



Recycling Steering Committee

Modernizing Oregon's recycling system with support from Oregon Consensus

Infrastructure Research Subcommittee Meeting

Agenda

Tuesday, October 22, 1:30-4:30 p.m.

700 NE Multnomah St, Portland, Room 601 — *please sign in at reception on the sixth floor — 601 is open at 1 p.m. — you are welcome to bring your lunch and eat early*

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Purpose of meeting: for the subcommittee to understand updated scope of Phase 2 infrastructure research and provide feedback to DEQ.

Agenda:

Time	Task	Objective
1:30-1:40 p.m.	Welcome and introductions. Review purpose of meeting and objectives — Robin Harkless, Oregon Consensus, facilitator	Everyone is introduced, the agenda for the meeting is set and the purpose of the meeting is understood
1:40-2:10 p.m.	Provide update on proposed infrastructure evaluation — David Allaway, DEQ	Shared understanding and feedback received on updated infrastructure research approach
2:10-2:40 p.m.	Confirm focus of collection alternatives research — Brian Stafki, DEQ / Cascadia Team	Shared understanding of collection alternatives to be researched
2:40-3:25 p.m.	Discuss proposed focus of processing alternatives research and get feedback — Brian, DEQ / Cascadia Team	Shared understanding of proposed processing alternatives and feedback received

Time	Task	Objective
3:25-3:55 p.m.	Discuss proposed research on education and compliance efforts research and get feedback — Brian, DEQ / Cascadia Team	Shared understanding of proposed education and compliance research and feedback received
3:55-4:15 p.m.	Discuss upcoming activity for DEQ and the subcommittee — Brian, DEQ	Shared understanding of role/activities of DEQ and subcommittee
4:15-4:30 p.m.	Summarize next steps and adjourn — Robin, OC	Next steps are confirmed

Meeting Summary

Participating: David McCall — Tillamook County, Bruce Walker — City of Portland, Bryce Jacobson — Metro, Dylan de Thomas — The Recycling Partnership, Jeff Murray — EFI Recycling, Vinod Singh — Far West Recycling, Nicole Janssen — Association of Plastics Recyclers, Dave Claugus — Pioneer Recycling, Janine Bogar — Washington State Department of Ecology

Cascadia Consulting Team: Jessica Branom-Zwick, Chris Bell

DEQ Staff: David Allaway, Justin Gast, Peter Spendelow, Brian Stafki

Oregon Consensus Facilitation: Robin Harkless, Amy Delahanty

ACTION ITEMS

WHAT	WHO	By WHEN
Review and provide comments on the recycling collection and processing research plan.	Subcommittee to Brian Stafki	COB, Wednesday, October 23.
Determine tasks and timeline for Subcommittee work for 11/4 and 11/20 meetings	DEQ	Before 11/4

SUMMARY

Welcome/Introductions/Frame for the Day: Robin Harkless, Oregon Consensus, led a round of introductions and reminded the group of the purpose and objectives for the day, which were to: hear an update on the proposed infrastructure evaluation; discuss and confirm the focus of the collection and processing research; discuss education and compliance research; and review subcommittee next steps.

Update on Proposed Infrastructure Evaluation. David Allaway, DEQ, shared that the Agency has given additional thought to what is needed with the infrastructure research and how it will inform the Steering Committee (SC) moving forward. He reminded the group that Phase I of the infrastructure research has been completed, and the Cascadia Consulting team is working to finalize the report. He then provided a broad overview of DEQ's proposed approach and timeline for Phase II of the research effort, which were the following:

- The proposed Phase II approach will be similar to that being undertaken in the Frameworks research effort (*timeline outlined in further detail below*). This approach will include a process for developing and evaluating infrastructure scenarios. The SC will then review and discuss these alternatives and seek consensus to identify the group's preferred infrastructure scenario(s). Following consensus of the preferred scenario(s), the SC will identify next steps and considerations for implementation and integration with the preferred frameworks scenario for whole-system design changes.
- David shared that scenarios will incorporate recycling system elements (*as detailed in the 10/22 PPT presentation to subcommittee members*) to varying degrees, and would help inform a several discrete possible futures of recycling in Oregon.
- Examples of potential scenarios to evaluate may include: a scenario that looks like Oregon's current recycling system with modest investments; the Rogue Disposal model; or upgrades to other collection systems.
- The selected scenarios will be evaluated against the baseline based on criteria such as cost, environmental outcomes, resiliency to market changes, contamination, etc.
- Prior to the development and evaluation of scenarios, however, some preliminary research will be commissioned. This includes:
 - A limited review of collection alternatives (Task 1).
 - A more detailed review of processing infrastructure alternatives (Task 2).
 - A literature review of generator-facing outreach and compliance interventions (Task 3).
 - Construction of a baseline model of recycling system costs in Oregon (Task 4).

There being no questions or comments from the group, David reviewed the updated research timeline.

Scenario Development Timeline. The first round of scenario development and evaluation by Cascadia is anticipated to begin in **February 2020** for SC consideration. (Meeting this date is conditioned on DEQ completing legal sufficiency review for a significant contract amendment with Cascadia.) Cascadia will develop three to five scenarios that represent combinations of materials, collection and processing methods, and education and compliance interventions. David shared DEQ's hopes that the first round of scenario evaluation results could be shared with the SC in **March**, and based on SC member feedback, a

second round of scenario evaluation results would be anticipated in **April**. Ideally, the SC will then strive for consensus on one/two different preferred infrastructure scenarios in **May**. Finally, there will be a gap analysis to compare the baseline (Oregon's current system) to the desired future scenario(s) to determine what implementation steps should be taken to achieve the desired future state.

David noted some SC members may want to conduct a deeper dive into Cascadia's research and evaluation findings of the proposed scenario alternatives. DEQ has requested that Cascadia build scenarios that are transparent so SC members are able to dive into the details, when possible.

Upcoming Research Needs. DEQ then reviewed the upcoming research needs associated with Phase II and highlighted proposed changes, which included the following:

- Collection Alternatives (Task 1): The goal of this task of the research is to provide the SC with summary-level evaluation of two collection alternatives (dual stream / one split cart and dual stream / two carts / alternating collection). Cascadia Consulting will develop two-to-three case studies for each of the collection alternatives (of the jurisdictions that use agreed-on collection methods) for a total of four-to-six case studies. David highlighted the other collection alternatives previously discussed by subcommittee members may still be included in scenarios (e.g. single stream options, depot options), but are more well-known, and as such don't need to be researched and evaluated in advance of scenario development.
- Processing Alternatives (Task 2) Task 2 remains a more robust and wide ranging look at processing alternatives. Cascadia will develop one-to-two case studies per type of processing system, of facilities outside of Oregon that use agreed-on processing methods, for a total of six-to-ten case studies.
- Education/Compliance Literature Review (Task 3) is a new task not previously discussed by the subcommittee. David shared there have been differing opinions about the potential role, efficacy, cost and long-term "stickiness" (retention) of generator facing education and compliance. DEQ would like to investigate what evidence exists regarding the efficacy and cost of these types of interventions, and is proposing in Task 3, a limited literature review supplemented with some focused phone interviews. This could inform the development of scenarios and subsequent evaluation of different future scenarios.

Questions

- *Question regarding Task 1*: Would dual stream be in all of the alternatives? If using dual stream, would it be in two containers?
 - DEQ response: there will be a light-touch look at dual-stream options to understand how they compare against each other – both split carts and two containers. All of the collection modes (including single-stream and drop-offs) will still be on the table for scenario construction, but we don't need to evaluate them as part of the research in advance of scenario building.
- *General Question*: Will Cascadia reference the work coming out of the frameworks research?

- DEQ Response: This contract was structured in isolation of the framework options. It's anticipated there will be an integration phase of the frameworks and infrastructure scenarios that will occur in late spring / early summer. The goal will be for the SC to mix and match the scenarios into a preferred whole system framework.
- *General Question:* How does Task 3 of the research impact the current timeline? Does it add a lot more time?
 - DEQ Response: We don't see Task 3 causing a delay right now.

Brian Stafki, DEQ, then invited the Cascadia team to provide a high-level overview of the collection and processing system alternatives research methodology with the group. (*See Phase 2 DRAFT Research Plan for additional details.*) The subcommittee provided initial feedback to DEQ and the consultant team on the collection and processing research methodology and key collection system characteristics. Cascadia asked whether it was more important to look at the glass on the side or focus on bottle bill states. Some subcommittee members suggested the group focus on bottle bill states, but there was a concern there may be limited case study examples. **The group ultimately agreed** Cascadia will gather enough data to be informing to SC members, with a preference to seek out those programs that have a bottle bill-like system. (Dylan De Thomas shared The Recycling Partnership can assist with the data to identify dual-stream communities in the U.S.).

One SC member wondered if the research would look at dual stream/ two cart systems, or an alternating collection system. While some expressed concern over the feasibility of changing the cart system, other members thought it would be valuable to research whether split carts could work, and if so, the costs and design footprint associated with this option. **There was agreement** that the case studies would highlight the **type** of equipment used and whether or not **contamination auditing tools** are a part of the systems.

Robin acknowledged that taking an objective look at collection and processing alternatives may be difficult for some members, as changes to the system as a result of outcomes of the research could directly impact their specific area of the system. Several Subcommittee members shared there are some companies that have made significant technology investments and certain changes have the ability to negatively impact their businesses. David shared appreciation to the subcommittee members for engaging in these discussions and being open to the process and various efforts. He shared the State and partners are looking at ways to improve the system and are collecting information in an attempt to identify those opportunities. Additionally, David shared that with any change, there would be a transition period, and in some cases, may take a significant number of years to implement. David emphasized the State and its partners owe it to Oregonians to be relatively thorough and look at the various options. Robin then reminded the group that the stated intent of the research is to help inform decision makers on how best to modernize the system. Following this, other comments and questions were provided:

- Comment: There are different interpretations regarding what 'residuals' mean. Suggestion to use a different word, or denote how each alternative defines 'residuals' during evaluation.
- Comment: We talked about researching dry waste MRFs independently with materials we aren't capturing. It's worth studying dry waste MRFs, but perhaps not integrated with clean MRF.

- Comment: all this work has an implicit assumption that a central planning approach will come up with the best answer. The market place generally does a better job identifying where those investments should be rather than a central planning approach.
- Concern: This project and actions DEQ takes has the potential to stop investment in MRFs, mills, etc. We don't want to discourage investment by actions that you take.
- Suggestion to look at transportation impacts and costs during evaluation.
- Suggestion: Avoid naming the facilities during the research, anonymity will be important.
- Suggestion: Consider utilizing a survey to gather data that is difficult to acquire. Then offer to follow up with a phone call.
- Comment: try to get information about the quality of the bales. Ask if they have had any rejected loads, or had shifts in markets because of contamination (or lack thereof).

Education and Compliance Research

The group then engaged in a brief conversation regarding Task 3 (Education and Compliance). Brian noted Cascadia will be doing a literature review regarding the potential role, efficacy, and cost-effectiveness of the generator-facing education and compliance tools (e.g. cart tagging, up charges, etc.). Brian then shared an initial list and solicited initial feedback from subcommittee members on the types of tools to examine the following comments and suggestions were provided by subcommittee members:

- Question: Do we want to talk about opt-in recycling programs and compare it towards mandatory recycling systems?
 - Cascadia response: we suspect there might not be a lot of robust data for this.
- Suggestion: Utilize an equity lens to consider potential impacts.
- Suggestion: Focused research that determine what are the routes that come in with cleaner or dirtier loads.
- Suggestion: consider what are the interventions that could reduce contamination?
- Suggestion: research incentive programs.
- Suggestion: utilize other existing research e.g. Metro or Department of Ecology reports.
- Comment: hope that the SC can investigate social media approaches to communicating education and outreach to generators.

Next Steps

The next subcommittee meeting is scheduled for November 4th to discuss and receive input on Tasks 4, 5 and 6. David shared that if the November 4th meeting is cancelled, the SC will plan to discuss Tasks 1-7 at its November 20th meeting. David shared that Infrastructure Subcommittee members would be welcomed to attend the November 20 meeting and he will see how to incorporate their feedback during the discussions. David then stated when the research design is confirmed in by the SC, it's anticipated the Infrastructure Subcommittee wouldn't meet again until sometime in 2020.

Infrastructure Research Subcommittee Meeting

Oct. 22, 2019

David Allaway and Brian Stafki, DEQ

Cascadia Consulting Group team



Recycling Steering Committee

Modernizing Oregon's recycling system with support from Oregon Consensus

Definitions

- “*Phase One*”: research into materials (material projections)
 - *Conducted spring + summer, 2019*
- “*Phase Two*”: research into infrastructure elements and scenarios
 - *To be conducted fall 2019 – spring 2020*
- “*Infrastructure scenario*”: a discrete possible future of recycling in Oregon, including the following elements:
 - Targeted materials
 - On-route and drop-off collection methods
 - Generator-facing education and compliance
 - Processing infrastructure
 - End markets
 - Contamination reduction and management throughout
 - Potential geographic differences for some/all of the above



Research: Phase Two

Collection (T1) and
processing (T2) research

Education/compliance
research (T3) and baseline
system cost modeling (T4)

First round of scenario
development and evaluation (T5)

Second round of
scenario
development and
evaluation (T6)

Select final scenario
and gap analysis (T7)

Collection alternatives (T1)

Single-family residential

- Single stream / glass on the side
- Dual stream / one split cart — *to be studied in T1*
- Dual stream / two carts / alternating collection — *to be studied in T1*
- Multi-material depots with staffing
- Limited depots with no staffing

Commercial collection

- Single stream collection (containers or roll carts) / glass on side
- Dual stream collection (containers or roll carts) / glass on side



Processing alternatives (T2)

Single-stream collection (no glass):

1. Specialized secondary MRF (residuals) (following single-stream MRFs)
2. Container recovery facility (following single-stream MRFs)
3. Fully modernized MRFs
4. Integrated MRFs (include select commercial dry waste)

Dual-stream collection:

5. Fiber-only MRFs
6. Container only MRFs (with glass cleaning)

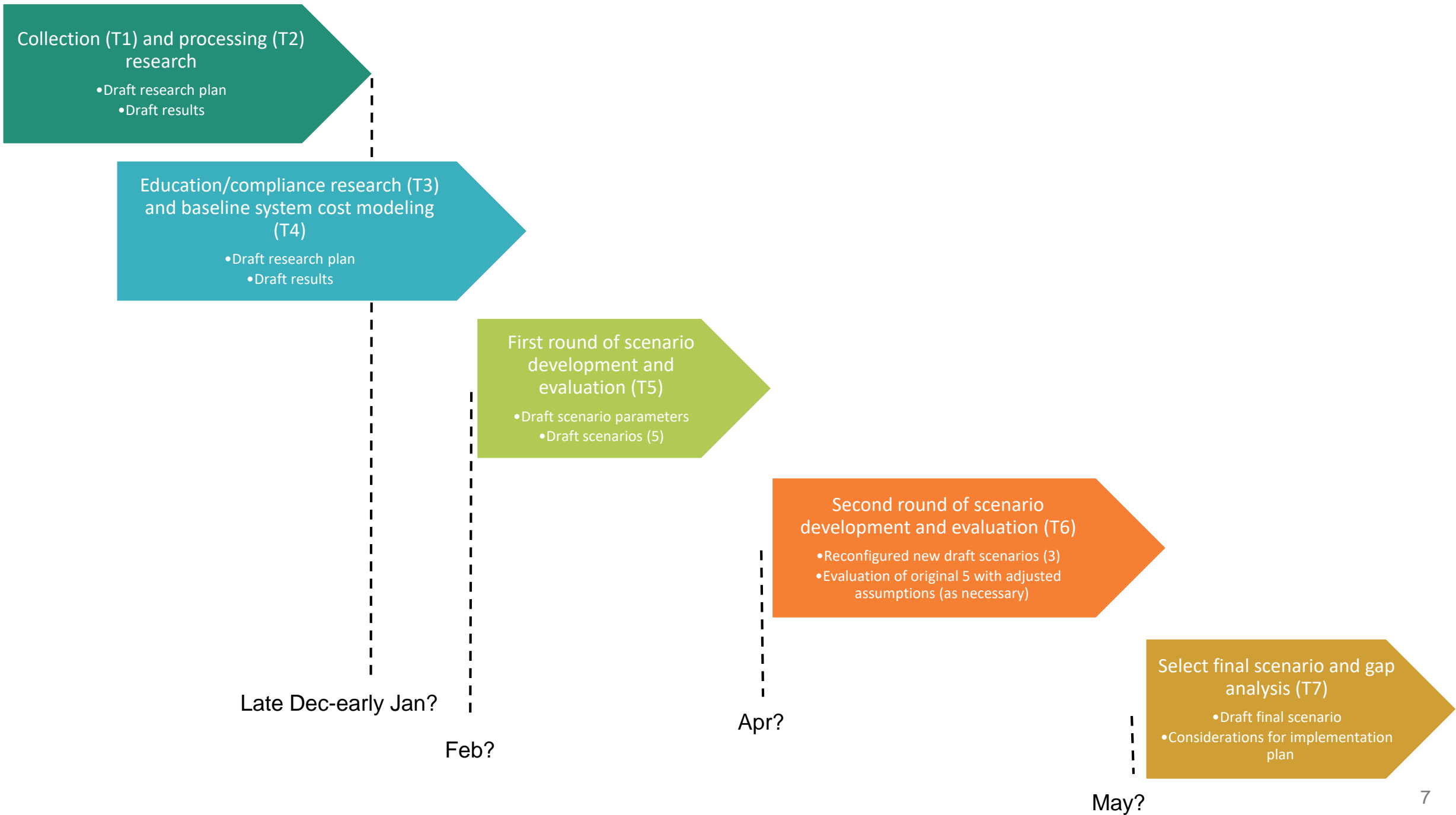


Education/compliance literature review (T3)

Options of interest where information is available:

- Cart-tagging (with or w/out refusal of service)
- Warnings/removal of carts
- Contamination fees
- Focused outreach campaigns (certain routes/generators)
- Community outreach campaigns
- Increased convenience
- Increased signage
- Impact of pay-as-you-throw relative to contamination
- Simplified material collection list
- Other behavior change considerations (capacity for new/improved behaviors vs tradeoffs)





Upcoming next steps (2019)

- Subcommittee provide feedback by COB 10/23
- Ask RSC for comments on research plan T1 & T2
- DEQ and Cascadia finalize research plan T1 & T2
- DEQ finalize contract amendment T1 & T2
- Subcommittee:
 - Nov. 4, 1-4 p.m. (*tentative or 11/21*)
 - Draft contract approach for T3 & T4
 - Review potential draft research plan T3 & T4
 - Draft contract approach for T5-7
- RSC infrastructure discussion 11/20
- DEQ finalize contract amendment and research plan for T3 & T4



Upcoming next steps (2020)

- DEQ finalize contract amendment T5-T7
- Subcommittee (meetings as needed):
 - Review collection & processing draft research results (T1 & T2)
 - Review education/compliance draft research results (T3)
 - Review of baseline system cost modeling draft research results (T4)
- Recycling Steering Committee
 - Review of T1-T4 research plans and results
 - Confirm scenarios for initial evaluation
 - Review first round of scenario evaluation results and identify additional evaluation (T5)
 - Review additional evaluation results (T6)
 - Find consensus on recommended scenario(s)
- Draft implementation plan

