



# 2018 ENVIRONMENTAL SUSTAINABILITY REPORT

Reporting Period: April 2018 - March 2019

## Epson Portland Operations

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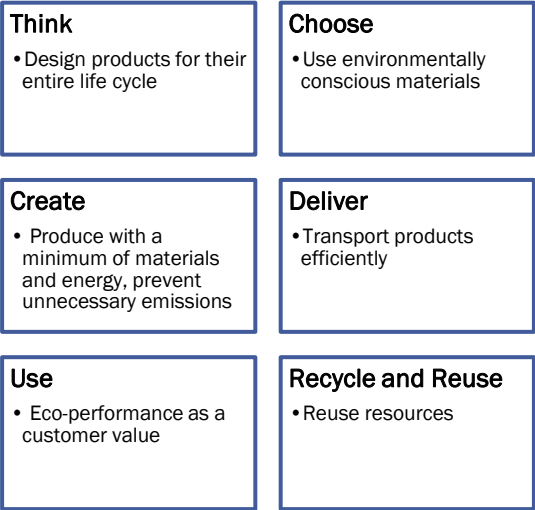
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# EPSON AND THE ENVIRONMENT

## Life Cycle Thinking

Through Epson’s creation of eco-considerate products, we are cooperating with customers and business partners to expand our environmental impact mitigation efforts beyond our doors.



## ENVIRONMENTAL VALUES

As Epson’s United States manufacturing affiliate, we are proud to have a progressive environmental program that includes a zero waste to landfill operation, renewable energy purchase program, effective use of energy and resources, responsible supply chain management, and employee engagement programs.

To support our goals and to ensuring compliance, we have company policies and a Corporate Social Responsibility (CSR) Action Plan that serve as a benchmark to gauge current activities, future activities, and help score our progress on a quarterly basis.

Our environmental values are used as a framework to measure and monitor environmental activities and determine company environmental objectives in conjunction with our Environmental Management System (EMS).



# SUSTAINABLE PROCESSES

We integrate our Environmental Management System (EMS) into business processes to produce environmentally sustainable products.

## ENVIRONMENTAL INDICATORS

### Accomplishments and Deficiencies Exceeding Regulatory Compliance

Promote Green Purchasing	Target: 80% of consumable supplies purchased are environmentally preferred products	Result: Achieved 85% green purchasing for consumables
Reduce Solid Waste	Target: Maintain Zero Waste-to-Landfill	Result: 100% solid waste goes to a waste-to-energy facility
	Target: (Hillsboro) Maintain FY17 Baseline Solid Waste Level	Result: 10% decrease
	Target: (QCU) Maintain FY17 Baseline Solid Waste Levels	Result: 14 % increase
Reduce Total Energy Consumption	Target: Maintain FY17 CO <sub>2</sub> Emissions (per unit produced vs. baseline FY17)	Results: Achieved 24% CO <sub>2</sub> reduction

# STRATEGIC APPROACH

## Determining Performance Indicators

The EMS is intended to be a guide for establishing, maintaining, and improving our environmental activities. The Environmental, Health, and Safety (EHS) department drafts recommendations based on the requirements and categories listed below which are approved by senior management. Once approved, the EHS department drafts plans for each objective, detailing who is responsible and critical milestones or deadlines to achieve each target. The EHS committee then completes an annual analysis of those environmental aspects and impacts.

Environmental Planning Procedures Integrated Process



8 Categories of Impacts

Air pollution	Utilities consumption
Water pollution (sanitary)	Reused/recycled materials
Water pollution (outside)	Solid waste
Soil pollution (outside)	Regulatory compliance

Basis of Objectives and Targets



POLLUTION PREVENTION

Energy Conservation & Renewable Energy

At Epson’s Portland Operations, we take a multifaceted approach to energy conservation which included upgrading the Hillsboro site’s HVAC System with approximately 48% energy reduction and reduction of operation lead-time for Quartz products at the Longview site. The company uses energy-efficient lighting which includes the use of LED lightbulbs in most of our facility and motion-sensing light switches as part of our ongoing efforts to conserve energy.

Patecons: Collapsible Plastic Boxes



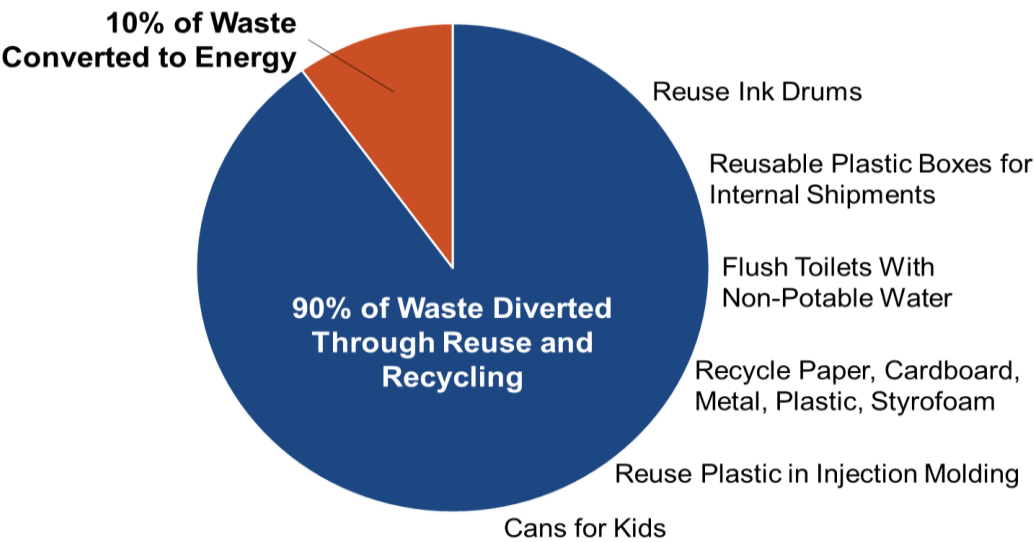
To prevent cardboard waste, we use patecons instead of corrugated cardboard boxes for internal shipments of in-process ink cartridges. Using patecons is not only cost savings initiative, but it also reduces the amount of recyclable waste we produce as a byproduct of the manufacturing process.

# Zero Waste to Landfill

Epson’s Hillsboro site has a zero-landfill waste stream operation with comprehensive recycling programs since March of 2000, opting instead to have any materials that are not reusable or recyclable sent to a local waste-to-energy facility. Through this program, we have recycled or otherwise diverted 60 tons of materials from the landfill in FY18. We collected more than 2,500 pounds (1,130 kilograms) of recyclable goods with 600 lbs. paper, 1812 lbs. of electronics, 170 lbs. of batteries, and 120 lbs. of Styrofoam.

The company’s innovative recycling and waste reduction programs include:

- Reclaiming and regrinding of waste plastic for reuse in the molding of new ink cartridge parts
- Reusing ink barrels rather than sending them to waste-to-energy



## LIDA (Low Impact Development Approach) Swale



In 2014, Epson’s Hillsboro site partnered with Clean Water Services, City of Hillsboro, and Portland State University to landscape a bioswale in the visitors parking area. This swale continues to serve as a natural filter for water runoff from the employee parking lot in addition to a habitat and food source for local wildlife, including deer.



## Renewable Energy

The Hillsboro site has been purchasing renewable energy through Portland General Electric’s (PGE) Clean Wind<sup>SM</sup> Program since 2003. In FY18, we purchased 4,752,804 kWh of renewable power and avoided 7,247,551 lbs. (3,287,434 kg) of CO<sub>2</sub> emissions. The company’s decision to use electricity from wind-generation facilities benefits everyone by increasing the demand for power from renewable sources.

## Wastewater Pretreatment

We pretreats effluent and storm water in cooperation with Clean Water Services (CWS). The pH of our effluent is monitored and pretreated to permit limitations before discharge with a limit between pH 6.0 and pH 11.0.



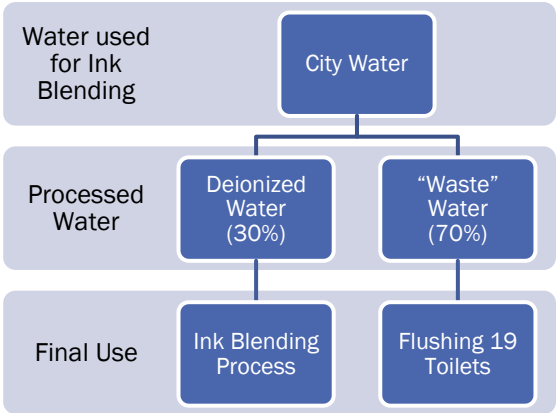
## Environmental Conservation



To reduce and offset CO<sub>2</sub> pollution, Epson’s Portland Operations are VOC-free (and have been since 2002). The company provides TriMet annual passes for public transportation to all Portland metro area employees as part of our comprehensive benefits package through the Department of Environmental Quality’s (DEQ’s) Employee Commute Options (ECO) program. This pass encourages ridership on environmentally friendly forms of transportation to reduce air pollution from motor vehicles and reduce local traffic congestion. Additionally, employees are encouraged to carpool or ride their bikes to work.

## Water Efficiency

At the Hillsboro site, we capture non-potable water from our ink blending process and use it as flush water for the 19 toilets in one building. Through this process, we reuse 900 gallons of water per day. The company also has low-flow toilets and maintains an extremely conservative summer landscape irrigation program made possible by a switch to native vegetation instead of high-water-needs-plants and flowers.



# EMPLOYEE PARTICIPATION

We believe in environmental conservation at the individual level, so we provide a variety of opportunities to employees and community members. Additionally, Epson's Portland Operations also make monetary donations to local non-profit organizations with an environmental focus. The local organizations we support include Columbia Land Trust, Lower Columbia Estuary Partnership, Jackson Bottom Wetlands, and Friends of Trees.

## Tree Planting



We maintain a long-term partnership with local non-profit Friends of Trees and sponsored 2 local tree planting events in FY18.

Employees and community members came together with Friends of Trees at these events to help plant more than 4,700 native trees, shrubs, sedges, and rushes during the 2018 planting season.

## Road Warriors Highway Clean-Up

Employee volunteers clean up litter through ODOT's Adopt-a-Highway program along our adopted section of Highway 26 at least twice each year. Each employee participant volunteered 2 hours per event.



## Campus Clean-Up

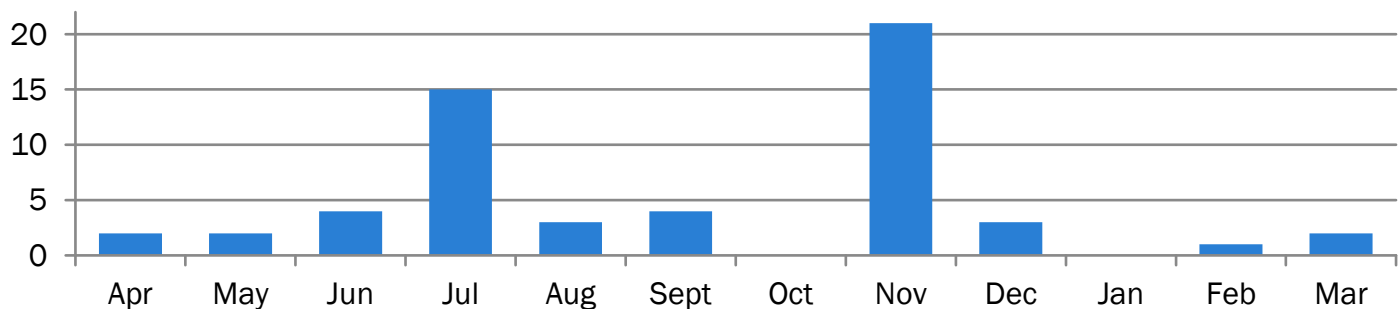


We encourage employees to participate in several campus clean-up events scheduled throughout the year. Employees are provided with supplies to pick up trash around the campus.

## Environmental E-Kaizens

We encourage employee involvement and promote continual improvement through the E-Kaizen Continual Improvement Program (“E-Kaizen”). Once an environmental improvement is implemented, an E-Kaizen may be submitted through the online E-Kaizen system.

**E-Kaizen Monthly Results**  
FY2018



## Earth Day Recycling



We create opportunities for employees to recycle those hard-to-dispose of items like electronics, secure documents, batteries, and Styrofoam. In FY18, we collected 600 lbs. of confidential paper for shredding, 1812 lbs. of electronics, 170 lbs. of batteries, and 120 lbs. of Styrofoam. Additionally, we partner with Metro, the Portland Metropolitan Area’s regional government, to host a household hazardous waste collection event for all community members.

## Sustainability Fair

To further engage employees, we create the opportunity once each year for local organizations to come onsite and share ways to live a more sustainable lifestyle. During this event, employees can get information about ways to minimize their environmental impact outside of work.





# FULFIL COMPLIANCE OBLIGATIONS

## Regulatory Status Category

- Conditionally Exempt Small Quantity Generator

## Regulatory Reports

- DEQ NPDES Cooling Tower Report
- DEQ Recovered Materials Report
- State Fire Marshal Report
- SWIS Metro Report
- EPA TRI Report
- EPA TSCA Report
- Waste Water Report

## Site Permits and Licenses

- Department of Emissions Quality NPDES Waste Discharge (Permit #100-J)
- Conditional No Exposure Exemption (Longview CNE #CNE303287)
- State Waste Discharge (Longview Permit #ST6185)
- Clean Water Services Industrial Wastewater Discharge (Permit #133072)
- Metro Solid Waste Non-System (License #N-028-17)
- Department of Emissions Quality NPDES Storm Water Discharge (Permit #1200-Z)

## Sustainable Purchasing

Epson Portland Operations maintains a strong green purchasing program, maintained through vendor surveys and audits to verify that products and methods of production are environmentally friendly.

## About ISO 14001

The ISO 14001 standard sets criteria and provides a framework for an Environmental Management System (EMS) that can be adopted by any organization. By using ISO 14001, Epson's Portland Operations demonstrates a commitment to measuring and improving our environmental impact.

This site established its EMS in 1998 in accordance with the requirements of ISO 14001, and was the fifth company in Oregon at the time to achieve such status.

The company participates in regular internal audits and annual external audits and has maintained its certification without interruption since 1998.

# COMMUNICATIONS

We are proud of our sustainable business practices and make every effort to communicate them, as appropriate, through: Internal Communications, Public Outreach, Community Engagement, and this Annual Environmental Sustainability Report.

## Green Business Leader

Epson's Portland Operations maintains the Washington County Green Business Leaders Gold Award, an award designed to recognize an organization's efforts in sustainable materials management, toxics reduction, employee and community engagement, and supporting actions like conserving water and energy.



## Independent Auditor's Report

Epson Portland Operation's Environmental Management System (EMS) surveillance and transition audit was conducted in August 2018 by Bureau Veritas Certification to upgrade the ISO 14001:2008 to 14001:2015. There were no non-conformances found during the audit. Based on the evidence verified and the findings of the audit, the EMS is maintained and is in conformance with the requirements of the ISO 14001:2015.

The Management System Review consists of an annual executive management strategic review by senior management, an annual review by the EHS committee as well as a monthly overview by leadership at and above the Assistant Manager level. All reviews were completed in FY2018. In addition, Epson conducts monthly focus audits to ensure the adequacy of policies, procedures, and actions that support cleanliness, safety, and the environmental considerations at the plant. These audits are done by members of the EHS committee as well as management representatives. Twice a year, the subject matter of the audits is environmental, and each time, any concerns noted are communicated to the appropriate person and action is taken to make corrections.

# ABOUT EPSON'S PORTLAND OPERATIONS

Based in Hillsboro, Ore., with a satellite office in Longview, Wash., Epson's Portland Operations are the United States manufacturing subsidiary and logistics center for the Epson brand. We move ink cartridges from concept to completion using Epson robotics, including precision injection molding of proprietary plastic parts and manufacture of Genuine Epson Ink. Our finished cartridges are packed into retail boxes onsite and prepared for distribution.

At our Longview, Wash., location, we manufacture synthetic quartz crystals for Epson's Micro-Device Division. The quartz is used in electronic products manufactured by Epson affiliates around the world.

Led by the Japan-based Seiko Epson Corporation, the worldwide Epson Group generates annual sales of more than JPY 1 trillion. Learn more at [global.epson.com](https://global.epson.com), [epson.com](https://epson.com), and