

# Compost Market Study



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Ecology Publication 25-07-062  
September 2025



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**Ecology Publication 25-07-062**

**September 2025**



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# Executive Summary

In 2023, approximately one million tons of organic materials were recovered for composting in Washington State. This report analyzes the impact of the recently passed Organic Management Laws (OMLs), which aim to reduce the amount of organic materials disposed of in landfills. This reduction will be driven by increasing the volume of organic waste recovered for composting and strengthening the Washington commercial compost industry. Two impactful forces contained within these laws are the newly defined Business Organics Management Areas (BOMAs) and Organics Recycling Collection Areas (ORCA). BOMAs require businesses that produce certain thresholds of organic material waste weekly to subscribe to curbside organics collection services<sup>1</sup> and the Organics Recycling Collection Areas (ORCAs) identify specific jurisdictions where all businesses that produce more than 0.25 cubic yards of organic material per week and single-family homes are required to have access to a similar set of services.

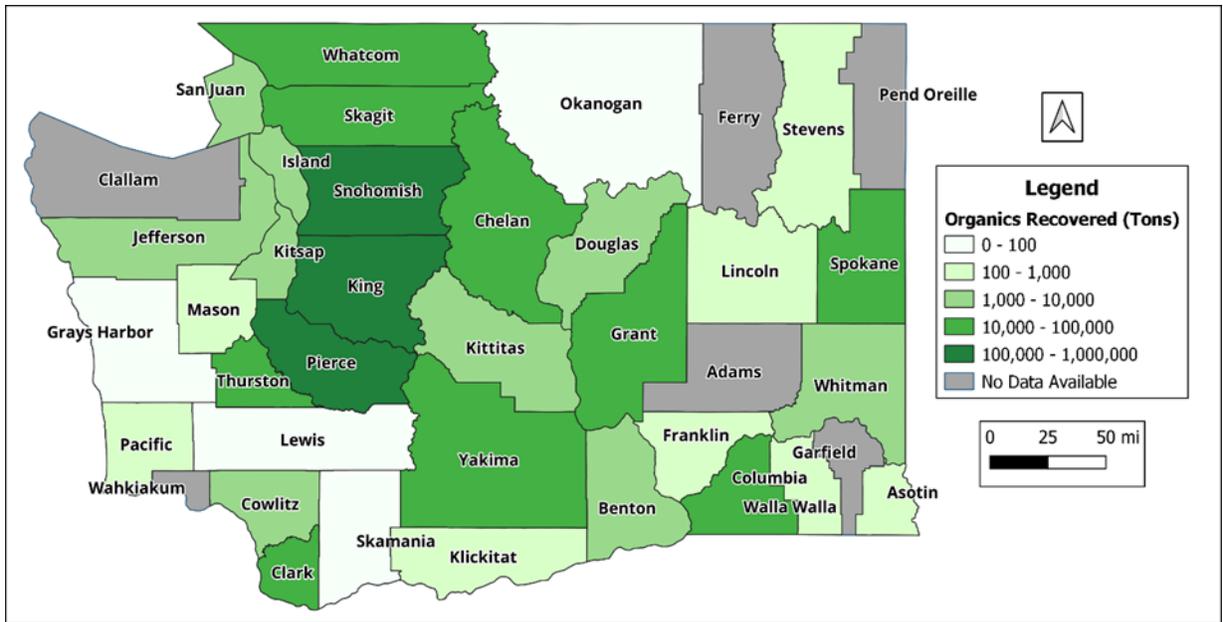
This report presents a starting point for jurisdictions to begin planning for the emerging opportunities for recovered organics and work toward effective organic material recycling strategies. The primary mechanism of analysis in this report is a spreadsheet-based model that projects expected volumes of organics recovered for composting and subsequent finished compost produced by Washington compost facilities on a county-by-county basis through the year 2035. The model projections are based on historic data collected by the Department of Ecology, and assumptions about the progressive implementation of BOMA and ORCA regulations throughout qualifying areas of the state. We developed an appraisal of the current compost market outlook using annual report data on amounts of organic materials managed at Washington compost facilities, voluntary survey responses, and outreach interviews conducted by Greene Economics.

The key findings from the projection analysis are,

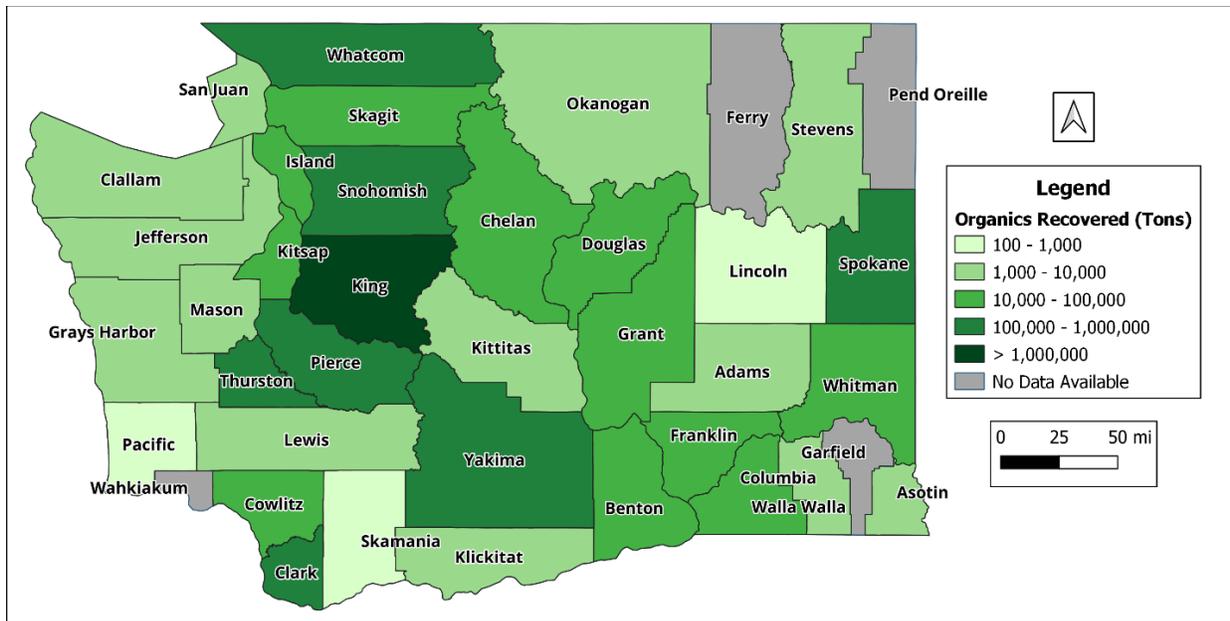
- Organic material recovered for composting is expected to increase by over 2.2 million tons between 2023 and 2035, from collecting approximately one million tons per year in 2023 to over 3 million tons in 2035. This represents a near quadrupling of the total material collected in just 12 years.
- The graphics below show the recorded volumes of organic materials recovered for composting by county in 2023 compared to those projected for 2035 for each county in Washington.
- King County is projected to remain the largest producer of both organic waste for use in compost as well as finished compost production.
- The demonstrated capacity of facility operators to respond to changing feedstock flows, market shifts, and their local customers, supports the idea that the materials management sector in Washington is fairly mature, and expected to be able to successfully respond to the OMLs material flows.
- The counties expected to experience the greatest *growth in the total volumes* of both organic materials collected for composting and finished compost produced are King and Spokane counties.

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<sup>1</sup> Or, manage the organic materials in equal or environmentally beneficial manner. List of options can be found [here](#).



**Figure ES-1. 2023 Total Organics Recovery by County**



**Figure ES-2. 2035 Forecasted Total Organics Recovery by County**

- The counties expected to experience the greatest *percentage growth* in both organic wastes collected for composting as well as finished compost production are Benton, Cowlitz, and Franklin counties. Given the relatively low recovery of organics in these counties historically and because these counties include ORCA impacted areas, the rate of increase is higher in these counties as collection requirements are phased in even if the *volumes* of organics and compost may be lower than other counties.

- In 2023, Washington recorded roughly 1.25 million cubic yards of finished compost produced by facilities in the state<sup>2</sup> using organic feedstock sourced in Washington and other states. By 2030, the volume of compost produced solely from organic material sourced in Washington is estimated to be 1.86 million cubic yards and by 2035 it is expected to reach just over 1.95 million cubic yards. This represents a 30 percent increase in production of finished compost using organic feedstock from Washington between 2025 and 2035. It remains unclear how much substitution of Washington feedstock for previously sourced feedstock from other states will occur between 2023 and 2035. Hence, we assume that by 2035, organic feedstock used for composting that is sourced in Washington will displace some feedstock currently coming from other states.
- Some composting facilities are reluctant to accept food waste, although increasing volumes of food waste recovered, a heavy material, will provide an economic incentive for facilities to modify operations to accept the new organic material, and generate new revenue through tipping fees based on tonnage.
- Using more food waste to create compost is complicated by the fact that food waste needs to be mixed with three to four times its volume in bulking agents such as wood or yard waste for compost. So, expanding capacity to handle food waste also necessitates capacity planning for increased volumes of bulking agents.
- The projections developed for this report are based on historical information, outreach with organics material collection and compost facility operators, and other publicly available information. However, there are many sources of uncertainty about how OMLs will be implemented and how swiftly facilities and municipalities will be able to respond to the new direction of organics management regulation. Also, the projections are based on historic data reported to Ecology by facilities and there is no assurance of consistency in interpretation of, for example, feedstock classification or whether material is sourced from commercial versus residential collection. For these reasons the projections may be considered a starting point for planning, and to point toward potential future research and data collection.

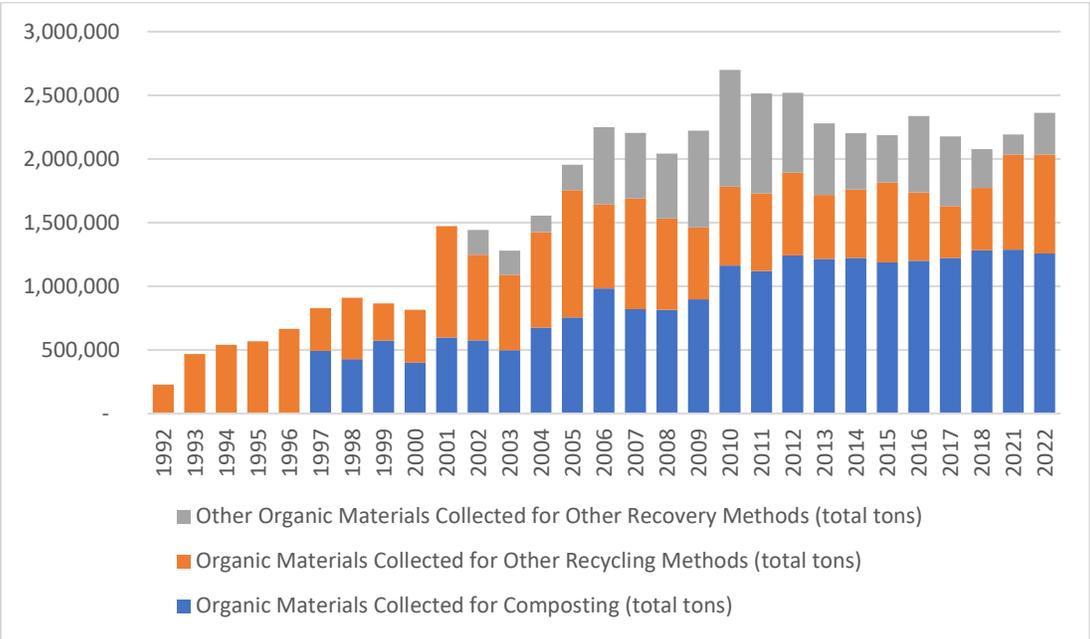
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<sup>2</sup> Washington State Department of Ecology. 2025. Compost Produced 2023.

# 1. Compost and New Organic Management Laws

In 2022, 2024 and 2025, the state Legislature passed the Organic Management Laws (OMLs) to help Washington reduce the amount of organic materials that end up in landfills by 75 percent compared to 2015 levels.<sup>3</sup> The laws state that this goal is to be achieved by 2030.

Organic materials collected in Washington have historically been recovered through composting, recycling, and other recovery methods (see Figure 1),<sup>4</sup> with composting representing the largest recovery method. The other recycling methods include anaerobic digestion (produces energy), energy recovery (also produces energy from organic waste through combustion), and direct land application, which is a permitted activity using mostly agricultural waste and food waste. Within this category, (colored orange in Figure 1), energy recovery represents over 92 percent, with anaerobic digestion representing six percent and land application about two percent.<sup>5</sup>



**Figure 1. Types of Organic Materials Collected for Recovery**

The focus of this report is specifically on how the OMLs will impact the compost industry. This report forecasts how organic material collected for composting will be affected by the OMLs and does not analyze what may also happen in the other two collection sectors represented in Figure 1. That is, we do not take into account how the recovery of organic material might in the future shift between recovery pathways such as anaerobic digestion, prevention, or other recovery and reduction strategies that might also be affected by the OMLs.

<sup>3</sup> See RCW 43.19A.150 and RCW 15.04.420  
<sup>4</sup> Included in the category “Other Recovery Methods” are anaerobic digestion, land application, burned for energy. “Other Recycling Methods” includes processing for animal feed, chipped for mulch, rendering, etc.  
<sup>5</sup> Zero Waste Washington, 2021. Improving Organic Materials Management in Washington State: An Assessment of the Barriers and Needs of Organic Waste Management Facilities in the State of Washington. Available [here](#).

This study will address how these new laws will affect production of compost, including where and how additional organic materials for composting will be collected by county, and how much finished compost will be produced. This study assumes that all additional material collected will be recovered by composting facilities. It does not take into account how other organic management processes may play into material recovery. The research also offers some insights into the market for finished compost in Washington State.

This report provides an estimate of:

1. projected organics recovery needs by county from 2025—2035,
2. projected finished compost production by county from 2025—2035, and
3. an assessment of the market outlook for finished compost.

The forecasts, or projections, incorporate the expected implementation of the new Business Organics Management Area (BOMA) and Organics Recycling Collection Areas (ORCA) collection requirements over the next several years. The Revised Code of Washington (RCW) 70A.205.545 (BOMA regulation) and RCW 70A.205.540 (ORCA regulation) work together to increase the volume of incoming organic waste to compost facilities and other recovery methods incrementally over the coming years.

Chapter 2 of this report presents the projection methodology. Chapters 3 and 4 show the results and key findings of the projected organic material recovery needs and the projected finish compost respectively. Chapter 5 addresses the market outlook for finished compost, and Chapter 6 offers a summary and some recommendations going forward. The remainder of this chapter covers a brief history of the new OMLs, some background information about composting in Washington, and the intended use of this report.

## **1.1. History of the Organics Management Laws (OMLs)**

Washington passed HB 1799 in 2022, HB 2301 in 2024 and HB 1497 in 2025, together forming a suite of legislation referred to as the OMLs. The OMLs established or amended over 20 state laws to create a comprehensive plan of action for organic materials recycling spanning across state and local agencies, residents, and businesses.<sup>6</sup> Reduction of organic waste from landfills is the central objective of the legislation, with the goals of reducing organic landfill waste by 75 percent and annual food waste by at least 50 percent relative to 2015 levels.<sup>7</sup> Both goals are intended to be reached by 2030.

There are two concepts in the new laws that will affect how organic materials are collected and delivered to compost facilities in Washington State. These are:

- **Business Organics Management Areas (BOMAs):** Starting in 2024, businesses located in a BOMA were required to subscribe to curbside organics collection services if they produced more than eight cubic yards (or approximately ten tons or 15,000 gallons) per week. The volume threshold that requires businesses to comply lowers in subsequent years.<sup>8</sup> As this threshold drops, more businesses will be required to participate in BOMA collection or self-manage their organic waste.

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<sup>6</sup> Washington State Department of Ecology. 2022. 2022 Organics Management Law. Available [here](#).

<sup>7</sup> Washington State Department of Ecology. 2024. 2024 Organics Management Laws. July, Available [here](#).

<sup>8</sup> Washington State Department of Ecology. 2024. Organics Management for Businesses. [Organics management for businesses - Washington State Department of Ecology](#)

- **Organics Recycling Collection Areas (ORCAs):** Starting in 2027, jurisdictions with a population over 25,000 and in some urban growth areas, all single-family homes and businesses that produce more than 0.25 cubic yards of organic material waste per week will be required to have curbside organics collection. In 2030, all impacted customers are required to have curbside organics collection and food waste must be a collected material.

BOMA compliance and expansion is projected to be a driver of growth of organic material collection. This is a result of the enforcement authority and process outlined in RCW 70A.205.545. This RCW grants specific enforcement authority to jurisdictional health departments and/or local jurisdictions with fines for noncompliance. Fines are \$500 for each day of violation for a first violation, \$750 for each day of violation under a second violation and \$1,000 for each day of violation for a third violation.

## 1.2. Composting in Washington

There are 59 permitted compost facilities in operation throughout Washington State, located in 30 of the 39 counties.<sup>9</sup> Shown in Figure 2, the Washington State Department of Ecology (Ecology) divides the state into four general administrative regions: Northwest, Southwest, Central, and Eastern. The distribution of compost facilities and their associated access to organic waste collection and management is highly skewed, with much higher concentrations of facilities in the Northwest and Southwest regions. These two regions include much higher population densities compared to the Eastern and Central regions, generating larger volumes of organic waste and higher numbers of compost facilities to manage that material.<sup>10</sup> Of the roughly one million tons of organic materials collected in Washington for composting, 48 percent (388,000 tons) were collected just within the Northwest region.



Figure 2. Regions of Washington State as Defined by Ecology

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<sup>9</sup> Washington State Department of Ecology. 2025. 2024 Composted Materials and Compost Produced details.

<sup>10</sup> Washington State Department of Ecology. 2024. 2022-2023 Washington Statewide: Recycling & Organics Characterization Study. July, [2022-2023 Washington Statewide Recycling and Organics Characterization Study](#)



As populations increase, there will be more jurisdictions reaching populations of 25,000 people or more and therefore considered to be an ORCA.

## **1.4. Intended Use of the Report**

This report is intended to help entities involved with organics management gain better insights on,

- The types and volumes of organic materials each jurisdiction needs to plan for;
- The impact of increased collection of organic material on finished compost; and
- The market outlook for selling the increased volume of finished compost.

The answers to each of these questions will be specific to each county, municipality, facility, etc., and will vary based on a host of conditions including: the volume of organic material currently collected, the investment requirements to expand facilities and capacity, and the price and availability of substitute products for compost. The report projections are estimates based on historical information, outreach with organics material collection and compost facility operators, and other publicly available information. However, it is essential to emphasize that there are many sources of uncertainty around the ways in which the OMLs will be implemented throughout Washington over the next ten years. How swiftly facilities and municipalities will be able to respond to the new direction of organics management regulation is wholly unknown, although all parties are in the process of determining how they can accomplish the new goals.

Additionally, the forecast models presented in this research assume that all increased recovery of organic material goes into the composting sector. Using different pathways for organics material management could also change the outcomes of these models. This report therefore represents a starting point for jurisdictions to begin preparing for the emerging opportunities for recovered organics and working toward more efficient and effective organic material management strategies.

## 2. Methodology

Green Economics LLC’s research team created a spreadsheet-based forecasting model to estimate increased organic materials collected for composting and for increased finished compost. The team created the model (titled, “Organic Material and Compost Projections by County 063025”) using historical data on organic materials collection (starting from the year of 2014) and assumptions about how the OMLs will be implemented. The spreadsheet model is a flexible tool, so users may update the forecasts as new data becomes available. Additionally, users can modify assumptions and see how different assumptions affect the results.

### 2.1. Forecasting Organic Material Collection

The research estimates county-level forecasts for organic waste collection by normalizing gross weights or volumes of waste with the population of that county. This produces a per capita waste estimate which may be used with population projections to produce a waste forecast. For example, the population of Washington State is expected to increase by 9.7 percent between 2025 and 2035,<sup>14</sup> or about one percent per year; thus, we can expect organic waste to increase by about that same percent. The rest of the process is explained in three separate steps.

1. To develop the forecasts, the study paired per capita organic waste rates by county with population projections from the Office of Financial Management (OFM). These forecasts were then separated into residential and commercial sectors, using data from the 2020-2021 Washington Statewide Waste Characterization Study to establish the general proportions of organic waste volumes typically composted allocated to each sector.<sup>15</sup>
2. The research team added together organic material currently recovered for compost and materials currently disposed but could have been recovered for compost. The results show organic materials *generated* that could be converted to compost. The data years used to establish the base data for this projection were 2020-2021 (Waste Characterization Study) and 2022 (compost facility annual reports), as these were the most recent reports from which complete data was available at the time of this analysis.
3. The final step involved adjusting for increases due to the OMLs. First, impacts due to BOMA regulations for commercial organics collection were estimated by identifying the number of businesses in each county with a BOMA that would consistently generate volumes of organic waste at or above the weekly thresholds requiring management at an organics recycling facility. Using the publicly available Data Axle tool, commercial data was filtered by North American Industrial Classification (NAICS) code to isolate those commercial sectors that produce high volumes of organic waste (and have annual sales volumes above \$1 million) and estimate the number of businesses in those sectors large enough to generate waste volumes that would trigger BOMA regulations in each county. This process was developed by Ecology to determine

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<sup>14</sup> Office of Financial Management - Forecasting & Research, December 2022.

<sup>15</sup> Washington State Department of Ecology. 2018. 2015-2016 Washington Statewide: Waste Characterization Study. January, [2015-2016 Washington Statewide Waste Characterization Study](#).

similar estimates in planning for the OMLs.<sup>16</sup> Further, the research team assumed that BOMAs would expand based on the presence of an ORCA, which expands with population growth and ensures that curbside organic collection will be available. These were then applied to model projections (See Appendix A for details of this process). To be clear, these forecasts are uncertain. The numbers of businesses estimated to be within a BOMA are not exact, and future expansions of BOMAs will depend upon many economic and financial uncertainties.

Much like the uncertainty associated with data for the BOMA analyses, there is uncertainty about how quickly—or to what extent—new ORCAs will lead to increased organics collection. To project the collection impact of ORCA regulations, the team assessed curbside organics collection participation rates were in counties with jurisdictions over 25,000 people where curbside organics collection was offered. Within these jurisdictions, the research team assumed that participation would rise to 100 percent by 2030, in line with ORCA requirements. We project organic material collection in these areas to grow based on higher participation within the ORCA area, and the study assumes the per capita rate is the same between all areas served by an ORCA.

The research team based all assumptions in this projection on the best available data; however, all forecasts inherently involve uncertainty, particularly when human behavior is a key factor. To mitigate potential bias, researchers aim to balance assumptions so that potential over- and under-estimations offset each other.

For example, the model assumes timely implementation responses from waste collectors, municipalities, and industry stakeholders to the Organics Management Laws (OMLs). If actual implementation is delayed, organics collection could grow more slowly than projected, making the forecast too high. Conversely, the projections are grounded in historical data that may understate actual past collection volumes. During data processing, Ecology adjusts for double counting using a combination of regulated and voluntary reports. While these adjustments enhance sector (commercial versus residential) accuracy, this can sometimes result in data imperfections that underestimate total volumes.

In all cases, the best available assumptions were applied, with the intention that any errors are not consistently skewed in one direction providing a balancing of the model. Looking ahead, counties have the opportunity to input more accurate, localized data into the model to further improve projection reliability.

## **2.2. Finished Compost Forecast**

Once the team calculated estimates of the volumes of feedstock material processed by compost facilities it was possible to calculate a finished compost projection. We produced county-level projections of finished compost by multiplying each of the categories of organic waste in the projection by a specific conversion factor for that category (See Table 1). The conversion factors are applied to tons of organic feedstock in each category to estimate tons of finished compost produced by specific categories of feedstock. Given that compost facilities typically record their finished compost volumes in cubic yards, the study converts the tons of finished compost to cubic yards then forecasts volumes

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<sup>16</sup> This is an Ecology defined process: "[Organics Law Outreach – Instructions for Identifying Businesses.](#)"

through 2035 for each county. The team used conversion factors for organic material to compost through a literature review for different types of organic material (see Appendix A for details). The reason for different conversion factors is because different organic materials vary in density, so both incoming feedstocks may differ as well as finished compost.

See the results in Chapter 4 of this report and the spreadsheet model. An example of this calculation for Clallam County, (which has neither a BOMA nor an ORCA), for 2035 is shown in Table 1 to demonstrate the method. Taking the “Ag and manure” category in Table 1 as an example of conversion calculations, within Clallam County we project to compost roughly 1,568 tons of agricultural and manure waste in 2035. We multiply this total by the conversion factor of 0.33 to estimate the tonnage of finished compost 1,568 tons of agriculture and manure feedstocks would produce, amounting to 523 tons of finished compost (1,568 tons \* 0.33 = 523 tons). The team then converted the tonnage of finished compost to cubic yards, amounting to 1,218 cubic yards of finished compost projected from agricultural and manure waste feedstocks composted in Clallam County for the year 2035.

**Table 1. Example Finished Compost Calculation, Clallam County (2035)**

Material Collected	Organic Materials (Tons)	Conversion Factor	Finished Compost (Tons)	Finished Compost (Cubic Yards)
Ag and manure	1,568	0.33	523	1,218
Food	1,461	0.20	292	681
Yard	3,237	0.33	1,079	2,516
Yard/Food	0	0.20	0	0
Land clearing	2,158	0.33	719	1,677
Wood (includes shavings)	0	0.33	0	0
Other (includes mortalities, compostable products)	0	0.33	0	0

For counties with a BOMA or an ORCA, the volume of additional material and type to be composted is less clear due to uncertainty surrounding the types of increased feedstocks in BOMAs and ORCAs over time. An average conversion factor (0.30) is used to convert the projected additional tonnage of feedstock material from BOMA and ORCA collection into tons of finished compost.

### **2.3. Data**

The research team gathered data for the projections and analyses in this report from a variety of sources including Ecology, OFM, interviews with compost facility staff, and a broad literature review. Additional data sources provided by Ecology include Compost Procurement Ordinance (CPO) report data, annual compost facility data reported by all regulated compost facilities to Ecology (as defined by WAC 173-350-220), and other publicly available information.

The primary source of organics recovery data by county were the annual reports submitted by compost facilities. This data shows the annual totals of organic material that originated in each county recovered

for composting and the organic waste category (e.g. “Yard Debris” or “Pre-Consumer Food Waste”). These reports also designate whether it is a commercial or residential source of material. Any material processed by facilities that originates from out-of-state was not counted toward any totals within the projection. Each year facilities are required to submit a report that includes this data as well as pathogen management results, volume of finished compost, and other performance standards. A screenshot of the feedstock data provided in these reports is displayed in Figure 4. The facility that provided this report, for example, received 31,178 tons of yard debris/food scraps from Thurston County for composting, and 40 percent, or 12,471 tons was from commercial sources and 60 percent was from residential sources.

Feedstock Detail Section									
	Waste Type	Amount (Tons)	Comm %	Comm Tons	Res %	Res Tons	County	State	Feedstock Disposition
Select	Yard Debris	34,119.00	75.00%	25,589.25	25.00%	8,529.75	Pierce	WA	Composting
Select	Yard Debris	9.00	98.00%	8.82	2.00%	0.18	Thurston	WA	Composting
Select	Food Processing Waste (pre-consumer)	57.00	%		%		Thurston	WA	Composting
Select	Yard debris/food scraps	31,178.00	40.00%	12,471.20	60.00%	18,706.80	Thurston	WA	Composting
Select	Agricultural Organics (vegetative)	9.00	%		%		Thurston	WA	Composting
Totals:		65372.00				OOC:34119.00	OOS:0		

**Figure 4. Example Facility Data Report to Ecology**

Additionally, we needed to account for the volume of organic waste materials *generated* annually to account for potential recovery. While the above dataset describes organic material recovered by composting facilities, the model needed to understand what volumes of organic material are still disposed. Ecology provided an estimate of disposed organic waste (waste to be targeted for increased rates of capture and processing by composters in the future) from the 2020-2021 Washington Waste Characterization Study. The sum of these two sets of volumes (recovered and disposed) is an estimate of organic waste generated.<sup>17</sup> The most recent and complete data for both disposed and processed organics was from 2020-2021 (Waste Characterization Study) and 2022 (annual reports). We used 2022 as the data year on which the projection model is based. More recent data was available and reported later in this study for organic materials collected.

All these sources were reviewed by the Greene Economics research team. A table summarizing the contents of each is provided in Appendix B. Other data sources are further described in Appendix C, which also addresses how BOMA and ORCA expansions were developed.

It is important to note that while the data reported by compost facilities is wide-ranging and highly informative, there are significant caveats regarding the degree of standardization to which the self-reported data adheres. While all facilities use the same template to report the annual data, the

<sup>17</sup> Based on data on disposed organics sourced from Ecology records detailing organic materials collected with municipal solid waste (MSW).

categories on which facilities report are not strictly defined and can be subject to the interpretation of the reporter. For example, there is not a uniform interpretation of a “commercial load.” Some facilities report commercial loads as those loads entering the facility via a commercial hauler and residential loads as those self-hauled by a resident; other facilities consider the source of the material when determining the commercial versus residential pathway. These types of reporting incongruencies impact the volumes of organic waste attributed to various categories within the model, and thus the accuracy of the projections.

## **2.4. Outreach**

The research team conducted interviews with staff members of compost facilities throughout the state. We selected the facilities to gather insights from a broad range of composters operating in different regions and at varying scales of processing, production, and commercialization (see Appendix D for summarized information from the outreach effort).

### 3. Key Findings: Organic Material Collected Forecast

This chapter shows the forecasts for organic materials that will be collected for composting from 2025 through 2035 for each county in Washington. The chapter starts with a brief presentation of historic organic materials collected for composting in the state. We then report results for the state as a whole and each county. This section concludes with a summary of the results and identifies some of the potential limitations of the model data and the uncertainty surrounding the ability to predict actual events and outcomes in future years.

#### 3.1. Historic Organic Material Collected for Composting

The historical data for Washington state shows that volumes of organic waste recovered for composting have fluctuated considerably over the years on both the county and state level, as depicted in Figure 5. Out of the seven primary categories to which organic waste is designated, “Food”, “Yard”, and “Food/Yard” waste collectively make up the largest share of the organic material recovered for composting. Although food waste alone appears to have been declining generally in volume since 2019, it may be that combined “Food/Yard” has become more common. Wood waste also seems to have experienced a decline in recovery since 2019; though this may be attributed to declining generation of wood waste from the closing of several large sawmills in the last decade.

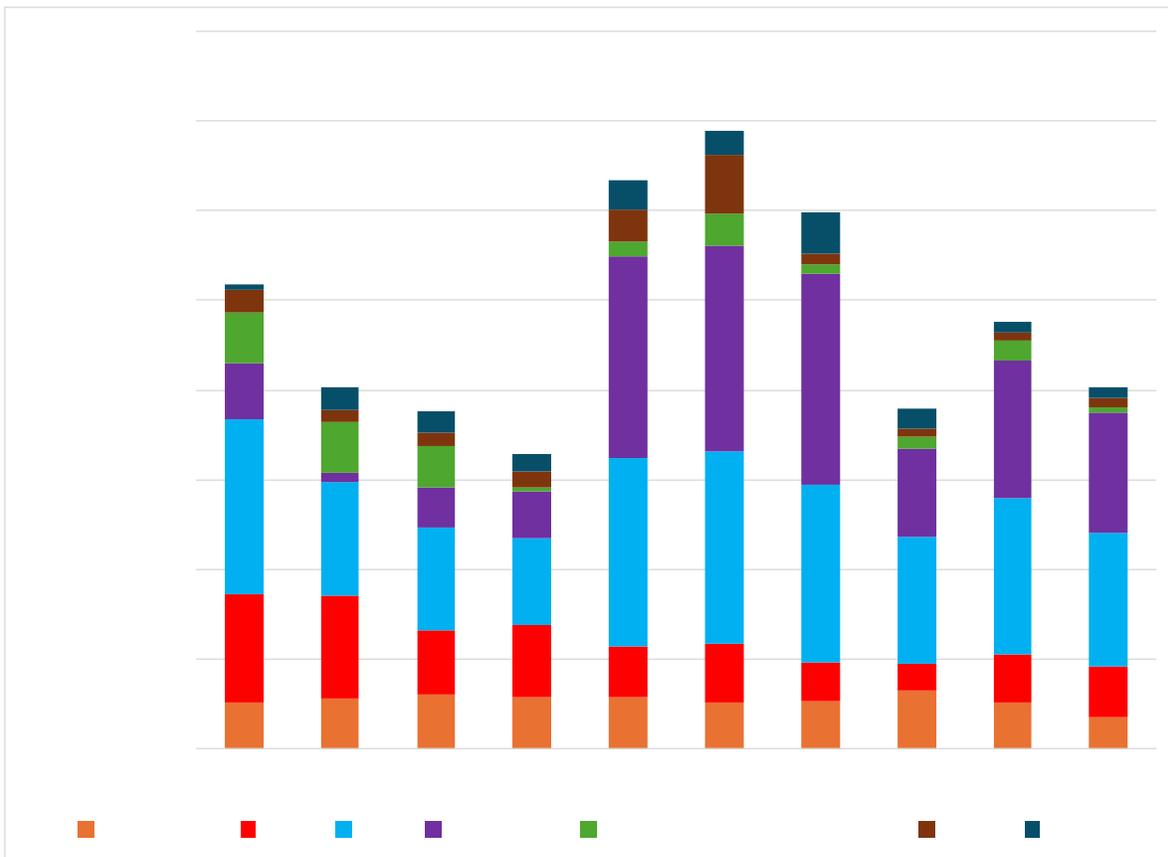


Figure 5. Washington Organic Materials Collected for Composting

### 3.2. Statewide Forecast Results

The research team expects the organic material recovered for composting in Washington to increase by over 2.2 million tons between 2023 and 2035, from approximately one million tons of organics recovered in 2023 to over 3 million tons in 2035. This represents a near quadrupling of the organic material recovered (3.8 times the quantity of 2023) in just 12 years, equivalent to about a 12 percent growth rate per year. Table 2 shows how the composition of the forecasted waste collected will change by 2035. While food waste represented a little over 14 percent of the material collected in 2023, we expect this share to increase to 26.8 percent of material collected in 2035. Equating to more than a seven-fold increase in tons collected over 12 years, food waste represents an average annual growth of approximately 18 percent per year. Yard waste will increase in tonnage by more than 527,000 tons over the same time period, reaching over 825,000 tons by 2035, but decrease in its share of the material collected compared to other organic waste categories. Mixed food and yard waste will nearly quadruple from just under 270,000 tons in 2023 to over one million tons by 2035.

**Table 2. Organic Material Collected for Compost 2023 – Actual and 2035 - Forecasted (Tons)**

	<b>2023 Actual</b>	<b>Share of Total</b>	<b>2035 Projected</b>	<b>Share of Total</b>	<b>Increase</b>	<b>Share of Increase</b>
Food	113,456	14.1%	814,436	26.8%	700,980	31.3%
Yard	298,561	37.1%	825,976	27.1%	527,415	23.6%
Mixed Yard/Food	269,294	33.4%	1,070,784	35.2%	801,490	35.8%
Other	124,374	15.4%	331,877	10.9%	207,503	9.3%
<b>Total</b>	<b>805,685</b>	<b>100%</b>	<b>3,043,073</b>	<b>100%</b>	<b>2,237,388</b>	<b>100%</b>

When combined, all other categories of organic materials recovered for composting are projected to increase by nearly three times between 2023 and 2035, from 124,000 tons to more than 333,000 tons. This category is expected to decline as a share of the total, from 15.4 percent to 9.3 percent.

A more detailed examination of the increases in organic material collected per category and their representative shares of the volume of organics collected statewide is shown in Table 3. For example, agricultural waste as a share of the tonnage of organics actually decreases from 8.7 percent to 6.8 percent. Rather than a result of a decrease in the actual tonnage of agriculture waste and manure collected, this is likely because as the quantity of food and yard waste increases faster, the quantity of agricultural waste therefore shrinks in its representative share of the organic waste.

**Table 3. Organic Material Recovery Share by Type**

Organic Material Type	2023	2035
Agriculture	8.7%	6.2%
Food	14.1%	35.1%
Yard	37.1%	24.0%
Yard/Food	33.4%	31.1%
Land Clearing	1.4%	1.4%
Wood	2.6%	1.6%
Other	2.8%	0.6%
Total	100%	100%

We expect the statewide split between commercial and residential materials recovered for composting to change through the course of the projection period. In 2023 commercial recovery represented 67 percent of the material reported and is projected to increase to 73 percent by 2035. Residential recovery is expected to decrease from 30 to 27 percent within the same period. This is likely due to the increase in BOMA organics collection requirements, in conjunction with the statewide goal of increased food recovery. As noted earlier, self-reporting by compost facilities means that the high percentage attributed to commercial loads may not be accurate. We learned that facilities may record curbside residential organics collected as commercial because it arrives in commercial trucks rather than self-hauled or gets consolidated with commercial loads at an intermediate facility prior to transporting to a composter. Much if not most of that material may be from residential collection and landscapers that serve residences. Table 4 details a regional breakdown of forecasted increases in the tons of organic material recovered for composting, starting from a baseline of 2023 population and recovery totals, to 2030 and 2035. The Northwest Region shows the greatest potential growth in both percent increase and tons of organic materials recovered, with a 356 percent increase between 2023 and 2035, an increase of 1.4 million tons. The Central, Eastern, and Southwest regions are forecasted to grow by roughly 262, 174, and 200 percent respectively from 2023 to 2035. Statewide, the percentage increase in organic material recovered for composting is expected to increase by 278 percent, with the tonnage of organic material recovered in 2035 reaching just over 3 million tons.

**Table 4. Forecast Organic Material Recovery for Compost by Region of Origination (Tons)**

Organic Material Origination	2023 Population	2023	2030	2035	2023—2035 % Increase
Central	701,625	76,097	256,853	275,388	262%
Eastern	877,675	106,079	261,579	290,983	174%
Southwest	2,243,625	235,563	657,814	705,862	200%
Northwest	3,965,100	387,947	1,728,405	1,770,840	356%
<b>Total</b>	<b>7,824,475</b>	<b>805,686</b>	<b>2,904,651</b>	<b>3,043,073</b>	<b>278%</b>

The research team bases these numbers on several assumptions regarding the implementation of, and compliance with, the OMLs. One assumption is that BOMAs are projected to expand over the course of the projection period based on where 2027 ORCA boundaries are located.<sup>18</sup> BOMA expansions are an assumption within the model that may or may not come to fruition. Some counties can request ORCA waivers<sup>19</sup> which could extend their timeline to comply with ORCA requirements and thereby change BOMA expansion assumptions.

<sup>18</sup> As outlined by RCW 70A.205.540 (ORCA), counties must provide for curbside collection of organic material waste for single family homes and nonresidential entities producing 0.25 cubic yards of organic material waste per week. Therefore, compliance with ORCA indicates the availability of curbside collection and capacity at an organics recovery facility, thereby triggering a BOMA.

<sup>19</sup> Counties can apply for ORCA waivers which extends the compliance timeline for up to five years for the collection requirements outlined in RCW 70A.205.540.

Most counties in Washington (21 of 39) are not expected to be affected by the BOMA portion of the OMLs. These are shown in light grey in Figure 6 (“No BOMAs”). Ten more counties (Whatcom, Skagit, Island, Snohomish, King, Pierce, Thurston, Chelan, Douglas, and Grant) currently have a BOMA that occupies some portion of the county, with the BOMA areas shown in blue in Figure 6. Another eight counties (Spokane, Whitman, Franklin, Walla Walla, Benton, Yakima, Clark, and Cowlitz) do not have a BOMA at this time, but due to ORCA requirements that will mandate collection services for areas with more than 25,000, these counties are projected to also have a BOMA in the next 10 years. These counties are shaded in a blue-grey color in Figure 6.

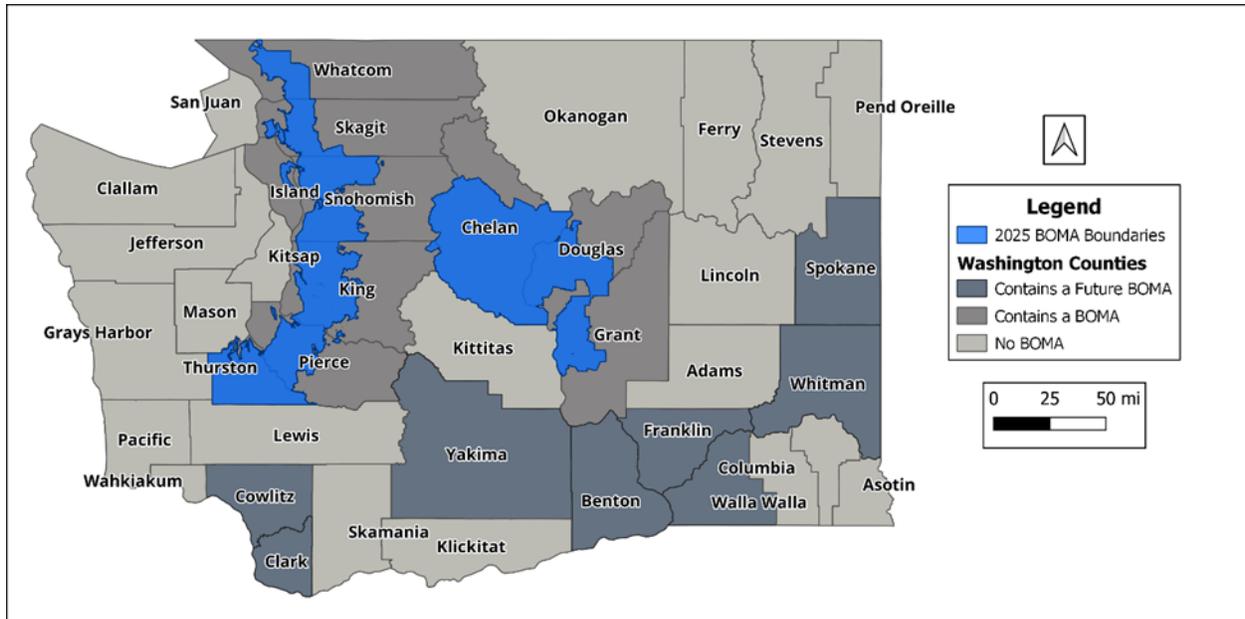
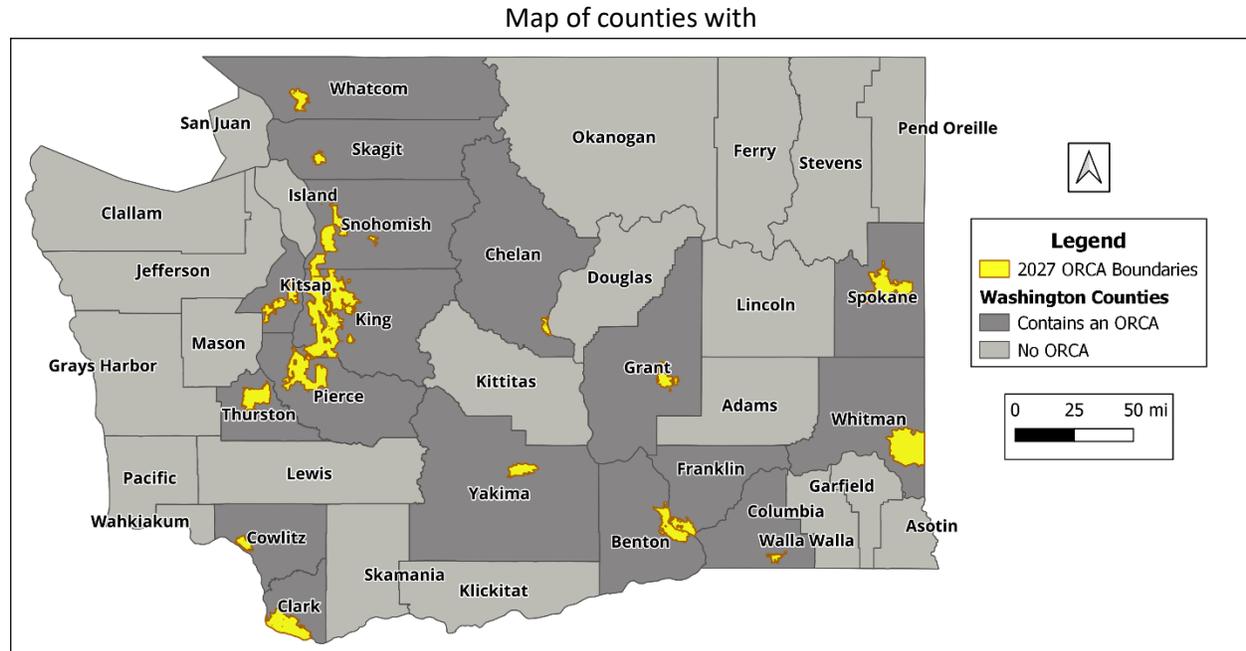


Figure 6. Original and Expanded Counties with BOMAs

Figure 7 shows the counties that will contain an ORCA in 2027. The model assumes that ORCAs will not expand over the timeline of the projection. An ORCA is triggered by population size, and while population projections suggest that no new threshold for ORCA compliance will occur during the projection period, population growth may well shift, and new ORCAs may develop.



### 3.3. County-Level Forecast Results

Over 800,000 tons of organic waste were recovered for composting in 2023 throughout all counties in Washington. Organic materials collected for composting are expected to grow 375 percent over the next 12 years to more than 3.0 million tons in 2035. Table 5 shows the actual organic collection for all counties in 2023, followed by the projected totals for 2030 and 2035.

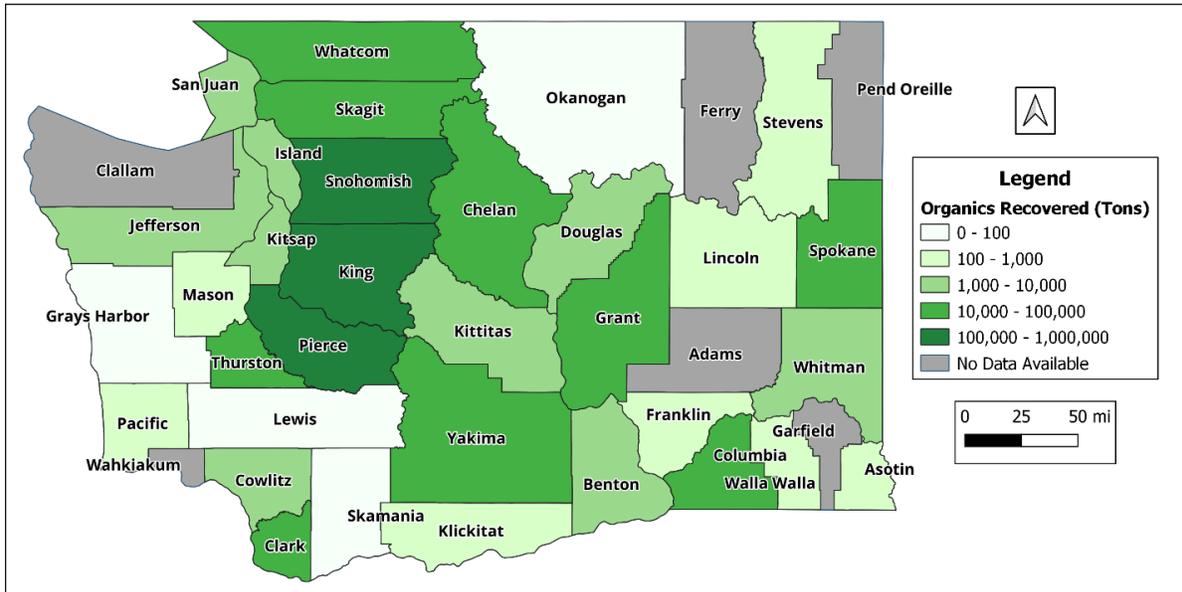
In the table below we provide the percent increase between 2023 and 2035 showing the projected growth of recovery over 12 years. The final column shows whether each county is impacted by BOMA and/or ORCA regulations, and if a county is part of the projected expansion of BOMAs by 2030 (denoted as “expanded BOMA”).

**Table 5. Annual Organic Material Recovered for Compost 2023-2035 (Tons)**

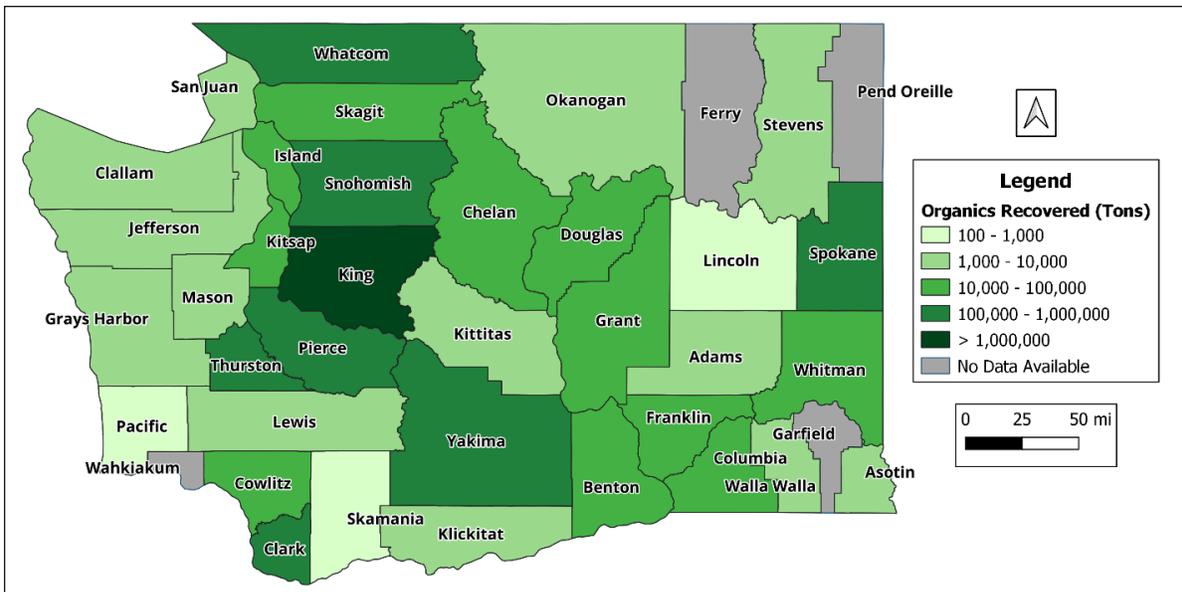
County	2023 Actual	2030	2035	% Increase	BOMA/ORCA
Adams	25	1,614	1,681	6622%	Neither
Asotin	941	2,686	2,727	190%	Neither
Benton	2,368	42,041	50,986	2053%	Current ORCA/Expanded BOMA
Chelan	26,146	57,156	58,626	124%	BOMA & ORCA
Clallam	6,453	8,226	8,424	31%	Neither
Clark	62,937	108,516	134,416	114%	Current ORCA/Expanded BOMA
Columbia	619	2,796	2,741	343%	Neither
Cowlitz	1,169	18,850	23,725	1930%	Current ORCA/Expanded BOMA
Douglas	4,794	12,101	12,211	155%	BOMA
Franklin	628	29,942	34,980	5470%	Current ORCA/Expanded BOMA
Grant	23,523	55,619	57,828	146%	BOMA & ORCA
Grays Harbor	45	6,217	6,248	13785%	Neither
Island	4,000	20,118	20,316	408%	BOMA
Jefferson	3,709	5,875	6,122	65%	Neither
King	189,766	1,119,781	1,144,348	503%	BOMA & ORCA
Kitsap	6,996	57,775	60,158	760%	ORCA
Kittitas	2,643	4,891	5,150	95%	Neither
Klickitat	305	2,400	2,479	713%	Neither
Lewis	23	1,574	1,618	6933%	Neither

County	2023 Actual	2030	2035	% Increase	BOMA/ORCA
Lincoln	324	774	782	141%	Neither
Mason	427	4,846	5,079	1089%	Neither
Okanogan	16	4,134	4,188	26078%	Neither
Pacific	255	263	266	4%	Neither
Pierce	111,009	359,765	369,451	233%	BOMA & ORCA
San Juan	1,108	1,405	1,478	33%	Neither
Skagit	17,016	73,522	74,727	339%	BOMA & ORCA
Skamania	51	964	996	1852%	Neither
Snohomish	144,178	344,780	356,250	147%	BOMA & ORCA
Spokane	36,848	135,911	161,918	339%	Current ORCA/Expanded BOMA
Stevens	650	2,916	3,016	364%	Neither
Thurston	55,939	142,718	149,517	167%	BOMA & ORCA
Walla Walla	35,951	45,971	46,676	30%	Current ORCA/Expanded BOMA
Whatcom	24,883	111,024	113,563	356%	BOMA & ORCA
Whitman	7,223	13,293	13,615	88%	Current ORCA/Expanded BOMA
Yakima	39,197	104,188	106,768	172%	Current ORCA/Expanded BOMA
<b>Total</b>	<b>812,165</b>	<b>2,904,650</b>	<b>3,043,073</b>	<b>275%</b>	

Figures 8 and 9 map the historical volume of organics recovered by county in 2023 compared to the projected volumes in 2035. Many counties that are expected to have BOMAs in the future (see Figure 6) are also counties currently demonstrating some (more than 1,000 tons) level of recovered organic material already, such as Cowlitz, Spokane, Clark, Walla Walla, Whitman, and Yakima. We see that a future BOMA designation may drive increased recovery in these counties.



**Figure 8. 2023 Organics Recovery Volumes by County (Tons)**



**Figure 9. 2035 Forecasted Organics Recovery Volumes by County (Tons)**

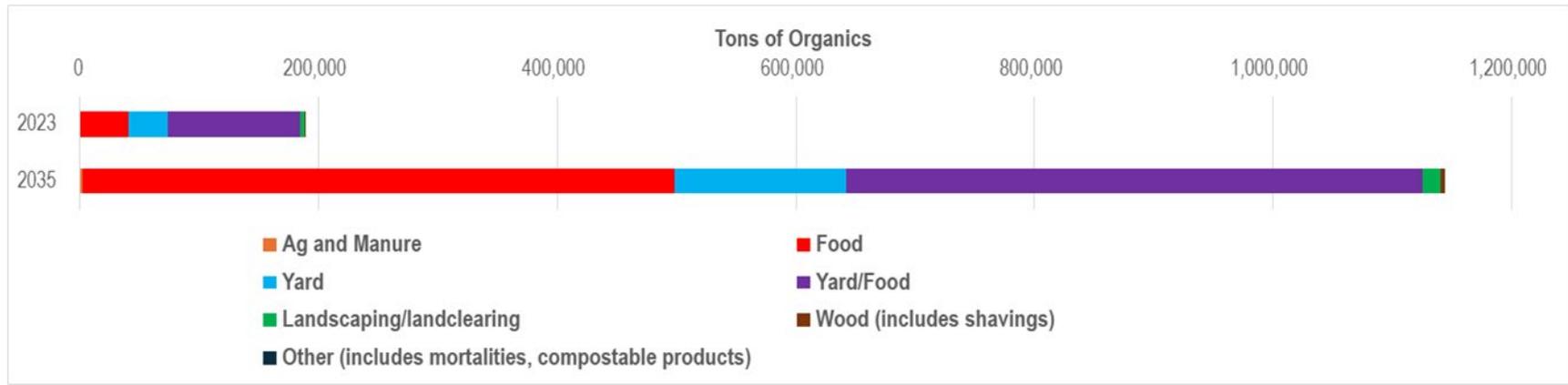
The detailed county by county results by type of organic materials are shown in Figures 10, 11, and 12. The model is based on assumptions that extrapolate from historic trends and develop estimates of expanded collection from increases in population. The results include the assumptions previously

described regarding implementation and compliance with the OMLs. County results include the following material types:

- “Ag and Manure,” encompassing all agricultural organics;
- “Food,” both pre- and post-consumer;
- “Yard,” lawn trimmings, leaves, branches, weeds, flowers, vegetable garden debris; etc.
- “Food/Yard,” a separate category of mixed food waste and yard debris;
- “Landscaping/Landclearing,” largely generated by commercial landscapers;
- “Wood,” tree removal, stumps, shavings, wood construction materials, etc.; and
- “Other,” mortalities, pet waste, compostable products, etc.

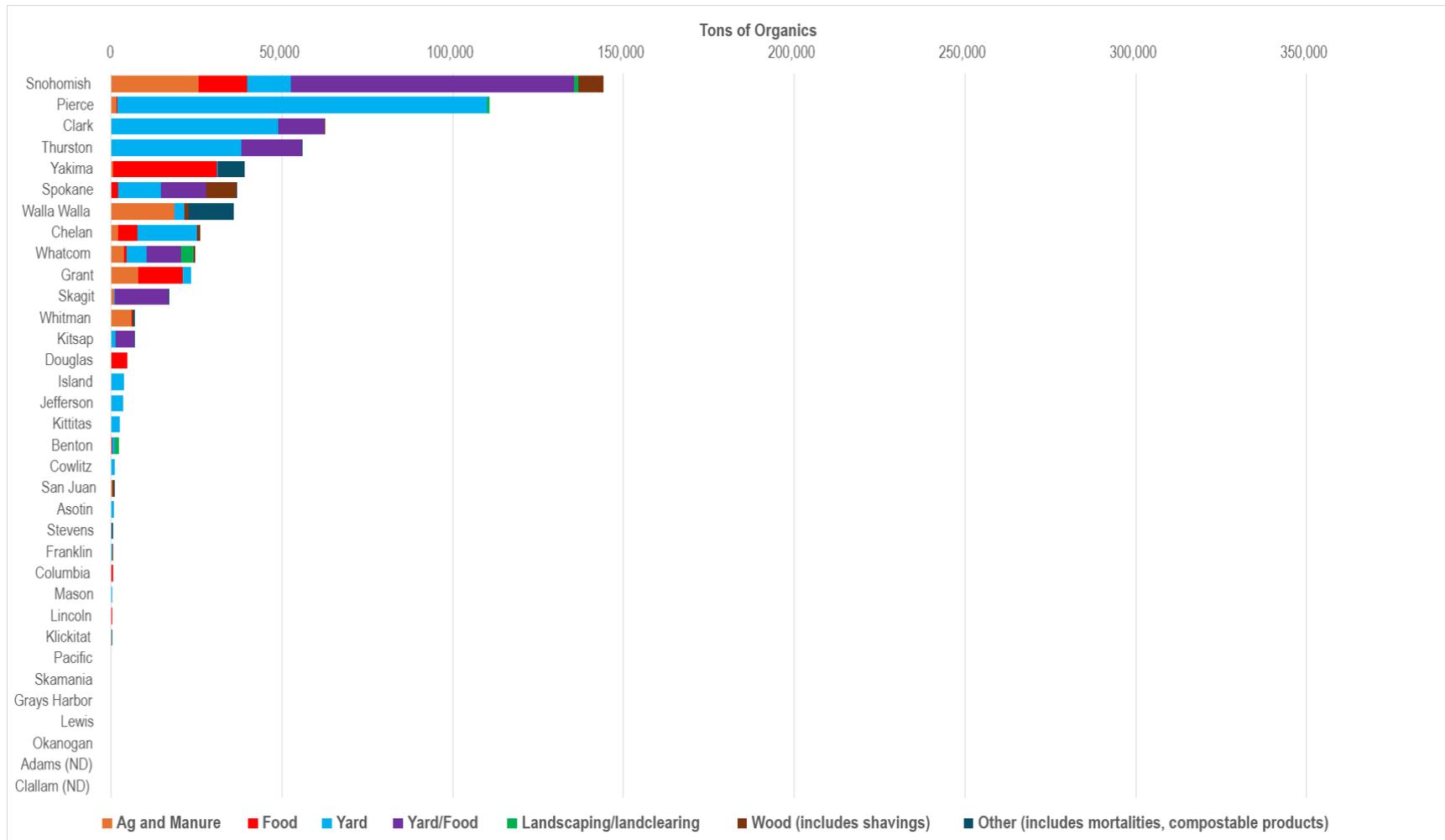
The data and waste category shares shown in Figures 10 through 12 for 2035 are projections based on trends and anticipated changes resulting from implementation of the OMLs. The results may differ greatly from what actually transpires in 2035 but are intended to assist counties and municipalities in planning for organic waste in the categories that will be increasingly collected for composting.

Results show that King County has the largest volume of organic material collected in 2023 and will have the largest volume collected in 2035. The increase is led by an increase in food waste (see Figure 10), which is expected to increase from under 50,000 tons to nearly 500,000 tons. King County is projected to significantly outpace all other counties in organics recovery, a function of population and existing policy. Due to its significantly larger projected outcomes when compared to the remaining WA counties, it was broken out in Figure 10.

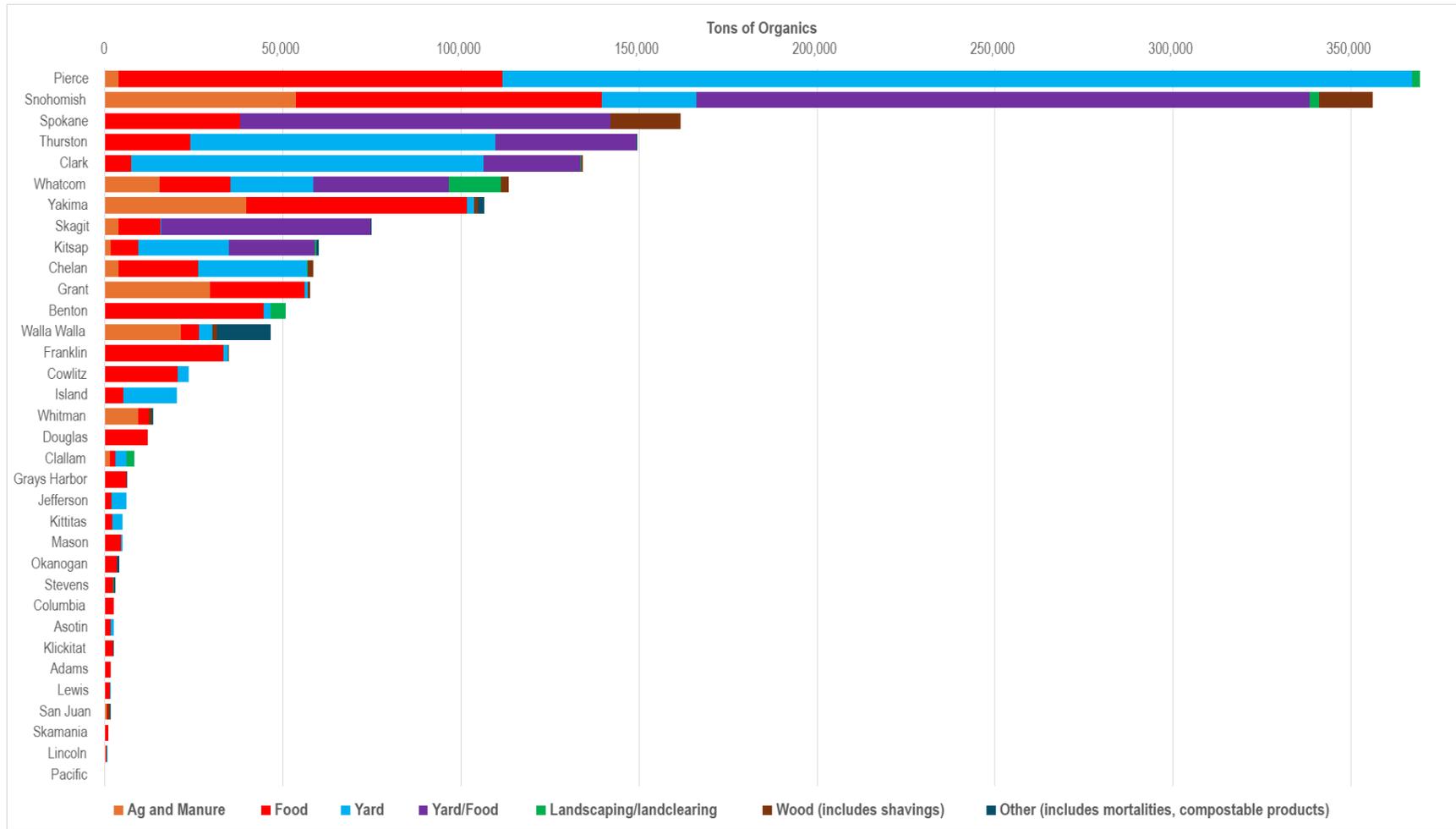


**Figure 10. King County 2023 and Forecasted Organic Material Collected for Composting by Type**

We also expect Snohomish County to increase recovery of organic materials significantly, with the second highest volume of organic waste collected in 2023, led by increases in agriculture and manure material, food waste, and yard debris, though less of an increase in mixed yard and food (Figures 11 and 12). Pierce County will also expand mostly in the agriculture and manure sector and with food waste, while showing less increases in yard waste. Spokane County is expected to see significant increase in mixed yard and food, taking the place of Clark County as the fourth largest collector of organic material in 2035. Some of the smaller counties are dwarfed in magnitude by these larger counties in terms of organic material collection, even after the expansions expected due to the OMLs.



**Figure 11. 2023 Organic Material Collected for Composting by County and Material Type**



**Figure 12. 2035 Forecasted Organic Material Collected for Composting by County and Material Type**

These county-by-county projection results vary widely. We provide results for four example counties—Grant, Kitsap, Lincoln, and Pierce—below. [The remaining county-level data can be found here.](#)

Consider the following relative to each county projection:

- 2014 to 2023 represents historic recovered organic materials for compost use based on data collected and aggregated by Ecology.
- 2025 to 2035 represents a projection of recoverable organic material for each county based on the requirements of the OMLs. The results are differentiated on the graphs with hash marks. This includes historic organic material recovery for compost and historic organic material disposal data.

## Grant County

Figure 13 shows an example of the forecast for Grant County from the Central Region. We see an increase primarily of food and agriculture/manure materials throughout the projection period. Grant County has a BOMA and has an impacted ORCA area. Historically, facilities in Grant County have recovered greater volumes of agricultural organics and manure than other organic materials. However, over 20 percent of this type of organic material was still going to landfill in 2022. Therefore, in the projected years, we expect to see both increased recovery of agricultural and manure materials as well as food waste, as the laws require increasing diversion from landfills.

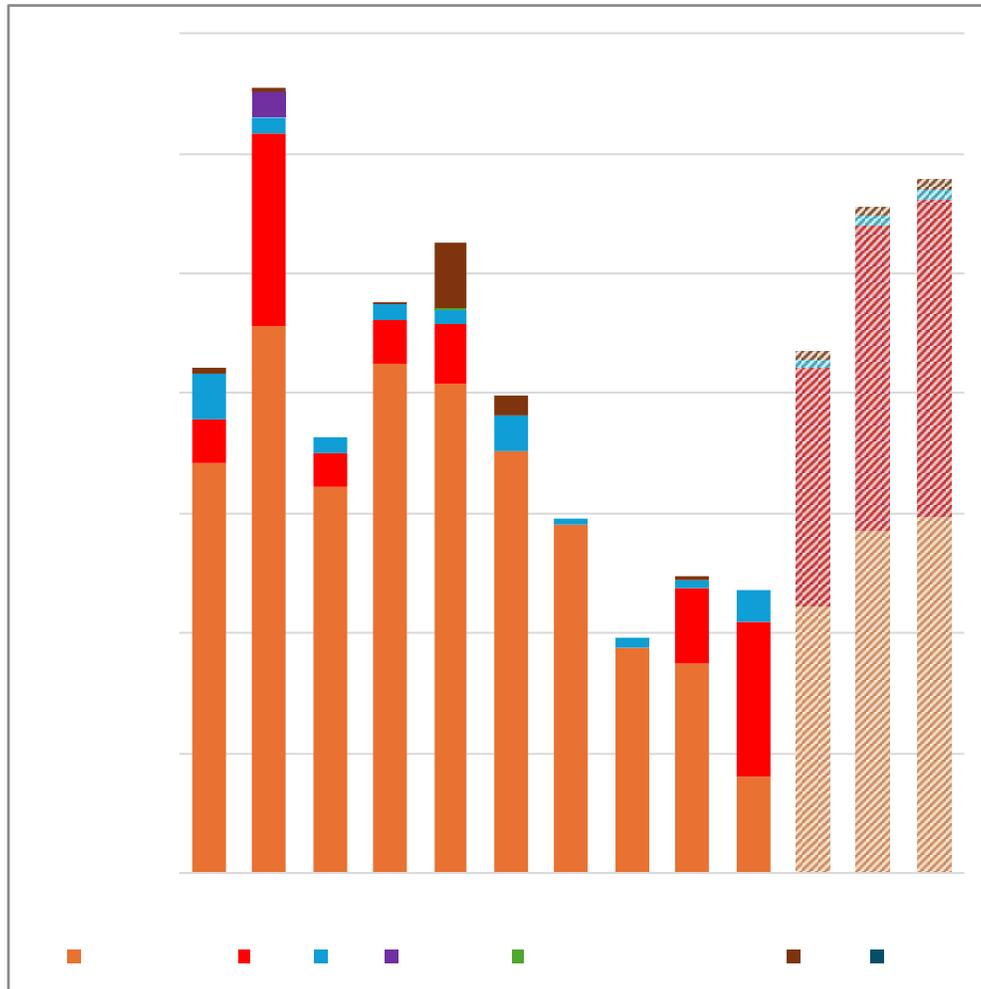
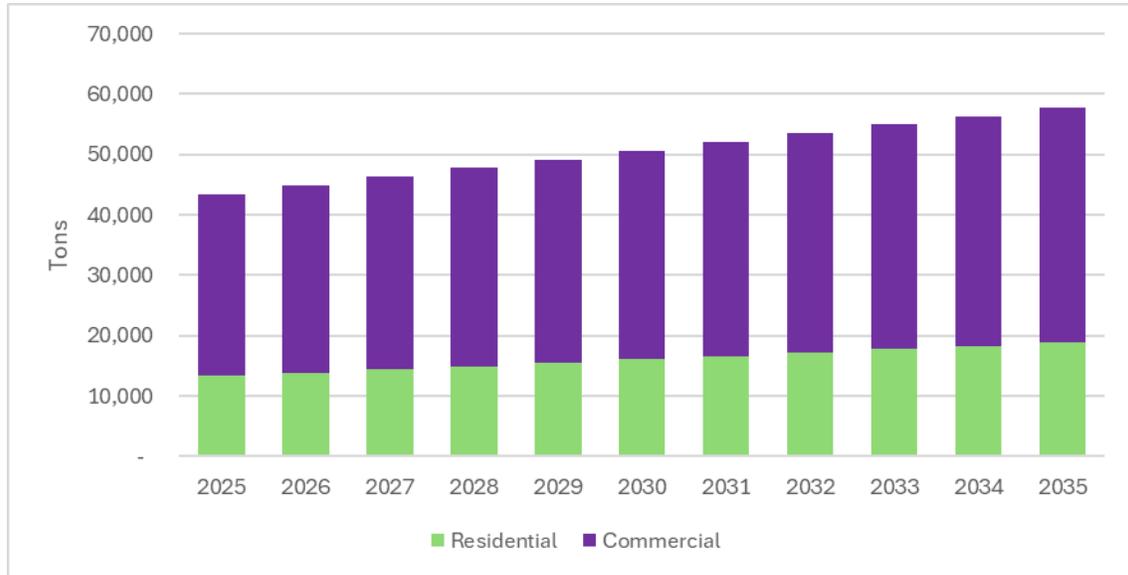


Figure 13. Grant County Organic Material Recovered for Compost Use

Figure 14 shows the forecast for organic waste generated by residential and commercial collection over the next 12 years in Grant County. We see significant growth in the commercial sector as Grant County has a BOMA within its boundary, thereby driving organics management collection requirements for businesses.



**Figure 14. Grant County Organic Material Forecast by Source**

## Kitsap County

Figure 15 illustrates changes in organic material recovery in Kitsap County as an example from the Northwest Region. We expect the organic waste recovered for composting in Kitsap County to increase by 113 percent. Kitsap County has an ORCA, therefore we expect increased volumes of residential and commercial yard and food waste. The ORCA requirements and directive to divert 50 percent of food waste from landfills by 2030 may impact counties like Kitsap that historically have had lower volumes of organics collected, as compared to counties that have already been diverting significant volumes of organic material (e.g. Snohomish County.)

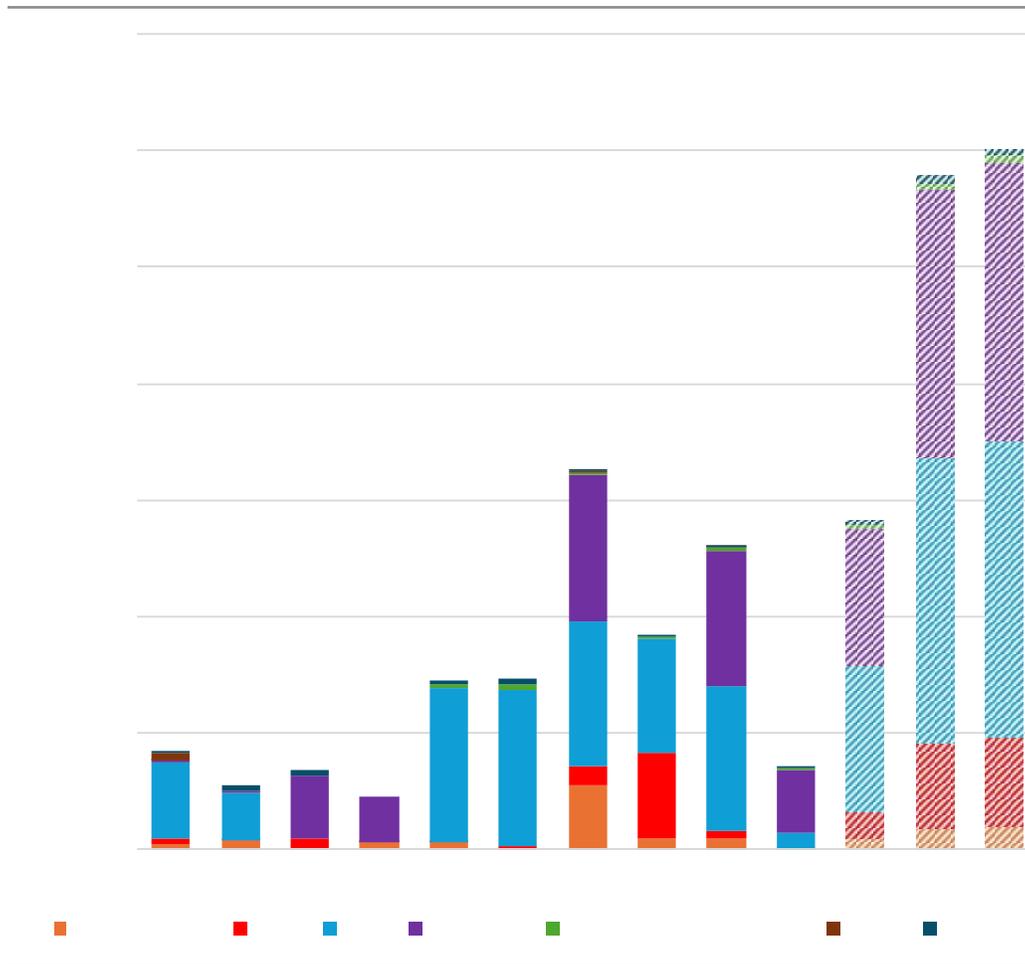
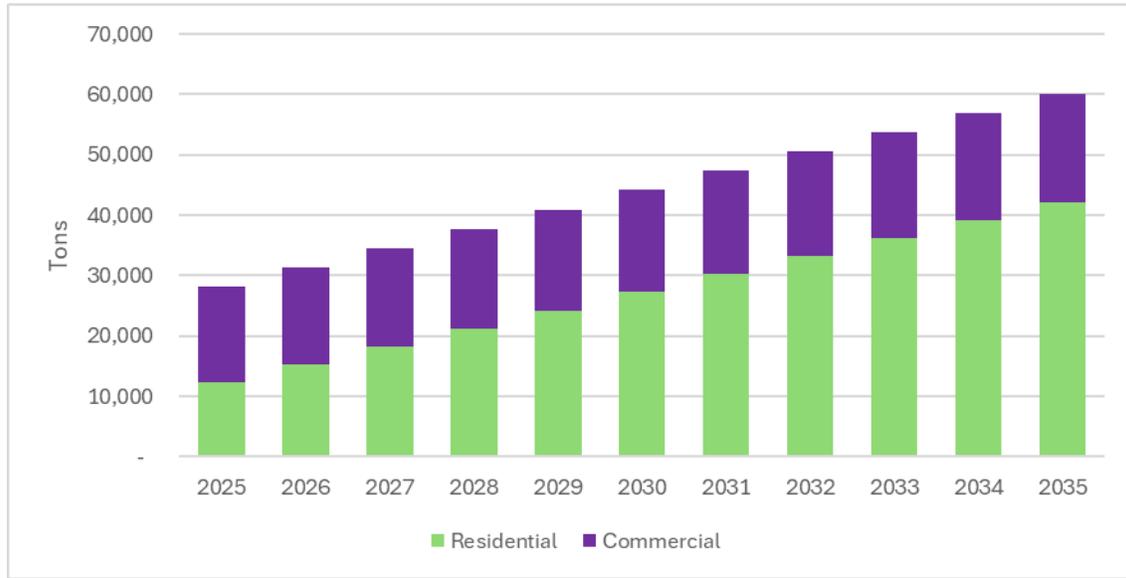


Figure 15. Kitsap County Organic Materials Recovered for Compost Use

Figure 16 shows the Kitsap County forecast for organic waste recovered for composting by residential and commercial collection over the next ten years. Residential recovery will more than triple from 2025 to 2035 while commercial recovery is expected to grow 13 percent over that same time period. The growth in the residential sector is driven primarily by the expected increase in organics recovery from the ORCA regulations as well as population growth in the county. Other counties included in the ORCA regulations with no BOMA could be expected to show similar growth but will likely differ in extent of the increases.



**Figure 16. Kitsap County Organic Waste Recovered by Source**

## Lincoln County

Figure 17 shows an example of the forecast for Lincoln County from the Eastern Region. Lincoln County is not impacted by a BOMA or an ORCA. Agriculture/manure and food are expected to remain the primary materials recovered for compost use, with some additional yard debris, reflective of 2022 levels. The organic material recovered for composting is projected to grow 4.5 percent over the course of the projection period (2025 through 2035), from 748 tons in 2025 to 782 tons in 2035.

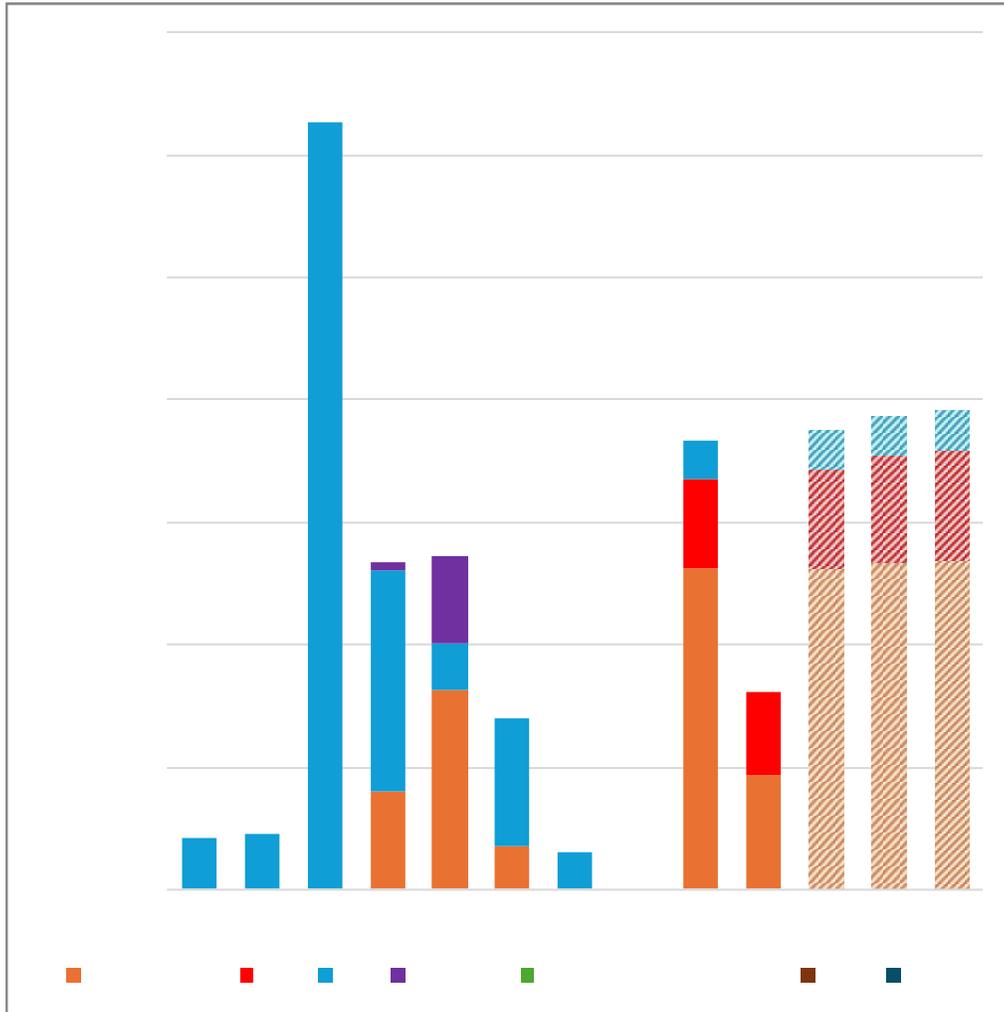
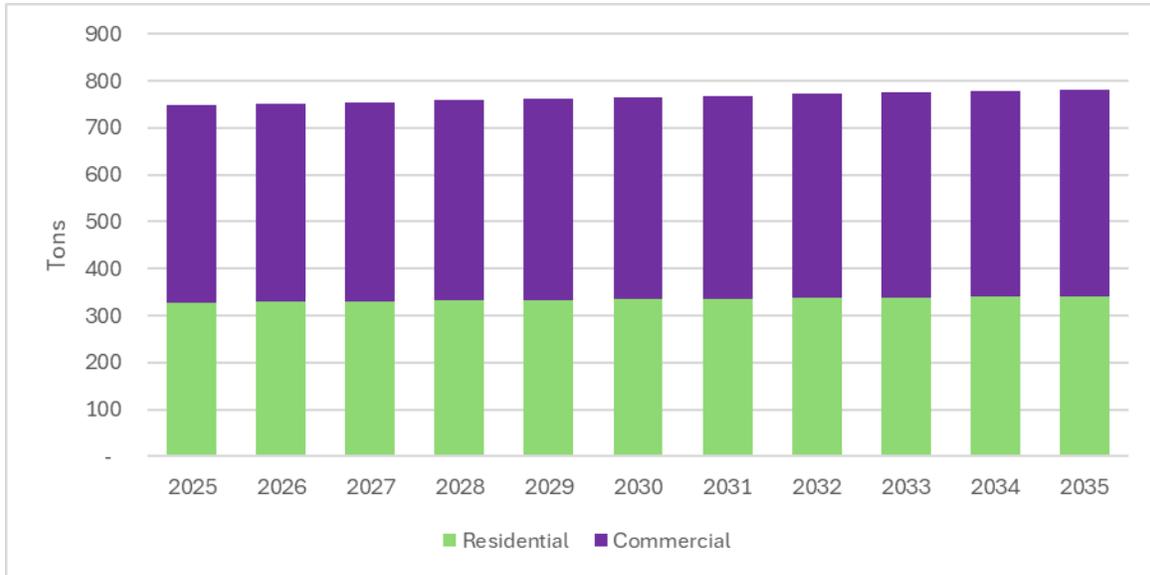


Figure 17. Lincoln County Organic Materials Recovered for Composting (Tons)

In Figure 18, we project growth to be steady for both residential and commercial sectors in Lincoln County, with 44 percent residential and the remaining 56 percent commercial through the projection period. The split between residential and commercial shares in Lincoln County stays constant, since it is not impacted by BOMA nor ORCA regulations.



**Figure 18. Lincoln County Organic Materials Recovered by Source**

## Pierce County

Figure 19 shows the forecast for Pierce County as an example from the Southwest Region; it is a large county that includes both rural and urban areas. Organic material collected for composting is expected to increase from just under 300,000 tons to over 360,000 tons. Pierce County has both BOMAs and ORCAs. It may be that food waste appears to be low because other forms of organics recycling and beneficial use were occurring for food waste. Because of the OMLs and the requirements of BOMA and ORCA to collect this material for recovery, Figure 19 shows that the future totals for food waste are anticipated to dramatically increase.

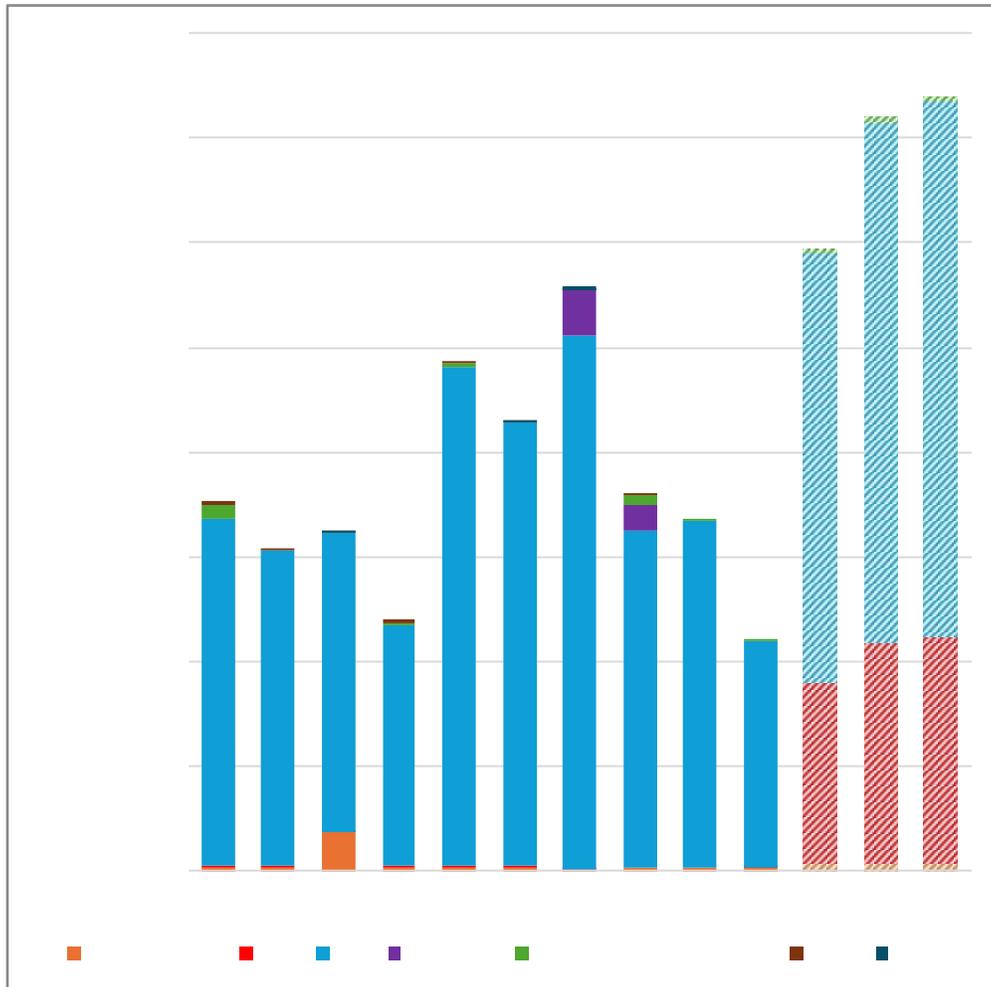
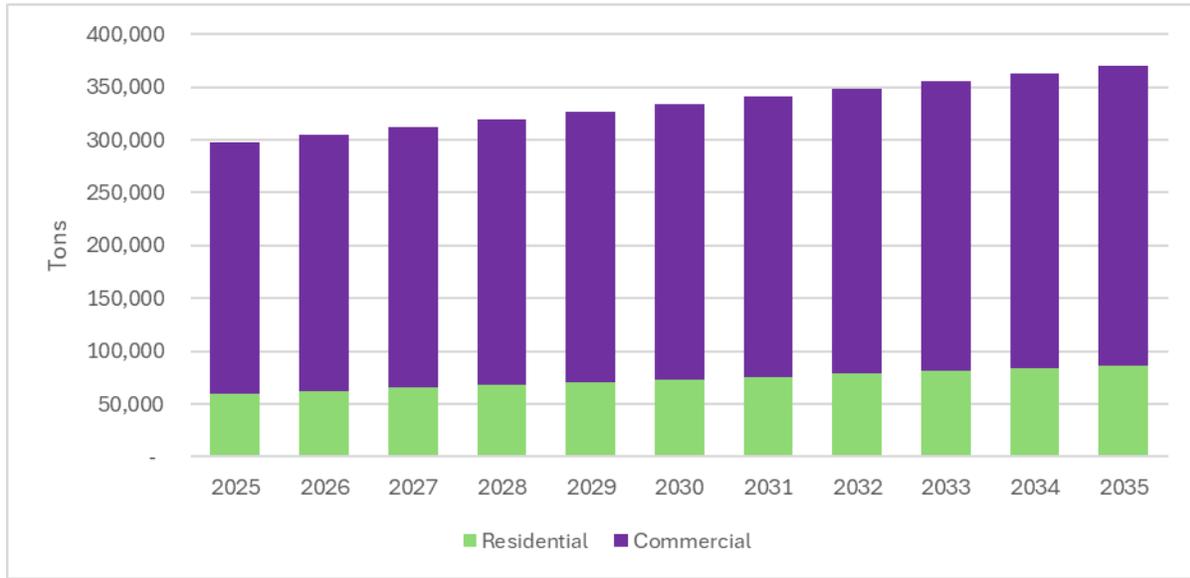


Figure 19. Pierce County Organic Materials Recovered for Compost Use

In 2022, Pierce County recovered just over 126,000 tons of organic material from the commercial sector, and 41,466 tons from the residential sector. Figure 20 below shows the forecast for increased organic materials recovered for composting by residential and commercial collection over the next ten years. We expect organic waste recovered for composting in Pierce County to grow 44 percent in the residential sector and 19 percent in the commercial sector from 2025-2035. The split between residential and commercial shares of the organic waste collection in Pierce County reflects the large commercial base with growth potential due in part to BOMA regulations.



**Figure 20. Pierce County Organic Materials Recovered by Source**

## BOMA and ORCA Counties

Another way to focus on the increases in volume of organic material collected is to view the percent increases on a map with BOMA boundaries and ORCA boundaries. Figure 21 shows how the BOMA boundaries overlap with the increases in organic materials recovery for composting, in percentage growth terms. Note the greatest percentage increases occur in Cowlitz, Benton, and Franklin counties. While none of these counties currently are under BOMA regulations, these counties all have ORCAs and are included in the BOMA expansion (Table 5, this chapter).

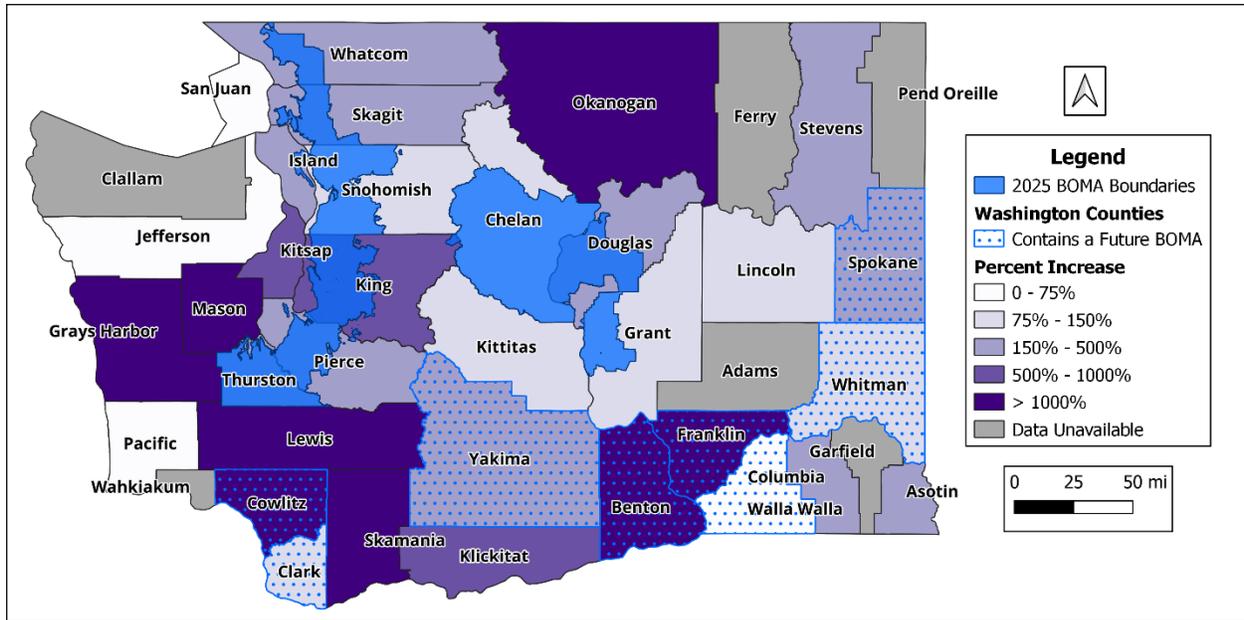
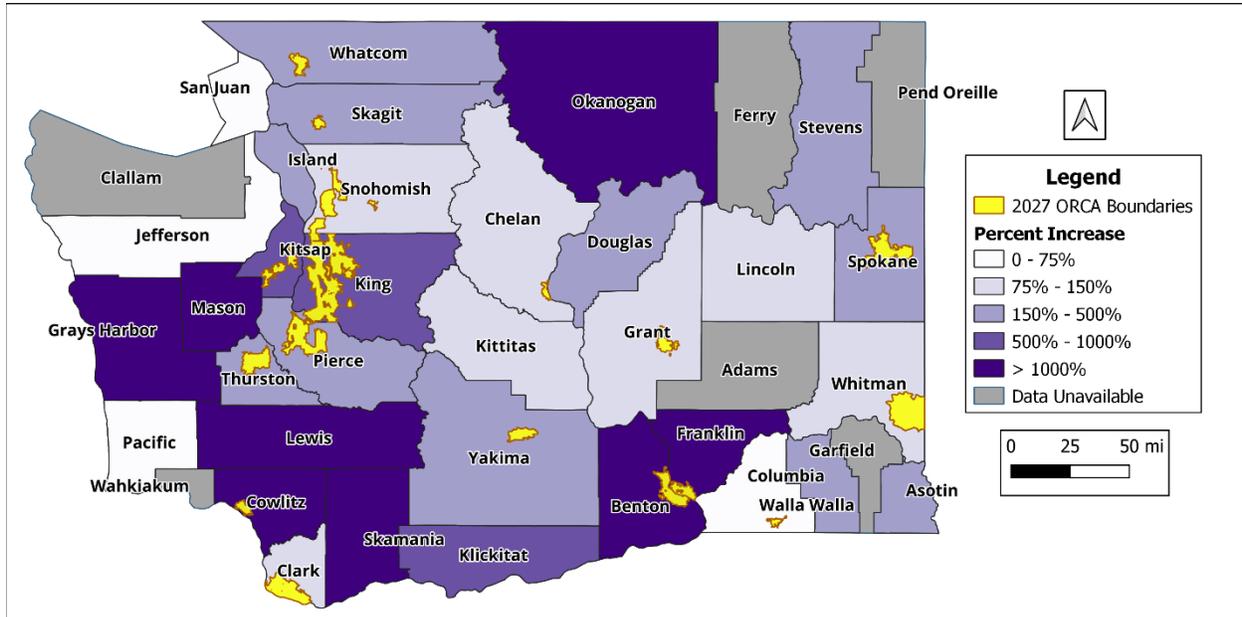


Figure 21. Percent Increase in Organics Recovery 2023 to 2035 with BOMA Boundaries

Figure 22 shows the same county level percentage increases for recovered organics material with the current ORCA boundaries. Counties that include an ORCA show the highest percentage increases of recovered organic material. Benton, Franklin, and Cowlitz counties are good illustrations of where we expect ORCA to drive increased recovered organics.



**Figure 22. Percent Increase in Organics Recovery 2023 to 2035 with ORCA Boundaries**

Related to Figures 21 and 22, note the percentage increase does not address the volume of organic material collection for composting. For example, King County has the largest quantities of material collected, and the largest projected increase in tonnage. But King County does not reflect the largest percentage increase—in part because the current quantity of organics collected is high. Counties with lower current organic material collection might see a dramatic increase in percentage collected, while not showing a very large end volume of collection. Figures 8 and 9 above provide more insight into tons collected in 2023 and 2035 by county, while Figures 21 and 22 offer a different perspective that shows the percent increase in tonnage. Both types of information (as well as per capita values, See Map Appendix F) may be useful for planning purposes.

## County Results by OML Category

Table 6 summarizes the projected growth in organic material recovery for county groups with an ORCA, a BOMA and/or an expanded BOMA, both, and neither. The group with only an ORCA and no expected BOMA includes just one county, Kitsap. Kitsap shows a high rate of growth in percent (760 percent) though a low growth in tons at just 53,000. Kitsap has other unique conditions such as having a fairly small residential participation rate, but then a very large potential for growth between 2023 and 2035.

The counties with no BOMA or ORCA show 377 percent growth projected between 2023 and 2035. This is likely because it is a large group of mostly small counties that may or may not be collecting much organic waste currently, so there is a lot of room for increase. These counties have no regulatory requirements, so these projections are driven by the statewide statutory goal of reducing 50 percent of the food waste in landfills by 2030.

Counties with both a BOMA and an ORCA show a 292 percent increase between 2023 and 2035 and over 1.7 million tons of increased material collected. This suggests the largest volume of organic waste diversion will come from counties with both an ORCA and a BOMA, or with both an ORCA and an expanded BOMA, which will see another 388,000 ton increase.

**Table 6. Growth in Organic Materials Recovered for Composting by County Group (Tons)**

County Group	% Growth 2023-2035	Absolute Growth (tons)
No BOMA or ORCA	377%	41,880
Counties with BOMA	270%	23,733
Counties with ORCA	760%	53,162
Counties with BOMA and ORCA	292%	1,731,852
Counties with ORCAs and Expanded BOMAs	208%	386,762

Table 7 outlines the impact of BOMA and ORCAs to the commercial and residential sectors. Commercial collection is accelerated by the presence of a BOMA with commercial representing an average of 89 percent of the increase in those counties. Residential represents 70 percent of the increase in Kitsap (with just an ORCA). The counties with both a BOMA and an ORCA will see the increases dominated by commercial waste, with 77 percent of the increase coming from commercial.

**Table 7. 2035 Shares of Organic Materials Recovered by Source and County Group (Tons)**

	Residential	Share of Total	Commercial	Share of Total
No BOMA or ORCA	23,211	44%	29,783	56%
Counties with BOMAs	3,644	11%	28,883	89%
Counties with ORCAs	42,199	70%	17,959	30%
Counties both BOMA and ORCA	534,665	23%	1,789,646	77%
Counties with ORCAs and Expanded BOMAs	223,958	39%	49,125	61%

We expect food waste to significantly increase as a recovered organic material for composting in counties with BOMAs. In turn, this will create increased demand for bulking agents such as wood waste and yard debris. Compost facilities are not operated to handle 50, 60, or 70 percent (or lower) food waste as a feedstock. Approximately 20 percent food waste is manageable. When facilities start to receive more than 20 percent, they need to acquire more bulking agents. While there is available wood waste that could be shifted from mulch or hog fuel production to composting, an analysis is needed on volumes of bulking agents necessary to support increased flows of food waste to compost facilities. This issue is important when considering the capacity of facilities to expand to manage additional food waste.

### 3.4. Capacity Analysis

The research team used several data sources (Ecology annual reports, Ecology survey data, and interviews) to identify regions that may have compost capacity constraints in the future. The Ecology Facility Capacity Survey<sup>20</sup> results included data from 32 to 70 percent of the facilities in each region (see Table 8). These facilities reported their current annual capacity (see fourth column in Table 8) which was then summed by region. The facilities also reported if they had plans to expand their operations. These two data points were used to assess the regional readiness to meet current and future capacity needs. Readiness is scored on a scale from one to five in the table below, where one indicates no capacity concerns and five suggests significant capacity challenges, either now or in the future.

We note that capacity data came from facilities and was not obtained from permitting documents reviewed by Ecology and approved by local health agencies. It is possible that facility data does not match allowable, permitted annual capacities. Still, these capacities are important to assess, as compost facility capacities will need to match feedstock collection if production is to increase smoothly.

**Table 8. Capacity Data by Region (Tons)**

Region	2024 <sup>21</sup> Collection (tons)	Survey Response Rate	Survey-Capacity (tons)	2035 Capacity Need (tons)	Increase (multiple)	Increase (tons)	Capacity Readiness (1 yes 5 no)
Central	176,541	(4/9) 44%	130,700	226,474	1.28	49,933	3
Eastern	262,887	(7/10) 70%	451,400	313,075	1.19	50,188	2
Northwest	662,294	(12/21) 57%	790,500	1,773,437	2.68	1,111,143	3
Southwest	252,267	(6/19) 32%	535,500	705,862	2.80	453,595	1
<b>Totals</b>	<b>1,353,989</b>	<b>(29/59) 49%</b>	<b>1,908,100</b>	<b>3,018,848</b>	<b>2.23</b>	<b>1,664,859</b>	

#### Central

Noting that just 44 percent of the facilities in the central region responded to the survey, the Central Region is the only region in which the 2024 organics material collection<sup>22</sup> total exceeds the total permitted capacity (provided by the compost facility survey respondents) of the region. It also appears this region will see an increase in collection of almost 50,000 tons by 2035. However, only two of the

<sup>20</sup> The Ecology Organics Team received responses from 29 compost facilities across the state out of 59 total compost facilities (response rate of 49 percent). To view a more detailed breakdown of this data see Appendix E.

<sup>21</sup> Although much of this report uses 2023 as the most recent year of complete data, the survey data follows 2024 collection results and hence for the survey discussion, reported data from 2024 is used.

<sup>22</sup> The organics material collected is based on the county where the organic material waste was generated.

four facilities surveyed in this region are considering expansion. Though both could accept more organic material during the busiest months of the year, this region could have capacity issues in the future due to the projected increase of organic material collection by 2035; it scored three in the Capacity Readiness column of Table 8. The Central Region may also be challenged to expand to accommodate bulking agents needed to compost food waste.

Note that it is possible that there will not be a capacity constraint as the survey data used to assess readiness represents less than half of the facilities, and the projected increase in total material collected for composting is just 28 percent higher in 2035 than what was collected in 2024.

## **Eastern**

In the Eastern Region, the capacity of the surveyed facilities is almost double the current collection volumes and is greater than predicted capacity needs in 2035. Four of the seven facilities surveyed are considering expansion in this region. As such, it is well positioned to accommodate the increase in organic material expected in this region and receives a score of two in the Capacity Readiness column. This does not necessarily mean that there is sufficient capacity to handle all types of organic waste. For example, pre-consumer food waste is only accepted at two facilities that responded to the survey, and only one facility accepts a small amount of post-consumer food waste. Therefore, at present there is no facility ready and willing to handle all types of material the OML intends to capture. There are some facilities that could handle doubling the quantity of mixed food and yard waste accepted.

## **Northwest**

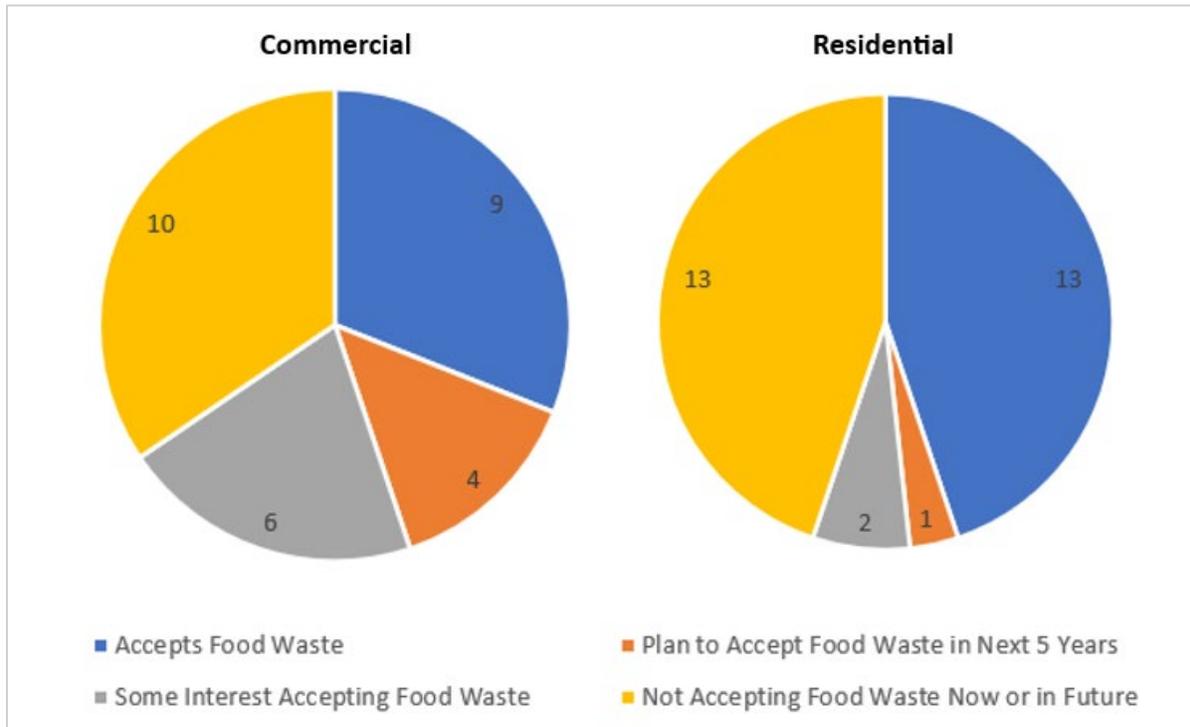
In the Northwest Region, the capacity of the surveyed facilities exceeds current collection volumes. However, this region is projected to significantly increase capacity needs by 2035. This region has two large compost facilities with an annual capacity greater than 225,000 tons, both of which could receive an additional 6,000 tons per month during their busiest times of the year. Additionally, seven surveyed facilities are planning to expand their operations over the next 5 to 10 years. Due to the region's current capacity and its potential for expansion, capacity should not pose a significant issue in the Northwest. However, this assumes the 12 surveyed facilities, about half of the regional facilities, are good representatives for the entire region. This area will need to more than double its current capacity to meet composting needs in 2035. If existing large facilities aim to expand, they will need to navigate constraints specific to air permitting. Due to the magnitude of the increase needed, and the uncertain capacity of the non-surveyed facilities, the region is given a score of three in the Capacity Readiness column.

## **Southwest**

In the Southwest region, the six surveyed facilities alone have the capacity to process more than double the 2024 recovered organics. Of the six facilities surveyed, five are planning to expand and all have a current annual capacity greater than or equal to 35,000 tons. The expansion of these facilities puts the region in a good position to accommodate additional organic materials anticipated in 2035. The region received a score of one in the Capacity Readiness column of Table 8.

## Food Waste

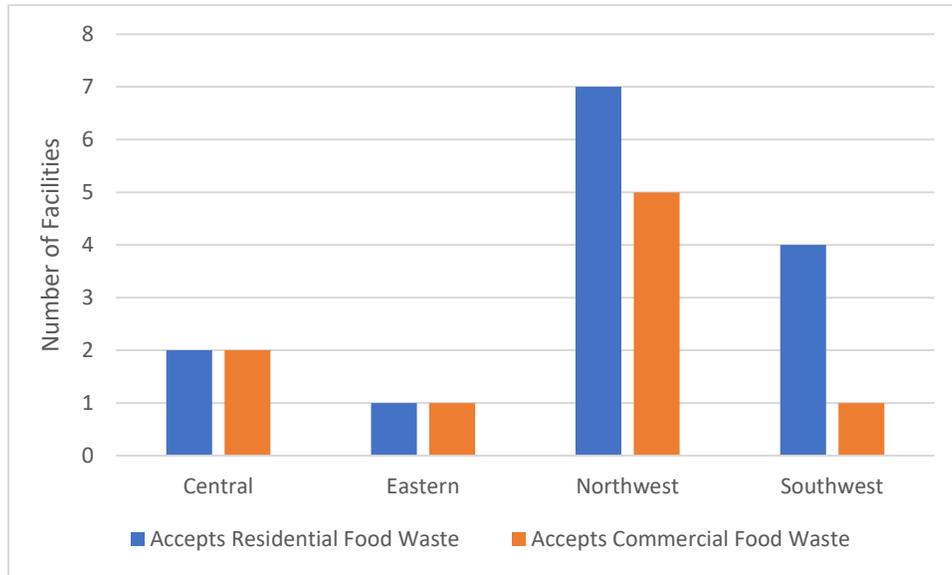
The team also used responses from the Facility Capacity Survey<sup>23</sup> to better understand how many facilities currently accept food waste and which are planning to do so within the next five years. Figure 23 describes the surveyed facility positions on accepting food waste now and in the future. Across the state, only 13 of the surveyed facilities are currently accepting residential food waste, and only nine are currently accepting commercial food waste. While a few facilities are exploring ways to accept food waste in the future, a significant number of survey respondents are not planning on accepting any food waste in the foreseeable future.



**Figure 23. Number of Facilities Surveyed by Food Waste Acceptance**

<sup>23</sup> The Ecology Organics Team received responses from 29 compost facilities across the state out of 59 total compost facilities (response rate of 49 percent). To view a more detailed breakdown of this data see Appendix E.

Figure 24 specifically looks at facilities that currently accept food waste based on the survey results. The Northwest Region has the largest number of facilities that accept both residential and commercial food waste, while the Eastern Region has the fewest.



**Figure 24. Surveyed Compost Facilities that Currently Accept Food Waste**

A 2022 addition to RCW 70A.205.040 directs counties to identify priority areas for the establishment of organic management facilities in their local solid waste management plans. It directs counties to identify priority areas for the establishment of organic management facilities in their local solid waste management plan. Priority areas must be zoned appropriately, not be located in overburdened communities, and be able to handle the capacity required to meet organic recovery goals. When counties are scheduled to update or amend their solid waste management plans, they must address these priority areas for organics management facilities.

### **3.5. Findings and Potential Challenges**

This section summarizes the key findings and challenges of the increased collection of organic materials.

#### **Findings**

- The team projects organic waste recovered for composting in Washington to increase by 375 percent between 2025 and 2035, with growth for each individual county ranging between two percent and 400 percent over that same timeframe.
- Commercial collection is a significant opportunity for the future; 92 percent of the counties show more organic materials to be recovered with commercial collection versus residential.
- Food waste is an emerging key material for recovery, with 27 percent of projected recovery being attributable to food waste alone, and additional food waste coming from mixed food/yard.
- The Puget Sound area (including King, Pierce, Skagit, Snohomish, and Whatcom counties) is already experienced in collecting residential food waste and other organic materials, so the

sector of greatest opportunity in this region is to increase organic materials collection primarily in the commercial sector.

- Across the state, the key growth of organic materials appears to be food and yard debris. Food makes up 27 percent, yard debris 27 percent, and food/yard 35 percent of projected organic material recovery for composting in 2035. When summed up, these material categories account for 89 percent of the total projected incoming organic stream.
- Counties with BOMAs and/or ORCAs exhibit the greatest projected growth in organic materials recovery, both in percentages and in tonnages.
- Jurisdictions with an ORCA drive the increase in residential recovery, and commercial recovery lags if there is no BOMA.
- If there is a BOMA (existing or projected to exist), it drives the growth to greater commercial recovery, although this is not absolute for every county.
- If neither an ORCA nor a BOMA exist in a county, growth tends to be slower in the forecast and growth in these counties will likely start with residential yard debris and then work toward the food waste goals reducing 50 percent of 2015 food waste disposed in landfills.
- Some counties show an opportunity to increase organic materials collection by one or two specific types, often food and/or yard debris. This can be a benefit to those counties, as they can focus their attention on solutions for those specific organics.
- Based on the projection, increased infrastructure to manage incoming organics materials will be needed. This analysis assumes there is a need and an economic motive to establish new composting facilities.
- With regards to improving the forecasts completed to address the impact of the OMLs, the following may be considered:
  - If there are specific counties already designated for inclusion into expansion of BOMAs and/or specific geographical areas, adding information regarding those will improve the projections.
  - Complete data for each of the ORCAs would allow for a more complete analysis. Missing data includes: populations of specific areas (especially those that included parts of specific towns or cities), participation rates, and a distinction of whether organics collection was available in the area.
  - The goal to decrease total organic waste by 75 percent is not specific to material categories. A more specific goal by category or additional information that would allow the goal to be assessed by category could improve the projections of both organic materials and the finished compost.

## Challenges

The potential bottlenecks and challenges to increasing the collection of organic materials center around three themes. These are the overall capacity constraints, contamination, and the seasonal availability of organic materials.

## Capacity

Based on data from the Ecology Compost Facility Survey and additional interviews conducted for this study, many facilities appear to be planning expansions that could help accommodate the projected increase in organic material by 2035. As discussed in Section 3.4, the capacity analysis shows that when current facility capacity is considered alongside planned expansions, the Southwest Region is well positioned to manage this growth over the next decade. Although there is more uncertainty in the Central and Eastern Regions, the survey results suggest that at least one facility in the Central Region is permitted for processing at least 50,000 more tons than the facility collected in 2024, which suggests capacity is available. The Northwest Region has several facilities planning expansions, yet it faces a steeper challenge: by 2035, its projected capacity need is more than two and a half times the current collection rate. This dramatic increase could present a capacity shortfall.

Beyond overall capacity concerns, there is a specific challenge related to food waste. Table 3 above indicates that statewide food waste collection is expected to increase by 700,000 tons by 2035, growing from 14 percent of total organic material recovery to 27 percent. Further mixed food/yard waste is projected to rise by over 800,000 tons during the same period. Despite its increasing share of the organic waste stream, many composting facilities currently do not accept food waste and have no plans to do so (see Figure 18). For example, counties will need facilities that accept food waste to comply with the organics management laws.<sup>24</sup>

And yet, interviews with facility operators highlighted widespread hesitancy to accept food waste. Unlike yard debris or agricultural waste, post-consumer food waste is wetter, breaks down more quickly, often comes with more contamination, and generates stronger odors if not managed properly.<sup>25</sup> Processing it requires more intensive monitoring, specialized equipment to control odor, and possible increases in leachate capture to manage leachate.<sup>26</sup> These upgrades, including new infrastructure, odor control systems, and staff training can be expensive. Additionally, due to the nitrogen-rich nature of the material itself, processing increased volumes of food waste also necessitates increased debris rich in carbon to create a suitable balance of nutrients needed to facilitate efficient composting processes and create a quality end-product. Several facility operators mentioned challenges related to the availability of carbon-rich material throughout the year, generally referring to the seasonal availability of materials.<sup>27</sup>

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<sup>24</sup> ORCA service waivers will be accessible to counties who need more time to comply with the ORCA requirements, including building capacity to handle increased volumes of post-consumer food waste.

<sup>25</sup> Cascadia Consulting Group. 2024. Compostable Products Management in Washington State: Report to the Legislature. September. Available [here](#).

<sup>26</sup> Leachate is the liquid that drains or "leaches" from organic materials—especially wet waste like food scraps—as they break down. The water content in food waste generates more leachate compared to organic material streams like yard waste with a lower water content. Leachate can contain nutrients, metals, pathogens which is why it must be collected, stored and treated. Source: Roy, et al. 2018. Composting Leachate: Characterization, Treatment, and Future Perspectives. Available [here](#).

<sup>27</sup> For example, personal communication with Samantha Winkle, Assistant District Manager, Silver Springs Organics. June 10, 2025.

## ***Contamination***

Concerns about contamination also contribute to reluctance to accept food waste, particularly from commercial sources.<sup>28</sup> Insufficient education and enforcement mechanisms around proper disposal and handling of physical contaminants (packaging, etc.) can create major bottlenecks at the point of processing and inhibit composters from being willing to accept food waste.

Organics from curbside collection programs are always contaminated to some degree, with residential being cleaner than commercial or multifamily, both of which can be highly contaminated. This places a significant burden on composters to attempt to sort out contamination before and after going into composting processes. Especially for larger facilities taking in large volumes of waste, these management strategies come at a significant expense. Managing increased contamination is the greatest hurdle for composters considering accepting commercial food waste generated through BOMAs.<sup>29</sup>

The issue is especially significant for facilities creating compost approved for use on organic farms. The National Organics Standards Board does not allow compostable products as a feedstock, so facilities who chose to access the organic farm market will not be able to accept food waste that includes compostable serviceware, such as plates and cups.

## ***Seasonal Availability of Organic Materials***

Some facilities interviewed mentioned that seasonal variations may be a challenge as more food waste is collected. To produce compost, carbon sources from materials like wood and yard waste must be mixed with food waste. However, while the food waste arrives evenly throughout the year, yard waste is primarily available only in spring through fall. There are strategies to overcome this, such as stockpiling, or importing from other facilities, or using the “overs” left from earlier processing. Some facilities will likely need new strategies to obtain increased feedstock volumes of wood waste to account for seasonality of some materials (e.g. yard debris) and maintain a viable composting ratio due to an increased volume of food waste.

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<sup>28</sup> Wallace, Jacob. 2023. Survey Finds More Composters are Accepting Food Waste, but More Challenges Remain. August. Available [here](#).

<sup>29</sup> As directed by the ORCA statute (RCW 70A.205.540), as of the writing of this report, Ecology has an open rulemaking for WAC 173-350 to address “contamination associated with incoming food waste feedstocks and finished products.” This rulemaking aims to help address facility concerns regarding contamination associated with increasing post-consumer food waste feedstocks.

## 4. Key Findings: Finished Compost Forecast

This chapter presents the forecasts for finished compost, starting with a brief discussion of compost sold and stockpiled historically. The forecasts focus on statewide results as well as those at the county level. The forecast illustrates finished compost produced in a county based on the projected organics materials recovered for composting in that county. Any organic materials that have been recovered through an alternative organics management method are assumed to maintain processing through those alternative channels at historical volumes.

The research recognizes that organic waste and finished compost do not recognize county borders and there is more flow of this material between borders than the analysis presents. Consider the projected volume of finished compost available on a county basis as both a directional and a regional approximation of total finished compost available for use and sale.

### 4.1. Historic Compost Sold and Stockpiled

Prior to developing a forecast for finished compost, a historical review of volume of compost produced, sold, and stockpiled overtime is summarized. A key source of this data is the annual compost report required by WAC 173-350-220 that is self-reported by facilities. Results are compiled annually by Ecology.<sup>30</sup> Based on this database, Table 9 provides the volume of compost produced, sold, and stockpiled historically in the state from 2006 to 2023. The median volume of compost produced annually between 2014 and 2023 was about 2.6 million cubic yards, with a median of 1.7 million cubic yards sold (68 percent of production) and 26 percent (median) stockpiled each year.

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<sup>30</sup> Washington State Department of Ecology. Various years. Compost Facility Annual Report required by WAC 173-350-220, years 2005-2023. Provided to Greene Economics by Ecology personnel.

**Table 9. Compost Produced, Sold, and Stockpiled in Washington, 2006-2023 (Cubic Yards)<sup>31</sup>**

Year	Quantity Produced	Quantity Sold	Quantity Stockpiled	% Sold	% Stockpiled
2006	1,782,780	924,172	847,733	52%	48%
2007	2,087,148	1,176,044	899,995	56%	43%
2008	2,002,995	1,337,515	650,006	67%	32%
2009	2,251,511	1,248,679	959,527	55%	43%
2010	2,855,362	1,420,194	1,406,252	50%	49%
2011	2,146,586	1,531,806	552,480	71%	26%
2012	1,933,152	1,518,953	350,179	79%	18%
2013	1,862,947	1,393,221	257,624	75%	14%
2014	3,557,071	1,634,771	1,506,826	46%	42%
2015	2,549,031	1,788,971	708,773	70%	28%
2016	2,397,656	1,447,934	624,923	60%	26%
2017	1,970,862	1,338,743	421,469	68%	21%
2018	2,546,259	1,670,564	756,468	66%	30%
2019	2,646,542	1,573,666	789,295	59%	30%
2020	2,787,638	1,965,255	784,799	70%	28%
2021	2,573,006	1,882,056	507,636	73%	20%
2022	2,725,511	2,092,190	491,687	77%	18%
2023	2,412,361	1,826,094	540,663	76%	22%
<b>Median (2014-23)</b>	<b>2,561,018</b>	<b>1,729,767</b>	<b>666,848</b>	<b>68%</b>	<b>26%</b>

<sup>31</sup> Based on data provided in: Washington State Department of Ecology. Various years. Compost Facility Annual Report required by WAC 173-350-220, years 2005-2023. Provided to Greene Economics by Ecology personnel.

An important trend is that there has been an increasing share of finished product sold in the more recent years (2020 through 2024) and less stockpiled. The same data is used to present the information graphically below (see Figure 25).



**Figure 25. Compost Produced, Sold, and Stockpiled in Washington, 2006-2023<sup>32</sup>**

Since 2006, sales of compost appear to have trended upwards in general, with a few incidences of decline (see the orange bars in Figure 25). Spikes in sales also seem to have some correlation with production. For example, there was a significant increase in compost production in 2014 (see blue line in Figure 25), followed by an increase in compost sales in 2015 and a correlated decrease in volume stockpiled (green bars in Figure 25) in 2015. This could also be due to a decrease in compost prices in 2015, potentially stemming from higher production in 2014. Another noticeable takeaway from this history is that the market has shown signs of maturity and stability in recent years.

<sup>32</sup> Based on data provided in: Washington State Department of Ecology. Various years. Compost Facility Annual Report required by WAC 173-350-220, years 2005-2023. Provided to Greene Economics by Ecology personnel.

Over the past ten years, both the total volume and sales have been increasing, while stockpiled decreased or maintained. This can be seen in Figure 26, which simply focuses on the share of compost sold and stockpiled each year.



**Figure 26. Percentage of Compost Sold and Stockpiled in Washington, 2006-2023<sup>33</sup>**

<sup>33</sup> Based on data provided in: Washington State Department of Ecology. Various years. Compost Facility Annual Report required by WAC 173-350-220, years 2005-2023. Provided to Greene Economics by Ecology personnel.

## 4.2. Statewide Forecast Results

Figure 27 presents the forecast of finished compost production in all counties within Washington State from 2023 (actuals) to 2035 (projected). Nearly 1.25 million cubic yards of finished compost were produced in 2023 in the state. This total includes compost produced from all sources, including organic materials collected from areas outside Washington. Compost produced from organic materials within Washington is projected to climb to 1.45 million cubic yards in 2025 based on the expected recovered organic materials presented in Chapter 3. By 2035, finished compost produced is expected to grow to nearly 2 million cubic yards, a growth of 36 percent compared to 2025.

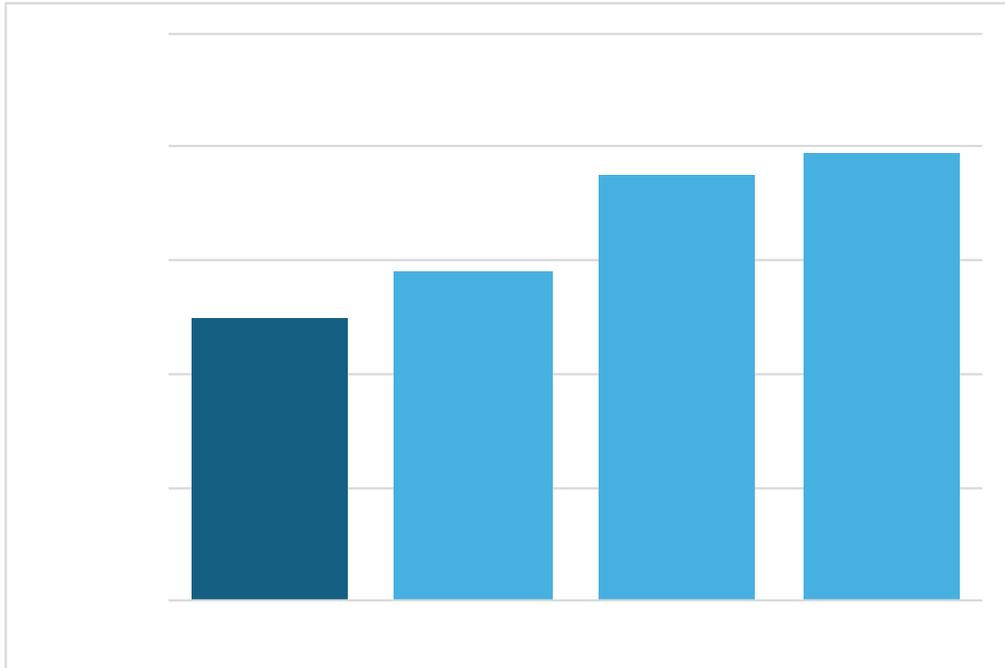


Figure 27. Washington Actual (2023)<sup>34</sup> and Projected Finished Compost (Cubic Yards)

## 4.3. County Level Results

The key results from this projection are the anticipated tons of finished compost expected for each county over the next 10 years as the new laws are implemented. Results for 2025, 2030, and 2035 finished compost projections are broken down by residential and commercial waste used to produce the compost. One of the graphs in the model shows the projection in tons, and the other shows the projection in cubic yards.

Table 10 shows the forecasted finished compost for all counties in 2025, 2030, and 2035 in cubic yards and the percent change between 2025 and 2035. The state as a whole can expect to see a 36 percent

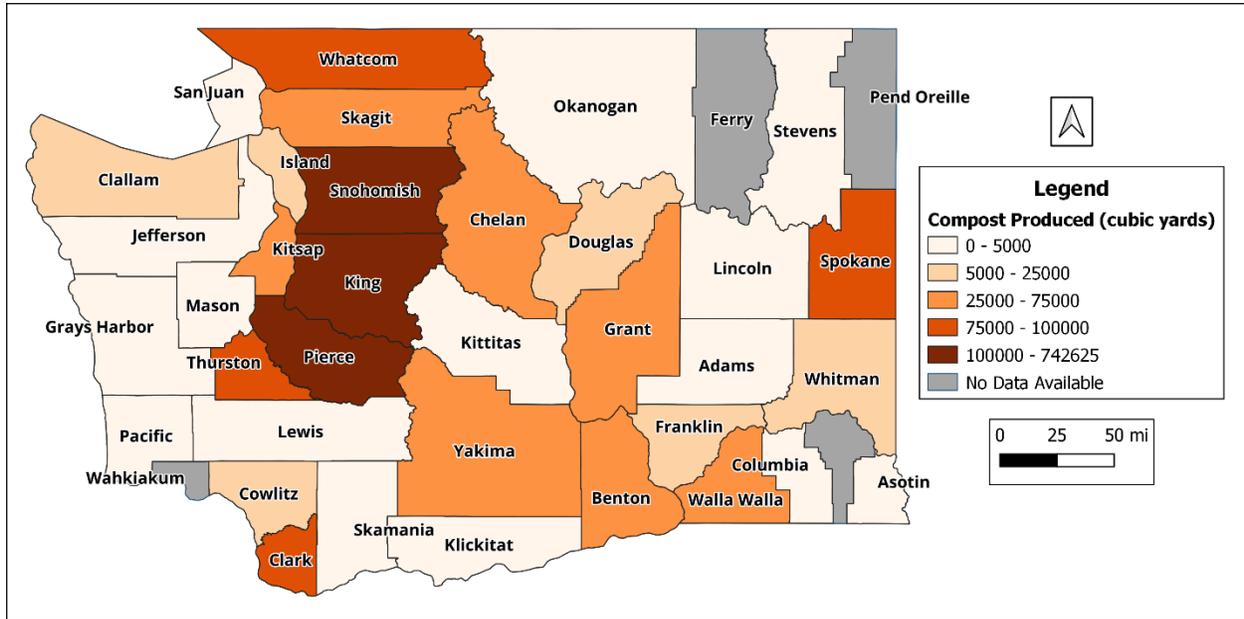
<sup>34</sup> The 2023 total includes compost produced from organic materials sourced outside of Washington and therefore does not represent a metric comparable to the projected values (2025, 2030, and 2035) of compost produced only from organic materials sourced within Washington. However, this value presents a point of comparison for the OML increases.

change in finished compost produced between 2025 and 2035. All compost forecasts are based on the conversion rates presented in Table 1.

**Table 10. Finished Compost Forecast to 2035 (Cubic Yards)**

County	2025 est.	2030	2035	% Change
Adams	382	761	792	108%
Asotin	1,137	1,555	1,578	39%
Benton	5,331	25,887	31,865	498%
Chelan	29,473	38,293	39,267	33%
Clallam	5,462	5,950	6,093	12%
Clark	47,074	75,289	93,158	98%
Columbia	1,251	1,304	1,278	2%
Cowlitz	2,825	11,235	14,536	415%
Douglas	6,331	7,824	7,875	24%
Franklin	3,862	17,348	20,560	432%
Grant	29,073	36,310	37,724	30%
Grays Harbor	1,468	2,912	2,927	99%
Island	10,873	13,896	14,034	29%
Jefferson	3,405	3,989	4,157	22%
King	602,038	721,157	735,989	22%
Kitsap	17,511	37,461	39,020	123%
Kittitas	2,803	3,186	3,354	20%
Klickitat	685	1,159	1,197	75%
Lewis	373	741	762	104%
Lincoln	532	546	552	4%
Mason	1,321	2,387	2,502	89%
Okanogan	1,256	2,101	2,129	70%
Pacific	200	204	207	3%
Pierce	209,432	247,332	253,985	21%
San Juan	931	1,030	1,084	16%
Skagit	38,738	46,171	46,803	21%
Skamania	324	450	464	43%
Snohomish	177,883	211,854	218,315	23%
Spokane	28,047	81,825	99,277	254%
Stevens	1,048	1,574	1,628	55%
Thurston	70,706	95,085	99,585	41%
Walla Walla	29,451	33,893	34,412	17%
Whatcom	57,473	74,197	75,828	32%
Whitman	7,902	9,441	9,666	22%
Yakima	50,015	63,244	64,816	30%
<b>Total</b>	<b>1,446,616</b>	<b>1,877,593</b>	<b>1,967,422</b>	<b>36%</b>

Figure 28 provides a geographic overview of the expected growth in finished compost by 2035 on a county basis. We anticipate Snohomish, King, and Pierce counties will produce the highest volumes of compost by 2035 (between 100,000 and 742,625 cubic yards), followed by Thurston, Whatcom, Clark, and Spokane counties (between 75,000 and 100,000 cubic yards).

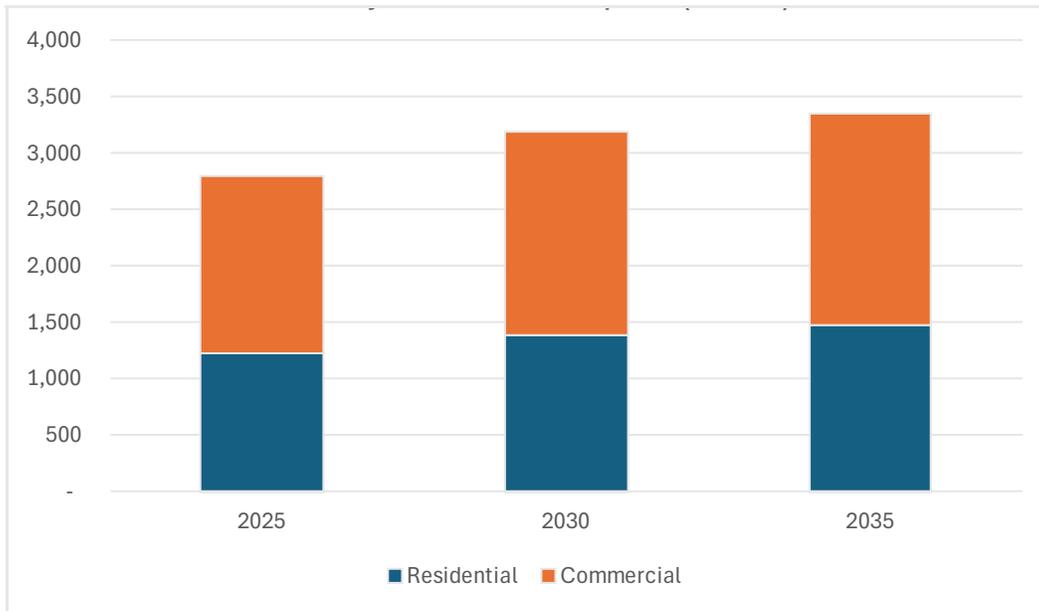


**Figure 28. 2035 Forecasted Finished Compost Production by County (cubic yards)**

Just as with the recovered organic materials for composting projection, the finished compost projection results include all county results in this report. Therefore, the results for three example counties are provided in this section to demonstrate different types of results. A similar analysis with greater detail is available for each county in the model. We provide the results for projected finished compost in Kittitas, Snohomish, and Spokane counties below.

## Kittitas

Figure 29 shows the results for Kittitas County as an example of a county located in the Central Region. As of the writing of this report, Kittitas County does not have a BOMA or ORCA. The composting facilities currently within the county primarily process yard debris. The corresponding Table 11 shows the finished compost production forecast for Kittitas County.



**Figure 29. Kittitas Finished Compost Projection, 2025-2035 (Cubic Yards)**

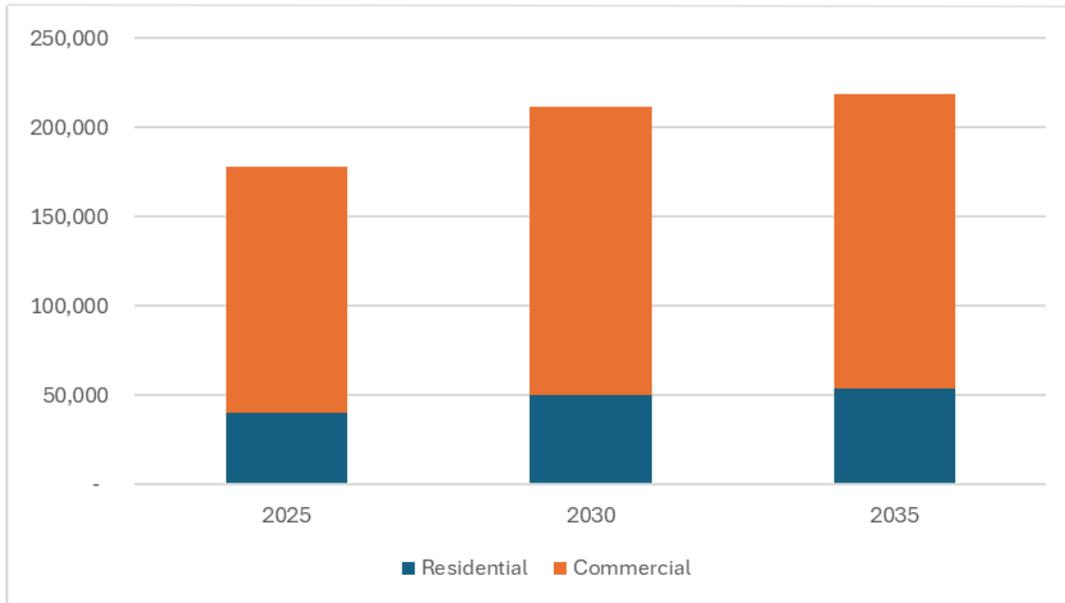
Finished compost produced in Kittitas County is expected to grow about 20 percent from 2025 to 2035, based on population projections or expansion of collection services.

**Table 11. Annual Finished Compost Forecast for Kittitas County, 2025-2035 (Cubic Yards)**

	2025	2030	2035
<b>Residential</b>	1,226	1,394	1,468
<b>Commercial</b>	1,576	1,792	1,886
<b>Total</b>	<b>2,803</b>	<b>3,186</b>	<b>3,354</b>

## Snohomish

Figure 30 shows the results for Snohomish County as an example of a county in the Northwest Region. Snohomish County is subject to both BOMA and ORCA regulations. The corresponding Table 12 shows the forecast for Snohomish County based on source material originating from commercial or residential sectors. Note the totals in Snohomish County are more than 50 times larger than the results in Kittitas County.



**Figure 30. Snohomish Finished Compost Projection (Cubic Yards)**

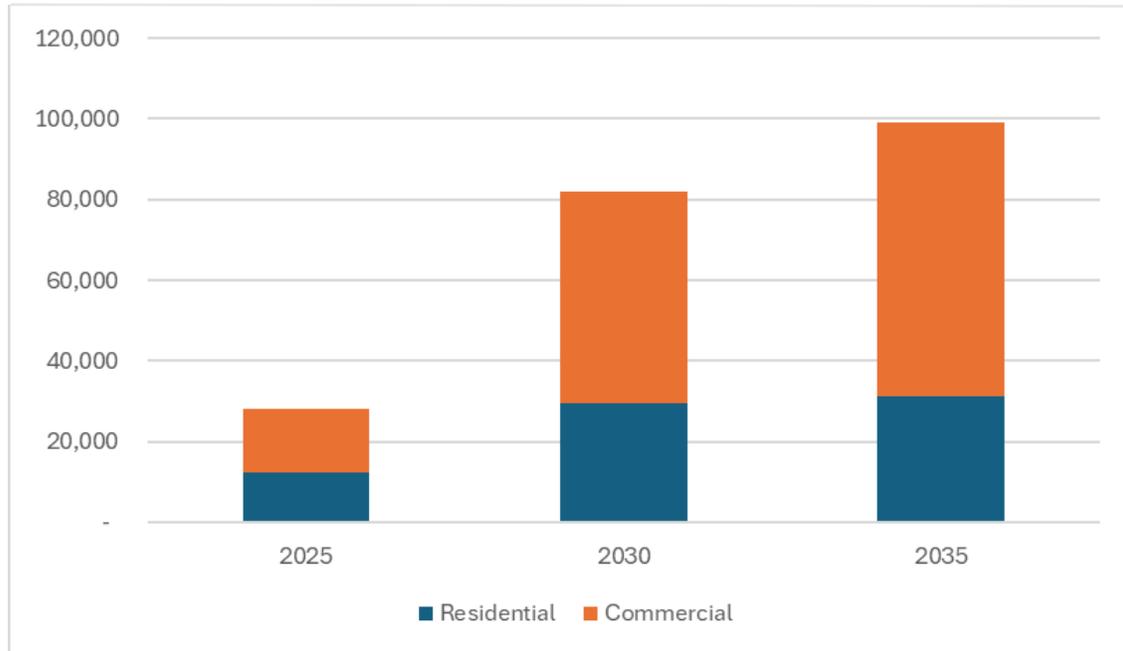
Finished compost produced from Snohomish County is expected to grow by 23 percent between 2025-2035, with nearly 25 percent of the feedstock coming from the residential sector and the remaining 75 percent from the commercial sector. Growth in the use of commercial material to produce compost is a result of increased commercial participation due to BOMA requirements. The less pronounced rise in the residential share is due to the ORCA requirements.

**Table 12. Annual Finished Compost Forecast for Snohomish County (Cubic Yards)**

	2025	2030	2035
<b>Residential</b>	39,675	50,311	53,510
<b>Commercial</b>	138,208	161,543	164,805
<b>Total</b>	<b>177,883</b>	<b>211,854</b>	<b>218,315</b>

## Spokane

Figure 31 shows the results for Spokane County as an example of a county in the Eastern Region. The county has an ORCA, and it is projected to have a BOMA by 2030. Spokane County shows significant growth in finished compost (253 percent) due to both ORCA and expanded BOMA requirements. This demonstrates how increasing organic material collection (339 percent, Table 5) translates into increased finished compost. The corresponding Table 13 shows the forecast for Spokane County of finished compost with feedstock from residential versus commercial sectors.



**Figure 31. Spokane Finished Compost Projection (Cubic Yards)**

Finished compost produced in Spokane County is expected to grow from 28,047 cubic yards in 2025 to 99,277 cubic yards in 2035. In 2025, the residential share is estimated at 44 percent, and this declines to 31 percent in 2035. This indicates the commercial sector is projected to increase from 56 percent share in 2025 to 69 percent in 2035. The split between residential and commercial shares of the finished compost follows the assumption of an expanded BOMA in 2030.

**Table 13. Annual Finished Compost Forecast for Spokane County (Cubic Yards)**

	2025	2030	2035
<b>Residential</b>	12,273	29,433	31,228
<b>Commercial</b>	15,774	52,392	68,049
<b>Total</b>	<b>28,047</b>	<b>81,825</b>	<b>99,277</b>

#### **4.4. Key Findings**

The historic data on compost produced and stockpiled shows a maturing market where a smaller share of compost has been stockpiled in recent years. The compost forecast suggests that in general, counties with the largest amount of recovered organic materials are anticipated to generate the highest volumes of finished compost. However, the mix of types of organic materials recovered varies between counties, and this in turn affects the finished compost. In other words, some material mixes will generate more finished compost than other mixes. Also, BOMA and ORCA designations are expected to significantly influence the increases in production of finished compost at the county level.

## 5. Market Analysis for Finished Compost

The third task in this analysis is to analyze the size of market channels for finished compost, and the willingness to pay for different market channels and compost type. In addition to researching this topic with publicly available literature and information, the team conducted interviews with representatives from compost facilities and used compost capacity survey data collected by Ecology. This chapter covers an overview of compost buyers and recent trends, markets, pricing, opportunities to expand, and comments on the entrepreneurial capacity within the industry. We combined conclusions based on this market analysis with other results from the forecasts and presented in Chapter 6.

### 5.1. Compost Buyers and Recent Trends

Based on interviews conducted by the research team, the most frequently mentioned customer base for the compost producers was homeowners, landscapers, and gardeners looking to purchase products for use in their personal or community cultivation projects. Multiple interviewees stated this group constituted over half of their annual sales, with agriculture, construction, and wholesaling operations making up the remainder of their markets. Ensuring high quality products for customers was a top priority for several operations. One producer claimed this consumer makeup had remained relatively consistent over the past decade, while others stated they had observed an increase in the number of farmers purchasing their products since the state implemented the compost reimbursement program (see Public Markets below for a discussion of this program).

When asked about whether sales of compost could be increased, composters described some of the market ups and downs that have influenced their sales in the past. For example, economic trends as potentially influential to the compost market include the Great Recession of 2008, when uncertainty ruled all markets and sales of compost were down. In a similar fashion, several producers commented that the COVID-19 pandemic of 2020 had a negative impact on compost sales, inspiring some businesses to scale back production and divert resources from plans for future expansions. One interviewee explained that farmers use compost as a fertilizer substitute, and that fossil fuel-based fertilizer becomes relatively cheaper when oil prices are down. Therefore, compost sales may be inversely related to oil prices. Another explained that some farmers are hesitant to use compost due to the risk associated with incorporating new elements into a successful agricultural process. Several composters commented that customers are not well educated about the environmental benefits of using compost as opposed to other products. These include the soil amendment, water retention, and carbon sequestration benefits of compost.

### 5.2. Public Markets

The OMLs anticipated the need to have demand-pull associated with the new supply of compost. The laws created two programs to incentivize the use of finished compost, the compost procurement ordinance and the compost reimbursement program. The compost procurement ordinance (CPOs) requires that cities and counties with populations over 25,000 develop local ordinances prioritizing the purchase of locally produced compost. The compost reimbursement program (CRP) reimburses farmers for the cost of purchasing and using compost. Each is described more fully below.

In January 2023, required jurisdictions (counties and cities) adopted CPOs to plan for the use of compost in four different types of municipal projects, as directed by law. Municipalities with CPOs are required to submit annual reports that outline the previous year’s compost procurement activities. Impacted jurisdictions submitted their first reports to Ecology in 2025. Washington municipalities spent \$1.3 million dollars purchasing just over 27,000 tons of finished compost at an average price of \$39 per cubic yard. This purchased volume represents two percent<sup>35</sup> of the finished compost produced in Washington in 2024. The same quantity also represents over five percent of the total compost that was stockpiled in 2023 (see Figure 25, above).

Counties like Snohomish, King, and Pierce, which are projected to significantly grow the finished compost produced in their county (see Figure 28), may want to specifically consider increased requirements for municipal and county compost procurement. This public procurement could support facilities in their respective counties to better plan for the increased volumes of finished material they will be both managing and selling.

Beginning in fall 2023, the Washington State Department of Agriculture opened the CRP. This program reimbursed Washington farmers who purchase compost from eligible compost facilities in the state. Funding limits for participating farms vary based on farm size and proposed budget. During FY2025 (July 1, 2024-June 30, 2025), this program supported the purchase of 16,237 cubic yards of compost, valuing \$808,651. This volume represents just over one percent of the finished compost produced in Washington in 2024.<sup>36</sup> The compost was secured at an average cost of \$49.80. Due to Washington state budget constraints, this program was not funded for the 2025-2027 biennium.

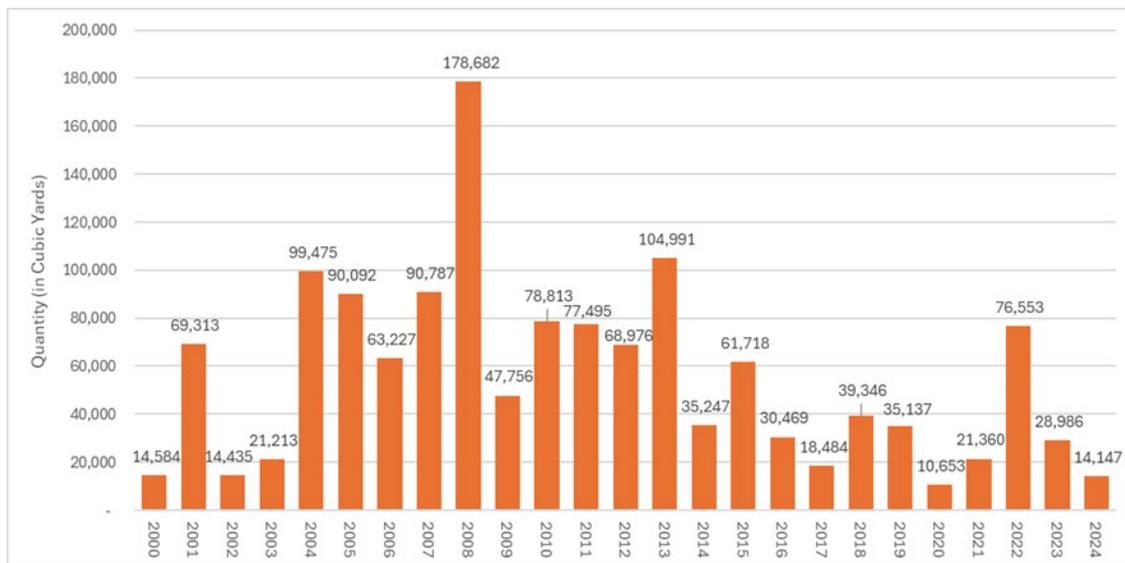
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<sup>35</sup> 2024 CPO Finished Compost Purchases: 27,375 yards; 2024 Total Finished Compost Produced: 1,403,757 cubic yards

<sup>36</sup> Total percent is an approximation as the timeline for reporting requirements is different (fiscal year vs. calendar year). FY 2025 CRP Finished Compost Purchases: 16,327 cubic yards; 2024 Total Finished Compost Produced: 1,403,757 cubic yards

In 2024, WSDOT procured 14,147 cubic yards of finished compost at an average price of \$29.59 per cubic yard.<sup>37</sup> Figure 32 shows how WSDOT compost purchases have varied from a low of just over 10,000 cubic yards in 2020 (pandemic year) to a high of over 178,000 in 2008.

Historically, WSDOT has also been a significant customer of the Washington compost industry. Their bids are project-centric and thus demand varies year-to-year based on project funding and project type. Generally speaking, WSDOT has the most stringent specification requirements of most markets. WSDOT purchases most often fine-grade compost where the specification indicates that at least 75 percent of the material passes a ¼ inch sieve. Further partnership with WSDOT to explore mechanisms that this customer segment could use to support the compost market could be beneficial.



**Figure 32. WSDOT Compost Bids Awarded Since 2000**

Public markets (parks, roadsides, etc.) on record purchased 57,759 cubic yards of compost in 2024. This represents four percent of the finished compost produced in Washington that same year. As the volume of finished compost grows with the implementation of the OMLs, the public sector has room to increase its purchase of compost and compost products. While many public sector projects are contingent on project and funding needs, prioritizing the use of these products will be a key mechanism to support the compost industry.

### 5.3. Pricing

There are different types of compost products that each command varying values on the market. The composition of compost products is impacted by feedstock, composting method (ex. windrow vs. aerated static piles), incoming contamination levels, and other factors. Moreover, compost products are often offered in differing granularity from fines (small particles) to course (larger particles). These variations trigger different market prices, as well as other factors such as bulk purchases, location, etc. Recall that in section 5.2 above we saw that CRP prices were on average nearly \$50 per cubic yard for

<sup>37</sup> This average represents a statewide price/cubic yard. Projects in Western Washington spent on average \$35.62 per cubic yard and those in Eastern Washington spent on average \$15.50 per cubic yard.

on-farm use, and municipal and county users purchased compost on average for \$39 per cubic yard based on CPO reporting.

While there are many sources of prices, according to one, bulk compost prices are \$20 to \$50 per cubic yard on average but can be higher.<sup>38</sup> At a more local level, price data are available through the websites of compost producers or provided by their representatives. Based on that, organic compost for use in certified organic agriculture ranges from \$34 per cubic yard in the Southwest Region<sup>39</sup> to \$62 per cubic yard in the Central Region<sup>40</sup> (see Table 14). Non-organic prices also vary, and in the Eastern Region, non-organic compost can be found for \$19 per cubic yard<sup>41</sup> while it can cost \$75 per cubic yard in the Central Region.<sup>42</sup> In terms of blends, a blend of compost and soil costs \$23.27 per cubic yard (50/50 blend) in the Eastern Region<sup>43</sup> while a similar blend can command \$93 per cubic yard (raised bed and container blend) in the Central Region.<sup>44</sup> A biochar and compost blend can range from \$80 per cubic yard to \$125 per cubic yard.<sup>45</sup>

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<sup>38</sup> Noel, Sarah - HomeGuide. 2023. How Much does Compost Cost? Available [here](#).

<sup>39</sup> Brady. 2025. Organic Compost. Available [here](#).

<sup>40</sup> Dirt Hugger. 2025. Compost + Soil Blends. Available [here](#).

<sup>41</sup> City of Walla Walla. 2025. Rates – Compost Rates. Available [here](#).

<sup>42</sup> Kittitas County. 2025. Solid Waste, Transfer Station. Available [here](#).

<sup>43</sup> City of Walla Walla. 2025. Rates – Compost Rates. Available [here](#).

<sup>44</sup> Dirt Hugger. 2025. Compost + Soil Blends. Available [here](#).

<sup>45</sup> Noel, Sarah - HomeGuide. 2023. How Much does Compost Cost? Available [here](#).

**Table 14. 2025 Retail Compost Price by Type (per Cubic Yard)**

Compost Types and Blends	Average Price per Cubic Yard
<b>Types</b>	
Manure/Agriculture Compost	\$34.00 <sup>46</sup>
Organic Compost	Central Region: \$62 <sup>47</sup> Southwest Region: \$33.95 <sup>48</sup>
Non-Organic Compost	Central Region: \$55 - \$75 <sup>49</sup> Northwest Region: \$39.50 <sup>50</sup> Southwest Region: \$13.00 <sup>51</sup> - \$35 <sup>52</sup> Eastern Region: \$19.31 <sup>53</sup> - \$32.04 <sup>54</sup>
<b>Blends</b>	
Compost and Soil	Central Region: \$83 (lawn mix); <sup>55</sup> \$93 (raised bed and container blend) <sup>56</sup> Northwest Region: \$42 (lawn mix); <sup>57</sup> \$39 (vegetable garden mix) <sup>58</sup> Southwest Region: \$26.95 (lawn mix); <sup>59</sup> 34.95 (garden mix) <sup>60</sup> Eastern Region: \$23.27 (50/50 blend) <sup>61</sup>
Compost and Biochar	\$80 – \$125 <sup>62</sup>

<sup>46</sup> Hill, Karen, Michael Brady, Georgine Yorgey, and Douglas Collins, 2019. Differentiating the Value and Cost of Compost Across Likely Farm Use Scenarios in Western Washington. A report for The Waste to Fuels Technology Partnership 2017-2019 Biennium: Advancing Organics Management in Washington State. Center for Sustaining Agriculture and Natural Resources, Washington State University, School of Economic Sciences, Washington State University and Washington State Department of Ecology, September.

<sup>47</sup> Dirt Hugger. 2025. Compost + Soil Blends. Available [here](#).

<sup>48</sup> Brady. 2025. Organic Compost. Available [here](#).

<sup>49</sup> Kittitas County. 2025. Solid Waste, Transfer Station. Available [here](#).

<sup>50</sup> Cedar Grove. 2025. 2025 Retail Bulk Pricing. Available [here](#).

<sup>51</sup> Brady. 2025. All Products. Available [here](#).

<sup>52</sup> Brady. 2025. All Products. Available [here](#).

<sup>53</sup> City of Walla Walla. 2025. Rates – Compost Rates. Available [here](#).

<sup>54</sup> City of Walla Walla. 2025. Rates – Compost Rates. Available [here](#).

<sup>55</sup> Dirt Hugger. 2025. Compost + Soil Blends. Available [here](#).

<sup>56</sup> Dirt Hugger. 2025. Compost + Soil Blends. Available [here](#).

<sup>57</sup> Cedar Grove. 2025. 2025 Retail Bulk Pricing. Available [here](#).

<sup>58</sup> Cedar Grove. 2025. 2025 Retail Bulk Pricing. Available [here](#).

<sup>59</sup> Brady. 2025. Pro Blend Soil. Available [here](#).

<sup>60</sup> Brady. 2025. Garden Mix. Available [here](#).

<sup>61</sup> City of Walla Walla. 2025. Rates – Compost Rates. Available [here](#).

<sup>62</sup> Noel, Sarah - HomeGuide. 2023. How Much does Compost Cost? Available [here](#).

At the retail level, typically compost is sold in one cubic foot bags, either as single bags or packages of multiple bags. Based on data from Lowe's and Home Depot in the Puget Sound area, prices for compost at the retail level range between \$6.98 per cubic foot and \$27.81 per cubic foot.<sup>63 64</sup> The wide variation in prices at Lowe's and Home Depot stores in the Puget Sound area is an indicator that, similar to bulk compost, many factors affect compost prices at the retail level, as well.

Compost products are not a commodity, and so the demand is influenced by factors related to product quality, intended use, and consumer behavior. Specifically, factors like consistent quality, nutrient availability, contaminant free, and no offensive odors are crucial for meeting market expectations. Furthermore, factors like tipping fees, the availability of alternatives, and the perceived value of compost in improving soil health and reducing chemical fertilizer use play a significant role in driving demand, particularly in agriculture.<sup>65</sup> Some basics of compost demand are listed below:

- Price: The quantity of compost sold generally increases as the price decreases.<sup>66 67</sup>
- Availability of Substitutes: The presence of alternative soil amendments, like cover crops or synthetic fertilizers, can influence the demand for compost.<sup>68</sup>
- Perceived Value: Consumers and farmers need to see the benefits of using compost, such as improved soil health, reduced chemical fertilizer use, and increased yields, to drive demand.<sup>69 70</sup>
- Market Segmentation: Different markets (e.g., agriculture, landscaping, residential gardening) may have different priorities and preferences for compost.<sup>71</sup>

The pricing information provided by the outreach section of this research supports the national information found with respect to pricing. That is, prices vary by product and quality, with some operators offering higher-priced products which can be sold in lower volumes. While others offer lower priced products with greater contamination but for less sensitive uses (e.g., construction) and can therefore be sold in greater volumes.

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<sup>63</sup> Lowe's. 2025. Compost Soil and Soil Amendments. Available [here](#).

<sup>64</sup> Home Depot. 2025. Soil Amendments – Compost. Available [here](#).

<sup>65</sup> Sawyer, Jeri, Bonnie Gee Yosick and Erin Harwood - BioCycle. 2015. Agricultural Demand for Compost in Metro Portland Region. Available [here](#).

<sup>66</sup> Folefack, Achille Jean Jaza. 2008. Factors Influencing the Use of Compost from Household Waste in the Centre Province of Cameroon. *J. Hum. Ecol.*, 24(2): 77-83 (2008). Available [here](#).

<sup>67</sup> Sawyer, Jeri, Bonnie Gee Yosick and Erin Harwood - BioCycle. 2015. Agricultural Demand for Compost in Metro Portland Region. Available [here](#).

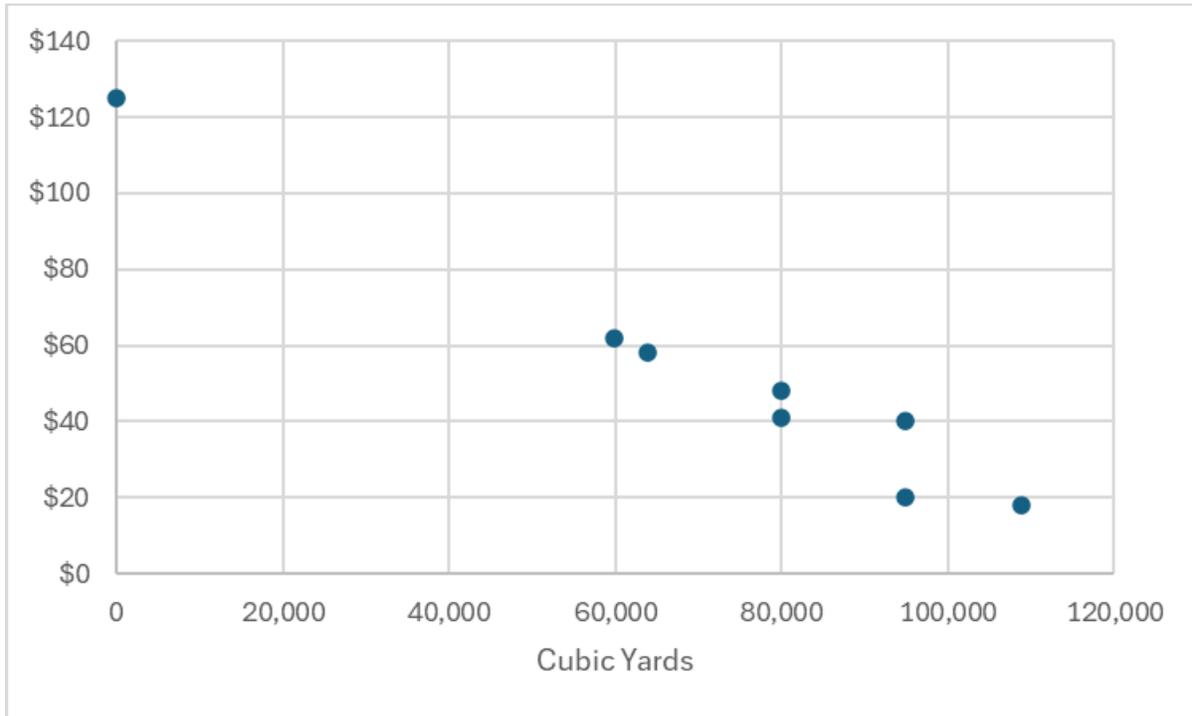
<sup>68</sup> Ibid.

<sup>69</sup> Lucintel. 2025. Compost Market: Trends, Opportunities, and Competitive Analysis (2024-2030). Available [here](#).

<sup>70</sup> Small, Gaston et. al. 2024. Phosphorus Recycling and Loss from Compost-Amended Urban Gardens: Results From a 7-Year Study. Available [here](#).

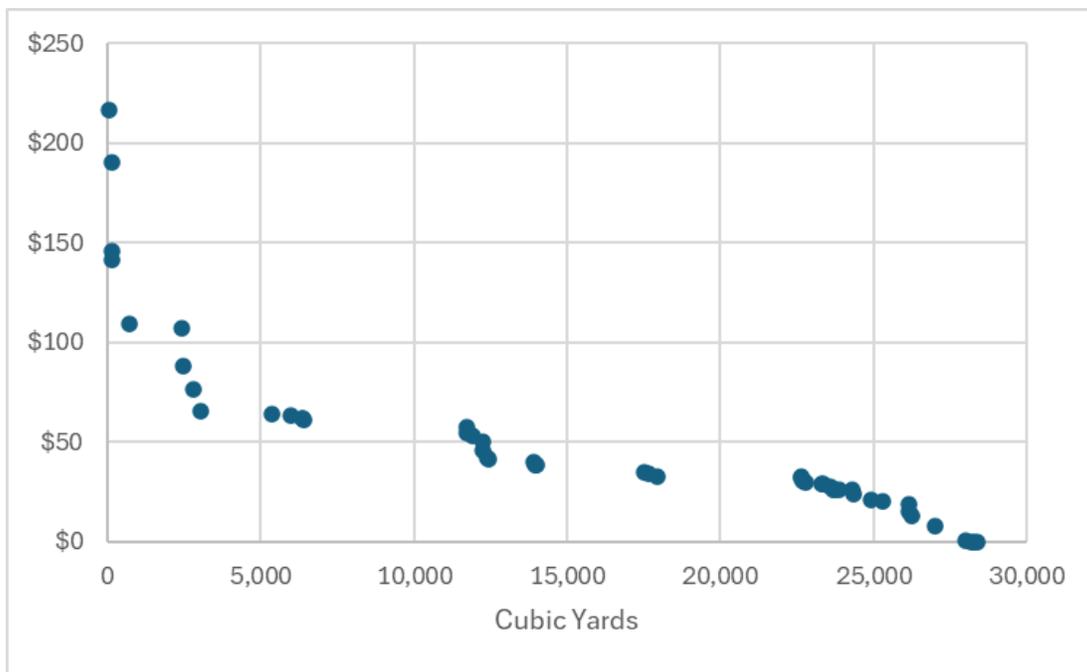
<sup>71</sup> Spherical Insights. 2022. Global Fertilizer Market Size, Share, and COVID-19 Impact Analysis. Available [here](#).

Graphing some of the data received from the outreach process produces a simple demand curve showing prices on the vertical axis and total volume sold on the horizontal axis (see Figure 33). For this graph, we sorted the quantity sold at different prices from high to low price. Then each point on the graph represents the total quantity (the horizontal axis) that was sold at the price (vertical axis) plus all that was sold at higher prices. For example, 80,000 cubic yards were sold among the facilities interviewed at a price of \$40 per cubic yard or higher.



**Figure 33. Volume of Compost Sales from Outreach Sample by Price (Cubic Yards)**

A similar trend is found when we use data provided in the CPO reports showing the procurement of compost by public entities.<sup>72</sup> 2024 was the first year that jurisdictions were required to document how much compost they procured for city/county use along with prices. As discussed previously, pricing varies based on location, quality, composition, technology used for production, facility scale, materials used as feedstocks, and other factors. The simple demand curve based on CPO data is provided below (see Figure 34). This graph reinforces the idea that compost products sell at a wide variety of prices, starting with several hundred cubic yards that sold for \$200 per cubic yard or more, and ending with several thousand cubic yards that sold for under \$5 per cubic yard.



**Figure 34. Volume of Compost Sales from CPO Data by Price (Cubic Yards)<sup>73</sup>**

Figures 33 and 34 confirm what was heard during facility interviews when facility operators explained how different markets demand different quality levels (and accordingly different prices). Compost markets are not particularly constrained by competitive price clearing. Instead, the market may be characterized by heterogeneous products tailored to local markets. A more in-depth look at this dynamic is described in section 5.5, Incentives and Entrepreneurs.

## **5.4. Opportunities to Expand**

For compost facility operators, the OMLs drive more supply and demand for these operations. These new opportunities can drive expansion and new revenues. In general, the operators we spoke with were enthusiastic about these opportunities. To take advantage of these new opportunities, compost facility operators, who produce compost, anticipate the need to address the following:

<sup>72</sup> Washington State Department of Ecology. 2024. Data from the Compost Procurement Ordinance (CPO) Reporting by Jurisdictions. Provided to Greene Economics by Ecology personnel.

<sup>73</sup> Washington State Department of Ecology. 2024. Data from the Compost Procurement Ordinance (CPO) Reporting by Jurisdictions. Provided to Greene Economics by Ecology personnel.

- Obtaining enough balanced organic material, namely bulking agents, to continue producing their products with recipes to serve their customer base.
- Expansion constraints like parcel size, air permits, or other restrictions that would prevent them from increasing their permitted capacity.
- Selling enough finished compost to move product off their lot to ensure space for the newly finished product.
- Increased competition to secure organic material contracts with municipalities.
- Physical contamination such as film plastics, glass, and metal.

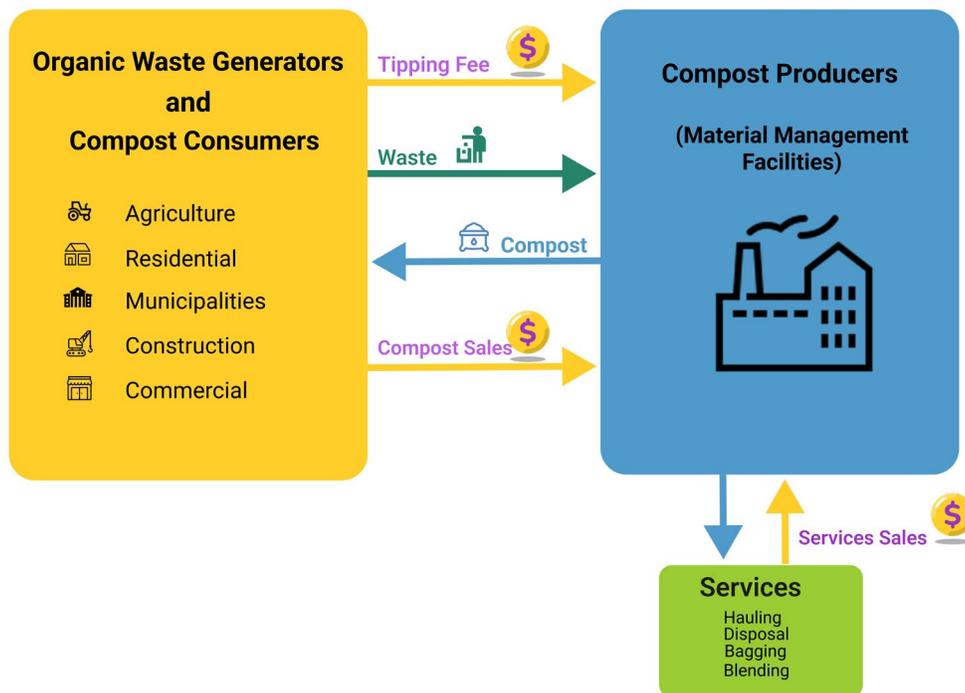
These responses did not appear to be correlated with the size of each operation and were not shared globally across the experiences of those interviewed.

Remarkably, interviewees viewed product price as a low forcing function in determining sales, stating that they would not expect to observe increased sales in response to reduced prices for consumers. This suggests that the markets are in some equilibrium, albeit highly specific to the local region and specific needs.

Despite market uncertainty, multiple representatives said they had plans to expand their businesses in the near future, either by purchasing supplementary land for their current facilities or by establishing additional facilities with their own independent supply chains and customer bases. This suggests that the industry is currently profitable and possesses room for growth. Additional opportunities were identified for facility expansion included use of biosolids, animal mortalities, and industrial sludge. One interviewee envisions their facility leveraging existing infrastructure to become more of an organic waste transfer station – keeping in mind that most facilities earn income both through tipping fees and selling compost. Therefore, expanding collection sites for organic materials is a key element of the expansion puzzle.

## 5.5. Incentives and Entrepreneurs

The compost market is unique in several ways. It is unique in that while most businesses pay for inputs, and produce goods and services to sell, compost facility operators receive tipping fees, or revenues for receiving and managing the inputs. They use these inputs to produce compost and other related products they sell. The figure below shows schematically how compost facilities are often more of a material management facility, generating revenue for processing waste as well as generating revenue from selling final compost products (see Figure 35). Though the majority of their revenue is from tipping fees. Also interesting is that most of the waste generators (e.g. agriculture, municipalities, residential, and commercial entities) are also the same sectors that purchase the finished products. In addition to this flow of material through the facilities, often sister operations can leverage the facility infrastructure for additional services like soil blending, trucking, and bagging activities so revenue can also be generated through this “vertical integration.”<sup>74</sup>



**Figure 35. Material Management Facility Process**

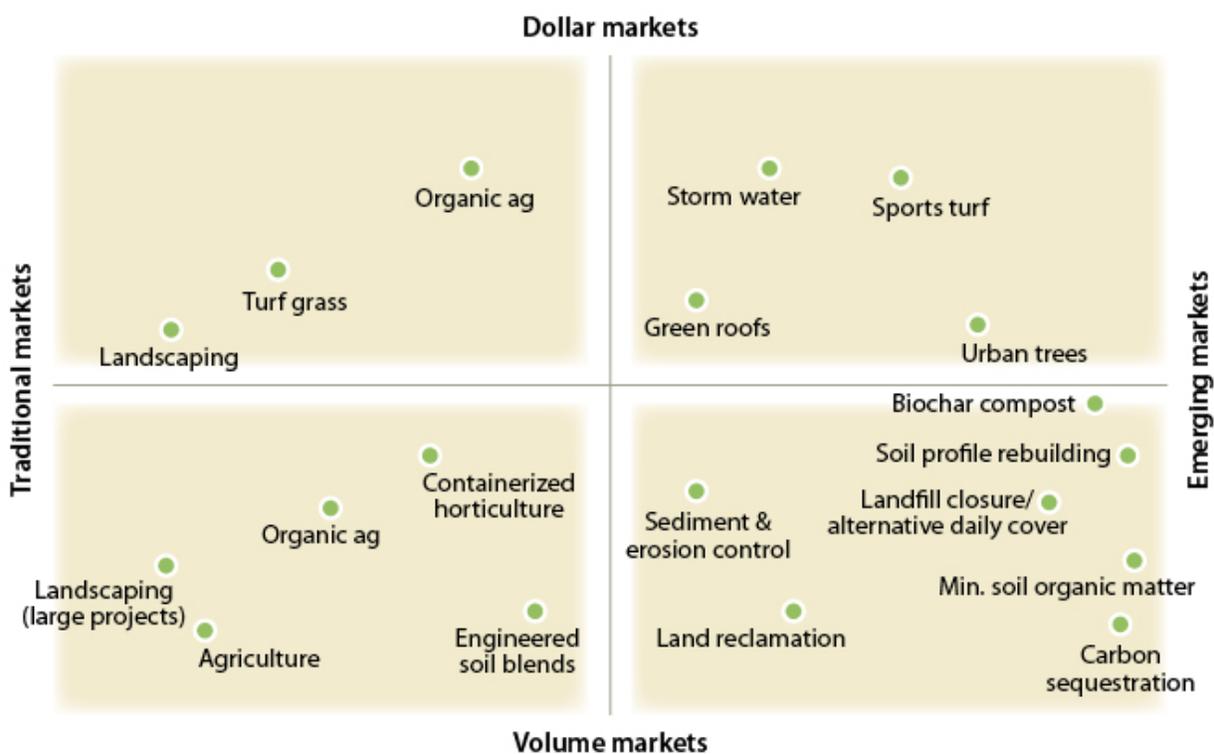
Facilities have a strong incentive to expand to earn the tipping fees for accepting and processing this new material, as these fees are a central aspect to their revenue model. For example, a recent survey of national compost operations suggests that for large facilities, tipping fees make up 80 percent of

<sup>74</sup> Coker, Craig, 2020. Composting Business Management: Revenue Forecasts for Composters. BioCycle. Available [here](#).

revenue<sup>75</sup> and this estimate was corroborated in a recent study by Zero Waste Washington that stated tipping fees usually represent 70 to 90 percent of revenue.<sup>76</sup>

In addition to the incentive needed for facility operators, the interviews with compost producers show the industry has a remarkable amount of entrepreneurial capital. Without much prompting, operators repeatedly explained how they had struggled to get their processing systems to be more dependable, how they had modified products to meet the needs of their customers, and how they had found innovative solutions to managing the inevitable unforeseen events that can interrupt the flow of material through a complex processing facility. Many used some form of a strategy that finds a variety of different types of products that cross the spectrum of high value/low volume products to low value/high volume products.

A diagram from a recent article in BioCycle by Craig Coker displays these emerging products in a quadrant system where the high value/low volume products (“Dollar Markets”) compared with the low value/high volume products (“Volume Markets”) are shown in the vertical axis, with traditional markets to emerging markets on the horizontal axis. Several of these emerging markets (e.g. sediment and erosion control, storm water, and biochar compost) were mentioned by operators as markets under consideration for future expanded operations (see Figure 36).



**Figure 36. Classification of Compost End Markets<sup>77</sup>**

<sup>75</sup> Environmental Research and Education Foundation, 2024. Composting State of Practice: Results from a National Operations Survey. Available [here](#).

<sup>76</sup> Zero Waste Washington (2021). Improving Organic Materials Management in Washington State, available [here](#).

<sup>77</sup> Coker, Craig, 2024. Compost Market Development, BioCycle, August 20, available [here](#).

The capacity of facility operators to respond to changing feedstock flows, market shifts, and their local customers, supports the idea that the materials management sector in Washington is fairly mature, and expected to be able to respond to the OMLs material flows with success. The problem-solving experience and skill set shown by operators confirms an entrepreneurial capacity that suggests this market paired with the public sector support will be responsive to the new incentives provided through the OMLs.

## 6. Summary and Recommendations

This chapter provides a summary of the projections, analysis, and opportunities associated with the increased collection of organic materials for composting in Washington as a result of the Organic Management Laws (OMLs.) The identified opportunities stem from data collection, interviews, discussions with Ecology staff, and in-depth analyses conducted at the county and state levels and presented in preceding chapters. Key opportunities include:

- Compost facility capacity needs to expand to handle the legislated goals for decreasing organic material disposal in landfills.
- There is a big opportunity in the Puget Sound area (including King, Pierce, Skagit, Snohomish, and Whatcom counties) for increasing organic materials collection in the commercial sector.
- Commercial-sector collection presents a significant opportunity for the future, with 92 percent of the counties showing more increases in organic materials to be recovered from the commercial sector versus residential. Based on the assumptions included in the projection model, over 70 percent of organic recovery for composting in Washington is projected to be from the commercial sector by 2035.
- Food waste is a key material ripe for recovery, with 35 percent of projected organic materials recovery being attributable to food waste alone.
- Some counties show an opportunity to increase organic materials collection by one or two specific types, often food and/or yard debris. This can be a benefit to those counties, as they can focus their attention on solutions for increasing those specific organics.
- Counties with BOMAs and/or ORCAs exhibit the greatest projected growth in recovery of organic materials, both in terms of percentage increases and in tons. If there is a BOMA (existing or projected to exist), it generally drives the growth to greater commercial recovery even if an ORCA also exists in the county, although this is not absolute for every county. If there is an ORCA, it drives the residential increase, with commercial lagging where no BOMA also exists. If neither an ORCA nor a BOMA exists, county organic material collection growth tends to be slower and the split between commercial and residential tends to remain the same as the historical split.
- Contamination (film plastics, garbage, etc.) is one of the major barriers to acceptability at compost facilities.
- Programs such as the Compost Reimbursement Program for farmers are effective as these provide monetary incentives. We recommend such programs continue.
- Revised Compost Procurement Ordinances at the municipal level that provide more certainty to the volume of compost to be procured are an important part of future market demand.
- Uniformity in reporting data in annual compost reports that facilities submit to Ecology would improve the accuracy of future compost projections. This could assist Ecology in continuing to support facilities and jurisdictions advancing the goals of the OMLs.

- Compost market conditions, including supply, demand, and price for finished compost, vary by region. Such variations can create bottlenecks for the production of finished compost (see Chapter 3 and 5 for more on this topic).
- Facilities may be forced to stockpile as prices can undercut their profitability, and/or they are unable to sell their products.
- Due to the limited supply of finished compost in Eastern Washington and lack of bagged product, users are buying compost largely from producers in Western Washington. Users and retailers, therefore, must factor transportation costs into the total price of the product. Per feedback received during the outreach process: “transportation of that product is a big issue and makes other fertilizer and product options more economically feasible in comparison to costs of buying and getting compost on site.”<sup>78</sup>
- There may be more opportunities for compost to be integrated into public works projects across different state agencies, following WSDOT. Compost is cited as a great resource for road restoration (WA Department of Transportation), stream restoration projects, and forest fire remediation (WA Department of Natural Resources).

The OMLs present many opportunities to increase the processing of organic material into finished compost. The OMLs will result in increased organic material collection that will generate revenue for composting facilities via tipping fees paid to facilities for handling the material. The compost produced will also generate additional revenues for compost facilities through the sale of compost products and blends. These clear economic incentives, paired with maturing compost markets, and entrepreneurial capital present in the existing compost sector in Washington suggest that industry is well placed to navigate the known, but surmountable challenges presented by the increased organic flows. As such, the OMLs can achieve the stated goals of reduced organic material in landfills and subsequently reduce greenhouse gas emissions.

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<sup>78</sup> Personal communication with Samantha Winkle, Assistant District Manager, Silver Springs Organics. June 10, 2025.

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### **Personal Communication**

Personal communication with Clara at SYG Nursery.

Personal communication with Samantha Winkle, Assistant District Manager, Silver Springs Organics. June 10, 2025.

# A

## Forecast Model Assumptions

## Model Assumptions

Several assumptions are incorporated into the model developed for generating a forecast for organic feedstocks by county. The research team created a spreadsheet tool to carry out this forecast, and many of these assumptions may be easily modified to produce differing results. The assumptions in the current set of results include:

- If the county has a BOMA, the quantities of organic waste will increase in 2024 and 2025 to accommodate the sectors most commonly found to produce more than four cubic yards of organic waste per week.
- The sectors (identified by North American Industry Classification System or NAICS code) assumed to be affected by the new laws in the years 2024 and 2025 are: Agriculture, Forestry, Fishing, and Hunting (11); Food Manufacturing (311); Food and Beverage Stores (445); Colleges, Universities, and Professional Schools (6113); Hospitals (622); Nursing and Residential Care Facilities (623); Accommodation and Food Services (71); Other Farm Product Raw Material Merchant Wholesalers (424590); New Single-Family Housing Construction (236115); New Multi-Family Housing Construction (236116); New Housing For-Sale Builders (236117); Residential Remodelers (236118); Finish Carpentry Contractors (238350); and Landscaping Services (561730).
- Estimates of expanded commercial waste by county after 2024 and 2025 waste generation thresholds take effect (8 cubic yards per week and 4 cubic yards per week, respectively) were calculated by subtracting existing commercial waste volumes from an estimate of future volumes. The future volume estimate is produced by multiplying (6 cubic yards) \* (52 weeks) \* (number of businesses within the affected sectors).
- As the average of the 8 cubic yards per week and 4 cubic yards per week thresholds, 6 cubic yards is used as the multiplier for organic waste volumes to include both phase 1 and 2 of BOMA regulation implementation.
- Additional increases in organic waste volumes are expected after 2026, when smaller waste-producing businesses (generating more than 96 gallons per week, Phase 3) will be included in collection requirements.
- The smaller waste-producing businesses are assumed to be 10 percent of the businesses remaining in counties with BOMA coverage. Meaning that after the larger businesses (identified by annual sales volume) of affected sectors are subtracted from the total number businesses in the county, 10 percent of the remaining number are assumed to be eligible for organic collection. While 10 percent is assumed as a reasonably conservative estimate for forecasting additional growth in commercial organics volumes, this assumption can be altered within the model if desired.
- We produce the estimate of future additional commercial organics by multiplying (96 gallons) \* (52 weeks) \* (number of businesses within the affected sectors).
- The model calculates the “additional organic materials collected due to BOMA requirements” by calculating the total organics collected due to BOMA regulations and subtracting the total collected commercial organics projected by the base model. If the total volume of BOMA organics is greater than the total commercial organics projected by the model, the difference

will be added to the base projection total in order to create a new total for collected commercial organics.

- The BOMA boundaries are assumed to expand in counties which are not already 100 percent contained within BOMA boundaries between 2026 and 2030, which will increase the number of businesses included in collection requirements. Currently (as of 2025), Thurston County is the only region where a BOMA covers 100 percent of the county.
- The expansion of BOMA boundaries is assumed to increase the number of businesses included in collection requirements by 10 percent, but this percentage can be modified in the model if desired.
- Of the additional businesses included in this 10 percent, half are estimated to produce 6 cubic yards of organic waste per week and half are estimated to produce 96 gallons per week.
- The total additional waste estimated as a result of the BOMA regulations is assumed to occur evenly over a 10-year period.
- Expansion of BOMA boundaries is anticipated to occur in counties outside of those with existing coverage starting in 2030.
- The additional counties expected by Ecology to include BOMAs by 2030 include Benton, Clark, Cowlitz, Franklin, Spokane, Walla Walla, Whitman, and Yakima. These counties are expected to include BOMAs as they are currently impacted by ORCA.
- The assumptions applied in BOMAs for these additional counties include:
  - 50 percent of the businesses within the sectors included in the original BOMA analysis above (listed by NAICS code) are assumed to be located within a BOMA in 2030 and produce greater than 4 cubic yards of organic waste. The future volume estimate is calculated by multiplying (6 cubic yards) \* (52 weeks) \* (number of businesses within the affected sectors).
  - Of the total businesses calculated in the previous step, we assume 25 percent to be located within a BOMA and produce greater than 96 gallons of organic waste per week in 2030 (this share is consistent with the share of “big” and “small” BOMA businesses in the original analysis provided in the report).
- The current set of ORCA assumptions applied to the model include:
  - If the county has an ORCA impacted area, the area’s participation in organic waste recovery, and thus the volume collected, will increase between 2025 and 2035.
  - As residential organics collection programs come online in counties that have not had residential organic waste management programs before (and thus no historical data), we assume per capita rates of residential organics collection to track with the Northwest average of 0.14 tons per capita per year. The Northwest Region has had residential organics collection programs in operation since 2015 and provides a basis of historical data upon which forecasts can be more accurately built.
  - Residences in ORCAs subject to organic waste regulations are assumed to achieve a 100 percent participation rate in residential organics collection by 2035.
  - Initial participation rates are based on city participation rates for residential organic waste collection; data provided by Ecology. The additional estimated tonnage of residential organic waste is derived primarily from the additional population that will participate.

- The total additional residential waste collected as a result of ORCA regulations is assumed to increase evenly over a 10-year period.
- Additional organic materials collected due to ORCA requirements is calculated by: (1) Calculating the total organics collected in an ORCA with 100 percent participation; (2) Subtracting the total collected residential organics projected by the base model from the total calculated in Step 1. If the total ORCA is greater than the amount already projected by the model (3) we added the difference to create a new total residential organic material collected.
- Once the feedstock estimates were projected, we derived finished compost projection. The county level projections of finished compost for the state of Washington were estimated by multiplying each of the categories of organic waste used in the organic compost materials projection by a specific conversion factor for that category. This results in the projected tons of finished compost, which is then converted to projected cubic yards of finished compost through 2035 for each county. We used conversion factors through a literature review for different types of organic material. These finished compost conversion factors are presented in Table A-1.

**Table A-1. Finished Compost Conversion Factors**

	Conversion Factor	Source
Ag and manure	0.33	Yushunxin Global Trade and Industry. Undated. How Many Compost Make From 1 Ton of Organic Waste. Available <a href="#">Here</a>
Food	0.2	Brown, Sally. Undated. Carbon Accounting for Food Scrap Composting in King County, WA. Prepared for King County Department of Natural Resources and Parks, Solid Waste Division.
Yard	0.33	Yushunxin Global Trade and Industry. Undated. How Many Compost Make From 1 Ton of Organic Waste. Available <a href="#">Here</a>
Yard/Food	0.2	Brown, Sally. Undated. Carbon Accounting for Food Scrap Composting in King County, WA. Prepared for King County Department of Natural Resources and Parks, Solid Waste Division.
Landscaping/landclearing	0.33	Yushunxin Global Trade and Industry. Undated. How Many Compost Make From 1 Ton of Organic Waste. Available <a href="#">Here</a>
Wood (includes shavings)	0.33	Yushunxin Global Trade and Industry. Undated. How Many Compost Make From 1 Ton of Organic Waste. Available <a href="#">Here</a>
Other (includes mortalities, compostable products)	0.33	Yushunxin Global Trade and Industry. Undated. How Many Compost Make From 1 Ton of Organic Waste. Available <a href="#">Here</a>

- The model was also configured to incorporate two additional goals established by the Washington legislature pertaining to organic waste management. The first of which, outlined in RCW 70A.205.715, being a 50 percent reduction in statewide generation of food waste by the

year 2030, relative to 2015 levels.<sup>79</sup> This goal is applied to every county on a gradual basis. On top of the base projection, in 2025 an additional 25 percent of the 2015 food waste is recovered for compost use. Then in 2030 another additional 25 percent of 2015 food waste is recovered for compost in 2030 (for a total of 50 percent of food waste recovered for use in compost). A second goal of recovering 75 percent of total organic waste for use in compost is recognized for each county and each shows the progress to that goal by 2030, based on the additional waste covered through BOMA and ORCA regulations, as well as the additional food waste recovered, but no hard limit is forced (showing it as a goal, which may or may not be reached). As a complete set of 2015 data was not available at the time of the analysis, the relationship between 2015 and 2022 composted materials is applied to the complete data set for 2022 for each county to estimate the 2015 waste generation by category.

- As a final step, for all counties where either a BOMA or an ORCA create additional residential or commercial materials collected, the new totals were distributed between categories based on the base projection shares.
- We note that based on all the assumptions presented in this section and the methodology taken to develop the projection model, the model is a conservative model. The model will therefore result in conservative estimates of the organic material available through 2035.

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<sup>79</sup> Washington State Legislature. 2020. RCW 70A.205.715 Food waste reduction—Goal—Plan—Definitions. Available [here](#).

# B

## Data Summary

**Table B-1. Summary of Available Data**

File Name	Year(s)	Feedstocks	Compost Produced	Compost Sold	By County	By Facility	Facility County	Additional Notes
2010 Compost data incl. biosolids FIUO	2010	✓				✓	✓	
2011 compost produced	2011		✓	✓		✓		
2011 WA Composted Materials - FIUO	2011	✓				✓	✓	
2012 compost feedstock details	2012	✓				✓	✓	
compost produced 2012	2012		✓		✓			Compost facility included
2013 feedstock data details	2013	✓				✓	✓	
Compost produced 2013	2013		✓		✓			Compost facility included
2014 compost feedstock and compost data	2014	✓	✓			✓		
2014 compost feedstock with detail	2014	✓				✓		
2015 Compost Produced 8.19.16	2015		✓			✓		
2015 Composted Materials all numbers 81916	2015	✓				✓		
2016 Composted Materials all numbers and Compost	2016	✓	✓			✓		
2017 Composted materials and produced ALL DATA	2017	✓	✓			✓		
2018 compost produced detail 5.13.2020	2018		✓		✓	✓	✓	Portion listed by compost facility (w/out county included) and portion grouped by county

File Name	Year(s)	Feedstocks	Compost Produced	Compost Sold	By County	By Facility	Facility County	Additional Notes
2018 composted materials details	2018	✓				✓	✓	
Composted Materials 2019 details	2019	✓				✓	✓	
Compost Produced 2019	2019		✓			✓	✓	
Composted Materials 2020 details	2020	✓				✓		
Compost Produced with details	2020		✓	✓		✓	✓	Compost Sold data on sheet labeled "compost types"; not directly listed per facility --> will take time to tally totals from this data
CompostReportData2020_StockpiledSold	2020	✓		✓		✓	✓	Facilities listed separately for each feedstock type; TIPPING FEES included; compost sold, stockpiled, distributed on/off site, other included
Composted Materials 2021 details	2021, 2020	✓				✓		Total feedstock #s per facility for 2020 also included to compare total volume of material composted between 2020 v. 2021
Compost Produced 2021	2021		✓			✓	✓	
CompostReportData2021_StockpiledSold	2021	✓		✓		✓	✓	Facilities listed separately for each feedstock type; TIPPING FEES included; compost sold, stockpiled, distributed on/off site, other included
Copy of data-county-2021_Ecology	2021				✓			Includes general data on organics collected for recycling and recovery by category per county
2022 Compost feedstocks details	2022	✓				✓	✓	

File Name	Year(s)	Feedstocks	Compost Produced	Compost Sold	By County	By Facility	Facility County	Additional Notes
CompostReportData2022_StockpiledSold	2022	✓		✓		✓	✓	Facilities listed separately for each feedstock type; TIPPING FEES included; compost sold, stockpiled, distributed on/off site, other included
Composted Materials 2023 with details	2023	✓				✓	✓	
Compost Produced 2023	2023		✓			✓	✓	Listed with counties in alphabetical order --> county totals able to be easily calculated
CompostReportData2023_StockpiledSold	2023	✓		✓		✓	✓	Facilities listed separately for each feedstock type; TIPPING FEES included; compost sold, stockpiled, distributed on/off site, other included
CompostAnnualReportData_AllYears_20241206	2005-2024	✓		✓		✓	✓	Facility individually listed for each type of feedstock material each year --> totals for any category must be calculated by combining all listings of each facility; includes compost sold, stockpiled, distributed; TIPPING FEES included
CPOReportSummar_All_4_4_2025	2024			✓	✓	✓	✓	
Estimated 75 percent of County OM disposal in 2015	2015, 2016				✓			Using data from 2015-2016 waste characterization study; lists totals of organic waste categories by county and what a 75 percent reduction of these numbers would be; East Waste Generation Areas

# C

## Incorporating BOMAs and ORCAs in Projections

This appendix presents how BOMAs and ORCAs are incorporated into the analysis. Specifically, it outlines how BOMAs and ORCAs are projected and then added into the base projection.

Data processing and analysis on a per capita basis was informed by population data gathered from the OFM population projections website,<sup>80</sup> as well as regional and per capita waste collection information derived from the 2022-2023 Washington Statewide Recycling & Organics Characterization Study conducted by Ecology.<sup>81</sup>

## Incorporating BOMAs in Base Projections

While specific information about businesses within BOMA boundaries is limited, certain industries generate higher volumes of organic waste (and thus the types of businesses that are most likely to be subject to BOMA regulations). According to a nationwide survey of full-scale compost facilities published by BioCycle in 2023,<sup>82</sup> the commercial sector which generates the highest volumes of organic waste is commercial landscaping and tree-trimming. Restaurants and supermarkets tie for the second-largest generators of organics on a weekly basis, followed by institutions like hospitals, correctional facilities, and public schools and universities. Other notable industries which consistently generate significant amounts of organic waste include the agricultural sector and papermaking industry.

For counties that included BOMAs, we collected information on which businesses were likely to be subject to BOMA regulations from the online database Data Axle Reference Solutions, following instructions developed and provided by Ecology. Per these instructions, we isolated likely BOMA participants from the total registry of Washington businesses by filtering by county, NAICS code, and annual sales volume. NAICS codes function to identify businesses by their associated industries, and in this case were used to isolate businesses in industries predisposed to producing higher volumes of organic waste. For example, NAICS code 11 refers to “Agriculture, Forestry, Fishing and Hunting.” We show a complete list of NAICS codes and their associated industries included in the BOMA analysis for 2024 and 2025 in Table C-1. In addition, we filtered businesses by annual sales volumes of \$1 million or higher. This enabled the database to produce search results for businesses that are operating on a larger scale, with higher throughput and thus, in conjunction with the NAICS code filter screening for businesses in industries working with high volumes of organics, producing higher volumes of organic waste.

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<sup>80</sup> Office of Financial Management, Forecasting and Research Division, 2024. Population of Cities, Towns and Counties, April 1. Available [here](#). And Projections of the Total Resident Population for Growth Management 2022 GMA Projections Middle Series. Available [here](#).

<sup>81</sup> Washington State Department of Ecology. 2024. 2022-2023 Washington Statewide Recycling & Organics Characterization Study. Available [here](#).

<sup>82</sup> Goldstein, Nora, Paula Luu & Stephanie Motta. 2023. BioCycle Nationwide Survey: Full-Scale Food Waste Composting Infrastructure in the U.S. BioCycle. Available <https://www.biocycle.net/us-food-waste-composting-infrastructure/>.

**Table C-1. Industries in BOMA Analysis**

NAICS Code	Sector Name
11	Agriculture, Forestry, Fishing and Hunting
311	Food Manufacturing
455	General Merchandise Retailers
6113	Colleges, Universities and Prof. Schools
622	Hospitals
623	Nursing and Residential Care Facilities
71	Accommodation and Food Services
424590	Other Farm Product Raw Material Merchant Wholesalers
236115	New Single-Family Housing Construction
236116	New Multi-Family Housing Construction
236117	New Housing For-Sale Builders
236118	Residential Remodelers
238350	Finish Carpentry Contractors
561730	Landscaping Services

## **Incorporating ORCAs in Base Projections**

For counties with an ORCA impacted area, we considered population, identification of areas within a county impacted by an ORCA, whether or not there is currently organics collection in the area, the participation rate of the residential program in the area obtained from Ecology, and population projections. We used these data to calculate the potential growth of residential organics collection and recovery within ORCAs. Of note, we included only those counties with sufficient data available to assess potential growth in the analysis. Missing data primarily included participation rate and/or whether organics collection was currently available in the specified ORCA impacted area. We include a list of the counties for which the analysis was completed in Table C-2.

**Table C-2. Counties in ORCA Analysis**

<b>County</b>	<b>Portion of County Impacted Area (by population)</b>
King	90%
Spokane	58%
Thurston	97%
Grant	26%
Chelan	44%
Benton	29%
Pierce	34%
Clark	42%
Yakima	38%
Franklin	78%
Walla Walla	54%
Whitman	69%
Kitsap	89%
Snohomish	13%
Whatcom	47%

# D

## Outreach with Compost Facility Operators

The research team conducted interviews with the staff of compost facilities throughout the state. The facilities contacted were intentionally chosen to gather information and feedback from a broad range of composters operating in different regions and on varying scales of processing, production, and commercialization. Table D-1 provides a list of the compost facility operators interviewed, along with some basic information about the respective facilities.

**Table D-1. List of Compost Facility Operators Interviewed and Basics of the Facilities Represented**

Interviewee(s)	Compost Facility/Facilities	Facility Region	Permitted Capacity (tons)	2024 Material Composted (tons)	2024 Compost Produced (cubic yards)
Gavin Schmidt	Dirt Hugger	Central	62,000	62,000	59,850
Kyle Ovenell	Ovenell Farms	Eastern	171,333	15,725	14,052
Tom Crane	TILZ Soil and Compost	Northwest	14,000		16,000
Kate Wynne	Brown to Green Composting	Central		68	48
Robbette Schmit	Winton Compost Facility	Central	62,000	5,173	3,951
Troy and Tevon Lautenbach	Skagit Soils	Northwest	44,000	23,522	13,000
Samantha Winkle	Hidden Valley Compost Factory	Southwest	65,000		
	Purdy Compost		45,000		
	Silver Springs Organics		120,000	48,118	39,048

The interviewees also provided insight on compost feedstocks, particularly issues related to food waste, and compost trends and purchasers. Their ideas and insights are summarized in the subsections below.

Production for compost operations begins with the source of their organic material, a critical aspect of the industry that is unique to each company. The most common material sources include:

- Curbside residential food and yard waste pickups;
- Pre-consumer food waste from grocery stores;
- Pre/post-consumer food waste from restaurants;
- Saw dust and wood chips from lumber operations;
- Spent grain from local breweries; and
- Community donations.

One producer reported the material from residential pickups contained roughly five percent food waste, with the rest being yard waste. Another noted that maintaining a proper carbon-nitrogen soil ratio required a mix of one-third food waste and two-thirds yard waste.

Contamination of feedstocks was mentioned by nearly every interviewee. Several producers stated they refused to accept materials with high concentrations of food waste due to increased rates of contamination from supposedly compostable food packaging products among other contaminants.

Many compost facilities have concerns about food waste contaminants and most smaller operations lack the extra infrastructure and equipment needed to process food waste. The only operations which accepted large quantities of food waste were equipped with measures designed specifically to address the issues associated with these products, which required the implementation of additional planning and resources. Some operations possess strict parameters for materials they will accept, while others receive all manner of organic materials and employ tactics like waste auditing, private hauling, and educational and community outreach campaigns in order to ensure quality.

One interviewee expressed concern over the high salt content of food waste and its potential negative impacts on soil chemistry. As more facilities consider accepting food waste, they will need to consider how food waste impacts their compost recipe.

# E

## Relevant Facility Survey Results

## **Introduction to Data**

We conducted the following analysis using information collected by the Ecology Organics Team in spring of 2025. The Ecology survey results include data from 29 compost facilities out of 59 total facilities in the state (49 percent). The following sections include an analysis of this data by capacity, expansion planning, food waste acceptance, and by region.

The Department of Ecology is divided into four regions: The Northwest, Southwest, Central, and Eastern Regions. Counties and regions are listed below:

- **Northwest Region:** Snohomish, San Juan, Skagit, Whatcom, King, Kitsap, and Island
- **Southwest Region:** Grays Harbor, Lewis, Pacific, Clark, Cowlitz, Skamania, Clallam, Jefferson, Thurston, Mason, Pierce, and Wahkiakum Counties
- **Central Region:** Benton, Kittitas, Yakima, Douglas, Klickitat, Chelan, and Okanogan
- **Eastern Region:** Adams, Grant, Lincoln, Spokane, Asotin, Columbia, Franklin, Garfield, Ferry, Pend Oreille, and Stevens.

## **Key Takeaways**

Of the 29 facilities surveyed, 16 do not currently accept residential food waste and only one facility in the Central Region plans to accept residential food waste in the next five years. Another facility in the Eastern Region is considering doing so but indicated that doing so would require an estimated \$30 million investment and relocation. A facility in the Northwest Region expressed interest but noted concerns over contamination. 20 facilities do not currently accept commercial food waste, though five are hoping to accept commercial food waste within the next five years and an additional six facilities are actively exploring options to accept commercial food waste. These include three in the northwest, two in the southwest, and one in eastern.

13 of the surveyed facilities are at max capacity during the busiest months of the year. The majority of these facilities are located in the northwest (five) and southwest (five), with two in eastern and one in central. Of these, six facilities reported that they are not considering any future expansion. This includes three facilities in northwest, one in southwest, one in eastern, and one in central.

Of those surveyed, 11 have no plans to expand their facility over the next five to ten years. Six of these facilities are currently operating at maximum capacity during their busiest times of the year. These include three in northwest, one each in the central, southwest, and eastern. Interestingly, three of these six facilities list their permitted capacity as zero tons (though this is a required element in their operation plan that received permit approval), while the other three have capacities ranging from 4,000 to 30,000 tons per year. In terms of food waste acceptance, six of these maxed-out facilities do not accept any food waste and do not plan to. Three others already accept both residential and commercial food waste.

The remaining 18 facilities do have plans to expand their facilities over the next five to ten years. Four facilities that are considering expansion do not currently accept residential food waste and have no plans to do so. The remaining 14 facilities already accept food waste, have plans to do so in the next five years, or are exploring programs to accept either residential or commercial food waste.

**Regional Differences:** The northwest facilities have a broad range in annual capacity, with small, medium and large processing facilities, whereas five of the six southwest facilities have a processing capacity greater than 35,000 tons per year, with two of those able to process over 100,000 tons per year. Eastern also has three facilities that can process over 100,000 tons. Central had the fewest surveyed entities, but these facilities were also the smallest in terms of capacity, with the largest able to process just over 62,000 tons per year.

In the southwest, where the facilities have significant processing capacity, most facilities are at max capacity during peak months. Northwest, with facilities of various capacity, has several facilities that can accept additional organic material during busy months. In central and eastern, almost all facilities can accept additional organic material during the busiest months of the year.

In southwest, where almost all of the facilities are at max capacity during the busy season, the facilities are planning to expand. In the other three regions, where only a few facilities are at max capacity, around half the facilities are planning expansions.

In southwest only one facility does not accept food waste and is not interested in accepting food waste in the future. In northwest four facilities do not accept food waste and have no plans to do so in the future. In eastern only one facility accepts food waste – while four facilities do not and will not accept any food waste in the future. Central is mixed, with half the facilities currently accepting commercial food waste. Only one facility has no intentions of accepting residential or commercial food waste in the future.

## **Summary of All Facilities Surveyed**

Ecology conducted interviews with 29 compost facilities across the state to gather information on capacity, regional distribution, and the acceptance of food waste. These facilities are distributed across four regions: four facilities (14 percent) are located in the Central Region, seven (24 percent) in the Eastern Region, 12 (41 percent) in the Northwest Region, and six (21 percent) in the Southwest Region.

### ***Annual Capacity***

The permitted annual capacity of the facilities surveyed ranges widely, from 1,400 tons to 250,000 tons per year. A few facilities reported capacities of 0 or 1 ton annually; however, these outliers were excluded from the capacity analysis. Among the 29 facilities, eight are permitted to accept more than 100,000 tons annually. These larger facilities are located in the eastern region (three facilities), northwest region (three), and southwest region (two). Notably, none of the facilities in central fall into this high-capacity category.

Seven facilities have a permitted capacity between 30,000 and 100,000 tons per year. Of these, three are located in the southwest region, two in central region, and one each in northwest and eastern regions. Another nine facilities are permitted to process between 1,400 and 30,000 tons annually. Most of these (six facilities) are in northwest region. The remaining three include two in eastern and one in central region.

**Table E-1. Summary of Facilities Surveyed**

Facility Name	Region	Permitted Annual Capacity (tons/year)
Smokey Ridge Meats	Eastern Region	1,400
Mailliard's Landing Nursery	Northwest Region	4,000
Ellensburg Compost Facility	Central Region	6,000
Sudbury Landfill Compost Facility	Eastern Region	10,000
Dykstra Farm	Northwest Region	10,500
TILZ Composting	Northwest Region	14,000
DTG Kingston/Olympic Organics	Northwest Region	30,000
Bailey's Compost	Northwest Region	30,000
DTG Composting - Kingston	Northwest Region	30,000
Brady Trucking Company	Southwest Region	35,000
Skagit Soils Inc	Northwest Region	44,000
Purdy Composting Facility (Pierce County Compost facility)	Southwest Region	45,000
Horn Rapids Compost Facility	Eastern Region	50,000
Winton MFG Compost Works	Central Region	62,000
Dirt Hugger	Central Region	62,700
LRI Compost Factory	Southwest Region	85,000
Barr-Tech	Eastern Region	100,000
Packaging Corporation of America	Eastern Region	120,000
Silver Springs Organics	Southwest Region	120,000
Lenz Enterprises, Inc.	Northwest Region	150,000
Ovenell Land, LLC Compost Facility	Eastern Region	170,000
Cedar Grove Everett	Northwest Region	228,000
Cedar Grove Maple Valley	Northwest Region	250,000
Port Townsend Biosolids Compost Facility	Southwest Region	250,000

The following table does not include facilities that reported an annual capacity of 0 or one ton. The three surveyed facilities in the central region have a total capacity of 130,700 tons per year. The six surveyed facilities in the eastern region have a combined total capacity of 451,400 tons per year. The ten surveyed facilities in the northwest region have a combined capacity of 790,500 tons per year. The five facilities in the southwest region have a total capacity of 535,000 tons per year.

**Table E-2. Facilities with a Capacity less than One Ton**

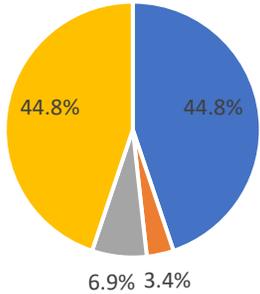
Facility Name	Permitted Annual Capacity (tons/year)
<b>Central Region</b>	<b>130,700</b>
Ellensburg Compost Facility	6,000
Winton MFG Compost Works	62,000
Dirt Hugger	62,700
<b>Eastern Region</b>	<b>451,400</b>
Smokey Ridge Meats	1,400

Facility Name	Permitted Annual Capacity (tons/year)
Sudbury Landfill Compost Facility	10,000
Horn Rapids Compost Facility	50,000
Barr-Tech	100,000
Packaging Corporation of America	120,000
Ovenell Land, LLC Compost Facility	170,000
<b>Northwest Region</b>	<b>790,500</b>
Mailliard's Landing Nursery	4,000
Dykstra Farm	10,500
TILZ Composting	14,000
DTG Kingston/Olympic Organics	30,000
Bailey's Compost	30,000
DTG Composting - Kingston	30,000
Skagit Soils Inc	44,000
Lenz Enterprises, Inc.	150,000
Cedar Grove Everett	228,000
Cedar Grove Maple Valley	250,000
<b>Southwest Region</b>	<b>535,000</b>
Brady Trucking Company	35,000
Purdy Composting Facility (Pierce County Compost facility)	45,000
LRI Compost Factory	85,000
Silver Springs Organics	120,000
Port Townsend Biosolids Compost Facility	250,000

### Food Waste Acceptance

When it comes to food waste acceptance, the majority of the facilities are not currently accepting residential food waste. Of the 29 surveyed, 16 facilities reported they do not accept residential food scraps. This group includes six facilities in the northwest, six in the eastern, two in the southwest, and two in central regions. Looking ahead, only one facility in the central region reported plans to begin accepting residential food waste within the next five years. Another facility in the eastern region is considering doing so but indicated that doing so would require an estimated \$30 million investment and relocation. A facility in the northwest region expressed interest but noted concerns over contamination.

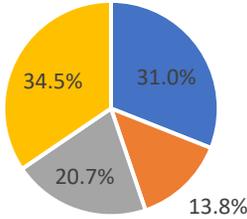
### Residential Food Waste Acceptance



- Accept Residential Food Waste
- Plan to Accept Residential Food Waste in Next 5 Years
- Some Interest Accepting Residential Food Waste
- Not Accepting Residential Food Waste Now or in Future

Similarly, 20 of the 29 facilities do not currently accept commercial food waste. However, four of these plans to begin doing so within five years—two in the southwest regions, one in the central region, and one in the eastern regions. An additional six facilities are actively exploring options to accept commercial food waste. These include three in northwest, two in southwest, and one in eastern. Many of these facilities are considering pilot programs or infrastructure expansions to support future acceptance of commercial organics. The majority of these six facilities do not accept food waste and do not plan to in the future.

### Commercial Food Waste Acceptance



- Accept Commercial Food Waste
- Plan to Accept Commercial Food Waste in Next 5 Years
- Some Interest Accepting Commercial Food Waste
- Not Accepting Residential Food Waste Now or in Future

**Table E-3.**

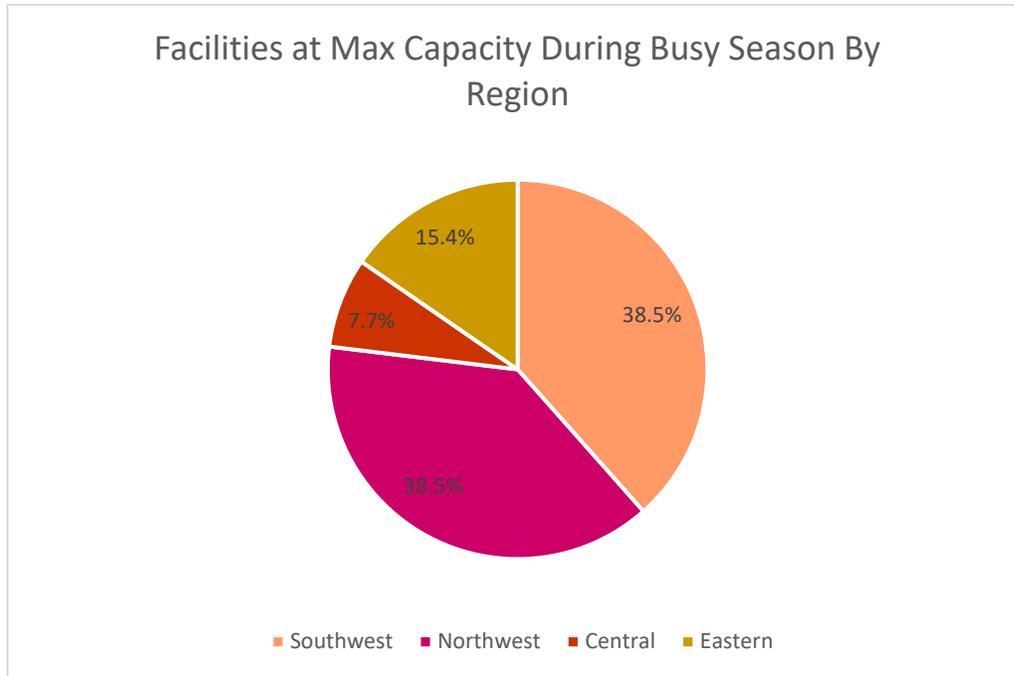
Facility Name	Residential Food Waste	Commercial Food Waste
<b>Central Region</b>		
Dirt Hugger	We currently accept residential food waste.	We accept commercial food waste for select customers only.
Colonial Lawn and Garden	No, we do not take residential food waste and do not plan to.	No, we do not plan to take commercial food waste.
Ellensburg Compost Facility	We do not accept residential food waste now but plan to within the next 5 years.	We do not accept commercial food waste now but plan to within the next 5 years.
Winton MFG Compost Works	We currently accept residential food waste.	We currently accept commercial food waste for all customers.
<b>Total Facilities that Accept Food Waste</b>	<b>2 (50%)</b>	<b>2 (50%)</b>
<b>Eastern Region</b>		
Sudbury Landfill Compost Facility	It's been considered. We estimate about \$30,000,000 and a facility relocation would be needed to accommodate this.	It's been considered. We estimate about \$30,000,000 and a facility relocation would be needed to accommodate this.
Packaging Corporation of America	No, we do not take residential food waste and do not plan to.	No, we do not plan to take commercial food waste.
Horn Rapids Compost Facility	No, we do not take residential food waste and do not plan to.	We do not accept commercial food waste now but plan to within the next 5 years.
Ovenell Land, LLC Compost Facility	No, we do not take residential food waste and do not plan to.	No, we do not plan to take commercial food waste.
Barr-Tech	We currently accept residential food waste.	We accept commercial food waste for select customers only.
Smokey Ridge Meats	No, we do not take residential food waste and do not plan to.	They process meat scraps from their own processing operations. They do not plan to accept pre- or post-consumer food waste
Cheney WWTP	No, we do not take residential food waste and do not plan to.	No, we do not plan to take commercial food waste.
<b>Total Facilities that Accept Food Waste</b>	<b>1 (14%)</b>	<b>1 (14%)</b>
<b>Northwest Region</b>		
Skagit Soils Inc	We currently accept residential food waste.	We currently accept commercial food waste for all customers.
DTG Kingston/Olympic Organics	We accept a limited amount of residential food waste currently	We plan to start a pilot program for commercial food waste this spring/summer

Facility Name	Residential Food Waste	Commercial Food Waste
Bailey's Compost	No, we do not take residential food waste and do not plan to.	No, we do not plan to take commercial food waste.
City of Langley WWTP	No, we do not take residential food waste and do not plan to.	No, we do not plan to take commercial food waste.
DTG Composting - Kingston	We currently accept residential food waste.	They are starting a commercial pilot this year.
Mailliard's Landing Nursery	No, we do not take residential food waste and do not plan to.	No, we do not plan to take commercial food waste.
Cedar Grove Everett	We currently accept residential food waste.	We currently accept commercial food waste for all customers.
Dykstra Farm	No, we do not take residential food waste and do not plan to.	No, we do not plan to take commercial food waste.
Cedar Grove Maple Valley	We currently accept residential food waste.	We currently accept commercial food waste for all customers.
Lenz Enterprises, Inc.	We currently accept residential food waste.	We currently accept commercial food waste for all customers.
TILZ Composting	We would like to accept food, but we have big reservations about the contamination it comes with.	We would like to accept food, but we have big reservations about the contamination it comes with.
Green Earth Technologies	We currently accept residential food waste.	We currently accept commercial food waste for all customers.
<b>Total Facilities that Accept Food Waste</b>	<b>7 (58%)</b>	<b>5 (42%)</b>
<b>Southwest Region</b>		
DANCING GOATS AND SINGING CHICKENS ORGANIC FARM, LLC.	We are doing a pilot study with NEXTCYCLE WASHINGTON to accept school cafeteria wastes in the future months	Hopefully, we can do this in the near future and feed our chickens and ducks, to compost their poop.
Purdy Composting Facility (Pierce County Compost facility)	We currently accept residential food waste.	We may expand and upon expansion we will evaluate accepting commercial food waste at that point
LRI Compost Factory	We currently accept residential food waste.	We do not accept commercial food waste now but plan to within the next 5 years.
Silver Springs Organics	We currently accept residential food waste.	We accept commercial food waste for select customers only.
Brady Trucking Company	We currently accept residential food waste.	We do not accept commercial food waste now but plan to within the next 5 years.
Port Townsend Biosolids Compost Facility	No, we do not take residential food waste and do not plan to.	No, we do not plan to take commercial food waste.

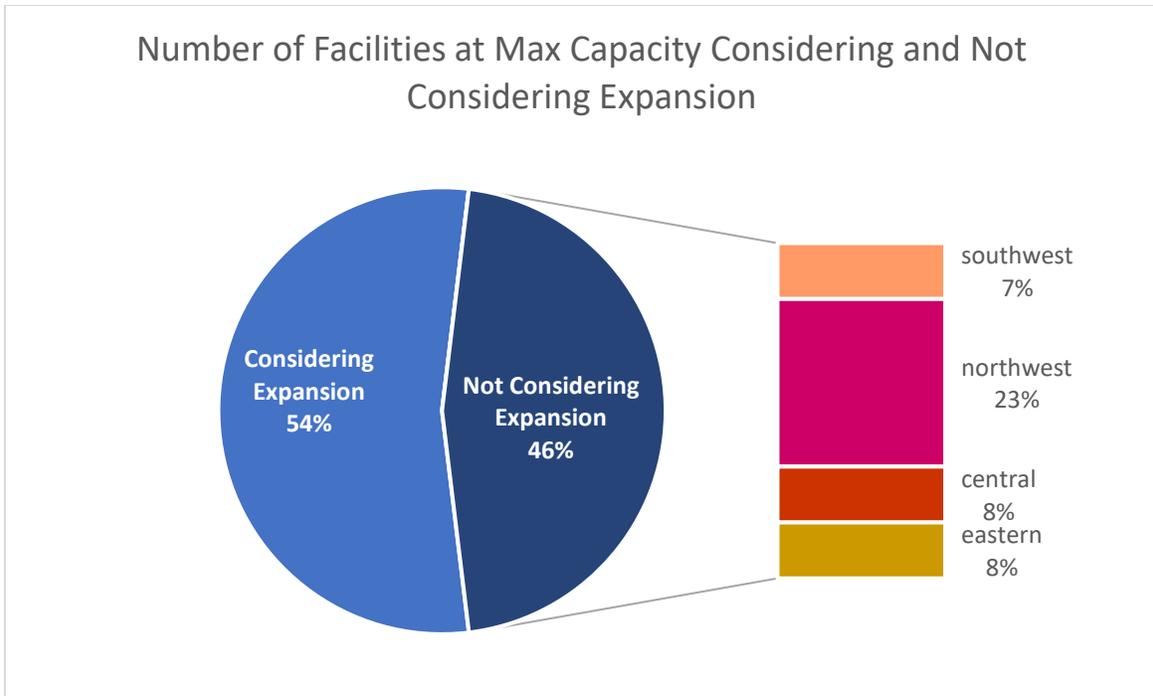
Facility Name	Residential Food Waste	Commercial Food Waste
Total Facilities that Accept Food Waste	4 (67%)	1 (17%)

## Summary of Facilities at Max Capacity During Busiest Months of the Year

Out of 13 compost facilities that are at max capacity during their busiest months of the year, five are located in northwest, five in southwest, two in eastern, and one in central.



Of these, six facilities reported that they are not considering any future expansion. This includes three facilities in northwest, one in southwest, one in eastern, and one in central.



Among the facilities with no plans for expansion, several also reported limited acceptance of food waste. In the eastern region, Cheney Wastewater Treatment Plant does not currently accept residential or commercial food waste and has no intention of doing so. Similarly, Colonial Lawn and Garden in the central region does not accept food waste and has no plans to change that policy. Three facilities in northwest —Bailey’s Compost, City of Langley Wastewater Treatment Plant, and Mailliard’s Landing Nursery—also do not accept any type of food waste and are not planning to start. Interestingly, the LRI Compost Factory in southwest currently accepts residential food waste and is planning to begin accepting commercial food waste within the next five years, though they have not shown any interest in expansion and are currently at max capacity during their busiest months.

## Summary of Facilities Not Planning on Expanding their Capacity Over the Next Ten Years

Out of the 29 compost facilities surveyed, 11 reported that they do not plan to expand their processing capacity over the next ten years. Notably, three of these facilities list their permitted annual capacity as zero tons, raising questions about their operational status or permitting structure.

### ***Regional analysis***

Of the 11 facilities not planning expansion, five are in the northwest region. Four of these have an annual capacity greater than zero, and half of them operate at maximum capacity during their busiest months. Within this group, three facilities do not accept residential or commercial food waste and have no intention of doing so. The remaining two facilities in northwest currently accept both residential and commercial food waste.

Three of the non-expanding facilities are in the eastern region. Two of these have annual permitted capacities above zero and indicated they could accept more organic material during peak months—

ranging from 28 to 2,000 additional tons. However, all three eastern facilities do not currently accept any type of food waste and have no plans to in the future.

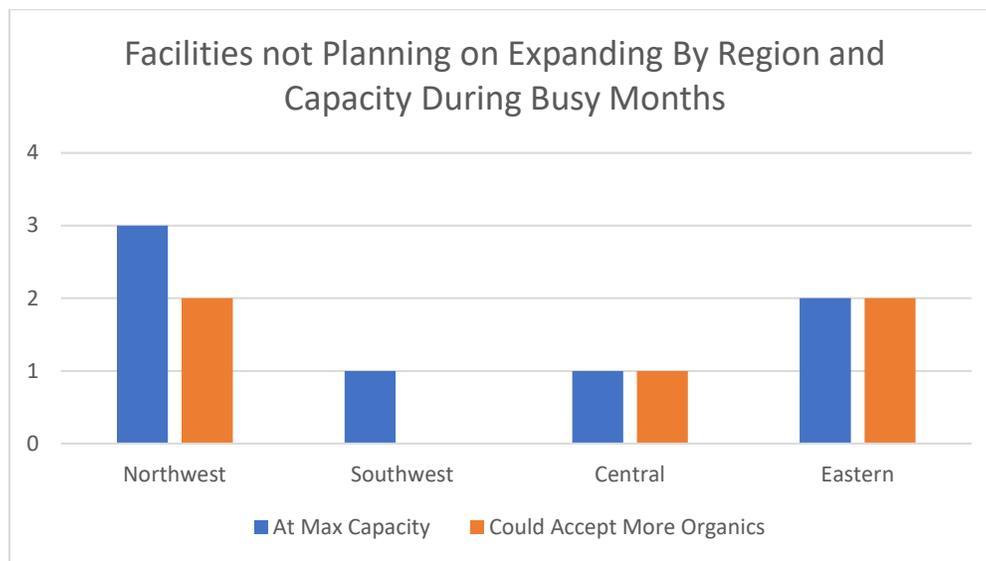
Two facilities are located in the central region. One has a non-zero annual permitted capacity and could accommodate up to 4,875 additional tons of organic material during its busiest months. This facility accepts both residential and commercial food waste. The second central facility reports a permitted capacity of zero and does not accept any food waste, nor does it plan to.

The final facility in this group is located in the southwest region. It is currently operating at full capacity during peak months and cannot take in additional material. However, it does accept residential food waste and plans to begin accepting commercial food waste within the next five years.

### **Capacity Analysis**

Among these 11 facilities, six are currently operating at maximum capacity during their busiest times of the year. These include three in the northwest region, one each in the central, southwest, and eastern regions. Interestingly, three of these six facilities list their permitted capacity as zero tons, while the other three have capacities ranging from 4,000 to 30,000 tons per year.

The remaining five facilities in this non-expanding group are not operating at full capacity. These include two in northwest, two in eastern, and one in central. The two northwest facilities have the capacity to process an additional 6,000 to 6,600 tons per month during peak times. The two eastern facilities could accept 28 and 2,000 additional tons respectively, while the central facility could take on 4,875 more tons per month during its busiest season.



### **Food Waste Acceptance**

In terms of food waste acceptance, six of these maxed-out facilities do not accept any food waste and are not planning to. Three others already accept both residential and commercial food waste. One facility, while not accepting residential food waste, does process meat scraps from its own operations but has no intention of handling pre- or post-consumer food waste. The final facility in this group accepts residential food waste and is preparing to begin accepting commercial waste within the next five years.

## Summary of Facilities Considering Expansion over the Next 5-10 Years

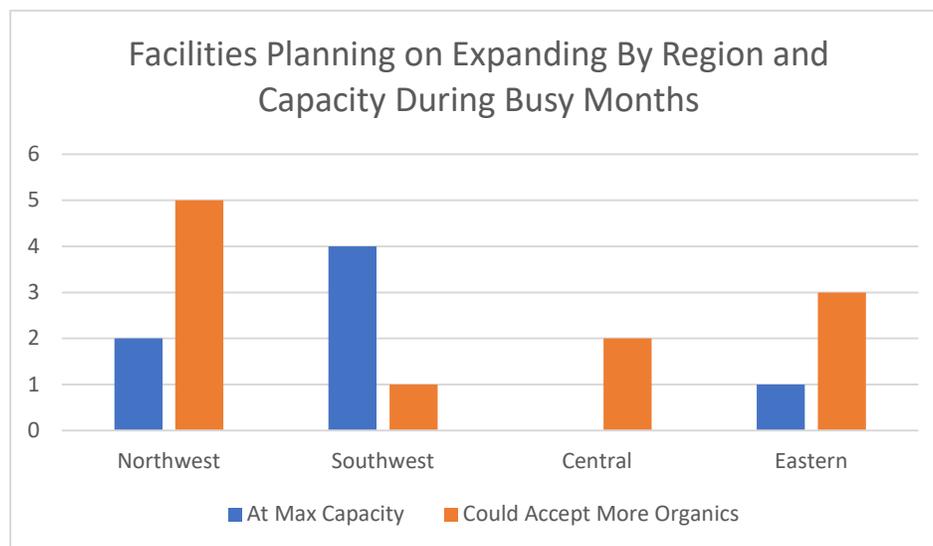
Of the 29 compost facilities surveyed, 18 reported that they are considering expanding their operations within the next five to ten years. These proposed expansions include a variety of strategies aimed at increasing capacity, improving efficiency, and enhancing long-term sustainability.

Seven of the facilities are exploring the possibility of increasing the physical footprint of their sites. This group includes four facilities in the northwest region, two in the southwest region, and one in the eastern region. These facilities currently have annual permitted capacities ranging from 10,000 to 45,000 tons.

Ten facilities are considering investing in new equipment to reduce overall processing time. This approach is being pursued by four facilities in eastern, three in northwest, two in southwest, and one in central. While one facility in this group reports an annual permitted capacity of just one ton, the others range from 30,000 to 170,000 tons, indicating that operational efficiency is a priority across a range of facility sizes.

Eight facilities are looking to hire additional staff in order to maximize their existing permitted capacity. These include three in northwest, two in both eastern and southwest, and one in central. The annual permitted capacity for these facilities falls between 30,000 and 250,000 tons, showing that staffing can be a key constraint even for high-capacity sites.

Additionally, 11 facilities identified other forms of expansion they are currently exploring. These include purchasing or investing in new technologies, applying for changes to existing permits, and even building entirely new facilities. One of these facilities reported an annual capacity of just one ton per year, while the remainder fall between 6,000 and 250,000 tons.



Despite the strong interest in expansion, a small number of these facilities still have no plans to accept food waste. Four facilities that are considering expansion do not currently accept residential food waste and have no plans to begin doing so. These are located in eastern (two facilities), northwest (one), and southwest (one). Similarly, three of the expanding facilities do not accept commercial food waste and do not anticipate doing so in the future; one each is located in the eastern, northwest, and southwest regions.

## Summary of Facilities by Region

### *Northwest Region*

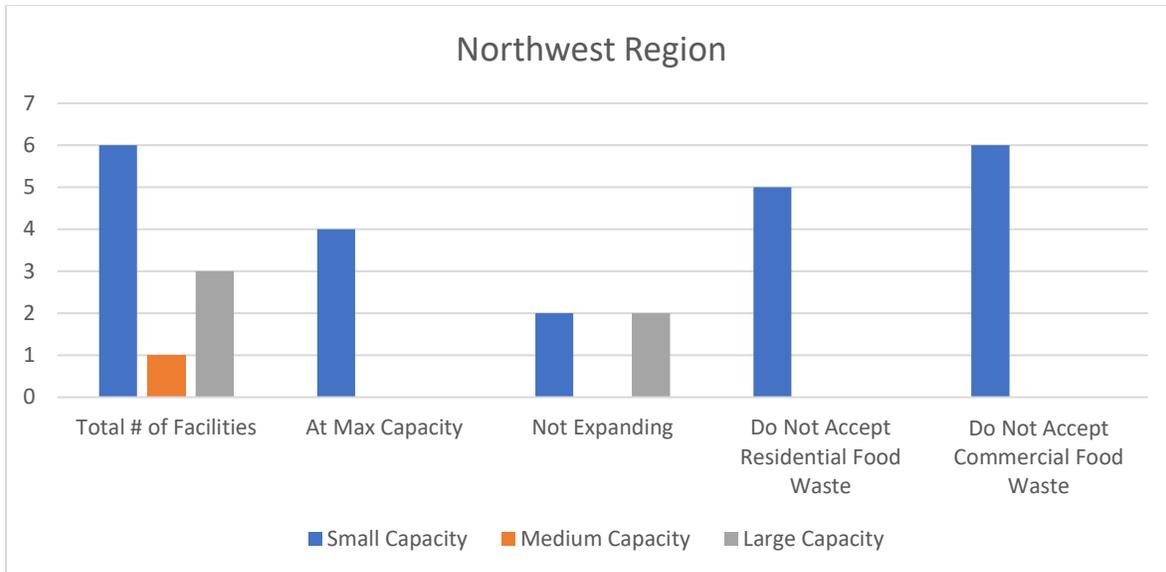
Twelve of the surveyed compost facilities are located in northwest. These facilities vary widely in scale and operational characteristics. One facility in the region reports an annual permitted capacity of zero tons. Among the remaining facilities, six are permitted to process between 4,000 and 30,000 tons annually, one is permitted for 44,000 tons, and three are high-capacity facilities permitted to handle between 100,000 and 250,000 tons per year. The final facility in the northwest is permitted based on spatial availability rather than tonnage, relying on the number of windrows it can maintain. That facility is currently utilizing 60 percent of its permitted space.

Of the 11 northwest facilities with an annual permitted capacity above zero, four are operating at full capacity during their busiest months. All four of these facilities are on the smaller side, each with a maximum permitted capacity of 30,000 tons or less. The remaining seven facilities report that they can accept between 600 and 7,500 additional tons of organic material during their peak processing periods, suggesting significant untapped capacity in parts of the region.

Five of the 12 facilities in northwest are not planning to expand over the next five to ten years. This group includes the facility with zero permitted capacity, as well as two of the region's largest facilities—permitted for 228,000 and 250,000 tons, respectively. The other two non-expanding facilities have more modest capacities of 30,000 and 4,000 tons per year.

Conversely, seven facilities in the northwest region are actively considering various forms of expansion. One facility with available capacity is closely monitoring the impact of emerging technologies, specifically, the increased use of robotic lawn mowers, which could potentially reduce the volume of yard debris it receives. Among the facilities planning for expansion, four are considering increasing their physical footprint, three are exploring investments in equipment to reduce processing time, and three are planning to hire additional staff to better utilize their current permitted capacity. Two are evaluating potential permit changes to increase their throughput, and several facilities noted they already own land that could support expansion but would require additional equipment and infrastructure development before proceeding.

In terms of food waste acceptance, six of the 12 northwest facilities currently accept residential food waste, and one facility accepts it on a limited basis. Four facilities do not accept residential food waste and have no plans to do so in the future. On the commercial side, five facilities already accept commercial food waste, and two more are launching pilot programs this year. Only four facilities in the region do not accept commercial food waste and do not plan to in the future.

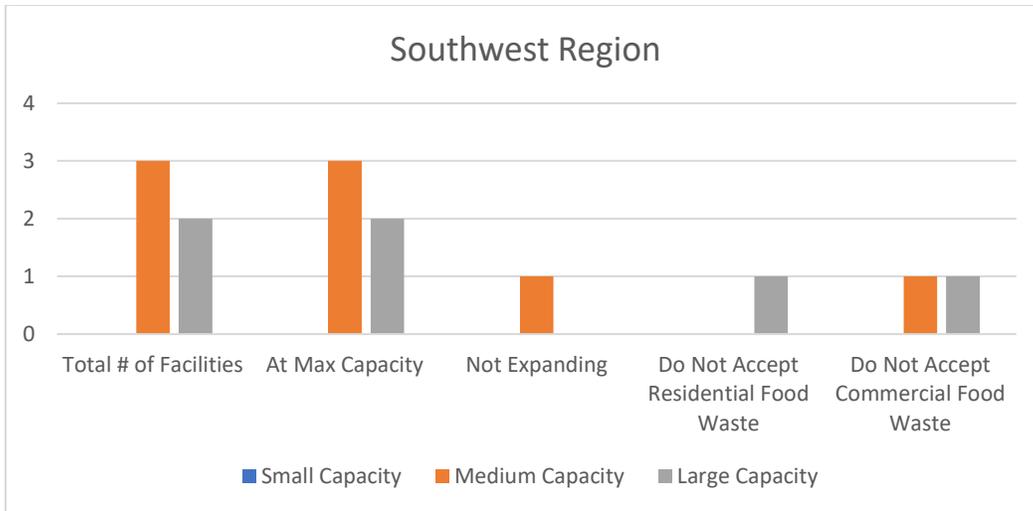


### ***Southwest Region***

Among the 29 compost facilities surveyed, six are located in southwest. These facilities vary in size, with one reporting an annual permitted capacity of just one ton. Three facilities have capacities ranging from 35,000 to 85,000 tons, while two facilities are significantly larger, permitted to process 120,000 and 250,000 tons annually. Of the five facilities with capacities greater than one ton, all are operating at full capacity during their busiest months, indicating high demand and limited available processing time during peak periods.

Regarding future growth, only one of the six southwest facilities, which has an annual capacity of 85,000 tons, is not considering expansion over the next five to ten years. The other five facilities are actively exploring ways to expand. Two facilities are looking to increase their physical footprint, two are considering investments in equipment aimed at reducing total processing time, and two are planning to hire additional staff to better utilize their existing permitted capacity. One facility noted that while it owns land suitable for expansion, it requires investment in new equipment and infrastructure, such as building out processing piles, before moving forward. Another facility aims to increase its aeration area to alleviate bottlenecks during the initial stages of processing.

In terms of food waste acceptance, four of the six southwest facilities currently accept residential food waste, and one facility is conducting a pilot study to accept waste from school cafeterias. One facility does not accept residential food waste and has no plans to begin doing so. When it comes to commercial food waste, only one facility currently accepts it, and this is limited to select customers. Two facilities plan to start accepting commercial food waste within the next five years. Another two are considering accepting commercial food waste contingent upon successful expansion. Only one facility does not accept commercial food waste and does not plan to in the future.

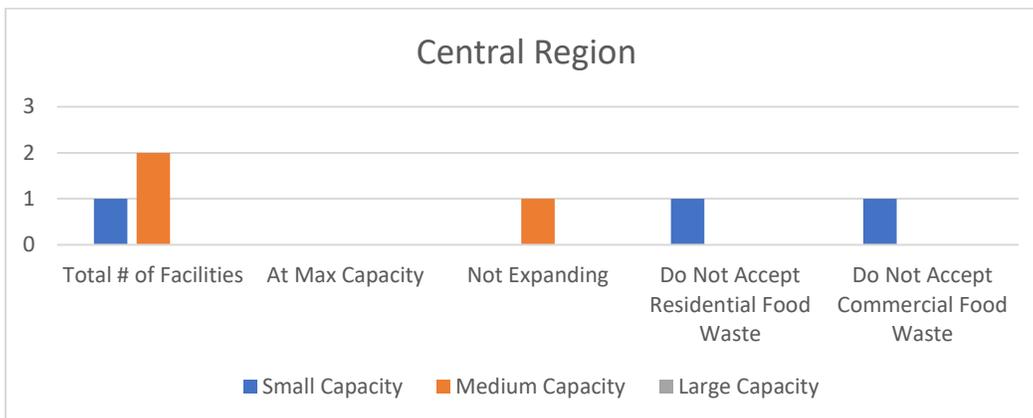


### Central Region

Four of the facilities surveyed are located in central. These facilities exhibit a range of capacities, with one facility reporting an annual permitted capacity of zero tons. The other three facilities have capacities of 6,000, 62,000, and 62,700 tons, respectively. During their busiest months, all three operational facilities with capacities above zero indicated they could accept additional organic waste, ranging from 300 to 5,000 extra tons, suggesting some available capacity during peak periods.

Looking ahead, two of the four facilities in the central region are not considering any expansion in the next five to ten years. In contrast, the other two are actively planning growth. One facility is exploring investments in equipment to reduce processing times and aims to hire additional staff to better utilize its existing capacity. The other is in the process of building a new facility that will increase its annual processing capacity from the current 6,000 tons to 10,000 tons.

Regarding food waste acceptance, two of the facilities currently accept residential food waste and plan to continue doing so over the next five years. One facility does not accept residential food waste and has no plans to begin. When it comes to commercial food waste, one facility currently accepts it from select customers, and another accepts commercial food waste from all customers. Additionally, one facility plans to start accepting commercial food waste within the next five years. Only one facility does not accept commercial food waste nor plans to do so in the future.



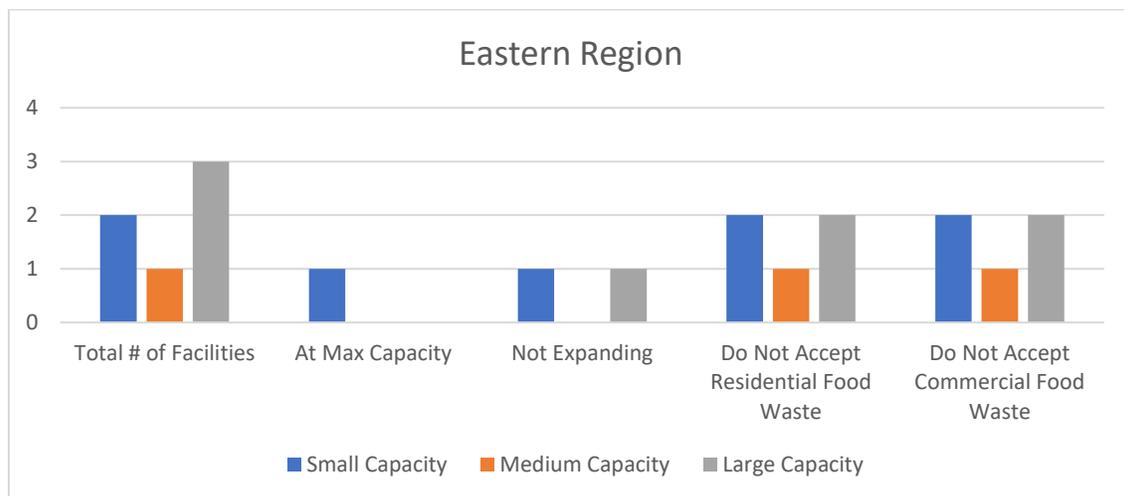
## Eastern Region

Among the 29 facilities surveyed, seven are located in the eastern region. These facilities vary significantly in size, with one reporting an annual permitted capacity of zero tons. Two facilities have smaller capacities, processing less than 30,000 tons annually—specifically 1,400 and 10,000 tons. Another facility is permitted for 50,000 tons per year, while three facilities are large-scale operations with capacities of 100,000, 120,000, and 250,000 tons, respectively.

Of the six facilities with an annual capacity above zero, only one operates at full capacity during its busiest months. The remaining five facilities have available capacity, capable of accepting between 28 and 5,000 additional tons of organic material during peak periods.

Looking to the future, three of the seven eastern region facilities are not planning any expansion over the next five to ten years. These include facilities ranging in size from zero to 120,000 tons in permitted annual capacity. The other four facilities are considering expansion efforts. Among these, one facility is exploring options to increase its physical footprint, while four are considering investments in equipment designed to reduce total processing time. Additionally, two facilities are contemplating hiring more staff to maximize the use of their current permitted capacity. One of the facilities is landlocked, with just enough space for a small expansion to meet local green waste needs, while another plans to invest in new technologies to enhance the value of its finished compost product.

In terms of food waste acceptance, only one facility in eastern currently accepts residential food waste. Five facilities do not accept residential food waste and have no plans to do so in the future. One facility has considered accepting food waste but determined that it would require a \$30 million investment and a facility relocation to accommodate this change. Regarding commercial food waste, one facility currently accepts it for select customers, and another plans to begin accepting commercial food waste within the next five years. The remaining four facilities do not accept commercial food waste and have no plans to do so in the future.



# F

## Additional Maps

# Per Capita Organics Recovery by County

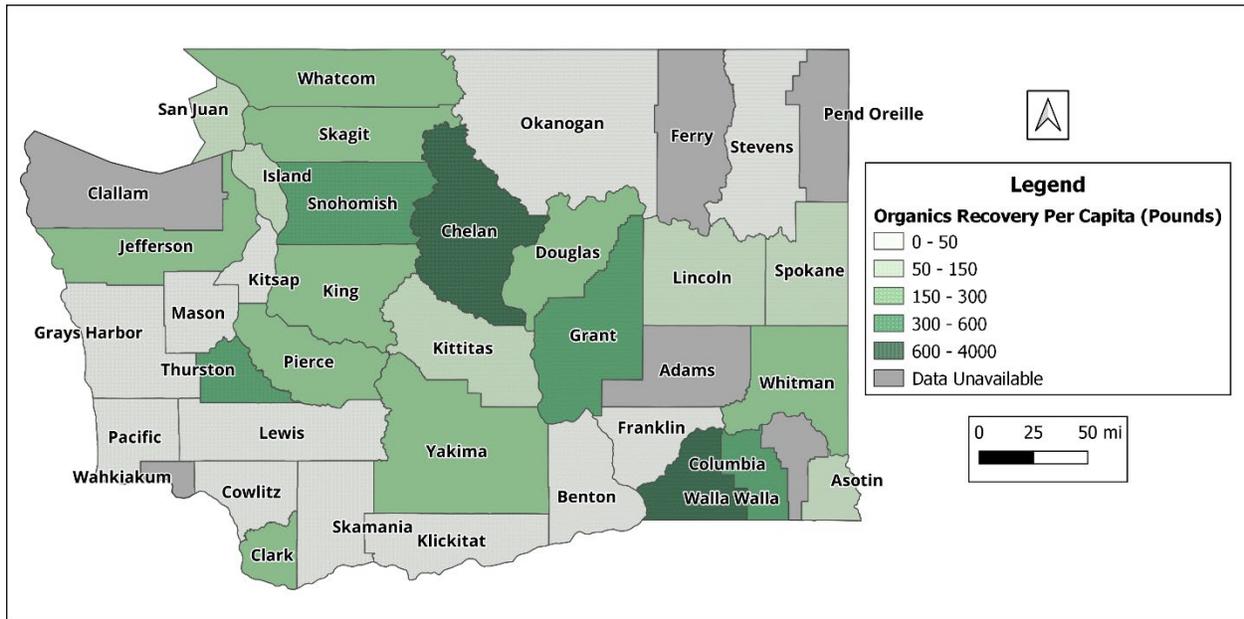


Figure F-1. 2023 Per Capita Organics Recovery by County (Pounds)

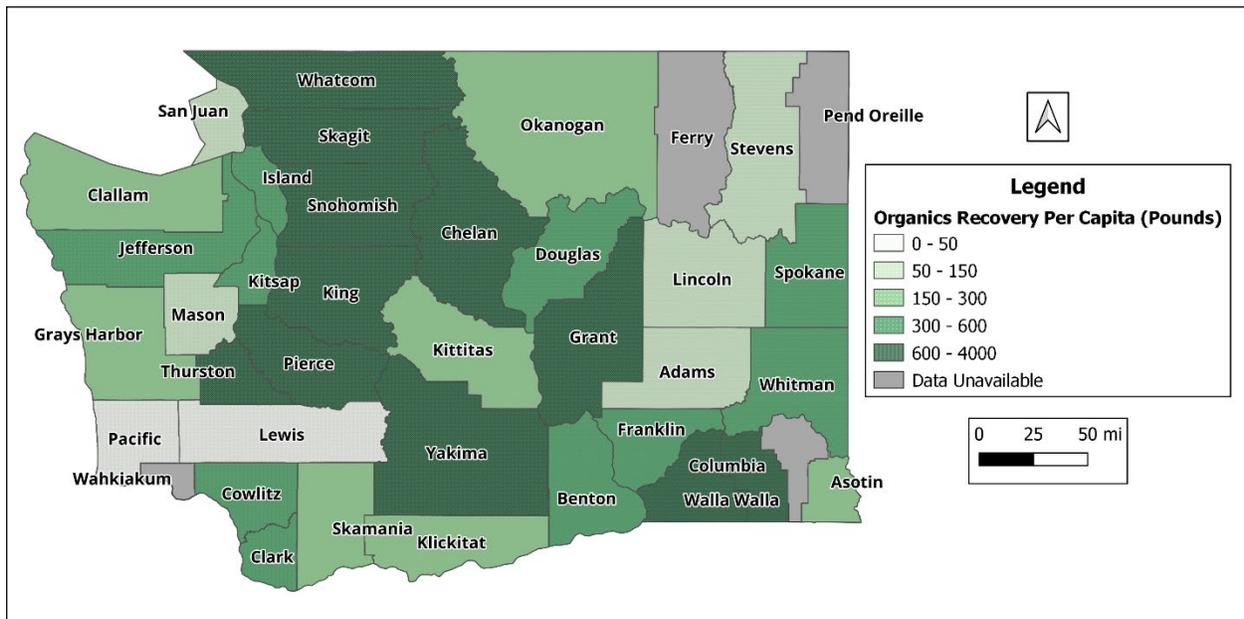


Figure F-2. 2035 Projected Per Capita Organics Recovery by County (Pounds)

## Food Waste and Mixed Yard/Food Recovery by County

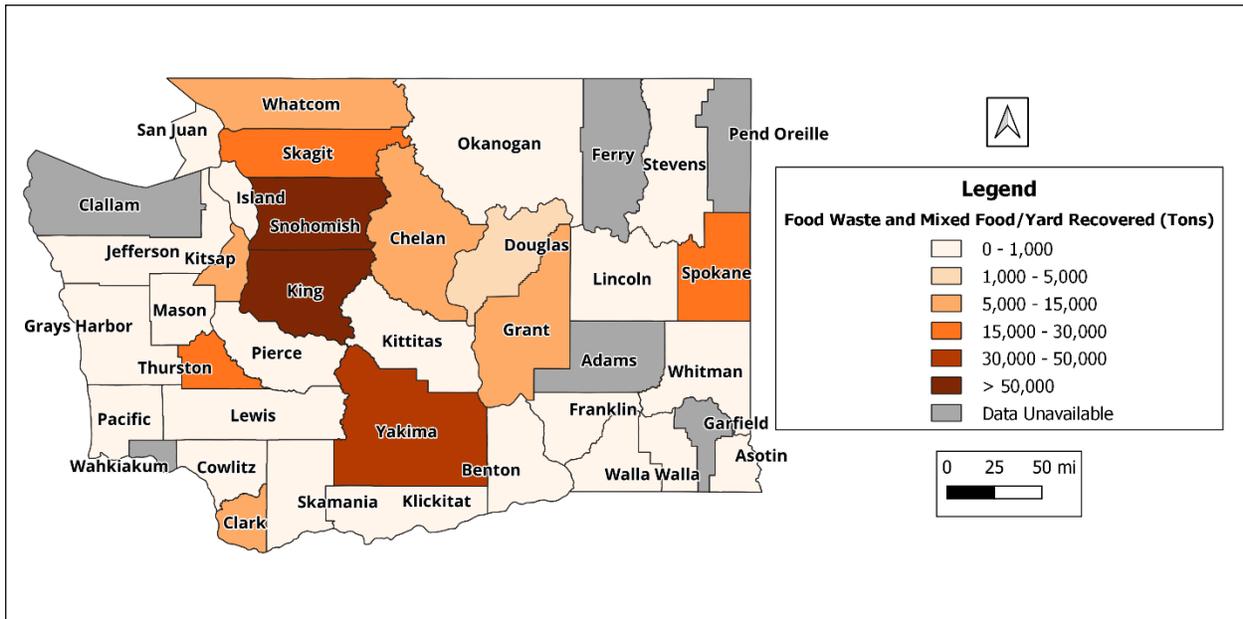


Figure F-3. 2023 Food Waste and Mixed Food/Yard Recovery by County (Tons)

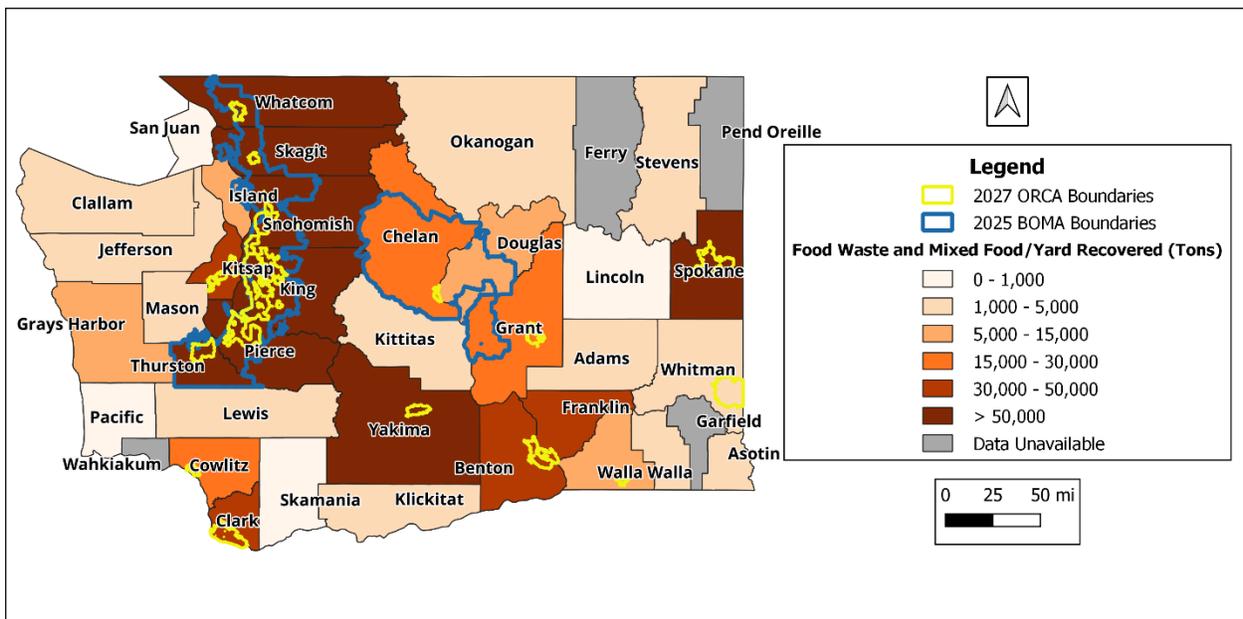


Figure F-4. 2035 Projected Food Waste and Mixed Food/Yard Recovery by County (Tons) with BOMA and ORCA Boundaries