

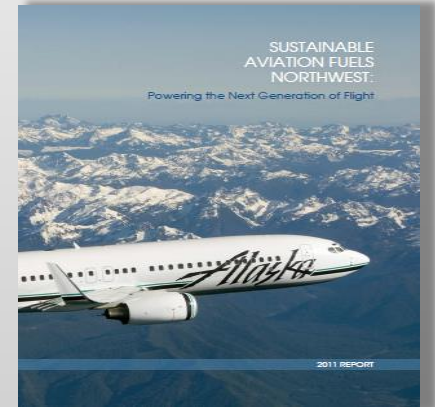
Aviation Biofuels Program Update

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Aviation Biofuel Program Expansion

- Will help us meet our Century Agenda goal to reduce aircraft-related emissions by 25%
- 2008-2014 – Port is early supporter of research & development, and charting a path to commercial scale biofuels
- 2015 – Port shifts to a Market Development Role
 - Exploring:
 - How to support fuel integration & infrastructure
 - How to help with incremental cost of fuel
 - How to help incentivize biofuel production in WA



Port's role in supporting aviation biofuels is expanding

Exploring Port of Seattle's Role in Developing Aviation Biofuels Market

Infrastructure Integration

- Airport role in providing receiving, storing & blending facilities for biofuel at Sea-Tac

Incremental Cost

- Airport role in covering incremental cost of biofuel
- Airport role in developing funding programs (corporations, passengers, airlines)

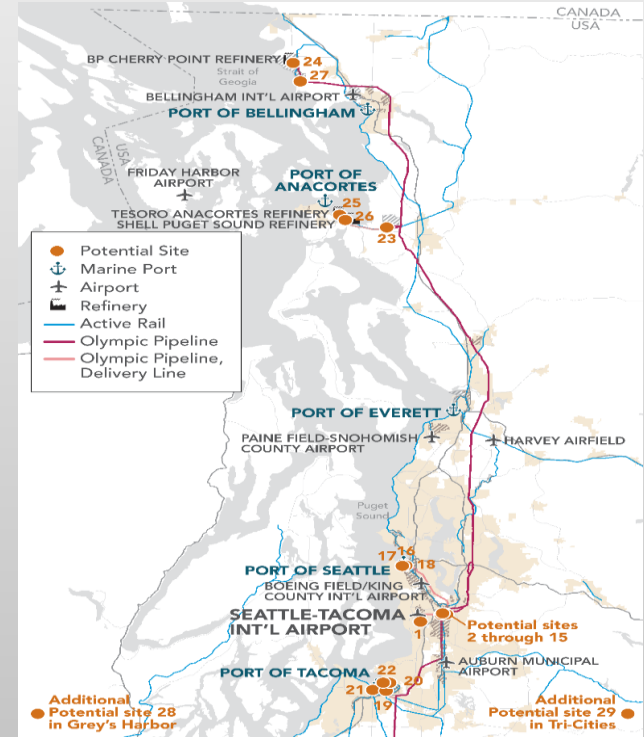
Attracting Biofuel Production Facilities

- Airport role in financing
- Airport role in developing business case for near-term production

Port's role in supporting aviation biofuels market is three-pronged

Infrastructure Study Approach

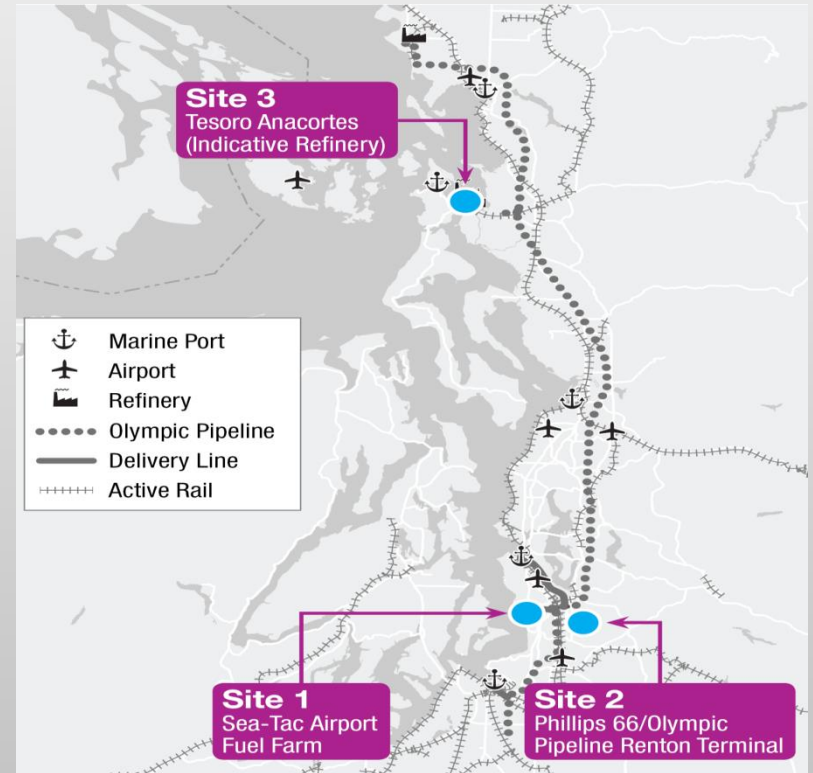
- 29 properties evaluated
 - Sites ~ 2 acres
 - Access to modes of delivery
 - Olympic Pipeline
 - Rail
 - Barge or vessel
 - Truck
 - Supply integration with Sea-Tac's hydrant systems



Study objective: bring aviation biofuel to Sea-Tac in cost-effective way

Selection of Top 3 Properties

- Properties
 - Scored based on Evaluation Criteria
- Conceptual Layouts
- Preliminary Opinion of Cost
 - Sea-Tac Int'l Airport - \$13.95 M
 - Renton Terminal - \$82.68 M
 - North-end Refinery - \$104.16 M



Existing petroleum handling facilities on pipeline are best choice

Evaluation & Scoring of Properties

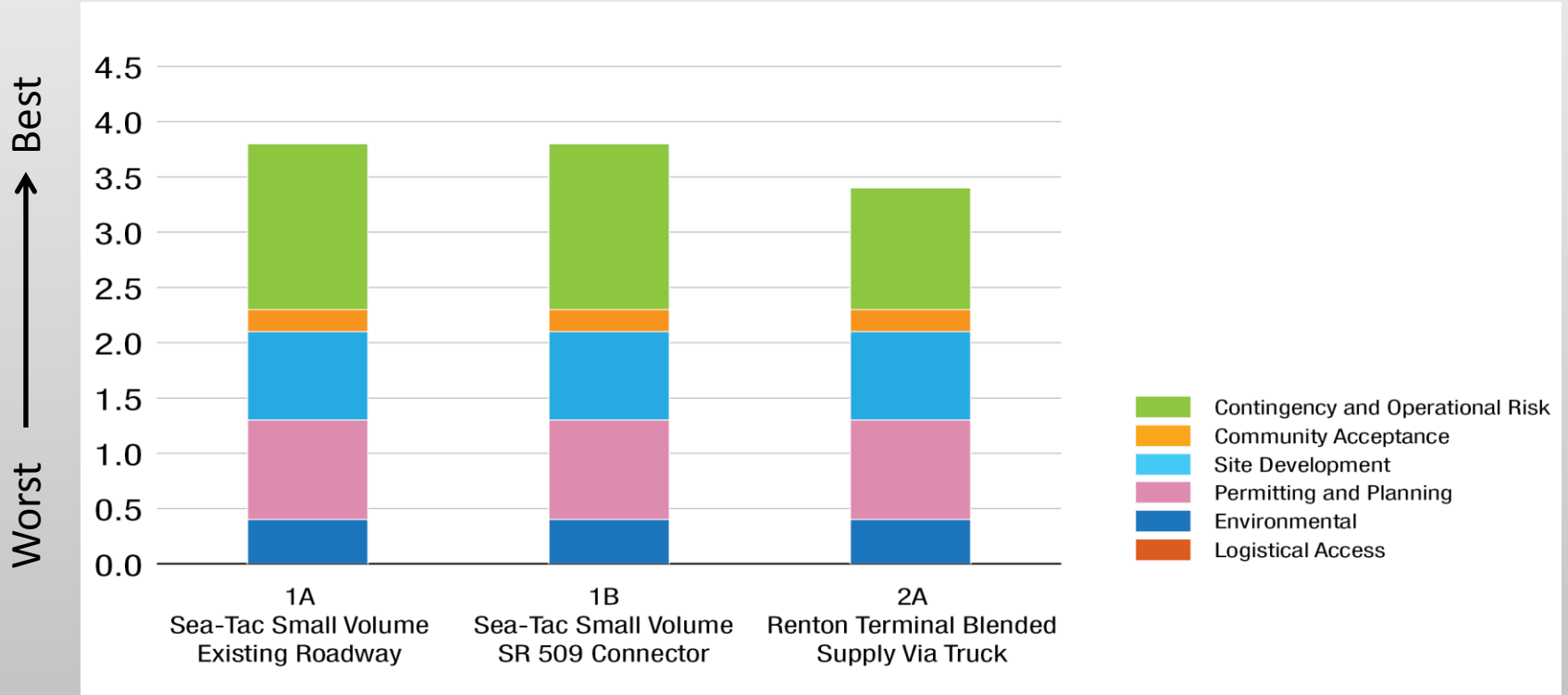
- For each short-term and long-term potential site, scores from 1 (undesirable) through 5 (desirable) awarded for criteria in the following categories:

	Contingency and Operational Risk
	Community Acceptance
	Site Development
	Permitting and Planning
	Environmental
	Logistical Access

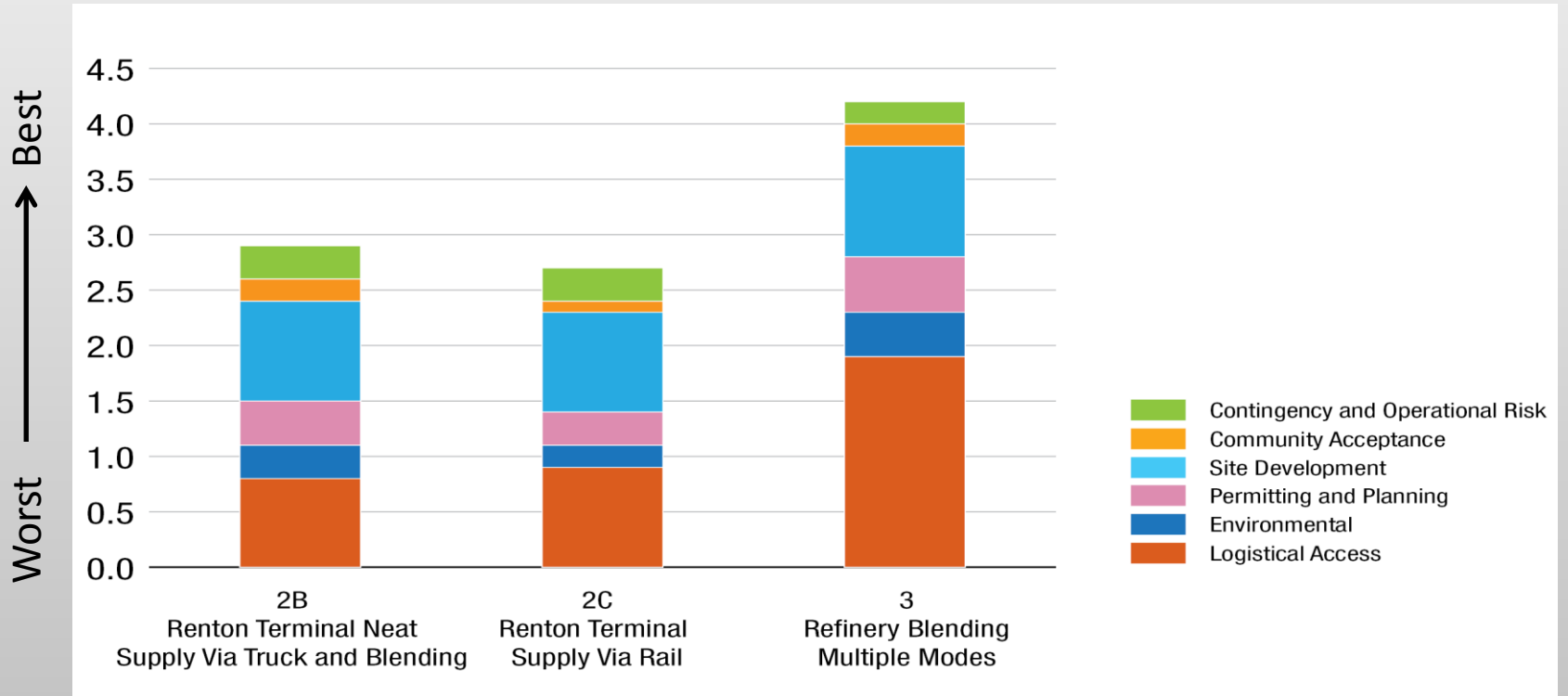
- Each category was then given a weight out of 100%.
 - For example, for the long-term sites, logistical access was weighted 40%, site development & costs 25%, permitting and planning 10%, etc. to add up to 100.

Properties were evaluated against 26 different criteria for 6 major categories

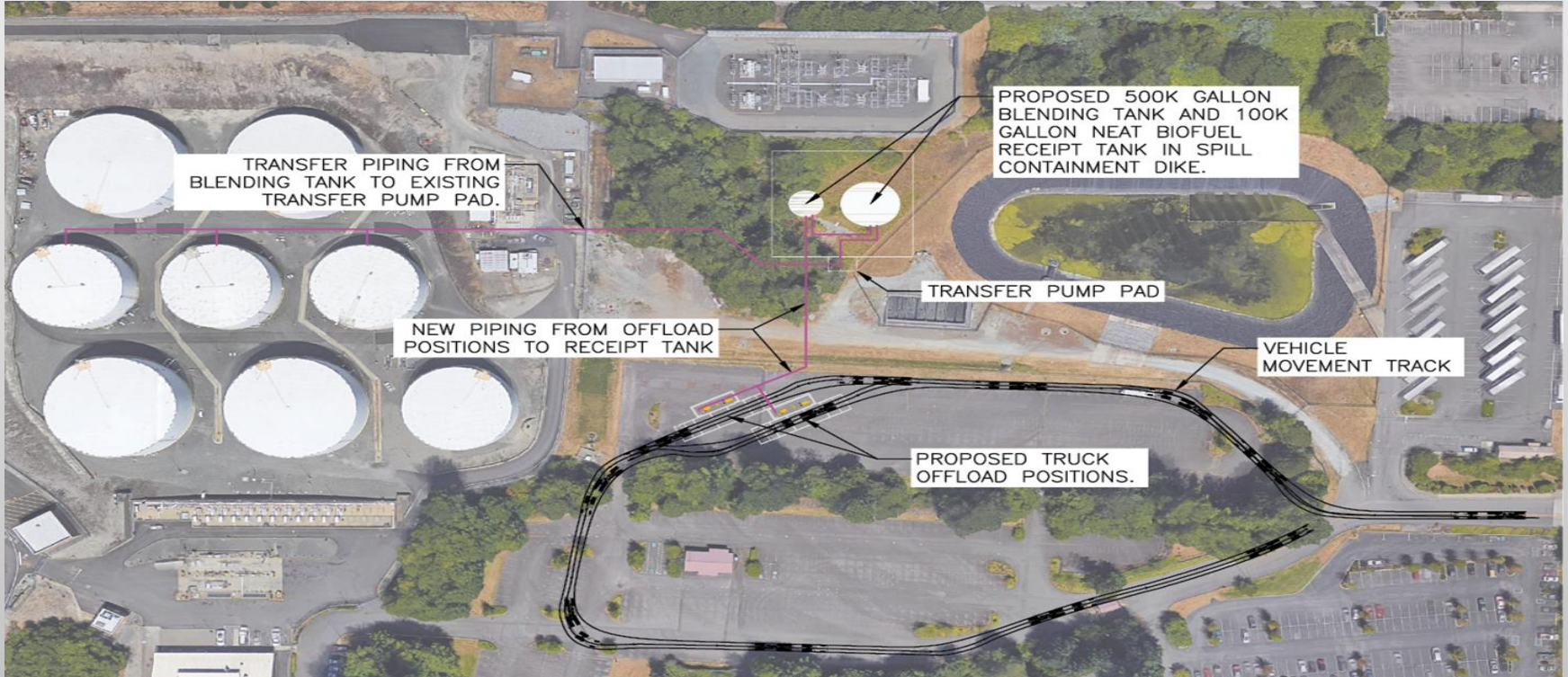
Scorecard Results for Short-Term Options



Scorecard Results for Long-Term Options



Sea-Tac Fuel Farm Aviation Biofuel Infrastructure



Next Steps

- Integrate Sea-Tac Fuel Farm updates into Sustainable Airport Master Plan
- Publish Financing Mechanisms Report (April 2017)
- Develop Business Case for Near-term Lower-Volume in-state production (December 2017)
- Continue to support on-going efforts (ASCENT, NARA)