

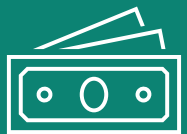


# WASTE DIVERSION & MATERIAL CONSERVATION

## Co-Benefits



Results in fewer emissions and improves air and water quality. Reduces the environmental impacts of resource exploitation.



Reduces cost of waste management to the City and ratepayers while making funds available for other purposes. Transition on circular economy creates jobs and economic opportunities.



Improves health outcomes, especially for those with respiratory and cardiovascular illnesses. Increases food security.



Reduces hunger and food insecurity for low-income community members.

## SDG Alignment





# WASTE DIVERSION & MATERIAL CONSERVATION

Spokane and its residents are innovative champions of materials use, reuse and conservation, and environmental stewardship.

## Guiding Principles for Waste Diversion and Material Conservation:

- Divert waste materials toward the highest and best use
- Prioritize materials re-use and conservation to minimize climate impacts
- Consider environmental equity in waste/recycling policy
- Minimize economic costs of waste management systems for low-income residents



City employees participating in a recycling audit in 2020. These “lid lifts” help identify contamination in the recycling stream. Photo credit: Kris Major

## Sector Level GHG Targets: Waste Diversion & Material Conservation

Vehicle Type	2016 Baseline		2030 Reduction Target 45% & 948,958 MT		2040 Reduction Target 70% & 1,476,155 MT		2050 Reduction Target 95% & 2,003,356 MT	
	Metric Tons CO <sub>2</sub> e	Percent of Total	Metric Tons CO <sub>2</sub> e	Percent Reduction	Metric Tons CO <sub>2</sub> e	Percent Reduction	Metric Tons CO <sub>2</sub> e	Percent Reduction
WTE	100,533	5%	65,346	35%	50,267	50%	5,027	95%
Biogenic*	136,713		68,357	50%	34,178	75%	6,836	95%

\*Biogenic emissions in this table refer to the combustion of biological material in the municipal waste stream. It is outside the scope of our community GHG inventory; however, these emissions can be reduced through food rescue initiatives, composting biological material into soil amendments, or digesting into biofuels. In other words, there is a higher and better use for these materials outside of direct incineration.

## Comprehensive Plan Alignment

Chapter 5: Capital Facilities and Utilities

CFU 5.5 Waste Reduction and Recycling

Chapter 7: Economic Development

ED 8.4 Environmental Protection Business Opportunities

Chapter 9: Natural Environment

NE 5.3 Packaging Reduction

NE 5.4 Profit from Waste

Chapter 10: Social Health

SH 8: Food Access & Security

▶ Action in-progress

▶ Action complete



# WASTE DIVERSION & MATERIAL CONSERVATION

## Waste Trends: National and Local

The US EPA has found that the average municipal waste output per person in the US has risen from 2.7 pounds in 1960 to 4.9 pounds in 2018 – an increase of about 81%. Of that total, about 3.03 pounds of waste per person per day was sent to landfills or incinerated. In 2018, the residents of Spokane County produced 310,677 tons of waste that was burned at the WTE incinerator or landfilled. This averages about 3.3 pounds per person per day.

It is reasonable to assume that the waste production per person for the City is about the same as for the county, and that it has reached that figure following a similar trend to the rest of the nation. There are many reasons for the increase in waste output: changing patterns of consumption; the variety, quality and durability of consumer products; increased packaging; and Americans' attitudes and habits about thrift and conservation.

Managing and disposing of municipal waste is one of the great challenges that every city faces. The cost of this is a direct burden on the citizens, which is paid as part of the utility bill. Conserving materials, reducing waste, and diverting it from incineration and landfills would save money and reduce greenhouse gas emissions.

This is a complex issue inextricably tied to long-term worldwide trends in manufacturing, packaging, and materials valuation, use and management. The City cannot simply impose a solution. The roots of the problem are global, and the branches are cultural. Solving it will entail many strategies: fostering a conservation ethic among citizens; promoting laws at every level of government that do not allow manufacturers to externalize costs; and better technical engineering. The City of Spokane will engage in efforts to change people's habits and attitudes about consumption and will promote conservation of the food, materials, and products our residents use. There will still be waste, and that will be addressed in the most efficient manner, producing the least emissions and impacts possible.

Our Waste-to-Energy (WTE) Plant is one of Washington's top emitters of greenhouse gases. In 2014, the WTE plant released more than 235,000 metric tons of carbon dioxide into the atmosphere. Incinerating waste to generate energy does release less greenhouse gases than burying it in a landfill. However, prioritizing reduced consumption, reuse, and recycling efforts to decrease the amount of municipal garbage is the most effective way to reduce carbon emissions, as well as all other harmful substances produced by combustion at the WTE plant.

Our goal is to reduce waste and divert materials towards the highest and best use while also holding producers accountable for the product and packing waste they create. By promoting smart solutions in our region, Spokane will become a leader in the circular economy where waste disposal is minimized, and economic opportunities are maximized. These efforts will create jobs, reduce pollution, and improve the way of life for all community members.



Spokane County Recycles artist, Ava King, North Central High School, Grade 7

*There is no good way to deal with trash except  
not to make it in the first place.*

*--Kris Major, Waste Reduction Education Coordinator,  
City of Spokane*

# WASTE DIVERSION & MATERIAL CONSERVATION

## GOAL 1. Invest in waste diversion programs to substantially reduce volume of Municipal Solid Waste (MSW)

### Strategy 1. Maximize composting of inedible food, yard waste, and other organic waste

Priority Actions	
WD 1.1	Work with businesses, schools, and institutions to develop systems for separation and collection of inedible food waste from other waste materials for composting
WD 1.2	Promote and facilitate the use of compostable packaging and foodservice ware
WD 1.3	Develop a residential food waste collection system to divert food waste from the Waste to Energy (WTE) plant by providing all residents with composting bins at no additional cost
WD 1.4	Use trash audits to inform residential and business sources of best practices in food waste separation

### Strategy 2. Minimize food waste generated by residents and businesses

Priority Actions	
WD 2.1	Support diversion of excess edible food from commercial & institutional kitchens and grocery outlets to community members in need through food rescue programs
WD 2.2	Educate business owners, schools, institutions and residents on the impacts of food waste and best practices to reduce it

## The New Clean Materials System

The Center for Sustainable Infrastructure is a Washington State nonprofit dedicated to helping the Pacific Northwest move toward a smarter, more sustainable materials management system. CSI provides education and advocacy that will lead us toward better environmental and economic outcomes.

Read more about their projects at [sustaininfrastructure.org](http://sustaininfrastructure.org)

## Transforming the PNW Waste & Recycling System





# WASTE DIVERSION & MATERIAL CONSERVATION

## GOAL 2. Boost regional economic opportunity by promoting circular waste programs

### Strategy 3. Promote, support, and incentivize a circular economy

Priority Actions	
WD 3.1	Incentivize the production and usage of durable goods
▶ WD 3.2	Support policies that prioritize easily recyclable, and compostable packaging (ex. extended producer responsibility (EPR))
WD 3.3	Build on the progress of standing networks addressing waste reduction outreach to continually update residents and business owners on current waste management regulations
▶ WD 3.4	Increase enforcement of curbside recycling contamination and fund seasonal cart-tagging programs for recycling
WD 3.5	Promote markets for recycled or reused materials, such as through increased local business purchasing of recycled products and reusing of materials
WD 3.6	Transform recycling infrastructure to maximize materials separation and recovery and minimize contamination
WD 3.7	Increase access to sustainable purchasing
WD 3.8	Support and promote sharing and exchange economy among residents
▶ WD 3.9	Support a statewide Industrial Symbiosis program to create circularity in manufacturing

### Strategy 4. Support state-wide and regional waste management solutions

Priority Actions	
WD 4.1	Build regional recycling infrastructure and markets
▶ WD 4.2	Support policies and regulations that reduce waste, especially difficult to recycle waste including extended producer responsibility policies
WD 4.3	Incubate industrial solutions to waste and recycling (eco-district)



**Circular Economy:** *A circular economy is designed intentionally to eliminate waste by keeping products and materials in use and preserving the value of resource inputs in perpetuity.*

# WASTE DIVERSION & MATERIAL CONSERVATION

## Existing Waste Diversion and Material Conservation Initiatives

There are many organizations at both the regional and state level working on reducing waste. Below are just a few of those initiatives.

### Food Waste & Food Security:

Washington Department of Ecology: Use Food Well Washington Plan  
Spokane County Food Security Coalition  
Spokane Food Policy Council  
Feed Spokane  
Spokane Food Fighters

### Packaging & bags:

Statewide plastic grocery bag ban  
Department of Ecology Plastics Study  
Proposed state extended producer responsibility bill

### Recycling & Waste Diversion:

Spokane County Solid Waste Advisory Committee  
Spokane County Comprehensive Solid Waste Management Plan  
Spokane Recycling Taskforce  
Zero Waste Washington



Photo Credit: Sea to Sky Removal

Left: Employees at Sea to Sky Removal, a Vancouver, BC company dedicated to reducing waste in the construction sector, created this list of “REs” to consider before throwing materials into the trash. We think it makes for good policy!

Right: A trophy designed from trash was awarded for team recognition during the 2013 Spokane River Clean Up. A creative reinvention of discarded material!



Photo Credit: Kris Major