

Changes in Washington's Statewide Solid Waste Metrics - FAQ

April 19, 2019

Frequently Asked Questions (FAQ)

1. QUESTION: Why is the Department of Ecology focusing more on waste generation?

Answer: Waste reduction has been statutorily the highest waste management priority since 1984. The Washington Legislature made this decision because waste reduction is proven to lead to best results in terms of reducing pollution and resource use. The best way to measure waste reduction is by first measuring waste generation. This will help Washington residents grasp the environmental impact of all purchases, which may lead to more thoughtful purchasing and disposal decisions.

For example, source reduction generally results in lower greenhouse gas (GHG) emissions than recycling and other waste management scenarios. See the **EPA Waste Reduction Model (WARM)** website at epa.gov/warm for details on how much GHG and energy is saved by source reduction versus recycling or other alternative waste management scenarios. The following table shows these savings for selected materials in WARM.

Per Ton Estimates of GHG Emissions for Baseline and Alternative Management Scenarios (WARM)

| Material | Source Reduced (MTCO ₂ E) ¹ | Recycled (MTCO ₂ E) | Landfilled (MTCO ₂ E) | Combusted (MTCO ₂ E) | Composted (MTCO ₂ E) | Anaerobically Digested |
|------------------|---|--------------------------------|----------------------------------|---------------------------------|---------------------------------|------------------------|
| Steel Cans | (3.06) | (1.81) | 0.02 | (1.57) | NA | NA |
| Copper Wire | (7.01) | (4.71) | 0.02 | 0.03 | NA | NA |
| Glass | (0.53) | (0.28) | 0.02 | 0.03 | NA | NA |
| HDPE | (1.47) | (0.87) | 0.02 | 1.23 | NA | NA |
| PET | (2.20) | (1.12) | 0.02 | 1.21 | NA | NA |
| Cardboard | (5.60) | (3.12) | 0.23 | (0.51) | NA | NA |
| Newspaper | (4.77) | (2.75) | (0.82) | (0.58) | NA | NA |
| Office Paper | (7.97) | (2.86) | 1.22 | (0.49) | NA | NA |
| Mixed Paper | (6.11) | (3.53) | 0.13 | (0.51) | NA | NA |
| Food Waste | (3.66) | NA | 0.54 | (0.14) | (0.18) | (0.06) |
| Carpet | (3.82) | (2.36) | 0.02 | 1.08 | NA | NA |
| Personal | | | | | | |
| Computers | (50.49) | (2.50) | 0.02 | (0.19) | NA | NA |
| Tires | (4.28) | (0.38) | 0.02 | 0.51 | NA | NA |
| Asphalt Concrete | (0.11) | (0.08) | 0.02 | NA | NA | NA |
| Asphalt Shingles | (0.19) | (0.09) | 0.02 | (0.35) | NA | NA |
| Drywall | (0.21) | 0.03 | (0.06) | NA | NA | NA |

2. QUESTION: Does this change mean Ecology is abandoning the statewide recycling goal of 50% from RCW 70.95?

Answer: No. But recent challenges with the recycling system have further illustrated this is not the most important goal. We have learned a lot since this goal was originally established in 1989. The 50% benchmark measures how much material is *collected* for recycling, not how

¹ Metric tons of carbon dioxide equivalent.

much material is actually turned back into a new product, the real definition of this term. Ecology will also honor the intent of the RCW by publishing the rate of materials collected for recovery vs. disposed, as this data in recent years is more genuine/reliable than the data for recycling. And, local governments will still be able to calculate recycling rates based on the best available data if they desire.

3. QUESTION: How did Ecology make this decision?

Answer: Ecology relies on partners around the state for important information affecting their waste management operations. We have heard from local governments that they want new metrics. Local governments emphasize that it is more important to collect quality materials, not just large quantities of contaminated materials. We agree. Having a goal that encourages more recycling may actually be encouraging a wasteful recycling system. Issues with Chinese import restrictions impacting markets for mixed materials have highlighted the issue.

4. QUESTION: My county just updated its solid waste management plan with a goal of increasing the municipal solid waste (MSW) recycling rate. Was that a waste of time?

Answer: No, not at all. Counties or solid waste planning jurisdictions are not required to adopt or gauge their own progress against the new statewide metrics. Local governments can continue to use the MSW recycling rate and consider it to be important to track for their jurisdiction: however, it will not be available on a statewide basis and will not be calculated for counties. Counties may calculate their own recycling rates using the individual material tonnages reported for their county on recycling reports and surveys tracked by Ecology and provided in aggregate to counties.

5. QUESTION: Why is Ecology shifting from a recycling rate to a “collected for recovery” rate? What does this mean?

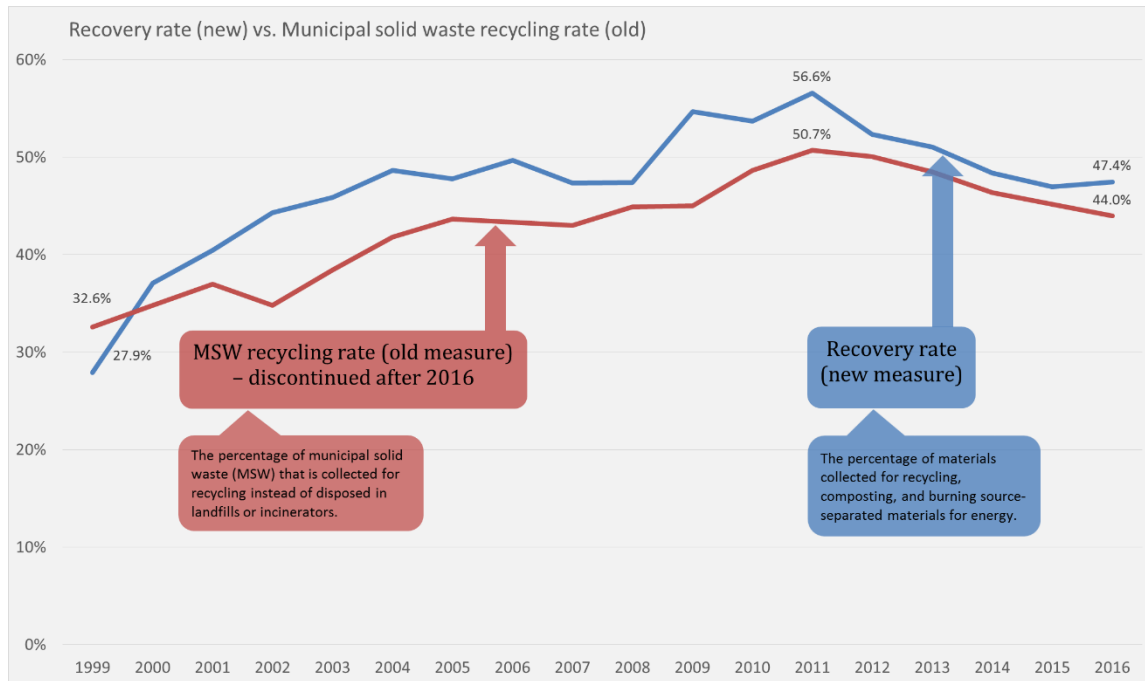
Answer: We are shifting because a recovery rate more accurately represents what is happening with these materials. They are being collected for recovery, but not necessarily recycled for a number of reasons. The municipal solid waste (MSW) recycling rate is no longer relevant because the line between what is and what isn't MSW does not correlate with data collected. The MSW recycling rate, as it has been calculated, does not include many materials that were actually recycled under state definitions, so it was limiting. Recycling other materials besides MSW also benefits the environment and economy, so we decided to broaden the measure.

Also, having two rates is confusing to some. The recovery rate measuring all materials that are collected for recovery from the solid waste stream is easier to follow.

6. QUESTION: How do the recycling and recovery rates compare to each other?

Answer: In 1999, Ecology first started asking for reports of non-MSW material that was collected for recycling and other beneficial uses. Since 2000, when reports of the other non-MSW recovered materials started to improve, the recovery rate has been a few percentage

points higher than the MSW recycling rate. See graph below for a comparison. Also see the next question.



7. QUESTION: What materials does this impact?

Answer: The recovery rate includes all materials reported as collected for recycling (about 90% of the total recovered), and all materials reported as collected for alternative energy markets or burning for energy (about 10% of the total recovered).

This table shows the materials impacted by the changes where they are counted:

| Incoming materials reported as collected by regulated solid waste facilities and on recycling surveys | End Use as reported ² | Counting under <u>previous</u> method (MSW Recycling Rate or Recovery rate) | Counting under <u>new</u> method (Recovery rate) |
|---|----------------------------------|---|--|
| Agricultural Organics | Recycling | Recovery | Recovery |
| Aluminum Cans | Recycling | MSW Recycling | Recovery |
| Anti-freeze | Recycling | Recovery | Recovery |
| Appliances/White Goods | Recycling | MSW Recycling | Recovery |
| Ash, Sand & Dust (used in asphalt production) | Recycling | Recovery | Recovery |
| Asphalt & Concrete | Recycling | Recovery | Recovery |
| Batteries - Auto Lead Acid | Recycling | MSW Recycling | Recovery |
| Cardboard | Recycling | MSW Recycling | Recovery |
| Carpet & Pad | Recycling | Recovery | Recovery |

² End uses for purposes of counting are recycling (includes compost), alternative energy, reuse, and disposal (includes landfill or incineration).

| Incoming materials reported as collected by regulated solid waste facilities and on recycling surveys | End Use as reported² | Counting under previous method (MSW Recycling Rate or Recovery rate) | Counting under new method (Recovery rate) |
|--|--|---|--|
| Cartons | Recycling | MSW Recycling | Recovery |
| Container Glass | Recycling | MSW Recycling | Recovery |
| Container Glass (used as aggregate) | Recycling | Recovery | Recovery |
| Electronics | Recycling | MSW Recycling | Recovery |
| Fats and Oils | Recycling | MSW Recycling | Recovery |
| Ferrous Metals | Recycling | MSW Recycling | Recovery |
| Fluorescent light bulbs | Recycling | MSW Recycling | Recovery |
| Food Processing Waste (pre-consumer) | Recycling | Recovery | Recovery |
| Food Scraps (post-consumer) | Recycling | MSW Recycling | Recovery |
| Gypsum | Recycling | MSW Recycling | Recovery |
| HDPE Plastics | Recycling | MSW Recycling | Recovery |
| High Grade Paper | Recycling | MSW Recycling | Recovery |
| Household Batteries | Recycling | Recovery | Recovery |
| Industrial Batteries | Recycling | Recovery | Recovery |
| Industrial Organics | Recycling | Recovery | Recovery |
| Industrial Paper | Recycling | Recovery | Recovery |
| Landclearing Debris | Recycling | Recovery | Recovery |
| LDPE Plastics | Recycling | MSW Recycling | Recovery |
| Mattresses | Recycling | Recovery | Recovery |
| Miscellaneous | Recycling | Recovery | Recovery |
| Mixed Paper | Recycling | MSW Recycling | Recovery |
| Mixed Plastic | Recycling | MSW Recycling | Recovery |
| Newspaper | Recycling | MSW Recycling | Recovery |
| Nonferrous Metals | Recycling | MSW Recycling | Recovery |
| Oil Filters | Recycling | Recovery | Recovery |
| Other Organics | Recycling | Recovery | Recovery |
| Other Recyclable Plastics | Recycling | MSW Recycling | Recovery |
| PET Plastic Bottles | Recycling | MSW Recycling | Recovery |
| Photographic Films | Recycling | MSW Recycling | Recovery |
| Post-Industrial and Flat Glass | Recycling | Recovery | Recovery |
| Post-Industrial Plastics | Recycling | Recovery | Recovery |
| Roofing Material | Recycling | Recovery | Recovery |
| Rubber Materials | Recycling | MSW Recycling | Recovery |
| Steel Cans | Recycling | MSW Recycling | Recovery |
| Textiles (rags, clothing, etc.) | Recycling | MSW Recycling | Recovery |
| Tires (baled) | Recycling | Recovery | Recovery |
| Tires (recycled) | Recycling | MSW Recycling | Recovery |
| Used Oil | Recycling | MSW Recycling | Recovery |
| Wood Waste (recycled) | Recycling | MSW Recycling | Recovery |
| Yard Debris | Recycling | MSW Recycling | Recovery |
| Yard Debris and Food (mixed) | Recycling | MSW Recycling | Recovery |

| Incoming materials reported as collected by regulated solid waste facilities and on recycling surveys | End Use as reported ² | Counting under previous method (MSW Recycling Rate or Recovery rate) | Counting under new method (Recovery rate) |
|---|----------------------------------|--|---|
| Agricultural Organics (for anaerobic digestion) | Energy ³ | Recovery | Recovery |
| Construction & Demolition Debris | Energy | Recovery | Recovery |
| Landclearing Debris (burned for energy) | Energy | Recovery | Recovery |
| Other Fuels (burned for energy) | Energy | Recovery | Recovery |
| Tires (burned for energy) | Energy | Recovery | Recovery |
| Used Oil (burned for energy) | Energy | Recovery | Recovery |
| Wood Waste (burned for energy) | Energy | Recovery | Recovery |
| Yard Waste (burned for energy) | Energy | Recovery | Recovery |
| Food (recovered by food banks) | Reuse | Recovery | Excluded ⁴ |
| Paint | Reuse | Recovery | Excluded |
| Refillable Glass Beer Bottles | Reuse | MSW Recycling | Excluded |
| Reuse - Clothing & Household items | Reuse | Recovery | Excluded |
| Reuse - Construct/demo Items | Reuse | Recovery | Excluded |
| Reuse - Miscellaneous | Reuse | Recovery | Excluded |
| Tires (retreaded/reused) | Reuse | Recovery | Excluded |
| Municipal solid waste (mixed) ⁵ | Disposal | MSW Recycling | Recovery |
| Other potentially recoverable materials disposed in segregated loads ⁶ | Disposal | Recovery/Diversion | Recovery |
| Other non-recoverable materials ⁷ | Disposal | Excluded | Excluded |

8. QUESTION: Will reused material be included in the recovery rate?

Answer: No. Materials reported as collected for reuse are excluded from the recovery rate as they are outside of the solid waste system, and therefore not regulated as solid wastes.

Ecology will continue to tally materials as reported as reused, and will provide this information to counties and the City of Seattle. See the table above for specific materials that have been reported and how they are counted.

9. QUESTION: We count hog fuel and used oil burning as recovery. Why not energy recovery of mixed MSW ("waste to energy")?

Answer: Ecology considers energy recovery from burning mixed municipal solid waste (MSW) primarily a volume reduction method for purposes of disposal. It's good that energy is

³ Source separated at a recycling facility and sent to alternative energy markets such as industrial boilers or anaerobic digestion.

⁴ Materials excluded from the recovery rate are also excluded from the waste generation, and tallied and reported separately.

⁵ Included in the denominator of recycling and recovery rates. Includes landfilled and incineration of mixed MSW.

⁶ Used to calculate the recovery rate, in the denominator. Examples: disposed construction and demolition wastes, inert wastes, industrial wastes, tires, wood and landclearing debris.

⁷ Examples: disposed solid wastes from environmental cleanups such as contaminated soils and asbestos.

recovered, but it is not the primary purpose. Source-separated materials such as wood or used oil are traditional fuel sources and marketable commodities sought out to use as fuel, so they differ from mixed refuse. MSW destined for energy recovery facilities are counted in the denominator of the recovery rate and counted towards overall waste generation.

10. QUESTION: What's the difference between diversion and a "collected for recovery" rate?

Answer: The diversion rate is essentially the same as the previously-reported recovery rate Ecology was calculating, but with some additions. In the past, the recovery rate included materials reported as collected for recycling, burning for energy, reuse and municipal solid waste (MSW) and other recoverable wastes in the denominator. Now the recovery rate will include all of these materials except those reported as collected for reuse.

11. QUESTION: Can you give more details on why Ecology is shifting from a diversion to a "collected for recovery" rate?

Answer: Ecology is making a shift to using more materials management-focused terminology as the state solid and hazardous waste plan guides us to do. We decided on the term "recovery" because the term "diversion" emphasizes the negative (landfill is still the focus). By replacing the term "diversion" with "recovery", we emphasize its positive aspect (recovering resources for beneficial uses).

12. QUESTION: Is Washington the only state focusing on waste generation and recovery? What are other states doing?

Answer: A number of states are now working on these issues.

For example:

- Oregon uses similar waste generation and recovery metrics, although it calculates them slightly differently. In Oregon, recovery includes backyard composting and excludes auto hulks.
- Minnesota uses the waste generation as the main metric, and their recycling rate is secondary.
- Vermont, New York, California, North Carolina and Tennessee all focus on decreasing disposal.
- Georgia's goals are about reducing the amount of key materials that are disposed.

Many states, however, still use the MSW recycling rate as their main metric.

13. QUESTION: Recycling is a feel-good activity for citizens and public officials. They don't know anything about waste generation or recovery. How do we make this transition?

Answer: The Department of Ecology planners and data analysts are available to provide technical assistance if you have questions. [The State Solid & Hazardous Waste Plan - Moving Washington Beyond Waste & Toxics](#) provides a resource for changing the focus to waste

reduction and materials management. Outreach materials such as articles and listserv messages will have talking points you can share.

Local Solid Waste Financial Assistance dollars are available to use to help with this transition. For example, local governments have used these funds to purchase durable school cafeteria trays and water bottle refill stations. More can and should be done on this important aspect of materials management.

14. QUESTION: What is a good goal for waste generation? Recovery? When will the state be setting goals for these? What should we do in the meantime when we are supposed to compare against the statewide goal and MSW recycling rate?

Answer: In the near future, Ecology hopes to work with its stakeholders to set numerical targets for waste generation and other solid waste metrics in the state. In the meantime, consider the Legislature's direction in RCW 70.95.010, in which we are reminded "*Waste reduction must become a fundamental strategy of solid waste management*"⁸, and that, "*It should be the goal of every person and business to minimize their production of wastes and to separate recyclable or hazardous materials from mixed waste.*"⁹

15. QUESTION: What information is there on disposed materials and waste?

Answer: Ecology has great data on the quantities going to landfills and estimates of the materials remaining in the waste stream after recovery efforts. Aggregated data from landfill reports is available on the Solid Waste Management Data page at:

<https://ecology.wa.gov/Research-Data/Data-resources/Solid-waste-recycling-data>

The 2015-2016 Washington Statewide Waste Characterization Study is available online at: <https://fortress.wa.gov/ecy/publications/documents/1607032.pdf>. A new characterization study is being planned for 2020 and 2021.

⁸ RCW 70.95.010(4).

⁹ RCW 70.95.010(6)(a).