

**Solid Waste Study:**  
*Disposal Scenario Feasibility, Capital, and  
Operating Costs*

*Fall 2024 – Winter 2026*



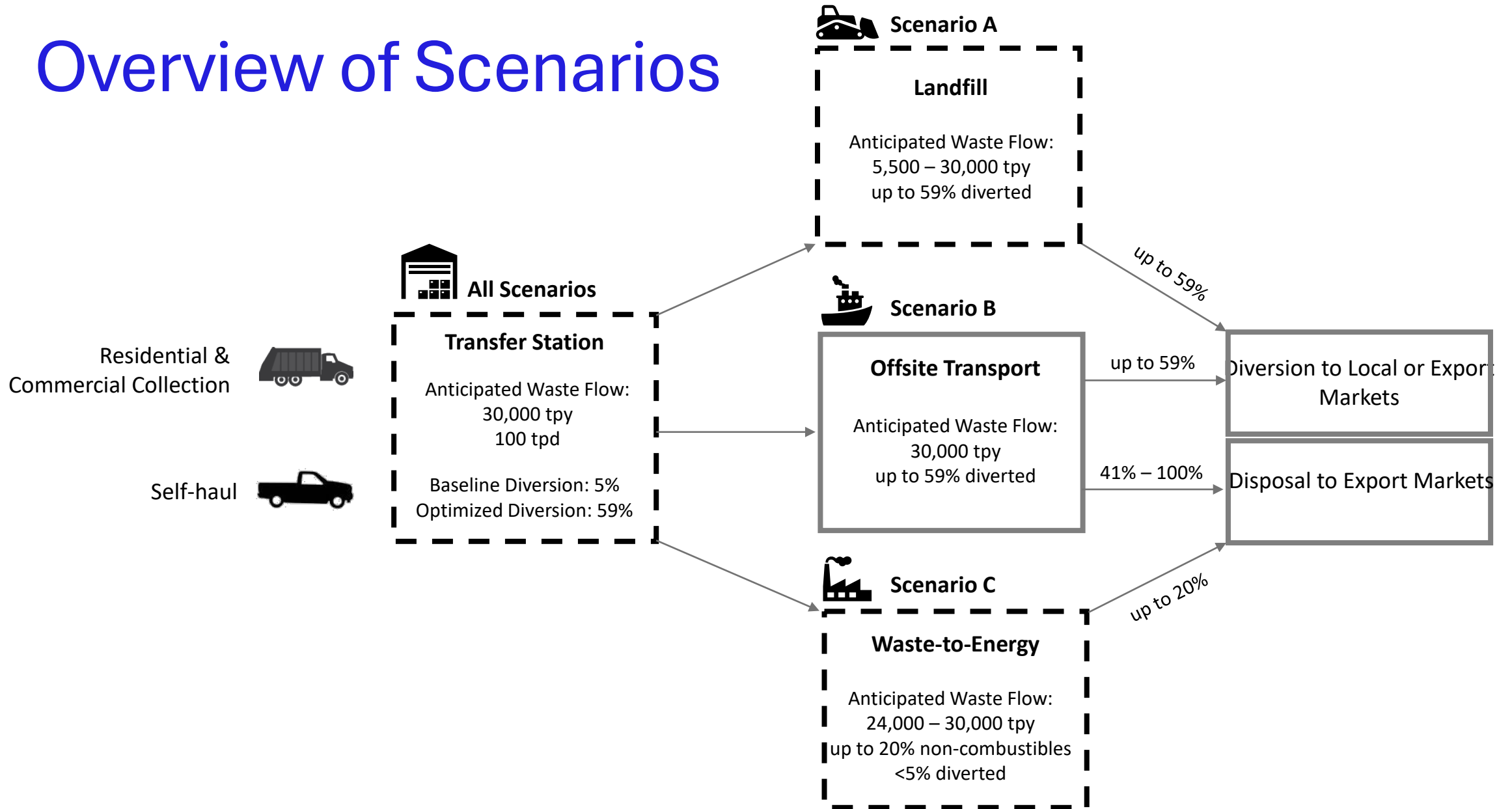
# Key Takeaways of the Solid Waste Study

- The **Capitol Disposal Landfill is estimated to close within 10 to 20 years.**<sup>1</sup> Unless the CBJ prepares now, Juneau may be left with no solution for solid waste disposal.
- The **CBJ lacks control over the solid waste system** in Juneau. This is unusual among jurisdictions in Alaska and the lower 48.
- Once the Capitol Disposal Landfill closes, the **cost of private waste disposal is expected to increase** significantly.
- The CBJ is evaluating three scenarios for future solid waste management. A **transfer station is an important element** of all three scenarios
- The recommended next steps for CBJ are<sup>2</sup>:
  - Determine the desired level of control in solid waste management through Assembly-level decisions
  - Continue with design/development of a transfer station
  - Pursue funding (beginning with transfer station)
  - Communicate study findings with Juneau community
  - Develop a comprehensive long-term solid waste system road map
  - Begin implementation of the desired scenario(s)

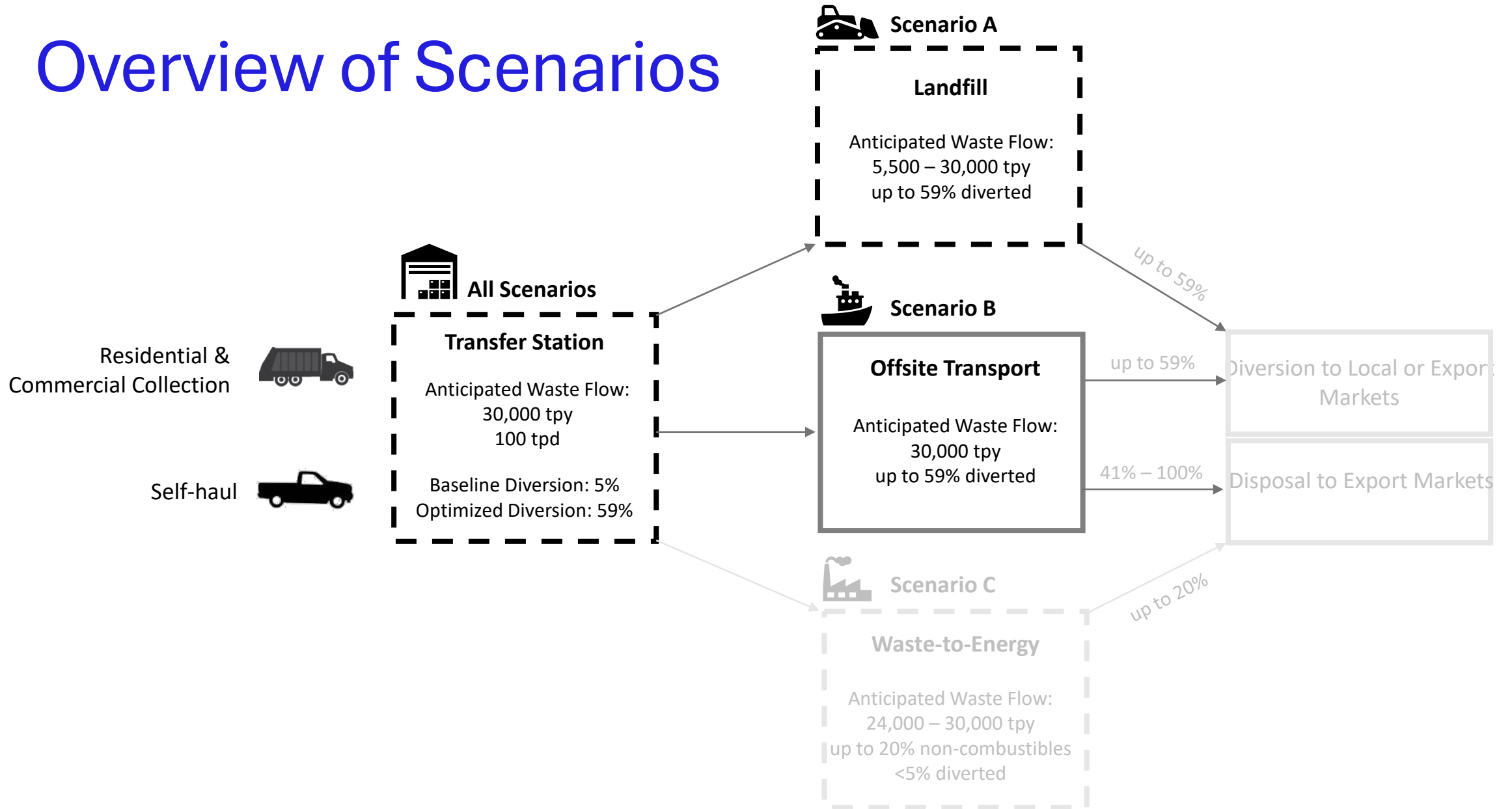
1. Capitol Disposal, Inc. 2015. Closure, post-closure, and financial assurance plan: Capitol Disposal Landfill, Juneau, Alaska (Rev. Dec. 3, 2015; Project No. 04215040.00). Prepared by SCS Engineers for Capitol Disposal, Inc.

2. The order and timeline of the recommended next steps should be reassessed periodically based on findings and key decisions throughout the process.

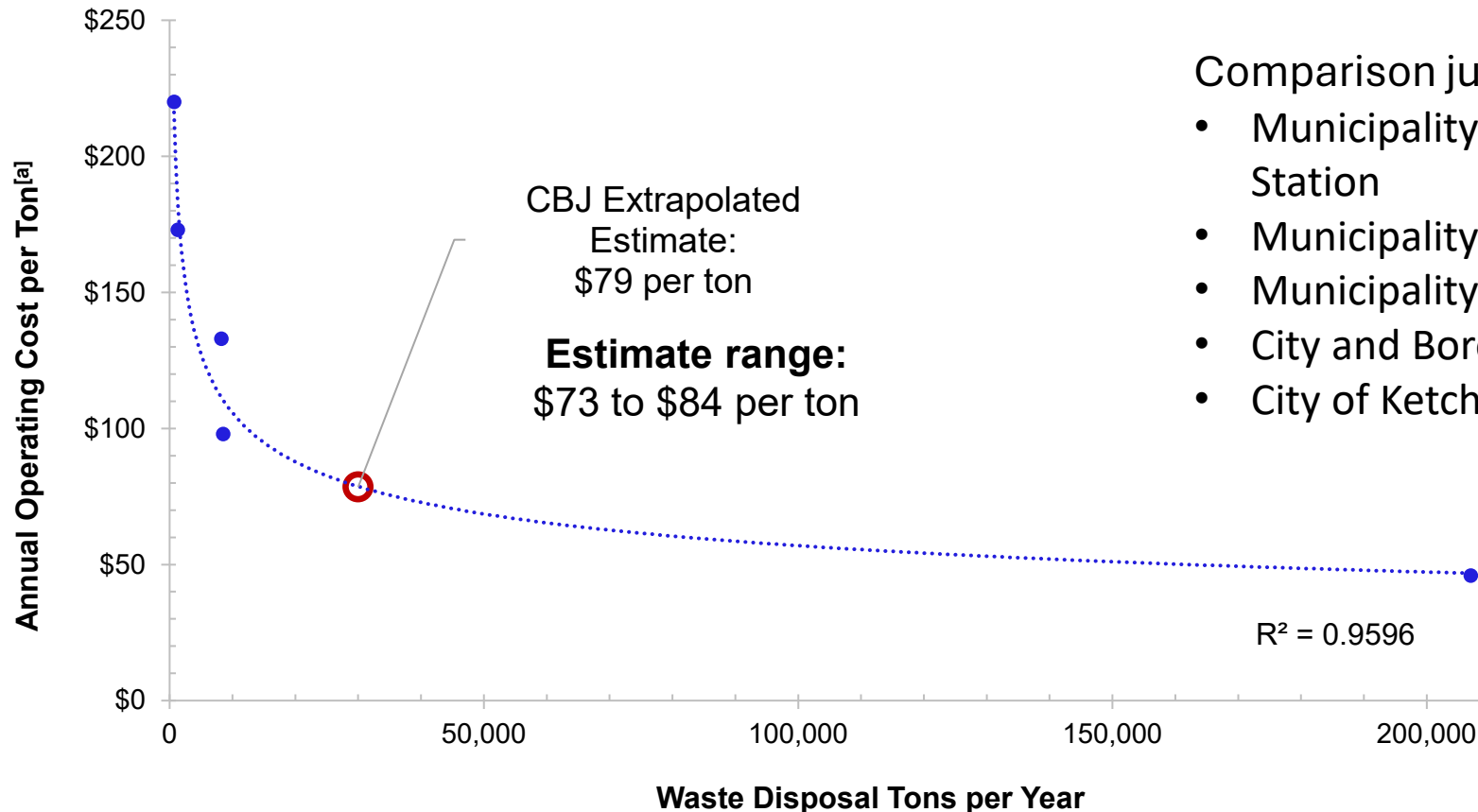
# Overview of Scenarios



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# Transfer Station Operating Costs\* (all scenarios)



## Comparison jurisdictions:

- Municipality of Anchorage Girdwood Transfer Station
- Municipality of Anchorage Central Transfer Station
- Municipality of Skagway Transfer Station
- City and Borough of Sitka Transfer Station
- City of Ketchikan Transfer Station

\*The costs shown are preliminary, order-of-magnitude estimates for comparison only. More detailed engineering, cost estimating, and risk analysis will be required before CBJ makes financial commitments or sets project budgets.

<sup>[a]</sup> Annual Operating Costs determined from 2025 municipal operating budgets, less debt service for development and construction costs.

# Landfill Operating Costs\* (Scenario A)

Name	Location	Annual Tons Received (tpy)	Cost per Ton	Adjusted Cost per Ton <sup>[b]</sup>
Kodiak Island Borough Landfill <sup>[e]</sup>	Alaska	11,700	\$270	\$270
Laramie Landfill	Wyoming	45,500	\$53	\$107
Canyonlands Solid Waste Authority Klondike Landfill	Utah	16,800	\$39	\$79
Fairbanks North Star Borough Solid Waste Facility	Alaska	107,700	\$95	\$95
Madera County Solid Waste Management Fairmead Landfill	California	164,700	\$53	\$110
Anchorage Regional Landfill	Alaska	301,000	\$61	\$61

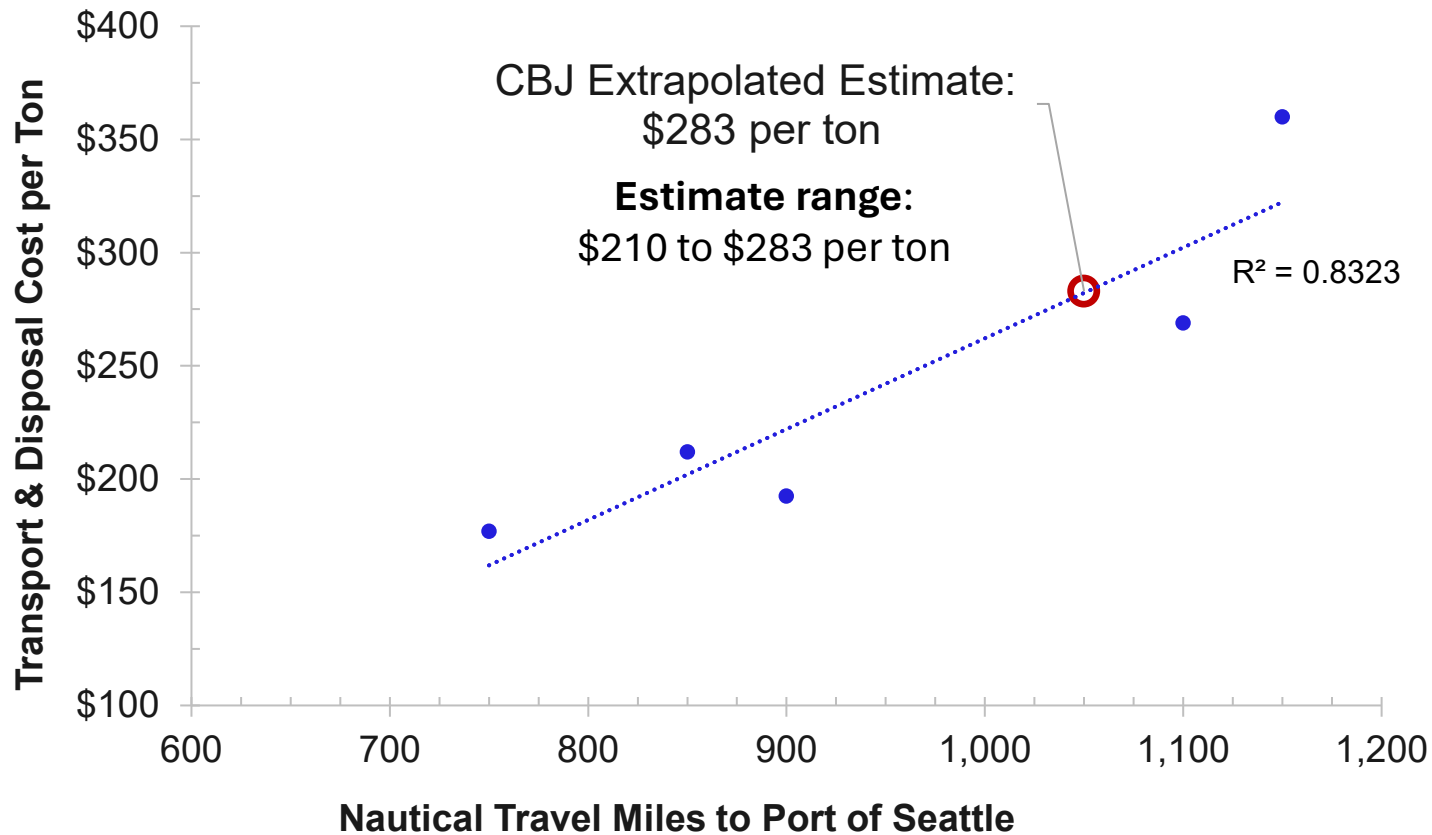
Estimated range for Juneau (30,000 tpy):  
\$155 to \$270 per ton

\*The costs shown are preliminary, order-of-magnitude estimates for comparison only. More detailed engineering, cost estimating, and risk analysis will be required before CBJ makes financial commitments or sets project budgets.

<sup>[a]</sup> Annual Operating Costs determined from municipal operating budgets, less debt service for development and construction costs and any funds set aside for closure or post-closure costs.

<sup>[b]</sup> The adjusted costs per ton were geographically adjusted using Consumer Price Index data from U.S Bureau and Statistics.

# Offsite Transport Operating Costs\* (Scenario B)



## Comparison jurisdictions:

- Municipality of Skagway
- City and Borough of Sitka
- City of Ketchikan
- City and Borough of Wrangell
- Petersburg Borough

*\*The costs shown are preliminary, order-of-magnitude estimates for comparison only. More detailed engineering, cost estimating, and risk analysis will be required before CBJ makes financial commitments or sets project budgets.*

# Projected Disposal Cost\*

Category	Scenario A <sup>[c]</sup> Transfer Station + Landfill	Scenario B Transfer Station + Offsite Transport
<b>New MSW Disposal Management Cost per Ton under each CBJ scenario<sup>[a] [b]</sup></b>	\$300 – \$544	\$316 – \$439

*\*Disposal costs are preliminary estimates for comparison purposes only, and a formal rate study would be required to evaluate long-term impacts on customers.*

*<sup>[a]</sup> The current disposal management cost per ton paid by Alaska Waste at Capitol Disposal Landfill is \$194.24. Costs are expected to increase once the Capitol Disposal Landfill closes, regardless of whether CBJ chooses to proceed with any scenario; however, the exact increase is unknown and was not factored into this analysis.*

*<sup>[b]</sup> Disposal management costs reflect debt issuance interest rates associated with the capital needed for new construction projects, approximated at 4% with a long-term bond of 30 years. This evaluation does not account for future rate changes from inflation or contractor adjustments.*

*<sup>[c]</sup> Because landfill construction occurs in phases, this analysis assumes that only about half of the total construction cost would be incurred upfront, with additional phases constructed over time as capacity is needed.*

# Ownership and Construction Financing



**Ownership and Operating Model:**

Public Ownership and Operation

Public Ownership, Private Operation

Private Ownership and Operation

**Procurement Options:**

Design-Bid-Build

Design-Build

Design-Build-Operate

Design-Build-Finance-Operate

*Public financing  
More common in AK  
Public ownership and control*

*Private financing  
Less common in AK  
Level of public control through ordinances or contracts*

# Preliminary Scenario Rankings

SCENARIO	FEASIBILITY RANKING	DISPOSAL MANAGEMENT COST PER TON	OPERATING COST RANGE	CAPITAL COST RANGE <sup>[a]</sup>	PROS	CONS
<b>B. Construct a transfer station</b> with all waste, as well as recyclables, HHW, and junk vehicles, <b>transported offsite by barge</b> for recycling and disposal.	1	<b>\$316 – \$439</b>	<b>Total = \$8.5 million – \$11 million</b>	<b>Total = \$14 million – \$40 million</b> <i>offsite shipping costs negotiated in transportation contract</i>	<ul style="list-style-type: none"> <li>•No capital costs to construct a new solid waste disposal facility.</li> <li>•Minimal regulatory requirements without a landfill or WTE facility.</li> </ul>	<ul style="list-style-type: none"> <li>•Offsite transportation costs, impacts, and availability of markets to accept material are outside of CBJ control; exposure to financial risks.</li> <li>•Operating costs are transferred into higher fees from the hauler and operator.</li> <li>•Likely associated with higher GHG emissions from transportation, based on an initial qualitative analysis.</li> </ul>
<b>A. Construct a new landfill and transfer station</b> with recyclables, HHW, and junk vehicles transported offsite by barge for diversion.	2	<b>\$300 – \$544</b>  <i>Separate leachate treatment system may increase cost up to \$668 per ton</i>	<b>Total = \$6.9 million – \$14.3 million</b>	<b>Total = \$59 million – \$182 million</b>	<ul style="list-style-type: none"> <li>•High level of control over operating costs, rates, and solid waste flow.</li> </ul>	<ul style="list-style-type: none"> <li>•Construction of a new landfill is expensive.</li> <li>•Siting and permitting would be required, adding to the timeline for a new facility to be operational.</li> <li>•Operating costs would be sustained by the CBJ unless the CBJ enters into an operating agreement with a private company.</li> <li>•Leachate treatment and stormwater management are a significant cost factor.</li> </ul>
<b>C. Construct a WTE facility and transfer station</b> for MSW with noncombustible waste, noncombustible recyclables, HHW, junk vehicles, and ash exported by barge for disposal.	3	Customer rates for a WTE facility were not considered in Phase 2 of this Solid Waste Study	Operating costs for a WTE facility were not considered in Phase 2 of this Solid Waste Study	<b>Total = \$99 million – \$110 million</b>	<ul style="list-style-type: none"> <li>•High level of control over operating costs, rates, and solid waste flow.</li> <li>•Minimizes solid waste volume and land use impacts.</li> </ul>	<ul style="list-style-type: none"> <li>•Diversion would likely be minimized to optimize efficiency of energy recovery.</li> <li>•No potential for revenue from net metering.</li> <li>•Does not improve the renewable energy profile for the CBJ.</li> <li>•WTE requires a high level of expertise and is more expensive to construct and operate than the other</li> </ul>

<sup>[a]</sup> Capital costs are not applied over the same time period across all scenarios. For example, the landfill capital would be applied over a 50-year period, while the replacement capital over the same 50-year period. Assessment of these factors would be completed with a more comprehensive economic analysis.

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# Timeline Following Assembly Decisions

**Initiate timeline:**

- 1) Reaffirm decision to establish CBJ control,
- 2) Dedicate funding for transfer station design, and
- 3) Dedicate funding to pursue disposal solution(s)

Approximate timeline to design transfer station while continuing to pursue long-term disposal solution(s)

Year 1

Year 2

Year 3

**Engagement**



Assembly discussions and decisions



Public communication

**Planning, Permitting, & Design**



Comprehensive planning, scheduling, and cost estimates



Budget planning (ongoing)



Consider complementary solutions

**Procurement Phase**



Contract discussions and negotiations



Pre-construction, and/or contract initiation

# Key Recommendations

1. **CBJ assumes control of solid waste system**: Reaffirm CBJ's desire to own and/or operate solid waste system, rather than the "status quo" (no public control).
2. **Continue funding transfer station design**: Proceed with the design of a transfer station.
  - Transfer station size and design may be modified in the future based on CBJ approach.
3. **Do not pursue Scenario C (Waste-to-Energy) at this time**: WTE is not economically viable for Juneau; may be considered as a complimentary solution in the future.
4. **Continue funding necessary to pursue CBJ control over solid waste system, including:**
  - Determine and implement desired ownership/operating and procurement model
  - Pursue local landfill and/or offsite shipping options, such as:
    - Prepare for future offsite shipping
    - Landfill siting study



# Jacobs

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## Thank you

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