

**SWAC Advisory Committee Meeting**  
 Oct. 20, 2023 - 9:30 a.m. to 11:30 a.m.  
 Virtual Meeting (Zoom)

<b>SWAC Members Present</b>		<b>King County Staff</b>	
April Atwood, Marketing and Education		Jerome Cruz, Public Health – Seattle/King County staff	
James Borsum, Labor Representative		Karen Herndon, SWD staff	
Amy Lam, Local Elected Official		Morgan John, SWD staff	
Brett Lohrman, Labor Representative		Kinyan Lui, SWD staff	
Bill Louie, Citizen Representative		Pat McLaughlin, SWD Director	
Laura Mork, Local Elected Official		Mary O’Hara, SWD staff	
Penny Sweet, Local Elected Official		Amy Ockerlander, SWD staff	
Leah Tischler, Public Interest Group		Said Seddikki, SWD staff	
Heather Trim, Recycling Industry		Andy Smith, SWD staff	
Wendy Weiker, Chair, Waste Industry		Isabelle Trujillo, SWD staff	
		Dorian Waller, SWD staff	
		John Walsh, SWD staff	
<b>Guests</b>			
Jon Gire, City of Bellevue		Zainab Nejati	
Dylan Brown		Andi Parnell, Sound Cities Association	
Robert McConnell, Georgia Pacific		Diana Wadley, Department of Ecology	

**Call to Order and Introductions**

After introductions, Chair Weiker called the meeting to order at 9:37 a.m.

**Meeting Minutes**

Sweet moved to approve the agenda. Lam seconded. The agenda was approved unanimously.

Weiker suggested the addition of the number of calls to haulers in the September minutes to show the magnitude of the feedback the county is getting.

Lam moved to approve the September minutes with the above edit. Sweet seconded. The minutes were approved unanimously.

**Public Comment**

Wadley shared several comments beginning with a pitch for the [Waste Planning and Reduction Resource library](#). There is a lot of information available there (open PDF for how to get SEARCH capabilities). Ecology is compiling information on the [Organics Management Law](#) in the main Box folder and there is a related email list. You can also find this [Local Government Requirements Workbook](#) there. The [Business Organics Management \(BOMA\) map](#) is also available and shows where the business management requirements under RCW 70A.205.545 apply in the state for the 2024 calendar year. Similarly, Olivia Carros is with the Organics Management and Food Center and is the person you want to reach out to with questions. If you have ideas for Olivia, please reach out and coordinate that with her.

Blurb to pass along to local governments and haulers for outreach from Olivia Carros: Business Organics Outreach Toolkit Development - REACH OUT TO US! If you are a local government interested in or already working on outreach strategies to assist businesses as they arrange for organic materials management services, please reach out to Olivia

([olivia.carros@ecy.wa.gov](mailto:olivia.carros@ecy.wa.gov)). Your input and insights are essential as the toolkits are developed. Questions are also welcome!

The [Waste Not Washington School Awards](#) is a funding opportunity that runs through Oct. 31. This award promotes sustainability and rewards school efforts to reduce waste, recycle, and teach environmental curriculum. You can get extra points if your efforts involve removing Styrofoam. The grant limit is \$5,000. Next, Wadley shared that King County's rate restructure is the topic at the Washington State Recycling Association (WSRA) Washington Recycles Every Day (WRED) event on Nov. 6, 9:00-10:00 a.m. Information and registration [here](#).

Lastly, the annual Washington State Recycling Conference is on May 14-17, 2024 and is accepting proposals for speakers so [pitch your idea](#) if interested.

### **SWD Updates**

McLaughlin provided the SWD update.

### **Tonnage Update**

Tonnage is continuing to soften. It is predicted to come down a little in comparison to 2022.

### **The 2022 Waste Characterization and Transfer Station Customer Survey**

In 2022, King County generated and disposed 865,156 tons of municipal solid waste (MSW). Understanding the source and composition of this waste is critical for implementing effective waste management practices and for identifying diversion opportunities for recoverable materials, helping the County achieve its goal of zero waste of resources by 2030.

The Waste Monitoring Program regularly conducts waste studies and surveys to collect data on waste flows and composition throughout the County. As part of the Waste Monitoring Program, King County conducted a year-long waste characterization study and customer survey in 2022. The last time we took these numbers was in 2019.

The goal of this project was 1) to collect and analyze data on the source and composition of disposed waste and 2) to evaluate how residents engage with waste disposal facilities. Specific objectives for each component of the project are summarized below:

- Waste characterization studies use representative waste samples collected from the County's disposal facilities to calculate statistically reliable estimates of the quantity and composition of waste in King County. Estimates are calculated for each method of waste collection and delivery (commercially collected or self-haul) and for each generator type (residential or nonresidential). Ultimately, the waste was sorted into 115 materials.
- Customer surveys collect valuable data on who uses disposal facilities and for what purpose. They complement waste characterization studies by providing greater detail about where waste is generated at the sub stream level and how it arrives at a disposal facility. The more than 6,000 surveys also help the County identify ways to improve infrastructure, staffing, and policies at specific facilities to best meet customer needs.

### **Results:**

- From 2019 to 2022 the amount of recoverable waste (recyclable, compostable or wastes with other recovery options) dropped from 72% of total waste to 67%. This is a 5% improvement.
- 20% of the garbage disposed is recyclable, 26% is compostable and about 21% of the waste has other recovery options (like take back programs, etc.). 33% of the waste is non-recoverable.
- For the first time we have data about the ethnicity of our customers.

### **Deconstruction training for frontline community members**

Our Construction and Demolition (C&D) Program hosted a three-week Building Salvage and Deconstruction training. Nine graduates successfully completed the training – benefiting from learning, and putting into practice, the basic principles required to salvage and deconstruct a house.

Graduates gained important skills that will contribute to the diversion of valuable materials from landfills. The training was in partnership with SPU and community-based organizations (CBO) serving frontline BIPOC communities. This effort supports building capacity in BIPOC organizations and communities to foster entrepreneurship, professional development, green jobs, and prosperous livelihoods.

### **City of Algona – Wetland Preserve – David E. Hill Land Dedication**

On Oct. 5, Solid Waste staff were among the many who attended the wetland dedication for former Mayor Hill (who was in attendance as well). Mayor Hill has been a staunch advocate for his community and a steadfast partner for the South County Recycling and Transfer Station (SCRTS) project over the years.

### **Re+ Update**

Ockerlander provided this Re+ update.

Since we last met, the City of Black Diamond signed the Re+ pledge. This means that 24 of the 27 Interlocal Agreement (ILA) cities have signed. As a reminder, there is an event on Oct. 26 to celebrate the 1-year release of the Re+ plan and recognize the King County cities that have signed the Re+ pledge, showing the shared commitment of Cities and the County in creating a more equitable and sustainable solid waste system. The event will include cities sharing their Re+ accomplishments, an award ceremony for our Re+ cities and the chance to celebrate the opportunities and achievements moving us toward a zero-waste future. We hope to see as many of you there as possible.

### **MSWAC Update**

Sweet said that SWAC had the same agenda with a full discussion.

### **Rate Restructure Check-in**

Waller stated that most cities have/are in the process of their councils taking action. He is confident that the cities should have things wrapped up by next month. There are a few smaller cities that have a little more work to do, but about 30 of the 37 cities are in the process.

Weiker said that on behalf of the haulers, they are all moving ahead with their cities. There has been conversations to reach the Washington Utilities and Transportation Committee (UTC) areas and are on track to reach the Jan. 1 deadline. Depending on the UTC requirements, they have to get things posted 60-90 days ahead of time.

### **Cedar Hills Regional Landfill Site Development Plan & Facilities Relocations**

Lui led provided this update.

Many things have happened in the last year, and this is just a brief update.

The current Cedar Hills Regional Landfill (CHRLF) filing plan set to begin in 2026 with Area 8, Area 5/6, and lastly Area 9. Before we can start excavating for Area 9 construction, we must move employees. This probably won't be done until 2028. Before the relocation, we need interim facility sites for staff with targeted move-in dates in 2024. We have identified four interim sites, with two in construction and two in final design.

Area 9 construction is also underway and will be conducted in two phases.

- Phase 1 excavation scheduled for Q2 2024
- Phase 2 excavation scheduled for Q1 2025

The permanent facilities relocation preferred alternative was selected as the south end of the landfill, and the design and permitting efforts are underway.

Trim wanted to know where the facilities are being moved to. Lui answered that we have identified two offsite locations and two onsite locations beginning in 2024.

Offsite locations: the Renton and Bow Lake Transfer Stations. Onsite locations: North Flare Station and parts of the south end of the landfill.

Majority of onsite staff will move to the North Flare station and that area will be expanded. The heavy equipment operators must be kept in the south end of the landfill, and we will be keeping a building down there. The scale house will not be moved so we will also keep some administrative buildings. The permanent facility will be at the south end of the landfill at the edge of the buffer zone, and the plan is to eventually have everyone there. But first we must get permits.

Lam asked how a city is supposed to respond to reducing food waste when they have long contracts that they can't modify. Smith stated that the cities having different contracts with different time lengths/renewal dates poses a challenge. To address this challenge, we plan on having a conversation with cities early next year. Other issues and topics that we want to cover include topics like responsible end markets and harmonized recycle lists. One of the things that we have heard from cities is that there is a desire to have a joint conversation on contracts, so we will convene this group and have the conversation. The issue of different contract lengths poses a huge problem, and we want to make sure that we move forward in a way that is consistent with cities contracted obligations.

Weiker added that if both contractual parties are arguable, a contract is subject to amendment. Lawyers would have to be involved, but if city staff or leadership recommend changes to the tenure contract, the contract can be amended. Contracts can also be amended on the UTC side but must get in front of the Utilities and Transportation Commission and make changes through a rate case or rate study. A contract is always changeable. As King County brings forward rules for the committee to address, we work together to make that happen. Between the city and the hauler, the contract is always subject to amendment because the system is very dynamic.

Trim commented that all the solid waste contracts have an opener clause related to a change in state law or external things. In this case, the change in state law is that cities must offer organics collection. She believed that the City of Sammamish has a good case to make to their lawyers to reopen the contract.

### **Northeast Recycling and Transfer Station (NERTS) update**

O'Hara provided this update.

O'Hara introduced herself as the Project Manager for the Northeast Recycling and Transfer Station (NERTS). This is an update on what we completed in 2023 for the project and what is planned for 2024.

As a reminder of the purpose of this project, our current Houghton Transfer Station was built in the 1960s and has outlived its useful life. Unlike our modern stations, it is not enclosed. There are no high-tech odor or noise control systems. The size of the station really limits our ability to provide additional recycling and garbage services.

We worked with our regional partners to develop 2019 solid Waste Division Comprehensive Plan and outlined the need for a new transfer station in the northeast county. A new station will come with a variety of benefits including more services:

- Dust and odor control
- Noise control
- Mitigation of traffic at the station
- Dedicated space for recycling
- Sustainability features

- Community amenities and more

Transfer stations play a central role in reducing a community's environmental impacts by reducing waste and increasing possibility for recycling. Modern stations are design to fit the feel of their neighborhood and reflect their surroundings. Buildings can look like business facilities or even community centers and offer neighborhood amenities.

When NERTS is moved to the design phase, we will work with the community to get input on what you want to see aesthetically so our transfer station serves the community they are sited in.

Enacted in 1971, the State Environmental Policy Act (SEPA) is a law that requires state and local agencies to identify the potential environmental impacts of proposed actions and plans through a formal review process. When potentially significant impacts are anticipated, an Environmental Impact Statement (EIS) is required. Environmental impacts to be analyzed could include such things as Noise, Odor, Surface Water, Wildlife, Human Health Transportation, and others relevant to the specific project and location. The SEPA review process is designed to help agency decision-makers and the public understand how a proposed action will affect the environment.

King County announced three alternatives and a no action alternative summer 2022. Scoping for the EIS began in late 2022 and concluded in early 2023. Community members, Tribes, and public agencies were invited to comment on the range of alternatives, areas to study and possible mitigation measures.

We made the decision to remove the Houghton Park and ride as an alternative in Q1 2023 and initiated a second scoping period and public comment period.

The project team has been studying two action alternatives and a no action alternative. The two action alternatives are:

- The current Houghton Transfer station property in Kirkland
- A sit comprised of six properties in Woodinville off Woodinville-Redmond Road (SR 202)
- The no action alterative is the current Houghton transfer station and assumes that no action is taken, and nothing changes.

As noted previously, the initial scoping period started late 2023 and extended into January 2023. A second 30-day scoping period took place in late March through early April 2023. The bulk of the activities for the remainder of the year have been dedicated to a technical analysis that will be used to build the draft EIS.

The Draft EIS will be formally issued during the first quarter of 2024. There will be a 60-day public comment period where the community, Tribes, and other publics agencies will have the opportunity to review and submit comments on the analysis and any mitigation measures that are proposed. The comments will be responded to in the final EIS and information offered may be incorporated into the text of the final EIS.

The final EIS will be issued late Q2 of early Q3 of 2024 and a final site decision will follow in Q3 of 2024. Preliminary design of the facility is anticipated to begin late 2024.

Weiker asked for an update on community involvement. O'Hara replied that the EIS will be used to make decisions and will be used by McLaughlin to make a final siting decision. When we issue the draft EIS, we will have another Siting Advisory Group (SAG) meeting that community members can attend, followed by a 60-day comment period that will have two more meetings. We will invite the public to comment during this period.

Lam wanted to know if there will be other technology advancements that were not present before. O'Hara answered that there will be newer dust and odor technology to minimize dust and odor; as well as more queuing space for traffic and a better layout for recycling opportunities. Weiker added that the Factoria Transfer Station is a good example of a modern transfer station.

### **South County Recycling and Transfer Station (SCRTS) update**

Herndon provided this SCRTS Construction update with information from May to September.

We issued the Notice to Proceed on May 1.

Since the groundbreaking on May 18, Major construction activities at SCRTS have been to establish the new stream channel and to excavate and construct site retaining walls. This work included:

- Site Clearing
- Mobilization
- Remove existing soils stockpiles from its previous use of a quarry.
- Excavate footings for retaining walls
- Import backfill
- Install 62 dewatering wells
- Form and pour site walls
- Grade new stream channel
- Install large woody material
- Install temp winter stream channel at West Valley Highway (WVH)
- Install culvert across Iowa Drive.

The site clearing activities was a full-blown logging operation. Any high value trees onsite were cut to specifications provided by the Muckleshoot Tribe and donated to their cultural division for art, including a totem to be constructed for the facility.

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The site has wetlands that must be excavated to remove unsuitable soils and then backfilled with strengthening materials of better soils, or more often rock in the form of gravel barrow or quarry spalls. The total tons of unsuitable soils that have been removed, including a stockpile onsite, was more than 38 thousand tons removed in nearly a thousand truckloads. The unsuitable materials went to the subcontractor's SR 167 project for reuse, or to the King Creek Pit in Orting where we have disposed of soils that cannot be utilized for construction. The wetland area on the right was at the toe of the western slope and required more than 5-feet of quarry spall backfill to establish an appropriate condition for Wall 5 footings. In total, we used more than 30 thousand tons of backfill onsite, with more than half of it being imported gravel barrow or quarry spalls rock.

There have been more than 50 personal vehicles onsite now that we're fully ramped up. Now that we have constructed the retaining walls that will comprise the transfer station trailer yard, the construction trailers are being moved from their current location adjacent to WVH to the more permanent construction location on the west, in the trailer yard, next to the Iowa Drive entrance. The trailers are being moved Friday, Oct. 13.

Every day, the site looks drastically different as grading and soils stockpiles are changed on an hourly basis. Many thousands of tons of soils have been moved onsite. Again, the topographic changes are nearly hourly.

Groundwater is very high on the site, requiring dewatering before excavation needed for retaining wall footings. 62 groundwater wells have been drilled and 55 million gallons of groundwater have been pumped from the soil so that wall footings can be excavated. The water is pumped into the existing WVH culvert, into the existing channel that runs north along HWY 167. The discharge point for all the site dewatering is a culvert just behind the fountain of water. It's no longer running like that because we have finished dewatering around the north end of the site where walls 5, 6, and 7 have been excavated and constructed.

Digging the new stream channel was the first order of business and heavy equipment tracks remain visible. The trees that line the new stream bed had to be imported because the site trees were not the right kind of large woody material needed for the habitat improvement.

Each tree placed was surveyed for location and was overseen by the project biologist and stream designer. The stream has been released into this new channel and is showing itself in some locations. As the rain commences, we will see the water level in the stream increase. We will hopefully share photos of that next quarter.

The Iowa Drive culvert is a bridge for the Iowa Drive entrance for King County Haul. While this culvert was being installed, we had to enter and exit the site from WVH and drive through the site to the trailers. It was very dicey at times with it being very muddy due to many huge earth movers moving in various directions. Thankfully, the culvert is complete, and we are now using the road being constructed over the culvert, to enter the site.

Contractors excavated the footings for walls 3, 5, 6, and 7 and have poured the walls. The project schedule critical path runs through the construction of these walls, and they've lost about two weeks in their construction due to the need for additional soils removal and backfill. The project has poured nearly 2000 cubic yards of concrete to date, via 167 concrete truck trips. All concrete has been tested for quality and every pour has exceeded requirements for quality.

The new site trailer location is going to be inside the curved retaining wall. The entire site has been cleared and graded but all the vertical construction has been on the north end of the site, driven by the construction of the new stream channel and the establishment of the trailer yard retaining walls.

Next up, over the fall and into the winter we will:

- Complete dewatering and excavation for retaining walls
- Complete retaining walls
- Install aggregate piers to stabilize unsuitable soils
- Excavate for and fabricate stormwater detention vaults at north and south ends of the site.
- Complete design of transfer building and place order

The project construction is going very well, with the only notable deviation being a larger number of unsuitable soils to be excavated and more required backfill than planned.

McLaughlin added that this is complicated work, and we are excited to bring this updated service to this part of the county.

Weiker asked when the facility is expected to open. Herndon replied that it is scheduled to [open in 2026](#). We are in the most critical part of construction with the soil excavation because everything will be sitting on top of the dirt. It is complicated and it gets bad when it rains because of the mud.

### **Resource Recovery and Mixed Waste Processing in King County**

John presented on this topic.

We've been exploring "resource recovery" options which means pulling resources from the garbage, and trying to get those valuable materials that are in the trash out of it. We also have numerous existing and new waste prevention and recycling programs to keep stuff out of the trash but we are working to find ways to get them out of the trash once they're in there.

Mixed Waste Processing (MWP) is somewhat unusual and there are not a lot of examples around the county. John went over examples of different approaches to MWP.

As many of you know, Re+ is the new county program focused on improving waste diversion and recycling. It's partly about managing resources, rather than waste disposal which means managing resources at many stages – including once they're in the garbage. About 70% of what gets thrown away every year could have been reused or repurposed in other ways, like cardboard, metal, food, etc. MWP can help us get to Zero Waste Recovery (ZWR).

Some estimated impacts from Re+ actions and ZWR include:

- Much less material going to the landfill, almost half a million tons.
- Fewer trees being cut down each year to make paper.
- A portion of the food that is thrown away is still edible and there's enough to feed ~92k people.
- More jobs - Re+ is a job growth engine. We need more people to collect materials, process materials, build capital infrastructure, etc.

With Re+, we could save disposal costs in the future. A decision has not been made about what to do after the landfill closes. And if we can harvest all the plastic that gets thrown away, this can save ~150k barrels of oil from being burned.

Re+ includes several "fast start actions" that we can take:

- Extended Producer Responsibility for Packaging and Paper Products
- Statewide Organics Policy Legislation
- Single-Family Organics Collection
- Community Panel
- Re+ Grants and City Grants
- City/County Collaboration
- Non-Residential Food Waste Recycling
- Mixed Waste Processing (MWP)
- Innovation Platform and Re+ Circular Economy Grants

MWP Includes many approaches that uses technology and automation to process typical garbage, separates resources out for re-use, and then directs the remaining "residuals" to the landfill. It's important to clarify that we consider MWP as a last resort to keep the materials out of the trash and back into the circular economy. It's complex and expensive, and we want to encourage less consumption, less packaging, more re-use, etc. But it is a way, a "last screen" to capture the good stuff out of the trash.

We've been keeping an eye on several MWP options. In 2021, we started working with Georgia Pacific's (GP) Juno team to set up a test run of their Juno facility. There's only one commercial-scale Juno facility in Toledo, Oregon, and we figured out a way to try it out on King County's garbage. Since Toledo, Oregon is far away, we wouldn't ship waste there on a long-term basis. But for facility testing, it was an opportunity. In June, SWD shipped about 740 tons of mixed solid waste (MSW) to the Juno Mixed Waste Processing Facility over ~10 weeks. MSW was shredded, baled, and processed, and residuals came back to Cedar Hills. We chose the MSW from the Renton Transfer Station both for operational reasons and because of the type of waste that is generally dropped at Renton – it is a pretty good example of the overall King County waste sort.

See the [Juno Facility](#).

Trim asked how the fibers were being pulled. John replied that GP uses a standardized drone that spins around. There is a lot of water involved in this process and the separator has holes so that the paper and water fall through. The standard equipment at the paper mill relies on recycled paper fibers. Trim wanted clarification on why other material like glass wouldn't end up in the slurry if gravity pulls out paper and water. John answered that small glass fibers do fall through and there are numerous things done to clean the slurries. Trim followed asking if getting the slurries cleaned is a multiple step process. John answered that there many ways to get the paper fibers out.

Tischler wanted to know if there is a concern about how much water is used for this process and if the water can be reused. John said that we have had conversations with GP and the water in the MSW is captured as leachate at the landfill.



At Juno, the MSW is separated and can be used as processed water. At the end of the process, some of the water can be used for processing needs at the paper mill. The remaining water is sent to an onsite wastewater treatment plant that the paper mill must maintain. There, it is treated like other water and released back into the stream.

Weiker added that GP has a transfer station in a separate area than the mill. She wanted to know if there was conversation with representatives to have the facilities closer together. John replied that the bailing process is not included with the transfer station material so they would not use all the shrink wrap for bailing. Since GP is located in Toledo, they want to be careful about things like rats, birds, odors, and dust, and that is why they developed that shredding and bailing process. John is unsure of what their new design is for shredding the material.

Wadley stated that it was interesting to see how GP captured poly-coded and aseptic containers, which is a problem in our stream. The poly-coded items tend to be contaminated with food and in this process, food is not really an issue.

Smith wanted to know if SWAC members have heard anything around the state of other solid waste divisions that are looking into similar recovery of MSW. Wadley believed that King County is the only one. McConnell said that future Juno sites will feed the shredded feedstock into the Juno Clave. Weiker believed that this is unique to Washington/Oregon but is present in Europe.

McConnell added that GP is currently developing a facility in the United Kingdom for 300,000 tons a year with four Juno claves. They are evaluating four facilities in North America and are in the process of moving that forward. They are responding to some Request to Process and Request for Information from the East Coast. Regarding water, the goal is to recycle it, and in the future, GP will drive the water material so it can be shipped to another facility.

Weiker asked members to send anything they hear about MSW processes to Waller.

Before we sent anything to Juno, we hired Cascadia Consulting to do a customized waste characterization study, so we knew what was going into Juno vs. what was getting diverted. In Spring 2023, Cascadia Consulting performed a custom waste characterization of typical MSW at the Renton Transfer Station. While this is not from the actual Juno waste, it is statistically valid.

“Organics” includes many items including food, wood, textiles, leather, etc.:

- **Organics** means compostable items not elsewhere defined. Examples include food, yard debris (including woody debris under four inches in diameter), hair, wine corks, rubber, animal carcasses, animal feces, animal bedding, soap, cosmetics, and wax.
  - This portion accounts for 32% of the total waste, or 237 tons estimated.
- **Wood** means all items made of wood-natural, dimensional, or engineered. Examples include tree branches and stumps (greater than four inches in diameter), lumber, pallets, plywood, wood furniture, popsicle sticks, chopsticks, shingles. Includes any wood that has been painted, stained, or treated.
- **Textiles & Leather** means natural and man-made textile materials such as cottons, wools, silks, woven nylon, rayon, polyesters leather and other materials. This category includes clothing, rags, curtains, cloth diapers, upholstery, and shoes.

The results of the Juno Project varied from batch to batch. What went in resulted in what came out. Loads that come from commercial and residential collection routes are generally wetter and have a higher amount of paper fiber. Roll-off loads generally, have less organics and paper, and more furniture, wood, C&D, bulky metal, etc. Juno batches that are mostly from those route truck loads are closer to 60% diversion, while batches with loads from roll-offs can be under 40% diversion.

King County’s overall results are:

- Paper fiber: 18%
- Metals: 3%

- Water/Organics: 25%
- Residuals: 54%

From 737 tons sent to June, about 342 tons diverted (46%), and about 395 tons residuals (54%).

The water and organics are not being measured or weighed like the other materials. Instead, Juno calculates its volume based on tonnage in and out. We sent 737 tons in, captured 21% of solid diverted material, weighed the residuals, and calculated that the water and organics made up the rest.

Some of the water is used as industrial process water, which helps to lessen the facility's need for fresh water. The rest is currently directed to the paper mill's wastewater treatment plant and is treated like any other wastewater. From there, it is cleaned and released back in the system as clean water. We count that as "diversion" because it is not in the "residual" tonnage that is landfilled. Future Juno plants will feed an anaerobic digestion (AD) facility that provides some water treatment and makes energy. We are excited by these results as Juno staff continue to pursue other ways to divert resources.

We are curious about institutions that handle a lot of food-soiled paper waste, and to see what Juno diversion rates would be for them.

DNRP [video](#). Georgia Pacific [video](#).

Juno, and few others, use water-based sorting that rely on wet waste to sort and separate.

We want to share a few other examples and different approaches to MWP.

MWP technologies include:

1. Water-based sorting
2. Dry MRF-style sorting
3. "Garlic Press" separation

#### [Santa Barbara: ReSource Center](#)

- Advanced MRF, or "dirty" MRF, facility and Anaerobic Digester.
- Opened in 2021 at the Tajiguas Landfill.
- 180,000 ton-per-year (TPY) MRF capacity: MSW and comingled recyclables.
- 80,000 TPY AD capacity.
- Plastics, metals, and energy are revenue sources.
- ~\$135 million facility costs (not including land).
- Claims a diversion rate of 60%. This bumps their overall rate to 70-80%.

Santa Barbara collects food waste with garbage. Yard waste and garbage waste are collected separately to limit contamination in the green bins and improve compost quality.

#### [San Jose: Green Waste Materials Recovery Yard](#)

- Opened in 2008, upgraded in 2018.
- 3 separate MRF facilities:
  - Comingled Recyclables
  - MSW
  - Yard Waste
- MSW line handles 90 tons per hour.
- Claims a recovery rate up to 75%.

San Jose has been running for a long time now and there is a lot of good experience regarding what works and what does not. They are also a good example of how all the pieces of the system – education, collection, treatment, etc. - must work together.

**Irwindale CA: Material Recovery Facility**

- Advanced MRF facility.
- Expected opening in late 2023.
- 6,000 tons per day capacity.
- 250,000 square foot facility.
- MSW, organics, and C&D waste.

**Anaergia: OREX Press**

- Presses 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 with getting adequate organics feedstock quantities.

They have different business lines including organics extraction AND a proprietary AD system.

The next steps for MSW processing include:

- Pursue other Re+ actions – (like EPR, food waste reduction) which will change the quantity and the composition of MSW.
- Work with Resource Recycling Systems consultants to help assess mixed waste processing options:
  - Different MWP technologies/approaches
  - Ownership and operation options
  - Flexibility with changing the waste stream
  - Marketability of diverted materials
  - Scale of MWP facilities

Ultimately, we want to emphasize the implementation of Re+ actions. We really want to reduce waste and keep materials out of the trash in the first place. We consider MWP to be a “last screen” before disposal. The other important part of Re+ actions are that they will change our waste stream.

**Member Comment**

Sweet shared her goodbyes with everyone and said she will miss these meetings. Weiker thanked her for her service and for her support of this organization.

**Adjourn**

Meeting adjourned at 11:05 a.m.