, increased costs.
- ✓ In some cases, the cost of the collaborative policy decisions was not analyzed or updated.

Project Cost Findings (cont.)

- ✓ The economy and tonnage forecasts have changed since the original plan.
- ✓ The Executive, Council, and regional partners may have additional time for further review.

Policy Decisions Drive Cost

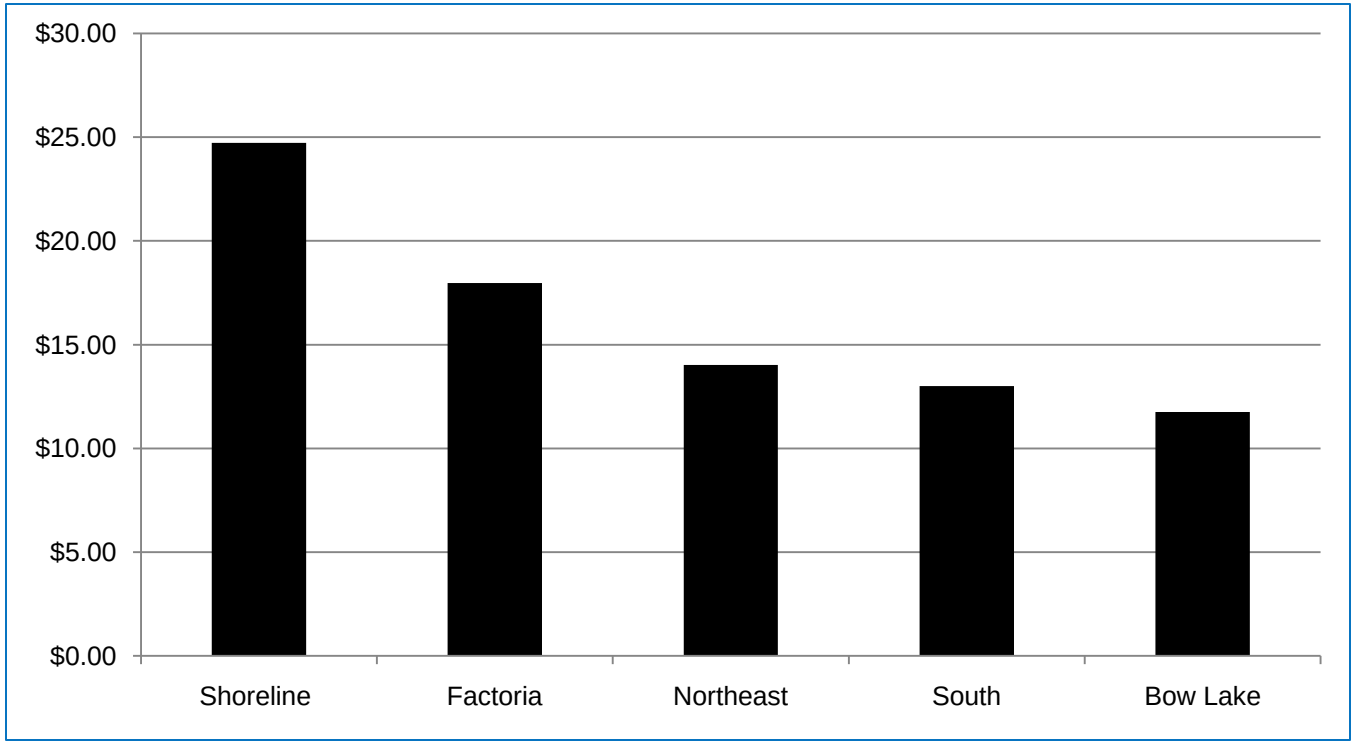
Collaborative and iterative decision process

1. Number of stations and capacity
2. Functionality criteria/decisions
3. Project financing and delivery

Cost Drivers

1. Station Number & Capacity

Capital Cost per Ton of Waste

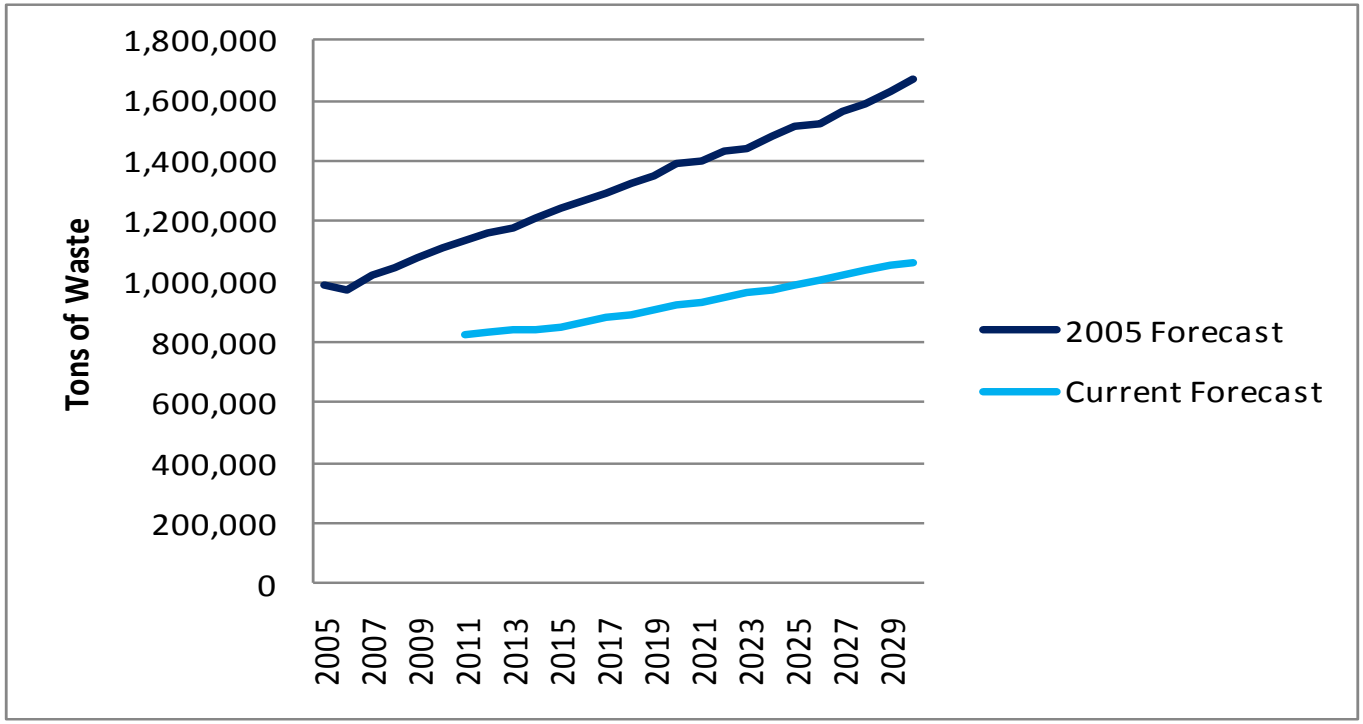


- Capital cost per ton ↓ as station utilization ↑
- Facilities using more capacity have lower cost per ton

Cost Drivers

Station Number & Capacity (cont.)

Change in Tonnage Forecasts



- Tonnage has declined, expected to increase slowly
- Planned system will reach 42% of capacity

Cost Drivers

2. Functionality Criteria/Decisions

Collaborative and iterative decision process.

Functionality costs should be available for:

- Self-haul
- Mitigation
- Compaction
- Open during construction
- LEED certification

Cost Drivers

3. Project Financing and Delivery

SWD analyzed project delivery methods.

Public-private partnerships also available.

Project Cost Recommendation

Recommendation:

Update system and facility plans.

Provide policy-makers and partners systematic analysis of:

- Cost impact of station number/capacity.
- Station functionalities.
- Project financing and delivery.

Summary

We found that:

- The rate proposal is sustainable.
- The iterative policy process increased costs.

We recommend that SWD:

- Use Forecast Council's economic assumptions.
- Implement LCCA for asset management.
- Review a new LRF investment strategy.
- Update transfer plans, systematically analyze.