

MSWAC Advisory Committee Meeting

Oct. 11, 2024 - 11:15 a.m. to 1:15 p.m.

Virtual Meeting (Zoom)

<u>MSWAC Members</u>		<u>King County Staff</u>
Troy Linnell	Algona	Ali Blum, SWD staff
Joan Nelson	Auburn	Sylvaine Bucher, SWD staff
Jon Gire	Bellevue	Theresa Curry Almuti, SWD staff
Ella Williams	Bellevue	Bonnie Fluckinger, King County PSB staff
Liz Wonder	Burien	Brian Halverson, SWD staff
Tamie Deady	Black Diamond	Wen Huang, SWD staff
Emily Warnock	Bothell	Morgan John, SWD staff
Kim Muromoto	Clyde Hill	Christine Kim, SWD staff
Chris Searcy	Enumclaw	Patty Liu, SWD staff
Brian Spindor	Enumclaw	Amy Ockerlander, SWD staff
Rebecca Kovar	Federal Way	Yolanda Pon, Public Health Seattle/King County
Rob Van Orsow	Federal Way	Chris Stubbs, SWD Deputy Director
Sam Tarvin	Issaquah	Isabelle Trujillo, SWD staff
Tony Donati	Kent	John Walsh, SWD staff
Carly Joerger	Kirkland	
Jenna McInnis	Kirkland	<u>Guests</u>
Penny Sweet	Kirkland	Zach Dugovich, Pacific Public Affairs
Aaron Moldver	Redmond	Katie Jerauld, Dept. of Ecology
Linda Knight	Renton	Jeanette Jurgensen, Bin There Consulting
John MacGillivray	Renton	Han Kirkland, Waste Management
Genevieve Rubinelli	Sammamish	Brad Lovaas, WA Refuse and Recycling Association
Sarah Bruemmer	Shoreline	Laura Moser, Waste Management
Colleen Minion	Tukwila	Rick Vahl, Washington State Recycling Association
		Hans Van Dusen, Consultant
		Kaylie --

Call to Order and Introductions

Chair Sweet called the meeting to order at 11:20 a.m.

Meeting Minutes

Knight moved to approve the September minutes. Minion and McInnis seconded. Minutes passed unanimously.

Public Comment

Jerauld shared a few items. She shared that Ecology’s Food Center team will be hosting their year in review meeting to discuss their 2024 progress on the Use Food Well Washington Plan Implementation, status of Food Center work, and

any potential next steps for 2025. If interested in attending, the meeting is Oct. 15 at 10 a.m. You may [register](#) in advance. For more information, please contact the Food Center team at FoodCenter@ecy.wa.gov.

Secondly, Washington State Department of Commerce's Industrial Symbiosis Program grant applications are open through Nov. 1. The program is a catalyst for transforming industrial waste byproducts, such as heat, energy, water, and biomass as well as materials, into added-value resources. Funding is open to any private, non-profit, tribal or public/government entity working to support the reduction, reuse or elimination of industrial waste to benefit Washington's circular economy. There is up to \$2,850,000 available, and each applicant can apply for \$150,000 to \$500,000 per grant. Please visit here for [more information](#).

Next, Ecology will be hosting four Regional Organics Management Summits to prioritize organic materials management goals, strategize with local partners, and look at the infrastructure strengths of each region. These summits will be facilitated by Ecology staff and our contracted facilitator. Each summit will be an in-person event held from 9 a.m. to 4 p.m. Please mark your calendars with the information listed below and watch for updates with details about the venue, registration, and agendas. Our region's summit, the Northwest region, will be on May 1, 2025, in Everett, WA. Please mark your calendars with the information listed below and watch for updates with details about the venue, registration, and agendas.

- Southwest Region: April 29, 2025 in Lacey or Olympia (TBD), WA
- Northwest Region: May 1, 2025 in Everett, WA
- Central Region: May 7, 2025 in Wenatchee, WA
- Eastern Region: May 8, 2025 in Ritzville, WA

Lastly, the EPA has announced available funding for recycling and organics projects. The funding is available for tribes, communities, and coalitions. The first grant is the Solid Waste Infrastructure for Recycling (SWIFR) Grant Program which are available to communities and tribes. Awards are available for two categories of applicants. The recycling funding for communities will provide awards ranging from \$500,000 to \$5 million each. Applications are due December 20, 2024. The recycling funding for tribes and intertribal consortia will provide awards ranging from \$100,000 to \$1.5 million each. Applications are due March 14, 2025. Eligible projects will improve collection and transport systems, and processes related to post-use materials that can be recovered, reused, recycled, repaired, refurbished, or composted. Read more about the [SWIFR grants for communities](#). The second grant is the Recycling Education and Outreach (REO) Grant Program. This grant program will provide approximately \$39M for one award to develop a cooperative agreement to reduce food waste and support composting. Applicants must be a coalition. Read more about eligible applicants and activities for this [funding opportunity](#). Ecology staff attended the informational webinar at the end of September to learn more and can provide additional information as needed.

SWD Updates

Stubbs provided the SWD update.

Tonnage update

Tonnage is up 1.34% through August (563K tons) compared to last year at the same time. That's a little over 7,400 tons more than this time last year.

We have seen a consistent increase in the percent of tons that come in from commercial haulers as opposed to self-haul customers.

Transactions (503K through August) have rebounded from a slow first quarter and are now slightly ahead of last year at this time (+2,563, an increase of 0.51% over last year at this time).

Yard waste tonnage (11K through August) is down from this time last year (-1,271, a decrease of 10.14% over last year at this time).

Open House Recap

On Sept. 30 and Oct. 9, we held two Long-Term Disposal Open Houses for Advisory Groups and ILA partners to learn about SWD's work to date and opportunities for future involvement.

There was strong representation from our Advisory Committees and in total, we had participation from over 20 cities. It was wonderful to see a great turn out and have the opportunity to hear from participants and answer questions.

We anticipate the consultants will deliver a draft of the Long-Term Disposal Decision report within the next week. We will be uploading it to the Long-Term Disposal Extranet so that Advisory Committee members can add comments simultaneously. There will be 2-3 weeks to provide comments before we work to finalize the report.

2025 Rate Notifications

On Sept. 30, SWD sent a 2025 rate notification to cities, haulers, and other interested parties.

Additional messaging about the new rate to the public and solid waste facility customers will begin in mid-October and continue through the end of the year.

Rates and Budget Move to Enterprise Services Section

Effective tomorrow (10/12), the rate and budget function, which have resided in SWD's Strategy and Performance Section, will be integrated into the Enterprise Services Section. The purpose of this transition is to align the financial activities of the division into one section, creating a centralized source for financial planning, decision making, and controls within the division.

We are in the most transformative time in our history as a Solid Waste Division. Ensuring alignment of key functions in our division is essential to prepare us for the path ahead and ensure our continued success.

For well over a decade, rate-setting and budget process has been managed by separate teams in the division. This separation of duties is not typical, so Pat and I worked with David Pierce and John Walsh to review potential advantages and disadvantages of how these functions are aligned in the division.

That work confirmed the need for a change. The introduction of the rate restructure that went into effect this year is just the beginning of how our revenue model will change as implement Re+.

As well, with new partnerships, potential acquisitions, and the selection of a new disposal method in the coming years, our expenses, and the impacts on rates are likely to be significant. Bringing these teams together now will help to ensure we are well positioned to achieve our strategic goal of financial stewardship.

WUTC rate increase

In June, Waste Management of North Sound filed a notice of a general rate increase to the WUTC that would impact unincorporated residents and WUTC cities in North King County. It is required that haulers provide a minimum of 45 days' statutory notice to customers for any rate changes within WUTC.

As written into RCW, the county legislative authority is responsible for providing periodic written feedback to the WUTC on the adequacy of services provided in unincorporated areas, including rates.

SWD has submitted letters to the WUTC expressing concerns regarding the proposed rate increase (Tariff 20, filing TG-240529). Our letters included a comparative analysis of rates and services between nearby jurisdictions services by WM and the current and proposed rates under the tariff. SWD also questioned some budget items that were used to justify the rate adjustment. We are doing this work to be diligent on behalf of unincorporated customers.

Vashon Recycling and Transfer Station Zero Energy Certification

With installation of a new solar array and other energy-saving features completed, the Vashon Recycling and Transfer Station has been Zero Energy Certified by the International Living Future Institute. This means that over the course of a year, the facility generates as much or more energy through solar power than it draws from the electricity grid.

SWD has also installed large solar arrays at the Enumclaw and Shoreline transfer stations and is expanding the solar panels at Bow Lake. We are also pursuing the Living Building Challenge – Energy Petal certification for the South County Recycling and Transfer Station, achieving net positive energy performance when certified. The Northeast Recycling and Transfer Station, while still in its final environmental review, is also planned to include features to reduce the carbon footprint of the construction and operations of the facility.

All this work is part of our division’s commitment to King County Strategic Climate Action Plan goals, which include 20 county projects gaining Zero Energy or Living Building Challenge certification by 2025, and an overall 80% reduction in greenhouse gas emissions from county operations by 2030.

Construction update

Progress to replace crane equipment at the Algona Transfer Station is still ongoing. The team is installing and testing the crane equipment to ensure it is fully functional when the station reopens. Reopening for commercial haulers is now scheduled for Nov. 13.

We have continued to actively work with haulers, including convening a meeting this past week, on strategies to minimize negative impacts and ensure they have the most up-to-date schedule information on the construction projects.

During construction for the crane installation at the Houghton Transfer Station, we intend to close the transfer station to the public at 2 p.m. to provide commercial haulers access to the transfer station from 2-5:30 p.m. This will help minimize challenges around dropping off loads at the end of the day. We are also exploring the option of allowing haulers to potentially use transfer stations in Snohomish County during construction.

Changing the operating hours at Houghton requires a 30-day notice of intent to the King County Council and Mayors of impacted cities. We submitted this notice in September and are in the 30-day window now. Ten days prior to the start of new hours, SWD will issue an official notice.

Construction is scheduled at Houghton from November 4 through December 3. This window may be pushed out to finish construction at Algona. We will communicate any changes in the schedule with city partners and haulers.

Van Orsow said based on his discussions with the South Sound Manager, no accommodations have been made at Algona. Even accommodating hours at nearby stations, like Enumclaw, would be helpful. Since this construction has gone on longer than anticipated, cities need accommodations so haulers can get access to disposal and stay in compliance with flow control.

Sweet shared her worries about the public health threat with the backed-up loads. It seems like there should be instances or situations where the regulations can be changed.

McInnis expressed her support to Van Orsow with the South Sound struggle and appreciated the forethought that this problem has led to with the Houghton construction project. She also shared her appreciation for the compromise of letting haulers use the Houghton Station in the afternoon. She asked how long the construction had been going on at Algona. Stubbs replied that the construction began on Aug. 5.

Moldver offered similar support to cities in south King County being impacted by the Algona construction. There was a design issue with the packer, and they don't want to end up in the same situation with the Houghton Transfer Station.

Nelson reiterated what Van Orsow said and would like to see accommodations made before Nov. 13 because a lot can be done now. She asked SWD to look at all options because it is heavily impacting the south end.

Gire wanted clarification on the LTD review process. To his understanding, there were a couple of weeks allocated for the round of review and wanted to know if there could be a second round of review. Liu replied that we are expecting to send the draft report out the week of Oct. 21. We don't have multiple review periods in our budget and don't have the money to keep asking them to create different iterations of the report. Hopefully, the subgroups and discussions with MSWAC and SWAC beforehand will mitigate these. Gire wanted to be optimistic that everything will be good with only one round of reviews but wants to make sure that at the end, we have a quality report. He wanted some flexibility if we do not get the desired result in one round. Liu asked Gire if it would be helpful to have a longer review period. Gire is nervous that people will have one chance at the review and is worried that everything might not be accurately captured in one round.

Walsh said he'd want to see what the feedback is first. If someone comes to give feedback after the initial review period, it is probably too late. If there is something critical in the report, we will address it. If there needs to be more dialogue, we have it.

MacGillivray echoed these comments and suggested the extension of the comment period.

Sweet was concerned that those that tuned into the Open Houses were mostly MSWAC members. She is worried that we are not reaching a broader audience. More people must see what the committees are talking about and begin to weigh in.

Liu said that all the subgroup meeting recordings are available on our website and the open houses will be available soon. The recordings and slides are available for the public.

Walsh added that at the second open house, there were about 50 people, and many were elected officials that are not part of MSWAC.

Van Orsow asked for Stubbs to provide an answer to previous comments about construction at Algona. Stubbs said that the problem is that we anticipated that the delays would be resolved in a certain amount of time, and they have not been. We will convene as a SWD team, continue to engage with our haulers, and step up our efforts in providing a resolution for haulers.

Sweet asked for SWD to keep members up to date.

SWAC Update

No update.

2025 MSWAC Work Plan and Schedule

Blum led this.

In 2025, MSWAC will meet the second Wednesday of the month from 10 a.m. to 12 p.m. The January meeting will be slightly longer to include an optional MSWAC orientation.

Knight said there are a lot of issues that we must deal with, and it would be nice to see the accomplishments and results over the last year. This could be a summary document.

Long-Term Disposal Study: Non-economic and Non-Environmental Criteria for Mass Burn and WEBR

Liu and Walsh presented this information.

Operating History Criteria Evaluation Results – Mid-Range Tonnage

	MASS BURN	WEBR
Proven Performance	Successfully utilized for over 40 years in North America at tonnage needed. Long Beach Facility closure due to cost of upgrades and end of lease.	30 years of commercial operations at tonnage needed. In recent years, Snohomish and Skagit counties have had to temporarily close transfer stations due to interruption of rail service due to weather, fire, and labor issues. Rail line outage would require transport by truck to landfill.
Major Safety Incidents	Long term operating facilities that upgrade periodically have a good safety record. Recent fire with Miami-Dade facility due to older facility with outdated fire controls.	Industry's safety-centered approach to investments and operations delivers overall improvements that have made the last decade the safest ever for rail.
Environmental & Regulatory Compliance	Long term operating facilities that keep up with regulatory requirements - such as Best Available Control Technology standards - have good environmental record. EPA's 2024 proposed emissions standards for updated emission control systems would have to be complied with.	Regulatory compliance and oversight are overseen at both the Federal (Federal Railroad Administration) and State (Washington Utilities and Transportation Commission) levels.

Logistics & System Capability Criteria Evaluation Results – Mid-Range tonnage

	Mass Burn	WEBR
Operating Life of Facility	20-40 years	The three rail served landfills have a combined life span of over 300 years (Based on current and projected waste disposal volumes).
Permitting / Construction / Siting Considerations	7-10+ years to site, design, permit and construct a site. Factors depend on size of facility (10-20 acres), zoning/land use & community involvement. Industrial zoning, distance to sensitive receptors, ESJ considerations, environmental impacts to be considered. Siting and permitting difficult.	NA - The WEBR option for this study does not include siting, designing, and constructing a County owned IMF. Some improvements may be needed at IMF to accommodate King County waste (estimated at \$1 to \$2/ton).
Compatibility with Existing Collection System	High compatibility.	

Capacity and flexibility evaluation results (mid-range tonnage)

	Mass Burn	WEBR
Waste Type Composition and Acceptance	Non-hazardous municipal waste accepted.	
Capacity/Minimum Waste Required	Technology is capable of processing amount of waste from this tonnage scenario.	
Waste Volume / Tonnage Flexibility	<p>Has a broad acceptable criterion. Can take a broad range of energy values and material types.</p> <p>One-time emergencies or catastrophic event addressed in design of back-up systems. Back-up alternative facility should also be identified for emergencies or failures.</p> <p>Cannot ramp down operations as easily as WEBR and capital cost creates incentive to maximize tonnage to the facility</p>	<p>Both serving railroads indicated that tonnage scenario volume could be accepted although traffic and congestion as capacity is used on railroads a factor.</p> <p>One-time emergencies or catastrophic event impeding access to rail transport requires back-up facility to be identified.</p>
Residuals Management	Ash would need to be disposed of in a separate ash monofil. CRLF and Roosevelt LF's considered for WEBR option in the study have ash monofils and could handle residual ash from the proposed tonnage scenario.	No residual waste to be managed.

Social criteria evaluation results – mid-range tonnage

- The updated number for jobs created is 10 for WEBR and 48 for mass burns within King County.

	Mass Burn	WEBR
Environmental Justice & Social Justice/Equity (ESJ)	Future siting to identify communities around potential facility locations and transport corridors and evaluate per EPA's Environmental Justice Screening and Mapping Tool and Washington Environmental Health Disparities Map. Social criteria to also consider exacerbation of an existing disparity.	
Number of Jobs Created	<p>48 Estimated</p> <ul style="list-style-type: none"> Minimal skills - 5 Technical skills - 26 Advanced - 17 	<p>20 Estimated^[1]</p> <ul style="list-style-type: none"> Minimal skills - 0 Technical skills - 19 Advanced - 1
Number of Truck/ Trips Per Day (one way)	<p>158</p> <p>(round-trips from Mixed Waste MRF to facility, 20% additional trips to IMF for ash disposal and metals recycler)</p>	<p>132</p> <p>(round-trips from Mixed Waste MRF to IMF)</p>
Other Potential Impacts (Air/ Odor / Noise / Groundwater)	<p><u>Air</u>: Primarily CO2, CO, NOx, VOC's, SOx emissions. Substantially reduced through regulatory requirements.</p> <p><u>Odor and Noise</u>: Primary source are trucks entering facility/Tip Floor.</p> <p><u>Groundwater</u>: Minimal impacts if facility properly designed/maintained.</p>	<p><u>Odor, Noise, Vectors, and Vibration</u>: Primary source are trucks entering facility and/or tipping floor</p>

[1] Based on need for additional labor to load/unload intermodal containers at existing IMF.

Evaluation summary of findings

- Mass burn
 - Established technology for quantities and types of waste projected for King County.
 - Capital costs higher than WEBR, typically requiring energy markets and economies of scale to ensure financial feasibility.
 - CETA restricts electricity from WtE facilities from entering the grid in WA, can be used for facility or sold out of state. WtE facilities subject to CCA cap-and-invest program.
 - Process produces emissions that require proper treatment and management.
 - Residuals include fly ash and bottom ash waste that require treatment and proper disposal.

- High level of public opposition due to air pollution concerns.
- Environmental impacts similar or less than WEBR except for global warming potential and human health toxicity – cancer potential (assuming no sale of electricity to grid).
- Waste export by rail (WEBR)
 - Established disposal option for other municipalities in WA
 - Contracts with railroads typically span 5-10 years
 - Adequate rail and landfill capacity exists
 - Disposal costs can be less than mass burn depending on contract with railroads
 - Transport of MSW in the PNW include service delays, track congestion, intermodal container shortages, (rare) weather-related outages and a lack of flexibility if a shipper wants to change the origin or destination of its cargo
 - In recent years, Snohomish and Skagit counties have had to close transfer stations due to lack of rail service access/capacity

What are the key criteria to use when briefing partners?

- These briefings will be to County leadership (Department, Executive, Council), Cities, Advisory Committees, SCA, Open Houses, etc. The focus is on waste export by rail (WEBR) vs mass burn.
- 20+ criteria is too many to walk through in a briefing and makes it difficult to make a decision.
- Rather than walk through all the criteria, the plan is to have a smaller comparison table with less than 10 key criteria to focus the discussion on.
- All 20+ criteria will still be in the report and can be discussed upon request.

Gire thanked SWD for taking this effort on and shared his concerns over the side-by-side comparison and the perception of it. He wanted to know if there was a different way to present this information like on their own rather than comparing them side-by-side because they are different.

Williams echoed Gire's comments that it was too early for this comparison chart. It would be helpful when looking at the individual options to have the key questions that SWD is asking for input on highlighted. Williams anticipates that there will be questions on ESJ and local siting and suggested adding this to the presentation now to be preemptive.

Knight shared these comments and stated that one of the missing components is the emphasis on Re+. Both options are dependent on what is going to happen with Re+ and the other element is that mass burn has a reliance on the amount and type of material. This moves into the priority management of material that has value in our circular economy. When we talk about mass burn or waste export, we look at examples in Europe but even places in Europe are moving away from these options and focusing on zero waste. Even though Europe is frequently mentioned with generating energy, it is not true that all areas want to focus on it. Knight wasn't sure if there was a way to bring attention to Re+ and how it can potentially change the decisions on Mass Burn vs. WEBR.

Walsh said we look at ways to incorporate more Re+.

Searcy commented that he does not see a big issue with the side-by-side comparison until the economic and non-economic factors are put together. Many elected officials will be considering the economic factors and communities may value non-economic factors more. Walsh responded that this is something that SWD has been discussing. Liu added that we will send all MSWAC members a survey where people can add what they think is important for SWD to focus on and any suggestions on how to talk to cities about this issue.

Van Orsow echoed Knight's comments and the compatibility with Re+. He asked for a reminder on who will have the final decision. Walsh replied that our plan is to go to cities and focus on a few of the major evaluation criteria. Next, we will seek

a letter from MSWAC and SWAC that will be sent to the Executive, and he will decide on what to include in the comp plan. After this, the comp plan will come back for the cities to sign. We are trying to facilitate conversations with cities to help When they vote on the letter of recommendation.

The full list of criteria

- Operating history
 - Proven performance
 - Safety record
 - Environmental compliance
 - Regulatory compliance
- Logistics
 - Operating life of facilities
 - Siting/design/permitting/construction
 - Considerations
 - Compatibility with current collective system
- Capacity
 - Waste type acceptance
 - Waste volume/tonnage flexibility
 - Residual waste management
- Environmental
 - Non-renewable energy demand
 - Water consumption
 - Acidification potential
 - Eutrophication potential
 - Global warming potential
 - Smog potential
 - Human health toxicity – cancer potential
- Economic
 - Capital costs
 - Operating costs
 - Cost per ton
 - Financial risk
- Social
 - Local traffic impacts
 - Local job creation
 - Other potential neighborhood impacts

Criteria with no major differences **bolded text is criteria**

- Operating history
 - Both are **proven technologies**, have good **safety records**, and must adhere to stringent environmental and regulatory compliance standards.
- Logistics
 - Both have long **operating lives** (20+ years) and high **combability with the current system**.
- Capacity
 - Both have similar **waste acceptance** standards (no restrictions other than hazardous waste).

Criteria with some differences **bolded text is criteria**

- Logistics

- **Permitting, siting and construction considerations** applies to mass burn only since a new facility must be built. WEBR can use existing railheads.
- Capacity
 - Mass burn requires additional **residuals management** for the ash that is generated. For **tonnage flexibility**, mass burn's capital cost creates a financial incentive to maximize throughout while WEBR can more easily ramp down.

These categories have some differences when comparing WEBR to Mass Burn.

Environmental Criteria **bolded text is criteria**

- Assuming electricity can't be sold to WA grid but can be sold in other nearby markets.
- Mass burn has positive impacts for **non-renewable energy demand, water consumption, acidification potential, and smog formation potential.**
- WEBR has positive impacts for **water consumption.**
- WEBR is neutral in **cancer potential**, while mass burn has a large negative impact.

This analysis is for the medium tonnage scenario. These are Life Cycle Analysis impacts that include offsets for electricity being offset by energy generated at the landfill or a mass burn facility. This does not mean that mass burn facilities and landfills do not create local emissions. *

Economic criteria **bolded text is criteria**

- Mass burn has much higher **capital costs.**
- Mass burn has much higher annual **operating costs.**
- **Cost per ton:**
 - Due to lower revenues of electricity sales (CETA), mass burn is higher in cost per ton than WEBR. However, WEBR costs increase more steeply over time.

This analysis is for the medium tonnage scenario.

Social criteria **bolded text is criteria**

- Jobs created
 - Mass burn creates many more **jobs** than WEBR.
- Traffic impacts
 - Mass burn has higher **truck trips** due to hauling residuals to a railhead or to recycling facilities (for metal). WEBR will increase time at RR crossings by 2-15 minutes.
- Air, odor, noise, etc.
 - These seem to be roughly the same assuming proper operations to meet regulatory requirements are in place.

This analysis is for the medium tonnage scenario.

The smaller list of criteria

- Operating history
 - Environmental compliance
- Logistics
 - Siting/design/permitting/construction
 - Considerations
- Capacity
 - Waste volume/tonnage flexibility

- Residual waste management
- Environmental
 - Non-renewable energy demand
 - Water consumption
 - Acidification potential
 - Eutrophication potential
 - Global warming potential
 - Smog potential
 - Human health toxicity – cancer potential
- Economic
 - Capital costs
 - Operating costs
 - Cost per ton
- Social
 - Local traffic impacts
 - Local job creation

Liu reiterated that the survey will be used to learn what criteria SWD should focus on and/or if there are any criteria missing that we should be focusing on. This survey will be sent out today or on Tuesday, 10/15. If you need additional time, please let us know.

Van Orsow asked if there will be comment boxes. Liu responded that there will be a comment box.

Sweet wanted to know if there's a parallel body of work where we can highlight Re+. Liu did not have an answer but said it is worth the conversation. Walsh stated that we have considered Re+ in this, and a lot of these analyses are based on Re+ impacts. It is in there, but we will try and factor it in more.

Mixed Waste Processing Overview

John led this.

If we move ahead with mixed waste processing (MWP), we will consider this to be in addition to the Re+ program and the other waste prevention programs we will have ongoing.

Mixed Waste Processing Approaches

- MWP uses a variety of automated equipment to sort garbage, pull resources from waste, and reduce tonnage of waste.
- MWP technologies include:
 - Water-based sorting
 - Dry Material Recovery Facility (MRF)-style sorting (similar to a MRF)
 - "Garlic Press" separation
- Different approaches work better depending on a community's waste stream.
- MWP can be a range of sizes:
 - A single conveyer that screens out cardboard
 - A machine or machines that sort some, not all, garbage at an existing transfer station
 - An entire new stand-alone facility

Mixed Waste Processing: Materials in and Materials out

- Typical garbage collection trucks will bring garbage to be processed – either to an existing station or to a new facility
- County-owned or privately-owned trucks will haul the diverted resources to be processed for recycling
- County-owned trucks will haul “residuals” to the landfill or the chosen final-disposal spot

Mixed Waste Processing: The numbers

- Now many MWP facilities exist, but we do know:
 - Capital costs: it depends
 - Up to \$500M for a new facility to handle all of King County’s waste
 - Throughout: it depends
 - Can be sized for one station, or for entire waste stream
 - Diversion: Over 50% capture of resources
 - Facility appearance: should blend in

Mixed Waste Processing Examples

- MWP is not common, but there are several facilities on the west coast that SWD has been watching:
 - Juno facility in Toledo, OR
 - San Jose, CA
 - Santa Barbara, CA
 - Irwindale, CA
 - Eugene, OR recently announced a new project

Juno Mixed Waste Processing Project

- SWD shipped 737 tons mixed solid waste (MSW) to Juno over 10 weeks
- MSW was shredded, baled and processed in Toledo, OR
- From 737 tons:
 - About 343 tons diverted (46%)
 - About 395 tons
-

San Jose, CA: GreenWaste materials recovery yard

- Opened in 2008, upgraded in 2018
- 3 separate MRF facilities:
 - Commingled recyclables
 - MSW
 - Yard waste
- MSW line handles 180,000 tons per year
- Claims recovery rate up to 75%

Santa Barbara: Resource Center

- Advanced MRF facility and anaerobic digester
- Opened in 2021 at the Tajiguas landfill
- 180,000 tons per year MRF capacity: MSW and commingled recyclables
- 80,000 tpy Anaerobic digester capacity
- Plastics, metals, and energy are revenue sources
- About \$135 M facility costs (not including land)
- Claims a diversion rate of 60%

Irwindale CA: Material Recovery Facility

- Advanced MRF facility
- Expected opening in late 2023
- MSW line handles 1,000,000 tons per year
- 250,000 square foot facility
- MSW, organics and C&D waste

Anaergia: OREX Press (like garlic press)

- Pressed MSW with hydraulics to separate wet waste from dry waste
- Wet waste goes to anaerobic digestion
- Dry waste can be further sorted or disposed
- Currently challenged with technology and getting adequate organics feedstock quantities

The facility in Eugene is working with BHS to collaborate on building an advanced MRF to serve the city of Eugene and surrounding areas. BHS is interested in having an on the ground example of MWP and demonstrate that their system works.

Mixed Waste Processing: Next Steps

- Pursue other Re+ actions – (like EPR, food waste reduction) which will change the quantity and the composition of MSW
- Work with Resource Recycling Systems (RRS), the consultants, to help assess mixed waste processing options:
 - Different MWP technologies/approaches
 - Ownership and operation options
 - Flexibility to changing waste stream
 - Marketability of diverted materials
 - Scale of MWP facilities
- Work with Re+ Community Panel
- RRS (the consultant) is doing industry outreach now
- Draft report due November 2024
- SWD will share draft report with MSWAC & SWAC for comments
- Final report due December 2024
- RRS is available to support any next steps
 - Further research, facility siting, implementation

Gire mentioned that the Organics Management Law in Washington needs to move towards more source separated organics. In California, there's a carve out that MWP could be the way to go but it first needs to be proved. Gire wondered if this could be a compliance pathway with source separated organics.

Sweet commented that this presentation helps to inform the cost of Re+. We have not been able to incorporate this into our long-term planning and this can be comprehensive as we move forward. We haven't done the math to get to our goal of 70% diversion.

Member Comment

No member comment.

Adjourn

Meeting adjourned at 12:59 p.m.