



Recycling Steering Committee

Modernizing Oregon's recycling system with support from Oregon Consensus

Infrastructure Research Subcommittee Meeting Agenda and Summary

April 22, 10:30 a.m.-12:30 p.m.

Agenda

To see presentations and meeting materials login to <https://www.webmeeting.att.com>

Use meeting number: 877-336-1828

Access code: 7760985

Call 877-336-1828. Use the access code above.

- Update on Phase 1 research progress
- Review Cascadia feedback on SOW for contract amendment
- Finalize SOW
- Review timeline for upcoming tasks
- Prep for discussion of material selection for projection research

Meeting summary

Participating:

- Asami — Recycling Partnership
- Brian — DEQ
- Bryce — Metro
- Dave — Pioneer Recycling
- David — Tillamook County
- Jeff — EFI
- Kristin — Pride Disposal
- Peter — DEQ
- Vinod — Far West Recycling

Invited but not present:

- Bruce — City of Portland
- Derek — Waste Connections
- Dylan — Recycling Partnership
- Kristan — ORRA

Research progress

Cascadia has begun Task 1.1 and expects to be completed by 4/27.

Contractors have provided feedback on definitions provided by DEQ. Jeff and Vinod will work with DEQ to finalize by 4/24.

The Recycling Steering Committee is a collaborative of representation from the Assoc. of Oregon Counties, Assoc. of Oregon Recyclers, Assoc. of Plastics Recyclers/Denton Plastics, EFI, Far West Recycling, Lane County, League of Oregon Cities, Metro, NORPAC, Oregon Department of Environmental Quality, Oregon Refuse & Recycling Assoc., City of Portland, Recycling Partnership, Rogue Disposal & Recycling, Waste Connections, and Waste Management. **For more information, visit <https://go.usa.gov/xmYYe>.**

Preliminary information to provide to Cascadia took longer than anticipated. We are about three to four weeks behind the original schedule of completing Phase 1 by May 8.

Once we have information about an updated timetable, Brian will update the greater project plan.

Feedback on research SOW

Cascadia provided feedback on the draft SOW as was shared prior to the meeting.

In general, the language here may be broader than what we eventually do — the broader the language the easier is to be authorized to conduct it. There are budget concerns with asking Cascadia to provide too much detail at this stage without contract language in place to authorize them to do that work. They need to be more general at this stage. Each task has language in it that allows them to work with us to come up with the specific research plan. We don't want to ask them to do work now isn't contracted and we can't pay them. We are asking for clarification on the number of alternatives they can research so we know what our budget parameters are.

We need to add some background info about why we are conducting research to set the context for Task 1 and 2 — that we are looking to inform later discussions and decisions about potential future collection and processing infrastructure which may include adding elements we don't currently have, improving one we do, making some substitutions or combination of all these.

For residential collection alternatives, what are considered “specialized” materials. The scope of the Steering Committee includes looking at on-route and depot programs, but what level will the contractor be looking at for this alternative — is it Styrofoam, batteries, glass, etc?

For commercial collection alternatives we need to clarify that dry-waste routes are not including C&D materials.

For P2 T2 research, it is not clear what, “For each system to be researched, DEQ will provide direction on system assumptions including defining a single scenario to be investigated that includes the number and average size of sorting and processing systems” means. Brian will talk with Contractors and get back to folks.

It will be important to understand the mix of materials collection and processing programs have. The SOW provides information on the quantities provided. We want to see if they can provide a general breakdown of those materials if available.

There might be additional policy drivers we will want to note such as Bottle Bill programs. We can make a list of significant policy drivers to look for.

Will contractors have protections in place when they conduct interviews of processors? We can copy the language from the proposed P2 T3 research around protections.

Brian will incorporate feedback from the meeting and answers to questions from Cascadia into a revised SOW and send it back out toward the end of this week.

We will finalize by email before sending it the SC for review.

Next steps

Cascadia will provide a draft materials list as described in Task 1.1. The subcommittee needs to review and finalize the list for Task 1.2 research. Brian will send out a poll for a phone call between May 1 and 8 to discuss.

New page and meeting materials

DEQ has a [new page](#) for the SC and associated work. The [current contract](#) is posted there under the Infrastructure Subcommittee.

End of meeting

DRAFT AMENDMENT

PHASE 2 – COLLECTIONS AND PROCESSING RESEARCH –~~OPTIONAL~~

Minor adjustments to the Services performed by Contractor in Phase 2 may be authorized by a written Change Order Form (Exhibit E – Change Order Form) signed by the Contractor Contract Administrator and the Agency Contract Administrator. A written Change Order may authorize only minor changes to the Services. Changes to deliverables, deliverable dates and the budget must be authorized by written amendment to this Contract.

Task 13. Compare Recycling Collection System Options

Using the material list from Phase 1 Task 2, Contractor will investigate alternative recycling collection systems to collect clean and high-quality recyclable materials. At the beginning of this task, Contractor and DEQ will identify and confirm, with feedback from the Steering Committee, the research plan to identify the system alternatives, key characteristics of those systems, and anticipated data sources.

Research will be conducted in two ~~parts~~ stages with an overall focus on a high-level assessment of whether the benefits of changing the system would outweigh the costs. ~~The first part stage will include a~~ high-level analysis of collection system alternatives and the benefits and drawbacks of each system compared to Oregon's current system — a system with commingled paper and plastic with glass collected separately and a robust beverage container return system. With these results, the Contractor will provide a recommended narrowed list of collection system alternatives to examine or more detail for the second ~~part~~ stage. DEQ and Partners will provide final direction to the Contractor for the next stage of analysis.

~~Prior to~~ At the beginning of this task, Contractor and DEQ will agree on a research plan that identifies the research focus (system alternatives and key characteristics to research), research methods, and anticipated data sources ~~and budget~~.

Residential ~~Collection~~ system alternatives ~~will~~ may include:

- ~~Residential: d~~Dual stream s in a split containers receptacle with separation of 1) (fibers versus and 2) other plastic, metal and glass containers ~~with glass~~
- ~~Residential: t~~Three streams within a split containers receptacle for with separation of 1) fiber versus non-glass and 2) metal and plastic containers and, a second receptacle for glass ~~collected separately from other containers~~.
- ~~Residential: d~~Dual streams with alternating week collection ~~(may require bins or bags instead of carts),~~ of 1) fiber and -2) other plastic, metal and glass containers ~~glass included with other containers~~.
- ~~Residential: t~~Three streams with alternating week collection 1) fiber and 2) metal and plastic containers and 3) glass containers
- ~~(may require bins or bags instead of carts),~~ glass separate from other containers. Specialized materials collected at depots.

Commented [JB1]: Stage 1 will require research because there has been a lot of changes over the last 18 months in response to the market meltdown. We don't expect that it will require exhaustive research, but we will need to contact haulers throughout the State to get an update on what changes they have made to their collection operations.

Commercial collection system alternatives will include:

- Commercial recyclables collection routes for some source separate materials.
- ~~Commercial dry-waste routing.~~
- ~~Specialized materials collected at depots.~~

Commented [SB2]: Mostly paper but no food — uses special processing lines. Collection from certain businesses like consulting firms, etc. Some plastics.

Key characteristics ~~will~~ may include, ~~but are not limited to:~~

- ~~Phase~~Stage 1 (based on Contractor team’s existing knowledge and experience plus limited additional research):
 - Typical ~~c~~Capital, operational, and equipment needs.
 - Materials typically included in programs using the collection system.
 - Compatibility of system with trends in materials projected in Task 1.2.
 - Compatibility with Oregon’s existing ~~or potential~~ processing infrastructure.
 - Additional processing infrastructure typically used elsewhere with the collection system
 - Compatibility with service to different generator types (residential, commercial, and multifamily).
 - ~~Compatibility~~Potential ~~with~~ end markets (e.g., true recycling, creating energy).
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- ~~Phase~~Stage 2 (based on additional research):
 - Anticipated ~~c~~Collection cost or change in collection rates.
 - ~~Compatibility with Oregon’s existing or potential processing infrastructure.~~
 - ~~Compatibility with service to different generator types (residential, commercial, and multifamily).~~
 - ~~Compatibility with end markets.~~
 - Examples of ~~c~~Consumer acceptance, where readily available if system is used elsewhere and consumer acceptance has been assessed.
 - ~~Compatibility with end markets.~~
 - i. Final disposition of recovered materials — true recycling, creating fuel or energy, etc.
 - ii. Necessary funding mechanisms. (Funding in this case is the change in collection rates)
 - Examples of Necessary policy drivers (such as EPR), where readily available if system is used elsewhere and policy drivers are substantially different from Oregon ~~including regulation and responsibilities for collection.~~
 - Anticipated ~~e~~Anticipated System effectiveness (quantities collected, material quality, contamination), where system is used elsewhere and effectiveness has been measured.

Commented [JB3]: Two tasks in Stage 2; consumer acceptance and policy drivers, may require a lot of effort.

Anticipated research methods and data sources could include, but are not limited to:

- Review of public data on costs ~~and, coupled with~~ available private data for collection operations within the State of Oregon, ~~for jurisdictions in the Northwest.~~ Data sources may include composite collection costs and operational data from several Oregon jurisdictions to compare current collection operations to the various system alternatives.
- ~~Consideration of trends with changes to collection programs.~~
- ~~Interviews with selected collection programs in the Pacific Northwest and beyond.~~

- Web research and targeted interviews with collection programs and experts around the country for published reports and other data on material quality and contamination in different collection systems.
- Contractor will review reports and presentations newer than 10 years, with a preference for data from the past 5 years.
- Contractor could attempt to harmonize materials lists when making comparisons of programs that accept different materials for more direct comparisons.

Task 24. Assess Potential Recycling Sorting and Processing System Options

Using the findings from Phase 1 Task 2 (materials) and the collection systems identified by DEQ in Phase 2 Task 1, Contractor could will research existing and emerging recycling sorting and processing technologies, processes and systems in the United States, Canada, and Europe to identify cost-effective recycling sortation and processing options for recyclable materials. Prior to At the beginning of this task, Contractor and DEQ will agree on a research plan that identifies the research focus, research methods, and anticipated data sources, and budget. For each system to be researched, DEQ will provide direction on system assumptions including defining a single scenario to be investigated that includes the number and average size of sorting and processing systems.

Examples of potential Research areas of focus could will may include systems that, but are not limited to:

- How to address mixed plastics (or mixed containers) and technologies for sorting, along with paper. Take in single-stream commingled recycling and glass containers included
- Take in dual-stream commingled recycling with glass containers collected separately
- Best processing models for newspapers, office papers, printing and writing papers, and bleached paperboard packaging. Use secondary sorting and processing of containers
- Use secondary sorting and processing for fiber
- Use local pre-sorting or preliminary cleaning before transfer to a larger facility with more capabilities
- Best practices for facilities sorting, processing and recovered paper grades from curbside systems.
- British Columbia's managed system where certain materials are collected at depots, paper is sorted and baled locally, and all other metal and plastic containers are transferred to one container recycling facility for specialized sorting.
- Processing systems to Address highly contaminated materials
- or mixed streams versus processing systems for streams with a limited accepted materials list. Take in some dry waste Include commercial mixed dry waste

Anticipated Research methods and data sources could will may include, but are not limited to:

- Interviews with equipment manufacturers regarding equipment capabilities, capacities, capital costs, and operating costs.
- Interviews with operators of existing sorting and processing facilities in the United State of Canada using selected technologies and processes regarding in-field experience with equipment capabilities, capacities, capital costs, and operating costs.

Commented [JB4]: We suggest not immediately excluding commercial mixed dry waste (e.g., commercial waste after organics have been source separated). There have been advances in processing, and mixed commercial typically includes a meaningful share of recoverable materials.

Research and analysis ~~could will~~ may address the following characteristics (level of detail depends on number of systems researched):

- Capabilities and functions of the technologies
- Capital and operating costs.
- Final disposition of recovered materials — ~~true recycling~~ incorporating materials back into manufacturing, creating fuel or energy, etc.
- Necessary funding mechanisms.
- Necessary policy drivers.

Technologies could be considered as part of an entire system (e.g., the order in which technologies should be deployed within a facility, not just the independent capabilities of the technology). For systems research in the focus areas, Contractor could prepare profiles of typical residential and industrial/commercial/institutional (ICI) systems used in North American and Europe, including whether systems are centrally managed or decentralized.

Tasks	Deliverables	Schedule	Budget
Phase 2 – COLLECTIONS AND PROCESSING RESEARCH			
Task 3. Compare Recycling Collection System Options	<ul style="list-style-type: none"> • Draft summary memo of Stage 1 findings. • Draft summary report and presentation and final report 	Stage 1 research due 5 weeks from finalized research plan. Stage 2 research due 8 weeks from finalized narrowed list of options.	\$33,000
Task 4. Assess Potential Recycling Sorting and Processing Systems	<ul style="list-style-type: none"> • Draft summary report and presentation and final report 	Due 13 weeks from finalized research plan	\$36,500
Total			\$69,500