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Environmentally Preferable Purchasing Program

A Study of State and Local Government Procurement Practices that Consider Environmental Performance of Goods and Services

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prepared for:

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I. Introduction

A number of state and local governments actively consider environmental performance of goods and services in their procurement practices. For the purposes of this study, the terms "environmentally conscious procurement" and "environmentally conscious purchasing" refer to these procurement practices. EPA undertook this study of selected state and local governments to gain insights from such programs on options for effectively including environmental performance considerations into federal acquisition efforts and thereby meeting the goals of E.O. 12873. This study also serves to encourage the exchange of information between EPA and state and local governments and ultimately to identify opportunities for assisting each other in procuring environmentally preferable products and services.

Because the goal of this project was to understand more completely the issues and processes underlying environmentally conscious procurement, we focused our research on a small number of purchasing agencies that were at least moderately active in the realm of environmentally conscious procurement. In order to gather data at the level of detail required for this report, we undertook a series of in-person interviews, conducted on-site at the offices of the purchasing agents. Past experience from the Massachusetts EPP project[1] suggested that detailed and comprehensive program information is often difficult to communicate over the telephone or in writing. In addition to collecting facts, the in-person interviews allowed researchers to observe the procurement process at work, including the less tangible aspects, such as interactions among employees, facilities and equipment, and level of organization.

To choose the agencies to be interviewed, procurement officials in states and counties that had active environmentally conscious procurement programs were faxed a brief questionnaire (see Appendix) which requested a small amount of program information and asked whether they would be interested in participating in the project. In addition, an attempt was made to gather information from purchasing agencies with different attitudes and philosophies on environmentally conscious purchasing. From the responses to the questionnaire, and project resource limitations, six states and counties were chosen to participate:

- State of Maine,
- State of Wisconsin,
- State of Minnesota,
- State of Washington,
- King County, Washington, and
- San Diego County, California.

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[1] Abt Associates Inc., 1995. "Procurement of Environmentally Preferable Products: A Review of Current Practices," prepared for The Commonwealth of Massachusetts Department of Procurement and General Services, Executive Office of Environmental Affairs, and Department of Environmental Protection, June 1995.

For each of the six state and county purchasing agencies covered in this study, Abt Associates staff interviewed the person or persons most knowledgeable about the organization's efforts to procure products and services with lesser environmental impacts. Abt Associates determined when procurement practices came into existence, the rationale behind these practices, what factors encouraged or would have further encouraged practice development, difficulties encountered in practice development both within and outside of the organization, program successes, and future plans.

It should be noted that exclusion of a purchasing agency from this report is not intended to make any kind of statement or judgment on its activities *vis a vis* environmentally conscious procurement. Similarly, inclusion in this report does not necessarily imply that these state and county purchasing agencies are more active in this arena than any of the hundreds of other purchasing agencies around the US. A number of factors, including time and availability of resources, were involved in deciding which agencies were to be interviewed. Nevertheless, the fact that each of these agencies agreed to meet with us suggests that they are committed to furthering the cause of environmentally conscious procurement.

Under EPA's direction, a more detailed list of questions was developed, which formed the basis of the discussion guides used during the interviews. Aside from the Maine interview, which was conducted approximately two weeks before the others, all of the interviews were completed within the space of a week in mid-December 1995. Follow-up calls were made in February and June of 1996 to gather further detail about particular components of purchasing agency activities.

The report is organized into a summary and six sesparate case studies. The main body of research is summarized, which identifies commonalities as well as differences among the six purchasing agencies, according to the following broad topics: 1) the history of its environmentally conscious procurement initiatives, 2) the procurement process and how it relates to recycled products and other products with lesser environmental impacts, 3) the agency's information systems, 4) successes, 5) barriers to environmentally conscious procurement, and 6) the future plans of the agency with respect to recycled products and other products with lesser environmental impacts. For each purchasing agency included in the report, the case study provides greater program-specific detail.

The agencies with whom we conducted the interviews all demonstrated a significant level of commitment to buying recycled content products. It should be noted, however, that while the scope of the initial research included many types of products, all of the agencies interviewed are currently interested mainly in recycled content products, almost to the exclusion of other issues such as energy efficiency or source reduction. The content of the report reflects these programs' emphasis on recycled content products.

II. Summary of Important Program Elements

Interest in environmentally conscious procurement is growing among purchasing agencies in state and local governments, particularly with respect to recycled content products. This enthusiasm appears to stem from several sources, including public and legislative attention toward environmental issues, personal commitment of staff to making an environmental contribution, and the increasing availability of a wide range of high quality recycled content products at competitive prices.

To gain insights from the experiences of these purchasing agencies, EPA undertook this study of selected state and local governments and their environmentally conscious procurement programs, including the States of Maine, Minnesota, Washington, and Wisconsin, and the Counties of King County, Washington and San Diego, California. EPA is examining these programs to assess options for effectively including environmental performance considerations into federal acquisition efforts and thereby meeting the goals of Executive Order 12873. This study should also serve to encourage the exchange of information between EPA and state and local governments and ultimately identify opportunities for assisting each other in procuring environmentally preferable products and services.

The agencies interviewed all expressed commitment to buying recycled content products. This commitment varied among agencies from an interest in complying with state recycling legislation to a strong desire to drive policy by purchasing recycled products. It should be noted here that while the scope of our initial research included many types of products, we found that agencies are mainly interested in recycled content, almost to the exclusion of other issues such as energy efficiency or source reduction. When asked about other environmental criteria or multiple environmental criteria, most of the interviewees stated that their programs had not yet reached the level of sophistication to assess multiple criteria. The content of this report reflects this emphasis on recycled product products.

For each purchasing agency, its case study outlines the history of its recycled product procurement initiatives, the procurement process and how it relates to recycled products and other products with lesser environmental impacts, the agency's information systems, successes, barriers to environmentally conscious procurement, and the future plans of the agency with respect to recycled content products and other products with lesser environmental impacts.

Program Histories and the Procurement Process

Although some states made efforts to procure products with lesser environmental impacts as far back as the mid-1970s, interest in recycled products procurement picked up significantly in the late 1980s and early 1990s. All of the interviewed programs cited legislative action for the reduction of solid waste as the primary impetus for creation of recycled product procurement initiatives. Generally, the reasoning provided was that purchasing of recycled products helps to stimulate the market for the inputs required to manufacture recycled products. When more of these inputs are diverted from the waste

stream to recycled products manufacturing, demand for waste management (e.g., landfills) is alleviated to a degree.

Most of the agencies interviewed noted that state and county purchases usually take three forms: direct commodity purchasing, professional services (contractors such as consultants and construction companies), and delegated authority, whereby customer agencies procure smaller quantities of goods on their own. Not surprisingly, each of the interviewed purchasing agencies has its own individual mix of these procurement methods, with some maintaining centralized control of most state purchases and others delegating much of the purchasing authority to its customer agencies.

Centralized vs. decentralized purchasing

The degree to which the purchasing process is centralized or decentralized is important to consider because it can affect the amount of control a purchasing agency has over the types of commodities purchased. In a centralized arrangement, most purchase requisitions are first channeled through the purchasing agency, which then conducts the actual transactions with suppliers. In some cases, the purchasing agency also maintains a Central Store designed to warehouse large quantities of goods and then distribute them to customer agencies. Maine is an example of a fairly centralized purchasing system, where all state agency procurement except for spot purchases under $1,000 must be conducted through the Division of Purchases.

When procurement is decentralized, purchases are delivered directly to the customer agency by the supplier. Even when state contracts are available, customer agencies in a decentralized arrangement have more autonomy to buy at their own discretion. One result of this independence is the diminished ability of the purchasing agency to influence customer agencies to buy products with lesser environmental impacts. Wisconsin's purchasing system, for example, is decentralized to a significant degree, in that many agencies do not buy through the purchasing agency. The University of Wisconsin handles its own purchasing, which comprises approximately one half of the total state procurement. Half of Wisconsin's procurement is, therefore, out of the control of the purchasing agency. However, one potential advantage to a decentralized system that was not observed in this study is that customer agencies have more authority to consider environmental performance of products and services.

Implementation: Command & Control vs. Education & Partnerships

The procurement agencies in this study lie along a continuum with respect to the amount of control they retain for themselves and the flexibility they afford their customer agencies when purchasing products with lesser environmental impacts. Examining the methods through which policy is implemented is useful because some observations can be made about the different conceptual approaches employed by purchasing agencies. Broadly stated, the continuum can be described by the "command & control" approach on one end, and the "education and partnerships" approach on the other.

Command & control

Although purchasing agencies exist to facilitate the procurement of goods desired by customers, they nevertheless can exert a significant influence on the purchases of their customers through defining the universe of available goods. The more customers depend on the purchasing agency to provide them with the goods they need, the more power the purchasing agency has to introduce, encourage, and in some instances, ensure the purchase of products with lesser environmental impacts. In this type of organizational structure, one way the purchasing agency can increase procurement of products with lesser environmental impacts is simply by offering such products as the only options for given product categories. For example, because Washington state can obtain recycled content file folders of quality comparable to virgin at a competitive price, it no longer includes them in their catalog.

Of the agencies interviewed, San Diego County's purchasing philosophy perhaps lies closest to the command & control end of the continuum. San Diego has developed a computerized requisitioning system which guides customers to purchase a recycled product if it has been deemed a suitable substitute for a virgin product. In taking this approach, San Diego ensures that agencies will comply with County policy, which requires the purchase of recycled products if they meet the price preference criterion.

Because San Diego's approach to recycled product procurement is a new one, it will be some time before the effectiveness of "command and control" can be gauged. The advantages of centralized programs would likely be strong enforcement of mandates and relatively quick progress in enhancing environmentally conscious procurement. In this case, the speed of progress in environmentally conscious procurement would be limited only by the speed with which the purchasing agency can successfully identify products which are suitable substitutes. Another potential benefit to this type of approach is that it gets people to try products that they otherwise might not due to misperceptions about products with lesser environmental impacts.

One potential drawback, however, is that agencies may feel excluded from the decision making process and will not cooperate fully with Purchasing. It also places the credibility of the purchasing agency at some risk if a recycled product chosen as a substitute for a conventional product turns out to be unsatisfactory.

Education & partnerships

On the other end of the continuum lies King County, Washington, which takes special care to allow agencies to choose specific products for purchase. The recycled product coordinators, while hired by the Purchasing agency, act mainly as educators and information sources for agencies interested in buying products with lesser environmental impacts. Because the coordinators contribute their efforts near the end of the procurement process (usually after purchase decisions have already been made), it is difficult for them to affect current purchasing requisitions coming down the pipe. Instead, by expanding and educating their network of contacts within customer agencies, King County Purchasing

hopes to influence the procurement process in a more indirect way than San Diego. If they find that a customer has chosen a virgin product over a suitable, cost-competitive recycled content product, one of the coordinators may initiate a dialogue with the customer to try to determine why the recycled product was passed over, and to educate them on the benefits of the recycled product.

This approach is conducive to the development of partnerships between purchasing and customer agencies, which in turn can lead to an overall increase in awareness and enthusiasm for environmentally conscious procurement throughout customer agencies. Because customers ultimately need to accept products with lesser environmental impacts in order to maintain a successful program, good working relationships between purchasing and its customers are exceedingly important. However, because change in institutional and organizational cultures can be slow, valuable opportunities and easy wins may be missed in the meantime.

Jurisdiction

Another issue to be considered in this discussion is the amount of jurisdiction a purchasing agency has over certain types of procurement. As discussed above, there are three basic forms of procurement, including direct procurement, contracted services, and delegated authority. In the latter two types of procurement, purchasing agencies do not execute actual purchasing and thus have relatively less influence on decisions made by customers.

Encouraging environmentally conscious procurement in cases where the purchasing agency cannot exert direct control on what gets purchased can be a complex and difficult problem. For example, when a construction company is contracted to build a new auditorium for a high school, it is hired not only to drive nails, apply mortar to bricks, and paint walls, but also to use their best professional judgment in obtaining the best materials for the job. A purchasing agency attempting to intervene by suggesting the use of environmentally preferable building materials runs the double risk of encountering resistance from the contractor, and accepting liability for the potential failure of the selected products. In such a situation, educating the agency managers overseeing the project and providing resources about products with lesser environmental impacts to them may be the only feasible method of influencing decisions about which materials to buy.

A similar argument for education applies for the issue of delegated authority procurement, in which a customer agency is allowed to purchase a limited amount of goods independent of the purchasing agency. Again, because the purchasing agency cannot directly affect the outcome of the customer agencies' purchasing decisions, the method most likely to be effective involves educating customers to understand the advantages of products with lesser environmental impacts and to preferentially choose them when they are of suitable quality and price.

Personal Commitment and Leadership Roles

In the course of our research, we found that one of the most important factors for the success of a recycled products procurement program is the enthusiasm and commitment of the person or persons in charge of the program. Although the proper organizational structure and legislative mandate are important for encouraging progress in recycled products procurement, shortcomings in either of these areas can often be offset by the leadership of a purchasing official personally committed to recycled products. These persons, through their contacts, ideas, and own initiative, are often the real drivers of the programs. If the chiefs of these agencies are committed to recycled products, they set a tone and goals for the whole agency.

Personal commitment to environmentally conscious procurement is important for two reasons. First, it is vital that someone play the role of visionary, a person who sets the standard for thinking about environmentally conscious procurement within a particular agency or organization. Second, because the concept of environmentally conscious purchasing is still a relatively new one, progress is not made simply by following the letter of the law. It also requires a certain initiative on the part of the leader to take all routes, through both official and unofficial channels, in order to produce results.

Taking the initiative

Although legislation mandating the purchase of recycled materials and other products with lesser environmental impacts often does exist, how to implement the mandate is not always outlined clearly. In most of the states and counties contacted, the structure through which decisions about environmentally conscious procurement are made is not well defined; decisions are often made in an *ad hoc* manner. In a system requiring careful coordination of the environmental and performance considerations as well as the wants and needs of vendors and customers, the success of the mandate implementation can depend greatly upon the initiative of those persons responsible for managing environmentally conscious purchasing.

Instituting responsibility and leadership: Environmentally conscious procurement coordinators

Another issue that came up in several discussions was the question of whether there should be a person or persons designated to manage and encourage environmentally conscious procurement. In most cases, the answer to this question was a clear "yes." Designating a coordinator appears to be important because the task of implementing an environmentally conscious procurement program can be overwhelming for a purchasing agency with an already-full taskload. In addition, giving the responsibility of environmentally conscious procurement to one or two people may help to concentrate incoming and outgoing information into a "goto" source who will, over time, develop expertise on the various issues related to products with lesser environmental impacts.

There are different opinions as to which agency or department such a coordinator should be located. For example, the King County Recycled Product Program Coordinators took the view that working in the Purchasing Agency itself was the optimal placement. A number of other states apparently agree, as coordinators are also placed in their state purchasing agencies. These states include Wisconsin and Massachusetts (not covered in this report). On the other hand, San Diego County mentioned that having a contact person *outside* of the purchasing agency could be helpful in avoiding conflicts between purchasing and other county agencies.

Information Systems and Electronic Procurement

Information systems are important components in a procurement program, and have the potential to play important roles in encouraging environmentally conscious procurement. Information systems can assist in the mechanics of procurement by automating labor intensive tasks and by providing an efficient and accurate means of record keeping. Examples of such information systems include computerized buying and requisitioning, supplier databases, automated purchasing tracking, as well as educational resources (e.g., Internet web sites) and systems that notify users of existing product alternatives. Information systems can provide tangible success measures by tracking total environmentally conscious purchases in terms of dollars or volume of goods. In addition, they allow for the two-way transmission of procurement information, with the customer receiving product information and the purchasing agency receiving data on the purchasing behavior of its customers.

It is interesting to note that many purchasing agencies cannot or do not track their purchases because of limited computing resources. Often their information systems are insufficient to handle what are typically large amounts of information, and sometimes their methods of data management are not computerized at all. For example, because Maine's procurement system is not automated, tracking of actual purchases is difficult. Because of the relatively small size of the state, however, Maine can track recycled product purchases manually with the aid of a spreadsheet program. This method clearly would be less feasible or impossible for larger state governments.

Electronic procurement

The San Diego County Department of Purchasing and Contracts (DPC) is investing a considerable amount of effort and resources to develop their electronic procurement system. The system will utilize a "County Commodity Catalog" that may not only reduce paper use and increase efficiency, but also promote environmentally conscious purchasing. When fully implemented, the system will allow any authorized requisitioner in any County agency to get on-line and requisition products and supplies from Purchasing. In line with San Diego's philosophy of "pushing the curve" on environmentally conscious procurement, the Catalog will direct users to "follow County policy" and purchase a recycled product if it has been determined to be a suitable substitute for the desired conventional product. By prompting the user in this way, the Catalog may help to increase the number of recycled products purchased within the County government.

The Internet

In the near future, the Internet will be of immense value for purchasing agencies because of its ability to disseminate information instantly around the world and facilitate a global bidding system. Providing information electronically also allows agencies to cut paper and printing costs for items such as supply contracts and policy statements. Although the number of people with access to the Internet is still relatively small, the on-line population is growing at an explosive rate. Most federal agencies have established a presence on the Internet, as have many state and county agencies.

King County has set up a World Wide Web site devoted to their Recycled Products Procurement Program. The original impetus for developing the Web site was a mandate to provide information to County agencies and citizens about recycled products. King County found that one of the great advantages of the Web site is that it just as easily makes information available for anyone around the world as it does for those within the County. Included on the site are the program's annual reports, supply contracts, product specifications, County policies, agency initiatives, and other information relevant to recycled products. King County relates that their Web site has proven to be a useful public relations vehicle, providing a cost-effective method for releasing large amounts of information to the public.

As the General Agreement on Tariffs and Trade (GATT) globalizes commodity markets, the Internet will likely play an increasingly large role in the transmission of bids and other purchasing information. Some states, such as Wisconsin, are planning to advertise internationally for bids over a certain dollar threshold. The Internet has the potential to speed up the international bidding process by distributing bid information instantaneously around the world. The increased speed of communication may also help in increasing the variety of products available to customers.

Measures of success

One of the advantages to having an automated procurement system is that it allows for automatic tracking of purchases, and recycled product purchases in particular. Many of the states and counties we visited considered the following as reasonable measures for success of an recycled product program: the volume of recycled products, dollars spent on recycled products, or the ratio of recycled products purchased to total purchases. These are all measures that can be more easily tracked using a system through which this information already flows, compared to manual tracking or asking suppliers to keep records of sales to the state or county.

Testing of Recycled Products and Other Products with Lesser Environmental Impacts

Testing of the validity of vendor environmental claims simply does not occur. However, some purchasing agencies have engaged in limited performance testing of products with lesser environmental impacts, to determine whether they matched the quality of "conventional" products. For example, Wisconsin commissioned a study of several recycled papers, which included running large quantities of recycled content paper through different types of printers and copiers to determine the best performance among products.

Mainstreaming Products

Several of the parties interviewed mentioned that ideally, procurement of recycled products would be the rule rather than the exception. Recycled products that have achieved this status are said to be "mainstreamed." Copier paper with recycled content is the only product purchased by all of the interviewed purchasing agencies, and is on the verge of becoming the first commodity to be mainstreamed. Of course, many "conventional" products that already contain a substantial amount of recycled material such as steel or glass have been mainstreamed for some time. King County pointed out that other commodities had high mainstreaming potential, including re-refined motor oil, retreaded tires, recycled concrete aggregate, recycled groundwood waste, and recycled glass aggregate.

Successes

We found that assessing the success of a program was a difficult task. There are many possible criteria to base a program assessment, however, data are not always easily obtainable. For the most part, interviewees described success of their program in terms of amount of recycled products purchased, and occasionally, in terms of attitude changes of their customers toward recycled products. However, variables such as the size of a state or county, overall budgets, and the different ways purchases are tracked made it impossible to draw any fair conclusions from inter-program comparisons. Nevertheless, some examples of what the programs themselves considered successes are presented below.

Wisconsin reports that it has been successful in encouraging agencies to increase their recycled content paper purchases. The overall statewide percentage of recycled fibers purchased in 1995 was 49% of the total, and of the reporting agencies, over half comply with the 40% minimum required by Act 335. King County also has made substantial progress in its recycled paper procurement. Currently, over 90% of paper products purchased have recycled content. The majority of the photocopy paper purchased contained 25% or 35% post-consumer waste, exceeding EPA's 10% standard and President Clinton's Executive Order standard of 20%. San Diego County reports successes with re-refined motor oil, and spent approximately $625,000 on re-refined oil in 1994, compared to only $52,000 in 1993.

Minnesota reports that one of the greatest successes of its program is the part it has played in altering customers' perceptions of recycled goods. Resistant even to the idea of recycled products in the past, agencies are now more receptive of recycled products. For example, agencies are now much more accepting of retreaded tires, and no longer pin responsibility for a blown tire on the tire's recycled content.

Washington State is currently purchasing recycled products which greatly exceed the recycled content specifications in EPA's Comprehensive Product Guidelines, although no data are available as to the amount of various types of recycled products purchased by agencies. Several contract products, such as file folders, are available as recycled only.

Maine reports that it introduced copier paper with recycled content to nearly 700 copiers in the state offices. By furnishing this paper "without fanfare," the Division of Purchases claims that it was able to avoid "potential 'perceived' operational difficulties." For the years covered in the report (1993 and 1994), Maine has had "no substantiated performance difficulties linked to the recycled content of the paper."

Barriers

The main barriers to environmentally conscious procurement, as related to us by the interviewees, include product quality, availability, and price issues; communication difficulties between the procurement agency and customers; the decentralization of purchasing; and the lack of Environmental Protection Agency guidance. Each of these barriers is discussed in further detail below.

Product quality, availability and price

Perhaps the most important barrier to recycled product procurement remains the higher price of recycled content products. The cost of recycled paper remains a problem, even though many purchasing agencies procure it in large volumes. For example, San Diego County related that if their only tool for buying recycled paper was their 5% price preference, they would be buying all virgin stock. Customer demand for recycled paper allows them to purchase recycled paper even when its price is considerably higher than the price preference allows.

According to the interviewees, product supply problems and the costs of collecting, processing, and transporting the inputs for recycled paper manufacturing combine to keep prices high. Another reason mentioned by several of the interviewees was that some of the costs are artificially inflated, caused in part by the price preference, which allows suppliers to sell their products at a higher price. As an example, Wisconsin observed instances during a period when the cost of inputs (i.e., waste paper) decreased while the cost of recycled content paper actually increased with the rising prices of virgin paper.

On the other hand, Maine reported that it was unable to meet its purchasing goal for recycled paper in 1993/94 because the state legislature suspended the 10% price preference. Maine's 1994 report on recycled product procurement suggested that the

elimination of the price preference "had an obvious impact" on the Division's failure to meet the mandated goal, and that "in tight budget times, the balance is delicate."

In some cases, recycled content products do not meet the needs of the user due to poor performance or product unavailability. For example, King County and San Diego County both experienced significant performance problems with the first recycled toner cartridges they purchased, although those problems have since been resolved. Also, King County's use of recycled glass aggregate for surfacing is sometimes restricted due to the fluctuating supply of recycled glass.

Another barrier to environmental purchasing is concern about health and safety during product use. For example, because the Federal Government does not recommend the use of retreaded tires on steering axles of vehicles due to safety concerns, Minnesota is wary of them and purchases retreads infrequently, and never uses them on emergency vehicles. Wisconsin also expressed concerns about the safety and reliability of retreaded tires, despite their cost competitiveness.

Communication and education

Sometimes the barriers to recycled product procurement come from the customer agencies. Unconventional products may be looked on with suspicion, and personal and organizational resistance to change can make the introduction of such products problematic. For example, because of perceived low quality of product, the head of Maine's DOT opposes the use of re-refined motor oil in the state fleet, even though it meets all of the necessary quality certifications. According to Maine, this resistance causes significant difficulties when trying to expand the procurement of re-refined motor oil.

As discussed by King County, barriers to success in environmentally conscious procurement have to do largely with the flow of information between Purchasing, customer agencies, suppliers, and contractors. For example, project managers in charge of construction projects are often unaware of the recycled products and other products with lesser environmental impacts that are available. Because many recycled products have only recently appeared on the market, often contractors have not been educated in their proper and preferred use.

Insufficient EPA guidance

Washington state related that weaknesses in U.S. EPA's recycled product guidelines can act as barriers and hindrances to progress in recycled products procurement. The lack of guidelines for certain product categories, and the conservative nature of the existing guidelines were both cited as examples of weaknesses. Washington states that it is important for EPA to release more guidelines for recycled products because they provide buyers with support should their decisions to buy recycled products be called into question. Another difficulty state and county purchasing agencies have with EPA guidelines is that if they are not kept current with the state-of-the-industry, they do not encourage manufacturers and suppliers to increase the recycled content in their products.

It appears that in the absence of other information sources, state and county governments often turn to the Federal government for guidance. In these cases, progress is made at the local level only when the Federal government moves forward. For example, King County looks forward to a better set of definitions of what "environmentally preferable products" actually are, and will be following EPA's lead on this issue.

Decentralization

As discussed above, decentralization of the procurement process can result in a decrease in a purchasing agency's ability to influence procurement. Some state agencies with large procurements, such as Universities and prison systems, will often have their own procurement system independent of the state procurement system.

Incentives for Improvement

Until products become mainstreamed, so me of the purchasing officials we interviewed suggested that extra attention needs to be directed toward these products and the people/agencies who use or promote environmentally conscious procurement. This can provide an incentive to encourage more use. King County Purchasing believes that recognizing individuals is an effective incentive to encourage people to continue finding new applications for recycled products. Persons and agencies doing exceptional work in the area of recycled products are recognized in an internal county newsletter, in Recycled Products Procurement Annual Reports, and there have been functions held for other people active in environmental issues. Wisconsin is also planning to experiment with press releases and a "bright lights" program as two ways to motivate staff and to generate outside support for the program.

New Directions: Future Outlook of Environmental Procurement

Most of the purchasing agencies seemed optimistic about the future of recycled products and environmentally conscious procurement, even though they also see many challenges ahead. These challenges include introducing new and unconventional products to their customers, developing more effective ways to track purchases, and keeping costs competitive.

Although in theory environmentally conscious procurement encompasses a wide range of products ranging from energy efficient light bulbs to less-toxic cleaners, in practice only recycled content products are being procured in any significant quantity. Of these, the vast majority of purchases consist of paper products. In the near future, however, many new products may be introduced as serious players in the market, including energy efficient computers and lighting, less toxic cleaners, and non-paper recycled products. As these products become "mainstreamed," the decision process associated with defining and selecting them will also become more important. Market globalization may also play a vital role in speeding up the evolution of new products with lesser environmental impacts.

Purchasing Agencies included in this report

Purchasing agency	Statute	Impetus for recycled products procurement program	Mandated price preference	Program goals (for recycled content paper)	Information systems
King County WA	1989 Recycled Products Procurement Policy (K.C.C. Chapter 10.16 Executive Policy CON 7-1-2 (AEP))	solid waste reduction	15% for paper products 10% for re-refined oil	60% of paper purchases must contain recycled content	purchasing not automated; minimal tracking
Maine	mid-1980s Title 5, MRSA, section 1812-B	reduction of inputs to landfills	10% on paper products	50% of paper purchases must contain recycled content	purchasing not automated; purchases tracked by hand
Minnesota	1989 SCORE (Governor's Select Committee on Recycling and the Environment) legislation	solid waste reduction	recycled paper is subsidized through Central Stores profits	--	voice fax for accessing contracts; all sales by Printing and Stores are tracked and reported; voice-fax system records each contract item purchased by state agencies
San Diego County CA	1992 San Diego County Board of Supervisors Policy B-67	reduction of inputs to landfills	5% on recycled products that conform to Federal or State guidelines	--	automated electronic procurement; limited tracking of recycled products
Washington State	1988 State Statute RCW 43.19: Recycled Product Procurement	To substantially increase the procurement of recycled content products by all local and state governmental agencies and public schools	10% for recycled products	60% of paper purchases must contain recycled content	fax-on-demand allows for automatic ordering of contract items; minimal tracking capabilities
Wisconsin	1989 Wisconsin Act 335, known as "The New Recycling Law."	The law bans all currently recyclable materials from Wisconsin landfills by January 1, 1995.	none	40% of total paper fibers by weight must be recycled	Recycled Products Clearinghouse BBS provides information but no electronic purchasing; purchases tracked by hand

III. States

Maine
Minnesota
Washington
Wisconsin

Maine Division of Purchases[2]

History of Procurement Practices that Consider Environmental Performance of Goods and Services

Maine's original impetus for starting procurement of recycled products was a state statute passed in 1973-74 mandating the use of recycled products when they were less costly than conventional products. the impetus for this state statute was the desire to reduce inputs to Maine's landfills. Maine originally focused on recycled paper, but discovered that the quality of the recycled content paper at that time was very poor. The idea, as Thompson put it, "died shortly after it was born."

In the mid 1980s, renewed interest in recycled products on the part of state legislators and the public as well as improved product quality resulted in a strengthening of the statute. Supported by the Maine Waste Management Agency, the new statute focused on recycled content paper and included a 10% price preference for recycled products.

Title 5 of MRSA[3] Section 1812-B mandates that as of October 1, 1993, not less than 50% of the money spent on paper products be used for products containing recycled materials. Maine now meets its mandated target for the purchase of recycled content paper, and has expanded the number of recycled paper products it procures. Initially, The problem of reduced brightness of recycled paper caused many state agencies to complain about its quality. According to Thompson, paper quality is no longer an issue, and office paper and tissue paper products are some of the few commodities to be distributed without a virgin equivalent.

Presently, Maine purchases a number of recycled products, which are outlined in the report entitled "Report on the Purchase of Recycled Products, December 31, 1994" prepared by Thompson's office (see attachment). The report summarizes Fiscal year 1993/94 purchases of various categories of products with recycled content, including paper products, tires, plastics, glass, re-refined motor oil, aluminum, toner cartridges, and wiping cloths. The report also summarizes new initiatives as well as some of the difficulties encountered by the state as it continues to purchase products with recycled content.

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[2] On November 14, 1995, Han Wang and Meredith Bellows of Abt Associates interviewed Dick Thompson, Director of the Division of Purchases, on the subject of environmentally conscious procurement. On June 27, 1996, a follow-up call was made for clarification on some issues and an update on any recent activities. The following is a summary of the information we gathered.

[3] Maine Revised Statutes Annotated

Organization

Maine's procurement is broken down into three categories:

- *Commodity procurement*, performed by buyer clusters (see below) within the Division of Purchases (totaling $60 million/year)
- *Professional services* (such as painting, engineering design), which are procured directly by agencies, but reviewed by Division of Purchases (totaling $49 million/year)
- Delegated authority to state agencies, which may purchase products up to a limit of $1,000 at a time (totaling about $24 million/year)

Commodity procurement comprises the largest category by sales, and is probably the one most important to recycled product procurement in Maine.

Commodity buyers are organized into buyer clusters, usually consisting of a senior buyer, buyer, and assistant buyers. Each cluster is responsible for the procurement of a certain type of product, such as motor vehicles, or paper. The cluster in charge of motor vehicles, for example, may purchase cars, trucks, police pursuit vehicles, tires, motor oil and replacement parts. The paper cluster buys products such as printing and writing paper, tissue paper, and paper towels. This cluster system was developed as a result of the downsizing of Maine's state government. In the past, the structure consisted of senior buyers, each of whom had a large staff of clerks to manage the details of the operations. In the current system, each buyer and assistant buyer has much more responsibility and is required to be knowledgeable in many areas, but may have less expertise concerning all of the products they purchase.

Possibly due to Maine's relatively small size, state purchasing remains very centralized, with all purchasing except for spot purchases under $1000 being channeled through the Division of Purchases. Contracts for products purchased in large volumes are negotiated by the Division of Purchases, which then produces purchasing bulletins for state agencies to use. For purchases that are over $1000 but are not represented in the state bulletins, agencies submit purchase requests to the Division of Purchases. The Division then draws up requests for bids, and distributes them to potential suppliers.

Decision making

While the final say rests with Thompson, it is usually the senior buyers who make the day-to-day purchasing decisions. To encourage the procurement of recycled products, there is no formal chain of command, decision making, or review rules. Instead, the importance and relevance of recycled products is emphasized informally at all levels of the hierarchy.

Thompson is a strong advocate of recycled content products, and exercises leadership from his position by encouraging his buyers to purchase recycled products. Because of the relatively small size of the Division of Purchases, Thompson is able to keep track of the

activities of his buyers and influence them accordingly. As a result, his senior buyers are aware of the importance of recycled products, and attempt to incorporate them into their procurement when possible. Also, the governor of Maine and the state environmental protection agency advocate and encourage the use of recycled products. Thompson relates that the general attitude toward recycled products is perceived to be a positive one.

Tracking procurement

Because Maine's procurement system is not automated, they have a difficult time tracking purchases in general, and of recycled products in particular. Maine's relatively small size, however, is an advantage as it allows Thompson to track purchases manually or with the use of a small spreadsheet. Overall, Maine's tracking system can be characterized as simple and informal. Products with recycled content and their dollar value are published periodically by Thompson's office in its "Report on the Purchase of Recycled Products."

Products

Maine does not have a formal mechanism in place to assess the quality or performance of the recycled products buyers are considering. Instead, the buyers rely heavily on their own experience, agency feedback, and vendor claims to help them with their procurement decisions.

Often, a customer agency is the original source of interest for a particular product. If a vendor can convince an agency that their recycled product is more environmentally desirable than the conventional product, the agency may then suggest the product to the Division of Purchases. For instance, one agency asked the Division of Purchases to provide them with less caustic cleaning solutions, after a worker injured by an improperly diluted cleaning solution brought a lawsuit against the vendor of the cleaner. This is an example of where the selection of products available on the state bulletin had to be expanded to accommodate different customers.

The multiple environmental criteria issue has not been addressed in depth by the Division of Purchases. In the case of paper, for example, while they are aware of the recycled content vs. chlorine free controversy, they resolve the problem with respect to their purchasing by deferring to the language of the statute. That is, since the statute calls for the preferential purchasing of *recycled* products, a product's recycled content is considered a more important factor than the amount of chlorine involved in its manufacture. As part of the Clean State Initiative, a broad based effort to address many different types of environmental issues, Maine is beginning to examine the possibility of procuring chlorine-free paper. Thompson notes, however, that it is still too early to predict the outcome of this project.

Since the Maine state government does not conduct any product testing, the Division of Purchases evaluates products by relying on vendor claims and independent third party research, such as the University of Southern Maine. However, most of the research involves testing of structural construction of products such as furniture and lighting.

Environmental claims and performance of environmentally preferable products are rarely addressed. Thompson admits that there is no easy way to verify vendor claims, especially with recycled content materials, where it is difficult to assess recycled content after manufacture. Maine utilizes university research (U. Southern Maine) to help determine performance of products. In the past, Maine employed its own materials tester, who examined product performance but did not verify environmental claims. The tester position was eliminated due to state budget cuts.

Barriers

According to the 1994 report, "the greatest difficulty facing government as it works to increase the use of products with recycled content is the cost.... Agencies must receive the greatest value for their dollar spent."

For Fiscal year 1993/94, the state legislature suspended the 10% price preference offered on paper products with recycled content in order to fund another, unrelated program. Because the money used for the price preference was taken away, Maine was unable to meet its procurement target for recycled paper in that year. The 1994 report claimed that the elimination of the price preference "had an obvious impact" on the Division's failure to meet the mandated goal, and that "in tight budget times, the balance is delicate." While the elimination of the price preference only occurred once, Thompson believes that it indicates that recycled products may not always be considered a high priority issue in Maine.

Sometimes the barriers to recycled product procurement come from the customer agencies. For example, because of perceived low quality of product, the head of Maine's Motor Transport Services is vehemently opposed to using re-refined motor oil in his fleet. According to Thompson, this resistance causes significant difficulties when trying to expand the procurement of re-refined motor oil.

After Maine expanded its purchase of recycled content paper, they encountered some resistance from vendors, who told the Division of Purchases that they were forced to buy out-of-state recycled paper to meet the demand. Because many of Maine's paper mills are located in remote forest regions, they cannot access the recycled pulp required for recycled paper as easily as mills in other states which are located closer to urban regions and interstate highways This places Maine's paper industry at somewhat of a disadvantage. According to Thompson, the relative distances virgin wood and recycled paper (the respective inputs for virgin and recycled paper) must travel to the papermaking plants is a significant factor in the price differential between virgin and recycled paper.

Successes

Thompson cites their expanding base of recycled products and the meeting of procurement targets as evidence of Maine's success. The 1994 report states that state agency users have become increasingly aware of the quality and advantages of recycled products, and that this awareness has resulted in an increase in overall recycled product purchases.

Thompson states that the Division of Purchases are continually working to increase the amount and types of products in their recycled product procurement.

The state government has been working to increase the involvement of municipalities in its recycled product procurement efforts. According to the 1994 report, "nearly all products available to state government can be purchased by local and county governments through the Central Warehouse or directly from the supplier" at prices comparable to state contract prices.

As a specific example, the 1994 Report also mentions Maine's success in introducing copier paper with recycled content to the nearly 700 copiers in the state offices. By furnishing this paper "without fanfare," the Division of Purchases claims that it was able to avoid "potential 'perceived' operational difficulties." For the years covered in the report (1993 and 1994), Maine has had "no substantiated performance difficulties linked to the recycled content of the paper."

Future Outlook

The main goal for the future, according to Thompson, is the implementation of lifecycle costing for recycled products and other products. Although some efforts are underway to measure certain attributes of certain products, Thompson hopes to install a program by which multiple environmental and performance criteria can be tested. Maine will most likely heavily depend on the University of Maine's research to inform their own decision making. Maine is still very much in the planning stages of this undertaking. Thompson relates that lifecycle costing is relevant because it is very important to understand the ultimate costs of purchasing and owning an item versus its upfront costs. As an example, he cites automobiles and potential tradeoffs between sticker price, gas mileage, and reliability.

References

Dept. of Administrative and Financial Services, Bureau of General Services, Division of Purchases, 1994. "Report on the Purchase of Recycled Products," December 31, 1994.

Minnesota Materials Management Division[4]

History of Procurement Practices that Consider Environmental Performance of Goods and Services

The State Resource Recovery Program in Minnesota's Department of Administration (Admin) came into being as a result of solid waste management laws passed in 1981. The Resource Recovery Program is responsible for promoting waste reduction, recovery of recyclable and reusable commodities, and facilitates the procurement of recycled and recyclable commodities by state agencies through the Materials Management Division. An interesting fact about Minnesota's waste management program is that initially it was not funded and had to be self supporting; funding was largely derived by selling materials diverted from the waste stream.

The state statute's emphasis on environmental procurement has provided stability and consistency for Minnesota's recycled products program, and according to John Haggerty, the legislature has been a "champion of the environment." The importance placed on the environment has been a constant since the 1980s, and over the years the Select Committee on Recycling and the Environment (SCORE) has continued to advise the Governor on environmental issues.

The first significant recycled content purchase success came in 1991 with the issuance of a recycled content copier paper contract. Minnesota collaborated with The Great Lakes Consortium (a nine state organization which includes Wisconsin), and in total the states committed themselves to purchasing 30 tons annually of recycled content paper. Initially, the paper industry claimed they could not produce that amount of post-consumer recycled paper in a year, but with continued pressure from the Consortium, the industry finally agreed to a contract. Over the past few years, the paper industry has produced a great variety of recycled content paper, much of it containing a higher percentage of recycled content than was initially offered.

Organization

Minnesota state agencies can purchase goods in three ways: 1) from Central Stores, 2) directly through contracts from suppliers, and 3) independently, through delegated authority by local purchase. The Materials Management Division (MMD) purchases goods for almost all of the 130 state agencies, and even though they are not required to do so, both the Legislative and Judicial branches buy through the MMD as well. Central Stores stocks commonly used office supplies, and agencies can purchase items from them as needed. Haggerty relates that Central Stores' recycled content paper is kept in parity by the state, and that customers pay the same price for comparable virgin and recycled

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[4] On December 6, 1995, Meredith Bellows of Abt Associates interviewed John Haggerty, Director of Minnesota's Materials Management Division. Follow-up calls on June 12, 1996 and June 26, 1996 were made for clarification of some issues. A summary of information gathered follows.

content products. Presently, half of the paper in stock at Central Stores has at least 25% recycled content. As of July 1, 1996, all copier paper used by state agencies must contain at least 10% post-consumer material by fiber content.

With delegated purchasing, personnel who receive the appropriate training are given the authority to procure goods and services independently of MMD As of this writing, there are approximately 1,750 personnel approved for delegated purchasing in city, local, and state agencies. Personnel must attend a two-day training course to obtain the authority to purchase up to $1500. An additional half-day course is required to increase purchasing limits to $5,000. In addition, some organizations have special purchasing authority. For example, the Minnesota State Colleges and Universities (MN/SCU) has the authority to spend as much as $25,000 without first having to consult MMD. In general, agencies are not required to report delegated purchasing activities to MMD.

As a way to expand the purchase of products with recycled content, the state has convened a Market Development Coordination Council which analyzes products, trends, feasibility, and gives guidance on what to buy and what quantities to consider. They give guidance on new opportunities on how to push the recycled products envelope and expand applications for recycled products.

Although there used to be a state product testing laboratory, a lack of funding terminated the department in 1982, and there has not been one since. The work conducted by the laboratory was divided between environmental claim verification and product performance evaluation. While they used to be quite common, Haggerty now views such departments and state quality inspectors as unaffordable luxuries for cash-strapped state governments. Nevertheless, the Office of Environmental Assistance currently hires a third party firm to conduct limited claim verification studies on the environmental performance of products.

Training

Aside from purchasing workshops that briefly touch on environmental procurement, there is currently very little formal environmental training for buyers. In the interview process, however, prospective buyers are asked about their past experience with environmental purchasing, especially with respect to issues such as packaging and end-of-life product disposal. In general, buyers are expected to use the guidance provided in Purchase Certification Training when dealing with recycled products. As the purchasing in the state becomes more decentralized, Haggerty believes the role of education and training of buyers in individual agencies will become increasingly important.

Information resources

Automated purchasing

Items on contract can be purchased via the "voice-fax" system, which allows agencies to access contracts electronically and order directly from suppliers. Products with recycled content are flagged in the Central Stores' catalogue to alert agencies. The system is available 24 hours a day
and is accessible by all local, county, and state agencies who are members of the State Cooperative.

Haggerty believes that in the future, all agencies will have satellite access and will be able to order products directly from producers.

Tracking procurement

The MMD does not have a formal tracking system, but they have ready access to agency purchasing information tracked by two significant sources: 1) All sales by Printing and Stores are tracked and reported to the MMD, and 2) the voice-fax system records each contract item accessed by state agencies. These records of agency purchases can easily be obtained in profile form with the voice-fax system. However, purchases made without using the contract and one time spot purchases are not tracked, and agencies are not required to report these purchases.

As procurement becomes more decentralized by the summer of 1996, it will be increasingly common for agencies to purchase products without using the state contracts, making racking of purchases even more difficult.

Products

As is the case with most of the other states and counties interviewed, Minnesota's experience with environmental procurement is primarily limited to recycled products. such as retread tires, re-refined oil, and paper products. One important exception is in the area of computers, where Minnesota purchases computers with the Energy Star certification. In the future, Minnesota hopes to procure products with other environmental attributes, although these attributes have yet to be defined.

Copier paper

According to the State Resource Recovery Program Report for Fiscal year 1993-94, Minnesota has increased steadily increased the amount of recycled content copier paper purchased annually. As of the end of Fiscal year 1994, 35% of all copier paper sold to state agencies was recycled content paper, up from 9.5% in 1989 and 28% in 1992.

Barriers

A barrier to environmental purchasing is concern about health and safety during product use. MMD is not willing to purchase a product if it poses any threat to the health or safety of the user. For example, since the Federal Government does not recommend the use of retreaded tires on steering axles of vehicles, Minnesota purchases retreads only infrequently, and does not use them on emergency vehicles. Plastic lumber used as railroad ties is an example of a recycled product which presented a potential safety problem. Possibly as a result of the cold, several recycled content plastic lumber railroad ties used on northern railroads splintered during winter weather. Apparently, the manufacturer of this product was not familiar with Minnesota's extreme weather. The plastic lumber was replaced with wood, which is now the only material used for railroad ties. It should be noted that this is a case where the recycled plastic lumber was supposed to substitute for a wood product, as opposed to a virgin plastic product. No information was available on whether plastic lumber made of virgin material would have fared better under Minnesota's difficult winter conditions.

Other barriers to environmental procurement:

- Manufacturers who won't commit to producing a recycled product unless they see a sizable market for it.

- Obtaining recycled content information from companies reluctant to report such information, perhaps because of the negative connotation that goes along with "used" products.

- Customers with the attitude of being suspicious of products that are "not new" (i.e., those having recycled content). With education, this perception is slowly fading.

Successes

One of the greatest successes of the Minnesota program is the part it has played in altering customers' perceptions of recycled goods. In the past, agencies were neither interested in buying recycled goods, nor were they willing to try them. Now, according to Haggerty, many agencies are more open to the idea of recycled products. Agencies receiving federal grants are especially likely to be receptive because a certain percentage of their overall purchases must be recycled products. Moreover, when agencies do have bad experiences with recycled content products, it is common for them to seek a way to improve the product instead of immediately concluding that the recycled product is inferior. For example, Haggerty reports that agencies are now much more accepting of retreaded tires, and no longer pin responsibility for a blown tire on the tire's recycled content. Similarly, the occasional copier jam is no longer blamed on the recycled paper in the copier.

The general acceptance of recycled paper is another great success cited by Haggerty. The "new versus used" issue seems to have dissipated, and recycled paper receives approximately the same number of complaints as virgin paper. MMD is striving to make recycled paper more commonplace by increasing product availability.

Other successes:

- Haggerty believes that the market for ethanol fueled vehicles has been pushed by Minnesota and other states by their commitment to current and future purchases of such vehicles. Federal law requires a minimum of 10% of total fleet vehicles to be alternative fuel-powered by 1997, increasing to 50% by the year 2000.

- Both recycled anti-freeze and re-refined motor oil are currently being used, and the reaction so far seems to be fairly positive.

- The state provides funding for approximately ten start-up grants for companies and agencies to test new products, although environmental preferability is only one of many considerations. Open to both private companies as well as government and other organizations, these grants can fund projects up to a level of 35%. Examples of funded projects *with* environmental angles include a company that separates lamp components such as glass and mercury for recycling, reprocessing of printing chemicals, and a process for recycling antifreeze.

Future Outlook

Haggerty believes that the General Agreement on Trade and Tariffs, or GATT, will profoundly affect procurement, which will become far more global in nature, both at the state and Federal level. Beginning in 1996, the state will be required to advertise internationally for bids over a certain dollar amount.[5] Because Haggerty sees Europe as being far ahead of the US environmentally, international bidding should be interesting from an environmental standpoint. Haggerty believes that purchasers will have to be risk-takers, flexible, technologically savvy, able to collaborate with different types of people, and have good language abilities. The job and industry will become more dynamic.

The timeline for international bidding may be problematic, however. While currently there is a seven day minimum for the turnaround of bids, the US Trade Ambassador is calling for a 40 day minimum. Haggerty believes this amount of time is far too long and unnecessary, especially with the use of the Internet and other means to rapidly distribute information.

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[5] 26 States and the Federal government were signatories to GATT. One component of the GATT requires that every participating entity post internationally all procurement bids equal or greater than $600,000 for commodities, and $7.5 million for construction projects.

On a more local level, Haggerty believes that environmental procurement can be facilitated with a few changes in the development of specifications, such as removing the standard boilerplate requirement that procured goods be "new." In some cases, recycled products might be construed as not being "new." Although specific examples were not available of instances where this language actually caused difficulties, Haggerty is of the opinion that changing the specifications in certain cases might be beneficial in encouraging the purchase of recycled products. In addition, Haggerty called for energy efficiency purchases to be given equal status as recycled products in the state mandate.

Washington Department of General Administration[6]

History of Procurement Practices that Consider Environmental Performance of Goods and Services

In 1988, Washington State adopted State Statute *RCW 43.19: Recycled Product Procurement*, which was designed to increase the procurement of recycled content products by all local and State agencies and schools, as well as to "provide a model to encourage a comparable commitment by Washington State citizens and businesses."

As with most of the other state and county agencies interviewed, Washington State's experience with environmentally preferable purchasing consists primarily of products containing recycled content. Though Washington State's first purchases under the new policy consisted almost entirely of recycled copier paper, the list has now expanded to include a number of different types of recycled products (see attachment). Washington State has adopted EPA's definitions of recycled products, as outlined in EPA's Comprehensive Product Guidelines (CPG).[7] To encourage the purchase of recycled products, the statute provides for a 10% price preference for recycled products. In addition, RCW 43:19 outlines a mandatory plan for state agency procurement that sets the following minimum purchase percentages for recycled paper and compost products:

(1) Paper products as a percentage of the total dollar amount purchased on an annual basis:[8]

(a) at least forty percent by 1993;
(b) at least fifty percent by 1994;
(c) at least sixty percent by 1995;

(2) Compost products as a percentage of the total dollar amount purchased on an annual basis:[9]

(a) at least twenty-five percent by 1993;
(b) at least forty percent by 1995;
(c) at least sixty percent by 1997;

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[6] On December 8, 1995, Han Wang and Meredith Bellows interviewed Connie Ann Stacy, Contract Administrator for Washington State, on the subject of environmentally conscious procurement. Follow-up calls were made on June 7, 1996 and June 17, 1996 for clarification of some issues. The following is a summary of the information we gathered.

[7] The CPG are published in the 40CFR§247.

[8] As defined in the State Statute Chapter 43.19A RCW, paper products are defined as "all items manufactured from paper or paperboard."

[9] As defined in the State Statute Chapter 43.19A RCW, compost products are "mulch, soil amendments, ground cover, or other landscaping material derived from the biological or mechanical conversion of biosolids or cellulose-containing waste materials."

When Washington State first started buying recycled content copier paper, it was more difficult to locate, and as much as 22% more expensive than virgin paper. Although 22% is considerably higher than the mandated price preference of 10%, Stacy and her department felt that they had to "get the ball rolling" on recycled product procurement, despite the initial lack of customer interest and relatively high cost involved. As of this writing, Washington State is paying a 7% price preference on recycled paper. Stacy estimated from memory that for paper purchases made by the Procurement Office in 1995, about 80% of the total dollar amount is spent on recycled paper. It is important to note that because of the various methods available to agencies for procuring products, Washington's tracking system does not give the Procurement Office the capability to tally total state purchases.

Organization

The Office of State Procurement is staffed by approximately 16 buyers, each responsible for a specific commodity area such as paper products, automobiles, and furniture. The majority of state agency purchases are made through contracts set up by the Procurement Office, with the main exceptions being spot purchases under $2500, which can be made without using a state contract. Spot purchases are allowed only for items not available on the state contracts, and are not designed to allow for long-term purchasing of non-contract items. Stacy related that if a long-term need arises for a non-contract item, the customer agency is required to contact the Procurement Office so that a contract for that item can be set up.

According to Stacy, there is a varying amount of commitment to recycled products among the buyers, and she is considered the main resource for information on recycled products and EPA guidelines. In practice, buyers are themselves responsible for researching new products and for following State policy of buying recycled products. There is no authority which polices the buyers on recycled products policies, and as Stacy is only the paper buyer, she considers it outside of her job description to make sure that other buyers are implementing the mandate.

At the outset of the recycled products program, the Department of General Administration hired a recycled products lead who was assigned the responsibility of promoting the purchase of recycled products among agencies and municipalities while maintaining the integrity of waste. The recycled products lead spent most of his time traveling to agencies, cities, and towns to educate them about recycled products, and consequently spent little time interacting with Procurement staff. In June 1995, after approximately five years, this position was eliminated because of state budget cuts.

According to Stacy, conflicts in goals and priorities occasionally caused friction between this individual and the buyers at the agency. For example, when the Procurement Office started to use a 100% recycled content office paper (Hammermill Unity DP) containing recycled groundwood waste, the recycled products lead did not fully support the decision because the paper was not easily recyclable. According to him, its groundwood content caused problems because it could not be mixed in recycling bins with conventional virgin

and recycled office paper. Because part of his mission was to promote recyclability of products, and there was no feasible means of recycling this type of paper. The Procurement Office went ahead with the decision anyway, and currently are still using the paper. She said that one important consideration in purchasing Unity DP was that it makes a strong environmental statement for the office. In addition, the paper costs only a few cents more per ream than virgin paper, and is considerably less expensive than more conventional recycled content office paper.[10]

In addition to contract purchasing, Central Stores distributes products to various agencies, which often has the effect of increasing customer purchases for those products. For example, use of the groundwood content paper mentioned above is increasing, and this may be because Central Stores stocks it. Central Stores also offers virgin goods as well as recycled goods because for the most part, virgin products are still less expensive than their recycled counterparts. About 50% of the copier paper purchased by state agencies has recycled content, with this percentage varying according to the current price of paper. According to Stacy, price is an important factor in determining the amount of recycled products purchased. On the other hand, even though the cost of recycled products is higher, some agencies such as the Department of Ecology and municipalities such as Seattle prefer it strongly. For example, the city of Seattle only buys recycled paper, and they purchase it using a state contract to get the best price.

In the recent past, before the U.S. EPA issues its Comprehensive Product Guidelines, the Departments of Ecology, General Administration, and the Procurement Office collaborated to define and adopt recycled product standards. Because funding was cut before the end of the process, however, the standards were never formally finalized or adopted. Nevertheless, according to Stacy, the Procurement Office used the unofficial standards until EPA released its guidelines, which Washington State has also adopted.[11] Stacy believes that the legislature will pass state standards into law sometime in the future.

Information Resources

Tracking

The Procurement Office does not have the capability to track contract purchases made by customer agencies directly through vendors. In the past, agencies submitted records of their purchases to the Procurement Office, but because Procurement staff were inundated by large amounts of paperwork, and agencies were greatly burdened by sending in the paperwork, the policy was eventually discontinued. Stacy has found it difficult to get reports on the amount of goods purchased from vendors, who claim that it is too costly to produce such reports for the state.

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[10] Examples of paper prices from Washington State's contract award information as of June 5, 1996:

James River #055107: 20 lb. 8½ x 11 in. virgin stock office paper	$1.807/ream
James River Eureka 20: 20 lb. 8½ x 11 in. 20% p/c content office paper	$1.932/ream
Hammermill Unity DP: 20 lb. 8½ x 11 in. 50% p/c, 50% waste content office paper	$1.846/ream

[11] Copies of the unofficial standards were unavailable.

Central Stores has the ability to track agency purchases made through its own system, and it provides agencies with the option of ordering products electronically as well as using conventional paper forms.

Automated purchasing

Washington State has built some amount of automation into their purchasing system. A fax-on-demand system allows for automatic ordering, and according to Stacy, in the near future contract bids will also be included in the fax-on-demand system. She notes that the statute concerning contract bids will have to be changed before the Procurement Office can legally accept returned bids by fax (currently they must include original signatures).

Successes

Washington State is currently purchasing recycled products which greatly exceed the recycled content specifications in EPA's CPG guidelines, although no data are available as to the amount of various types of recycled products purchased by agencies.

Several contract products, such as file folders, are purchased as recycled only. If a recycled product of comparable quality is known to be readily available within the price preference, then it is automatically purchased to the exclusion of the products made with all virgin materials.

Barriers

Stacy said that weaknesses in EPA recycled product guidelines could act as barriers and hindrances to progress in recycled products procurement. She mentioned the lack of guidelines for certain product categories, and the conservatism of the existing guidelines as examples. At present, Washington State tends not to adopt guidelines that are stricter than EPA's to avoid the problem of agencies questioning the validity of going beyond what EPA sets.

Stacy states that EPA guidelines for recycled products are important because they can provide buyers with more back up support should their decisions to buy recycled products be called into question. This security allows the buyers at the state and local levels to buy recycled products with more confidence that they will not be seen as making unwise purchasing decisions. The lack of EPA guidelines for products can cause buyers to shy away from proactively choosing recycled products over time-tested conventional products.

In Stacy's opinion, another difficulty with EPA guidelines is that if they are not kept current with the state-of-the-art, they can actually discourage manufacturers and suppliers from increasing the recycled content in procured goods. For example, if a vendor only needs to meet EPA guidelines in order to qualify for a bid, then there is no incentive to exceed the guidelines, especially if the manufacture would incur additional costs to do so. It does not make economic sense on the part of the supplier to make product changes or

improvements in which the customer (e.g., the state) is not interested. According to Stacy, at least one paper manufacturer actually lowered the recycled content of its products (thereby lowering its prices) in order to compete with other suppliers in the market.

Future Outlook

Washington State will continue to follow Federal purchasing guidelines in accordance to law. Recycled procurement is likely to continue with the same moderate level of enthusiasm as in the past, with some agencies buying recycled products as they are required to, and others making recycled content purchasing a priority.

Commodity buyers will continue to look out for new recycled content products, as well as for recycled content products of superior quality. They will also continue to strive toward eliminating the purchase of virgin products with recycled content equivalents.

Buying recycled certainly is not the "hot" issue it was a few years ago, but as statutes are firmly in place and will not disappear, the state will continue purchasing recycled content products.

Wisconsin State Bureau of Procurement[12]

History of Procurement Practices that Consider Environmental Performance of Goods and Services

Wisconsin's state legislature expanded and strengthened existing requirements for environmental product procurement with the passage of 1989 Wisconsin Act 335, known as "The New Recycling Law." To encourage waste reduction and recycling, the law bans all currently recyclable materials from Wisconsin landfills by January 1, 1995. In addition to other activities designed to encourage waste reduction in Wisconsin, Act 335 requires the purchase of recycled products from several product categories, "when technically and economically feasible."[13] Act 335 singles out recycled paper for particular attention by setting annual goals for the procurement of recycled content paper, and requiring that all state agencies to report their purchases to the Department of Administration (DOA).

Organization

The Bureau of Procurement within DOA sets the policies and guidelines for state procurement, and is responsible for implementing the procurement aspects of Act 335. Most state agencies are required by law to comply with DOA's procurement policies, with the exception of the legislature, the court, and authorities. It is significant to note, however, that even these agencies must report their annual paper purchases to DOA. Similar to other states, road construction and building construction fall outside of the Bureau of Procurement's sphere of influence.

In Wisconsin, there are two basic methods by which state agencies can conduct their procurements: 1) "standard commodity" purchasing through state purchasing bulletins, and 2) delegated purchasing, where agencies issue bids and do the actual buying. Wisconsin differs from many other states in that a large amount of the procurement is conducted through delegated purchasing. Each of these two procurement methods are explained briefly below.

By combining the collective buying power of state agencies, DOA is able to develop state-wide contracts for commonly purchased items and services, such as tissue paper and road salt. These items and services are then listed as "standard commodities" on state purchasing bulletins, which contain details on ordering. Whether a commodity is considered a "standard commodity" is decided, as Wehrman puts it, through a "blend of history and common sense." In other words, products that are commonly purchased in

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[12] On December 5, 1995, Meredith Bellows of Abt Associates interviewed Dan Wehrman, the Procurement Recycling Coordinator for the State of Wisconsin. Follow-up calls for clarification on a number of issues were made on June 5 and June 19, 1996. The following summarizes information gathered in our discussion.

[13] These product categories include: 1) paper and paper products, 2) plastic and plastic products, 3) glass and glass products, 4) motor oil and lubricants, 5) construction materials, including insulating materials, 6) furnishings, including rugs, carpets, and furniture, and 7) highway equipment, including signs, signposts, reflectors, guardrails, land dividers, and barricades. See the section entitled "Products" for more detailed information.

large quantities and/or products traditionally considered contract items fall under the "standard" category. When buying these types of items, agencies under the jurisdiction of DOA must choose their purchases from these standard commodities, and may order them directly through vendors or utilize the services of state warehouses. Such outlets include the State Consolidated Stores, DOA Central Printing, and Waupun Warehouse.

Purchasing managers within the Bureau of Procurement are assigned as leads on specific commodity groups, such as office paper, hardware, lumber and related supplies, and canned food. The purchasing managers are responsible for understanding agency needs and resolving problems for their particular products. To accomplish this, purchasing managers conduct surveys among their client agencies to determine purchase volume, performance requirements, and other information. DOA also convenes committees and councils at the commodity group as well as state-wide cross-commodity levels to provide forums for agencies to voice their concerns and suggestions.

The ordinary "standard commodity" purchasing system covers nearly all of the recycled products that are likely to be purchased by state or federal procurement offices. The Bureau of Procurement aggressively directs the statewide purchasing of recycled products by centrally issuing bids and ensuring the use of statewide purchasing bulletins. Bulletin purchases are recorded by the DOA purchasing data processing system, which provides the basis for ongoing monitoring and enforcement of mandatory bulletins. Standardized procedures cover practical purchasing issues such as definitions of recycled content terms. The Recycling Coordinator works with each individual purchasing manager to determine product availability and suitability and to develop bid specifications. The state procurement system can be flexible; the Bureau has written bids for experimental commodities, such as chlorine-free paper.

In delegated purchasing, rather than directly contracting and warehousing commodities, DOA transfers some of the purchasing authority to state agencies themselves. DOA sets policies and procedures for state purchasing while agencies issue most of the bids and do most of the actual buying. In general, agencies with delegated purchasing authority must issue a formal, written request for bid for a commodity purchase over $25,000, and agencies send a copy of the bid to DOA for review at the same time it is issued to vendors. For smaller dollar amounts, agencies may use a less formal competitive process, maintain internal documentation, and then report their low dollar purchases to DOA. While the under $25,000 purchases constitute the greatest number of purchase orders, they represent only 5 to 10% of the dollars spent. In either case, all agencies must follow standardized purchasing procedures, including environmentally preferable purchasing, and are subject to periodic audits by DOA.

Wehrman reviews all agency bids sent to DOA, and looks for opportunities to promote recycled products and other products with lesser environmental impacts. Based on the past five years, Wehrman reports that most agencies are cooperating fully with the environmental program, particularly with regard to paper, if they know that recycled is an option. Of the remaining bids reviewed, the vast majority are for items for which environmentally preferable options do not exist, such as heart surgery machinery. If a

recycled product option does exist, the Recycling Coordinator contacts individual agencies with information and recommendations for future purchases. Although DOA has the authority to force an agency to rewrite a bid, this extreme response is usually reserved for potential legal liability. In Wisconsin's experience, a bid hastily rewritten to include recycled options often fails to result in the recycled product procurement. So with regard to delegated purchasing of uncommon items, DOA's role is often limited to the provision of information and after-the-fact reviews of bids and purchases. On the other hand, most purchasing agents appreciate the chance to incorporate change the next time around.

According to Wehrman, the independence of many agencies from DOA complicates management of the recycling program. Despite the aggressive, successful program for standard, common commodities, the relationship between DOA and very large agencies is not always a cooperative one. For example, the University of Wisconsin (UW), which typically purchases up to half the state's total procurement, does most of its buying through delegated purchasing. It is Wehrman's opinion that the University, while adhering to the recycling mandate, has not been particularly cooperative with respect to meeting DOA's reporting requirements or with regard to trying out new alternatives.

Training

DOA includes recycled product information as part of its standard procurement training courses, and also conducts specific training sessions at statewide conferences and at individual agency retreats. Approximately 200 agency employees throughout the state are responsible for buying recycled and for reporting their purchases annually to DOA. These two hundred individuals receive direct mailings throughout the year that cover guidance, instructions, and evaluations of agency performance. All agencies are encouraged to maintain one-on-one communication, and many call regularly for assistance. As mentioned earlier, the recycling coordinator participates in the development of all centralized statewide bids for recycled products. In addition, recycling information reaches a wider audience through the monthly procurement newsletter. DOA recently sponsored a set of workshops around the state for both state and local purchasing officials.

Products

Act 335 requires that agencies procure recycled products from the following categories when "technically and economically feasible:" paper, plastic, glass, motor oil and lubricants, construction materials, furnishings such as carpets and furniture, and highway equipment.

The primary environmental attribute that Wisconsin considers in the procurement process is recycled content, but Act 335 does mention procuring products that result in waste reduction. Recently DOA has been waging an energy efficiency campaign, and has brought into the procurement process the purchase of "green" light bulbs (compact fluorescents) and energy efficient computers.

Like most states, Wisconsin relies as much as possible on specifying product quality through physical requirements and performance standards. When feasible, bid specifications may require documentation from independent testing laboratories. As with conventional purchasing, procurement offices generally rely on manufacturer's claims of recycled content and other attributes. Wisconsin requires a mill certification (a letter from a paper mill confirming recycled content) from printers and other paper vendors. Wehrman reports that manufacturer's claims have been found to be trustworthy, and that the process often clears up confusion that may develop at the print shop.

In order to deal with major performance problems, DOA began testing large volumes of copy paper in state copy centers in 1991. An EPA grant in 1993 enabled the state to expand their testing to every mill brands available, and to test paper in a variety of office machinery in six different state agencies. After running about 8 million sheets of paper, the results were used to write the specifications for Wisconsin's nine-state cooperative bid for copy paper, and to develop a generic "ten-case test" to judge paper performance.[14]

The state also informally researches product performance by pilot testing products on agency volunteers and then soliciting their comments. Water-based typing correction fluid and rechargeable alkaline batteries are examples of products that were tested in this manner. In the case of correction fluid, the component that was tested was not the fluid itself, but a new, refillable container for the fluid. Wehrman reports that the pilot tests were aborted after discovering that the brushes that came with the refillable bottle were defective, making it difficult to compare the products. The results of their research were therefore inconclusive in this case. According to Wehrman, the rechargeable battery tests are still underway.

Tracking Procurement

Wisconsin does not have one automated tracking system for all procurement, and all agency information is hand gathered and compiled by Wehrman. As every agency uses a different tracking system, none of which have a good system for converting dollar purchases into fiber weights, compiling agency reports for paper is extremely time consuming. DOA trains agency buyers to record and report recycled paper purchases, but there remains substantial amounts of overlapping data and omissions. Due to a legislative mistake, Act 335 makes reporting and tracking even more complicated by requiring reports to be submitted at the end of the calendar year, rather than the fiscal year.

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[14] Results of this research were published in the following report: Kratzer, Danelle, 1993. "Recycled Paper Performance Testing in State Agency Office Equipment," Cooperative study between the University of Wisconsin -Madison and the WI Department of Administration, September 1993.

Reporting requirements

Because reporting requirements in Act 335 are most specific for recycled content paper, Wisconsin has implemented extensive requirements for reporting recycled paper purchases by state agencies. The state requires that every state agency report its recycled paper purchases to DOA, regardless of whether or not it falls under the jurisdiction of DOA. Act 335 mandated that by January 1, 1995, 40% (by weight) of the paper fibers purchased by a state agency had to be recycled.[15] This requirement is unusual in that the goal put forth is in terms of the percentage weight of fibers purchased, as opposed to a percentage of total dollars spent on paper, or the number of recycled sheets as a percentage of total number of sheets purchased. For example, an agency could meet the 40% recycled content mandate by having 80% of its total paper purchases consist of a 50% recycled content sheet.

Price Preference

Wisconsin does not have a price preference for recycled products, as many states do. However, agencies have to buy recycled paper in order to meet reporting requirements, and because recycled paper is generally more expensive, state agencies are definitely paying more to buy recycled. Recycled copy paper has ranged from 10 to 20% more costly than virgin paper over the past five years, resulting in a significant price premium.

Information Resources

The Recycled Products Clearinghouse is a database of companies that make and distribute recycled products, intended to help state and local government buyers locate such products. Since it began in 1990, the information has been sent out in response to phone requests and has been made available on an electronic bulletin board system (BBS). Periodically, DOA will print out hard copies of the Clearinghouse for distribution to state agencies and other interested parties. The directory is similar to the national *Recycled Product Guide*, except that it is more tailored to needs of Wisconsin state agencies (although it is not restricted to regional products). The information for the Clearinghouse is collected by Wehrman, and the most time consuming aspect of compiling the Clearinghouse keeping up with changing information. About one quarter of the companies listed in the clearinghouse have product literature accessible through a "print-on-demand" system which can be accessed electronically by agencies.

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[15] Act 335, signed into law on April 27, 1989, phased in these purchase requirements over four years. The requirements were laid out as follows:
a. 10% of all purchased paper fiber by weight must be recycled by January 1, 1991;
b. 25% of all purchased paper fiber by weight must be recycled by January 1, 1993;
c. 40% of all purchased paper fiber by weight must be recycled by January 1, 1995.
(Source: The University of Madison's Campus Ecology Research Project WWW site at http://env.fpm.wisc.edu/cerp/paper/body.html)

According to Wehrman, the BBS is underutilized by his customers, because most of them still do not have modem access and because on-line ordering services are not available. Therefore, the BBS is still relatively primitive and somewhat quaint by Internet standards. Wehrman states that much of their efforts are directed at assisting customers over the telephone, rather than upgrading the Clearinghouse.

Barriers

One of the primary barriers to environmental procurement faced by Wisconsin is the lack of competitively priced recycled products of proven quality. According to Wehrman, recycled products fall into one of two categories: If the recycled product simply meets existing standards and specifications -- if it is a perfect substitute -- then the product will not be cost-competitive. If it were cost competitive, Wehrman suggests, the product would simply succeed in the conventional marketplace without artificial incentives. Recycled products made from steel, copper, and aluminum are examples of common sense resource management ideals that are so successful that people often forget the products are recycled.

If the recycled product is cost competitive, it is often difficult to prove that it will perform satisfactorily. According to Wehrman, either appropriate product standards do not exist, or the recycled product does not meet conventional standards. Wehrman brought up rebuilt laser toner cartridges as an example of this issue. Although rebuilt toner cartridges are cheaper than new cartridges, quality varies widely from vendor to vendor, and there is currently no accepted standard of performance. Until the industry develops reliable standards, it is difficult to compare products and to state that a product is of a certain quality. As another example, the history of retreaded tires suggests that perceived performance of recycled products may have a significant effect on customer acceptance. Wisconsin relies on the Federal GSA retread specifications for its statewide contracts, and is completely confident in the quality of the retreads purchased by the state. Due to past negative perceptions of retreaded tires, however, Wisconsin is promoting the use of retreads on light and medium trucks, and is slowly undergoing a gradual transition to increased retread use.

DOA has learned that providing recycled products which are readily available and convenient to use is one of the best means to convince agencies to purchase them. Wehrman relates that demonstrating that buying recycled products will not inconvenience users in any way works more effectively than purchase mandates. Wehrman noted that even agencies who generally prefer recycled content paper buy virgin paper if it is more available. Because of this observed tendency among agencies, DOA makes a priority of stocking state paper warehouses with recycled content paper.

Successes

Wisconsin has been successful in encouraging agencies to increase their recycled content paper purchases. The overall statewide percentage of recycled fibers purchased in 1995 was 49% of the total, and of the reporting agencies, over half comply with the 40% minimum required by Act 335.

Wisconsin has also found success purchasing paper under a cooperative purchasing agreement with the Great Lake states. From 1991 to 1994, Wisconsin led this cooperative effort and contracted the annual purchase of 30 million pounds of recycled high-speed copier paper. The contract is a clear example of a government impact on the paper market, because initially the paper industry claimed that it was impossible to produce such a large amount of recycled paper in that short period of time. Most of the states, however, abandoned the contracts in 1995 when the prices of recycled content paper dramatically increased.

Wehrman relates that the purchase of recycled paper is becoming a commonplace activity. Even in the initial stages of purchasing recycled paper, DOA did not encounter significant resistance from customer agencies because the mandate of Act 335 had already passed into law, but Wehrman reports that *every* agency complains about the price premium placed on recycled paper.

Future Outlook

Wehrman believes that the Department of Administration will begin to more actively advertise their environmental achievements. For several years, Wehrman hoped to quietly push the concept of recycled product procurement into everyday use. He now admits that this way of doing things might not produce the best results, and that promoting the programs and achievements of procurement staff is an important component of success. As environmental procurement is not yet a mainstream concern, procurement staff should be recognized for the successes they have had and encouraged to continue their good work. Wehrman is planning to experiment with press releases and a "bright lights" program as two ways to motivate staff and to generate outside support for the program. Wehrman points to programs such as King County's Recycled Product Procurement Program as evidence of the success of promotional activities in raising interest in recycled products.

Other areas of possible future growth mentioned by Wehrman include:

- Solar energy usage in remote parks.
- Significantly expand the use of energy efficient products.[16]
- Create a data base of environmentally preferable products beyond recycled products.

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[16] Although Wisconsin is interested in purchasing Energy Star certified computers, Wehrman relates that they have been experiencing difficulties keeping computers that go into "sleep" mode connected to LANs.

IV. Counties

King County, Washington
San Diego County, California

King County, Washington Procurement Services Division[17]

History of Procurement Practices that Consider Environmental Performance of Goods and Services

King County adopted its Recycled Products Procurement Policy in 1989, and was one of the first communities in the nation to develop such a policy. The Policy (K.C.C. Chapter 10.16 Executive Policy CON 7-1-2 (AEP)) provides that "all departments shall, whenever practicable, use recycled products and recyclable products to meet their needs." In addition, the Policy authorizes a 15% price preference for recycled paper products, and a 10% price preference for re-refined lubricating oil. In 1991, King County earned the National Recycling Coalition's Procurement Award for its efforts in encouraging the use of recycled products.

In 1995, King County revised and simplified its recycled products policy to reflect experience gained by the County as well as to harmonize its policy with U.S. EPA's enhanced recycled products guidelines.[18] According to King County's 1995 Recycled Product Procurement Annual Report, their revisions "streamlined the policy and clarified accountabilities so that further revisions to EPA guidance can be smoothly accommodated and implementation efforts easily enhanced." (King County, 1995)

The original impetus for developing a recycled products policy was the Division of Solid Waste's desire to provide leadership for the development of stable recycled material markets by ensuring that county agencies purchase and use recycled products whenever possible. King County's interest in recycled and recyclable goods also manifests itself through efforts by other agencies and the creation of agencies such as the Commission for Marketing Recyclable Materials, which is "dedicated to developing markets for recycled products."

Organization

To encourage the use of recycled products, King County situated its recycled product procurement program within its Procurement Services Division. From there, Nelson and Hamilton serve as recycled product procurement coordinators, providing information and technical assistance. They monitor requisitions to identify opportunities for agencies to use environmentally preferable products, but they are not readily able to modify requisitions. Since responsibility for satisfactory performance of the work of the County lies with the functional departments in the field, responsibility for the creation and submission of

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[17]On December 7, 1995, Han Wang and Meredith Bellows of Abt Associates interviewed Eric Nelson and Karen Hamilton on the subject of environmentally conscious procurement. Follow-up calls to Karen Hamilton on June 17, 1996 and Eric Nelson on June 27, 1996 were made for clarifications on some issues. The following is a summary of the information gathered. Because a large amount of factual information about their program has already been outlined in detail in the Recycled Product Procurement Annual Report, much of it is not repeated here. Most of the information contained below was drawn from our conversation with Nelson and Hamilton. When the information source is the Annual Report, it is cited as such.

[18] EPA's Comprehensive Product Guidelines, or the CPG, are published in 40CFR§247.

requisitions for procurement lies there also. Usually, information and persuasion must be brought to bear on requisitioners (user agencies) before their requisitions are written, long before the existence of a requisition is known to the Procurement Division.

Although Hamilton acknowledged that their position within the Procurement Division did not fulfill all the hopes of some for rapid change in all areas, she expressed the opinion that Purchasing is a good place for them to be positioned. By working in the Purchasing office, they are in close contact with the buyers and the buying process, and have gained a good understanding of how the process works and how it can be effectively influenced. Had they been placed elsewhere, Hamilton said, they would not have their fingers on the procurement pulse in the way that they do now, and have less opportunity to effectively put theory into practice.

According to King County, one of the program's key features is its collaborative approach toward recycled product procurement. Nelson and Hamilton feel that their role in recycled product procurement is to act as information resources, educators, and motivators for their clients, the agencies. In turn, Nelson and Hamilton look to client agencies for their expertise in evaluating products in the field as well as discovering new procurement opportunities. Although in theory the authority to approve or reject requisitions based on whether or not they consider recycled products could be useful in increasing environmentally conscious purchases, Nelson and Hamilton believe that it is not advantageous for them to usurp the decision-making role that is properly the purview of users. In addition, they do not wish to add another bottleneck in the purchasing process, which would only serve to strengthen client resistance.

Agency liaison network

To optimize collaboration, the Recycled Product Procurement Program has set up an agency liaison network to provide outreach and information to customer agencies. Although it is each agency's responsibility to designate an employee as its liaison, in practice Hamilton and Nelson work to create good relationships with the people most qualified and most eager to participate at those agencies. Activity within the liaison network tends to focus on construction-oriented and landscaping recycled products, as opposed to products such as toner cartridges and copier paper, which are close to being "mainstreamed" (see the "Successes" section below for a discussion of mainstreaming). Purchasing provides its agency liaisons with information such as direct mailings from manufacturers concerning new products, and hosts informational meetings, "field trips," and other events to educate agencies. In 1995, Purchasing organized workshops on recycled asphalt, composting, plastic lumber, glass and recycled concrete aggregates, and re-refined oil. (King County, 1995)

In particular, Hamilton said that Solid Waste and Purchasing have a very good relationship, and often collaborate on projects. Solid Waste is very committed to buying recycled products, and tries to embody the philosophy of the Recycled Products Procurement Program. Although in general Solid Waste does not often perform outreach services with respect to recycled product procurement, there are exceptions. For example

Solid Waste has developed a grant program for suburban cities to improve their education on solid waste and recycling issues. To be considered for the grant, a suburban city must set up or already have set up a municipal recycled products procurement program.

Contractors

An interesting point raised by Hamilton and Nelson is that much more money is spent through construction contracts than supply contracts, although no specific statistics were available. There are valuable opportunities to influence procurement of contractor-purchased materials, but there are some serious pitfalls that must be avoided as well. Project managers, who are usually employees of the agency which has contracted the work, have to compromise between demanding that specific materials (e.g., recycled) be used, thereby running the risk of being held liable for material or equipment failures, and being overly conservative with respect to recycled products, thus allowing good opportunities to purchase recycled products slip away. In addition, often the project managers themselves are not particularly well versed or educated about recycled products, so that they may not even know that these opportunities exist. Nelson and Hamilton have invested considerable effort to educate project managers about recycled products on a case-by-case basis, but there are no current plans to formalize the training program beyond the liaison program.

A good example of contractor procurement occurs in the construction of buildings and other public structures for King County. At any one time, King County is engaged in many projects with thousands of detailed purchasing decisions which could be influenced in favor of recycled products. According to Hamilton and Nelson, purchasing decisions on which construction materials to use may be made at many different project stages by many different people. Various people working for project managers, designers, and contractors may get involved in specifying materials for purchase.

The two recycled product coordinators actively keep their eyes open for possible opportunities to introduce recycled products to both direct and contractor procurement. With direct procurement, they are able to approach customers and suggest recycled alternatives. This can be a very effective way of changing customer awareness and behavior with respect to recycled products. With contractor procurement, however, each construction project presents a unique and time-dependent opportunity to introduce recycled products, as changes in material selection cannot be made after detailed building plans have been specified. In these cases, it is important to affect the process in its early stages, when designers and architects are still making decisions about material selection.

Nelson notes that they usually deal directly with project managers, some of whom are receptive to their ideas and some who are not. Nelson believes it is not productive to try to convince someone to use recycled products when they are resistant to the idea, and that it is a better use of time and resources to work cooperatively with project managers who are enthusiastic about recycled products. Nelson describes the two main ways of influencing materials selection in construction projects. First, it is important to investigate and stay abreast of what products are available and what they can do, and then attempt to

match these materials to people who could use them. The agency liaisons are very important in this regard, because they are more directly in touch with the various projects under way around the County.

The second important thing is to keep lines of communication open. Often, positive results occur just from getting people to talk to each other. For example, Nelson brought up the example of a member of the liaison network who was also the project manager for a large landscaping project. While on a site visit, this project manager noticed ground wood waste being used as groundcover as a substitute for "beauty bark." Realizing that she could also use ground wood waste for the same purpose, she ended up purchasing 10,000 cubic yards of wood waste at $1/cubic yard, as opposed to beauty bark, which typically sells for approximately $14/cubic yard.[19]

Nelson emphasizes that in this kind of work, maintaining a high level of credibility is extremely important. Although he is sometimes criticized by environmentalists for not going far enough in pushing recycled products, he counters this complaint by bringing up the point that he cannot haphazardly recommend products to his customers just because they contain recycled content. Only by providing sound advice can he continue to be effective in encouraging the use of recycled products.

As an example of the importance of credibility, Nelson related an anecdote about the Metropolitan Regional Justice Center, which is currently under construction. In the initial stages of construction, the contractor was required first to tear down old buildings already on the site. Instead of landfilling all of the resulting debris, Nelson recommended that the project manager work with the Solid Waste Division's Construction, Demolition and Landclearing Debris (CDL) Program to recycle the materials. In the end, they were able to recycle 95% of the debris from the demolition, at a savings of $265,000 over the cost of disposal. Encouraged by this success, the project manager was then much more receptive to Nelson's subsequent suggestions. Nelson was able to introduce the use of composted top soil, plastic lumber, recycled glass, recycled asphalt, and recycled concrete aggregate.

Citizens' Groups

Hamilton and Nelson provided one example of a citizens' group participation, albeit tangentially, in the recycled product procurement process. The Washington Citizens for Recycling led radio and print ad campaigns to encourage the use of re-refined motor oil and non-chlorine bleached paper, helping to raise awareness of the issue.

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[19] Wood waste generally sells for $4-6/cubic yard, but because they originally bid for bark, they received money back from the contractor and ended up only paying $1/cubic yard.

Information Technology Resources

Tracking system

King County tracks purchases of recycled products in two ways. When purchases are made under supply contracts, vendors are required to report purchases of recycled and non-recycled purchases quarterly. When purchases occur under construction contracts, they rely on the project managers for information on purchase volumes. According to Nelson and Hamilton, the organizational disconnect between Accounting and Purchasing also makes it particularly challenging to track purchases.

Automated purchasing system

While Nelson and Hamilton believe that automation of the purchasing system would be a major improvement to the current system, they do not have the resources to integrate operations, accounting, and procurement. In addition, the recent merging of King County Administration with that of Metro will cause many elements of both organizations to change in the near future. King County's Central Stores closed in December of 1995 due to the reorganization.

World Wide Web site

Although Nelson and Hamilton state that the King County Recycled Products Procurement web page (http://www.metrokc.gov) is not one of their top priorities, it is nevertheless a very good information source for suppliers, customers, as well as the general public.

The current contents of the site include:

King County recycled product procurement policy
King County recycled product procurement program annual report
Model policy and implementation guide
King County recycled product contracts list
Contract language for buy-recycled contracts
Information resources for buyers
Specifications for recycled construction and landscaping materials:
- Aggregate, Recycled Glass
- Aggregate, Recycled Concrete
- Asphalt, Recycled
- Compost as Organic Soil Amendment
- Hog Fuel (Ground Wood-Waste)
- Paint, Recycled
- Plastic "Lumber" and other recycled plastic products
- Recycling and Waste Management During Construction
- Tire-rubber Materials and Products

Specifications for recycled automotive and office products:
- Antifreeze, Re-Refined
- Laser Printer Toner Cartridges, Remanufactured
- Motor Oil, Re-Refined
- Paper, Recycled
- Plastic can-liners, Recycled
- Tire Retreading and Retreads

Product Performance Summaries
- County agencies' experiences with recycled materials

Environmental/Recycling Links

The Web site provides a good avenue for contacts and the ability to reach new people with new ideas, and an excellent and cost effective means of distributing information not only to the County (a County mandate) but also to the rest of the world. The site also serves as a very useful public relations tool.

Incentives

Awards/recognition

King County Purchasing believes that recognizing individuals in the County who are "doing good things" is an effective incentive to encourage people to continue finding new applications for recycled products. They emphasize that risk-takers and forward thinking individuals at County agencies are instrumental in pushing forward the recycled product agenda. Persons and agencies doing exceptional work in the area of recycled products are recognized in an internal county newsletter, in Recycled Products Procurement Annual

Reports, and there have been functions held for other people active in environmental issues.

Successes

King County's Recycled Product Procurement reports its activities in detail in its Annual Report (see attached document). The reader is therefore referred to the Annual Report for specifics on which types of products and dollar values of purchases. Nevertheless, there are a few examples of their successes that are worth mentioning.

King County has made substantial progress in its recycled paper procurement. Recycled paper products purchased by the County have grown from an original 8% at the outset of policy implementation to 90% in Fiscal year 1994-95. The majority of the photocopy paper purchased contained 25% or 35% post-consumer waste, exceeding EPA's 10% standard and President Clinton's 20% Executive Order. Other products mentioned in the Annual Report include: recycled concrete aggregate, re-refined antifreeze, recycled asphalt, compost, ground wood waste, re-refined motor oil, remanufactured toner cartridges, retreaded tires, reprocessed paint, plastic lumber, tire rubber chips (play area cover), recycled glass aggregate and recycled plastic can-liners.

"Mainstreaming"

Hamilton and Nelson emphasized the "mainstreaming" of recycled products as a key issue in their recycled products conceptual framework. A recycled product, once it has been mainstreamed, will no longer require artificial incentives or extra effort to keep the level of purchases high. According to Hamilton and Nelson, success with a recycled product has been achieved once it is completely mainstreamed. Recycled office paper is on the verge of becoming mainstreamed.

Other products on their way to becoming mainstreamed in King County include:

- recycled groundwood waste
- recycled concrete aggregate
- recycled glass aggregate
- re-refined motor oil

Barriers

As discussed by Nelson and Hamilton, barriers to success in environmentally conscious procurement have to do largely with the flow of information between Purchasing, customer agencies, suppliers, and contractors. Project managers in charge of construction projects are often unaware of the recycled products and other products with lesser environmental impacts available to them. Because many recycled products have only recently appeared on the market, often contractors have not been educated in their proper use. As discussed above, there is also the issue of liability in case a recycled product fails to perform satisfactorily. Products for which performance histories are unavailable may

present unquantifiable risks, and therefore may be avoided in favor of conventional products.

In other cases, the recycled products currently available do not meet the needs of the user, or are too expensive or difficult to find. For example, King County experienced significant performance problems with the first recycled toner cartridges they purchased, although those problems have since been resolved. As another example, the use of recycled glass aggregate for surfacing is sometimes restricted due to the fluctuating supply of recycled glass. Recycled rubber as a road material also caused difficulties due to its flammability.

The cost of recycled paper also remains a problem, even though King County purchases it in large volumes. According to Hamilton, product supply problems and the costs of collecting, processing, and transporting the inputs for recycled paper manufacturing keep the prices high. However, she also was of the opinion that some of the costs could be artificially inflated, caused in part by the price preference, which could act as a subsidy for recycled paper vendors.

Future Outlook

Hamilton and Nelson expect to continue educating project managers, buyers, the community, and researching new procurement opportunities and ways to improve the recycled product procurement process. They emphasize that mandates are not as effective in encouraging the purchase of recycled products as providing people with good, credible information about good, economical products that perform well.

One of the things Hamilton and Nelson are looking forward to is a better set of definitions of what "EPPs" actually are. As the universe of products with lesser environmental impacts expands and diversifies, it becomes increasingly difficult to assess which environmental claims are legitimate, and which environmental issues are most important. King County states that they will be following EPA's lead on this issue. Eventually, they would also like to start incorporating multiple environmental attributes into the program, but there are no current plans to do so. For the time being, King County will focus on increasing and encouraging the purchase of recycled products.

References

King County, 1995. "King County Recycled Product Procurement 1995 Annual Report."

San Diego County Department of Purchasing and Contracting[20]

History of Procurement Practices that Consider Environmental Performance of Goods and Services

The impetus for San Diego's recycled products procurement program was San Diego County Board of Supervisors Policy B-67, adopted in March 1992. The policy was designed to stimulate markets for recycled items, and included a 5% price preference on recycled products that conform to Federal or State guidelines. The price preference requires agencies to choose a recycled product over a virgin product if it is no more than 5% more expensive than the conventional product. The original driver of this policy was a program initiated by the State of California to reduce the amount of solid waste entering its landfills (Assembly Bill 989). A study was done between the years of 1989-1992 to determine the best way to target program efforts.

The first products to be considered under the new policy were recycled xerographic paper and recycled toner cartridges. Tollefson mentioned that toner cartridges were targeted as a priority recycled product because they were beginning to pile up at County landfills.

For recycled product procurement, the Department of Purchasing and Contracting (DPC) works with the Department of Solid Waste, which is the Office of Primary Responsibility for the program. The Department of Solid Waste is interested in recycled materials because an increase in their use will eventually result in a decrease in the amount of inputs to County landfills.

Organization

DPC is staffed by approximately 22 buyers and a handful of officials such as Mr. Tollefson, who is the Manager of Procurement Planning. Each buyer is responsible for a particular set of products. About four or five of the buyers are in charge of contracts larger than $100,000.

Procurement is divided into three levels, according to the amount of money involved. Simplified procurements are procurements with dollar values between $2,500 and $100,000, and involve the Request for Quotation (RFQ) and Purchase Order process. Simplified procurements are completed using the County's automated purchasing system. "Micro procurements" have a threshold of $2500, and are implemented through other, more cost effective means such as purchase cards. Because of state law, procurements with values greater than $100,000 still require the County to utilize the request for proposal/bid process. In addition to these procurements, construction contracts also have

[20] On December 6, 1995, Han Wang of Abt Associates interviewed Ken Tollefson on the subject of environmentally conscious procurement. Follow-up calls to Mr. Tollefson to discuss additional questions were made on February 22, 1996 and June 21, 1996. In addition, Han spoke briefly with Pam Cortelyou from the Dept. of Solid Waste (also on February 22) regarding their role in the recycled products procurement campaign. The following is a write-up of the information gathered.

a RFQ limit of $50,000, above which they must also be released using the request for proposal/bid process.

Successes and Barriers

When discussing successes and barriers to recycled product procurement, Mr. Tollefson and his staff provided examples pertaining to recycled paper, recycled toner cartridges, recycled tires, and re-refined motor oil. According to Mr. Tollefson, one of the most important barriers to success is perceived or real quality differences between recycled and conventional products, which can cause customers to be suspicious and unwelcoming of new products. A good example of a battle fought over perceived quality differences was over recycled paper used in photocopiers. An example of a problem with actual product quality involves recycled toner cartridges.

Recycled paper

Though EPA's standard for recycled paper is 20% post consumer, San Diego County is purchasing copier paper with 25% recycled content. However, because of price differentials between virgin and recycled paper, only 20% of the copier paper purchased contains recycled content. Demand for recycled content paper in San Diego County appears to be largely driven by customer requirements for recycled products rather than the 5% price preference, which, according to one of Tollefson's buyers, cannot always compensate for the higher price of recycled paper.

Some of the municipalities within the county, such as the cities of San Diego and Carlsbad, require that 100% of the paper used in the municipal offices contain some recycled content. Some agencies, such as the Department of Social Services, will buy recycled paper regardless of the price difference. Because they receive Federal funding, they are less affected by the price differentials between virgin and recycled paper than other agencies. According to County policy, Federal funding is expended using Federal rules, which currently include a requirement to purchase recycled content paper.

When San Diego first began buying recycled paper for its copy machines, copier technicians complained that the recycled paper jammed the County's copiers. DPC's response was to conduct some informal tests using the recycled paper, which included subjective assessments of sheet brightness as well as performance in the County's copiers. The performance tests involved running a quantity of recycled copier paper through various copy machines, and then assessing whether or not the jam rate was comparable to jam rates using virgin paper. After running tests, and having satisfied themselves that the paper was acceptable both in terms of brightness and performance, DPC also managed to convince its customers that recycled copier paper was a satisfactory product. It should be noted that DPC does not engage in scientific testing or ranking -- products are put through their paces and an informal assessment of their performance is made.

Mr. Tollefson relates that despite his office's efforts to encourage the use of recycled paper, some agencies nevertheless manage to circumvent the County mandate. If an agency can make the case that only virgin product is acceptable for their applications, they can get an exemption from the rule. In 1993, the Department of Information Systems (DIS) was granted exemptions for re-inked printer ribbons and recycled paper for its high speed and high volume laser printers. In both cases, DIS sought exemptions because of performance considerations.

In addition, according to Ms. Cortelyou, elected officials are not required to abide by County policy. For example, some judges will only allow the use of virgin stenographic recording paper, stating that information recording is critical in the judicial process and that the likelihood of recycled paper jamming the machines is too high to be acceptable. Mr. Tollefson states that agencies with sufficient political clout also have the freedom to disregard the recycled product mandate. He also points out that this disregard for recycled product statutes among elected officials and others is a problem in other counties and states, and is not peculiar to San Diego.

Recycled toner cartridges

Initially, recycled toner cartridges caused even larger problems than recycled copier paper not only in terms of product quality but also because they triggered an inter-agency conflict. When the County started to purchase recycled toner cartridges in 1994, there were initial toner smearing problems associated with their use. Because of this smudging problem, the Department of Information Systems (DIS), which manages the County's computer equipment, began to recommend that its County customers not use the recycled toner cartridges. Because the DIS and DPC had not coordinated with each other, the two agencies now had toner cartridge policies which were in direct conflict with each other. Once DPC found recycled toner cartridges which did not cause smearing, it responded via an open letter in the county employee newsletter to the effect that the toner cartridges were fine and should be used.

A number of factors contributed to solving the toner cartridge problem, including improvements in the product itself, user education, and a shift in the type of paper used with the toner. According to Tollefson, even the manufacturers of recycled toner cartridges will say that their initial products had serious performance problems. The manufacturers were able to significantly improve recycled toner cartridges by making changes in the way they replaced parts. Tollefson also noted that user misinformation was a contributor to the number of complaints received by DPC about recycled toner cartridges. Some users reported that printer and copier vendors would tell them that only their own proprietary toner cartridges were suitable for use in their machines, which caused users to distrust alternatives. Finally, pulp dust from some recycled papers caused the toner cartridges to fail. Finding paper with lower dust content also helped in solving the toner cartridge performance problem.

Retreaded tires

San Diego County uses retreaded tires on all county vehicles except for sheriff patrol cars and the steering axles on big trucks. These vehicles were exempted from using retreaded tires because the Department of General Services felt that there is still some uncertainty over how well retreaded tires hold up under high stress conditions, such as high speed pursuit and steering of eighteen-wheelers.

Re-refined motor oil

San Diego County purchases a considerable amount of re-refined motor oil. All motor oil used in San Diego County vehicles (including re-refined oil) must meet SAE (Society of Automotive Engineers) standards. The main difficulty the County has encountered when it purchases re-refined oil is its high price compared to virgin motor oil. Warranty issues also present problems to the County. Since Ford has not yet approved the use of 5W/30 grade re-refined oil for its new police cars, the County will not purchase re-refined 5W/30 until it gets approval from Ford.

Another significant problem that the County has with re-refined oil is that they currently lack a closed loop recycling system for the oil. Since their vendor, Evergreen Oil, is based in the Midwest, transporting spent oil back to the re-refiner is too expensive to be economically feasible.

Problems notwithstanding, San Diego is purchasing increasingly larger amounts of re-refined oil.

1993: $52,321 of re-refined oil purchased
1994: $625,495 of re-refined oil purchased

Although prices may have risen between 1993 and 1994, along with total demand for oil, dollars spent nevertheless increased by an order of magnitude, which suggests a substantial increase in the actual amount of re-refined oil procured.

San Diego County currently tracks only a small number of recycled purchases. Although many products containing recycled content are purchased, there is currently no complete list of such products. The following is a listing of the tracked products purchased through DPC in fiscal years 1993/94 and 1994/95:

ITEM	FY 1993/94	FY 1994/95
Recycled tires	$ 329,915.67	$ 366,181
Recycled xerographic paper	$ 379,872.41	$ 334,675
Recycled toilet tissue and paper towels	$ 242,078.42	$ 313,782
Re-refined motor oil	$ 52,320.91	$ 625,495
TOTAL	**$1,004,187.41**	**$1,640,133**

Other issues

It is Mr. Tollefson's opinion that at the outset of their recycled product procurement campaign, San Diego County should have had a recycled products coordinator selected by the County Board of Supervisors to drive some of the issues. Tollefson's view is that such an individual would have helped the program to start up a little more smoothly than it did. The recycled products coordinator would have been responsible for communicating with customer agencies about recycled products, encouraging their use, and acting as the contact person in the case of difficulties or complaints with the products. For example, the Board of Supervisors has a specially selected person who is responsible for local business development. Environmental concerns ought to be as important to the County as local business development, says Mr. Tollefson.

When asked whether socio-economic/political issues such as "buy local" or "buy American" ever conflicted with the goals of the recycled product procurement program, Mr. Tollefson related that this was essentially a non-issue. Mr. Tollefson relates that within the recycled product procurement program, DPC's primary concerns were the need to reduce solid waste. For example, while there exists a 1% price preference for products produced within the County, in practice it is almost never a factor. According to Mr. Tollefson, there have been no instances where there was a procurement decision conflict between a locally produced virgin product (with its 1% price preference) and a non-locally produced recycled product.

Drivers of Policy

The driving forces for encouraging the purchase of recycled products come from three separate sources:

1. Department of Purchasing and Contracting
2. Department of Solid Waste
3. Automated purchasing system

Dept. of Purchasing and Contracting

DPC employs several means to discover new recycled products, including sending its staff to trade shows and working with vendors that carry recycled content products. Decisions to pursue new products are made based on meetings between senior buyers and other purchasing staff. Buyers are responsible for keeping abreast of new products in their product lines.

DPC also participates in cooperative contracts containing recycled products with other counties as well as the State of California. These efforts are often coordinated through the California Association of Public Purchasing Officers. According to Tollefson, one major benefit of these cooperative contracts relevant to recycled products is that the large volumes of goods purchased often result in lower prices.

Central Stores is a centralized warehouse managed by DPC which stocks some of the goods used in high volume by the County. The sheer number of units Central Stores moves allows it to have a significant influence on the types of products purchased. By purchasing recycled paper products in large volume, Central Stores gets better prices than smaller individual customers and helps to reduce the price differential between virgin and recycled products. This provides another way of driving the purchase of recycled products. Products stocked by Central Stores include paper products and canned food for the Department of Corrections.

Department of Solid Waste

In addition to DPC, environmental procurement initiatives are coming from other areas of the County government as well. Examples include the County initiative to replace lights in county buildings with more energy efficient lighting fixtures.

The Department of Solid Waste (DSW) plays an important role in recycled products procurement by augmenting DPC's efforts in this area. DSW performs three functions which are relevant to procurement: 1) provision of information about recycled products to the public as well as contractors; 2) identification of new products with recycled content, such as trash cans and oil recycling containers, and 3) specifying that recycled products be used in construction and other contracts.

By specifying that recycled materials be used in construction contracts, DSW can have a significant impact on the amount of recycled materials used. Ms. Cortelyou mentioned recycled PVC vent pipes and rubberized asphalt as examples of materials specified in construction contracts. DSW confers with its own engineers as well as engineers from other agencies (e.g., California Department of Transportation, or Caltrans) to obtain expert opinions on the performance of recycled products. In situations where the recycled product has not been tested to the satisfaction of the parties involved, DSW will occasionally create pilot projects to determine for themselves the suitability of the product.

Automated purchasing system

San Diego County has invested a considerable amount of effort and resources into the development of their automated purchasing system. The computer system began approximately seven years ago as an electronic requisitioning system, but has grown to incorporate purchasing as well as other communication abilities. It has evolved to the point where 100% of requisitions between $2,500 and $100,000 are now made on the system, and interactions between DPC and suppliers also occur on-line. This electronic purchasing system also allows DPC to automatically track purchases. In addition, San Diego is currently implementing a pilot project involving the so-called County Commodity Catalog, which will prompt users to requisition a recycled product if such an alternative is available.

According to Mr. Tollefson, San Diego County's philosophy on recycled products and products with lesser environmental impacts in general is to push the envelope using whatever means they have at their disposal. To San Diego, the computerized purchasing system is an important tool in their recycled product procurement efforts. Mr. Tollefson relates that over time, the recycled product procurement program will become fully automated, and the purchase of recycled products and other products with lesser environmental impacts will be a common and natural occurrence for his County customers. Mr. Tollefson states that effectively mainstreaming recycled product procurement in the County would be an important success for their program.

The automated purchasing system is divided into three modules: automated requisitioning, automated requisition management (purchasing), and the electronic commerce system. Aside from small purchases (less than $2500) and purchases over $100,000, county agency customers send requisitions to DPC via the electronic requisitioning. Of the 17,500 county employees, only 750 have the authority to make requisitions, and only 250 have the authority to make requisition approvals. Once DPC receives a requisition, buyers use the Automated Requisition Management module to amend the requisition and to create a Request for Quotation. These solicitations are then uploaded to the interactive electronic commerce system bulletin board, which can be accessed by suppliers. Suppliers can respond electronically with quotations, which are collected in a spreadsheet for buyers. The electronic commerce system bulletin board can be accessed by anyone with a modem at 619-685-2366, and will soon be accessible via the World Wide Web (http://www.co.san-diego.ca.us).

To encourage the purchase of recycled products, San Diego has added a new feature to the electronic requisitioning system. Products for which there exist equivalent recycled products are tagged as such. Whenever a user selects a product to be purchased, the system checks to see if the product requisitioned by a user has a recycled alternative. If it does, the system provides the commodity code for the recycled equivalent, and reminds the user of the County's recycled product procurement policy. San Diego County has launched a pilot program with the Department of Social Services and the Department of Health to test this new system.

Future Outlook

DPC's focus is clearly on implementing and improving the automated purchasing system, and in particular the module which specifies recycled alternatives for conventional products. Mr. Tollefson's describes his vision as "getting everyone aboard" so that all County agencies may take advantage of the computer system. Their goal is to get this system up and running for all products and all County agencies by the end of 1996. By 1997, they hope to have the first year of complete purchasing data for the county. Another priority for San Diego is to include other local governments in their electronic purchasing system. They are currently in the final stages of discussions with the City of San Diego and other southern California cities to get them on board with the computer system.

Mr. Tollefson emphasizes that making procurement of recycled products a commonplace activity among all of his customers is essential for the success of their recycled product procurement campaign.

Interviewee Contact Information

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Appendix A: Questionnaire for Selecting Interviewees

ENVIRONMENTALLY PREFERABLE PRODUCTS STUDY

Dear respondent: Abt Associates is working with the U.S. EPA to produce a report on procurement practices that encourage the purchase and use of environmentally preferable products and services (EPPs). If you would, please take a moment to answer the following questions so that we can gain some understanding about the way your purchasing organization conducts its activities with respect to procuring EPPs. After analyzing the screeners, we will select a small number of organizations on which we would like to conduct case studies. Please let us know if you would be willing to participate in a case study. Please note that because of limited resources, we will only be able to select a handful of organizations. Thanks in advance for your help.

Please forward responses and address questions to:
Meredith Bellows, Abt Associates Inc., 55 Wheeler St., Cambridge, MA 02138
Fax: 617 349-2660; Phone: 617 349-2786; e-mail: meredith_bellows@abtassoc.com

Name of respondent: _____

Title of respondent: _____

Organization/Agency: _____

Respondent Phone: _____ Fax: _____

Address: _____

Type of Program (circle):

STATE PURCHASING ORGANIZATION
COUNTY PURCHASING ORGANIZATION
OTHER ORGANIZATION: _____

Would you be interested in participating as a case study for our report? ____

1.) <u>Organizational structure of Procurement Program</u>

Describe your customers: _____

_____

Do you have a system that computerizes procurement requests? _____

Does the computer system have features which educate or otherwise prompt the user to select environmentally preferable products over conventional products? _____

Do you have a computerized system for tracking purchases? _____

Do you track dollars or volume of EPPs (or both)? _____

2.) EPP Procurement Process

From where does the impetus for procuring EPPs come? (e.g., within your organization, from another organization, executive order, legislation, customer preference, etc.) _____

_____

Describe your experience with the procurement of EPPs (circle):

HAVE DONE A GOOD DEAL OF WORK HAVE DONE A LITTLE WORK

I AM NOT THE PERSON RESPONSIBLE FOR THESE PURCHASES

COMMENTS: _____

_____

Do you have person responsible for managing environmental procurement? _____

Who? _____

Is his/her position located within the procurement organization/department? _____

In another organization? (e.g., Department of Environmental Protection) _____

Does your organization work with other organizations in the procurement of EPPs? _____

Which ones? _____

3.) Environmentally Preferable Products

Which of the following environmental attributes are currently being emphasized in your procurement process?

- ❑ RECYCLED CONTENT
- ❑ RECYCLABLE
- ❑ REMANUFACTURED
- ❑ REUSABLE
- ❑ WASTE REDUCING
- ❑ LESS/NON TOXIC
- ❑ REDUCES AIR POLLUTION
- ❑ LOW NOISE
- ❑ ENERGY EFFICIENT
- ❑ LOW WATER CONSUMPTION

What other attributes are being emphasized? _____

Which attributes/types of products would you like to consider in the future? _____

_____