



**King County**

Department of  
Natural Resources and Parks  
Solid Waste Division

# SOLID WASTE DIVISION **ANNUAL REPORT**

# 2017



*Per King County Code Sections  
10.14.080 And 10.24.020*

---

## MESSAGE FROM THE DIRECTOR

---



Pat D. McLaughlin

*Our dedication to waste prevention did not waiver as we maintained and enhanced our various programs designed to keep reusable and recyclable materials from entering our waste stream.*

I am pleased to present the *King County Solid Waste Division's 2017 Annual Report*, which highlights our major achievements in waste prevention, resource recovery, and waste disposal. The past year was yet another busy one for the Solid Waste Division as we continued to provide the resources and services our customers, partners, and stakeholders expect of us.

Our dedication to waste prevention did not waiver as we maintained and enhanced our various programs designed to keep reusable and recyclable materials from entering our waste stream. Programs like *Green Schools* and *Earth Heroes at School* target future generations of environmental stewards and let them know that 70 percent of what we throw away could have been reused or recycled. Our *Food: Too Good to Waste* program shows how a few simple actions can go a long way in preventing food waste. *Recycle More* and its Spanish-language counterpart *Recicla Mas* help people understand that recycling isn't hard, in fact it's easy to do.

In 2017, the Solid Waste Division expanded its resource recovery efforts at recycling and transfer stations, ensuring valuable resources such as cardboard, scrap metal, and clean wood are not being wasted. These materials, and many others, have established markets and are worth much more if they are routed back into the economy instead of decomposing in the landfill. We are proud that resource recovery has now expanded to five of our nine facilities. Programs like *LinkUp* work to expand markets for selected recyclable and reusable materials by facilitating an interactive community of businesses, public agencies, and other organizations.

Of course, we are still responsible for handling the more than 900,000 tons of garbage that come across our scales and into our transfer stations, and that are finally disposed of at the Cedar Hills Regional Landfill. The modernization of our transfer system continues to be updated with a redeveloped Factoria Recycling and Transfer Station in Bellevue completed this year. We also made major progress toward constructing a new South County Recycling and Transfer Station by siting a location for this new facility. At Cedar Hills, new equipment improved our landfill operations and our partnership with Bio Energy Washington resulted in another year of clean energy production.

We also strengthened our partnerships with our cities and stakeholders. The City of Bellevue, along with Clyde Hill, Hunts Point, Medina, and Yarrow Point extended their interlocal agreement with King County until 2040—ensuring continuity of an important regional partnership that supports the county's ability to provide efficient, cost effective waste disposal and recycling services to the region.

When we weren't providing the absolute best in waste prevention, resource recovery, and waste disposal, we were looking ahead and thinking strategically about the future. Much of 2017 was spent preparing for the release of our *Draft Comprehensive Solid Waste Management Plan*. This far-reaching document will help inform policy makers on how we manage garbage and recycling in King County for the next six to 20 years. As 2017 drew to a close, we were proud to see that document ready to be released for public comment.

It is a great privilege to serve people who care about our shared environment and who believe in our mission. Our work from this past year makes us proud, and it could not have been possible without the support of our customers, partnering cities, advisory committees, our valued staff, the King County Executive, and the King County Council.

Together, we will continue to build on our past successes while always looking ahead for new opportunities and meeting the challenges that come next.

A handwritten signature in blue ink that reads "Pat D. McLaughlin". The signature is stylized and fluid.

Preventing waste from entering the waste stream is paramount to the division's goals of achieving a 70 percent recycling rate and having zero waste of resources. From recycling pilots and ordinances that require certain materials to be recycled to education programs, 2017 was another important year for the Solid Waste Division's waste prevention efforts.

## FOSTERING THE NEXT GENERATION OF ENVIRONMENTAL STEWARDS

Engaging and innovative education is a key part of waste prevention, which is why the Solid Waste Division continued its *Green Schools* and *Destination Zero Waste* programs in 2017.

The division's *Green Schools* program provides resources, supplies, and assistance to the next generation of recyclers, composters, and conservationists. As of December 2017, 285 schools – 57 percent of the K-12 schools in King County outside of the City of Seattle – have received or are receiving assistance from the *Green Schools* program. The participating schools are located in 17 school districts and 35 cities, as well as the county's unincorporated areas. More than 139,000 students in those schools have had opportunities to learn about and engage in waste reduction, recycling, and other conservation practices. Of those 285 schools, 214 have been recognized by the program for meeting criteria in one or more program level.

With a focus on Equity and Social Justice, *Destination Zero Waste* invites schoolchildren from low-income areas to visit division facilities, learn about operations, receive a lesson on recycling, and have a healthy snack. Transportation to and from the facility is provided free of charge by the Solid Waste Division. In 2017, the Solid Waste Division hosted 32 students from Lakeland Hills Elementary School at the Bow Lake Recycling and Transfer Station in Tukwila.

## RECYCLING PILOTS TARGET MATTRESSES AND TIRES

To prevent bulky materials that do not readily breakdown from entering the waste stream, the Solid Waste Division began a tire and mattress materials recovery pilot at the Factoria and Bow Lake recycling and transfer stations. Mattresses are collected and processed by the nonprofit Northwest Furniture Bank in Tacoma, and tires are collected by Portland-based Tire Disposal and Recycling Inc. The division collected more than 3,200 tires and 1,670 mattresses in 2017.



*Students visit the tipping floor of the Bow Lake Recycling and Transfer Station as part of the Destination Zero Waste program.*



*More than 1,670 mattresses were recovered and diverted from the landfill in 2017.*

## CONSTRUCTION AND DEMOLITION WASTE RECYCLING

Construction and demolition waste (C&D) makes up one-third of the solid waste generated in the county. The C&D recycling ordinance that became effective in 2016 furthers the division’s waste diversion and climate change reduction efforts by mandating recovery of selected C&D materials. In 2017, the division added an additional C&D recycling facility to the privately managed locations that manage C&D, bringing the total number of approved facilities to 13. The division’s C&D management program is funded by a fee that applies only to C&D that is landfilled, which further incentivizes recycling. Due to a delay in reporting by the Washington State Department of Ecology the most recent year’s C&D recycling data for King County is not yet available.

The division contracts with the King County Sheriff’s Office to assist in enforcing the C&D recycling regulations. Each week a detective visits jobsites to surveil management of C&D and monitors compliance with recycling requirements at the designated C&D management facilities. The division also holds quarterly stakeholder meetings to discuss the enforcement program and other issues impacting C&D recycling and disposal. Initial enforcement activities focus on education and outreach (rather than fines) to inform the construction industry of the need to send C&D to designated processing facilities. When potential violations are noted the detective takes immediate action to inform the hauler and contractor of the requirements. In 2017, the division issued nine warning letters to potential violators and citations. Monetary fines were issued to two repeat violators.



Commingling recyclables makes recycling more easy to do.

## PRIMARY AND SECONDARY RECYCLABLES

As specified in the *Final 2001 Comprehensive Solid Waste Management Plan*, materials designated as recyclable are divided into two categories – primary and secondary. Primary recyclables are materials that have a curbside collection program available throughout most of King County. Secondary recyclables are materials currently not collected in most curbside programs, but which have recycling options and markets.

### Primary Recyclables

- Newspaper
- Cardboard
- High-grade office paper
- Computer paper
- Polycoated paperboard
- Mixed paper (may include paper grades listed above)
- Plastic containers #1 through #7, excluding #6 polystyrene
- Yard waste (including woody materials less than 3 inches in diameter)
- Food scraps and food-soiled paper
- Glass containers
- Tin cans (steel cans)
- Aluminum cans
- Ferrous and non-ferrous metals (subject to size limitations)

### Secondary Recyclables

- All other single-resin plastics not included as primary recyclables
- Electronics
- Textiles
- Photographic films
- Toner/ink cartridges
- Reusable household and office goods
- Fluorescent lamps
- High-intensity halide lamps
- Plate glass
- Tires
- Batteries
- Fats and oils
- Porcelain
- Appliances
- Carpet and pads
- Bulky yard waste
- Untreated wood
- Land-clearing debris
- Reusable building materials
- Used oil and oil filters
- Anti-freeze
- Gypsum

*Whether it is removing recyclable materials from the waste stream and putting them back into the economy or recapturing gases produced by garbage decomposition, resource recovery is all about getting the most out of materials. Not only does resource recovery have important environmental benefits, it also helps the division as it continues to work toward its goal of zero waste of resources.*

## RESOURCE RECOVERY HELPS COLLECT MORE RECYCLING

In 2017, the division collected 31,728 tons of recycling at recycling and transfer stations, a 25 percent increase over 2016. Yard waste was the most-recycled item with 19,076 tons collected in 2017. The increase is due in part to the division's *Resource Recovery* program that makes it easier for self-haul customers to recycle scrap metal, clean wood, and cardboard by putting bins in unloading areas for these targeted materials. Additionally, Transfer Station Operators spend more time informing and educating customers on how to sort their loads, and encouraging them to use the provided bins. After several successful years of operations *Resource Recovery* efforts are now underway at the Bow Lake, Enumclaw, Factoria, Shoreline, and Vashon recycling and transfer stations. In 2017, recovered resources increased by 12 percent.



*In 2017 resource recovery helped lead to a 25 percent increase in recycling.*

## CREATING VALUE FROM LANDFILL GAS

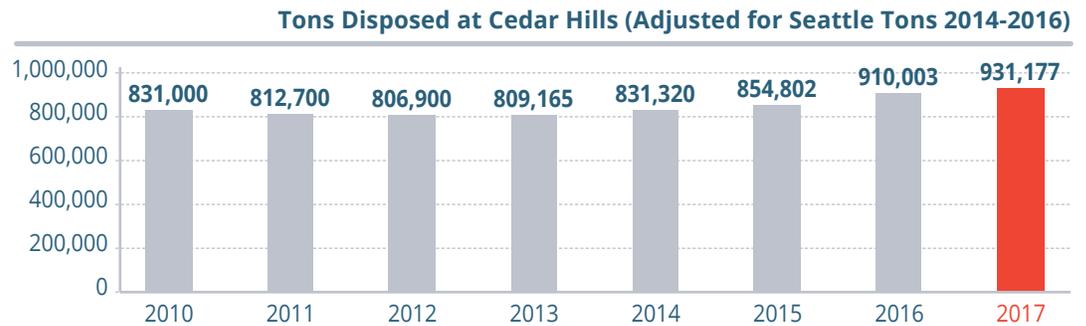
Bio Energy Washington (BEW) contracts with the division to process landfill gas into pipeline-quality Renewable Natural Gas (RNG) for sale to Puget Sound Energy (PSE). The RNG from the Cedar Hills Regional Landfill, processed by the adjacent BEW gas purification facility, displaces fossil fuel-based natural gas to fuel natural gas powered vehicles. The division partners with PSE to maximize the revenue of the renewable fuel. Renewable energy markets are highly volatile, and were strongly favorable to the division in 2017, generating an estimated \$7.1 million from the gas purified at Cedar Hills.



*Located onsite at Cedar Hills, Bio Energy Washington converts landfill gas to clean energy.*

# WASTE DISPOSAL

Even with the advances made in waste prevention and resource recovery, waste disposal remains a core piece of the Solid Waste Division's business. Compared to 2016, total tonnage disposed in 2017 grew by 1 percent, to 931,200 total tons of garbage disposed at transfer stations and the landfill. Economic growth, including more, better-paying jobs and an increasing county population, all contributed to an increase in tonnage. In 2017, the division worked to make the collection, transfer, and disposal of those thousands of tons of trash more efficient.



## NEW FACTORIA RECYCLING AND TRANSFER STATION

In October, the division achieved a major milestone with the opening of its redeveloped Factoria Recycling and Transfer Station in Bellevue. Garbage disposal services were not disrupted during the three-year reconstruction project, which included the demolition and removal of the old facility, the building of a new retention wall, and the installation of public art.

Prior to the construction of the new station, there were no recycling services available at Factoria. Now customers are able to recycle major appliances, yard waste, clean wood, scrap metal, commingled recyclables, and textiles, among others. Additionally, a new household hazardous waste (HHW) facility allows customers safe disposal of their HHW materials.

The station utilizes a flat-floor design, the first of its kind in the county, and allows for easier unloading of garbage, better traffic flow and expanded capacity that help reduce customer wait times. Sustainable design features that improve energy efficiency include translucent skylights and window panels that allow natural light into the building, rainwater harvesting, use of recycled content building materials such as steel, asphalt, and concrete, and landscaping with drought-tolerant plants.



Elected officials from King County and the City of Bellevue helped dedicate the new facility in October



The new Factoria Recycling and Transfer Station makes it easy for customers to dispose of their materials, with features that reduce its environmental impacts.

## EXTENDING HOURS AT THE ENUMCLAW RECYCLING AND TRANSFER STATION

To improve service to our customers, the Solid Waste Division decided to extend operating hours at the Enumclaw Recycling and Transfer Station to seven days a week. Prior to the change, Enumclaw was only open five days a week and employees did not like having to turn away customers who were coming to dispose of their garbage and recycling. After a 30-day public comment period that showed enthusiastic support for the change, the division began the new operating hours on May 1.

## PROGRESS ON A NEW SOUTH COUNTY RECYCLING AND TRANSFER STATION

In early 2017, the Solid Waste Division chose the location for a new recycling and transfer station in south King County. The new station will be built on land adjacent to the existing Algona Transfer Station, which has been in operation for more than 50 years and is past its engineered lifespan. The division is analyzing options for design and construction of the new facility, which is expected to cost an estimated \$100 million to design and build, and begin operations in 2022. The new station is expected to bring enhanced service levels to customers in this region, and will continue the division's efforts to modernize its transfer system.



*A new South County Recycling and Transfer Station will replace the current Algona Transfer Station, which is old, outdated, and at the end of its engineered lifespan.*

After spending most of 2017 working with advisory committees, city partners, and stakeholders, the Solid Waste Division released its *Draft Comprehensive Solid Waste Management Plan* and *Draft Environmental Impact Statement* for public comment in early 2018. These two far-reaching documents inform policy maker decisions on how garbage and recycling will be managed in King County for the next six to 20 years. Following a 60-day public comment period, the division will develop final versions of the two documents, expected to be adopted in 2019.

Two major decisions that will be informed by the Comp Plan are how we handle long-term garbage disposal and how we continue to manage transfer capacity in the northeast portion of King County.

The Solid Waste Division is committed to leading by example and continuing the regional dialogue on recycling, waste prevention, and resource recovery. That's why beginning in January 2018, the division will require customers at solid waste transfer stations and drop boxes to recycle cardboard, scrap metal, yard waste, and clean wood at facilities where those materials can be recycled.

This new rule is intended to reduce waste and save room in the landfill, thereby allowing the Solid Waste Division to continue providing its services at the level customers expect for both the near and distant future.

The upcoming year will also be filled with discussions and strategic planning on how the Solid Waste Division will continue managing King County's garbage and recycling. One of the most pressing issues we must consider is how our region will respond to China's "National Sword" policy. These restrictions on the amount and type of plastic recyclables sent to China will require serious thought, regional collaboration, and innovation for a positive outcome.



*The Comp Plan will help determine long-term disposal options for King County.*



**King County**  
Department of  
Natural Resources and Parks  
Solid Waste Division

Waste Prevention	Resource Recovery	Waste Disposal
---------------------	----------------------	-------------------

Alternative Formats On Request  
206-477-4466 • TTY Relay: 711

 1202M  Printed on recycled paper – Apr18DK