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## Moving Toward Beyond Waste with Industries

### Introduction

The goal of this initiative is to maintain the economic vitality of Washington State industries as we reduce wastes and toxic releases, and to increase the use of recyclable materials. This can only be accomplished through cooperation and partnerships between Ecology and industry.

To date, business and government have made great strides together in reducing waste generation and improving waste management. However, there are still many opportunities to foster business competitiveness and protect human health and the environment.

Redesigned processes and products will result in reduced costs for industry, less need for government regulation, improved conditions for workers, and a better environment. The adoption of more efficient production methods for goods and services will position Washington businesses to be leaders. This will increase the ability of Washington's businesses to sell to other national and international firms that have already adopted such practices and are requiring their suppliers to do the same. Ultimately, this will enhance economic vitality in the state.

For the purposes of this initiative, the term "industries" includes the sectors of Washington's economy (public agencies as well as private companies) that produce goods and services for businesses and citizens. Industrial activity generates a significant portion of the solid waste and most of the hazardous waste generated in Washington. Managing these wastes costs Washington industries millions of dollars each year. If this initiative is successful, Washington's industries will greatly reduce these costs, making them more competitive. Ultimately, the 1.1 million tons of solid waste disposed, 0.2 million tons of hazardous waste generated and almost 16,000 tons of toxic chemicals released by industry each year will no longer be in our environment<sup>1</sup>.

This initiative was selected as one of the keys to Beyond Waste for three main reasons:

1. Significantly reducing wastes and hazardous substances from Washington industries should, over time, increase competitiveness with out-of-state businesses and strengthen the state economy.
2. Most of the toxic wastes are generated by industry in the course of providing consumer products and services. These wastes are costly to manage and pose high risks to human health and the environment.

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<sup>1</sup> Cascadia Consulting Group and Ross & Associates, *Achieving the Beyond Waste Vision – A Framework for Moving Forward*, p. 40, prepared for the WA State Dept. of Ecology, March 24, 2003.

3. Many Washington industries already have working relationships with Ecology staff, especially through the pollution prevention (P2) planning program. These well-established relationships will be springboards for working together to reduce waste and increase competitiveness for businesses.

This initiative focuses not only on reducing wastes in industry, but also on reducing/eliminating the use of hazardous substances, such as toxic chemicals in Washington's industrial processes. Hazardous wastes are difficult to recycle. In addition, hazardous substances used in manufacturing often result in hazardous substances in the products themselves. These products carry with them an environmental and sometimes public health risk before, during and after their use.

### **Today's Reality**

Washington State's population is projected to grow dramatically to 7.8 million by 2025. Hazardous wastes, toxic releases from manufacturing processes, and product consumption will also increase. This will add to the potential for human exposure to toxic chemicals and environmental degradation. At the same time, most industries will be looking for ways to increase market share and reduce costs to stay competitive in an ever more global marketplace. It is a very tough time for business in Washington. This was the recurring theme expressed at Ecology's Hazardous Waste Generator focus groups in 2003.

Washington's economy is in the midst of change. Manufacturing jobs are diminishing and, as the population increases, there will be additional growth with service industries. These changes affect the type of wastes generated and hazardous substances used. Based on projected employment, some of Washington State's traditional industries such as aerospace and aluminum production are expected to continue to decrease. Other sectors are expected to increase such as chemical manufacturing, petroleum refining, government, services, electrical/electronic equipment production, wholesale trade, and industrial machinery/equipment.<sup>2</sup>

Partially due to state of the economy, it will not be easy to achieve the Beyond Waste goals in the industrial sector. As a society, it will take technological changes (hazardous material substitution, more ways to reduce and recycle wastes, etc), time, financial resources and incentives for waste and toxic reductions by purchasers of goods and services. Getting to Beyond Waste will involve a culture change within any organization as well as external pressures such as requirements by shareholders, product or service purchasers or regulators. Ecology, in cooperation with industries and other key players in the economy, will continue to examine these areas of change to develop more long-term strategies for achieving Beyond Waste.

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<sup>2</sup> Cascadia Consulting Group and Ross & Associates, *Achieving the Beyond Waste Vision – A Framework for Moving Forward*, pp. 16-17, prepared for the WA State Dept. of Ecology, March 24, 2003.

One of the additional challenges for the future will be addressing the toxics in products. Research by INFORM conducted in New Jersey and Massachusetts found that 95% of the persistent, bioaccumulative toxins (PBTs) leaving industrial facilities leave in products destined for commercial and consumer use (batteries, deodorizers, art supplies, fertilizers, etc.), rather than in releases to air, water or off-site disposal.<sup>3</sup> The problem with this is many of these products are used and disposed by the individual homeowner and are not handled in a manner many experts feel PBTs should be. Polybrominated diphenyl ether (PBDE) is a classic example of this. It is found mainly in products, not wastes. Because PBDE is so widely dispersed in the environment, it is showing up in high levels in both animal and human blood as well as human breast milk. Ecology's efforts up to now have mainly been focused on wastes, not products. In fact, Ecology has very little authority to regulate toxics in products. However, Ecology has broad authority to encourage voluntary reductions of hazardous substance use.

### Goals: What Washington will look like in 30 years

The following are 30-year goals for the Industries Initiative:

- **Safe Products and Services:** Most threats to human health and the environment due to hazardous materials have been eliminated. The products and services produced in Washington are designed to minimize hazards throughout their life-cycles. Nearly all products are less toxic, and consumer demand for effective, environmentally friendly products is widespread. Products formulated with hazardous materials are handled as carefully as hazardous waste.
- **Economic Vitality:** Washington businesses and other sectors thrive in the domestic and global marketplace as hazardous materials are systematically eliminated from products and services. Consumer confidence has increased, risks and liabilities have decreased, and costs for managing wastes are reduced. Washington businesses, and the products and services they provide, are designed to maximize pollution prevention and sustainability principles.
- **Sustainable Materials Management:** Consumers demand sustainable products and services that Washington businesses design and provide. Protecting human health and the environment are paramount. A well-operating infrastructure for safely and responsibly managing hazardous materials exists.

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<sup>3</sup> INFORM. "Purchasing for Pollution Prevention." Available at [http://www.informinc.org/p3\\_00.php](http://www.informinc.org/p3_00.php) accessed 11/17/04.

While these goals may seem ambitious; they are in line with other forward thinking companies and institutions. A prime example is the U.S. Army's Fort Lewis objectives for 2025, shown below.

### **Fort Lewis Long-term Vision**

Current objectives for 2025:

- Eliminate all petroleum and fossil fuel use by 2025.
- 100 percent of electricity produced on-site by 2025.
- All listed and candidate federal species in the Puget Sound area will be recovered by 2017.
- All materials purchased will be recycled, recyclable and leased. Procurement will include the environmental value and impact of product purchased (2007).
- Zero net waste.
- Zero discharge of waste water.

In a Beyond Waste future, most industrial wastes will be significantly reduced and very few toxic products will be used. Over the years, fewer and fewer cleanup sites would be created and there will be less and less mismanaged industrial waste. People will not be threatening to sue industries for exposure to toxic chemicals, but instead will be actively supporting and promoting their local industries. Businesses will thrive in Washington and be sustainable both economically and environmentally.

Studies bear out that there is a strong correlation between profitability and strong environmental performance for individual businesses.<sup>4</sup> Since it is clearly established for individual companies that good environmental performance positively affects their competitiveness, profitability and stock market performance, it makes sense that the more businesses emphasize sustainability in a geographic area, the more the overall economy should improve.

Specific outcomes for this initiative include:

- ✓ Less solid waste and less hazardous waste.
- ✓ Fewer hazardous substances used (in products and processes).
- ✓ Less environmental risk from materials used in products and processes.
- ✓ More recovery and reuse of materials.
- ✓ More profitable businesses.
- ✓ Increased economic viability.

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<sup>4</sup> Murphy, Christopher, J. "The Profitable Correlation between Environmental and Financial Performance: A Review of the Research." 2002

An example of a company that works toward these outcomes would be a business that develops a comprehensive Environmental Management System (EMS) that results in holistic, continual improvements. One of the many tools they may use would be lean manufacturing techniques. As a part of its EMS, the company would examine all its inputs and outputs, figure out how to reduce wastes, and substitute less risky and/or hazardous inputs so its product outputs would be less hazardous. The products produced by such a company would be easier to reuse and recycle. The company would spend less money, time, and energy managing its by-products and wastes. Some well-known Northwest companies and institutions such as Starbucks, REI, Nike, and Fort Lewis are already working to achieve these outcomes. Here is one example of a company mission statement that emphasizes this approach.

### **Nike Mission Statement**

Through the adoption of sustainable business practices our company is committed to securing intergenerational quality of life, restoring the environment and increasing value for our customers, shareholders and business partners. Among our goals:

- Eliminate waste and potentially harmful substances from materials and manufacturing processes.
- Designing products that can either be donated, brought back and re-manufactured, or safely returned to nature.

There are many other lesser known companies that are also working to achieve these outcomes. Some of these other businesses are critical to success of the other Beyond Waste initiatives. For example, Quadrant Corporation in Bellevue, one of the largest homebuilders in the Puget Sound region, certifies its homes as “Built Green.” Another local Northwest company, Canyon Creek Cabinet out of Monroe is one of the largest kitchen and bath cabinet manufacturers in the Northwest. They have pioneered use of water-based finishes and substitutes for solvents to clean equipment. We also have innovative businesses working directly to better the environment by recycling and composting existing wastes. Without such businesses in Washington, Beyond Waste would be an impossibility.

## **Discussion of Strategies**

As previously mentioned, this initiative is a continuation of the direction Ecology and industry are already moving in, with some important changes. Those changes are as follows:

- A. More emphasis on collaborative partnerships and the recognition of the importance of a vital economy and a healthy environment for everyone. The old paradigms of industry vs. government and economy vs. environment are replaced with a shared mission to protect human health and save money. Industries and government work together to minimize the production and use of hazardous materials.
- B. New emphasis on hazardous substance reduction and toxics in products.

- C. New and modified strategies and tools that provide mutually beneficial incentives for Beyond Waste.

These three changes are discussed in greater detail below.

### **A. Partnerships**

The emphasis on partnerships is critical. The advantages are many. Partnerships offer the chance to understand barriers, and craft workable solutions. However, it is one of the more challenging changes to implement. Ecology should continue toward cultural change and away from its former presumption that a command and control approach is always warranted. One possible way to achieve these partnerships is to work with industry to build a regulatory framework that is linked to environmental performance. For example, perhaps less testing or reporting would be required if other performance measures were met. Ecology staff needs to be open to these and other similar suggestions if the outcome will be a better environment for all of us. A successful partnership is when businesses see that Ecology cares about their economic future and Ecology has evidence to advocate that Washington's hazardous waste generators are doing the right thing.

A key method to achieve working partnerships is through "sector work/campaigns." Through focused sector work, Ecology provides extensive education and technical assistance to encourage a group of industries to change their behavior in a way that leads to significant environmental protection. The Hazardous Waste & Toxics Reduction (HWTR) Program has had success with sector campaigns in the past. Some examples are Shop Sweeps (auto body shops), Snapshots (photofinishers), the Cleaner Production Challenge (metal finishers, circuit-board manufacturers, and aerospace parts manufacturers), and the work on mercury that is being done under the auspices of the agency's persistent, bioaccumulative toxins (PBT) strategy. Focused sector efforts may concentrate on groups of hazardous waste generators that generate the same type of waste, use the same process, or are considered to be a sector due to similar economic interests. Over time, these sector efforts will become more of a focus for the work of the HWTR Program, and hopefully other state and local agencies as well. The goal is for future sector work to be more holistic and far-reaching than past sector campaigns. For example, these sector campaigns should not just be focused on waste, but also on hazardous substance reduction and multi-media approaches.

### **B. Product Input**

The emphasis on hazardous substance reduction is due to the recognition that most future wastes are products that contain hazardous material.<sup>5</sup> Consequently, industries and government can no longer only look at wastes that are generated during the manufacturing process. They must also look at the wastes resulting from the products themselves. It is important to review material inputs and see if changing the inputs will produce less toxic products. Material inputs also impact future reduction and recycling opportunities. For example, some products may be easier to recycle and reduce if different inputs are used. A

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<sup>5</sup> WA State Dept. of Ecology, *The Future of Waste and Toxins in Washington*, Publication No. 04-04-015, April 2004.

good example of this is the use of water-based inks instead of oil-based inks. Oil-based inks generate a hazardous waste when recycled. Recycling water-based inks generates much less waste.

This focus on hazardous substance reduction is critical because as long as hazardous products are created, hazardous wastes will also be created. To eliminate wastes and to get to the root cause of the situation, hazardous substances must also be eliminated. In addition, some hazardous wastes and/or substances may be so toxic that it may be important to take them out of use to protect the environment. This may require a comprehensive approach of education, incentives and legislation in conjunction with the state's PBT strategy and rule.

### **C. Incentives**

The third big change is the development of new strategies that provide mutually beneficial incentives for Beyond Waste. While some of the incentives may address short-term problems such as what to do with the phased-out mercury auto switches, most of the incentives will be far-reaching and encourage long-term efforts to achieve the Beyond Waste goals. Some of these strategies may have been used in the past, but they will be modified in a way to make them more effective. An example of mutually beneficial incentives is the mercury Memorandum of Understanding (MOU) that was signed in 2003 by the Washington State Dental Association and Ecology. The agreement states that Ecology will not take action against dentists for lacking amalgam separators if the Dental Association agrees to have their members install such separators within two years. The agreement is a win-win situation for both entities.

Mutually beneficial incentives will become a keystone for future sector work. For example, if the drycleaners sector is chosen, Ecology might come up with a package of incentives to encourage drycleaners to switch to a more environmentally friendly process than the current use of the chemical perchloroethylene (PERC). PERC is a cancer-causing chemical that persists in the environment and it has contaminated some water municipal supply systems. Such an incentives package might include low-interest loans to convert to a non-PERC process, public recognition for those drycleaners that have changed to the less polluting process, and a targeted education effort to encourage consumers to use drycleaners that are more environmentally friendly. At the beginning of the drycleaners sector work, it would be important to work with drycleaner associations to identify how such a focused sector effort by Ecology could benefit their members. Sector efforts will be successful with industries that see the benefits of these partnerships. Ecology's desire is that every focused sector effort helps the selected industry sector economically as well as being good for the environment.

### **Proposed Actions**

Listed below are the recommendations for this initiative. Each recommendation is followed by some background information that explains the rationale for the proposed actions.

### Short-term Milestones

The following milestones are proposed for the first five years of the Industries Initiative:

- ✓ Most of the companies participating in the Cleaner Production Challenge have an overall 10-25 percent reduction in wastes, including a 50-90 percent reduction of water consumption and wastewaters and 30-60 percent reduction of hazardous sludge. (It is Ecology's intent that specific numerical goals be set for any future sector work.)
- ✓ A chemical action plan for polybrominated diphenyl ethers (PBDE) has been agreed to and is being implemented to reduce threats posed by these toxic flame-retardants.
- ✓ The Washington State Mercury Chemical Action Plan has been fully implemented for hospitals, auto switches and lamps, resulting in significantly less mercury in the environment.
- ✓ Government is leading by example, with significantly less waste generation and reduced use of toxic substances at the local, state and federal levels. The mandated federal agencies are actively implementing their Environmental Management Systems (EMS) and the required state agencies are actively implementing their sustainability plans. The state contract for hazardous waste management and disposal reflects a preference for waste recycling/reclamation when not in conflict with minimizing long-term liability.
- ✓ Another sector project has been chosen and work has been started on it.
- ✓ If, in the next two years, another PBT chemical is chosen for an action plan by Ecology in compliance with the proposed PBT rule, that plan has been developed and at least partially implemented.
- ✓ The Hazardous Waste & Toxic Reduction Program Web site includes much more information about best management practices, including alternatives, for key wastes and substances.
- ✓ Most pollution prevention plans comprehensively address hazardous substance use.
- ✓ Most of the major new businesses locating in Washington State have been designed to minimize wastes and toxics.
- ✓ Most hazardous waste handlers in Washington have taken noticeable steps toward becoming brokers of materials to encourage more reuse and recycling by those who generate hazardous waste.
- ✓ With the support of stakeholders, additional incentives have been identified to implement Beyond Waste, which may include changes to hazardous waste fees and taxes.
- ✓ An adequately-funded low-interest financing program for the upfront capital costs for preventing pollution and for technologies to reduce wastes and toxics is in place, and some businesses have obtained loans.
- ✓ EPA and Ecology have been working together to implement Beyond Waste.

## Summary List of Recommendations

<b>Recommendation IND1</b>	Focus on sector work
<b>Recommendation IND2</b>	Specific sectors to focus on
<b>Recommendation IND3</b>	Develop a standardized process for sector work
<b>Recommendation IND4</b>	Develop specific tools for sector work
<b>Recommendation IND5</b>	Modify the Pollution Prevention Planning program to dovetail with the Beyond Waste vision
<b>Recommendation IND6</b>	Expand information on Ecology's Web site
<b>Recommendation IND7</b>	Form a work group on low-interest loans
<b>Recommendation IND8</b>	Renegotiate the state agreement with EPA
<b>Recommendation IND9</b>	Collaborate with affected parties to explore changes to hazardous waste fees and taxes
<b>Recommendation IND10</b>	Explore ways to implement Beyond Waste incentives
<b>Recommendation IND11</b>	Encourage new businesses to adopt sustainability practices
<b>Recommendation IND12</b>	Encourage waste handlers to become materials brokers
<b>Recommendation IND13</b>	Support EPA's "Beyond Waste-type" efforts
<b>Recommendation IND14</b>	Promote sustainability in product development

## Priority Recommendations

### Recommendation IND1 — Focus on sector work

#### Statement of Action

Focus Ecology's hazardous waste and toxic substance use reduction efforts on businesses in selected industry sectors. Focused efforts and partnerships with industry sectors will encourage hazardous waste generators to make changes that will lead to significant environmental protection and will result in sustainable industrial practices. Some examples of sector work are:

- ✓ Statewide sector efforts that will encourage hazardous waste generators to make changes that will lead to significant environmental protection and will result in sustainable practices.
- ✓ Aligning existing Hazardous Waste & Toxics Reduction (HWTR) Program activities such as Technical Resources for Engineering Efficiency (TREE), environmentally preferable purchasing, and pollution prevention assistance to dovetail with statewide sector efforts.
- ✓ Due to unique regional situations or at the request of local governments or the legislature, some sector work may be conducted in individual regions of the state rather than statewide.
- ✓ Aligning the HWTR Program data collection and reporting system to be sector focused which will assist with program planning for and evaluation of sector work.

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However, there will continue to be activities in the HWTR Program that may not relate to current priority sectors such as dealing with complaints from the public about improper hazardous waste management activities, abandoned hazardous waste sites, required inspections, pollution prevention plan review, legislative requests, etc.

### **Background/Rationale**

Currently, there are 300 business-type sectors generating recurrent hazardous waste in the state. Due to this large number of sectors, the plan is for HWTR Program sector work to be continuous and ongoing. Each sector effort will emphasize sustainable practices in line with the Governor's commitment to sustainability. Specific goals will be set for each focused sector effort. Compliance issues will not be ignored and will be made a part of the effort's approach when appropriate. The collection of data, before and after, is critical to be able to evaluate the success of each sector effort separately.

Focused sector efforts are efficient ways to use limited resources. Positive feedback and results have been received for previous sector efforts conducted by the HWTR Program. Also, partnerships, which are essential for this project, are easier to achieve with focused sector efforts.

### **Recommendation IND2 — Specific sectors to focus on**

#### **Statement of Action**

Work on the following sectors:

- ✓ Finish work on the existing Cleaner Production Challenge which focuses on the metal-finishing sector.
- ✓ Finish implementing key recommendations of the Washington State Mercury Chemical Action Plan, including mercury-related issues with auto switches and lights, and in hospitals.
- ✓ Sectors that are consistent with Ecology's next chemical action plan, which is polybrominated diphenyl ethers (PBDE), a class of flame-retardants.
- ✓ The general government sector (including federal, state, and local government) with emphasis on greenhouse gases, PBTs, and environmentally preferable purchasing.
- ✓ Other industries, institutions, wastes, and hazardous substances being considered include hospitals, colleges and universities, auto recyclers, and industries that produce or use lead, greenhouse gases, biodiesel, used oil, polyvinyl chloride (PVC) plastics or solvents, and/or construction and demolition wastes.

### **Background/Rationale**

These sectors were chosen because they meet most of the important criteria for sector work including: the potential for significant waste or hazardous material use reduction or other significant environmental improvement; they are strong drivers compatible with the Beyond Waste vision; companies are likely to be receptive to exploring partnership opportunities

with Ecology, and economics work in direction of Beyond Waste. The exact sectors were chosen due to the following reasons:

1. It makes sense to finish work that has been started on the Cleaner Production Challenge and mercury.
2. The Governor has asked Ecology to implement another chemical action plan. This needs to be an agency priority.
3. Throughout the Beyond Waste Project, Ecology has received comments on the importance of government leading by example. Since the Governor has required some state agencies to develop sustainability plans, it makes sense to continue this work. Also, some federal agencies are being required to develop Environmental Management Systems. Lessons learned with the general government sector can be used for the next sector efforts. It also makes sense to emphasize PBTs and greenhouse gases due to the momentum behind them from the state's PBT strategy and the three state (Washington, Oregon and California) Governors' agreement on reduction of greenhouses gases.

### **Recommendation IND3 — Develop a standardized process for sector work**

#### **Statement of Action**

Develop a standardized process to clarify and guide how sectors will be selected in the future and how sector work will be conducted. Whenever possible, sector projects will emphasize multi-media approaches and address both pollution prevention and compliance issues.

#### **Background/Rationale**

Since it is anticipated that this sector work is to be continuous and ongoing, a standardized process would increase the efficiency of this work and prevent each new group of staff assigned to sector work from having to "reinvent the wheel." Such a process could ensure that certain aspects are examined at the beginning of every sector effort and a standardized evaluation is done at the end of every sector effort.

### **Recommendation IND4 — Develop specific tools for sector work**

#### **Statement of Action**

Use the right mix of specific tools to implement sector work on a case-by-case basis as needed, such as:

- Targeted consumer education (information geared to the homeowner on proper use and management of specific products containing hazardous materials and wastes) will tie into sector efforts as appropriate. For example, consumer education may not be a tool for the general government focused sector effort, but it will be used for sectors that may impact the general population such as PBDE. Most likely, consumer education will be accomplished by grants to local governments and/or contracts to for-profit or non-profit organizations since Ecology does not have the staffing for educational campaigns.
- MOU's (memoranda of understanding) with trade associations or organizations to lessen or phase-out hazardous substance use or to encourage proper management of certain hazardous materials will be considered similar to the Memorandum of Understanding with the

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Washington Dental Association. These agreements are voluntary and yet can be more successful than enforcement efforts.

- Environmentally preferable purchasing (EPP) is purchasing goods and services that are more environmentally preferable because they contain less toxic materials, create less waste, or are more energy efficient. EPP is an important tool that will be used a lot for the next several focused sector efforts, especially for the general government sector work. Not only will environmentally preferable goods and services be emphasized, but staff from the HWTR Program will also work to get certain hazardous products removed from the state contract list. This list is used by state, local, and other public entities to purchase a huge amount of goods.
- Environmental Management System (EMS) templates for specific industries will be developed for certain sector work. They may be appropriate for the general government effort for certain public agencies, especially since all federal agencies are required to have EMS's by 2005. It will also be useful for some of the larger industries. Such a template would make doing an EMS much easier, and quicker, especially for businesses not familiar with how to develop an EMS. These templates will emphasize multi-media approaches to waste management.
- Pilot projects to test a regulatory approach that is more closely linked to environmental performance.

### Background/Rationale

For each focused sector effort, the tools may be different. It is important to have effective tools available to help achieve the goals for that sector, with the recognition that some new tools will need to be developed and some old tools will need to be revamped. This may take some time. In the long-run, the goal is to have enough working tools so that each focused sector effort can be extremely effective.

## Recommendation IND5 — Modify the Pollution Prevention Planning program to dovetail with the Beyond Waste vision

### Statement of Action

Modify the Pollution Prevention (P2) Planning program activities and program direction to dovetail more closely with the Beyond Waste vision, since it is a key tool for implementing the Industries Initiative. Some of the possible ways to do this are:

- Make P2 plans more effective.
- Tie in P2 data tracking with Beyond Waste data tracking efforts.
- Encourage earlier P2 planning that emphasizes designing that includes recycling in products and processes, and excludes the use of toxic substances in products and processes.

### Background/Rationale

One of the keys to implementing the Industries Initiative will be Washington's P2 Planning program. Since this program requires larger generators of wastes to do 5-year P2 plans and annual progress reports, it makes sense for Ecology staff to work closely with P2 planners so they do more than just the required plans and/or annual reports. P2 plans can and should actually

work to achieve the Beyond Waste vision. Most of the P2 recommendations (listed under the Current Hazardous Waste System Issues in the summary document and Background Papers) dovetail nicely with the Industries Initiative, are in line with Beyond Waste vision, and will make the P2 program more effective. In addition, tying together the P2 data tracking system with the Beyond Waste data tracking system should benefit both systems. Encouraging earlier P2 planning so that, ideally, the waste is not created to begin with, will also further the Beyond Waste goals.

### **Recommendation IND6 — Expand information on Ecology’s Web site**

#### **Statement of Action**

Encourage all hazardous waste generators in Washington to reduce toxics contained in their products, as well as wastes generated in making their products, and to properly manage the remaining wastes. The HWTR Program Web site will be expanded to include more detailed information on specific waste streams and processes, with an emphasis on best management practices. Multi-media approaches will be emphasized.

#### **Background/Rationale**

The focus groups and the survey of hazardous waste generators conducted during the Beyond Waste Project indicated that many facilities in Washington would like to do a better job of reducing and managing their hazardous substances and wastes. Yet, a lack of information and the belief that there are no effective non-toxic alternatives (which may or may not be true) were identified as two of the barriers to the reduction of toxics and wastes. A better Web site would free up Ecology staff time spent on basic technical assistance and allow for staff to work on other Beyond Waste efforts. In addition, some generators are reluctant to call Ecology for technical assistance due to compliance concerns. A good Web site could provide information for those generators. The Web site would also be a good way to provide recognition to facilities that are doing a good job of reducing wastes and toxics.

### **Recommendation IND7 — Form a work group on low-interest loans**

#### **Statement of Action**

Form a work group to explore how to provide low-interest loans or other financing to businesses and other organizations for innovative pollution prevention or other environmental improvements, such as redesigning products to minimize the use of hazardous substances. Other state and agency programs, including the existing Cascadia revolving fund, that have successful financing mechanisms and/or low-interest loan programs will be examined, as well as funding needs and legal issues.

#### **Background/ Rationale**

The survey of hazardous waste generators conducted as a part of the Beyond Waste Project indicated that pollution prevention “costs too much” and this is seen as a barrier. The focus groups indicated a high level of support among smaller businesses for low-interest loans to fund environmental improvements. (The larger businesses were not opposed to a low-interest loan program; they were just unlikely to use or need low-interest loans.) Business loans typically have high interest rates, up to 15 percent, and in some cases due to a short

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time of being in operation or other factors, it may be impossible for some businesses to obtain loans from a typical bank.

The Cascadia revolving fund, which is operated by a non-profit organization, exists for this purpose in Washington. However, it is a small account with not enough capital to fund all the projects that would be needed to get to Beyond Waste. One of the tasks of this work group would be to do an assessment of needs to see what type of funding will be needed to achieve the desired outcomes.

### **Recommendation IND8 — Renegotiate the state agreement with EPA**

#### **Statement of Action**

The HWTR Program will work with the Environmental Protection Agency (EPA) to negotiate the state/EPA agreement (which partially dictates Ecology's workload and provides financial support for much of the program's compliance work) to focus more on meeting the Beyond Waste Plan goals, including sector work.

#### **Background/Rationale**

It makes sense to ensure that the program's compliance efforts are consistent with the HWTR Program's priority sector work. It has been shown that the reduction of wastes and toxics may also reduce the difficulties generators have when it comes to staying in compliance with the Dangerous Waste Regulations. In addition, as has been previously mentioned, the HWTR Program resources are limited. Since the agreement with EPA dictates much of the Program's compliance work, renegotiating the agreement to be more in line with this plan and the HWTR Program's emphasis on sectors would increase the possible resources that are available to this project.

### **Recommendation IND9 — Collaborate with affected parties to explore changes to hazardous waste fees and taxes**

#### **Statement of Action**

Work in collaboration with affected parties to explore the feasibility of restructuring the existing hazardous waste fees and taxes, including the planning fee, and the Hazardous Substance Tax to provide incentives for reducing hazardous wastes and substances.

#### **Background/Rationale**

Ideally, these fees and taxes would provide incentives for the reduction of hazardous wastes and substances, which they currently do not do. In addition, there are several problems with these fees and taxes regarding how equitable they are. For example, small companies pay proportionally more than do large companies.

Economics play an important role in determining whether hazardous waste generators will invest in reduction and recycling. There may not be enough of an economic incentive for a company to disinvest in toxic products. Appropriately structured fees and taxes could help rectify this situation.

## **Recommendation IND10 — Explore ways to implement Beyond Waste incentives**

### **Statement of Action**

Work with affected parties to recommend ways to implement financial and regulatory incentives and approaches to encourage hazardous waste generators to adopt Beyond Waste behaviors. Some possible incentives and approaches are as follows:

- ✓ Performance results: Reduce “regulatory burdens” for businesses that adopt environmentally beneficial results that are above and beyond current requirements.
- ✓ Green technology: Accelerating adoption of environmentally beneficial technology, primarily in the public sector.
- ✓ Product stewardship: Collaborating with producers/manufacturers to take responsibility for minimizing their product’s environmental effects.
- ✓ Product certification/labeling: Certifying the environmental performance of products by an independent third party.
- ✓ Recognition programs: Recognizing businesses that volunteer and meet certain waste-reduction criteria (and the recognition is used as a marketing incentive).
- ✓ Tax or fee incentives including rebates and advance fees: Using state/local tax code to indirectly encourage a desired behavior.
- ✓ Eliminate subsidies: Removing current payments that directly or indirectly encourage use of toxic substances and virgin materials.
- ✓ Fees: Charging fees on a relative scale to pay for government oversight – polluters pay on a sliding scale, based on type or amount of pollutant/waste.
- ✓ Phase out highly toxic substances using memorandums of agreement: Developing a memorandum of agreement between Ecology and affected parties to phase out certain highly toxic substances.
- ✓ Assistance in redesigning an organization’s product or process: Providing assistance to companies in redesign efforts, to the benefit of the company and the environment.

### **Background/Rationale**

Incentives are the key factor to encourage adoption of Beyond Waste behaviors. More research needs to be done to see which incentives would be most effective within the context of the different initiatives and program areas.

## **Recommendation IND11 — Encourage new businesses to adopt sustainability practices**

### **Statement of Action**

In cooperation with the Washington State Department of Community Trade and Economic Development (CTED), Ecology should work with new businesses locating in the state to

encourage them to adopt pollution prevention and sustainability practices into their facility and product design.

### **Background/Rationale**

It is much easier to incorporate P2 and sustainability into a facility before it is built than after. Unfortunately, it not easy to actually accomplish this because many facilities start out small, sometimes simply in someone's garage, and become large over time. Currently, a facility isn't required to prepare a P2 plan until two years after they generate sufficient quantities of hazardous waste. Since CTED recruits new businesses into the state, working with them is one way to encourage early adoption of P2 principles and sustainability.

### **Recommendation IND12 — Encourage waste handlers to become materials brokers**

#### **Statement of Action**

Provide technical assistance to waste handling firms so they can become materials brokers and transcend the current treatment, storage and disposal model to support greater material reuse and recycling. The goal is for these "second generation" treatment facilities to reclaim and recover waste for beneficial value and to stock reusable materials for redistribution and reuse. As this evolves, examine Ecology's regulatory controls and permitting authority to ensure that materials that are also hazardous substances are managed properly.

#### **Rationale**

Treatment, storage, and disposal (TSD) facilities provide services to treat, store and dispose hazardous waste. Ultimately, in the Beyond Waste future there will be very little need for the disposal of hazardous waste. However, even in the Beyond Waste future, there will undoubtedly still be a need for an infrastructure to help manage hazardous waste in the state. TSD's could evolve to be this infrastructure with the focus of their business being reuse and recycling instead of disposing wastes. Ecology's authority may need to be reexamined since Ecology has much less authority over recycling hazardous wastes; yet improper recycling can cause severe environmental problems.

### **Recommendation IND13 — Support EPA's "Beyond Waste-type" efforts**

#### **Statement of Action**

Support EPA's efforts to develop and move forward on:

- ✓ The Beyond RCRA plan.
- ✓ Resource Conservation Challenge.
- ✓ Performance Track.
- ✓ Waste Minimization Partnership Program.
- ✓ Innovation in permitting and compliance assistance.

### **Background/Rationale**

EPA's Beyond RCRA plan is proposing to move EPA in a similar direction as Ecology has proposed in the Beyond Waste Plan. Some of the directions Ecology would like to move toward, such as more emphasis on hazardous substances, will be difficult to do at the state level. Having national support for these efforts would be very helpful.

### **Recommendation IND14 — Promote sustainability in product development**

#### **Statement of Action**

Participate with key organizations and institutions to promote sustainability in product development. Assist such organizations and institutions with their research into selected existing and proposed alternative products for their toxicity, recyclability, reusability, water consumption, energy use and waste resulting from manufacturing and use. Using this research, Ecology will develop and provide technical assistance to businesses and other interested parties on sustainable product development. In addition, Ecology will work with others to explore the viability of establishing a research and educational institute in conjunction with the state's university system to address sustainable product design and manufacturing.

#### **Background/Rationale**

As was stated earlier, most PBT's are in products, not substances. If Ecology ignores toxics in products, a big part of the problem is being ignored. Simply dealing with toxics in wastes is similar to trying to capture downstream non-point sources of pollution, instead of trying to tackle the problem more upstream. If products can be made more sustainable, then the resulting wastes are fewer and easier to handle. Having a university institute in Washington State focused on this could assist existing Washington businesses as well as attract new sustainable businesses, thereby helping the state's economy.

### **Future Possible Recommendations/Action Steps**

After the first 3 to 5 years, the HWTR Program needs to evaluate the success of its sector approach. If the decision is to move forward with these focused sector efforts, the next sector(s) will have to be determined. Sectors will be chosen based on established criteria.

Once additional sectors have been chosen, additional tools and strategies should be examined for effectiveness in those sector efforts. Some of those possible tools and strategies are as follows:

1. A statewide recognition program.
2. A regulatory framework that is linked to improved environmental performance.
3. Revised regulations to discourage disposal of certain toxics and wastes.
4. Labeling requirements for certain products containing toxics.
5. Programs similar to King County's "Link Up" program which provides technical assistance to businesses who want to use recycled materials in their production processes.
6. Working with other states on wastes and products that are developed by national and international companies.
7. Many other options exist as well.

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At that point, it may be important to take a harder look at additional incentives, especially economic incentives. These are longer term options that will take time to generate a consensus for support and most of them will require state legislation. Some ideas include:

1. Adjust the current Hazardous Waste Planning Fee by removing or altering the fee cap.
2. Revise and expand the Hazardous Substance Tax.
3. Explore use of feebates, deposit/refunds, rebates and product taxes to target specific needs, as opposed to broad fees that target all wastes.
4. Continue to monitor and adjust price signal tools over time.

### **Conclusion**

Environmental protection and economic vitality go hand in hand. Studies support this. It does not make sense to work toward one goal without consideration of the other goal. The initiative supports this strong connection by emphasizing partnerships, product input and incentives.

### **Implementation Plan for the Industries Initiative**

The following table shows when the recommendations from this initiative will be undertaken. This table is an excerpt from the Beyond Waste Implementation Plan, which can be accessed at <http://www.ecy.wa.gov/biblio/0407034.html>

**Moving Toward Beyond Waste with Industries**

Recommendations to Begin in First Year	Approach for Implementation	Recommendations for Years 2-5
<p><b>IND 1 Focus on sector work</b></p> <p><b>IND 2 Specific sectors to focus on</b></p> <ul style="list-style-type: none"> <li>• Implement Mercury Action Plan, including auto switches, lights, and hospital use</li> <li>• Help implement PBDE chemical action plan</li> <li>• General government sector</li> <li>• Cleaner Production Challenge</li> </ul>	<p>Ecology will initiate this effort in close cooperation with local government, and several other entities.</p>	<p>IND3. Select future priority sectors</p> <p>IND4 Develop specific tools for sector work</p> <p>IND7 Form a work group on low-interest loans</p> <p>IND9 Collaborate with affected parties to explain changes to hazardous waste fees and taxes</p> <p>IND11 Encourage new businesses to adopt sustainability practices</p> <p>IND12 Encourage waste handlers to become materials brokers</p> <p>IND14 Promote sustainability in product development</p>
<p><b>IND 3 Develop a standardized process for sector work</b></p> <ul style="list-style-type: none"> <li>• Workgroup will establish process for selecting future sectors to prioritize</li> </ul>	<p>Ecology will initiate this effort in close cooperation with local government, and several other entities.</p>	
<p><b>IND 5 Modify the Pollution Prevention Planning Program to dovetail with the Beyond Waste vision</b></p>	<p>Ecology will lead this effort.</p>	
<p><b>IND 6 Expand information on Ecology’s Web site</b></p>	<p>Ecology will lead this effort with other entities.</p>	
<p><b>IND 8 Negotiate the state agreement with EPA</b></p> <ul style="list-style-type: none"> <li>• Revise state agreement between Ecology and EPA to be more in line with Beyond Waste vision.</li> </ul>	<p>Ecology will lead or coordinate these efforts.</p>	
<p><b>IND 10 Explore ways to implement Beyond Waste incentives</b></p>	<p>Ecology will lead these efforts in consultation with affected parties.</p>	
<p><b>IND 13 Support EPA’s “Beyond Waste” efforts</b></p>	<p>Ecology will lead or coordinate these efforts.</p>	

*If you need this information in an alternate format, please call the Solid Waste and Financial Assistance Program at 360-407-6900. If you are a person with a speech or hearing impairment, call 711, or 800-833-6388 for TTY.*