

2018 Septage Management Summary

Overview

The Department of Ecology uses an annual report to collect information on biosolids management from permit holders. We used an online report for the first time in 2018. Overall data collection improved, and we added one question for publicly owned treatment works on volumes of septage received. The additional information improved our picture of septage management in Washington. Wastewater treatment plants reported receiving more than 67,000,000 gallons of septage in 2018. Septage Management Facilities – those that apply directly to the land, and *mixing* facilities – those that combine septage with biosolids and treat to the standards for biosolids (other than wastewater treatment plants), reported receiving more than 94,000,000 gallons.

Type of Facility	Management Activity in Millions of Gallons			Total
	Beneficial Use	Incineration	Landfilling	
Mixing Facility	58.6			58.6
Septage Management Facility	27.4		8.2	35.6
Wastewater Treatment Plant	60.8	6.4		67.1
Total	146.8	6.4	8.2	161.4

Background

Septage is a subset of biosolids that comes from onsite wastewater treatment (septic) systems, portable toilets, recreational vehicle dump stations, marine sanitation devices, and other similar systems.

The capacity to manage septage is a growing concern in Washington. Wastewater treatment plants face increasing demands for service as our population grows. Building new treatment plants, or expanding existing ones, is time consuming and extremely costly. Consequently, as we build more homes to accommodate our expanding population, there is also an increasing demand for new onsite (individual) wastewater treatment systems. Wastewater treatment plants are not obligated to serve customers outside their system, and many treatment plants are not designed to receive septage. As those that can receive septage, near capacity, they may decline to take septage.

Septage is difficult to manage at traditional wastewater treatment plants for the following reasons:

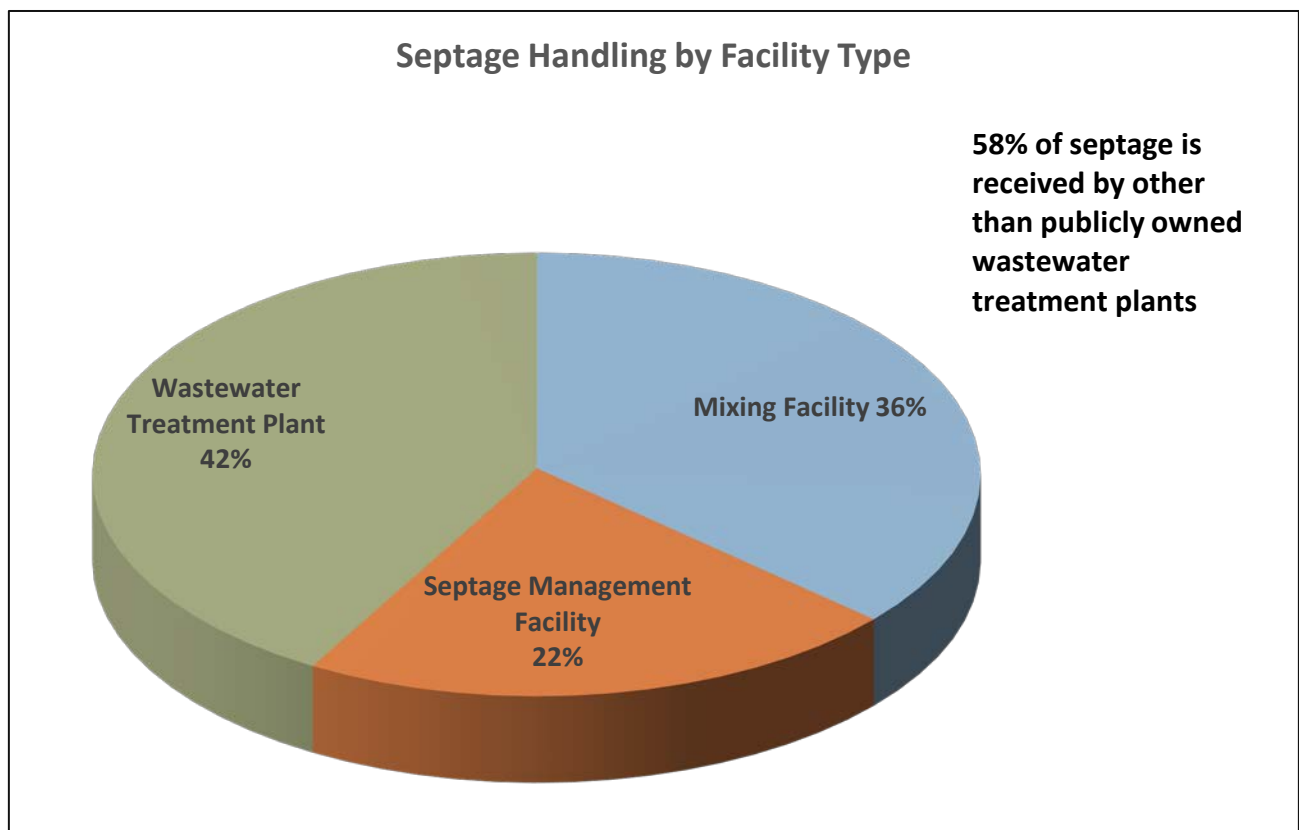
- Septage is more concentrated than wastewater conveyed to a treatment plant in a sewerage system. As a result, many small treatment works simply cannot accept septage for treatment.
- Septage contains much greater amounts of trash than sewage. Before the septage can be introduced to any treatment system (or applied to the land), it must go through a screen to remove the trash.
- Some mid-sized wastewater treatment plants might be able to meter septage into their processes, but lack adequate facilities for receiving and screening.
- Treatment plant operators harbor concerns regarding the quality or kind of material that might be delivered to their facilities by onsite system service providers, regardless of being represented as septage.

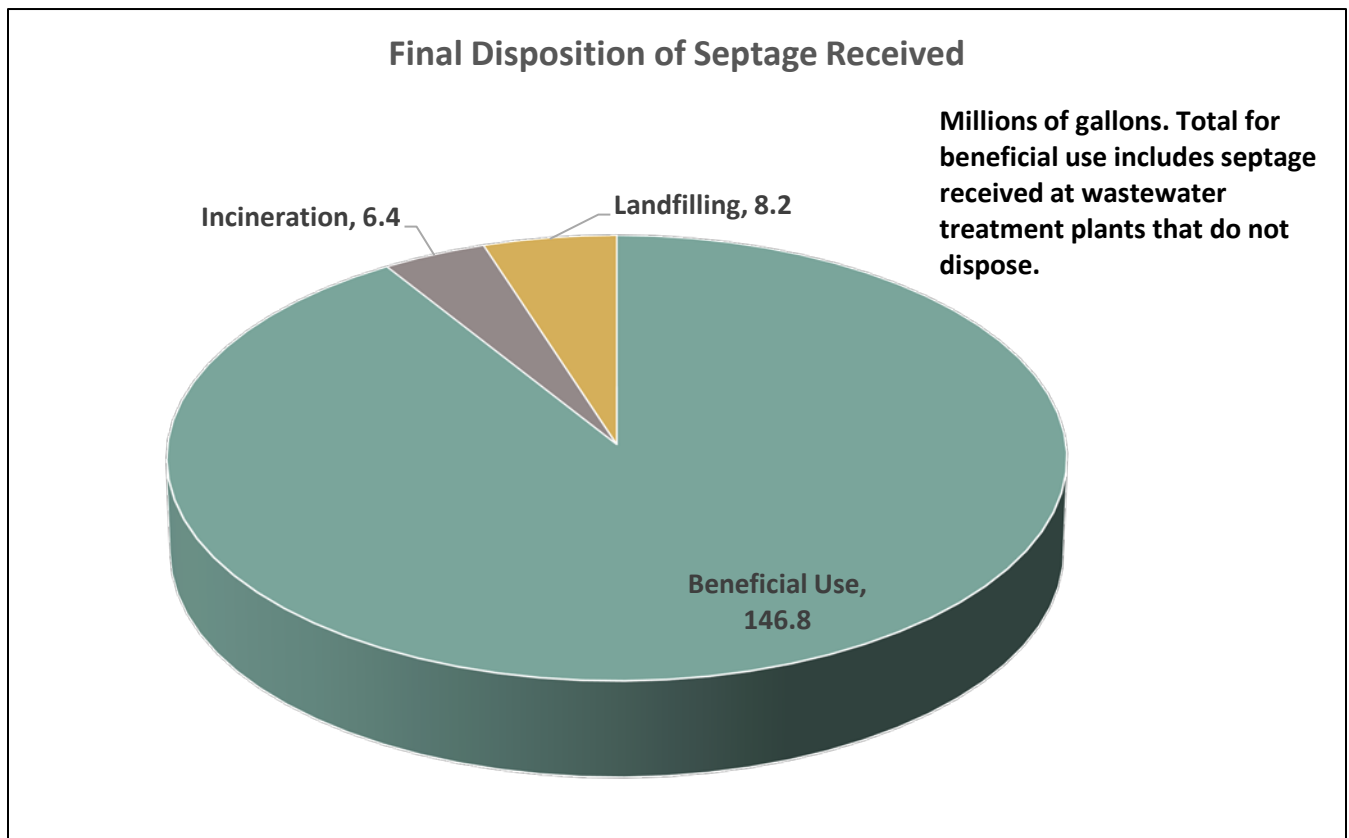
Septage management facilities – those that apply septage directly to the land, and wastewater treatment plants submit annual reports to Ecology summarizing their activities for the preceding calendar year. In 2018, we added a question to our annual report form, asking wastewater treatment plants to provide us with information on the amount of septage they accept

What we found

In 2018, forty-seven facilities reported accepting more than 161 million gallons of septage for further treatment or application to the land.

- Seven facilities are categorized as *mixers*. Mixers are facilities that accept both septage from onsite system service providers, and biosolids generated at wastewater treatment plants. The resulting mixture is treated to meet the higher standards for biosolids generated by wastewater treatment plants. The standards for septage are less, largely because of its long residence time in an onsite treatment system, and additional limitations on use, including restrictions on the kinds of crops that can be grown.
- Twenty-three facilities are classified as *septage management facilities*. They are specifically permitted to handle only septage, and may do so with or without lime stabilization before land application. Some have lagoons for temporary storage, while others go from screening directly to land application. All but one ultimately engage in beneficial use.
- Seventeen (of 336) wastewater treatment plants reported accepting septage in 2018. Three are incinerators (incineration and landfilling are considered to be disposal). The remaining fourteen are wastewater treatment plants of varying configurations. In all cases, septage is treated along with sewage received at the facility.





Data Limitations

The data that we received are limited in the following ways:

- It is possible that some treatment works accepted septage they did not report. 2018 was the first year we asked this question about septage, and not all treatment works may have been prepared for the question. It will be helpful to compare future data, when available.
- In some cases, gallons reported may be derived from vehicle gross and tare *weights*, and in other cases there may be a presumption that the amount delivered is equal to the vehicle's stated capacity. We do not expect these potential sources of error to have a major impact on data analysis at the statewide level.
- Data here represent the amount of septage received, and for facilities ultimately engaged in beneficial use, may not equal the amount beneficially used during the reporting year. This is primarily because of year-to-year carryover in lagoons, and losses through evaporation from those facilities. The amount of septage received is the best value for comparison because it represents the statewide management burden in the reporting year.