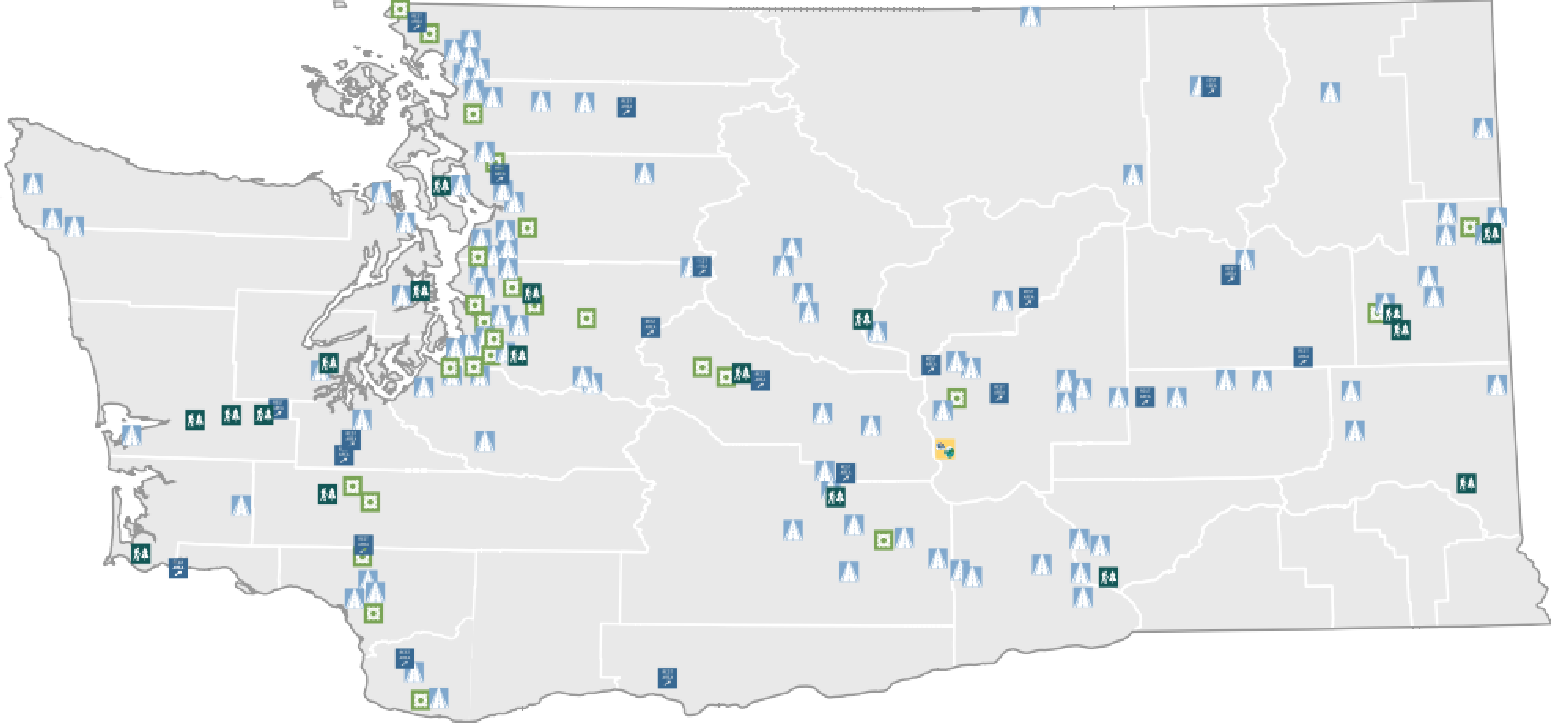
## Why did we measure litter?

**Litter impacts road safety, our environment, and the wellbeing of our communities.** Washington State Departments of Transportation and Ecology (Ecology) together spend more than $12 million annually on litter cleanup efforts. Unfortunately, they can only pick up a small portion of the waste that accumulates on the ground. If we know the types and amounts of litter present, we can help develop strategies to prevent litter and littering behavior, and measure progress over time. The focus sheet and final report will be available at <https://ecology.wa.gov/Waste-Toxics/Solid-waste-litter/Litter/Litter-studies>.

## How did we measure litter?

In this study, we collected litter from **182 randomly selected sites across Washington state**. Sites were categorized into five main groups: 1) roadways, 2) interchanges (on- and off- ramps), 3) rest areas, 4) parks, and 5) recreational areas. We sorted the litter by type (for example, glass bottles, cigarette butts, cardboard boxes, plastic film), counted the number of pieces of litter, and weighed the samples of litter. Using this data from 182 sites in Washington, we estimated the yearly average pounds and pieces of waste.



182

# sites

sampled

# 104

Roadways

(Urban and Rural)

# 26

Interchanges

(On- and Off- Ramps)

# 26

Rest Areas

along Highways



# 18

State and

County Parks



# 8

DNR and

DFW

Lands

Roadways and interchanges, rest areas, parks, and state-owned lands were included in the study.



**Washington State 2022**

**LITTER STUDY**

**FOCUS SHEET**

Publication 23-07-009 - Litter Study Fact Sheet

**Where did we measure litter?**



We measured litter along roadways, interchanges, and at high-use areas of rest areas, parks, and certain public lands. Many of these sites were used in the 1999 and 2004 litter studies, and we used the Washington Environmental Health Disparities Map to ensure representation across diverse communities.

|  |  |
| --- | --- |
|  | **Roadways** include all 81,021 miles of public roads from interstate highways to small neighborhood streets, including land areas within  15 feet of the side of the road—the approximate throwing distance **15’**  from a moving vehicle. This amounts to nearly 6.4 billion square feet  or 147,311 acres of litterable roadway area. |
|  | **Interchanges** are on-ramps and off-ramps for highways. Washington has 590 interchanges, and we measured litter in land areas falling within 15 feet of each interchange. This adds up to more than 470 million square feet, or 10,794 acres of litterable interchange area. |
|  | We measured litter in the **high-use parts of rest areas** located along highways. Examples include parking lots, picnic tables, and permanent restrooms or other buildings.  Washington’s highway rest areas have 230 acres of high-use areas. |
|  | We measured litter in the **high-use areas of state and county parks**. High-use areas are places that typically have visitors every day during summer. For parks, these areas  include parking areas, campsites, trails, ball fields, picnic and play areas, and permanent restrooms or other buildings. Washington’s state and county parks have 83,888 acres of high-use areas. |
|  | We measured litter on **high-use areas of land owned** by the Washington State Department of Natural Resources (**DNR**) and Department of Fish and Wildlife (**DFW**). Examples of these areas include parking areas, campsites, trails, and permanent restrooms or other buildings. DFW and DNR lands have 2,112 acres of high-use areas. |

## How much is littered each year in Washington? Where is it happening?

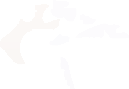
**Statewide, 37.8 million pounds are littered per year**, which is 4.8 pounds per person per year. These pounds are made up of 7.1 billion items per year, which is about 5 pounds (or 897 pieces) of litter per person per year.

In total, **roadways** get the most pounds per year (nearly 18.5 million pounds) and high-use areas of **state and county parks** get the most pieces per year (3.4 billion pieces). But the picture changes when we consider how large each area is. When we look at litter per acre,

**interchanges** get the most pounds *and* pieces per year,

**37.8 million**

**pounds of litter each year**



**18.5**

**million**

That’s nearly **5 pounds** (or 897 pieces) of litter per person every year

**7.7**

**million**

**10.6**

**million**

**.04**

**million**

**1**

**million**

and roadways get the fewest.

**Roadways Interchanges**

**Rest Areas**

**Parks DNR + DFW**

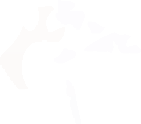
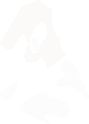
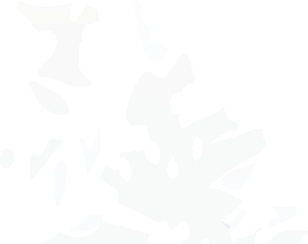
**lands**



|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Site type** | **Total pounds**  **per year** | **Total pieces**  **per year** | **Pounds per acre**  **per year** | **Pieces per acre**  **per year** |
| Roadways | 18,496,200 | 1,858,555,848 | 126 | 12,617 |
| Interchanges | 7,695,600 | 1,630,078,616 | 713 | 151,017 |
| Highway Rest Areas | 38,000 | 17,860,849 | 165 | 77,656 |
| State & County Parks | 10,618,000 | 3,404,009,782 | 127 | 40,578 |
| DNR & DFW Lands 946,000 | | 141,717,935 | 448 | 67,101 |

**TOTAL LITTER 37,793,800 7,052,223,030 155 28,863**

## Which types of roadways get the most and least litter per mile per year?



**Interstates** get the most litter (1,579 pounds and 73,580 pieces per mile per year). They get almost as much litter as all other

roadways combined and are also the most difficult and dangerous roadways

1 mile, 1 year

**Litter accumulation along roadways**

(**pounds** and **pieces** per mile per year)

**All Roadways Urban**

**Rural Interstates Arterial Collector**

**Local**

**22,939**

228

**48,903**

402

to clean. **Local roads** get the least (143 pounds and 18,051 pieces per

151

**11,559**

mile per year).

1,579

**73,580**

**Urban roads** get two to four times more litter than **rural roads**. Urban

499

**61,751**

roads get 402 pounds and 48,903 pieces while rural roads get 151 pounds and 11,559 pieces of litter per mile per year.

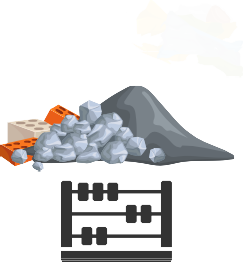
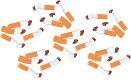
238

143

**16,015**

**18,051**

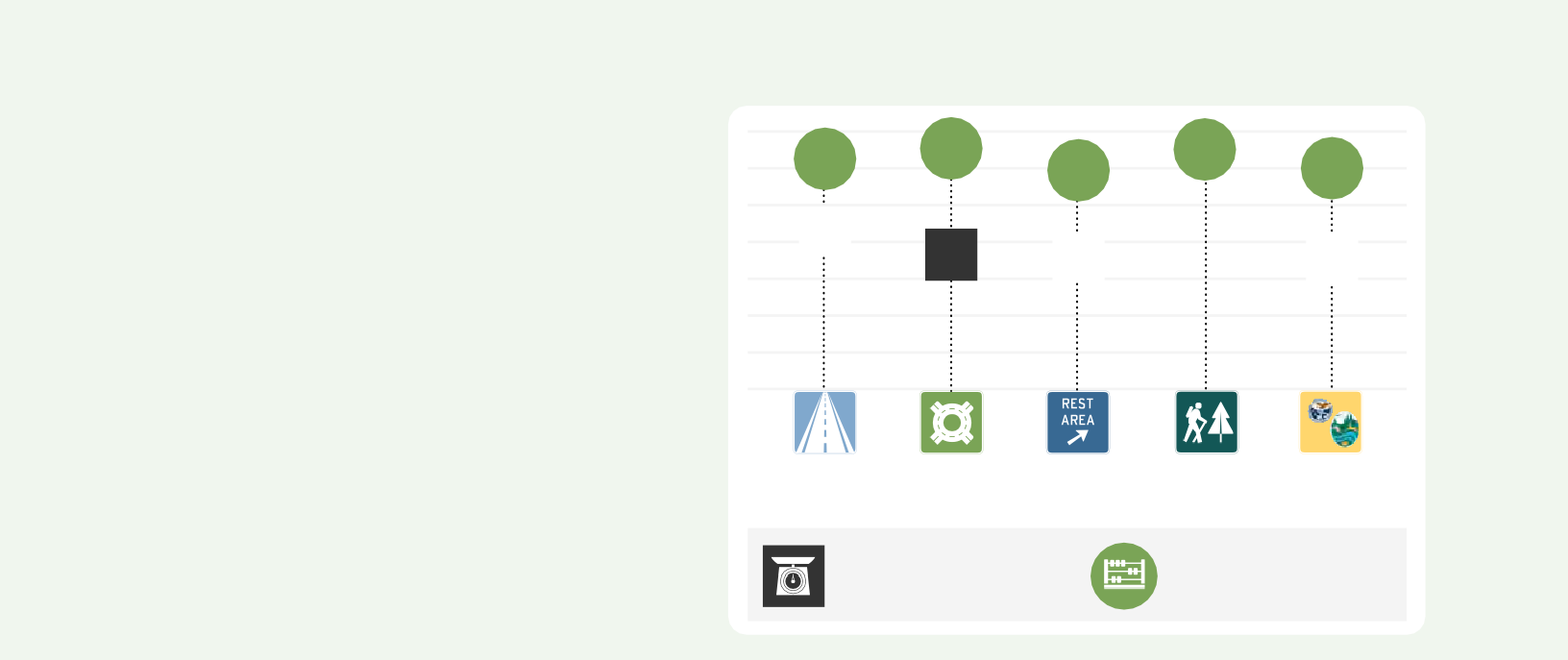
## What items are littered the most?



The most littered items vary by site type and by whether we’re measuring pounds or pieces. The **top three littered items** across site types by pounds are glass beer bottles, construction and demolition debris, and cardboard boxes. The top three littered items across site types by pieces are cigarette butts, construction and demolition debris, and food wrappers and snack bags.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Site type** | **Top three litter items by pounds** | **Top three litter items by pieces** |
|  | **Roadways** | * Glass beer bottles * Construction and demolition debris * Miscellaneous materials   *(Example: small and hard to identify items)* | * Cigarette butts * Other plastic   *(Example: packing insulation, zip ties, and other hard to identify plastic litter pieces)*   * Other paper   *(Example: sticky notes, books, envelopes)* |
|  | **Interchanges** | * Miscellaneous materials * Other plastic * Cigarette butts | * Cigarette butts * Other plastic * Other foam   *(Example: egg cartons and packing peanuts)* |
|  | **Rest Areas** | * Miscellaneous materials * Cigarette butts * Other metal   *(Example: hard to identify metal objects)* | * Cigarette butts * Other metal * Other paper |
|  | **State and County Parks** | * Non-food plastic packaging * Auto rubber products   *(Example: tire shards or treads)*   * Vehicle debris | * Cigarette butts * Other paper * Other plastic |
|  | **DNR & DFW**  **Lands** | * Glass beer bottles * Miscellaneous materials * Construction and demolition debris | * Cigarette butts * Bottle caps and tabs * Construction and demolition debris |

## How much of Washington’s litter is taxable?



Percentage of littered pounds that are taxable

Percentage of littered pieces that are taxable

**Washington’s Litter Tax was established in**

**1971 to help meet the costs of litter cleanup statewide.** The tax rate and 13 covered items have not changed in over 50 years. Current revenues do not cover what it costs to clean up the amounts or types of litter we find today.

Today, **69-76 percent of littered pieces** are covered by the litter tax, while only **42- 62 percent of littered pounds** are covered. The difference is because many of the

**73% 76%**

**44%**

**52%**

**69%**

**43%**

**76%**

**62%**

**69%**

**42%**

items covered by the tax—such as cigarette butts, food wrappers, and snack bags—are lightweight, while many of the heavier littered items are not covered. *See a full list of items at* [*dor.wa.gov/taxes-rates/other-taxes/litter-tax*](http://dor.wa.gov/taxes-rates/other-taxes/litter-tax)*.*

**Roadways Interchanges**

**Rest Areas**

**Parks DNR + DFW lands**