




Title		Document Code No.
King County Recycled Product Procurement Policy		CON 7-1-1 (A-EP)
Department/Issuing Agency		Effective Date
Executive Administration / Purchasing Agency		July 28, 1990
Approved		
	7/18/90	

**1.0 SUBJECT TITLE: King County Recycled Product Procurement Policy**

1.1 EFFECTIVE DATE: July 28, 1990

1.2 TYPE OF ACTION: SUPERSEDING CON 7-1(A-EP).

1.3 KEY WORDS: (1) Waste Reduction/Recycling; (2) Procurement Policy;  
(3) Recycled Products; (4) Market Development of Recycled Materials;  
(5) Guidelines

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**2.0 PURPOSE:**

2.1 To establish policies and procedures for implementing K.C.C. 10.16 and Ordinance No. 9240, the King County Recycled Product Procurement Policy.

2.2 To transmit Guidelines prepared by the Purchasing Agency and the Solid Waste Division for procurement of products designated in K.C.C. 10.16.40.

2.2.1 Paper and paper products.

2.2.2 Cement and Cement concrete.

2.2.3 Lubricating oil.

2.2.4 Tires.

2.2.5 Building insulation products.

2.2.6 Other products to be designated by the Purchasing Agency and the Solid Waste Division on a case-by-case basis.

3.0 ORGANIZATIONS AFFECTED: Applicable to all King County departments, offices and agencies.

4.0 REFERENCES: K.C.C. Chapter 10.16 and Ordinance No. 9240.

5.0 DEFINITIONS:

- 5.1 "Contractor" means any person, group of persons, consultant, designing architect, association, partnership, corporation, or other business entity that has a contract with King County (including suppliers) or serves in a subcontracting capacity with an entity having a contract with King County for the provision of goods or services.
- 5.2 "Designated products" means all products that have been or may be identified pursuant to K.C.C. 10.16.040 as products that can be procured with significant levels of recovered materials.
- 5.3 "Minimum content standards" means standards set by the County specifying the minimum level of recovered material and/or post-consumer material necessary for designated products to qualify as recycled products.
- 5.4 "Post-consumer material" means only those products generated by a business or consumer that have served their intended end uses, and which have been separated or diverted from the solid waste stream for the purposes of collection, recycling and disposition.
- 5.5 "Post-consumer paper material" means:
  - 5.5.1 Paper, paperboard and fibrous wastes including corrugated boxes, newspapers, magazines, mixed waste paper, tabulating cards and used cordage from places like retail stores, office buildings and homes after the point at which they have passed through their end use as consumer items; and
  - 5.5.2 All paper, paperboard and fibrous wastes that enter and are collected as mixed municipal solid waste.
- 5.6 "Recovered material" means material and byproducts that have been recovered or diverted from solid waste, but does not include those materials and byproducts generated from, and commonly reused within, an original manufacturing process (such as mill broke or home scrap).

- 5.7 "Recovered paper material" means paper waste generated after the completion of a paper-making process, such as post-consumer material, envelope cuttings, bindery trimmings, printing waste, cutting and other converting waste, butt rolls, and mill wrappers, obsolete inventories, and rejected unused stock. Recovered paper material, however, shall not include fibrous waste generated during the manufacturing process such as fibers recovered from waste water or trimmings of paper machine rolls (mill broke), or fibrous byproducts of harvesting, extractive or woodcutting processes, or forest residue such as bark.
- 5.8 "Recyclable product" means a product which, after its intended end use, can demonstrably and economically be diverted from the King County solid waste stream for use as a raw material in the manufacture of another product.
- 5.9 "Recycled designated product" means a product designated in or pursuant to K.C.C. 10.16.040 that meets or surpasses (1) County minimum content standards, and (2) all other criteria for qualification as specified in K.C.C. 10.16.
- 5.10 "Reusable product" means a product that can be used several times for an intended end use before being discarded, such as a washable food or beverage container or a refillable ball point pen.

## 6.0 POLICIES:

- 6.1 The King County Executive strongly supports and will aggressively implement the King County Recycled Product Procurement Policy, K.C.C. Chapter 10.16.
- 6.2 Policies to encourage the procurement of specific designated recycled products shall be promulgated in Guidelines prepared by the Purchasing Agency and the Solid Waste Division and contained in Section 9.0.

## 7.0 PROCEDURES:

- 7.1 Procedures and information regarding procurement of designated products by County departments and contractors shall be included in Recycled Product Procurement Guidelines prepared by the Purchasing Agency and the Solid Waste Division and contained in Section 9.0.
- 7.2 The Purchasing Agency, after consultation with the Solid Waste Division, may revise Guidelines without going through the normal review process to update information about product availability or revise minimum content standards.

## 8.0 RESPONSIBILITIES:

8.1 All agencies shall fulfill the responsibilities specified in K.C.C. 10.16.

8.2 Directors of Executive departments shall assign staff responsible for:

8.2.1 Helping contract administrators obtain a satisfactory level of contractor compliance with any contract requirements for use of recycled products.

8.2.2 Collecting and compiling data regarding use of designated products by contractors, as specified in the Guidelines.

8.3 Additional responsibilities are contained in the Guidelines.

## 9.0 APPENDICES: RECYCLED PRODUCT PROCUREMENT GUIDELINES

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## **KING COUNTY PROCUREMENT GUIDELINES PAPER AND PAPER PRODUCTS**

### **I. INTRODUCTION**

The King County Recycled Product Procurement Policy, K.C.C. Chapter 10.16, designates "paper and paper products" as commodities that can be procured with significant levels of recovered materials. Paper products qualify as recycled products if they meet King County minimum recycled content standards contained in Section 9.8. For recycled paper products, the Procurement Policy establishes a preferential procurement program applicable to all County agencies and their contractors.

### **II. DEFINITIONS**

- A. "Bond paper" means a generic category of paper used in a variety of end use application such as forms, offset printing, copy paper, stationery, etc.
- B. "Computer paper" means a type of paper used in manifold business forms produced in rolls and/or fan folded. It is used with computers and word processors to print out data, information, letters, advertising, etc. It is commonly called computer printout.
- C. "Book paper" means a generic category of papers produced in a variety of forms, weights, and finishes for use in books and other graphic arts applications, and related grades such as tablet, envelope, and converting papers.
- D. "Brown papers" means papers usually made from unbleached kraft pulp and used for bags, sacks, wrapping paper and so forth.
- E. "Corrugated boxes" means boxes made of corrugated paperboard which, in turn, is made from a fluted corrugating medium pasted to two flat sheets of paper board (linerboard); multiple layers may be used.
- F. "Cotton fiber paper" means paper that contains a minimum of 25 percent and up to 100 percent cellulose fibers derived from lint cotton, cotton linters, and cotton or linen cloth cuttings. It is also known as rag content paper or rag paper.

- G. "Cover stock" means a heavyweight paper commonly used for covers, books, brochures, and pamphlets.
- H. "Doilies" means paper place mats used on food service trays in hospitals and other institutions.
- I. "Duplicator paper" means writing papers used for masters of copy sheets in the aniline ink or hectograph process or reproduction.
- J. "Envelopes" means brown, manila, padded, or other mailing envelopes not included with "stationery."
- K. "Facial tissue" means a class of soft absorbent papers in the sanitary tissue group.
- L. "Fiber or fiberboard boxes" means boxes made from containerboard, with either solid fiber or corrugated paperboard, or boxes made from solid paperboard of the same material throughout.
- M. "Form bond" means a lightweight commodity paper designed primarily for business forms including computer printout and carbonless paper forms.
- N. "Industrial wipers" means paper towels especially made for industrial cleaning and wiping.
- O. "Ledger paper" means a type of paper generally used in a broad variety of record keeping applications, such as in accounting machines.
- P. "Mimeo paper" means a grade of writing paper used for making copies on stencil duplicating machines.
- Q. "Newsprint" means paper of the type generally used in the publication of newspapers or of special publications like the Congressional Record. It is made primarily from mechanical wood pulps combined with some chemical wood pulp.
- R. "Office paper" means note pads, loose-leaf fillers, tablets and other papers commonly used in offices, but not defined elsewhere.
- S. "Offset printing paper" means an uncoated or coated paper designed for offset lithography.
- T. "Paper napkins" means special tissues, white or colored, plain or printed, usually folded, and made in a variety of sizes for use during meals or with beverages.

- U. "Paper towels" means paper toweling in folded sheets, or in roll form, for use in drying or cleaning, or where quick absorption is required.
- V. "Recycled paper" means paper or paper products that meet the standards set forth in the King County Minimum Recycled Content Standards.
- W. "Stationery" means writing paper suitable for pen and ink, pencil or typing. Matching envelopes are included in this definition.
- X. "Toilet tissue" means a sanitary tissue paper, the principal characteristics of which are softness, absorbency, cleanliness, and adequate strength. It is marketed in rolls of varying sizes or in interleaved packages.
- Y. "Writing paper" means a paper suitable for pen and ink, pencil, typewriter or printing.
- Z. "Xerographic/copier paper" means any grade of paper suitable for copying by the xerographic process (a dry method of reproduction).

### III. MINIMUM CONTENT STANDARDS

Minimum recycled content standards for selected paper products have been established by the Purchasing Agency and the Solid Waste Division (see Section 9.8). K.C.C. 10.16.070 requires the standards to be at a minimum consistent with standards promulgated by the United States Environmental Protection Agency unless the County determines that different standards would increase recycled product availability, improve competition, or increase the amount of recycled material used. The Purchasing Agency and the Solid Waste Division may revise minimum content standards to accomplish these purposes.

#### IV. POLICIES

- A. King County's recycled paper procurement goal (expressed as a percentage of the total volume of paper purchased) is:

1. Not less than ten percent by 1990
2. Not less than thirty percent by 1992
3. Not less than sixty percent by 1995

Each department shall be responsible for making its best effort to meet or surpass these goals.

- B. All County letterhead paper and business cards shall be printed on recycled paper.
- C. County agencies are encouraged to purchase and use recycled paper for all their paper needs. Agencies may require recycled content as a specification when procuring paper or paper products.
- D. County agencies shall, at all times, use recycled paper if its cost is not more than 15% higher than that of equivalent non-recycled paper.
- E. All printed or photocopied material submitted under contract to the county shall be on recycled paper if its cost is not more than 15% higher than that of equivalent non-recycled paper.
- F. To reduce the volume of paper used, County agencies shall use both sides of paper sheets whenever practicable.
- G. All agencies shall print the words "Printed on Recycled Paper" on all letterhead paper and on the title page of all reports printed on recycled paper.



V. AGENCY USE OF RECYCLED COPIER PAPER: INTERIM REQUIREMENTS

**Introduction.** The County currently has separate blanket purchase orders for supply of recycled and non-recycled copier paper. The non-recycled copier paper contract expires in September 1990. The following interim policies shall apply be effective while the current copier paper contracts are in place:

- A. Because the current price of recycled paper is less than fifteen percent higher than non-recycled paper, all agencies procuring legal or letter size copier paper shall purchase recycled paper from the County's blanket purchase order No. B01082B.
- B. Agencies may purchase non-recycled copier paper only if they have documentable performance problems with recycled paper available on the County purchase order. Before purchasing non-recycled paper, agencies shall submit to Purchasing Stores a Request for Supply of Non-Recycled Paper and agree to participate in tests of paper performance specified by the Purchasing Agency.
- C. Purchasing Stores may fill orders with non-recycled paper if necessary to deplete existing stock.

**VI. PAPER PROCUREMENT -- RESPONSIBILITIES OF PURCHASING AGENCY**

**A. Contracts for Supply of Paper**

1. Apply price-preference. In all competitive bid processes for supply of paper products where recycled content is not included as a specification, the Purchasing Agency shall solicit bids for both recycled and non-recycled products and shall apply in bid evaluation a price-preference of 15% for recycled paper, using the following procedures:
  - a. Identify items qualifying for price-preference.  
An item qualifies for price-preference if:
    - i. The bidder has submitted the Manufacturer's Statement of Recycled Content, listing each item which is offered as a recycled product preference is requested; and
    - ii. The recycled content stated by the manufacturer meets the standards set forth in the King County Minimum Recycled Content Standards.
  - b. Consider the price-preference in bid-evaluation.
    - i. For each item that qualifies for price-preference, subtract 15 percent to arrive at an "Evaluation Price" for the item.
    - ii. Re-total the bid (or bid section), substituting the "Evaluation Prices" for the bid prices.
    - iii. Use the new total as the basis for further evaluation (e.g. MWB) and award. "Ties" are awarded to the recycled product.
  - c. Forward a copy of the Manufacturer's Statement of Recycled Content to the Recycled Product Procurement Coordinator in the Purchasing Agency.

2. Satisfy reporting requirements.

- a. For term contracts, include in the ITB and contract the requirement that suppliers provide a quarterly report of the recycled and non-recycled paper supplied to the County. Notify the Recycled Product Procurement Coordinator of the contracts that include this reporting requirement.
- b. When purchases are made directly, and not on term contract, record the purchases by each agency on the Department Record of Paper Purchase. Include reams of recycled and non-recycled paper purchased and reason for purchase of non-recycled paper. Submit a quarterly report summarizing purchases by department to the Recycled Product Procurement Coordinator in the Purchasing Agency.

B. Contracts for Printing

1. Apply price-preference. In all competitive bid processes for contracts involving the production of printed material for the County in which recycled content is not included as a specification, the Purchasing Agency shall solicit bids for both recycled and non-recycled products and shall apply in bid evaluation a 15 percent price-preference for recycled paper, using the following procedures:
  - a. Identify items qualifying for price-preference. An item qualifies for price-preference if:
    - i. The bidder has requested price-preference for the item on the bid; and
    - ii. The recycled content of the product offered by the supplier meets the standards set forth in the Minimum Recycled Content Standards.
  - b. Consider the price-preference in bid-evaluation.
    - i. For each item that qualifies for price-preference, subtract 15 percent to arrive at an "Evaluation Price" for the item.
    - ii. Re-total the bid (or bid section), substituting the "Evaluation Prices" for the bid prices.
    - iii. Use the new total as the basis for further evaluation (e.g. MWB) and award.

2. Satisfy reporting requirements.

Record paper purchases by each agency on the Department Record of Paper Purchase. Include reams of recycled and non-recycled paper purchased and reasons for purchase of non-recycled paper. Submit a quarterly report summarizing purchases by department to the Recycled Product Procurement Coordinator.

- C. Provide performance testing protocols to departments submitting a Request for Supply of Non-Recycled Paper to Purchasing Stores, Evaluate the findings and report determinations to the departments.
- D. Maintain a list of vendors supplying recycled paper products.
- E. Provide agencies with information regarding use of a recycling logo on copies, printed reports, and computer-generated output.

VII RESPONSIBILITIES OF COUNTY DEPARTMENTS

- A. County departments that administer contracts involving the production of printed material for the county or submission of printed material to the county shall:
  - 1. Ensure that contractors whose contracts will involve the production of printed material for the County or submission of printed material to the County submit the Statement of Recycled Paper Compliance prior to contract award.
  - 2. Include the Contractor Record of Paper Purchase in the contract package when the estimated volume of paper that will be submitted in fulfillment of the contract exceeds 10 reams in any month.
  - 3. Obtain the Contractor Record of Paper Purchase from these contractors prior to contract expiration and final payment.
  - 4. Submit all completed Contractor Record of Paper Purchase forms to the Recycled Product Procurement Coordinator quarterly, with an attached summary report.
    - a. The summary report shall include total volumes of recycled paper and non-recycled paper usage reported by contractors during the reporting period.
    - b. Reports shall be submitted before the end of the month immediately following the end of each calendar quarter. The first report shall be submitted not later than October 31, 1990 for contracts expiring in July, August, and September, 1990.

- B. The Print Shop shall maintain records of paper purchases by department, showing reams of recycled, reams of non-recycled and reason for purchase of non-recycled, using the Department Record of Paper Purchase and submit a quarterly report of paper purchases to the Recycled Product Procurement Coordinator in the Purchasing Agency, summarizing purchases by department.
- C. Supply contractors with a list of vendors supplying recycled paper products, if needed. This list is available from the Recycled Product Procurement Coordinator in the Purchasing Agency.
- D. Use both sides of paper sheets for photocopies.
- E. At no time purchase a non-recycled paper product on a direct voucher if a recycled product is available from Purchasing Stores or on a current supply contract.

VII. ATTACHMENTS

- 9.2 VII - A. Manufacturer's Statement of Recycled Content
- 9.2 VII - B. Statement of Recycled Paper Compliance
- 9.2 VII - C. Contractor Record of Paper Purchase
- 9.2 VII - D. Department Record of Paper Purchase

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## Manufacturer's Statement of Recycled Content: Paper & Paper Products

Manufacturer	Phone	Bid Number
Address		

Manufacturer shall certify below the percentage of "Recovered Paper Material" and that part of the Recovered Paper Material which is "Post-Consumer Material". The definitions of these terms appear on the reverse of this statement. Current standards for recycled material content appear in the King County Minimum Recycled Content Standards, available from the Purchasing Agency.

Product	% Recovered Paper Material *	% Post- Consumer Material

The material above contains, at a minimum, the stated percentages of recycled material, as defined on the reverse of this statement.

Printed Name and Signature of Manufacturer's Representative	Title	Date
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\* Recovered cotton fiber may also be included here.

## Definitions

**"Post-Consumer Material"** means only those products generated by a business or consumer which have served their intended end uses, and which have been separated or diverted from the solid waste stream for the purposes of collection, recycling, and disposition.

**"Recovered Paper Material"** means paper waste generated after the completion of a paper-making process, such as post-consumer material, envelope cuttings, bindery trimmings, printing waste, cutting and other converting waste, butt rolls, mill wrappers, obsolete inventories, and rejected unused stock. Recovered paper material, however, shall not include fibrous waste generated during the manufacturing process such as fibers recovered from waste water or trimmings of paper machine rolls (mill broke), or fibrous byproducts of harvesting, extractive or woodcutting processes, or forest residue such as bark.

Please note that "post-consumer material" is included in this category and that the products which are commonly referred to as "ground wood" papers are excluded.



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### Statement of Recycled Paper Compliance

This statement shall be completed by all contractors who purchase paper with County funds or submit printed or photocopied materials in fulfillment of contract obligations.

The King County Recycled Product Procurement Policy (KCC 10.16) requires contractors and consultants to use paper meeting the King County Recycled Content Standards in fulfilling contractual obligations to the county whenever practicable.

The King County *Recycled Product Vendor Directory* is available from the Purchasing Agency. It contains the King County Minimum Recycled Content Standards and a listing of vendors supplying products meeting them.

Contractor agrees to use recycled paper for printed or photocopied documents submitted in fulfillment of this contract whenever practicable.

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Contractor Signature

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Date

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Contractor Name/Title





CRPP-070290

Phone

County agencies are required to use recycled paper whenever practicable and to provide information to the purchasing agency about paper purchases. Non-recycled paper may be purchased only if the cost of recycled paper is more than 15% above the cost of non-recycled paper or the use of recycled paper is precluded by documentable performance problems. County employees who purchase paper shall submit this record of paper purchase to the Recycled Product Procurement Coordinator in the Purchasing Agency quarterly.

[illegible]

\* Indicate the product and packaging unit if not reams.

## Page Totals

\* Indicate the product and packaging unit if not reams. **Page Totals**     ARPP6071090

**KING COUNTY PROCUREMENT GUIDELINE  
CEMENT AND CEMENT CONCRETE**

**I. INTRODUCTION**

The King County Recycled Product Procurement Policy, K.C.C. Chapter 10.16, establishes policies and procedures to increase the use of recycled products by County agencies and their contractors. The Policy is also intended to satisfy guidelines established by the Environmental Protection Agency (EPA) for preferential procurement of recycled products where federal funding is being used for product purchase. Recycled products are those products identified in the Procurement Policy that meet minimum recycled content standards established by the Purchasing Agency and the Solid Waste Division.

Cement concrete is designated by the Procurement Policy and by the EPA as a product that can be procured containing significant amounts of fly ash generated from coal combustion.

**II. DEFINITIONS**

- A. "Cement" means a powder-like manufactured mineral product, often referred to as "Portland cement," used in the manufacture of cement concrete.
- B. "Cement concrete" means concrete that contains cement.
- C. "Cement with fly ash or cement concrete with fly ash" means cement or cement concrete containing any amount of fly ash
- D. "Fly ash" means the component of coal which results from the combustion of coal, and is the finely divided mineral residue which is typically collected from boiler stack gases by electrostatic precipitator or mechanical collection devices.

### III. MINIMUM CONTENT STANDARDS

The Procurement Policy does not specify a minimum or maximum level of fly ash content for any uses, due to variations in fly ash, cement, strength requirements, costs, construction practices, etc. However, replacement rates of fly ash for cement in the production of blended cement generally do not exceed 20% to 30%, although fly ash blended cements may range from 0%-40% fly ash by weight, according to ASTM C595, for cement Types IP and I(PM). 15% is a more accepted rate when fly ash is used as a partial cement replacement as an admixture in concrete.

### IV. PROCUREMENT POLICIES AND PROCEDURES

K.C.C. 10.16.080 states: Each department that administers construction contracts is responsible for ensuring that all invitations to bid issued by the County after March 31, 1990 contain specifications that allow cement or cement concrete with fly ash as an optional or alternative material for all construction projects. The purpose of this provision is to ensure that fly ash is allowed as a component of concrete unless there are specific technical reasons why it is not appropriate.

### V. SPECIFICATIONS

The Purchasing Agency believes that the attached specifications currently used by the Department of Public Works satisfy Procurement Policy requirements. Other County engineering agencies should adopt similar specifications. If there are technical reasons for not allowing fly ash, please contact the Purchasing Agency's Recycled Product Procurement Coordinator at 296-4210. Attached specifications include:

- A. Fly Ash Composition: Section 9-23.9 of standard specifications (WSDOT)
- B. Fly Ash Alternate for Portland Cement Concrete (King County General Special Provisions, G5-05.3X1)
- C. Concrete Mixes Incorporating Fly Ash (King County General Special Provisions, G6-02.31FA)



VI. REPORTING REQUIREMENTS

- A. Where cement or cement concrete is purchased by purchase order, contractors shall estimate in signed bid documents the percentage of fly ash by weight, as well as the total weight of fly ash to be supplied.
- B. Where cement or cement concrete is purchased as a component of a construction contract, the engineer responsible for the mix design shall maintain records of the percentage of fly ash (as a percentage of total cementitious material).
- C. Each department that purchases cement or concrete shall annually summarize and submit to the Purchasing Agency the total weight of fly ash purchased and the percentage of fly ash (as a percentage of total cementitious material).
- D. The Purchasing Agency will develop and distribute a form to departments to assist them in recording the requested information.
- E. All County employees are encouraged to contact the Purchasing Agency's Recycled Product Procurement Coordinator at 296-4210 to clarify reporting requirements and processes.

**VII. ATTACHMENTS**

**A. WSDOT, Standard Specifications, page 594: Section 9-23.9 Fly Ash**

Fly ash shall conform to the requirements of ASTM C 618 Class C or F with optional chemical and physical requirements as set forth in Tables 1A and 2A and with a further limitation that the loss on ignition be a maximum of 1.5 percent.

**B. King County Public Works General Special Provisions - 1988  
G5-05.3X1 FLY ASH ALTERNATE FOR PCC PAVING**

Fly ash may be utilized in the portland cement concrete for pavement. Mix proportions shall be subject to approval by the Engineer and shall be in compliance with the following conditions.

1. Fly ash may be used to replace up to 20 percent of the Type II portland cement content as designated in section 5-05.3(1) of the standard specifications at the rate of 1-1/4 pounds of fly ash for each pound of portland cement replaced. The replacement ratio may be reduced to 1:1 in the case of Class C fly ash provided that the requirements of condition No. 2 below are attained.
2. Cement replacement may be utilized subject to confirmation and approval of the proposed mix by the Engineer. The basis of approval will be attainment of the equal flexural strength at 14 days, or other lesser design age if requested by the Contractor, as that obtained from a reference mix produced from all portland cement with no replacement of fly ash conforming to the requirements of section 5-05 of the standard specifications and the same aggregate approved and produced for the project. The candidate and reference mixes shall be identical in aggregate proportions and gradation. Establishment of equivalence shall be based on an average of 5 beam specimens. Approval shall be for the tested design age only.
3. Fly ash shall conform to the requirements of section 9-23.9 of the standard specifications.
4. In making calculations relative to cement factor or allowable water content, the total cementitious material shall be considered to be the weight of portland cement plus the weight of fly ash substituted.

As an alternative to the use of fly ash and cement as separate components, a blended hydraulic cement may be used. Concrete made with blended hydraulic cement shall meet the requirements listed above. In addition, the origin and percentage of fly ash shall be certified on the cement mill test. The blended hydraulic cement shall comply with ASTM C-593-83 Type 1P (MS).

All costs in connection with replacing portland cement with fly ash as specified shall be included in the unit contract price per square yard in place for the various bid items involved.

**C. King County General Special Provisions - 1988**  
**G6-02.31FA CONCRETE MIXES INCORPORATING FLY ASH**

Concrete mixes incorporating fly ash may be used for all classes of concrete, unless otherwise noted in these special provisions.

Materials: Fly ash shall conform to the requirements of Section 9-23.9 of the standard specifications.

As an alternative to the use of fly ash and cement as separate components, a blended hydraulic cement may be used. Concrete made with a blended hydraulic cement shall meet the requirements listed above. In addition, the origin and percentage of fly ash shall be certified on the cement mill test certificate. The blended hydraulic cement shall comply with ASTM C 595 Type IP(MS).

Construction Requirements: Mix proportions will be subject to approval by the Engineer and shall be in compliance with the following conditions:

1. Fly ash may replace up to 20 percent of a specified portland cement content at the rate of 1-1/4 pounds of fly ash to each pound of portland cement replaced. In concrete mix designs where a specific cement content is not specified, the fly ash content shall not exceed 25 percent of the total cementitious material. Cementitious material shall be the sum of portland cement plus fly ash.
2. Cement replacement in concrete mixes specifying a cement content shall be subject to strength confirmation testing and approval of the proposed mix by the Engineer for the following classes of concrete:

Concrete Class A  
Concrete Class B when used in bridges, culverts, and  
retaining walls  
Concrete Class AX

For these classes of concrete, the Contractor shall design the concrete mix to meet an average 28 day compressive strength of 1.34 times the minimum ultimate compressive strength shown in section 6-02.3(2) for concrete plants with a coefficient of variation of 20 percent.

For concrete plants with a coefficient of variation other than 20 percent, the required average strength shall be:

$$f'_{cr} = (1/1 - 1.28 V) \times f'_c$$

where  $f'_{cr}$  = required average 28 day compressive strength  
 $f'_c$  = minimum ultimate compressive strength at 28 days  
 $V$  = coefficient of variation (CV) expressed as a decimal  
(i.e. CV = 20%,  $V = 0.20$ )

The required average 28 day compressive strength will be determined from five 6-inch by 12-inch cylinders tested in accordance with WSDOT test Methods 801 and 811.

A CV of 20 percent will be assumed unless the concrete supplier can justify a lower value.

To establish a CV for a concrete plant, a minimum of 30 sets of two cylinder compression test breaks will be required. The cylinders will be 6-inch by 12-inch test specimens and will be made, handled, and stored in accordance with WSDOT test Method 809 (Method 1) and tested in accordance with WSDOT test Methods 801 and 811. Each set of two cylinders will be produced from separate batches of production concrete. The equipment used for the production concrete must be the same as will be used for the proposed class of concrete.

The concrete mix design shall be approved by the Engineer and verified by submission of ingredients and testing of specimens made in accordance with this mix design prior to the use on the project.

Confirming mix tests shall be made with the proposed production aggregates, type and sources of portland cement, fly ash, and specific brands and proportions of admixtures to be used on the project. The test mix shall be air entrained if required.

3. Cement replacement may be used without strength confirmation testing of the proposed mix for concrete class C, class D, class DX, and class B for applications other than those listed in item 2.

4. In making calculations relative to cement factor or allowable water content, the total cementitious material shall be considered to be the weight of portland cement plus the weight of fly ash substituted.
5. All concrete of the same class within a structure shall have the same proportion of fly ash.
6. Acceptance of concrete containing fly ash will be on the same basis as for comparable class of concrete without fly ash.

Payment: All costs in connection with replacing portland cement with fly ash as specified shall be included in the unit contract price per cubic yard in place for the various classes of concrete involved. If the concrete is to be paid for other than by class of concrete, all costs involved with replacing portland cement with fly ash as specified shall be included in the unit contract price for the applicable item or items of work.

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## **KING COUNTY PROCUREMENT GUIDELINE LUBRICATING OIL**

### **I. INTRODUCTION**

The King County Recycled Product Procurement Policy, K.C.C. Chapter 10.16, establishes policies and procedures to increase the use of recycled products by County agencies and their contractors. The Policy is also intended to satisfy guidelines established by the Environmental Protection Agency (EPA) for preferential procurement of recycled products where federal funding is being used for product purchase. Recycled products are those products identified in the Procurement Policy that meet minimum recycled content standards established by the Purchasing Agency and the Solid Waste Division.

Lubricating oil is designated by the Procurement Policy and by the EPA as a product that can be procured containing significant amounts of re-refined oil.

### **II. DEFINITIONS**

- A. "Engine lubricating oils" means petroleum-based oils used for reducing friction in engine parts.
- B. "Gear oils" means petroleum-based oils used for lubricating machinery gears.
- C. "Hydraulic fluids" means petroleum-based hydraulic fluids.
- D. "Lubricating oils" mean engine lubricating oils, hydraulic fluids, and gear oils, excluding marine and aviation oils.
- E. "Recycled oil" means lubricating oil that meets King County's minimum content standards.
- F. "Re-refined oils" means used oils from which the physical and chemical contaminants acquired through previous use have been removed through a refining process.

### **III. MINIMUM CONTENT STANDARD**

Lubricating oil with re-refined oil content shall contain the maximum practicable amount of re-refined oil, but not less than twenty-five percent of total product weight.

#### IV. PREFERENTIAL PROCUREMENT PROGRAM

- A. In all competitive bid processes for procurement of lubricating oil, the Purchasing Agency will award contracts to the lowest responsible bidder offering recycled oil if the offered price is not more than ten percent higher than the lowest offered price of non-recycled oil, and if the oil meets the County's specifications.
- B. The purchasing agency will review specifications for lubricating oil to ensure that oil with re-refined content is permitted wherever practicable.

#### V. SPECIFICATIONS

- A. Specifications will, in most cases, be based upon military specifications (Mil Specs) and/or American Petroleum Institute (API) service categories. Both of these specification systems apply the same testing criteria to recycled and non-recycled oil.
- B. It is possible that some equipment warranties may prohibit the use of non-recycled oil. It is the responsibility of user agencies to notify the Purchasing Agency before June 1, 1990.
- C. Smaller re-refiners whose products meet API standards often do not attempt to qualify for Mil Specs because of the expense of testing procedures. The Purchasing Agency will perform additional research to determine whether meeting the Mil Specs is necessary for all the County's lubrication needs.
- D. County employees knowledgeable about lubricating oil and specification requirements are encouraged to call the Purchasing Agency's Recycled Product Procurement Coordinator.



## **KING COUNTY PROCUREMENT GUIDELINE TIRES**

### **I. INTRODUCTION**

The King County Recycled Product Procurement Policy, K.C.C. 10.16, designates tires as commodities that can be procured with significant levels of recovered materials. The Policy requires County departments to purchase retread tires and retreading services whenever practicable.

### **II. MINIMUM CONTENT STANDARDS**

All retread tires qualify as recycled products.

### **III. CURRENT COUNTY PROCUREMENT PRACTICES**

- A. **Retreading services.** The County is currently procuring retreading services for many of its utility vehicles using larger tires. Retreading services have not been used for light truck and passenger tires because the County can obtain new replacement tires at a low cost, and because of unresolved safety issues.
- B. **Replacement tires.** At this time, the contract used by the County for purchase of replacement passenger and light truck tires supplies only virgin tires. The County and the State of Washington use a Qualified Products List prepared by the GSA to ensure that tires meet adequate performance and safety tests. The GSA Qualified Products List uses the same testing criteria for retreads and virgin tires. To date, no retreads have qualified for the list.

### **IV. PREFERENTIAL PROCUREMENT PROGRAM**

- A. The Purchasing Agency shall continue, for the present, to use the GSA Qualified Product List to determine tire eligibility because it provides an objective, thorough, and non-discriminatory testing procedure. If retread replacement tires qualify on the GSA list, the County shall not discriminate against their procurement.
- B. The Purchasing Agency shall continue to gather information regarding performance and safety of retread services and retread replacement tires for passenger and light vehicles and ensure that the County is using these where practicable, consistent with passenger safety.

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**KING COUNTY PROCUREMENT GUIDELINES  
BUILDING INSULATION**

**I. INTRODUCTION**

The King County Recycled Product Procurement Policy, K.C.C. Chapter 10.16, establishes policies and procedures to increase the use of recycled products by County agencies and their contractors. The Policy is also intended to satisfy guidelines established by the Environmental Protection Agency (EPA) for preferential procurement of recycled products where federal funding is being used for product purchase. Recycled products are those products identified in the Procurement Policy that meet minimum recycled content standards established by the Purchasing Agency and the Solid Waste Division.

Building insulation is designated by the Procurement Policy and by the EPA as a product that can be procured containing significant amounts of recovered material. The content of recovered material differs according to the type of insulation.

King County's preference program for building insulation is based upon the program recommended in the EPA's Guideline (40 CFR Part 248), which contains extensive background information. Those who are interested in obtaining a copy of the EPA Guideline should contact the Purchasing Agency's Recycled Product Procurement Coordinator.

**II. DEFINITIONS**

- A. "Blanket insulation" means relatively flat and flexible insulation in coherent sheet form, furnished in units of substantial area. Batt insulation is included in this term.
- B. "Board insulation" means semi-rigid insulation preformed into rectangular units having a degree of suppleness, particularly related to their geometrical dimensions.
- C. "Building insulation" means a material, primarily designed to resist heat flow, which is installed between the conditioned volume of a building and adjacent unconditioned volumes or the outside. This term includes but is not limited to insulation products such as blanket, board, spray-in-place, and loose-fill that are used as ceiling, floor, foundation, and wall insulation.

- D. "Cellulose fiber loose-fill" means a basic material of recycled wood-based cellulosic fiber made from selected paper, paperboard stock, or ground wood stock, excluding contaminated materials which may reasonably be expected to be retained in the finished product, with suitable chemicals introduced to provide properties such as flame resistance, processing and handling characteristics. The basic cellulosic material may be processed into a form suitable for installation by pneumatic or pouring methods.
- E. "Designing architect" means any architect or engineer performing architectural or engineering services for the county in connection with a county construction project, and who is chiefly responsible for the project's design.
- F. "Fiberglass insulation" means insulation that is composed principally of glass fibers, with or without binders.
- G. "Foam-in-place insulation" means rigid cellular foam insulation produced by catalyzed chemical reactions that harden at the site of the work. The term includes spray-applied and injected applications such as spray-in-place foam and pour-in-place.
- H. "Perlite composite board" means insulation board composed of expanded perlite and fibers formed into rigid, flat, rectangular units with a suitable sizing material incorporated in the product. It may have on one or both surfaces a facing or coating to prevent excessive hot bitument strike-in during roofing installation.
- I. "Phenolic insulation" means insulation made with phenolic plastics, which are plastics based on resins made by the condensation of phenols, such as phenol or cresol, with aldehydes.
- J. "Plastic rigid foam" means cellular polyurethane insulation (PU), cellular polyisocyanurate insulation (PIR), glass fiber reinforced polyisocyanurate/polyurethane foam insulation, cellular polystyrene insulation, phenolic foam insulation, spray-in-place foam and foam-in-place insulation.
- K. "Post-consumer material" means only those products generated by a business or consumer which have served their intended end uses, and that have been separated or diverted from the solid waste stream for the purposes of collection, recycling and disposition.

L. "Post-consumer paper material" means:

1. Paper, paperboard and fibrous wastes including corrugated boxes, newspapers, magazines, mixed waste paper, tabulating cards and used cordage from places like retail stores, office buildings and homes after the point at which they have passed through their end use as consumer items; and
2. All paper, paperboard and fibrous wastes that enter and are collected as mixed municipal solid waste.

M. "Project administrator" means the County employee chiefly responsible for a building construction project, including administration of the design, engineering, and construction phases.

N. "Recovered material" means material and byproducts which have been recovered or diverted from solid waste, but does not include those materials and byproducts generated from, and commonly reused within, an original manufacturing process (such as mill broke or home scrap).

O. "Rock wool insulation" means insulation which is composed principally from fibers manufactured from slag or natural rock, with or without binders.

### III. MINIMUM CONTENT STANDARDS

As required by K.C.C. 10.16.070, the Purchasing Agency and the Solid Waste Division have jointly adopted minimum content standards for recycled building insulation products (see section 9.8). These standards are required, at a minimum, to be consistent with standards in the EPA Guideline for Procurement of Building Insulation Products (40 CFR 248.21), unless the County determines that different standards would significantly increase recycled product availability or competition.

### IV. PREFERENCE FOR CELLULOSE INSULATION.

The EPA Guideline and the King County Recycled Product Procurement Policy specify that whenever practicable the type of building insulation with the highest post-consumer material content shall be procured. Since cellulose insulation has by far the highest post-consumer material content, the County prefers its use in all appropriate applications.

V. RESPONSIBILITIES OF DESIGNING ARCHITECTS. Designing architects shall be responsible for:

- A. Including the County's preference for building insulation containing recovered materials as a design consideration in all bid and construction documents they prepare.
- B. Selecting the type of building insulation to be procured, and whenever practicable procuring the type with the highest post-consumer material content.
- C. Determining whether the selected types of building insulation are practicably available in products that meet the County's minimum content standards (the designing architect may rely upon product listings provided by the Purchasing Agency to determine availability and minimum content levels).
- D. Providing to the project administrator a written statement explaining the architect's selection of a type of building insulation not on the County's minimum content list.

VI. BIDDING PROCEDURES

- A. If the selected type of insulation is available in products that meet minimum content standards, these standards shall be included in bid solicitations for construction work.
- B. Bid solicitations shall require prospective suppliers of building insulation products to estimate the percentage of recovered material for each building insulation product to be supplied.
- C. When minimum recycled content standards for insulation are included in bid specifications, suppliers shall certify, prior to delivery or installation, that the building insulation products provided meet or exceed these standards.

VII. RESPONSIBILITIES FOR MONITORING AND REPORTING

- A. Project administrators shall maintain the following records for each procurement of building insulation:
  - 1. The type and amount of building insulation purchased;
  - 2. The percentage of recovered material; and
  - 3. Reasons for not procuring building insulation meeting minimum content standards.
- B. Each department that purchases building insulation shall annually summarize and submit to the Purchasing Agency the total amount of building insulation purchased, the percentage of recovered material, and the reasons for not procuring building insulation meeting county standards. The reporting period is July 1 through June 30, beginning in 1990-91.
- C. County employees are encouraged to contact the Purchasing Agency's Recycled Product Procurement Coordinator at 296-4210 to discuss these reporting requirements and the opportunities for use of recycled material in insulation jobs.

**KING COUNTY PROCUREMENT GUIDELINE  
PREFERENCE PROGRAM FOR  
RECYCLED AND RECYCLABLE PRODUCTS  
QUALIFIED ON A CASE-BY-CASE BASIS**

The Purchasing Agency and the Solid Waste Division are in the process of developing procedures for implementing K.C.C. Sections 10.16.110 and 10.16.120 of the King County Recycled Product Procurement Policy. These sections of the Policy establish preferential procurement programs on a case-by-case basis for recycled plastic, compost, and other products and for recyclable products. Suppliers must petition the County for product qualification and, if the County's evaluation criteria are satisfied, may be eligible for a price preference of up to 15%.

A semi-annual cycle will be established for evaluating petitions and qualifying products. The evaluation process will include input from user agencies. After a product is qualified by evaluators, the Purchasing Agency will prepare a Guideline to be added to the Executive Policy. The standard Executive Policy review procedures will be followed.

For information about the status of the case-by-case program, contact the Purchasing Agency's Recycled Product Procurement Coordinator at 296-4210.



**KING COUNTY  
MINIMUM RECYCLED CONTENT STANDARDS  
BUILDING INSULATION PRODUCTS**

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Cellulose loose-fill and spray-on.....	75% post-consumer paper
Perlite composite board.....	23% post-consumer paper
Plastic rigid foam, polyisocyanurate/polyurethane:	
Rigid foam.....	9% recovered material
Foam-in-place.....	5% recovered material
Glass fiber reinforced.....	6% recovered material
Phenolic rigid foam.....	5% recovered material
Rock wool.....	50% recovered material

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FIBERGLASS INSULATION: No manufacturer of fiberglass insulation using recovered material has been identified.

POLYSTYRENE RIGID FOAM INSULATION: No manufacturer of polystyrene insulation using recovered material has been identified.

Minimum content standards are based on the weight of material (not volume) in the insulating core only.

Minimum content standards are not applicable to insulation used for cold storage, equipment or pipe insulation.

Prepared by: King County Purchasing Agency  
King County Solid Waste Division  
January 25, 1990 (3/13/90)

**KING COUNTY  
MINIMUM RECYCLED CONTENT STANDARDS  
PAPER AND PAPER PRODUCTS**

	Minimum percentage of recovered materials	Minimum percentage of post-consumer materials	Minimum percentage of recovered paper materials
<b>Newsprint.....</b>	--	40	--
<b>High grade bleached printing and writing papers:</b>			
Offset printing.....	--	25	OR 50
Mimeo and duplicator paper.....	--	25	OR 50
Writing (stationery).....	--	25	OR 50
Office paper (e.g., note pads).....	--	25	OR 50
Copier paper (purchases by County agencies).....	--	25	OR 50
Copier paper (purchases by County contractors).....	--	15	OR 25
Envelopes.....	--	25	OR 50
Form bond including computer paper and carbonless...	--	25	OR 50
Book papers.....	--	25	OR 50
Bond papers.....	--	25	OR 50
Ledger.....	--	25	OR 50
Cover stock.....	--	25	OR 50
Cotton fiber papers.....	50	--	--
<b>Tissue products:</b>			
Toilet tissue.....	--	20	--
Paper towels.....	--	40	--
Paper napkins.....	--	30	--
Facial tissue.....	--	5	--
Doilies.....	--	40	--
Industrial wipers.....	--	0	--
<b>Unbleached packaging:</b>			
Corrugated boxes.....	--	35	--
Fiber boxes.....	--	35	--
Brown papers (e.g., bags).....	--	5	--
<b>Recycled paperboard:</b>			
Products including folding cartons.....	--	80	--
Pad backing.....	--	90	--

Price-Preference for Recycled Paper and Paper Products - 15%