600 NE Grand Ave.
Portland, OR 97232-2736

Metro | *Agenda*

Meeting: Solid Waste Alternatives Advisory Committee (SWAAC)
Date: Wednesday, July 8, 2015
Time: 9:30 a.m. to 12 p.m. (noon) ***NOTE SPECIAL START TIME***
Place: Metro, Council Chambers

The purpose of the Solid Waste Alternatives Advisory Committee is to develop policy options that, if implemented, would serve the public interest by reducing the amount and toxicity of waste generated and disposed, or enhancing the effectiveness and sustainability of the system through which the region's solid waste is managed.

9:30 AM	**1.**		**CALL TO ORDER AND DECLARATION OF A QUORUM**	**Matt Korot, Chair**
9:32 AM	**2.**		**COMMENTS FROM THE CHAIR AND SWAAC MEMBERS**	
9:37 AM	**3.**	**	**CONSIDERATION OF SWAAC MINUTES FOR MAY 13, 2015**	
9:40 AM	**4.**		**SOLID WASTE ROADMAP: FOOD SCRAPS PROCESSING CAPACITY** *Purpose*: To review draft options for actions Metro could take to ensure there is adequate capacity to process the region's food scraps and to provide feedback to staff prior to Council engagements. *Outcomes*: • Identification of benefits, consequences and likely impacts of options. • Identification of additional options for potential consideration.	**Jennifer Erickson, Metro**
10:40 AM	**5.**	**	**SOLID WASTE ROADMAP: LONG-TERM MANAGEMENT OF DISCARDS** *Purpose*: To discuss responses to Metro's solicitation of interest from companies using specific technologies identified by Metro for the management of waste, and to discuss Metro's preliminary evaluation of the responses. *Outcomes*: • Understanding of the technology responses and Metro's preliminary evaluation. • Input from SWAAC members on the responses and evaluation	**Rob Smoot, Metro** **Paul Ehinger, Metro**

Continued on back…

11:40 AM	**6.**	**CITIZEN COMMUNICATIONS TO SWAAC AGENDA ITEMS**	
11:55 AM	**7.**	**PREVIEW OF THE NEXT MEETING'S AGENDA AND FINAL COMMENTS**	**Matt Korot, Chair**
Noon	**8.**	**ADJOURN**	

* Material available on the Metro website.
** Material will be distributed in advance of the meeting.
# Material will be distributed at the meeting.

Upcoming SWAAC Meetings:

- Wednesday, August 12, 2015 from 10 a.m. to 12 p.m. (noon) at the Metro Regional Center
- Wednesday, September 9, 2015 from 10 a.m. to 12 p.m. (noon) at the Metro Regional Center

For agenda and schedule information, call Matt Korot at 503-797-1760, e-mail: matt.korot@oregonmetro.gov.
To check on closure or cancellations during inclement weather please call 503-797-1700.

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600 NE Grand Ave.
Portland, OR 97232-2736

Metro | *Meeting minutes*

Meeting: Solid Waste Alternatives Advisory Committee (SWAAC)
Date: May 13, 2015
Place: Metro Regional Center, Council Chamber

Members present
Paul Ehinger, Metro
Scott Keller, City of Beaverton
Leslie Kochan, Oregon Dept. of Environmental Quality
Theresa Koppang, Washington County
Matt Korot, Metro
Mike Leichner, Pride Disposal
Dan Blue, City of Gresham
Keith Ristau, Far West Recycling
Bruce Walker, City of Portland
Amy Roth, Association of Oregon Recyclers

Members absent
Alando Simpson, City of Roses Disposal & Recycling
Amy Pepper, City of Troutdale
Kathy Kaatz, City of Tualatin

Guests
Tom Chaimov, Metro
Ken Ray, Metro
Jennifer Erickson, Metro
Lyndsey Lopez, CH2M

1. CALL TO ORDER AND DECLARATION OF A QUORUM

Chair Matt Korot called the meeting to order and declared a quorum.

2. COMMENTS FROM THE CHAIR AND COMMITTEE MEMBERS

Chair Korot reviewed the agenda items and introduced and welcomed new SWAAC member Casey Camors from the City of Milwaukie.

3. CONSIDERATION OF SWAAC MINUTES FOR February 11, 2015

The minutes of the February 11, 2015 SWAAC meeting were approved as written.

4. UPDATES AND UPCOMING EVENTS

Tom Chaimov of Metro provided the following updates on Solid Waste Roadmap projects and other items:

- **Long-term Management of Discards:** The report on the combined qualitative analysis and greenhouse gas analysis of selected waste scenarios has been posted to the Solid Waste Roadmap web page. Details regarding the five technologies under review for integration into the region's solid waste system are also posted online. Solicitations for requests for expressions of interest from qualified firms that have been involved in the successful operation of businesses using these technologies are due May 15, 2015. Metro staff will review and present these at the July 28, 2015 Metro Council work session.
- **Landfill Capacity**: This is a Council-directed project that is currently in the scoping phase.
- **Transfer System Configuration:** The task force is currently considering the roles of public and private facilities. It is finalizing a problem statement and then will develop evaluation criteria based on the six public benefits guiding the Solid Waste Roadmap projects. An overview of task force process steps is posted on the Metro website. Council will be briefed on the work of the task force at its work session on May 26, 2015.
- **Metro South Transfer Station:** Two options have moved forward for how this facility might better serve the region's customers. A constructability study on option 1,filling and leveling the pit, is underway, and work is being done to explore how to bring down the costs of option 2, handling self-haul services off-site.
- **Fee and Tax Policies:** consideration of changes will take place in 2016 after further progress and decisions are made on other Roadmap projects.
- **Foundational Work:** This project is developing a tool to estimate the amount and nature of solid waste in the future. It's a "what if" model that will allow for different scenarios to be run. Staff is aiming to demonstrate the model to interested parties in August 2015.
- **Upcoming Metro Council Engagements**
    - May 26, 2015: Metro Council work session discussion of transfer system configuration.
    - July 21, 2015: Metro Council work session discussion of food scraps processing capacity options.
    - July 28, 2015: Metro Council work session discussion of long-term options for managing discards.
    - Late Fall: Solid waste facility permit renewals and extensions.

Ken Ray of Metro reported that the May 5, 2015 Let's Talk Trash event that featured David Allaway of Oregon DEQ, *Ignoble Rot – Food Scraps as Compost and Energy* (part of the Science on Tap series), had a great turnout. No further Let's Talk Trash events are scheduled at this time. Ken hopes to develop some later in the year that will be aligned with specific Roadmap projects.

5. SOLID WASTE ROAD MAP: FOOD SCRAPS CAPACITY PROJECT – REPORT ON TRANSFER STATION CAPACITY ANALYSIS

Jennifer Erickson, Metro, and Lyndsey Lopez of CH2M reported on the transfer station analysis recently completed as part of theSolid Waste Roadmap's Food Scraps Capacity Project. The objectives of the analysis were:

- To gain an understanding of the capacity available at public and private transfer stations in the region to accept and manage 50,000 to 75,000 tons per year of commercial food scraps delivered under a variety of scenarios.
- To gain an understanding of the capacity available at public and private transfer stations or reloads in the region to accept and manage up to 230,000 tons per year of residential food scraps/yard debris mix.
- To gain an understanding of the potential impacts that food scraps would have on existing transfer station operations.

The analysis concluded the following:

- Overall, the existing transfer system has potential capacity capable of managing the projected commercial food scraps and residential food/yard debris.
- The overall system capacity does not consider matching the needs of generators to capacity in various sub-geographies within the region. The western portion of the region does not currently have adequate transfer capacity.

CH2M interviewed 15 facility owners/operators to collect the information that informed the analysis.

Staff will complete a final report on the transfer capacity analysis soon and share it with SWAAC members, the Transfer System Configuration System task force and on the Metro Solid Waste Roadmap web pages.

Committee input and questions

- Mr. Blue asked how the facilities in the analysis were chosen and why Allwood Recycling was not included. Ms. Erickson responded that the primary criterion was whether the facility was permitted to take putrescible waste. We did not include yard debris-only facilities.
- Mr. Walker asked whether it's fair to say the study results are encouraging. Ms. Erickson replied yes, that when we reach a point of adequate processing capacity of food scraps we will know we have the capacity to transfer it.
- Ms. Roth asked what was assumed as the growth rates and timeframes for collecting food scraps. Ms. Erickson responded that phase one of the study assumed there would be growth over time. Mr. Korot replied that, absent mandates, the growth is presumed to be gradual.
- Mr. Blue asked what role local jurisdictions would have in deciding where food scraps would go. Ms. Kochan noted that facilities would need to seek land-use compatibility permits from local jurisdictions in order to be compliant with DEQ regulations. In cases where the transfer stations already had permits, DEQ would go to local jurisdictions to have them sign-off on the changes. Roy Brower stated that Metro would not grant approvals without checking-in with local jurisdictions, as well.

- Mr. Blue questioned how east Multnomah County would be served for residential mixed yard debris and food, since all yard debris currently goes to a facility not included in the analysis. Ms Erickson stated that the design of the program was not expected to be dictated by current processing of yard debris.
- Mr. Keller asked if this analysis was just one element of a larger piece. Ms Erickson responded yes, that the project is focused on processing capacity and that we now know that we can collect and transfer food scraps when a build-out of processing capacity becomes imminent.
- Ms. Erickson asked the SWAAC members if there was detail that should be emphasized to the Council.
    - Mr. Blue said that it will be important for the Metro Council and local governments to understand the cost impacts of programs, particularly from adding food to existing yard debris service.
    - Ms. Koppang said there is a disconnect among elected officials between residential and commercial programs and why they have to be separated, and we will have to help them to understand.
    - Ms. Kochan wondered if an overlay map of the facilities and residential and commercial supply could give an enhanced overview.

6. **CITIZEN COMMUNICATIONS TO SWAAC AGENDA**

Meredith Sorenson of Solid Waste Strategies and Harvest Power said that Council often asks for equity in services and Metro should consider that given that there are existing facilities that were not included in the analysis.

7. PREVIEW OF THE NEXT MEETING'S AGENDA AND FINAL COMMENTS

The next SWAAC meeting is scheduled for Wednesday, June 10, 2015 from 10 a.m. to 12 p.m. (noon) at the Metro Regional Center. The agenda is expected to include a continuation of the discussion of the food scraps project and discussion of the Solid Waste Roadmap's long-term management project.

8. ADJOURN

Chair Korot adjourned the meeting at 11:00 a.m.

MAKING A GREAT PLACE

Metro

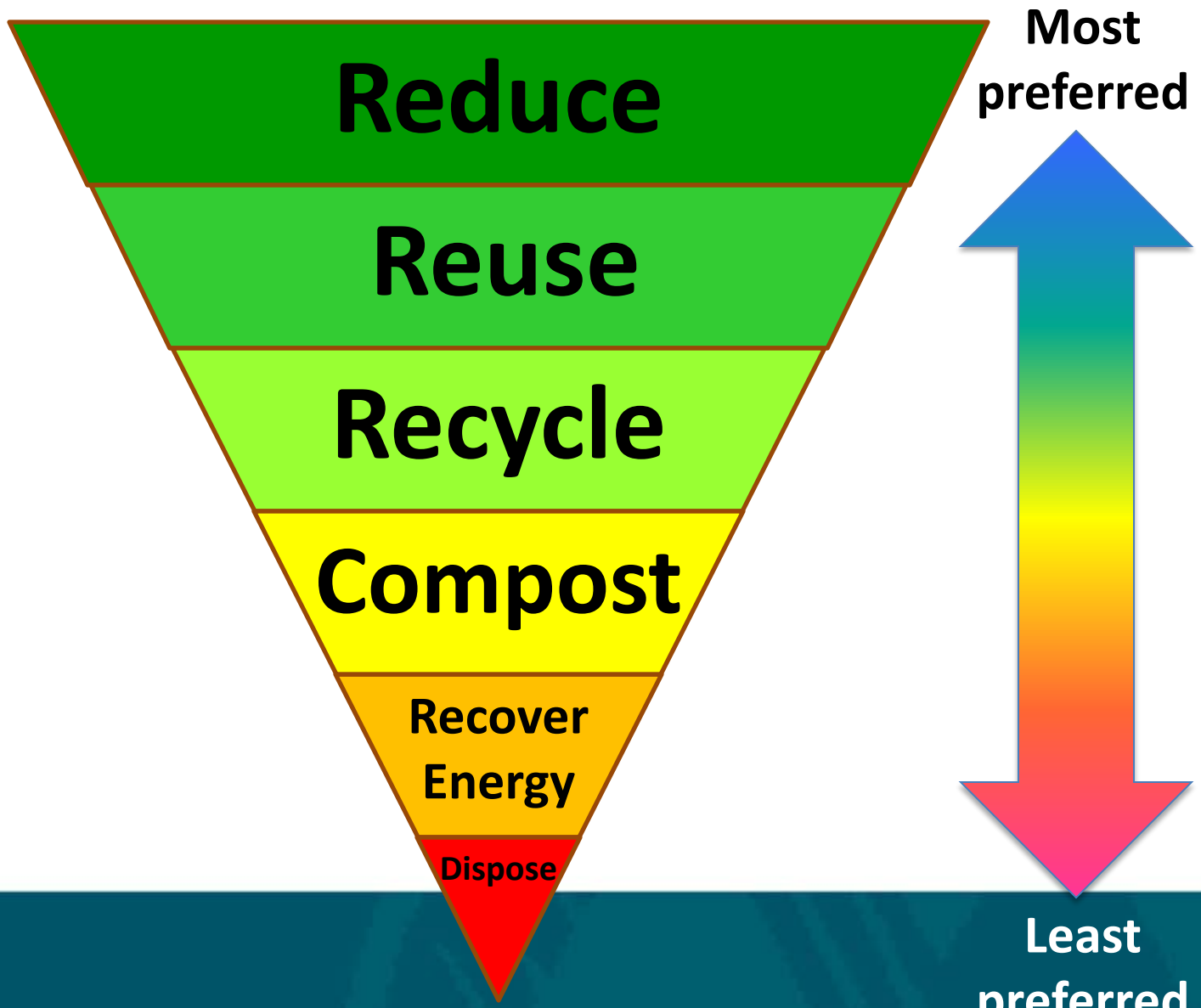
SWAAC July 8, 2015
Long Term Management

SWAAC July 8, 2015
Long Term Management – Agenda

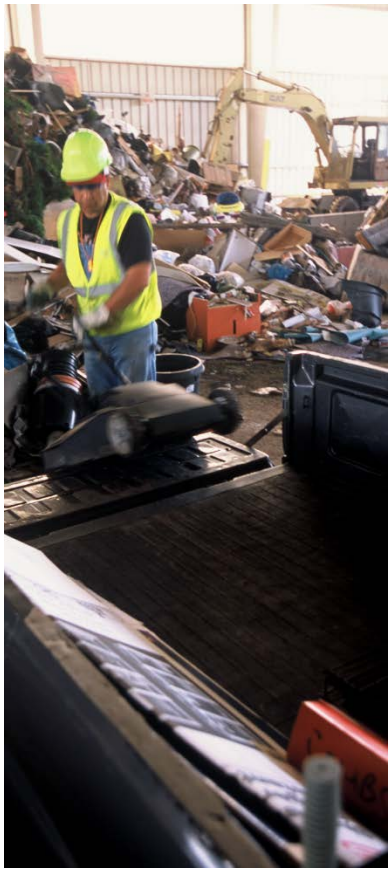
1. Purpose and desired outcome
2. Summary information on Long-Term options
3. Staff Thoughts
4. Proposed Next Steps
5. SWAAC input and discussion

Metro

Solid waste hierarchy



Public benefits



- Protect people's health
- Protect the environment
- Get good value for the public's money
- Be adaptable and responsive in managing materials
- Ensure services are available to all types of customers
- Keep our commitment to the highest and best use of resources

MAKING A GREAT PLACE

Metro

Metro

Long Term Waste Management Options

Combined Qualitative Analysis And Greenhouse Gas Analysis Of Selected Waste Scenarios

HDR

March
2015

Need for industry input

Information to tip the scales

Overview of Responses

- Nineteen responses from companies worldwide
- Five companies that have local operations
- Not all responses compatible with MSW
- Responses included offerings of one or more of all five management options

Overview Cont.

- 14 respondents proposed to use advanced material recovery
- Four offered direct combustion technologies
- Five offered gasification
- Eight offered refuse derived fuel (includes drying)
- Four offered plastics to fuel
- 14 offered anaerobic digestion options (both dry and wet processes were offered); however, Three required source separated organics

RFEOI Responses Summarized

	Type(s) of technologies proposed					
	AMR	WTE	Gasify	AD	RDF	P2F
1		x				
2		x				
3		x				
4		x				
5					x	
6					x	
7					x	
8			x			
9					x	
10			x			
11			x			
12					x	
13	x					
14					x	
15						x
16			x			
17				x		
18				x		
19				x		

AMR is Advanced Material Recovery; **WTE** is Direct Combustion; **Gasify** is Gasification
AD is Anaerobic Digestion; **RDF** is Refuse Derived Fuel; **P2F** is Plastics to Fuel

Advanced Material Recovery

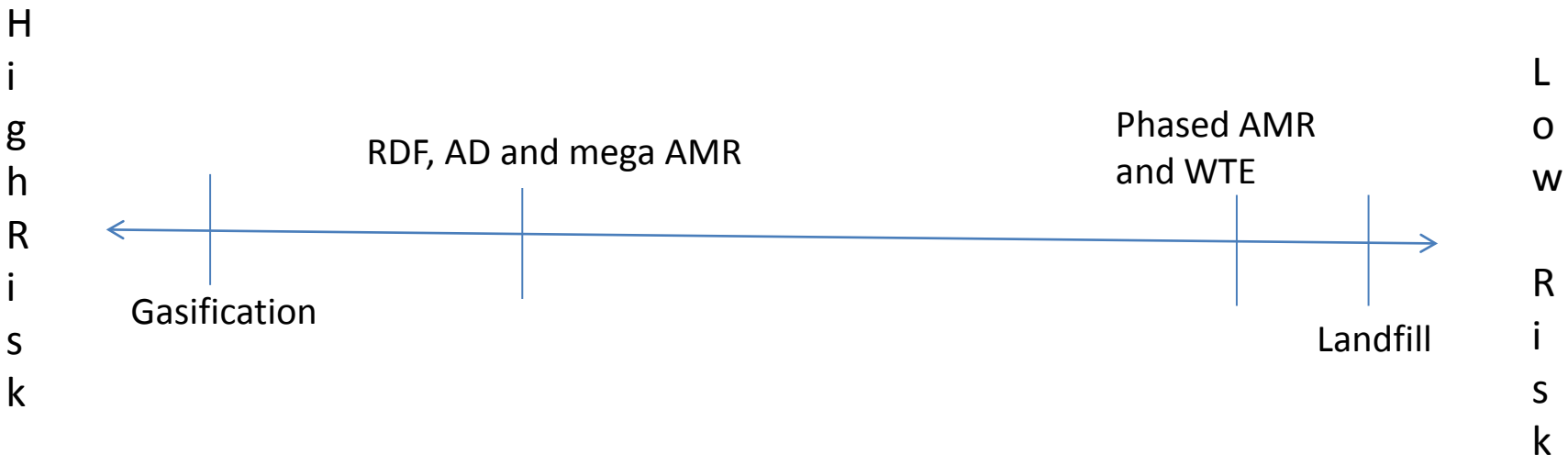
- Two purposes
  1. Recover material
  2. Create feedstock
- System considerations
  1. Where to employ
  2. When to employ

Dry Anaerobic Digestion.

- Extracting the organic fraction from MSW is sensitive to collection methods and requires advanced material recovery infrastructure

- The regional solid waste management plan calls for source separated organics, which will impact feasibility of dry anaerobic digestion.

Implementation Risk



Preliminary Thoughts

1. Consider methods of employing Advanced Material Recovery:

- This may be more policy than technology driven
- Consider phasing in options
- Consider impacts /risks to stakeholders and Metro
- Discuss with key stakeholders

2. Delay consideration of Dry Anaerobic Digestion of garbage until Food Scraps Roadmap has matured

3. Further explore conventional waste to energy options:

- What are the economic impacts of the amount of waste guaranteed
- Where could or should the technology be sited.
- What are financial risks to Metro and its stakeholders.

4. Delay Gasification and Refuse Derived Fuel.

- Gasification is not ready for commercial use of Metro's MSW
- RDF will be difficult to find a market for in our region.

Proposed Next Steps

- Reach out to conventional waste to energy providers to get details of implementation cost and schedule
- Develop alternatives for implementing advanced material recovery in the region
- Stakeholder and Public Outreach
- Fall; Council to decide what, if any, alternative technologies should be pursued for implementation.

Solid Waste Roadmap

Food Scraps Transfer & Processing Capacity Development

Metro Solid Waste Alternatives Advisory Committee

July 8, 2015

Project Question

What actions should Metro take to ensure there is adequate capacity to transfer and process food scraps collected from the region's businesses and residents?

Today's objectives

To get SWAAC members' input on options to address capacity.

Presentation Outline

1. Project overview
2. Review of work to date
3. Discussion of options

Key Barriers to Progress

1. **Supply**: Any investment in processing infrastructure is reliant on confidence in supply of food scraps, which the region cannot currently provide.

2. **Location**: The goal of “proximate capacity” may not be feasible in the region.

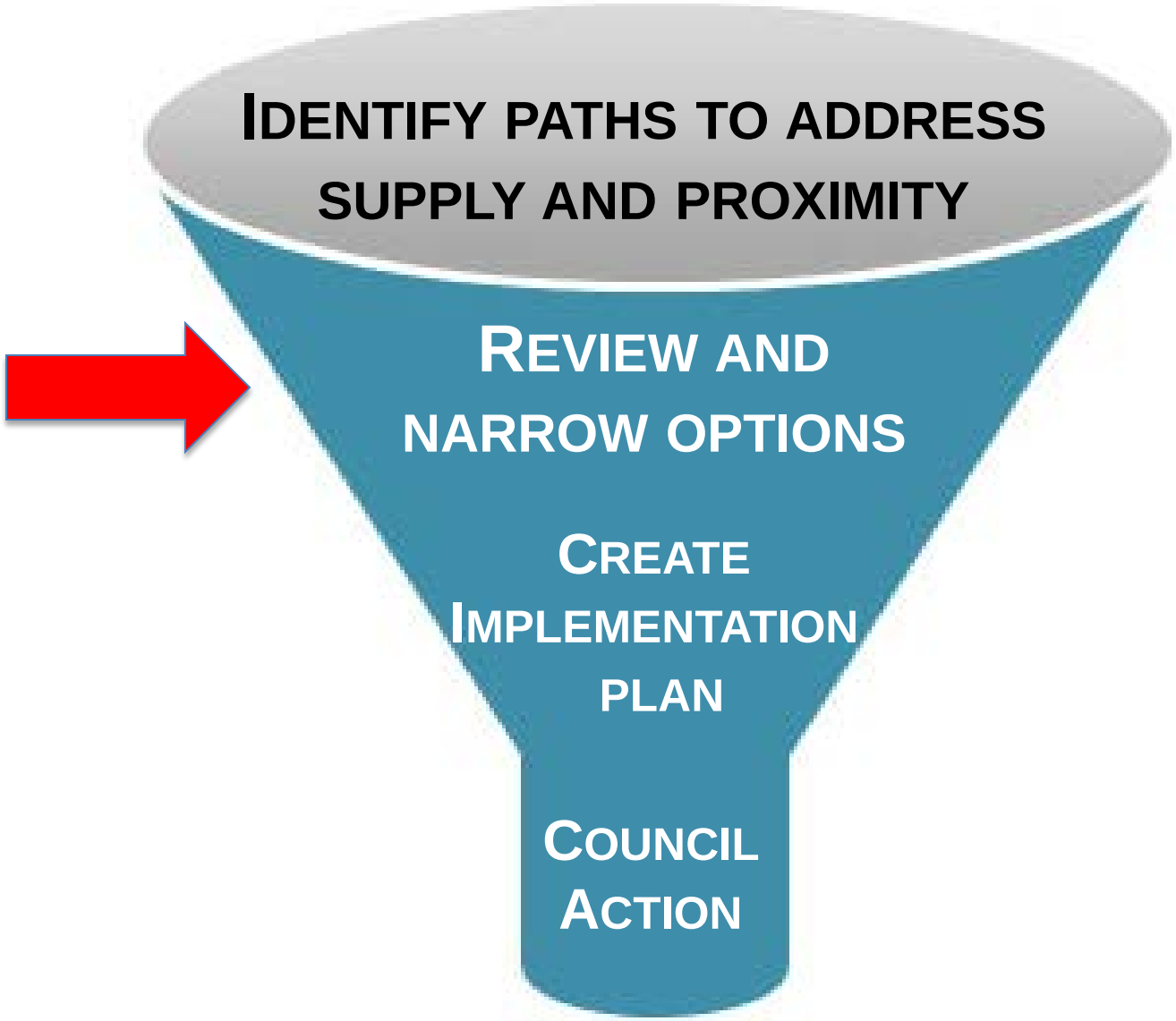
Supply

1. Enact required recovery
2. Use flow control authority
3. Provide financial incentives

Proximity

Assess impact of sending to distant facilities

Project stages



Commercial vs. Residential Focus

Proximity Analysis

Relative emissions compared to a 10-mile transport distance.

Distance (miles, one way)	Smog/trip (NOx)	GHG/trip (CO2e)	Particulates /trip	Cost $/mile ($0.13)
50	4.3x	4.1x	3.4x	$6.50
100	8.2x	7.9x	5.0x	$13.00
140	Current distance to landfill (one way).			
300	24.7x	23.8x	15.0x	$39.00

Questions?

Menu of Options

Generator

- Financial Incentives
- Required Recovery

Transfer

- Status Quo: Each Station Decides
- Require Private Stations to Accept Food
- Direct Food to Metro Stations

Processing

- Status Quo: Transfer Stations Decide
- Metro Procures Processing for Region
- Metro Offers Financial Assistance
- Metro Builds or Partners to Build
- Use Distant Processors

Generator Options

Financial Incentives

- Food scraps tip fees at Metro and/or private transfer stations are set substantially lower than solid waste, OR
- Local governments establish subsidized collection rates without tip fee adjustment.

Required Recovery

- Food-generating businesses are required to separate food scraps.
- Haulers must provide collection service to those businesses.

Generator Options: Impacts

Financial Incentives

- Little to no supply certainty.
- Unknown how much cost reductions will incent participation.

Required Recovery

- Supply certainty greater.
- Could be coupled with incentives.

Transfer Services Options

Status Quo: Each Station Decides

- Currently commercial food scraps are handled only by Metro Central and WRI.
- Other transfer stations may or may not choose to offer service.

Require Private Stations to Accept Food

- Metro requires that some or all provide service, depending on regional need.

Direct Food to Metro Stations

- Metro directs all food scraps to its stations.

Transfer Services Options: Impacts

Status Quo: Each Station Decides	• Lack of geographic equity of service. • No certainty that transfer capacity will be provided.
Require Private Stations to Accept Food	• Provides greater geographic equity of service. • Would require operational and, possibly, capital equipment changes.
Direct Food to Metro Stations	• Lack of geographic equity of service. • Private facilities are not system participants.

Processing Options

Status Quo: Transfer Stations Decide	• Food scraps go to processors chosen by each station.
Metro Procures Processing for Region	• Metro selects processor(s) for all of region's food scraps.
Metro Offers Financial Assistance	• Metro provides direct financial assistance (grants and loans)
Metro Builds or Partners to Build	• Metro finances and builds a new facility alone or in partnership.
Use Distant Processors	• Metro procures no new processing and utilizes existing distant capacity.

Processing Options: Impacts

Status Quo: Transfer Stations Decide	• Market-based decisions. • Dilutes supply of food scraps. • No system coordination.
Metro Procures Processing for Region	• Creates more stability in supply to limited number of processors. • May be more stability in tip fee.
Metro Offers Financial Assistance	• May spur private investment and participation. • No system coordination.

Processing Options: Impacts

Metro Builds or Partners to Build

- Metro would direct food scraps to this facility.
- May be more stability in tip fee.
- Long-term commitment to a particular processing method.

Use Distant Processors

- Food scraps transported long distances, with higher transport emissions.
- Reduced chance of NIMBY
- In most cases, processors are close to their end-product markets.

Questions?

Missing Options?

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Metro | *Making a great place*

Metro Solid Waste Alternatives Advisory Committee (SWAAC)
July 8, 2015

Background for Solid Waste Roadmap: Long-term Management of Discards agenda item

Metro is looking at different options for managing our region's garbage after its current landfill contracts expire at the end of 2019. Currently, most of our region's garbage is sent on long-haul trucks to the Columbia Ridge Landfill near Arlington, Ore., about 150 miles east of Portland. This landfill, owned and operated by Waste Management, has received much of our region's garbage since the early 1990s. One option for the future would be to continue sending much of the garbage there or to other similar landfills for burial.

There are also other technologies that are used throughout the world that offer the potential to capture energy from the unwanted and non-reusable stuff we roll to the curb. Metro staff has begun to study what some of those technologies are and identified six approaches that could offer potential for capturing more value from waste:

- **Advance Material Recovery:** Much as our source-separated, commingled recyclables are processed through material recovery facilities, this option would envision facilities equipped to extract recoverable materials from wet or mixed dry waste.
- **Landfills:** Sending garbage to landfills where methane is extracted from the decaying waste.
- **Combustion:** Burning garbage to create heat and electricity.
- **Gasification:** Heating garbage at very high temperatures (1800 degrees Fahrenheit and higher) to create gases and break down into simple compounds that can be used for electricity generation or other chemical processes.
- **Anaerobic digestion:** Using bacteria to break down biodegradable material without oxygen to produce methane and carbon dioxide for electricity, natural gas or other fuels.
- **Refuse-derived fuels:** Developing new fuels from garbage that can be used in power plants and for other industrial purposes.

On July 15, 2014, the Metro Council held its first work session to discuss these different technologies and direct Metro staff to study them further. The six options were grouped into seven scenarios that illustrate potential options that could be integrated into our existing disposal system. These were purposefully evaluated as though all of the region's waste would be managed by a single scenario in hopes to better compare the advantages of the individual technologies.

1. **Landfill and 1A. Landfill with Recovery**
   Dispose of waste
2. **Direct Combustion and 2A.Combustion with Recovery**
   Recover Energy from Waste
3. **Gasification after Advanced Material Recovery**
   Recover Energy or Alternative Fuels from Waste

4. **Dry Anaerobic Digestion after Advanced Material Recovery**
   Recover Energy from Waste and reduce GHG from Landfill residue
5. **Refuse Derived Fuel with Dry Anaerobic Digestion and Advanced Material Recovery**
   Recover Energy from Waste and produce fuel to replace coal

Some form of Advanced Material Recovery (AMR) could be considered with the use of Landfills and Direct Combustion scenarios, but both technologies can manage the region's garbage as delivered. For this reason, an additional option is included in each of these scenarios to include advanced material recovery. AMR will be required for Gasification, Dry Anaerobic Digestion and Refuse Derived Fuel processes or those would not be viable options.

Even with AMR, Metro believes that the material sent to dry anaerobic digestion will have too many contaminants to make use of the digested material for landscaping amendment or agriculture. Scenario four assumes it would go to a landfill, but in scenario five the digested material would be used for Refuse Derived Fuel.

Metro evaluated the seven scenarios for cost, material recovery, energy recovery and greenhouse gases. From the analysis that was completed in late 2014, only a few conclusions surfaced.

1. Direct combustion, without material recovery, gets the most energy from waste, but with materials recovery it still does quite well and gasification and refuse derived fuel would get about the same energy recovery.
2. Anaerobic digestion showed the greatest GHG advantage, but all scenarios with advanced material recovery have a large potential to reduce GHGs.
3. Additional information was needed to refine current technology information with real, verifiable and implementable processes from vendor-specific technologies.

In spring 2015, Metro issued a Request for Expressions of Interest (RFEOI) to seek responses from companies experienced in successful implementation of the technologies listed above, other than landfills, and including advanced material recovery. Metro received 19 responses to the RFEOI from established companies representing firms from 8 countries, and all 5 of the technologies were represented in responses in various combinations. Responses are confidential, so are not available for distribution, but will be discussed at the SWAAC meeting.

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Metro | *Meeting minutes*

Meeting: Solid Waste Alternatives Advisory Committee (SWAAC)

Date: July 8, 2015

Place: Metro Regional Center, Council Chambers

Members present
Dan Blue, City of Gresham
Casey Camors, City of Milwaukie
Paul Ehinger, Metro
Scott Keller, City of Beaverton
Leslie Kochan, Oregon Dept. of Environmental Quality
Matt Korot, Metro
Mike Leichner, Pride Disposal
Amy Pepper, City of Troutdale
Keith Ristau, Far West Recycling

Members absent
Kathy Kaatz, City of Tualatin
Teresa Koppang, Washington County
Amy Roth, Association of Oregon Recyclers
Alando Simpson, City of Roses Disposal & Recycling
Bruce Walker, City of Portland

Guests
Jennifer Erickson, Metro
Rob Smoot, Metro

1. **CALL TO ORDER AND DECLARATION OF A QUORUM**

   Chair Matt Korot called the meeting to order and declared a quorum.

2. **COMMENTS FROM THE CHAIR AND COMMITTEE MEMBERS**

   Chair Korot reviewed the agenda items.

3. **CONSIDERATION OF SWAC MINUTES FOR MAY 13, 2015**

   The minutes of the May 13, 2015 SWAAC meeting were approved with the addition of Casey Camors, City of Milwaukie as Member Present.

4. **SOLID WASTE ROADMAP: FOOD SCRAPS PROCESSING CAPACITY**

   Jennifer Erickson, Metro, introduced draft options for actions Metro could take to ensure there is adequate capacity to process the region's food scraps. The options are intended to address the key barriers of supply and proximity previously identified and discussed with Council and SWAAC. She reviewed a menu of options that identified benefits, consequences

and likely impacts of options for generation, transfer and processing of commercial food scraps.

Generation

Options :

- Financial Incentives
  - Food scraps tip fees at Metro and/or private transfer stations are set substantially lower than solid waste, or
  - Local governments establish subsidized collection rates without tip fee adjustment.
- Required Recovery
  - Food-generating businesses are required to separate food scraps.
  - Haulers must provide collection service to those businesses.

Impacts may include:

- Financial Incentives
  - Little to no supply certainty.
  - Unknown how much cost reductions will incent participation.
- Required Recovery
  - Supply certainty greater.
  - Could be coupled with incentives.

Transfer

Options:

- Status Quo: each station decides
  - Currently commercial food scraps are handled only by Metro Central and WRI.
  - Other transfer stations may or may not choose to offer service.
- Require private stations to accept food scraps
  - Metro requires that some or all provide service, depending on regional need.
- Direct food to Metro stations
  - Metro directs all food scraps to its stations.

Impacts may include:

- Status Quo: each station decides
  - Lack of geographic equity of service.
  - No certainty that transfer capacity will be provided.
- Require private stations to accept food scraps
  - Provides greater geographic equity of service.
  - Would require operational and, possibly, capital equipment changes.
- Direct food to Metro stations
  - Lack of geographic equity of service.
  - Private facilities are not system participants.

Processing

Options:

- Status Quo: Transfer Stations decide
  - Food scraps go to processors chosen by each station.
- Metro procures processing for region.
  - Metro selects processor(s) for all of region's scraps.

- Metro offers financial assistance
    - Metro provides direct financial assistance (grants and loans).
- Metro builds or partners to build
    - Metro finances and builds a new facility alone or in partnership.
- Use distant processors.
    - Metro procures no new processing and utilizes existing distant capacity.

Impacts may include:

- Status Quo: Transfer Stations decide
    - Market-based decision.
    - Dilutes supply of food scraps.
    - No system coordination.
- Metro procures processing for region
    - Creates more stability in supply to limited number of processors.
    - May be more stability in tip fee.
- Metro offers financial assistance
    - May spur private investment and participation.
    - No system coordination.
- Metro builds or partners to build
    - Metro would direct food scraps to this facility.
    - May be more stability in tip fee.
    - Long-term commitment to a particular processing method.
- Use distant processors
    - Food scraps transported long distances, with higher transport emissions.
    - Reduced chance of NIMBY.
    - In most cases, processors are close to their end-product markets.

Committee input and questions

- Chair Korot reminded the committee that these will be presented to Council as a range of options, and they may combine some of the various choices presented. He asked SWAAC members for their input to shape the information for the Council.
- Mr. Blue commented that Gresham is using a 20% rate reduction for food scraps as an incentive for participation. The hope is to get businesses to at least a neutral cost position. It has helped get businesses on the edge of participation to join the program. Overall, the incentive is good to keep in the mix. It has opened the door for City staff to engage in conversations around food waste recycling. Mr. Blue feels incentives should be part of the Metro package.
- Ms. Kochan reminded the committee that recycling can be a disincentive to preventing waste. She likes the idea of providing incentives, e.g., free collection to businesses with food waste prevention and reuse practices.
- Mr. Keller noted that Beaverton uses a 50% rate reduction for businesses as an incentive and has had the same experiences as Mr. Blue related. The reduction is a great way to start discussions with businesses, but has had mixed results. Mr. Keller feels that the incentives would have to be over 50% in order to drive businesses into the program.
- Mr. Leichner feels that incentives, such as heavy/light rates, can save businesses with food scraps programs a little money. An interest of the hauling industry is that the

impact on all ratepayers is understood and that they or their elected officials are consulted before some customers are subsidized.

- Mr. Blue and Mr. Keller noted that the elected officials in their respective jurisdictions reviewed and approved the subsidies.
- Mr. Blue added that Gresham modeled its rate subsidy to try get 60-80 of the larger, heavy generators into the program, which would reduce disposal costs by the approximate amount of the incentive costs. They are at 45 businesses now.
- Ms. Pepper expressed that she did not believe Metro should have any role in local rate setting.
- Regarding required recovery, Mr. Keller noted that his concerns are a bit of a "chicken and egg" conundrum. We should not require recovery until we understand the rate implications and have incentives in place. He is concerned that neither the business sector nor the haulers are ready to implement a program without a lot of pain and angst.
- Mr. Blue does not think that a Business Recycling Requirement-style is the right approach, but would like to see a Metro-imposed standard and a disposal ban to get separated food waste flowing. He agrees that local governments should be allowed to build sufficient routes and then roll out the program.
- In regards to transfer services, Mr. Leichner would like for staff to communicate to Council that closer-in facilities will have greater relative emissions for shipping the end product to market than facilities that are farther out.
- Mr. Blue likes option two of the transfer services where private facilities are required to accept food waste. He would like the tip fees be the same at all facilities, and with an equal difference with garbage.
- Mr. Leichner commented that there is a need to factor in that private facilities have different operations and transportation costs and they cannot charge much more than Metro facilities in order to stay competitive.
- With regard to processing options, Mr. Blue would like to see a combination of Metro procuring processing for the region's scraps and providing direct financial assistance through grants and loans. He thinks a stronger Metro role across all three sectors would advance the region's work, and also sees the value of incentives.
- Mr. Leichner also like the idea of Metro setting standards for what is in and what is out of food scraps loads.
- Mr. Keller also likes the combined approach that Mr. Blue has drawn out; he would like to see a designated set of processors.
- Mr. Leichner commented that there were good reasons why the region ended up with a distant landfill; that may be a reality for food waste as well. It may be necessary from a practical perspective. Transportation impacts to a distant facility, in the form of greenhouse gases, could be mitigated.
- Ms. Erickson pointed out that there could be reduced emissions with alternative fuels and, although volatile organic compounds increase with compressed natural gas (CNG) fuels, there is a significant decrease in other pollutants. Mr. Leichner agreed and noted that maintenance of CNG vehicles is less expensive.
- Mr. Keller would like staff to remind Council of the emissions benefits derived from processing food waste versus landfilling it.

- Ms. Erickson responded that the benefits are ten-fold. Council wants to see a model of transportation and emission impacts to a distant facility.

5. **SOLID WASTE ROADMAP: LONG-TERM MANAGEMENT OF DISCARDS**

Rob Smoot and Paul Ehinger, Metro, presented the results of a request for expressions of interest for the long-term management of discards. There were a total of 19 responses, proposing six different technologies: advanced material recovery, waste-to-energy, gasification, anaerobic digestion, refuse-derived fuel and plastics-to-fuel. Each option was weighed for feasibility and impacts, with the following conclusions:

- Consider methods of employing Advanced Material Recovery:
  - This may be more policy than technology driven.
  - Consider phasing in options.
  - Consider impacts/risks to stakeholders and Metro.
  - Discuss with key stakeholders.
- Delay consideration of Dry Anaerobic Digestion of garbage until food scraps recovery has matured.
- Further explore conventional waste-to-energy options:
  - What are the economic impacts of the amount of waste to be guaranteed?
  - Where could or should the technology be sited?
  - What are financial risks to Metro and its stakeholders?
- Delay Gasification and Refuse-Derived Fuel.
  - Gasification is not ready for commercial use of the region's municipal solid waste.
  - It will be difficult to find markets in our region for Refuse-Derived Fuel.
- Proposed next steps include:
  - Reach out to conventional waste-to-energy providers to get details of implementation cost and schedule.
  - Develop alternatives for implementing Advanced Material Recovery in the region.
  - Stakeholder and public outreach.
- November: Council to decide which, if any, alternative technologies should be pursued for implementation.

Committee input and questions

- Mr. Blue asked if there is a way to insert costs into the continuum or if the options can be graded from least to most expensive. Mr. Smoot replied that the requests for expressions of interest did not ask for costs to be included in the responses. He said that annualized capital costs are included in the first report and the financial picture will emerge more fully with the next study. Mr. Ehinger noted that there are many nuances to the financial risks and it would be difficult to portray the costs in an equitable manner at this point in the juncture.

6. CITIZEN COMMUNICATION S TO SWAAC AGENDA ITEMS

- Rick Winterhalter from Clackamas County commented on the food scraps options. He emphasized that Metro should really consider environmental costs, quantifying what that cost is for landfilling food and reflect that in a cost comparison. He noted also that local governments have been subsidizing heavy food generators like restaurants for years and need to figure out how to address that to better reflect real costs. He stated that he likes

the idea of Metro financing a local facility, particularly since there is already an approved site in Portland.

- Brian Heiberg of Heiberg Disposal commented on the food scraps options. He said the difficulty is getting the message out to the customer of what is acceptable and what is not; not having a single standard is a problem.
- Doug Drennen with J.R. Miller and Associates responded to Mr. Smoot's comment about delaying consideration of anaerobic digestion for the long-term management of discards. He observed that dry anaerobic digestion is a successful technology in Europe and becoming more popular and asked why is it being discounted in the Metro region? Mr. Smoot replied that the proposers reflected experiences in communities that have very different collection systems, so there is a concern that dry anaerobic digestion would not fit here without redoing the collection system, and that's not on the table. Mr. Drennen replied that there are places with source-separated organics programs that also successfully do dry anaerobic digestion.

7. PREVIEW OF THE NEXT MEETING'S AGENDA AND FINAL COMMENTS

Mr. Korot summarized the upcoming Council discussions:

July 21 Council Work Session: the food scraps processing capacity work discussed today and the Solid Waste Roadmap's transfer system configuration project.

July 28 Council Work Session: the long-term management of discards work discussed today.

August 4 Council Work Session: the Solid Waste Roadmap's landfill capacity policy project.

8. **ADJOURN**

Chair Korot adjourned the meeting at 11:25 a.m.