2001 Green Permit Annual Report

EPSON Portland Inc.

Hillsboro, Oregon

Epson Portland Inc. (EPI) received our Green Permit on November 9, 2001. In accordance with the requirements of the green permit, EPI continued to improve our environmental performance and achieved results that are beyond compliance. The report summarizes FY2002 plans, FY2001 environmental improvement activities, environmental compliance, and stakeholder activities.

Site History

Located in Hillsboro, Oregon, EPI is the sole U.S. manufacturing affiliate of Japan's Seiko Epson Corporation (SEC). SEC decided to begin manufacturing printers in the United States to support Epson America, Inc., SEC's U.S. sales and marketing subsidiary (NAICS code 325910). Now embarking upon its 15th year in operation, EPI currently manufactures various models of EPSON ink cartridges. EPI also performs, plastic injection molding, optical engine refurbishing, media development, and development engineering.

1985 Incorporated as EPI and began original construction
1986 Printer & Circuit Board assembly began
1987 Print Head manufacture commenced
1988 Original factory expanded and plastic injection molding capacity added
1993 ISO 9002 certified
1996 Second factory building completed
1997 First clean room added
1998 ISO 14001 certified
1999 Second clean room added
2000 Contract manufacturing begun

2001 Printer and contract manufacturing and all related departments discontinued

300 employees, current payroll exceeds $13 million.
More than $75 million invested in facilities, equipment and 38 acres of land.

Site Description

Phase 1 & 2 building

Manufacturing in this building consists of Ink Cartridge Plastic Injection Molding, Ink Cartridge Assembly, Ink Cartridge Packaging, Optical Engine Repair and Development Engineering. Support departments include engineering, sales & logistics, purchasing, production planning, information systems, human resources, quality assurance and administrative offices, and warehouse areas.

Phase 3 building

A two story building that has now been closed and is for sale/lease.

On its 38 acres of land, EPI has two buildings and four parking lots.

Regulatory Status Category

Phase 1& 2
3950 NW Aloclek Place
Small Quantity Generator
EPA ID# ORD151160934

CWS - Industrial Wastewater Discharge Permit
Permit Number 133072

DEQ - National Pollutant Discharge Elimination System Waste Discharge Permit
Permit Number 100-J
File Number 103448

DEQ - National Pollutant Discharge Elimination System Storm Water Discharge Permit
Permit Number 1200-Z
File Number 103448

METRO - Solid Waste Non-System License (for waste-to-energy)
License Number N-028-00

State Fire Marshal Hazardous Substance reporter

DEQ Green Environmental Management System Achiever Permit

ORS 468.020

Permit No.: GP003

Expiration Date 5-1-2010

Oregon's Voluntary Clean-up programs
DOT Road clean up (Road Warriors)

Community Involvement
Bike to work month
United Way Day of Caring
Earth Day activities
S.O.L.V. Oregon beach clean up
Clean Air Action days
Monetary Donations
EPI Environmental Month (November)
Jackson Bottom Wetland Reserve

Regulated under TSCA
Imports and Exports reporting

Environmental Management System

EPI takes its commitment to protecting the environment seriously. One of the many steps it has taken to meet its goal of being as "green" as possible is the establishment of an Environmental Management System (EMS) that conforms to the requirements of ISO 14001. Certification was completed in June 1998, making it one of only four companies in Oregon at that time to achieve such status.

As a member of the Seiko Epson Group, Epson Portland Inc. shall fulfill its social obligation as a good corporate citizen, striving to achieve a harmonious balance between its business activities and the global environment by actively taking steps to use resources efficiently and prevent pollution.

Epson Portland has established policies based on the Environmental Philosophy and pledges to carry them out with full participation. EPI will use these policy statements as a benchmark to gage current and future activities and to determine corporate environmental objectives and targets, including identifying significant aspects, when appropriate. These will be reviewed by EPI senior management annually.

Epson Portland will:

Utilize Environmentally Sound Processes.
Environmentally sound manufacturing processes will be used to create equally environmentally sound products.

Prevent Pollution.
Pollution will be prevented by defining, monitoring and raising the environmental control level through continuous improvement of our manufacturing processes.

Contribute to the Environment.
Support of environmental efforts will be given at both the local and international levels.

Provide Employee Volunteer Programs.
Various employee volunteer programs will be supported, such as: "Road Warriors" our highway clean-up program and annual Earth Day activities.

Comply with Regulatory Requirements.
Applicable legislative and regulatory requirements will be complied with and/or exceeded with a goal of minimizing the impact on the surrounding environment.

Conform to ISO 14001 Requirements.
An Environmental Management System that conforms to the requirements of ISO 14001 will be established and maintained.

Communicate its Environmental Commitment.
The environmental commitment of the company will be communicated through ongoing public outreach and a published Annual Environmental Report.

Epson Portland Inc.'s Environmental Management System (EMS) is intended to be a guide for establishing, maintaining, and improving EPI's environmental activities. Environmental planning procedures describe an integrated process of identifying environmental aspects, ranking and selecting them to determine significance, developing objectives and targets, and developing environmental programs which support our goals of increasing EPI's environmental stewardship (reducing the use of water and electricity, reducing the amount of solid, waste, reducing volatile air emissions and hazardous waste, and increasing reuse, recycling, and employee involvement).

In determining objectives and targets, EPI bases its decisions on the following: United States regulatory requirements, Seiko Epson Corporation requirements, requirements from top management, EPI's significant environmental impacts, and views of interested parties. All information is funneled to the environmental committee (with members representing each department at EPI) and recommendations are drafted and forwarded to top management for approval. Once the environmental committee, environmental committee chairperson, and top management approve objectives & targets, the environmental & safety engineer drafts work instructions for each objective & target detailing each task, responsible person(s), due dates, and critical milestones, if needed.

EPI's environmental aspect and impact analysis is completed at least annually. Each department goes through an extensive aspect analysis considering all items going into and coming out of their department. Impacts are categorized in 12 areas: air pollution, water pollution (sanitary), water pollution (outside), land contamination, utilities consumption, non-renewable resource, nuisance (noise, light, smell, etc.), non-hazardous solid waste to landfill, hazardous waste,
Regulatory compliance, communication and other.

Based on EPI's EMS, these are the FY 2002 Significant Aspects

	Significant Aspects	Negative Environmental Impacts	Department
1 5	Material purchases	All Impacts	Office
2 5	General Purchasing	All Impacts	EITC
3 5	General Purchasing	All Impacts	Warehouse
4 5	Receiving	Water Pollution/Consumption of Utilities	Warehouse
5 5	Shipping	Water Pollution/Consumption of Utilities	Warehouse
6 5	General Purchasing	All Impacts	Manufacturing
7 5	Engineering notices	All Impacts	Manufacturing
8 5	Janitorial	Water Pollution / Solid waste	Manufacturing
9 5	Ink Cart. Water Treatment Room	Water Pollution (sanitary)	Facilities

10	5	Parking Lots	Water Pollution (outside) Consumption of Utilities	Facilities
11	5	Construction on and off the property	All Impacts	Facilities
12	4	Engineering notices	All Impacts	Office
13	4	Battery charging area	Regulatory Compliance	Warehouse
14	4	General lighting	Consumption of Utilities	Manufacturing
15	4	General office areas	Consumption of Utilities	Manufacturing
16	4	Ink disposal	Water Pollution Sanitary	Manufacturing
17	4	Energy conservation efforts	Consumption of Utilities	Facilities
18	4	Storm water discharge drains	Water Pollution (outside)	Facilities
19	3	General Office Lighting	Consumption of Utilities	Office
20	3	Chemical purchases	All Impacts	Office
21	3	Plastic (resins)	Water Pollution Outside	Manufacturing
22	3	Storage Area Phase II	Water Pollution (sanitary / outside)	Facilities
23	3	Roof top of buildings	Water Pollution (outside)	Facilities
24	2	Office Equipment	Consumption of Utilities	Office
25	2	Supplier selection	All Impacts	Office
26	2	Printer test area	Consumption of Utilities	Engineering Lab
27	2	Print Media Lab	Consumption of Utilities	Engineering Lab
28	2	Engineering Lab	Consumption of Utilities	Engineering Lab
29	2	PC Lab	Consumption of Utilities	Engineering Lab
30	2	QA lab	Consumption of Utilities	EITC
31	2	Network lab	Consumption of Utilities	EITC
32	2	Telco lab	Consumption of Utilities	EITC
33	2	Hardware lab	Consumption of Utilities	EITC
34	2	Project lab	Consumption of Utilities	EITC
35	2	Downstairs QA lab	Consumption of Utilities	EITC
36	2	Hardwall office areas	Consumption of Utilities	EITC
37	2	Open office areas	Consumption of Utilities	EITC
38	2	Kitchen	Consumption of Utilities	EITC
39	2	Supply/copy room	Consumption of Utilities	EITC
40	2	Warehouse	Consumption of Utilities	EITC
41	2	Office area	Consumption of Utilities	Warehouse
42	2	Stocking	Consumption of Utilities	Warehouse
43	2	Down stroke bailer	Consumption of Utilities	Warehouse
44	2	Vacuum Pump Room	Consumption of Utilities	Facilities

Environmental Management Systems
Objectives & Targets
FY 2002

Regulatory Compliance
Maintain 100% compliance with DEQ green permit
Maintain 100% compliance with EPA performance track

ISO 14001 Requirements
Maintain 100% ISO 14001 certification

Reduce Solid Waste
Maintain an average 60% diversion rate
Reduce total waste by 8% (baseline FY01) and/or 80% (baseline FY97)
Maintain 100% waste to energy

Reduce Air Emissions
Continue to monitor 100% of manufacturing and maintenance chemical usage

Sharing Environmental Information
Generate one annual environmental report by May of each year
Promote Environmental Activities

Promote Green Purchasing
20% of general purchases (Office & Janitorial supplies) be environmentally green products
100% of production purchases be environmentally green products

Reduce Total Energy Consumption
Reduce electrical usage by 5% (baseline FY01) and/or 25% (baseline FY97)
Reduce natural gas usage by 5% (baseline FY01) and/or 25% (baseline FY97)
Reduce water usage by 5% (baseline FY01) and/or 25% (baseline FY97)

Environmental Performance FY2001

The registration assessment audit was conducted in April 2001 by BVQI. We received a recommendation for continued registration with no major non-conformances. EPI 's Quality Assurance department audits every department every six months in all of the ISO 14001 elements. In FY2001 there was fifteen internal and two external non-conformances. Some examples of the non-conformances are chemical container not labeled, No work instruction for significant impact, employee not knowing evacuation procedure, EMS documentation does not clearly define how these monitoring and measurement requirements are being fulfilled. All of the non-conformances have been closed.

EPI's Management Reviews consist of one annual executive management strategic review by top management, two bi-annual executive management tactical review by top management, four quarterly EMS reviews by the Environmental & safety committee. All reviews were completed in FY2001. EPI's EMS was considered suitable, adequate, and effective.

Meeting FY2001 Objective and Targets

Accomplishments and Deficiencies
Exceed Regulatory Compliance

Storm water - DEQ noted a stormwater permit deficiency for the reporting year 2000 - 2001, only one of two event water samples were taken. EPI immediately generated a corrective action/preventive action request (CAR) form CAR01006 within their EMS. The corrective action generated a technical assistance visit by Clean Water Services (CWS). CWS conducted a technical assistance site evaluation and assisted EPI in producing a good management plan. Engineering controls and best management practices have been integrated to create and effective storm water management plan.

Analysis Reports:

	PH	Oil & Grease	TSS	Copper	Lead	Zinc
None Detected (ND) limit		2ppm	2ppm	0.01ppm	0.01ppm	0.01ppm
8/22/01						
#1	5.38	ND	4	ND	ND	0.06
#2	5.52	ND	4	ND	ND	0.13
#3	5.84	ND	13	ND	ND	0.06
#4	5.47	ND	ND	ND	ND	0.05
#5	5.25	ND	5	ND	ND	0.03
Creek*	6.18	ND	19	ND	ND	0.05
#7	5.21	ND	4	ND	ND	0.03
#8	6.11	ND	2	ND	ND	0.04
10/30/01						
#1	6.03	ND	ND	ND	ND	0.05
#2	6.02	ND	3	ND	ND	0.03
#3	5.89	ND	ND	ND	ND	0.03
Creek*	6.37	3	13	ND	ND	0.02
1/31/02						
#1	6.62	ND	3	ND	ND	0.06
#2	6.43	ND	3	ND	ND	0.04
#3	6.24	ND	ND	ND	ND	0.04
Creek*	6.50	3	62	ND	ND	0.07

- Note: Creek* sample are water sample taken up stream of EPI discharges.

Monthly visual inspections completed with no issues. Inspections includes:

1. Floating solids in creek from manufacturing
2. Oil and grease sheen in creek
3. Oil and grease sheen in parking lot
4. Catch basins in parking lot
5. Trash in parking lot
6. Overall cleanliness
7. Roof top inspection

Inspection results

	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
#1	None	None	None	None	None	None	None	None	None	None	None	None
#2	None	None	None	None	None	None	None	None	None	None	None	None
#3	None	None	None	None	Some	None	None	None	Little	Little	None	None
#4	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good
#5	None	None	Some	Some	None	None	Good	Some	Some	Good	None	None
#6	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good
#7	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good

Storm drains pumped out and cleaned April 2002.

NPDES 100-J - 103448 Non-Contact cooling water discharge permit had no issues.

Analysis Report

	12/2001	1/2002	2/2002	3/2002
Effluent flow	.003428	.002455	.003203	.003541
Temperature	68^0F	74^oF	78^0F	78^0F
Total chlorine	0	0	0	0
Flow X Temp.	0.233104	0.18167	0.249834	0.276198
pH	8.70	8.46	8.63	8.60

CWS Industrial Wastewater Discharge Permit 133072 had one issue in March 2002. The February report was 2 days late. Non-conformance E214 was issued against ISO 14001 element 4.4.6. Root cause was too many departments had responsibility for information and report. Corrective action, now one department is responsible for the monthly report.

Maintain below 220 pounds of hazardous waste at EPI.
EPI did not meet this target. Due to the closer of printer production there was excess chemicals for disposal.

Maintain a 90% diversion rate (recycling to waste energy)
EPI did not meet this target. EPI Averaged 85% diversion rate

Reduce VOC's by 97% in manufacturing and maintenance areas (baseline 1997)
EPI reduced VOC's by 99%

Promote employee commute alternative transportation
EPI started a carpooling program however at this time it has been discontinued.

Generate annual environmental report
EPI has 1999 - 2000 information on web site.
Promote environmental activities to stakeholders
Open house was not offered in 2001 due to the shut down of printer and contract manufacturing

Support Seiko & Epson affiliates
EPI is the chairperson of US Epson Environmental Committee

5% percent of total purchases be environmentally green products.
EPI did not complete green-purchasing guidelines to accurately get a reliable percentage rate.

Continue to distribute and track surveys to all domestic vendors and suppliers.
EPI completed distribution of all surveys

Electricity = EPI has reduced electrical consumption by 9.2%

Natural Gas = EPI has reduced gas consumption by 60%

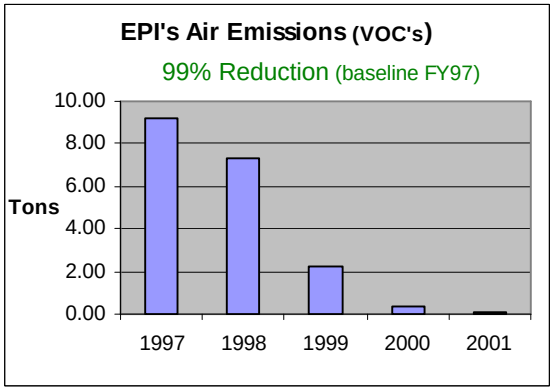
Water = EPI has reduced water consumption by 7.3%

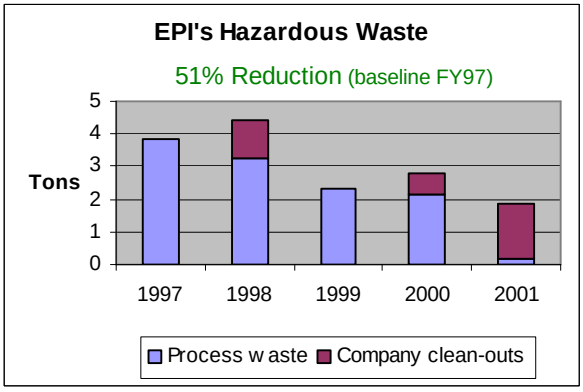
EPI has reduced use of toxic and hazardous materials by 51%.
EPI has reduced total solid waste by 73%.

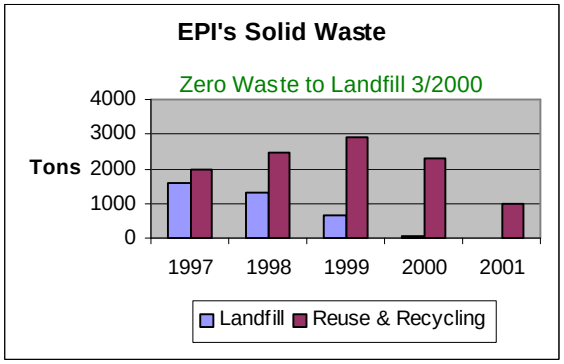
All solid waste goes to a waste to energy facility

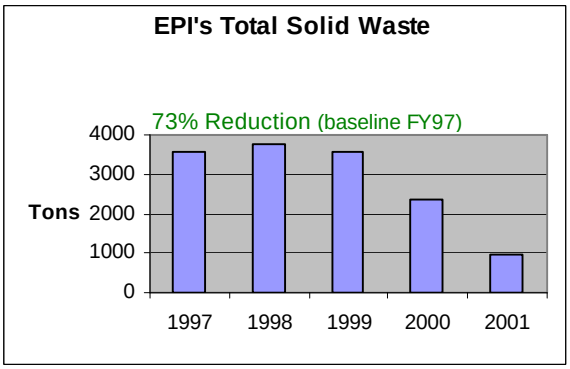
EPI FY2001 solid waste total tons produced 88 mWh of energy, saved 234 barrels of oil and saved 675 cubic yards of landfill space.

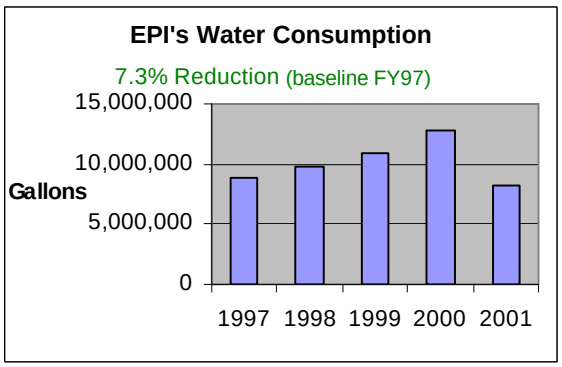
EPI has reduced air emissions (VOCs) by 99%.

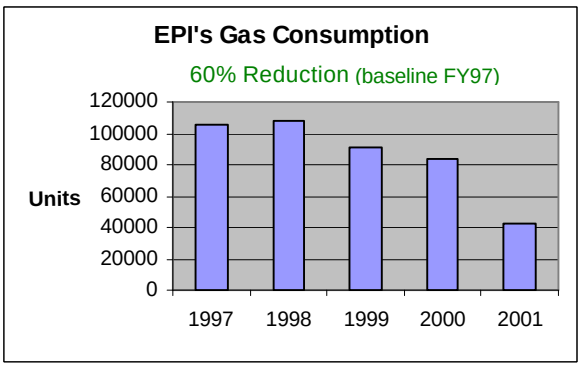


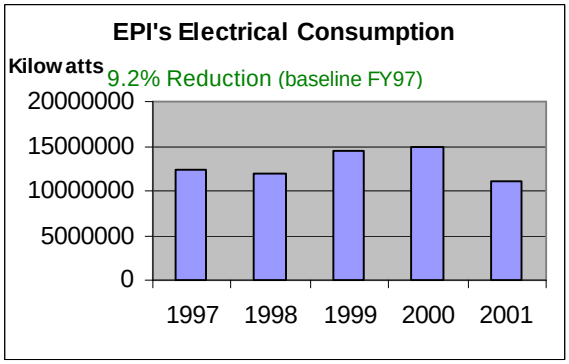












Environmental Activities (FY2001)

A variety of proactive efforts play a big part in the continuing success of Epson Portland Inc.'s (EPI's) Environmental Management System (EMS). For instance, EPI has worked hard to keep 100% of its waste out of the landfill first by preventing it at the source, then by finding alternative uses for the waste the company can't prevent. Plastic film waste is sent to Trex where it is combined with wood-waste and turned into decking products. In 2001 alone, more than 1.5 million pounds of plastic, metal and paper were recycled, saving the company over $80,000.

The remaining waste which cannot be recycled or re-used (approximately 18%) is then sent to Covanta Waste Treatment Services in Brooks, OR. At Covanta Energy, waste is incinerated and used to create electricity, some of which is then sold to PGE.

Not only does the company, through reuse and recycling, contribute to the production of "green products", but its affirmative procurement program also makes it a priority to purchase products that have been made from recycled materials or are environmentally safe.

Promoting environmental awareness among its employees is another way EPI stays ahead. Although pollution prevention is stressed all through the year, a company-sponsored Earth Day is held annually in April; plus each June is designated as. Environmental Month, during which time the company offer an open house for all outside stakeholders and places a special emphasis on educating its employees on the importance of environmental stewardship. Crossword puzzles, word searches and trivia

questions, such as "What kinds of plastics does EPI recycle?" are included in the company's internal newsletter. The names of those who answer correctly are included in a drawing for free movie tickets and other prizes. Guest speakers are invited to show examples and explain the process of making the products that are created out of EPI's waste products.

Epson Portland recognizes the importance of helping the community and supports many environmental activities and organizations, including the Tualatin River Watershed Council, Tualatin River keepers, Friends of Trees, The Great Oregon Beach Clean-up organized by SOLV (Stop Oregon Litter and Vandalism) and the Jackson Bottom Wetlands Preserve, by providing volunteer workers and/or financial contributions.

Finding markets for recyclables, buying "green" products, raising employees' environmental awareness and volunteering in the community are but a few of the things that make Epson one of Portland's most impressive environmental stewards.

EPI will continue to work with DEQ and the GEMS permit program to demonstrate industry leadership and work toward Tier 3 by applying sustainable development principles to the Environmental life cycle aspects of our activities, products, and services.

BEST (Businesses for an Environmentally Sustainable Tomorrow)
Award won for waste reduction and recycling, April 2000. BRAG (Business Recycling Awards Group) Distinguished member since 1997.
SEC (Seiko Epson Corporation) Level 3 Environmental Prize winner for FY2001 and Environmental Management Award which only 2 companies in the SEC group achieved.

Stakeholder Involvement Plan

Epson Portland Inc. will communicate to stakeholders through its web page at www.epi.epson.com and also via its environmental community outreach activities throughout the year.

Though not a publicly-held company, nor one that has much contact with community members on a day-to-day basis (virtually no sales transactions take place at this location), Epson Portland (EPI) nonetheless conducts itself as a model corporate citizen, and therefore is continually mindful of the impact of its actions on the surrounding environment and community.

In 1989, EPI voluntarily discontinued the use of all Chlorofluorocarbons (CFCs) in its manufacturing processes, an act that won the company an EPA Stratospheric Ozone Protection Award in 1997. We have also participated in several other EPA-sponsored programs, including the Green Lights Program and the Energy Star Program. Most recently, EPI was recognized as being the first Charter Member accepted to the EPA's newest program: the National Environmental Performance Track. Also DEQ Green Permit program which at this time only 3 companies participate.

EPI is an ISO 14001 certified company, and as such has a complete Environmental Management System (EMS) in place.

As a company, we have involved ourselves in several community-based environmental activities, including: the Oregon Department of Transportation's "Adopt-a-Highway" program, Earth Day, the DEQ Clean Air Action Day program and SOLV's Great Oregon

Beach Clean Up. We have also committed to a five-year partnership with the Jackson Bottom Wetlands preserve.

In addition, EPI's goal is to donate 30% of the money it allocates for corporate contributions each year to environmental causes. These donations have gone to organizations ranging from SOLV to Friends of Trees to the Tualatin River Watershed Council. EPI has also been a sponsor of an Oregon Environmental Council seminar on persistent biological toxins, and in November 2000 / 2001 was a major sponsor for the Northwest Environmental Conference & Tradeshow.

EPI is a member of the Seiko Epson environmental committee and heads the U.S. Epson environmental committee. We have also participated on the WRAIN (Waste Reduction Action Information Network) committee which brings together representatives from over 35 local companies to brainstorm ideas for reducing waste since 1998.

EPI has hosted the following events which were open to the public: Metro Recycling group's annual compost bin sale (1999 / 2000 / 2001); Washington County Cooperative Recycling Program's (WCCRP) computer collection event (2000 / 2001); and a panel discussion on waste reduction and recycling (2000 / 2001). In addition, we hosted a group from the U.S. Department of Energy for a discussion of EPI's environmental activities and a plant tour (2000).

For its employees, EPI instituted a carpool incentive program and hosted a household hazardous waste collection event in June 2001. Also, in the bi-weekly employee newsletter, the *Insider*, over 74% of the issues contains articles pertaining to the environment.

In March of 2000, we began sending all waste which was not reused or recycled to Covanta, Inc. in Brooks, Oregon. There, the waste is incinerated and converted into renewable energy. Keeping waste out of our local landfill is a definite benefit to the community. This achievement was probably the single most important step which led to the company receiving a string of environmental recognitions and awards in 2000, including: the BEST (Businesses for an Environmentally Sustainable Tomorrow) award; the BRAG (Business Recycling Awards Group) award; and the Seiko Epson Corporation's (SEC) Environmental Grand Prize. FY2001 Seiko Epson Corporation's Level 3 Environmental Award and their Environmental Management Award which only two companies in the Seiko Epson group achieved.

Because of our efforts, EPI has been profiled in the Hillsboro Argus newspaper, the U.S. DOE newsletter, and WCCRP publications.

As you can see, EPI has begun posting its environmental report on its external website: www.epi.epson.com. This allows the public access to all of our performance indicators. And of course, the company always welcomes public inquiries into its environmental programs and policies.

Task	**Completion Date**
Elimination of CFCs	1989
Green Lights & Energy Star Program	mid-1990's

Stratospheric Ozone Protection Award	1997
ISO 14001 Certified	1998
Sponsor of OEC seminar	1999
All waste diverted from local landfill	March 2000
BEST Award	April 2000
BRAG Award	May 2000
Seiko Epson Environmental Prize	June 2000 / 2001
First Charter Member in EPA's National Environmental Performance Track	Fall 2000
Oregon DEQ Green Permit	Fall 2000 / 2001
Green Permit notifications sent out	Fall 2000
Hosted US Dept. of Energy group	Fall 2000
Computer collection event	Fall 2000 / 2001
Environmental panel discussion	November 2000 / 2001
Major sponsor of NWEC	November 2000 / 2001
Feature article in DOE newsletter	Fall 2000
WCCRP ad	Fall 2000
Hillsboro Argus article	December 2000

Task	**Timeframe**
Insider articles on environmental topics	Since 1988
Adopt-a-Highway program	Since 1992
United Way Day of Caring (usually includes environmental tasks for charities)	Since 1993
EPI Earth Day	Since 1995
Clean Air Action Day program	Since 1996
Bike to Work Month participation	Since 1996
Jackson Bottom Wetlands	Since 1998
WRAIN committee participation	Since 1998
Great Oregon Beach Clean Up	Since 1999
Compost Bin Sale host	Since 1999
Carpool Incentive Program	Since 2000
Post Environmental Report on Web	2001
SEC Environmental Committee	Ongoing
US Epson Environmental Committee	Ongoing

Thus far, the stakeholder interest has been in sharing information on how Epson Portland Inc. has accomplished some of its environmental achievements. Outside stakeholders have not yet expressed concerns or provided suggestions regarding Epson Portland Inc.'s environmental activities. Epson Portland Inc. will continue to solicit public input through planned activities listed above, open house in June, and through its website. Epson Portland Inc. will generate an annual environmental report that will be available on its website at www.epi.epson.com.