



*Washington State Department of Printing*

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# **2006 SUSTAINABILITY PROGRESS REPORT**

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October 2006

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## POLICY STATEMENT

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Sustainability can be defined simply as the application of the Golden Rule from generation to generation. Sustainable organizations use, develop, and protect resources in a way that meets current needs without sacrificing the requirements of future generations. As the demands on our natural resources increase, agencies must implement sustainable practices to safeguard the environmental health, economic growth, and quality of life of Washington's citizens.

The Department of Printing (PRT) has long been committed to environmentally responsible printing, with a strong tradition of recycling, pollution prevention, and socially responsible purchasing. The agency is dedicated to the continued use of sustainable practices to protect the health and safety of customers, employees and the surrounding community, to ensure excellent product quality, and to provide new opportunities for economic success.

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## THE PRT SUSTAINABILITY TEAM

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To guide and support sustainability at the Department of Printing, a team of PRT employees representing all work sections meets monthly to discuss progress toward Sustainability Plan goals and share ideas about future initiatives. The following employees served on the Department of Printing Sustainability Team during the time covered in this progress report:

### *Current team members:*

- Laura Kirschner, *Interim Sustainability Coordinator/Employee Services*
- Lynley Berry, *Facilities*
- Steve Freymond, *Information Technology*
- Kathy Forbes, *Executive Team*
- Oliver Hurd, *Purchasing*
- Eric Long, *Copy Centers*
- Cindy Schultz, *Customer Service*
- Dan Smith, *Production (Prepress, Press, Bindery and Mail)*

### *Additional team members for 2006 Fiscal Year:*

- Cynthia Bennett, *Employee Services*
- Mel Caldwell, *Plant Manager*
- Jason Bippert, *Customer Service*
- Dan Maygra, *Prepress*
- Jeannie Simpson, *Print Buying*

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## CONTACT INFORMATION

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If you have any questions or comments about this report or sustainability efforts at the Department of Printing, please contact our Sustainability Coordinator, Laura Kirschner, at the following address.

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## EXECUTIVE SUMMARY

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Overall, the Department of Printing made progress toward achieving the agency's sustainability goals. The Director is firmly committed to making the Department of Printing a sustainable organization, and many managers participate on the Sustainability Team.

However, the agency continues to struggle with the challenge of balancing sustainability initiatives with production schedules, employee workloads, technology limitations, and cost efficiencies. For example, it remains a challenge to purchase paper with a high percentage of post-consumer recycled fiber without increasing the cost of printing for the state because, overall, virgin white paper costs six to eight percent less than comparable recycled stock.

### Progress toward Long-term Goals

The Department of Printing Sustainability Plan set long-term goals for reducing energy and water use, decreasing hazardous waste, and switching to clean energy sources. During the past year, PRT has improved its ability to measure progress toward these goals by gathering reliable baseline data and implementing processes to ensure accurate measurements for the future. Although the agency remains committed to achieving long-term sustainability goals, the unique nature of the Department of Printing as a manufacturing facility makes it difficult to make significant reductions in energy and water use. As demand for the agency's services increases, more energy and water must be used to operate production equipment to provide the printing, copying, and mailing services required.

The following table shows progress toward long-term goals at the time this progress report was written. Additional details are given in the "Reporting on Goals and Objectives" section on page 5.

Goal	Achieved	Making Progress	Delayed
Replace at least half of diesel-powered delivery vehicles with hybrid or alternative-fuel vehicles by 2015.		*	
Reduce hazardous waste by 20% over FY 2003 levels by July 2010.		*	
Purchase at least 10% of energy from clean, renewable resources by July 2010.			*
Switch all existing diesel-powered vehicles in the PRT fleet to B20 biodiesel fuel by July 2009.		*	
Reduce water use by 5% by July 2007.		*	
Reduce energy use by 5% by July 2007.		*	

### Progress toward Short-term Objectives

In addition to long-term goals, the Department of Printing has set short-term objectives for every department in the agency. The agency hopes to implement most of these short-term objectives within a biennium, but realizes that business needs and the availability of time and staffing resources may delay some of the completion times.

The following table shows progress toward these objectives at the time this progress report was written.

<b>Objective</b>	<b>Achieved</b>	<b>Making Progress</b>	<b>Delayed</b>
Include sustainability goals in all future agency strategic plans.		*	
Create a process to collect employee suggestions for improving sustainable practices throughout the agency.			*
Support a Sustainable Practices Team composed of employees from every department to discuss opportunities, assess progress toward achieving goals, and make recommendations for future actions.	*		
Include sustainable practices in the new-employee orientation information on the agency intranet.		*	
Post annual updates on progress toward achieving sustainability and pollution prevention goals on the agency intranet.		*	
Provide online sustainability information, training opportunities, and links on the agency intranet.		*	
Recommend that all individual employee training plans include classes about sustainability.		*	
Expand and update information about PRT's environmentally responsible production processes for the agency's Web site.	*		
Encourage supervisors and managers to include sustainability information in weekly staff meetings.		*	
Include sustainability information in all Safety Team meetings.	*		
Establish baseline energy and water usage levels.	*		
Reduce energy demands by purchasing Energy Star-certified computers, small appliances, and office equipment.	*		
Switch to Computer to Plate (CtP) printing to reduce the use of film and processing solutions.	*		
Use electronic communication and online ordering to reduce the amount of office paper used.		*	
Encourage carpooling, use of mass transit, and other strategies to reduce the amount of pollution produced by employees traveling to and from work.		*	
Initiate a vehicle maintenance program to reduce oil leaks and other sources of pollution, and ensure all agency-owned vehicles perform with the highest fuel efficiency possible.		*	
<b>Objective</b>	<b>Achieved</b>	<b>Making Progress</b>	<b>Delayed</b>
Switch to a low-emission press wash solution.	*		
Use ink sludge and pressroom waste to create energy.	*		
Use UV curing on the web press to reduce the amount of VOCs produced during the printing process.	*		

Return all boxes received with ink shipments for re-use by the vendor.	*		
The Department of Printing will lead a taskforce including the Department of General Administration, the Department of Information Services, and other interested agencies to recommend efficiency improvements for the management of printers and copiers in state agencies.	*		
Recycle or donate all used computer equipment to keep toxic waste out of landfills.	*		
Increase employee recycling of glass, aluminum, plastic, and cardboard.		*	
Continue to use only Process Chlorine Free (PCF) paper with the highest possible post-consumer recycled fiber content for in-house stock and office paper.	*		
Purchase only remanufactured toner cartridges for all copiers and printers, and recycle all used cartridges.			*
Ensure all new and replacement furniture is constructed of non-toxic, renewable materials, using refinished or surplus furniture whenever possible.		*	
Shift purchasing of office supplies to use items that are recyclable and made from recycled materials.		*	
Seek out vendors who use sustainable processes and production materials when bidding jobs to private printers and binderies.		*	
Purchase supplies and equipment that support sustainability goals.		*	
Establish a system for monitoring and tracking waste produced in all production areas to find opportunities for further reduction.		*	
Print two-sided documents whenever possible.	*		

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## REPORTING ON GOALS AND OBJECTIVES

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The Department of Printing believes sustainability is essential for the continued health and vitality of Washington State. In support of this commitment, the agency has set the following goals and objectives for expanding environmentally responsible practices in every area of operation.

### Long-term Goals

***Goal: Replace at least half of gasoline or diesel-powered delivery vehicles with hybrid or alternative-fuel vehicles by 2015.***

The Department of Printing has replaced all but one diesel-powered delivery vehicles with gasoline-powered models since 2005. The new delivery vehicles represent a small step forward in agency sustainability efforts because they offer higher gas mileage and produce fewer emissions than the diesel models they replaced. The new vehicles also reduce the amount of pollution produced by oil and other fluid leaks.

The agency investigated switching all diesel-powered PRT delivery vehicles to biodiesel in 2004. However, the low availability and high cost of biodiesel fuel made it impractical to proceed with biodiesel at that time. There has been little change to availability and cost that improves the practicality of such action at this time. The agency will continue to review the feasibility of hybrid or alternative-fuel vehicles as more models become available and alternative fuels become more cost effective.

***Goal: Reduce hazardous waste by 10% by 2010.***

By switching from standard methods of making printing plates that rely on film and processing solutions to digital Computer-to-Plate methods that use thermal imaging, the Department of Printing has eliminated need to purchase and dispose of film and processing solutions. This has reduced the amount of hazardous waste produced in the prepress and plate-making areas by approximately 90 percent.

In 2006, the agency completed its work with the Department of Ecology to determine the requirements for a Pollution Prevention Plan. After the process of designating all waste within the Department of Printing, the Agency was determined and classified as a Small Waste Generator. PRT submits a Progress Report each year in September. Because PRT falls below the designated thresholds it will not be required to submit a Pollution Prevention Plan until it exceeds those thresholds.

During this reporting period, the Department of Printing generated 2569 lbs. of hazardous waste in the form of ink residuals and fountain solutions. The department utilizes a hazardous waste specialist who secures the waste product and disposes of it in accordance with the law. The data obtained this year will serve as the baseline data to the goal of reducing waste by 10% in 2010.

***Goal: Purchase 10% of energy from clean, renewable resources by June 2010.***

The Department of Printing currently does not purchase energy produced by wind, solar, geothermal, or other renewable, non-polluting sources. PRT leases building space from General Administration, and all energy is supplied through standard sources from Puget Sound Energy. The Department of Printing will continue to work with General Administration and look for ways to compensate for the higher cost of purchasing “green” power through energy savings in the hope of achieving this goal in the original time frame.

***Objective: Switch all existing diesel-powered vehicles in the PRT fleet to B20 biodiesel fuel by July 2009.***

The Department of Printing has replaced all but one diesel-powered delivery vehicles with gasoline-powered models since 2005. The new delivery vehicles represent a small step forward in agency sustainability efforts because they offer higher gas mileage and produce fewer emissions than the diesel models they replaced.

The agency investigated switching all diesel-powered PRT delivery vehicles to biodiesel in 2005. However, the low availability and high cost of biodiesel fuel made it impractical to proceed with biodiesel at that time. The agency will continue to review the feasibility of hybrid or alternative-fuel vehicles as more models become available and alternative fuels become more cost effective.

***Goal: Reduce water use by 5% by fiscal year 2007.***

Water use at the Department of Printing rose slightly over the last fiscal year due to increased work volumes and the addition of a new warehouse facility for the fulfillment department. As demand for printing services grows, the agency will continue to search for ways to use water more efficiently to offset the increased demand for water in production areas. For example, pressroom employees now use waterless towels to clean their hands instead of washing with water. This saves approximately 200 gallons of water a day. Unfortunately, it may not be possible for PRT to reduce water use by five percent by the goal deadline due to production constraints. However, the agency will still strive to meet this goal, or at least offset increased production demand to maintain water use at baseline FY 2005 levels.

***Goal: Reduce energy use by 5% by fiscal year 2007.***

The Department of Printing has established baseline energy use at FY 2005 levels, and estimates more energy was used during this fiscal year than FY 2005 due to increased workload and the addition of a new warehouse facility. As more agencies order from PRT and demand for printing, mailing, and fulfillment services grows, the amount of energy required to operate production equipment also increases. The agency will search for new ways to reduce energy demands in non-production areas to compensate for this increased demand and reduce the amount of energy used overall.

## **Agency Values and Strategic Planning**

***Objective: Support a Sustainable Practices Team composed of employees from every department to discuss opportunities, assess progress toward achieving goals, and make recommendations for future actions.***

A Sustainability Team was established at the Department of Printing in January 2004, with managers from every department participating as team members. The current team consists of the agency Sustainability Coordinator and nine team members, and represents all areas of PRT that are directly affected by sustainability initiatives.

The team will meet quarterly to discuss new initiatives, share progress toward goals, and learn more about sustainability principles.

***Objective: Create a process to collect employee suggestions for improving sustainable practices throughout the agency.***

The Department of Printing plans to include a page in the sustainability section of the agency intranet that will allow any employee to make suggestions for new or improved sustainability projects. The suggestions will be routed to the Sustainability Coordinator, who will act on the suggestion or forward it to the appropriate Sustainability Team member for review.

Unfortunately, the agency has not been able to make further progress on implementing this plan due to staffing changes in the technology services area and challenges in training employees about sustainability principles. The agency remains committed to achieving this goal, but now plans to delay the initiative until there is an opportunity to familiarize employees with basic sustainability issues and the benefits of pursuing sustainable printing.

## **Communication and Education**

***Objective: Include sustainable practices in the new employee orientation information on the agency intranet.***

The Department of Printing currently uses an online presentation on the agency intranet for new employee orientation. A new intranet page about sustainability was completed in 2006. A link to that page from the new employee orientation gives employees a review of basic sustainability principles, a view of the agency sustainability plan, and the opportunity to see what the Department of Printing is doing in support of sustainability initiatives.

Additional information about sustainability will be added to the PRT U Training and Development Plan for employees over the next year, further educating our staff about the sustainable practices that we embrace.

***Objective: Post quarterly and annual updates on progress toward achieving sustainability and pollution prevention goals on bulletin boards and the agency intranet.***

The Department of Printing has been unable to make progress on this goal during the past fiscal year due to employee workloads. The agency is committed to implementing this initiative and plans to achieve this goal in the coming year.

***Objective: Recommend that all individual employee training plans include classes about sustainability.***

The agency is making plans to create online training modules and internal classes to provide a means of meeting this objective. Starting in January 2007, all new employees will be required to attend a new hire orientation where subject matter specialists in many areas will be available to further discuss matters of expertise. An official recommendation has been made to include sustainability classes in all individual training plans and will be implemented in January 2007.

***Objective: Expand and update information about PRT's environmentally responsible production processes for the agency's Web site.***

A Sustainable Printing page was added to the Department of Printing website in July 2004. The web page includes information about current sustainable practices at PRT, tips to help customers order sustainable print and mail jobs, and links to the PRT Sustainability Plan and the Sustainable Washington website.

***Objective: Encourage supervisors and managers to include sustainability information in weekly staff meetings.***

All PRT managers have been encouraged by the Executive Team to include sustainability topics in regular staff meetings. Because many of the managers are also on the agency sustainability team, they are able to pass on news about sustainability initiatives and gather ideas from staff fairly efficiently. However, it remains a challenge to make sure that all managers have accurate, up-to-date sustainability information at all times.

***Objective: Include sustainability information and in all Safety Team meetings.***

The Department of Printing Safety Team meets monthly to discuss safety issues at PRT and make recommendations for ways to improve safety awareness among employees. Because sustainable practices help PRT provide a safer, healthier work environment for employees, sustainability is included in all Safety Team meetings.

## Use of Materials, Energy, and Water

### ***Objective: Establish baseline energy and water usage levels.***

Originally, data from fiscal year 2003 were to be used as the baseline for determining progress toward achieving PRT sustainability goals. However, baseline data for energy and water use for FY 2004 was unavailable due to the misplacement of computer files during multiple staff turnovers in the PRT Facilities Management Section. Because the missing data will make it difficult to track use, the energy and water use for FY2005 listed below will be used as baselines, and progress toward sustainability goals will be made in the next Sustainability Plan Update in 2007.

<b>Resource Measured</b>	<b>FY 2005 Baseline (All PRT Locations)</b>	<b>FY 2006</b>
Water	107,800 Cubic Feet	81,100 Cubic Feet*
Electricity	2,302,295 Kilowatt Hours	2,266,800 Kilowatt Hours
Natural Gas	55,699.67 BTUs	56,447.28 BTU's

*\*Water bills are sent directly to GA and include both this site and the Fulfillment off-site warehouse. The usage difference appears to be remarkable, but until data is gathered and monitored more closely over the next year, we will not be sure our baseline data is correct.*

### ***Objective: Reduce energy demands by purchasing Energy Star-certified computers, small appliances, and office equipment.***

As of June 30, 2005, all computers, monitors and printers purchased by the Department of Printing are Energy Star compliant. Any existing equipment that does not meet Energy Star standards will be gradually phased out as it is replaced with new, more efficient equipment.

### ***Objective: Use electronic communication and online ordering to reduce the amount of office paper used.***

Many of the administrative functions that previously required printed paper forms are being replaced with online or electronic processes. For example, customers now request cost estimates through e-mail or an online form instead of filling out a paper form and transporting it to the Department of Printing. When the cost estimate is completed, an email is sent to the customer instead of a computer printout. The PRT purchasing department receives customer orders and vendor confirmations online, and internal orders for marketing materials are now placed through the PRT online ordering system, PRTonline. When customers request a copy of their completed job, PRT now sends it electronically as a PDF file instead of as a hard copy.

In July 2005, PRT began offering pricing incentives for customers who order envelopes online. Over 85 percent of envelope orders are now placed through PRTonline, which has significantly reduced the need for paper order forms and purchase orders. In addition, the online ordering system has reduced spoilage by 30 percent, which reduces the amount of production waste as well.

### ***Initiative: Return all boxes received with ink shipments for re-use by the vendor.***

The Department of Printing began returning shipping boxes for re-use by our ink supplier in 2004. The agency now returns all boxes used for delivery of ink shipments to the main plant so the vendor can re-use the boxes for future shipments. This keeps cardboard out of the landfill and reduces the need to produce more cardboard or boxes.

***Executive Order 05-01, Section 6B: The Department of Printing will lead a taskforce including the Department of General Administration, the Department of Information Services, and other interested agencies to recommend efficiency improvements for the management of printers and copiers in state agencies.***

In June 2005, PRT established a Print Management Committee composed of members from PRT, General Administration, the Department of Information Services, and the Department of Ecology. The group will set policies and procedures for agencies to obtain print assessments to determine how they are using print devices now, and to contract for managed print services to ensure all print devices are acquired, placed, and managed at peak efficiency.

The Public Printer received authorization from the Office of Financial Management to develop and manage a contract with a pool of qualified vendors. The Print Management workgroup set procedures and criteria for print assessments. The Print Assessment Workgroup consists of members from state agencies, city government, and county government. Agencies and local governments are able to obtain print assessments through the Department of Printing..

In addition, the Department of Ecology, the Department of Information Services, and PRT worked together to create a model RFP for acquiring managed print services, and Ecology is currently receiving managed print services that were obtained with this model RFP.

## **Pollution Reduction**

***Objective: Switch to Computer to Plate (CtP) printing to reduce the use of film and processing solutions.***

The Department of Printing completed the switch to Computer to Plate printing in 2005. The technology allows PRT to produce printing plates directly from computer files, eliminating the need to output intermediate film negatives for most print jobs. This makes the printing process more sustainable by:

- Eliminating the need to output film before making printing plates. Traditionally, printing plates were created from a negative created by imprinting an image on acetate film and processing it through several types of chemical solutions. On the other hand, Computer to Plate technology uses a thermal laser to imprint the image directly on the printing plate. As a result, PRT is able to completely eliminate the need for film and processing solutions.
- Because the process is completely digital, CtP is much more stable and accurate than manual plate burning methods. As a result, the need to re-burn spoiled plates is nearly eliminated and the use of film, processing solutions, and energy is reduced.
- The CtP plates use a different chemistry than traditional plates, and are too sensitive to be combined with solvent-based press solutions. This means that none of the press solutions used for printing at PRT are based on solvents, reducing the amount of hazardous waste and VOCs produced during printing.
- Because printing plates are now produced in a single step on one highly efficient, digital machine, the amount of processing solutions used to produce printing plates has been reduced by approximately 95 percent over the traditional film-based workflow.
- The digital workflow makes it easier to use electronic proofs instead of printed copies. Use of soft proofs, computer files emailed to customers for approval, eliminates the need to print and transport proof copies and approval forms. This reduces the amount of paper, toner, and energy used in prepress and eliminates the pollution created during the transport of printed proofs. Since CtP was implemented, customer use of soft proofs has risen by 20 percent.
- By transitioning to a totally digital workflow, PRT is able to store electronic originals of print jobs instead of hard-copy artwork. This not only reduces the amount of paper and storage space used, but also increases the amount of time originals are available to customers.

The transition to CtP was not very difficult for PRT because we were able to adapt existing image setting workflows quite easily. The main challenges were educating customers about the use of digital proofs and training press staff to work with the new printing plates.

***Objective: Encourage carpooling, use of mass transit, and other strategies to reduce the amount of pollution produced by employees traveling to and from work.***

The agency currently promotes the STAR pass in the new employee orientation and the internal employee newsletter to encourage employees to use mass transit. The Employee Services office also acts as a central contact point for employees who want to establish a vanpool. At the current time we have three staff who participate in vanpools. One staff member rides his bike to work in fair weather.

***Objective: Initiate a vehicle maintenance program to reduce oil leaks and other sources of pollution, and ensure all agency vehicles perform with the highest fuel efficiency possible.***

The Department of Printing implemented a vehicle maintenance program in 2005. The PRT Facilities staff works with delivery drivers and the bindery manager to ensure agency-owned vehicles are properly maintained to reduce pollution and increase fuel efficiency. Drivers keep track of their mileage and notify Facilities when it is time for the vehicle to be serviced. After a purchase order is issued, the driver takes the vehicle to Jiffy Lube for maintenance. The Department of Printing receives a report of all maintenance services performed and keeps an up-to-date record of all vehicles.

For more information about fleet management practices at the Department of Printing, please see the agency *Fleet Management Plan* (Appendix B).

***Objective: Use re-refined motor oil whenever possible in servicing all agency fleet vehicles and recycle all used oil to keep PBTs out of the environment.***

All Department of Printing vehicles are serviced by Jiffy Lube, and all used oil is recycled by Emerald Petroleum in Seattle. However, Jiffy Lube does not use re-refined motor oil. The agency remains committed to this objective, and will seek to achieve it within the limitations of the cost and availability of re-refined oil.

***Objective: Increase employee recycling of glass, aluminum, plastic, and cardboard.***

Large bins are in place throughout the main plant and at all field copy centers to collect cardboard for recycling. Cardboard collected in these bins is sold to a recycler and creates a small amount of additional revenue for PRT.

In addition, recycling collection centers have been created for lunch and break areas at the main plant to make it as easy as possible for employees to recycle glass, aluminum, and plastic.

***Objective: Recycle all used shrink wrap and plastic packaging materials by July 2005.***

Shrink wrap, plastic bags, and other plastic film materials are received in many incoming supply shipments, and waste plastic is produced when setting up PRT packaging equipment. Instead of sending this plastic film to a landfill, the Department of Printing recycles all plastic film waste.

Mel Caldwell, PRT Plant Manager and member of the PRT Sustainability Team, worked with Avoco Plastics Corporation to set up the plastics recycling program. PRT now places shrink wrap, stretch wrap and used plastic bags in recycling containers set aside specifically for plastic recycling. Avoco provides collection bags and picks up the plastic film for recycling at no cost to PRT.

***Initiative: Switch to a low-emission press wash solution.***

The Department of Printing uses a press wash solution formulated to produce 35 percent lower VOCs by volume than standard solutions. The new press wash does not contain benzene or acetone, which is present in most standard press washes. The PRT pressroom worked with vendors to test the new product, and became the first press room in the state to use the press wash in September 2004.

***Initiative: Use ink sludge and pressroom waste to create energy.***

The Department of Printing Pressroom has established a partnership with Rineco, a resource recovery and waste management company, to use ink sludge, used press wash, and waste cleaning cloths as an alternative energy source.

Previously, used press wash and non-recyclable ink sludge were disposed of according to hazardous waste requirements, and blanket wash cloths were sent to the landfill because they contain no hazardous chemicals. Now pressroom waste is placed in 55-gallon drums and sent to Rineco's facility in Arkansas. There, the waste is blended with fuel and incinerated at extremely high temperatures as a replacement for coal and natural gas for cement kilns. The metal drums are then recycled as scrap metal.

Each barrel of waste produced 1,660,000 BTUs of energy and 50 pounds of scrap metal for recycling. In FY 2006 the Department of Printing has sent six containers of waste to Rineco, resulting in 600 pounds of recycled metal and 19,920,000 BTUs of energy since the initiative began in 2005.

The new initiative keeps these pressroom products out of the waste stream and provides an alternative energy source. Over the last two years, the program has reduced the number of barrels of hazardous waste PRT sent to landfills by 90 percent, with PRT sending only one barrel of waste compared to 10 barrels in the previous two years. In addition, PRT receives payment for the waste provided to Rineco, which pays the fees for trucking and disposing of the material.

***Initiative: Recycle or donate all used computer equipment to keep toxic waste out of landfills.***

The Department of Printing uses Dell's Asset Recovery Service to recycle or resell used computer equipment. The program allows us to return computers, monitors, and printers to Dell for recycling. Any computers that do not qualify for the Dell program are sent to state surplus for re-use or recycling.

***Initiative: Use UV curing on the web press to reduce the amount of VOCs produced during the printing process.***

In March 2005, PRT replaced an aging web press, which is a press that prints large-quantity jobs on rolls of paper. The old press required a great deal of maintenance and was not compatible with new, more sustainable printing processes and materials. The new web press allowed PRT to complete the switch to Computer-to-Plate digital technology, and implement Prime UV curing to dry the ink while the job is still on the press. The use of UV curing has virtually eliminated the production of VOCs on the web press and supports PRT's business practices by allowing the agency to fold and finish jobs more quickly.

## **Use of Non-toxic, Recycled, and Remanufactured Materials**

***Objective: Continue to use only Process Chlorine Free (PCF) paper with the highest possible post-consumer recycled fiber content for in-house stock and office paper.***

The Department of Printing continues to stock only recycled, process chlorine free paper for use in office printers, copiers and fax machines. In addition, the paper kept in stock for print jobs is process chlorine free and contains the highest percentage of recycled content possible within the constraints of price and availability.

Most in-house uncoated paper contains 30 to 40 percent post-consumer recycled content, and in-house coated sheets are 10 percent recycled. Unfortunately, some jobs produced on the web press require virgin roll stock in order to meet end-user quality requirements, especially letterhead and forms that will be run through a printer or copier after printing.

The Department of Printing is committed to using high-recycled content, process chlorine free paper whenever possible. However, efforts to increase the recycled content of paper used at the agency face challenges from current trends in the printing and paper industries. Private printers, especially those who print forms, continue to rely on virgin sheets, which cost approximately six to eight percent less than comparable recycled stock and continue to run more reliably through office equipment after printing. In

fact, use of virgin stock is so prevalent in the forms printing industry that it is often difficult to find supplies or vendors capable of producing forms on recycled paper.

The Department of Printing continues to encourage the use of recycled paper and regularly discusses the need for cost-effective recycled stock with all of our paper suppliers. The agency continues to work with suppliers and vendors to provide sustainable paper choices that meet state government's need for cost-effective, high-quality printing.

***Objective: Purchase only remanufactured toner cartridges for all copiers and printers, and recycle all used cartridges.***

The Department of Printing continues to recycle used printer toner cartridges as in the past. However, PRT has had very little success in using remanufactured cartridges in our current equipment. The agency has purchased remanufactured toner cartridges from three different vendors, and all have resulted in toner leakage, excessive paper jams, and increased overall machine maintenance. As a result, the agency currently purchases only new printer toner cartridges. However, PRT continues to search for a source of remanufactured toner cartridges that produce the quality and reliability we need, and plans to switch from new cartridges as soon as possible.

***Objective: Ensure all new and replacement furniture is constructed of non-toxic, renewable materials, using refinished or surplus furniture whenever possible.***

Most Department of Printing staff work in cubicles produced by Correctional Industries. Desks used by employees who do not work in cubicles are almost exclusively obtained from state surplus, with any cleaning and re-finishing performed by Correctional Industries. Other office furniture such as file cabinets and shelving are usually obtained from surplus, with the remainder purchased from the most cost-effective major office supply retailer.

## **Environmentally Preferable Purchasing**

***Objective: Shift purchasing of office supplies to use items that are recyclable and made from recycled materials.***

While a variety of recycled office supplies are currently available, they cost from 30 to 60 percent more than standard office supplies. As a result, the Purchasing Department at PRT has chosen not to pursue the purchase of recyclable and recycled office supplies in the interest of cost effectiveness. The agency will continue to monitor the availability and pricing of environmentally friendly office supplies, and will switch to alternative sources as they become financially feasible.

***Objective: Seek out vendors who use sustainable processes and production materials when bidding jobs to private printers and binderies.***

The PRT Contracts Department bids out jobs to private vendors and maintains contracts for computer forms and envelopes. Jobs are bid to vendors according to customer specifications, and are given to the vendor that is able to meet these specifications most cost effectively.

Because most customers request recycled paper, over half of the work sent to outside vendors through the Contracts Department is produced on recycled paper. However, some customers continue to request virgin stock because it costs less than recycled paper or works better in the customer's equipment. Moreover, recycled paper is simply not available for some applications, such as certain colors of carbonless forms. As a result of these constraints, PRT's goal of expanding the use of sustainable processes and production materials to our vendors has experienced challenges and will require long-term commitment and patience.

When a vendor wishes to do business with the Department of Printing, they must complete a vendor application form detailing their experience and services offered. Vendor records are then kept on file in the Contracts Department to allow the Department of Printing to quickly determine which vendors are

qualified to receive invitations to bid on incoming orders. The vendor application form does not currently ask for information about the vendor's processes or materials. However, discussions have been held on the best way to gather this information, and how it may be used when bidding out jobs.

***Objective: Purchase supplies and equipment that support sustainability goals.***

All areas of the Department of Printing regularly review practices for purchasing supplies and equipment to ensure they use energy and natural resources effectively. For example, the press department purchases press solutions and ink that are water-based and non-toxic instead of using traditional petroleum-based products. Details about other ongoing efforts to purchase and use sustainable materials and equipment are detailed in other sections of this report as appropriate.

## **Waste Reduction**

***Objective: Establish a system for monitoring and tracking waste produced in all production areas to find opportunities for further reduction.***

In early 2006, the agency worked with the Department of Ecology to develop a Pollution Prevention plan to create a viable, active waste management program at PRT. The new plan is being used to create systems and procedures for monitoring waste production and disposal in all production areas in compliance with all rules and regulations.

***Objective: Print two-sided documents whenever possible.***

Employees are encouraged to print and copy two-sided documents whenever possible, and most departments print a majority of items using duplex settings. However, some documents must be printed single-sided because of the way they are used. For example, job tickets must be printed single-sided because employees must be able to see all the instructions for the job through the clear window of the job ticket envelopes. The agency will continue to educate employees and initiate processes to reduce the amount of one-sided copying needed and reduce overall office paper use in the long term.

***Objective: Purchase computers and electronics with the lowest level of PBTs possible, and return used computers to vendors for recycling or remanufacturing.***

The Department of Printing is currently taking advantage of Dell's Asset Recovery Service to recycle or resell used computer equipment. The program allows us to return computers, monitors, and printers to Dell for recycling, or to resell usable equipment through Value Recovery and receive cash back for old computer equipment. Any computers that do not qualify for the Dell program are sent to state surplus for re-use or recycling.

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## **STATEWIDE PERFORMANCE MEASURES**

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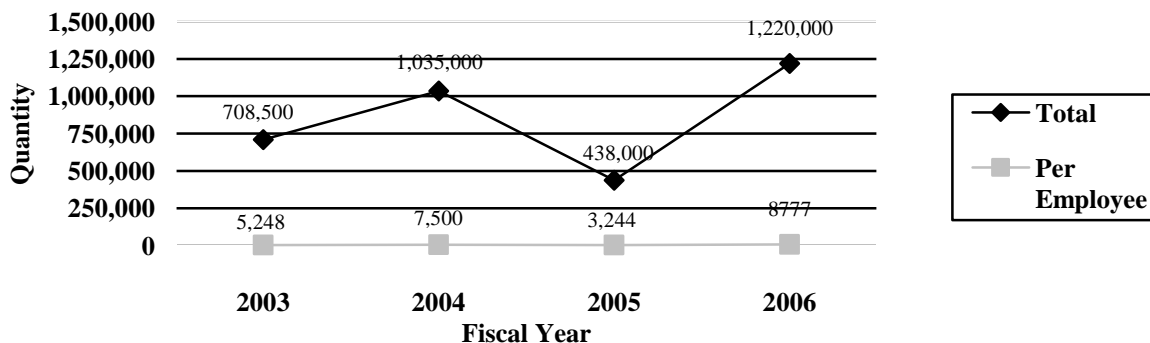
The following performance measures represent data collected for the fiscal year ending June 30, 2006. Whenever possible, this information is compared to previous or baseline data and information in previous sustainability plans and progress reports.

### **Paper Use**

Many different weights and sizes of paper are used in printing, including flat sheets in sizes from 8½" x 11" to 26" x 40" and roll stock measured by weight rather than number of sheets. Because printing production paper uses so many different units of measure, it is almost impossible to give a truly accurate accounting of the total amount of paper used for all printing produced at PRT. The purchasing and IT departments at PRT are working together to create a way to gather data using the agency's print job management software so this information can be reported in future sustainability reports.

The data in the following table applies only to paper used for PRT's internal use in office equipment. The quantities given are given as equivalents to 8½" x 11" sheets, with each 11" x 17" sheet counting as two 8½" x 11" sheets. The figures include both 20-pound bond paper with 40% post-consumer recycled fiber and 60-pound text paper containing 30% post-consumer recycled fiber. Based on the range of fluctuation between fiscal years, PRT will engage in evaluating our data collection methods.

**PRT Office Paper Use**



FY 2004		FY 2005		FY 2006	
Total	Per Employee	Total	Per Employee	Total	Per Employee
1,035,000	7500	438,000	3244	1,220,000	8777

## Recycling

The Department of Printing collects office paper, cardboard, and aluminum for recycling in the same bins as the waste produced during the production process. As a result, the data included in this progress report refers to the total amount of material recycled by PRT because it is impossible to separate data for office materials from data for waste from production areas.

Between July 1, 2004 and June 30, 2005, the Department of Printing used more than one vendor for recycling services. Unfortunately, the vendor who provided these services from July through October 2004 did not provide a breakdown of the amount of materials recycled, and PRT has no way of reporting the quantity of paper, cardboard, or aluminum recycled during this time.

Monthly reports of our recycling activities include a breakdown by the type of recycled material. These reports show that PRT recycled a total of 505,150 pounds of waste paper, 2,560 pounds of cardboard, and 2,490 pounds of aluminum from November 2004 to June 2005. Between July 1, 2005 and June 31, 2006 PRT recycled a total of 863,935 pounds of waste paper; 36,800 pounds of cardboard, and 6,450 pounds of aluminum. The vendor paid the Department of Printing \$32,142 for its recycle waste. Recycling helps the agency financially as well as reducing the amount of energy and resources needed to produce the materials.

The agency also recycled all plastic film waste from production areas and incoming shipments. However, there is no data currently available for the amount of plastic film waste recycled because the recycler does not furnish that information to PRT. The agency is working on a process to measure this data internally so it can be reported in the next sustainability report.

## Vehicle Mileage

The Department of Printing owns and operates the following four vehicles, which are used to pick up orders, transfer orders and work between production locations, and deliver completed jobs.

- 1995 Ford Cube Truck
- 1997 Ford Econoline Van
- 2001 Grumman Workhorse
- 2006 Chevy Express Van

In addition to agency-owned vehicles used for pickup and delivery, personal vehicles are used by Customer Education Specialists and other staff to meet with customers statewide. The Customer Education program established in February 2004 to provide customers with on-site training and information about PRT services contributes to the vehicle mileage.

The following table shows the miles traveled on agency business for both agency-owned and employee-owned vehicles.

Description	FY 2004 Miles Traveled	FY 2005 Miles Traveled	FY 2006 Miles Traveled
Agency-owned vehicles	56,160*	66,642	71,003
Personal vehicles	36,385	56,146	47,634
<b>TOTAL</b>	<b>92,545</b>	<b>122,788</b>	<b>118,637</b>

\*Estimated

New procedures were implemented in 2004 to allow PRT to gather accurate information about miles traveled by agency fleet vehicles, and actual miles traveled can now be reported. Because the data reported for fiscal year 2004 cannot be verified, the figures for FY 2005 will be used as a baseline for future sustainability reports.

For more information about fleet management practices at the Department of Printing, please see the agency *Fleet Management Plan* (Appendix B).

## Fuel Use

Work volumes at the Department of Printing continue to increase, requiring agency-owned delivery vehicles to travel more miles each year. As a result, the amount of fuel used by agency fleet vehicles increased substantially.

The following table lists fuel purchases for Department of Printing delivery vehicles during the past three fiscal years.

Type of Fuel	FY 2002-03 Gallons Used	FY 2003-04 Gallons Used	FY 2004-05 Gallons Used	FY2005-06 Gallons Used
Gasoline	2217	2563	4525	4151
Diesel	392	495	1637	3195
<b>TOTAL</b>	<b>2609</b>	<b>3058</b>	<b>6162</b>	<b>7346</b>

When the fuel usage data reported for July 1, 2005 through June 30, 2006 is analyzed with the associated mileage figures, it appears that agency vehicles operated with an average fuel efficiency of 16 miles per gallon.

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## UPDATED GOALS AND OBJECTIVES

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As the Department of Printing moves toward sustainability, it continually evaluates the progress the Agency has made and creates new or revised goals to ensure continued success. After evaluating progress toward current goals and identifying potential areas for new initiatives, the Department of Printing has set the following sustainability goals and objectives for the next fiscal year.

### Long-term Goals

- Replace at least half of gasoline or diesel-powered delivery vehicles with hybrid or alternative-fuel vehicles by 2015.
- Purchase at least 10% of energy from non-polluting, renewable resources by June 2010.
- Reduce hazardous waste by 10% over FY 2004 levels by June 2010.

### Agency Values and Strategic Planning

- Support a Sustainable Practices Team composed of employees from every department to discuss opportunities, assess progress toward achieving goals, and make recommendations for future actions.
- Report progress toward sustainability goals quarterly as part of agency GMAP data.

### Communication and Education

- Expand and enhance sustainable practices information provided on the agency intranet for new employee orientation.
- Educate employees about sustainability principles and agency sustainability goals by posting sustainability information, progress reports, and training on bulletin boards and the PRT intranet.
- Expand and update information about PRT's environmentally responsible production processes for the agency's Web site.
- Encourage supervisors and managers to include sustainability information in weekly staff meetings.
- Establish a method of collecting data and reporting how much recycled and virgin office paper is purchased from PRT by each state agency, and how much recycled and virgin office paper is used by each state agency for jobs printed in the main plant and copy centers by July 2007.
- Participate in organized tradeshows and other relevant events emphasizing the agencies sustainability efforts.

### Energy and Water Use

- Maintain the amount of energy and water used at FY2005 levels by reducing energy and water use in non-production areas to compensate for increased demand in production areas.
- Continue to purchase only Energy Star-certified computers, small appliances, and office equipment to reduce energy use.

### Pollution Prevention

- Encourage carpooling, use of mass transit, biking, and other strategies to reduce the amount of pollution produced by employees traveling to and from work.

- Maintain a fleet management program to increase the fuel efficiency of agency vehicles and prevent oil leaks and other sources of pollution from motor vehicles.
- Maintain a program to encourage employees to recycle glass, aluminum, plastic, and cardboard.

### **Use of Non-toxic, Recycled, and Remanufactured Materials**

- Use only Process Chlorine Free (PCF) paper with 100% post-consumer recycled fiber content for all PRT office machines by July 2007.
- Stock Process Chlorine Free (PCF) paper with the highest possible post-consumer recycled fiber content for use in printing jobs on white paper.

### **Environmentally Preferable Purchasing**

- Provide Managed Print Services to PRT customers so agencies can accurately assess office printing and copying needs and acquire and maintain print equipment in a way that uses less energy and resources while providing a healthier work environment.
- Establish a process to seek out vendors who use sustainable processes and production materials when bidding jobs to private printers and binderies.
- Purchase office equipment, furniture, and supplies that are recyclable and made from recycled materials.

## Appendix A

# SUSTAINABILITY EXECUTIVE ORDER KEY PROVISIONS

Topic	Required Actions	Goals	Progress to Date	Barriers and Challenges	Success Factors	Savings and Environmental Benefits
<b>Green Buildings</b>  <i>Incorporate into all new projects as modified by ESSB 5509.</i>	All new construction projects and remodels >5000 ft <sup>2</sup> built and certified to LEED Silver standard or equivalent.	Not applicable. No new construction is planned.	X	X	X	X
	GA and other agencies will develop processes to ensure green building practices are integrated into design and construction process.	Not applicable. No new construction planned.	X	X	X	X
<b>Vehicles</b>  <i>Reduce petroleum use.</i>	Reduce petroleum use by 20% by 2009.	Maintain petroleum use at FY 2005 levels.	Because PRT is producing more print jobs and the customer education program requires additional travel, petroleum use at PRT has increased since 2005.	Because PRT is a service agency, the use of petroleum for delivery vehicles and travel by customer education staff will continue to grow as agencies send more work to PRT and workloads increase.	Ability to plan delivery routes and customer visits to use the least amount of petroleum possible.  Encourage increased use of teleconferencing.	Not applicable.
	Freeze the purchase of four-wheel drive SUVs.	Not applicable. PRT doesn't use SUVs and has no plans to purchase any.	X	X	X	X

Topic	Required Actions	Goals	Progress to Date	Barriers and Challenges	Success Factors	Savings and Environmental Benefits
<b>Vehicles - Continued</b>  <i>Reduce petroleum use.</i>	By September 1, 2009, replace standard diesel with B20. Begin using B5 as soon as practicable.	To replace standard diesel with B20 by September 1, 2009. Begin using B5 as soon as practical	None	Currently remains cost prohibitive		
	Purchase hybrid gas/electric and other fuel-efficient, low-emission vehicles.	Replace at least half of gasoline or diesel-powered delivery vehicles with hybrid or alternative-fuel vehicles by 2015.	No hybrid gas/electric vehicles have been purchased by PRT yet.	The only vehicles PRT owns are delivery vehicles. There are no hybrid vehicles available yet for delivery use.	Not applicable.	Not applicable.
	Replace pre-1996 light-duty vehicles within 3 years.	Replace pre-1996 light-duty vehicles within 3 years.	After replacing a truck in 2004, PRT has only one pre-1996 light-duty vehicle.	PRT is not funded and must use revenues generated by print jobs to purchase supplies and equipment. Because these limited funds are used to purchase presses and other production equipment, the funds available to purchase new vehicles are extremely limited, and delivery vehicles are used as long as financially practical.	Because PRT is charged with providing print services at the lowest cost possible, vehicle purchasing decisions are made according to the total cost of ownership. When the cost of keeping an old vehicle becomes higher than the cost of purchasing a new one, the old vehicle is replaced.	By replacing the old vehicle, PRT uses less fuel and produces less air pollution when delivering jobs. However, because no data is available for the fuel efficiency or emissions of the vehicle that was replaced, the amount of these savings is unknown.

Topic	Required Actions	Goals	Progress to Date	Barriers and Challenges	Success Factors	Savings and Environmental Benefits
<b>Vehicles - Continued</b>  <i>Reduce petroleum use.</i>	Fleet management plans and annual progress reports due September 1, 2005. Consider transfers of vehicles or contract with GA for fleets with <100 light-duty vehicles.	Create and implement a fleet management plan for all agency-owned vehicles.	An initial fleet management plan was drafted (see Appendix B.)	PRT provides delivery services. As growth continues the customer base will expand increasing use of delivery vehicles.	Facilities staff worked closely with delivery drivers and the shipping area to make sure the fleet management plan includes reasonable goals.	None- Growth of delivery requirements increase petroleum use.
	Request fuel-efficient, low-emission vehicles for employees from commercial car rental vendors.	Require employees to request fuel-efficient, low-emission vehicles first when renting cars on agency business.	The executive team has been briefed about this requirement.	PRT employees rarely require a rental vehicle, and often must make selections based on cost.	Unknown, because PRT employees have not rented cars on agency business.	None yet, because PRT employees rarely require rental vehicles.
<b>Paper</b>  <i>Reduce lifecycle impacts of paper products.</i>	Use office paper with a minimum 30% post-consumer recycled content.	Use only office paper with 100% post-consumer recycled fiber content by July 2006.	PRT uses office paper with 40% post-consumer recycled content.	100% post-consumer office paper costs about 24% more than 40% post-consumer paper.	Reducing the amount of office paper used will offset the extra cost associated with 100% post-consumer paper.	By using 40% post-consumer recycled office paper instead of virgin stock, PRT saves 7.5 trees; 3066 gallons of water; 26 pounds of air pollution; 1796 Kwh of energy; and 1.3 cubic yards of landfill space when compared with virgin paper at a rate of 438,000 sheets per fiscal year.

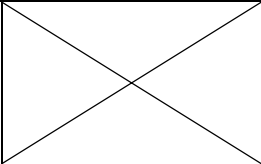
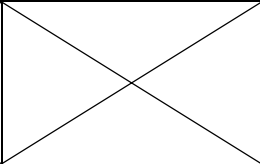
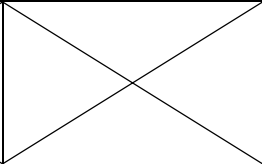
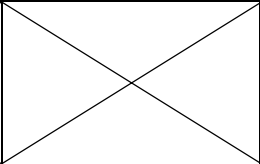
Topic	Required Actions	Goals	Progress to Date	Barriers and Challenges	Success Factors	Savings and Environmental Benefits
<b>Paper - Continued</b>  <i>Reduce lifecycle impacts of paper products.</i>	Reduce the use of office paper by 30% based on 2003 plans.	<p>Print 2-sided documents whenever possible.</p> <p>Increase use of email and electronic ordering to reduce the amount of paper needed for print orders.</p>	<p>All documents are printed 2-sided whenever possible.</p> <p>There continues to be increases in the use of the online ordering system which should result in use of less office paper.</p>	PRT must use office paper to create job tickets and place orders for supplies. As demand for services increases, the amount of paper used by PRT will also grow.	Online ordering is much more convenient than ordering with a paper order form, so many customers are happy to switch to PRTonline ordering.	According to data collected by the PRT purchasing department, PRT has used 36% more paper in FY 2006 than in FY 2005. However, this data may not be correct due to issues with software and data reporting.
	Increase the percentage of environmentally preferable office paper to over 50%.	Use only office paper with 100% post-consumer recycled fiber content by July 2006.	PRT uses office paper with 40% post-consumer recycled content, and will switch to higher recycled content paper as it becomes economically feasible.	The higher the percentage of post-consumer recycled fiber in paper, the more expensive it is.	Manufacturers are responding to demand and the availability and cost-effectiveness of EP paper is improving	By using 40% post-consumer recycled office paper instead of virgin stock, PRT saves 7.5 trees; 3066 gallons of water; 26 pounds of air pollution; 1796 Kwh of energy; and 1.3 cubic yards of landfill space when compared with virgin paper at a rate of 438,000 sheets per fiscal year.
	Recycle 100% of used office paper.	Recycle 100% of used office paper and waste paper produced in production areas.	PRT currently recycles all waste paper and used office paper.	Some paper cannot be recycled due to contact with food or other contaminants.	Because PRT already recycled waste paper in production areas, it was very easy to add office paper to recycling processes.	Recycled 869,935 pounds of paper in FY 2006 providing \$32,142 revenue.

Topic	Required Actions	Goals	Progress to Date	Barriers and Challenges	Success Factors	Savings and Environmental Benefits
<b>Paper - Continued</b>  <i>Reduce lifecycle impacts of paper products.</i>	Increase the use of recycled and chlorine-free janitorial paper products.	No goals set by PRT in this area because all janitorial products and services are provided by GA.				
<b>Energy</b>  <i>Achieve gains in energy conservation.</i>	Reduce energy purchases by 10% from FY 2003, use energy efficiency programs and on-site renewable resources.	Initial goal was to reduce energy use by 5% by 2007. However, due to increased demand for energy to produce customer orders, this goal has been revised to maintaining energy use at FY 2005 levels. An increase of 1.5% in use of natural gas; a decrease of 1.5% in electrical use. On target for maintaining FY2005 levels.	Because demand for PRT services is growing, energy use has increased since 2003. The agency is looking for ways to reduce energy use in administrative areas to offset the increased demand in production.	PRT is a manufacturing facility that must use more energy to operate production equipment as demand for services increases. In addition, the agency opened a new warehouse facility to meet the demand for fulfillment services.	Steps are being taken to offset the need for more energy in production areas by reducing energy use in office areas. Employees are asked to turn off unused lights and equipment and stop using space heaters and personal refrigerators.	Not applicable
	Report total energy use annually to GA.	Not applicable. PRT leases building space from GA, and all energy bills and reports go directly to GA.				

<p><b><i>Toxic Chemicals</i></b></p> <p><i>Reduce the use of products with persistent, toxic chemicals.</i></p>	<p>Report annually on progress in sustainability plans.</p>	<p>Use methods set in Pollution Prevention Plan to collect data about toxic chemicals in production areas, and use information for sustainability reports.</p>	<p>PRT has completed the Waste Stream designations. As a small generator, there is not a requirement to complete a Pollution Prevention Plan. Annual reports that show progress and monitoring are provided to Dept of Ecology every September.</p>		<p>The agency is committed to including measures in GMAP reports.</p>	<p>None now. However, reporting has enabled PRT to look for reducing the use of items with persistent toxic chemicals in the future.</p>
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Topic	Required Actions	Goals	Progress to Date	Barriers and Challenges	Success Factors	Savings and Environmental Benefits
<p><b>Toxic Chemicals - Continued</b></p> <p><i>Reduce the use of products with persistent, toxic chemicals.</i></p>	<p>Adopt measures to reduce the use of equipment, supplies, and other products that contain persistent, toxic chemicals.</p>	<p>Eliminate the need for film and processing solutions that contain heavy metals by switching to Computer-to-Plate technology.</p> <p>Use inks that do not contain heavy metals as pigments.</p>	<p>Because printing plates are created directly from digital files through Computer-to Plate thermal imaging or Silvermaster cameras, no film negatives are needed. This eliminates the need for film and processing solutions that contain silver and other toxic chemicals.</p> <p>Only one color of ink used by PRT contains heavy metal as a pigment. Warm Red contains cadmium, and there is currently no non-toxic pigment that matches this color. Customers are discouraged from using Warm Red ink.</p>	<p>PRT is committed to eliminating the use of persistent toxic chemicals in all areas of the agency. However, we must rely on manufacturers and suppliers to provide environmentally friendly alternatives that perform well and provide customers with the quality they expect.</p>	<p>Manufacturers have found ways to create safe, non-toxic alternatives to printing products that have traditionally contained persistent, toxic chemicals. Many times these alternatives perform better and result in higher quality prints than their toxic counterparts. As a result, it makes good business sense for PRT to switch to safer products to eliminate costs associated with handling toxic chemicals and improve customer satisfaction.</p>	<p>Computer-to-Plate technology has virtually eliminated the need for film and processing solutions, which means PRT does not need to purchase, process, and dispose of approximately 5400 square feet of film per month.</p> <p>Because the inks used by PRT do not contain heavy metal pigments, the ink sludge may be used as an alternative energy source instead of being disposed of as hazardous waste.</p>

Topic	Required Actions	Goals	Progress to Date	Barriers and Challenges	Success Factors	Savings and Environmental Benefits
<i>Communications and Education</i>	Steps taken to educate employees or clients.	<p>Educate every PRT employee about general sustainability principles and PRT sustainability initiatives.</p> <p>Educate customers about sustainability efforts at PRT and ways to make print jobs more environmentally responsible.</p>	<p>The executive team and customer service staff have had training sessions about sustainability principles and PRT initiatives.</p> <p>Initial steps have been taken to implement a training program for new hires and add sustainability training to the intranet.</p>	Production employees do not have access to the Internet or a common lunch period, so it is difficult to find ways to educate them without interrupting production.	Customers are very interested in making their printing and mailing jobs more sustainable, so they are demanding more information and drawing attention to the need for education materials.	PRT customers are more able to make sustainable choices when ordering printing and mailing, which reduces the amount of energy and resources used for printing statewide.
	Education about the sustainability plan and general educational efforts.	Make every employee aware of the goals in the PRT sustainability plan, and encourage all employees to make suggestions and work to meet goals.	Copies of the sustainability report are provided to the manager of every department, and are posted on the agency website.	.	The roll out of PRT University in July 2006 will provide a vehicle to deliver information about and educate staff on Agency sustainability efforts.	None now. However, when all employees are educated about sustainability, they improve PRT's ability to create initiatives that will save money and resources.

Topic	Required Actions	Goals	Progress to Date	Barriers and Challenges	Success Factors	Savings and Environmental Benefits
<p><b>Performance Measures</b></p> <p><i>Data from FY 2005</i></p>	<p>A. Annual Petroleum use, vehicles miles traveled, and number and type of state vehicles owned.</p>	<p>Maintain petroleum use and miles traveled at FY 2005 levels despite growing demand for delivery and customer education travel.</p> <p>Replace at least half of gasoline or diesel-powered delivery vehicles with hybrid or alternative-fuel vehicles by 2015.</p>	<p>Customer education staff and delivery drivers plan routes to minimize the miles traveled and petroleum used.</p> <p>Teleconferencing is encouraged.</p>	<p>Because PRT must drive vehicles to deliver printing and mailing orders, the number of miles traveled and the amount of petroleum used will likely increase as demand for these services grows. It will be difficult to offset these increases simply by increasing the use of strategies such as teleconferencing.</p> <p>Large load delivery trucks require diesel operation. Based on the nature of this business this may be a barrier to the goal of replacing all diesel vehicles by 2009.</p>	<p>The high cost of petroleum will encourage employees to use strategies such as teleconferencing to reduce travel, and will require delivery drivers to operate as efficiently as possible.</p>	<p>Replacing the only remaining diesel-powered vehicle in the PRT fleet with a gasoline-powered vehicle with higher gas mileage will result in less pollution and reduced petroleum use for the route used by that vehicle. With the barriers considered, it is the goal of PRT to eliminate all Diesel vehicles by 2009.</p>
	<p>B. Number of exception purchases of four-wheel drive SUVs.</p>	<p>Not applicable. PRT doesn't use SUVs.</p>				

Topic	Required Actions	Goals	Progress to Date	Barriers and Challenges	Success Factors	Savings and Environmental Benefits
<p><b>Performance Measures - Continued</b></p> <p><i>Data from FY 2005</i></p>	<p>C. Amount and type of office paper and janitorial paper products purchased.</p>	<p>Reduce the use of office paper by 10% by the end of FY 2007.</p> <p>Switch to using only 100% post-consumer recycled paper for office equipment.</p>	<p>Most of the office paper used at PRT contains 40% post-consumer recycled content.</p> <p>It appears that PRT used 36% more paper in FY 2006 than in FY 2005. However, the data may be incomplete due to reporting software and inventory issues, and there is a question whether the agency actually used less paper this year.</p>	<p>The demand for paper use will probably grow at PRT as demand for print jobs grows, because each job requires a printed job ticket. We are discussing ways to reduce paper use through increased use of electronic job information more efficient use of the software used to manage print jobs.</p> <p>100% post-consumer recycled paper costs more than 40% recycled paper, and it will be difficult to make the switch unless we are able to offset the extra cost through significant reduction in the amount of paper used.</p>	<p>GA provides all the janitorial paper used at PRT facilities, and they are currently using environmentally preferable products.</p>	<p>By using 40% post-consumer recycled office paper instead of virgin stock, PRT saves 7.5 trees; 3066 gallons of water; 26 pounds of air pollution; 1796 kWh of energy; and 1.3 cubic yards of landfill space when compared with virgin paper at a rate of 438,000 sheets per fiscal year.</p>

Topic	Required Actions	Goals	Progress to Date	Barriers and Challenges	Success Factors	Savings and Environmental Benefits
<b>Performance Measures - Continued</b>  <i>Data from FY 2005</i>	D. Quantity of office paper recycled.	Recycle all waste paper in office and production areas.	PRT recycled 863,935 pounds of paper in FY 2006.	Some paper cannot be recycled due to contact with food or other contaminants.	As a printing facility, it has always been good business practice for PRT to recycle waste paper, and it is very easy to include office paper in the same recycle bins.	<p>Assuming the waste paper recycled by PRT contains an average of 20% post-consumer fiber, this saves 1718 trees; 707,200 gallons of water; 60621 pounds of air pollution; 414,224 Kwh of energy; and 304 cubic yards of landfill space.</p> <p>PRT also received \$32,142 in payment for the recycled paper instead of paying to dispose of it in a landfill.</p>
	E. Justification for virgin office paper purchased.	Not applicable. PRT doesn't use virgin office paper.	X	X	X	X
<b>New or updated goals and objectives</b>		Use UV curing on the web press to reduce the amount of VOCs produced during the printing process.	Prime UV curing dries print jobs quickly to reduce the amount of emissions produced by printing ink.	Old, outdated equipment had to be replaced because it was incompatible with new, sustainable printing chemicals and processes.	Because Prime UV curing dries print jobs faster, it makes the plant more efficient and enables PRT to produce jobs more quickly.	Prime UV curing systems eliminate the emission of VOCs, so the web press no longer emits any VOCs during print production.

Topic	Required Actions	Goals	Progress to Date	Barriers and Challenges	Success Factors	Savings and Environmental Benefits
<i>New or updated goals and objectives</i>		Use ink sludge and pressroom waste to create energy.	Ink sludge and used press cleaning supplies are sent to Rineco for use as an alternative energy source instead of being handled as hazardous waste.	Very few vendors who handle pressroom waste have the ability to make sustainable use of the waste. Most vendors simply dispose of the waste following guidelines for the chemicals involved.	By using press waste as an alternative energy source, PRT receives payment that offset the cost of packing and delivering the material. This saves the agency money by eliminating the cost of disposing of it as hazardous waste.	Takes ink sludge and other pressroom waste out of the waste stream and has resulted in 600 pounds of recycled metal and 19,920 BTUs of energy since the initiative began.
		Switch to Computer to Plate (CtP) printing to reduce the use of film and processing solutions.	PRT does not use film or processing solutions to create printing plates.	We could not complete the switch to CtP until we could replace outdated press equipment that was not compatible with the new technology. There was a delay until funds were available to buy the new equipment.	The agency had already switched to mostly digital workflow in the prepress area, so there was very little training required to switch to CtP.	Eliminated the need for film negatives and the processing solutions used to create them. This eliminated the need to purchase or dispose of solutions containing silver and other heavy metals.
		Switch to a low-emission press wash solution to reduce the amount of VOCs produced during press maintenance and operation.	All presses now use a press wash that does not contain acetone or benzene, and produces 35% less VOCs than standard press washes.	The use of low-VOC materials is dependent on the ability of manufacturers to create environmentally friendly products that perform well and provide the high-quality prints.	The new press wash performs better than the one with more VOCs.	VOCs have been reduced by 35% over standard press wash solutions.

Topic	Required Actions	Goals	Progress to Date	Barriers and Challenges	Success Factors	Savings and Environmental Benefits
<p><i>New or updated goals and objectives - Continued</i></p>	<p>Executive Order 05-01, Section 6:</p> <p>The Department of Printing will lead a taskforce including the Department of General Administration, the Department of Information Services, and other interested agencies to recommend efficiency improvements for the management of printers and copiers in state agencies.</p>	<p>Establish a Print Management Committee with members from PRT, GA, DIS, and ECY to direct managed print efforts in the state.</p> <p>Provide Managed Print Services to PRT customers so agencies can accurately assess office printing and copying needs and acquire and maintain the right print equipment in a way that uses less energy and resources while providing a healthier work environment.</p>	<p>The Managed Print Committee was established in June 2005. continues to work with interested state agencies, cities, and counties to provide services to local governments and agencies for Print Assessments.</p> <p>A model RFP was developed in FY2005 for the Department of Ecology. A pool of qualified vendors has been contracted to provide print assessment services to local governments and state agencies..</p>	<p>Cultural issues make it difficult for agencies to streamline office equipment. Agencies may have difficulty obtaining the initial funding to perform print assessments, and there is currently no way for agencies to get credit for the money they save through print management.</p> <p>It is difficult to find vendors willing to provide impartial print assessments that are not linked to a specific brand of equipment.</p>	<p>The Governor's office has encouraged state agencies to implement print management because there is ample evidence that it will result in significant cost savings over the long run.</p> <p>Agencies are beginning to include print management as part of their sustainability goals.</p>	<p>Reducing the number of print devices reduces the amount of energy used and decreases the amount of ozone and paper dust emissions in the workplace.</p>

## **Appendix B**

# **FLEET MANAGEMENT PLAN**

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## **INTRODUCTION**

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Executive Order 05-01 requires state agencies to “employ professional vehicle fleet management and planning practices” to help the state meet sustainability goals of using less petroleum and reducing the amount of pollution produced by motor vehicles.

The Department of Printing (PRT) owns and maintains two vans and two trucks for pickup and delivery of print jobs. The shipping and facilities departments have traditionally managed and maintained this fleet to ensure peak operating efficiency, with each department overseeing tasks related to their areas of operation. By implementing this Fleet Management Plan, PRT has gathered the processes and procedures used by each department into an overall vision for the efficient use and maintenance of all vehicles owned and operated by the agency. The facilities department in partnership with the Bindery is now responsible for oversight of fleet management activities.

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## **FLEET MANAGEMENT**

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### **Vehicle Acquisition**

Because PRT must purchase all production equipment and delivery vehicles with the limited revenue produced by a five percent markup on materials, vehicles are purchased infrequently, and only as required to meet business needs. The agency purchases only base-model vehicles, with no optional or add-on features. All vehicle acquisitions follow General Administration’s acquisition policy, and are approved by executive staff.

### **Vehicle Replacement**

The Department of Printing does not receive funds from the state General Fund and must use the revenues generated by print jobs to purchase supplies and equipment. Because these funds are limited and must be used to purchase printing presses and other production equipment in addition to delivery vehicles, all vehicles in the PRT fleet are kept in service as long as possible. Vehicle replacement decisions are made according to the total cost of ownership and the ability of the vehicle to provide reliable service. When it becomes financially impractical to keep a vehicle due to repair or fuel costs, or the vehicle becomes so unreliable that it interferes with PRT’s ability to deliver jobs, the vehicle is replaced after approval by the agency’s executive staff. A formal process for allocating funds for vehicle replacement is expected to be in place by December 1, 2006.

### **Vehicle Utilization**

All vehicles are used for the delivery of print jobs and are operated only by PRT delivery drivers. The Bindery Manager is responsible for overseeing when and how the vehicles are used, and delivery schedules are coordinated to make the most efficient use of time and fuel. A time-based delivery fee is charged on customer invoices to offset costs associated with operating and maintaining delivery vehicles.

## Vehicle Inventory

The Department of Printing owns and operates the following four vehicles, with an average fleet age of 7.25 years.

License Number	Vehicle Type	Assignment and Location	Make/Model	Year	VIN	Mileage	Annual Usage*
16363E	Truck	Delivery - Main Plant	Grumman Workhorse	2001	5B4JP42R713333899	47,749	2962
16305E	Truck	Delivery - Main Plant	Ford Cube	1995	1FDWH70C95VA76596	53,638	21,023
09899E	Van	Delivery - Main Plant	Ford Econoline	1997	1FTFE24L8VHB6955	186,101	20,296
14419E	Van	Delivery - Main Plant	Chevrolet Express	2006	1GCGG25V061102816	19,519	16,360

## Fleet Management Policies and Procedures

The following written policies, procedures, and tasks have been created by PRT to facilitate fleet management activities. In addition, existing procedures for vehicle acquisition, vehicle replacement, and preventative maintenance are being formalized and put in writing.

- Policy 39.01: Purchasing Goods and Services
- Procedure 36.SA.02: Reporting Accidents Involving PRT Vehicles
- Task 01.SA.2: Using PRT Fuel Cards

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## OPERATIONS MANAGEMENT

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### Vehicle Repair

The Department of Printing uses a commercial vehicle repair shop for all vehicles owned and operated by the agency. When a driver sees that a vehicle needs to be repaired, he or she reports the need to the Bindery Manager. The manager then contacts the Facilities Coordinator and obtains a written estimate of repair costs. After the Plant Manager approves the repair at cost given in the written estimate, the Facilities Coordinator obtains a purchase order for the repair and the driver takes the vehicle to the repair shop. The same procedure is followed if the repair is required because the vehicle has been in an accident. Written procedures are being created to formalize this process, and should be in place by December 1, 2006.

### Preventive Maintenance

All Department of Printing vehicles are routinely checked for safety and optimum performance, and the Facilities Office keeps a log tracking the preventive maintenance and repair performed on each vehicle. Although PRT has tracked vehicle maintenance for some time, the procedure is not documented at this time. We expect to have a written procedure for preventive maintenance by December 1, 2006.

## Fuel Cards

Fuel cards are used only by PRT drivers as described in Written Procedures; Task 01.SA.2.

## Vehicle Warranty Usage Process

Only one PRT vehicle, a 2006 Chevrolet Express van, is currently under warranty. The Chief Financial Officer maintains a file of vehicle warranties. Because PRT did not have any vehicles under warranty until recently, the agency does not have a written process for using vehicle warranties. Based on the size of the agency and its fleet, the warranties are easily managed by the Chief Financial Officer.

## Fleet Operating and Maintenance Costs

The Department of Printing tracks fleet operating and maintenance costs through its normal accounting software. Unfortunately, the software removes some details for entries after the accounts are closed for a fiscal year. As a result, PRT does not have a breakdown of how the total cost for vehicle repair and maintenance was distributed among vehicles, or how much of the cost was for preventive maintenance and how much was for repair.

The table below shows the total cost for vehicle repair and maintenance for all PRT vehicles for fiscal year 2006. Because the cost cannot be broken down by vehicle, the figure provided also includes maintenance and repair costs for a 1989 Ford Cube Truck which PRT replaced in 2005. Steps have been taken to make it possible to gather reliable cost breakdowns, and future fleet management plans will provide data for preventive maintenance and repair costs for each vehicle.

License No.	Type	Make/Model	Year	VIN	FY 2006 Miles*	FY 2006 Fuel <sup>†</sup>		FY 2005 PM Cost	FY 2005 Repair Cost
						Cost	Gal.		
16363E	Truck	Grumman Workhorse	2001	5B4JP42R713333899	2962	\$726.61	290		
16305E	Truck	Ford Cube	1995	1FDWH70C95VA76596	21,023	\$8,310.06	3140		
09899E	Van	Ford Econoline	1997	1FTFE24L8VHB6955	20,296	\$5,385.48	2118		
14419E	Van	Chevrolet Express	2006	1GCGG25V061102816	19,519	\$4,597.84	1798		
<b>TOTALS</b>					<b>60,641</b>	<b>\$19,020.49</b>	<b>7346</b>	<b>\$24,988.63</b>	

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## SUSTAINABILITY MANAGEMENT

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The Department of Printing is not required to comply with the requirements of the Energy Policy Act (EPAct) because it owns and operates only four vehicles. However, PRT has set goals for increasing fuel efficiency and reducing the amount of emissions produced by these vehicles.

The agency has set a long-term goal of replacing at least half of the agency's diesel or gasoline-powered delivery vehicles with hybrid or alternative fuel models by 2015. Unfortunately, when PRT investigated the possibility of switching its diesel-powered delivery truck to biodiesel in 2004, the low availability and high cost of biodiesel fuel made it impractical to proceed with biodiesel at that time. Instead, PRT replaced the diesel-powered truck with gasoline-powered van during this fiscal year. The new delivery vehicle represents a small step forward because it provides higher gas mileage and fewer emissions than the diesel model it replaced.

There are currently no hybrid vehicles on the market capable of acting as delivery vehicles. However, the agency will continue to review the feasibility of hybrid or alternative-fuel vehicles as more models become available and alternative fuels become more cost effective.

### **Vehicle Mileage and Fuel Use**

Please see the Statewide Performance Measures section of the PRT Sustainability Plan for sustainability goals and data related to vehicle and fuel use.

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## **INFORMATION SYSTEM**

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Because the Department of Printing owns and operates only four vehicles, the agency does not have an information system devoted solely to fleet vehicles. However, the Facilities Department keeps an Access database to track and manage maintenance and repair of vehicles, and a written log is kept to track the mileage, fuel use, maintenance, and repair for each vehicle. All financial information related to agency vehicles is processed through the agency's accounting software, Microsoft Great Plains, and it is possible to run financial reports using this software.