



Solid Waste Facility Replacement Planning - Alternatives Development and Initial Screening , Workshop #4 GUIDE

4.0 Development of INITIAL Draft Solid Waste Facility (SWF) Alternatives

This step of the process is used to identify a list of initial SWF alternatives. All the initial SWF Alternatives must present solutions that could meet the SWF improvement objectives with minimum constraints. Alternatives' formulation has been conducted for this SWF planning project with a focus on achieving the planning vision and goals, while abiding by the project principles defined in the Integrated Project Charter.

The Draft Initial SWF Alternatives are described in the Table below with the current facility.

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- The table below is provided as background information for the SWFTF and may be used as part of the public meetings. The “Basic” level of service is anticipated to be the starting level of service for a Transfer Station. The “Medium” provides a greater level of service and is intended to have more efficient customer queuing and operations queuing over basic. The “High” column lists an exceptional level of service, public access, amenities, and operations efficiency. The “Current” column shows what the transfer station offers today. The “Management Strategies” include operational actions that may improve each level of service.

Facility Design and Functional Criteria	Alternative 1	Alternative 2	Alternative 3	Alternative 5	Alternative 6
Level of Service	Basic	Medium	High	Current	Management Strategies to create greater efficiencies with Basic
Overall Facility Capacity (Projections)	Plan to 20+ years, existing operational hours	Plan to 20+ years, flexible expansion, existing operational hours	Plan to 40+ years, flexible expansion, preserve area for future use, existing operational hours	Has reached design capacity, today Limited expandability (not expandable) No long-term plan in place, keep maintained to existing function	Mandatory curbside collection by Ordinance (adopted by Board of County Commissioners) Reduces planned capacity projections Removes high volumes of self-haul customers Reduces site area required (if removed to separate hauler transfer station)
Facility Service Life, Buildings and Infrastructure	30+ years	30+ years	40+ years	Currently has reached of end design service life, can be extended	30+ years
Queuing and Traffic Circulation to Scales	<u>One Site Entrance</u> <ul style="list-style-type: none"> Clear turn lanes in-out of site One-customer & operations point of access Queuing length inbound and outbound to accommodate high mid-week hourly traffic rates Goal: 10-minute wait maximum weekday, 20-minute maximum weekend No traffic backing-up onto adjacent roadways Access free recycling and free amenities areas separately 	<u>Two Site Entrances</u> <ul style="list-style-type: none"> Separate operations traffic from customer access Queuing length inbound and outbound to accommodate medium weekend traffic rates. Goal: 10-minute wait time at moderate weekend No traffic backing-up onto adjacent roadways Access free recycling and free amenities areas separately 	<u>Two Site Entrances</u> <ul style="list-style-type: none"> Separate operations traffic from customer access Queuing length inbound and outbound to accommodate maximum weekend traffic rates. Goal: 10-minute wait time at peak weekend No traffic backing-up onto adjacent roadways Access free recycling and free amenities areas separately 	<u>One Site Entrance</u> <ul style="list-style-type: none"> Single point of site access, short inbound & outbound queuing lanes No separate site access for operations 10+ minute wait at moderate weekday & 20+ minute wait typical weekend, traffic queues outside of site inbound, traffic conflicts with site access outbound Access free recycling is affected by point-of-sale access queues 	Variable site entrances using cones and signage, request traffic officer assistance on peak days for safety Reduces traffic to-from site
Scales and Scale House	New, accessible pay booth, future customer scale capable, scale for commercial haulers only <u>Bypass lanes and commercial scaling separated</u> <ul style="list-style-type: none"> Inbound & Outbound bypass access at pay kiosk Pay by volume inbound for customers with dedicated inbound & outbound lanes Bi-directional scale for commercial haulers and operations separated from customers 	New, accessible scale house <u>Bypass lanes and co-use scaling</u> <ul style="list-style-type: none"> Inbound & Outbound bypass access at pay kiosk (1) inbound & (1) outbound scale combines customer, commercial, & operations, pay outbound 	New, accessible scale house <u>Bypass lanes and separated scaling</u> <ul style="list-style-type: none"> Inbound & Outbound bypass access at pay kiosk (1) inbound & (1) outbound customer scale, pay outbound Bi-directional scale for commercial haulers and operations separated from customers 	Scale house not ADA accessible, no attendant amenities Existing scale is too short for functional use <u>does not fit customer vehicles with trailers, semi-trucks, large commercial vehicles</u> <u>No bypass lane access</u> <ul style="list-style-type: none"> Issue: long queue times for customers, operations must wait-in line with customers. Inefficient 	Implement speed pay, rolling scales, tare weights, remote pay for commercial haulers, adjust traffic patterns during peak times to reduce queuing

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Queuing and Traffic Circulation, On-Site	Queue at primary site functions does not take more than 10-minutes before discharge during moderate weekday times	Queue at primary site functions does not take more than 10-minutes during moderate weekend times	Queue at primary site functions does not take more than 10-minutes during maximum weekend times	Queuing moderate weekday reaches 20+ minutes, signage indicated	
Waste Receiving and Waste Loading Operations	<ul style="list-style-type: none"> Increase tipping floor capacity over existing Increase number of tipping stalls Use scale elsewhere for trailer weights 	<ul style="list-style-type: none"> Increase tipping floor capacity over existing Increase number of trailers receiving waste Tipping stalls number determined by customer averages, weekday Operations does not need to shut down floor to clear Separate commercial tipping from customer tipping Large vehicle trailer maneuvering 	<ul style="list-style-type: none"> Increase tipping floor capacity over existing Increase number of trailers receiving waste Operations does not need to shut down floor to clear Tipping stall number determined by customer averages, weekend Separate commercial tipping from customer tipping Large vehicle trailer maneuvering Provide future tipping floor expansion capability Provide future flexibility to add compaction capability 	<ul style="list-style-type: none"> Tipping capacity minimal, does not accommodate separation of waste, inflexible, floor shuts down to clear causing customer queue to increase Commercial and customers use same tipping floor and bays Trailer weights are tamped and pit scale is used when pit scale not-functioning operations shuts down 	
Drop-Off Recycling (see below table for more information on a range of service levels and the current service level)	Basic, same materials accepted as current <ul style="list-style-type: none"> ADA Accessible bins and receiving Moderate queue times 	Additional materials Medium <ul style="list-style-type: none"> ADA Accessible bins and receiving Separate customers from operations Moderate queue times 	Additional Materials High <ul style="list-style-type: none"> ADA Accessible bins and receiving Separate customers from operations Minimal queue times 	<ul style="list-style-type: none"> List of materials on separate spreadsheet Combination of small access containers and tipping floor Combined customer drive access and operations 	
Waste Diversion, HHW	<ul style="list-style-type: none"> Limited collection of HHW goods Direct palette to vehicle, loading docks 	<ul style="list-style-type: none"> Limited collection of HHW goods On-site storage and separation Loading docks 	<ul style="list-style-type: none"> Collection of HHW goods Future expansion Customer amenities, paint recycling & mixing 	<ul style="list-style-type: none"> No dedicated HHW facility 	
Waste Diversion, Construction and Demolition (C&D) Diversion	<u>Divert</u> <ul style="list-style-type: none"> Separate collection from garbage to landfill Bin area for collection of sources separated C&D waste Laydown mixed collection area, similar to volume of one 3,000-sf home Transfer to secondary processor 	<u>Divert</u> <ul style="list-style-type: none"> Separate collection from garbage to landfill Bin area for collection of sources separated C&D waste Large sorting laydown mixed collection area, similar to QTY (2) 3,000-sf homes Transfer to secondary processor 	<u>Divert + limited on-site processing</u> <ul style="list-style-type: none"> Separate collection from garbage to landfill Bin area for collection of sources separated C&D waste Large sorting laydown mixed collection area, similar to volume of (4) 3,000-sf homes Concrete grinding Area for sorting and salvage 	<u>Not Diverted</u> <ul style="list-style-type: none"> Non-separated C&D waste, currently tipped onto transfer floor 	<ul style="list-style-type: none"> Source separation of C&D waste collected and processed by 3rd party
Transfer Vehicle Operation	<ul style="list-style-type: none"> Top load trailer tarping on-off area Storage for 5-full, 5-empty trailers Emergency area for 3-days full trailers 	<ul style="list-style-type: none"> Top load trailer tarping on-off area Storage for 5-full, 10-empty trailers Emergency area for 5-days full trailers 	<ul style="list-style-type: none"> Top load trailer tarping on-off area Storage for 10-full, 10-empty trailers Emergency area for 7-days full trailers 	<ul style="list-style-type: none"> Top-load trailers, tamped to weight On-site storage for 10 empty or full trailers 	
Operation Employee Facilities (non-scale attendant)	<ul style="list-style-type: none"> Accessible break area Multiple restrooms and personal changing rooms 	<ul style="list-style-type: none"> Accessible break area, Multiple restrooms and personal changing rooms 	<ul style="list-style-type: none"> Accessible break area Multiple restrooms and personal changing rooms 	<ul style="list-style-type: none"> Accessible break area and restroom for employees, supervisor office 	



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	<ul style="list-style-type: none"> Supervisor offices 	<ul style="list-style-type: none"> Showers Lockers Supervisor offices 	<ul style="list-style-type: none"> Remotely located restroom for operations staff convenience on-site Showers Lockers Supervisor offices Views of operations, both site and tipping Conference room or meeting room 		
Public Facilities	<ul style="list-style-type: none"> Artist in Residence Public Restrooms Classroom Volunteer Space Parking for visitors 	<ul style="list-style-type: none"> Artist in Residence Public Restrooms Classroom Volunteer Space Parking for visitors Community Meeting Area 	<ul style="list-style-type: none"> Artist in Residence Public Restrooms Classroom Volunteer Space Parking for visitors Operations Viewing Area Artist Exhibit spaces Public Access to tool check-out lockers or closets 	<ul style="list-style-type: none"> Artist in Residence Public Restrooms 	
Partnerships	<ul style="list-style-type: none"> Specially advertised and partnership events, HHW weekend, reusable goods swap days, etc. 	<ul style="list-style-type: none"> Organics composting Reusable building items collection and scale Repair days 	<ul style="list-style-type: none"> Organics composting Reusable building items collection and sale Repair days Asphalt shingle grinding Woody debris and wood chipping 	<ul style="list-style-type: none"> Organics Collection on-site, separate operator, composted elsewhere 	
Environmental Quality	<ul style="list-style-type: none"> Meets statutory regulatory and permit compliance Meets Washington State Energy Code Provides adequate lighting for operations staff Meets Washington State Stormwater Code No 3rd Party Certifications Fuel efficient operating equipment 	<ul style="list-style-type: none"> Meets statutory regulatory and permit compliance Exceeds Washington State Energy Code Documented reductions in carbon footprint Provide high daylighting % reducing lighting use Rainwater collection and storage for site use Low potable water consumption Fuel efficient operating equipment 	<ul style="list-style-type: none"> Meets statutory regulatory and permit compliance Exceeds Washington State Energy Code Rainwater collection and storage for site use Low potable water consumption Fuel efficient operating equipment Strives to achieve USGBC LEED, Energy Star, Net Zero, Living Building, or other high-performing building standard Participates in green building monitoring (EUI, monitored Greenhouse emissions) Solar power and/or heat recovery systems 	<ul style="list-style-type: none"> Transfer Station, Recycling, Scale House, and Operations Building do not meet current designed-to 3rd party energy standards 	

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Recycling levels of service (LOS)

- The table below is provided as background information for the SWFTF and may be used as part of the public meetings. The “Basic” level of service lists materials that are relatively easy to manage and/or have a higher commodity value. The “Medium” level of service expands on the list of materials to include materials that are more difficult to manage or have lower commodity values. The “High” level of service includes materials that even some urban transfer stations do not accept because they have low commodity values, are difficult to manage on site, or have limited demand or markets. The “Current” list is shown next to the “High” list for comparison.

Basic – Recycling Level of Service	Medium - Recycling Level of Service	High – Recycling Level Recycling	Current – Recycling Level Recycling
CURBSIDE MIX	CURBSIDE MIX	CURBSIDE MIX	CURBSIDE MIX
Corrugated Cardboard	Corrugated Cardboard	Corrugated Cardboard	Corrugated Cardboard
Mixed Paper and Newspaper	Mixed Paper and Newspaper	Mixed Paper and Newspaper	Mixed Paper and Newspaper
	PET/HDPE Bottles	PET/HDPE Bottles	PET/HDPE Bottles
		Other Rigid Plastic	
		Plastic Film	
Aluminum Cans	Aluminum Cans	Aluminum Cans	Aluminum Cans
Tinned Food Cans	Tinned Food Cans	Tinned Food Cans	Tinned Food Cans
	Glass Containers	Glass Containers	Glass Containers
			Note: also collected at transfer station and 2 drop sites that are open 24/7
ORGANIC WASTE	ORGANIC WASTE	ORGANIC WASTE	ORGANIC WASTE
	Yard Waste	Yard Waste	Yard Waste - <i>City operated facility co-located at transfer station</i>
	Residential Food Waste & Soiled Paper	Residential Food Waste & Soiled Paper	Residential Food Waste & Soiled Paper - <i>Through composting classes that include bins</i>
	Commercial food waste (restaurant & grocery store)	Commercial food waste (restaurant & grocery store)	Commercial food waste (restaurant & grocery store) - <i>Current large diversion rate accomplished by private sector exchange between producers and ag sector</i>
		Woody Debris & disaster debris, with wood-chipping	Woody Debris & disaster debris, with wood-chipping - <i>Up to 8’ long and 10” diameter</i>
METAL	METAL	METAL	METAL
Scrap Metal	Scrap Metal	Scrap Metal	Scrap Metal
	Appliances	Appliances	Appliances
		Metal fencing & pipe rails	Metal fencing & pipe rails
CONSTRUCTION & DEMOLITION WASTE	CONSTRUCTION & DEMOLITION WASTE	CONSTRUCTION & DEMOLITION WASTE	CONSTRUCTION & DEMOLITION WASTE
Clean dimensional lumber	(Note - 2022 ECY-funded study found little available material)		
		Gypsum Wallboard	
	Asphalt Shingles	Asphalt Shingles	

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Basic – Recycling Level of Service	Medium - Recycling Level of Service	High – Recycling Level Recycling	Current – Recycling Level Recycling
		Carpet & Carpet Pad	
Tires	Tires	Tires	Tires – <i>Collected through annual collection events</i>
	Concrete	Concrete	Concrete - <i>Collected at private sector enterprise in Port Hadlock</i>
		Ceramic Tile	Ceramic tile – <i>collected at private sector enterprise in Port Townsend</i>
	Wood Pallettes	Wood Pallettes	Wood Pallettes
BULKY ITEMS	BULKY ITEMS	BULKY ITEMS	BULKY ITEMS
	Furniture	Furniture	Furniture - <i>Collected at private sector enterprises throughout Jefferson County</i>
	Mattresses	Mattresses	Mattresses - <i>collected at private sector enterprises throughout Jefferson County</i>
Tires	Tires	Tires	Tires
REUSABLES	REUSABLES	REUSABLES	REUSABLES
Building Materials (events)	Building Materials (events)	Building Materials (events)	Building Materials (events) - <i>all listed Reusables currently collected at multiple private sector enterprises throughout Jefferson County</i>
		Household Goods	
		Textile & Clothes	
		Bicycles	
		Plumbing (toilets, sinks, bathtubs)	
		Livestock watering troughs	
		Tools and manufacturing equipment	
	Window frames and doors	Window frames and doors	
Electronics	Electronics	Electronics	Electronics
	Computers & hard drives	Computers & hard drives	Computers & hard drives
	Televisions	Televisions	Televisions
Household Hazardous Waste	Household Hazardous Waste	Household Hazardous Waste	Household Hazardous Waste
		Lithium batteries	Lithium batteries
		Car batteries	Car batteries
		Latex paint	Latex paint - <i>At HHW collection events – no charge</i>
		Propane tanks (small & medium)	Propane tanks (small & medium)
Used Oil	Used Oil	Used Oil	Used Oil
Antifreeze	Antifreeze	Antifreeze	Antifreeze
	Mercury containing lamps	Mercury containing lamps	Mercury containing lamps



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Public Facility Levels of Service

- The table below is provided as background information for the SWFTF and may be used as part of the public meetings. The “Basic” level of public access shows what most rural transfer stations provide. The “Medium” column lists what some urban area transfer stations provide. The “High” column lists an exceptional level of public access that exceeds urban transfer station public access. The “Current” column shows what the transfer station offers today.

Scenario C: Basic	Scenario B: Medium	Scenario A: High	Scenario D: Current
<ul style="list-style-type: none"> Artist in Residence ADA Public Restrooms Classroom Volunteer Space Parking for visitors 	<ul style="list-style-type: none"> Artist in Residence Public Restrooms Classroom Volunteer Space Parking for visitors Community Meeting Area 	<ul style="list-style-type: none"> Artist in Residence Public Restrooms Classroom Volunteer Space Parking for visitors Operations Viewing Area Artist Exhibit spaces Public Access to tool check-out lockers or closets 	<ul style="list-style-type: none"> Artists in Residence Public Restrooms