

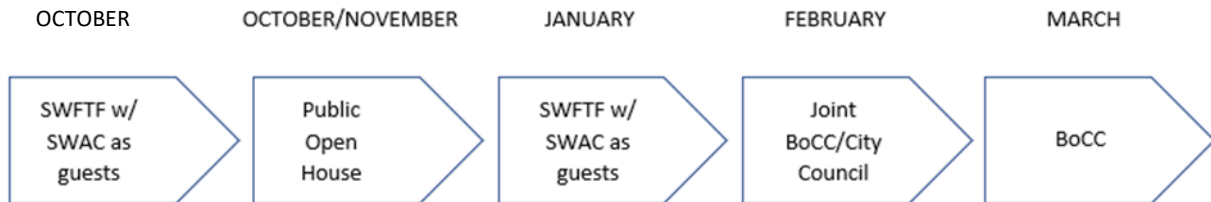
SOLID WASTE FACILITY TASK FORCE – MEETING No. 6

SOLID WASTE FACILITY LOCATION SELECTION PRIMER

This meeting primer provides the Solid Waste Facility Task Force (Task Force) with information in preparation for the next meeting. This follows from an extended period of Task Force inactivity that Public Works saw as necessary to provide time for internal analysis that brought more “local knowledge” to a narrower focus on site selection.

Public Works will refer to the initial collaboration with the consultant and Task Force as Phase 1, the period of staff-led studies as Phase 2, and the return to collaboration with the Task Force as Phase 3 of our planning process.

Our tentative meeting schedule and audience is as follows:



A brief review of the work conducted in Phase 1 and 2 of our planning process follows and these items will be reviewed in more detail at our meeting.

PHASE 1 WORK

Team Charter

The Team Charter was created jointly between Public Works Staff, the Consultant, and the Task Force members to provide guidance on our collaboration. The Guiding Principles within the document are touchstones for our work and will serve us well in the 3rd phase of our work when we use the Guiding Principles that apply to siting as performance indicators for general site locations. The complete list of Guiding Principles excerpted from the Team Charter is included as Attachment A.

Current Condition Assessment

The current condition assessment provides the rationale for facility replacement. This score card found the current transfer station to be marginally adequate to meet service demand. The score card is included as Attachment B.

Replacement Value

Determining the replacement value (in 2022 dollars) provided us with a relative cost for a new transfer station. Included here in Attachment C is a table excerpted from the replacement value study showing a high estimate of \$8.2M. Note that the study did not include utilities or property acquisition costs and we have experienced a period of high inflation since the study was conducted.

Level of Service

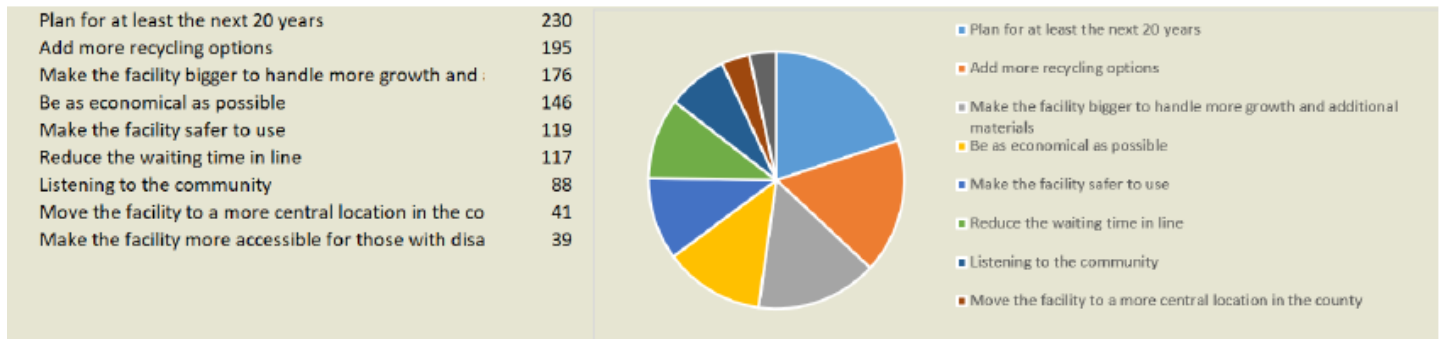
The Task Force determined that the future level of service should be somewhere between Medium and High. Level of Service includes such things as the level of the fee for service, landfill diversion options and tons diverted, wait times, and drive time to the facility. As a point of reference, a 2022 service level comparison between Jefferson County and King County and Seattle showed that on the basis of drive times between facilities and the types of materials accepted at those facilities, Jefferson County’s service level was the same or better. The recycling program comparison is included as Attachment D.

Other Functions

The Task Force discussed a range of other functions that it would like to see at a new transfer station. No parameters were given (size, feasibility, cost, etc.) as this was an aspirational exercise. Public Works staff returned to this list and considered these as part of its Phase 2 planning.

Public Survey

An online public survey was conducted to gather feedback on the Task Force’s work and on the process in general. The below pie chart shows the level of importance given for elements of the planning process which provide a possible basis for level of service:



Grays Harbor Transfer Station Visit

Public Works staff shared with the Task Force what was learned in visiting a newer rural county transfer station in Grays Harbor. This facility operates on nearly the same sized footprint as Jefferson County’s transfer station but processes more than three times the solid waste with fewer staff and about a quarter of the self-haul customers. Locating the facility in an area that encouraged residents to choose curbside service over self-haul visits was key to gaining operational efficiencies, as self-haul operations are most labor intensive.



Traffic Studies

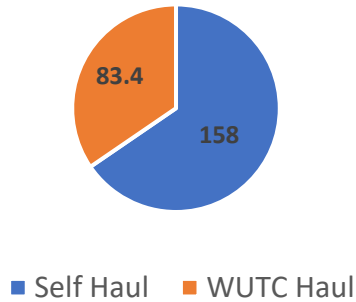
Public Works staff completed traffic studies on the County-owned properties that are in consideration for a future site. More detailed investigations may need to be done on a final candidate site.

Greenhouse Gas Emissions Study

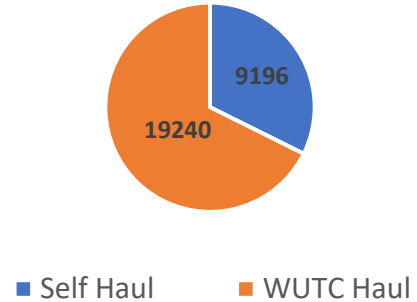
Public Works staff worked with the Jefferson County Climate Action Committee to compare the greenhouse gas emissions created by the curbside collection of municipal solid waste vs. self-haul deliveries to the two solid waste facilities in 2022. Further refinement of this work by the Climate Action Committee considered the difference between

diesel and gasoline engines and found that despite the WUTC Hauler (Waste Connections) delivering more than twice as much garbage, this delivery model produces half of the emissions as self-haul customers as shown below:

2022 ANNUAL TONS OF CO2 EMISSIONS

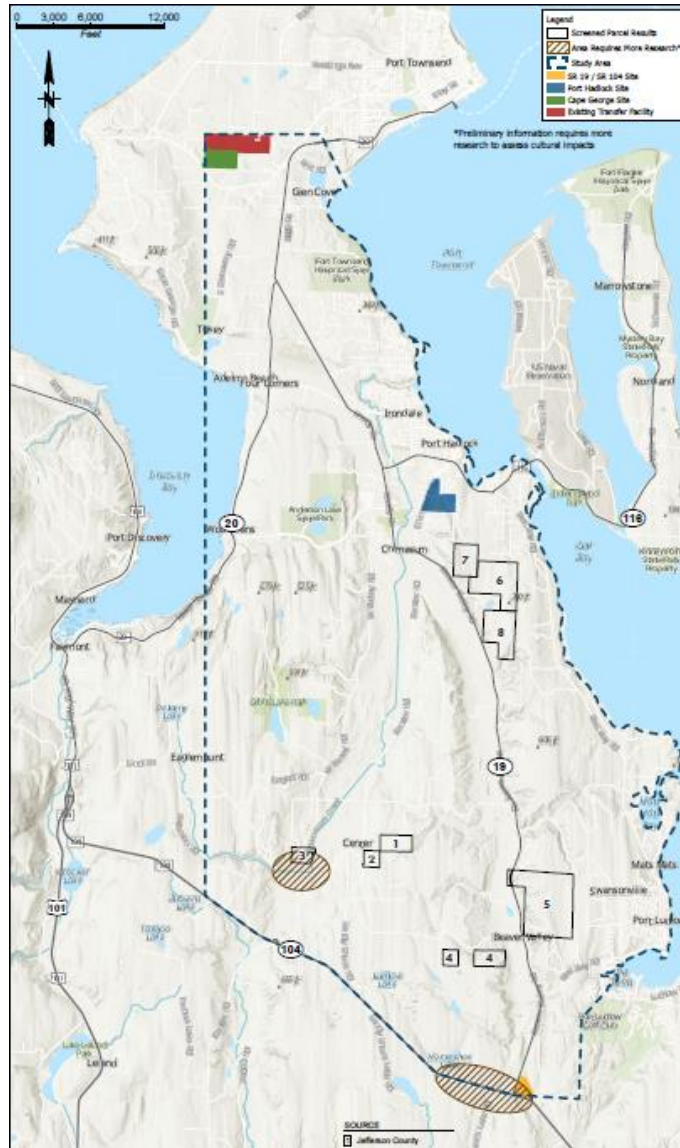


2022 ANNUAL TONS OF GARBAGE



Initial Site Screening

The consultant led the Task Force through the 8 screening criteria which brought over 6,000 properties down to 11 candidate sites for more detailed consideration as shown below. Note that the 4 County-owned properties are shown in red, green, blue and yellow.

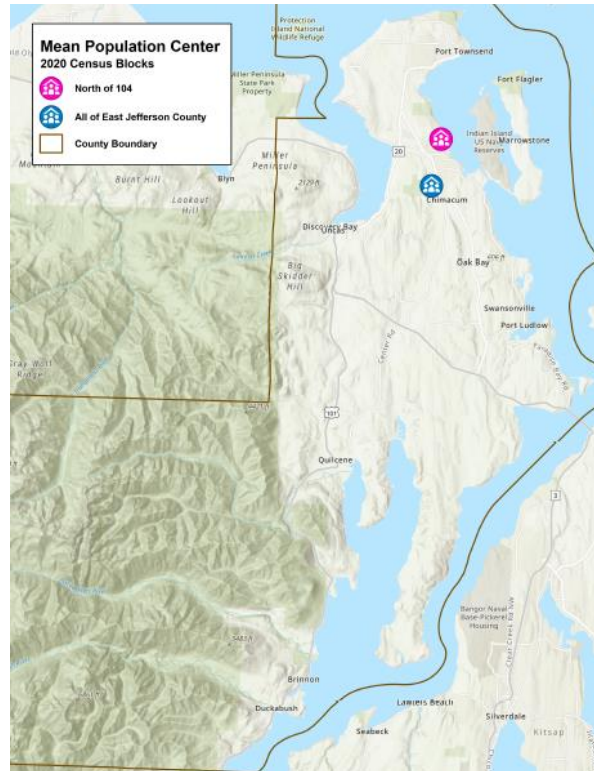


PHASE 2 WORK

Mean Population Center

The County’s GIS department identified two mean population centers: one which included just those residents living north of Highway 104 and one with all residents in the East Jefferson County service area included, as shown in the map below. The entire service area includes residents in the areas of Gardiner, Discovery Bay, Shine, Coyle, Leland, Quilcene, and Brinnon.

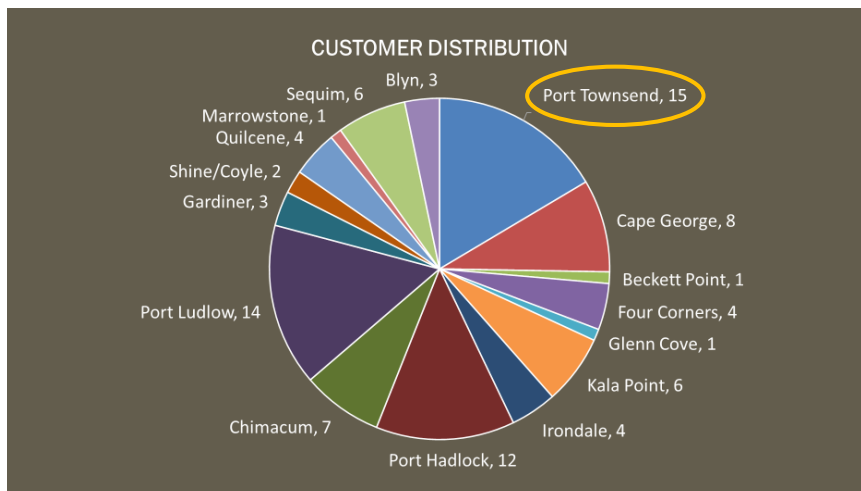
The Grays Harbor example should be kept in mind as well where a new transfer station was sited away from population centers, leading to more residents choosing curbside collection and achieving cost savings through operational efficiencies and a reduction in the carbon footprint.



Customer Survey

Public Works staff conducted a customer survey at the transfer station to gauge the effect of an increase to the minimum fee in reducing small load self-haul trips and to gain insight into where customers are coming from. The results were shared with the Board of County Commissioners at a workshop. Key findings include:

- The highest number of customers were from Port Townsend which has mandatory curbside service and the majority of these were minimum weight customers



- 41% of all customers surveyed had brought less than 240 lbs. of garbage
- 54% of the surveyed customers were aware of the curbside service option
- When asked what the minimum tipping fee would need to be set at before they would consider using the curbside option, customer responses averaged \$31.00. This is slightly more than the monthly cost of every other week 60-gallon roll cart curbside service including recycling

These results are important in considering whether the fee schedule or facility location has more utility in reducing self-haul trips to curb both operational costs and greenhouse gas emissions and improve curbside collection vendor performance.

Staff Siting Exercises

- ***Other Function Selection***

Staff developed criteria to vet the Task Force’s aspirational list of other possible facility functions. A short list of this criteria includes: support from the larger public in the public survey; the potential for public/private/NGO partnerships; limited or no burden on the tipping fee to finance infrastructure or maintenance and operation, and; likeliness of grant funding for start-up. Of the 19 Task Force-suggested additional functions, staff selected the below 5 for consideration in order to identify the acreage necessary to support these operations:

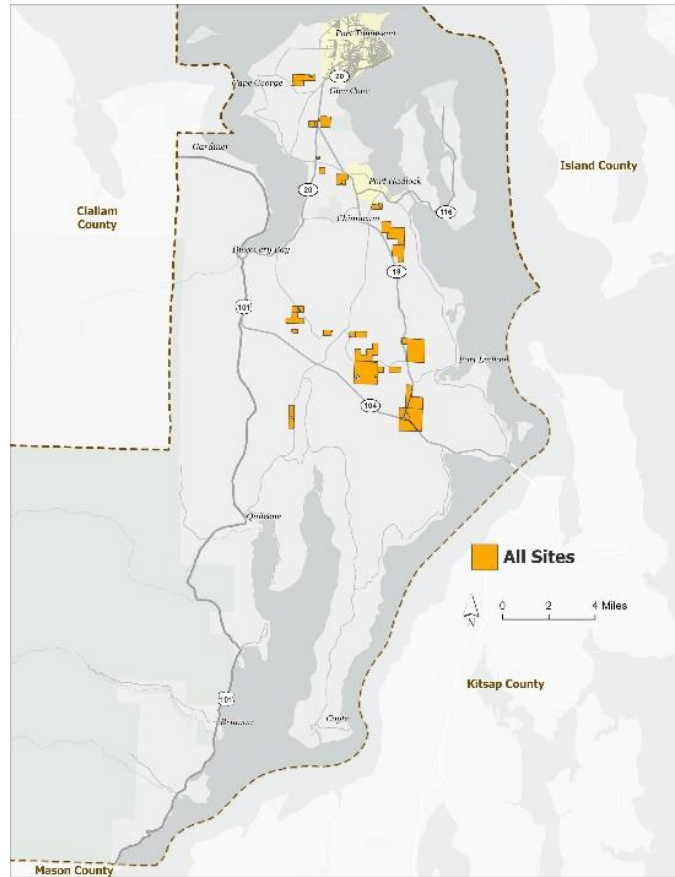
- Food waste/organics composting
- Drop and take area
- Repair Café
- Material diversion area (incorporating 3 of the material types suggested for landfill diversion)
- Food Hub (incorporating the suggestion for edible food diversion)

Staff estimates the total footprint of these functions to be on the order of 22.35 acres.

Note: We have a large body of work to complete, including gathering more public feedback, before any functions that are ancillary to the core service of garbage processing are made part of the plans for the replacement facility. But this exercise serves us well at this point in our iterative process in “stress testing” candidate sites for their capacity (size) to host these functions.

- ***Modified Siting Criteria***

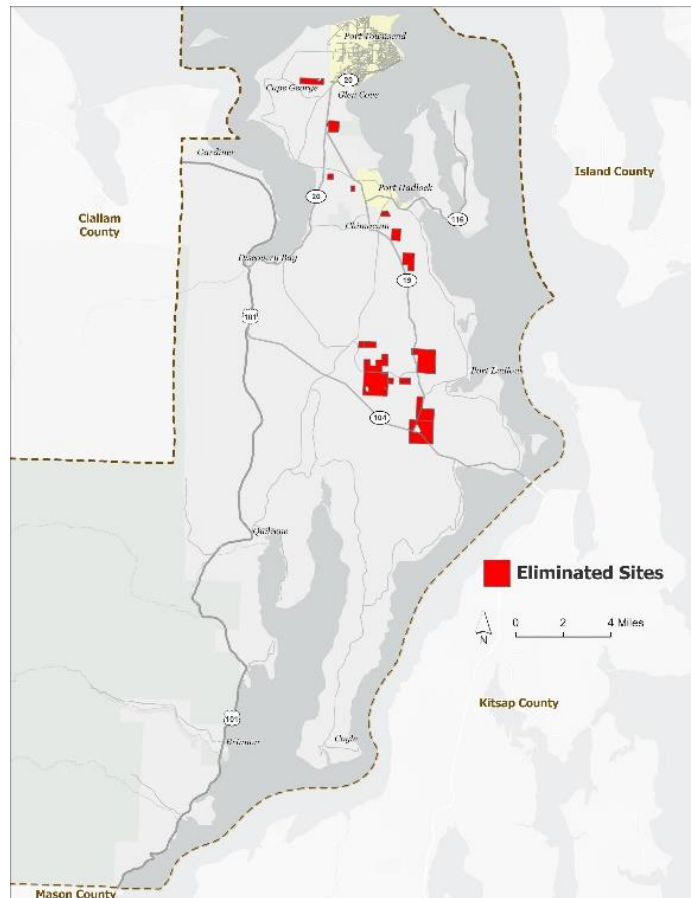
In order to make sure the Phase 1 siting criteria did not exclude properties deserving consideration, staff modified the siting criteria to include residential properties since there was the potential that a larger property zoned “Residential” might be situated where rezoning it would not burden adjacent properties or those on connector roads. Staff also redrew the study area to include properties slightly outside of those bounds. This increased the number of candidate properties to 26 as shown in the below map:



- **Fatal Flaw Screening**

Staff then applied pass/fail criteria to these sites that included: minimal acreage of 20; steep slope at the access point; “downstream” traffic impacts to private properties; critical area crossings; politically infeasible use conversion (Little League Fields); landslide hazard; utility crossings; critical aquifer recharge areas, and; winter road conditions. Those properties eliminated from consideration are shown below.

Note that the current transfer station property did not pass the fatal flaw screening because of limitations on developable acreage and the high cost of major traffic revisions.



- **Private Properties**

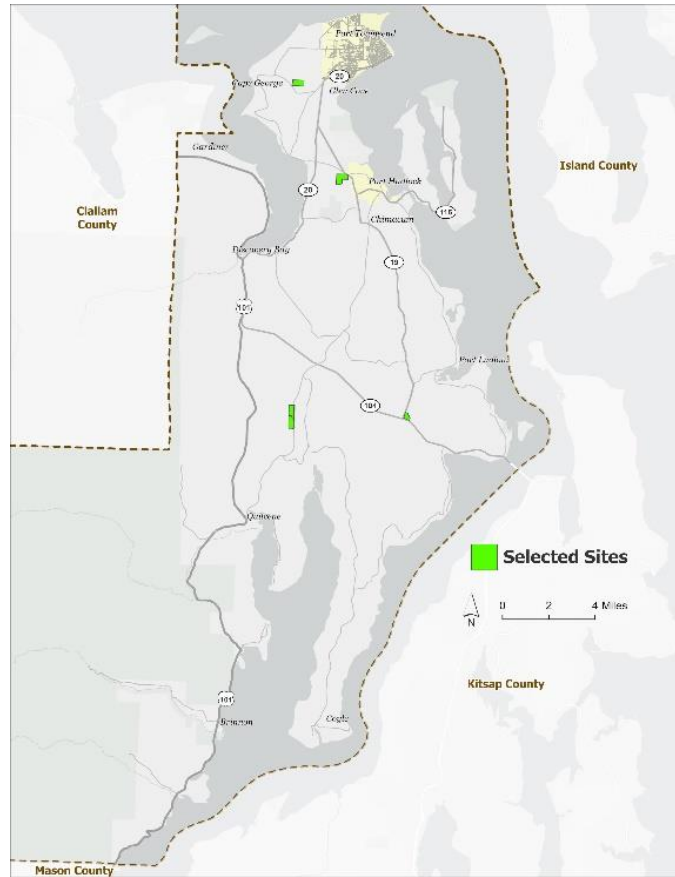
From the list of properties that remained after the fatal flaw screening, staff contacted the owners to inquire of their level of willingness to sell to the County for the purpose of relocating a transfer station. Some owned multiple properties (Rayonier, Inc., for example) and of the 6 owners, 5 were willing to sell to the County.

- **Short List**

Staff then compared the remaining 14 properties based on the below considerations:

- Critical area presence
- Developable acres
- Potential for multi-county partnership
- Potential for WUTC hauler partnership
- Potential for greenhouse gas emission reduction
- Drivetime to population centroid
- Drivetime to Hood Canal Bridge (as the start of the outbound leg of material flow)
- Cumulative drivetime
- On-site and off-site traffic revisions
- Relative traffic revision costs
- Distance to utilities
- Service equity
- Potential for facilities consolidation

From this list, staff selected 4 sites for more detailed analysis as shown below:



▪ **General Area Screening**

Staff then developed an altogether different framework for site selection. In this whiteboard exercise, staff used the Guiding Principles found in the Team Charter which can be related to site selection as “performance criteria” for three general locations within the modified study area identified simply as North, Central, and South as shown below with the original study area defined by the red line.



PHASE 3 WORK

Following a review of the above work, and with all Task Force member questions answered, the consultant will lead us through the General Area Screening exercise described above.

For this exercise, please find included **Attachment E: Solid Waste Facilities General Location Scorecard**. Task Force members will be provided with a hard copy of this primer and your packet will include a box of crayons. Staff and the consultant will provide data for you to consider in “scoring” the general North, Central, and South locations by filling in the boxes with either a green, yellow, or red crayon. Green would indicate that the general location satisfies the guiding principle, yellow that it mostly or sort of does, and red that it barely or doesn’t at all.

At the conclusion of our meeting, we ask that you return your scorecard only to the Public Works office in the pre-paid envelope included in your packet. Staff will then tabulate the results and report the results back to the Task Force.

Attachment A

2.4 High Level Project Guiding Principles

These are the fundamental guidelines that inform the team on the requirements of the Solid Waste Replacement Facility that will be recommended by the team and include:

- **Service Life.** The replacement SWF will provide a service life of a minimum of at least 40 years.
- **Flexibility.** The replacement SWF Facility Plan will be flexible. The plan must provide future operational continuity, while accommodating growth and other changing circumstances without material service disruptions or adverse impacts to the environment.
- **Transportation , Site Access , Traffic and Circulation.** Access to the proposed SWF Facility alternatives should be compatible with the types of vehicles using the facility and American Disability Act (ADA) requirements, and provide adequate space for onsite roadways, queuing, parking, utilities, and safe operations.
- **Service Equity.** The SWF Facility or facilities will provide a level of service that is as equitable to all County residents relative to population densities and ADA requirements .
- **Environmental Excellence.** Proposed facility should reduce the carbon footprint and reliance on the electric grid, promote the improvement of air quality, protect and enhance the quality of adjoining environmental elements and integrate the natural environment. The facility location should include consideration for the reduction of Greenhouse Gas (GHG) emissions and reduction in the carbon foot print within the service area.
- **Land Development and Land Use.** Proposed alternatives should be sensitive to general community interests and consistent with Jefferson County's Solid Waste Management Plan and land-use requirements. Buildings and landscaping should blend into the surrounding areas and maintain adequate buffer space and separation from adjoining lands.
- **Energy and Water Consumption Efficiency.** Options could include renewable sources of energy, improved efficiency of energy and water consumption, and use of energy efficient and/or recycled materials in future construction of improvements/new facility.
- **Experiential Education.** The SW Facility will provide a user experience that intuitively describes the waste management hierarchy with waste reduction as the highest order.
- **Waste Diversion.** The SW Facility will provide users with the means to exchange useable items and for materials to be otherwise diverted from the waste stream, including optimal food waste, and support the highest cost-effectively feasible waste reduction and diversion program, within the constraints of the facility selection assessment criteria.
- **Public Private Partnerships.** The SW Facility will provide opportunities for public/private partnerships for waste diversion.
- **Other Operations Co-location.** The SW Facility will provide opportunities for the co-location of ancillary County functions that benefit from shared infrastructure. Such functions may include an organics management facility.
- **Cost-Benefit Outcome.** The SW Facility will provide the highest level of return for the public's investment, consistent with all relevant constraints and goals, as specified by the relevant decision makers.

JEFFERSON COUNTY SOLID WASTE FACILITY

Current State Condition Assessment Report Card

- 2 Tonnage and Vehicle Flow Capacity**
Design capacity is 50 tons per day; facility operated at over design capacity for 12 out of the last 17 years.
- 2 Emergency Storage, Buffer & Expandability Capacity**
152.97 - acre property with: closed landfill and wastewater lagoon, leased gun range, wetland, and Port Townsend biosolids facility. Developable area is less than 15 acres.
- 2 Site Access**
Difficult intersections, turning radii and single lane queuing along Jacob Miller and County Landfill Road. No trailer or recycling-only customer bypass lane on approach.
- 2 Scales and Scalehouse**
Platform vehicle scale length is suboptimal at about 25 ft; access via right-turn lane from tipping area to scale is very tight for vehicles with trailers; no bypass lanes on scales; scalehouse is very small with no ADA compliant accessible features, restroom or parking stalls.
- 2 Recyclable Collection and Processing Areas**
Many material recycling options; no ADA accessible options to the bins; inadequate mixed traffic of self-haul customers to bins and commercial vehicles to large recycling processing buildings; undersized collection and processing building.
- 3 Transfer Building and Operations**
Pre-engineered 7,500 sf structure was rebuilt in 1994; tipping floor capacity relative to vehicular demand is adequate but suboptimal; No backup tipping capacity; compaction tampering equipment is suboptimal.
- 3 Waste Loading Operations**
Adequate - axle (tunnel) scales and trailer parking area. Cycle time from floor clearing, tampering and trailer parking is about 20 minutes; time to achieve adequate payload of 26 tons per trip is not optimal.
- 3 Employee Facilities**
Administrative office last modified in 2020; recycling building built in 1983 and close to end of life; adequate parking, break and lunch/meeting room, separate restrooms, and dedicated recyclable processing buildings with lunch and rest rooms are adequate.
- 2 Public Facilities**
Visitors parking area not paved; with non-ADA compliant access to administrative building area; no standard public telephone or restrooms or public education and information area(s).
- 2 Queuing and Traffic Circulation**
Customers can enter and exit recycling area freely; standing outside their vehicles and unloading have accident risk exposure; unsafe cross-traffic between recycling only and refuse customers; queuing at tipping floor is suboptimal.
- 3 Transfer and Recycling Building Structure**
Transfer building is in fair condition externally; it is crowded in the interior; tipping building clear height to bottom of roof structure is less than optimum; ventilation is adequate; administrative building is in good condition; scale house building is in fair condition; recycling building condition is not adequate.
- 3 Operating Equipment**
Key operating equipment - Knuckle boom crane, tractors, recyclable processing, pit scale, drop boxes, and platform scale are in fair to good conditions.
- 2 Facility Management Cost**
Operations and Maintenance costs increased by 44% from 2014 to 2022. Capital spending was variable and dependent on asset renewal. Comparison of O and M to replacement cost suggest that the facility is in overall fair condition.
- 3 Statutory Compliance Risk**
Customers standing at tipping floor to dispose waste; operator vehicles are not separated from customer vehicles; recycling and stored goods are near roof trusses; age of buildings suggests electrical systems near end of life; open-sided transfer building allow noise to exit building.
- 4 Facility Social Significance**
The facility has significant influence on the community behavior as it relates to sustainable waste management and environmental stewardship; it is the main solid waste management facility in the county.
- 3 Impact of Facility on the Environment**
Low risk of greenhouse gas emissions or groundwater pollution from the closed landfill as it's closed per regulatory standards; potentially high energy consuming equipment and building. Potential increase to carbon footprint due to lack of sustainable buildings on site.

Grade Scale **1** CRITICAL **2** INADEQUATE **3** FAIR **4** GOOD **5** EXCEPTIONAL

Attachment C

Asset Category	Replacement Cost, \$
Buildings	3,511,200
Machinery and Equipment	2,482,181
Site Improvements other than Buildings	289,300
Subtotal Planning Level Solid Waste Facility Replacement Costs	6,282,681
Cost Estimating Contingency Allowance (-10%) - [LOW]	(628,268)
Cost Estimating Contingency Allowance (+30%) [HIGH]	1,884,804
Grand Total Planning Level Solid Waste Facility Replacement Cost Estimate (LOW)	5,654,413
Grand Total Planning Level Solid Waste Facility Replacement Cost Estimate (HIGH)	8,167,485
Average Planning Level Facility Replacement Cost Estimate	6,910,949

Attachment D

2022 Recycling Service Level Comparison: Jefferson County, King County & Seattle

Service Options	Propane/Gas Cylinders	Computers/Monitors	Televisions	Cans (aluminum, steel, tin)	Paper	Cardboard	Plastics	Glass	Scrap Metal	Automotive/Marine Batteries	Household Batteries - Alkaline	Household Batteries - Lithion Ion	C&D	Clean Wood Waste	Sharps	Mercury Containing Lights	Major Appliances-Refrigerants	Major Appliances-Non-refrigerant	
King County Facilities																			
Algona Transfer Station	⊗	⊗	⊗	♻️	♻️	♻️	♻️	♻️	⊗	⊗	♻️	⊗	♻️	♻️	♻️	⊗	⊗	♻️	
Tukwila Transfer Station	⊗	⊗	⊗	♻️	♻️	♻️	♻️	♻️	⊗	⊗	♻️	⊗	♻️	♻️	♻️	⊗	♻️	♻️	
North Bend Drop Box	⊗	⊗	⊗	♻️	♻️	♻️	♻️	♻️	⊗	⊗	♻️	⊗	♻️	♻️	♻️	⊗	⊗	♻️	
Enumclaw Transfer Station	⊗	⊗	⊗	♻️	♻️	♻️	♻️	♻️	⊗	⊗	♻️	⊗	♻️	♻️	♻️	⊗	♻️	♻️	
Factoria Transfer Station	⊗	⊗	⊗	♻️	♻️	♻️	♻️	♻️	⊗	⊗	♻️	⊗	♻️	♻️	♻️	⊗	♻️	♻️	
Kirkland Transfer Station	⊗	⊗	⊗	♻️	♻️	♻️	♻️	♻️	⊗	⊗	♻️	⊗	♻️	♻️	♻️	⊗	⊗	♻️	
Renton Transfer Station	⊗	⊗	⊗	♻️	♻️	♻️	♻️	♻️	⊗	⊗	♻️	⊗	♻️	♻️	♻️	⊗	⊗	♻️	
Shorline Transfer Station	⊗	⊗	⊗	♻️	♻️	♻️	♻️	♻️	⊗	⊗	♻️	⊗	♻️	♻️	♻️	⊗	⊗	♻️	
Skykomish Drop Box	⊗	⊗	⊗	♻️	♻️	♻️	♻️	♻️	⊗	⊗	♻️	⊗	♻️	♻️	♻️	⊗	⊗	♻️	
Factoria MRWF	♻️		⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	♻️	♻️	⊗	⊗	♻️	♻️	⊗	⊗	
Seattle Facilities																			
North Transfer Station (Wallingford)	♻️	♻️	♻️	♻️	♻️	♻️	♻️	♻️	♻️	♻️	♻️	♻️	♻️	♻️	♻️	⊗	♻️	♻️	
South Transfer Station (Georgetown)	♻️	♻️	♻️	♻️	♻️	♻️	♻️	♻️	♻️	♻️	♻️	♻️	♻️	♻️	♻️	⊗	♻️	♻️	
North Transfer MRWF (Wallingford)	♻️	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	♻️	♻️	♻️	⊗	♻️	♻️	♻️	⊗	⊗	
South MRWF (Georgetown)	♻️	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	♻️	♻️	♻️	⊗	♻️	♻️	♻️	⊗	⊗	
Auburn Wastemobile (Mobile MRWF)	♻️	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	♻️	♻️	♻️	⊗	♻️	♻️	♻️	⊗	⊗	
Jefferson County Facilities																			
Quilcene Drop Box	♻️	♻️	♻️	♻️	♻️	♻️	♻️	♻️	♻️	♻️	♻️	♻️	♻️	♻️	♻️	♻️	♻️	♻️	
Jacob Miller Road Transfer Station	♻️	♻️	♻️	♻️	♻️	♻️	♻️	♻️	♻️	♻️	♻️	♻️	♻️	♻️	♻️	♻️	♻️	♻️	
Boat Haven MRWF	♻️	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	♻️	♻️	♻️	⊗	⊗	♻️	♻️	⊗	⊗	
KEY																			
RECYCLED	♻️																		
NOT ACCEPTED	⊗																		
DISPOSED OF AS MUNICIPAL SOLID WASTE	♻️																		

Attachment E

SOLID WASTE FACILITIES GENERAL LOCATION SCORECARD

	FLEXIBILITY	SERVICE EQUITY	ENVIRONMENTAL EXCELLENCE	LAND DEVELOPMENT	PUBLIC/PRIVATE PARTNERSHIP	OTHER OPERATIONS CO-LOCATION	COST BENEFIT
GENERAL LOCATION	Does the general location accommodate future growth and changing circumstances? In which general location would a transfer station have the least adverse impact to the environment?	Does the general location provide an equitable level of service relative to population densities?	Which general location has the most potential to reduce the operation's carbon footprint?	Which general location would allow the facility to blend into the surrounding area? Does the location provide enough buffer from adjoining lands?	Which general location holds the highest potential for public/private partnerships?	Which general location holds the highest potential for co-locating other County functions?	Which general location would yield the highest return on investment over 40 years?
NORTH							
CENTRAL							
SOUTH							