1. **Include environmental considerations as part of the normal purchasing process,** weighing all factors: performance, price, safety and availability. A reasonable price premium may be justified because the environmental attributes of a product or service will provide offsetting reductions in its operating and disposal costs.
2. **Emphasize pollution prevention** as part of the purchasing process. It is cheaper to prevent pollution than to pay for clean-up later on.
3. **Take a holistic approach** when specifying and reviewing the bids. A product or service impacts the environment **throughout its life cycle** - both long before and long after it is purchased and used. A product's life cycle includes activities associated with raw material acquisition, product manufacturing, packaging and transportation, product use, and ultimate disposal.
4. **Compare the environmental impacts** when selecting products and services.
    1. Consider the reversibility of its impact– that is, how long it will take for its impact on the environment to disappear.
    2. Recognize the scale of a product's effect on the environment. Compare its contribution to the pollution of a local stream versus its impact on global temperature change. Strive to reduce the impact on both the local level and globally.
    3. Weigh the different types of environmental impact. When faced with reducing toxicity or reducing waste, first concentrate your energies on the impact to health and the environment. Prioritize the more pressing toxicity concern.
    4. Human health. Regardless of a product's affect on the environment, if it has an adverse effect on human health, it is not considered "environmentally preferable."

RESOURCES/LINKS:

- OSHA https://www.osha.gov/index.html
- (ANSI) American National Standards Institute: http://ansi.org/
- (UL) United Laboratories: http://productguide.ulenvironment.com/QuickSearch.aspx
- EPA http://www3.epa.gov/epawaste/conserve/tools/cpg/index.htm
- (ISO) International Organization for Standardization 20400: http://www.iso.org/iso/home/news_index/news_archive/news.htm?refid=Ref1873
- (NIST) National Institute of Standards and Technology http://www.nist.gov/consumer-safety-portal.cfm
- (NSF) National Safety Foundation: http://www.nsf.org/certified-products-systems
- International Green Purchasing Network: http://igpn.org/
- Green Purchasing Network, India: http://gpnindia.org/

- NIGP's Green Resources Page: http://www.nigp.org/eweb/StartPage.aspx?Site=NIGP&webcode=com-green-docs
- NASPO Green Purchasing Guide: http://naspo.org/green/#top
- NACo Green Purchasing Toolkit: http://www.naco.org/topics/environment
- Responsible Purchasing Network: http://www.responsiblepurchasing.org/
- Northeast Recycling Council: https://nerc.org/

LCCA, building links:

- Building for Environmental and Economic Sustainability (BEES) (http://www.bfrl.nist.gov/oae/software/bees/)
- Stanford: https://lbre.stanford.edu/sites/default/files/publications/lcca121405.pdf
- IOWA: http://www.dps.state.ia.us/fm/building/energy/PDF/LifeCycleCostAnalysis.pdf
- National Institute of Standards and Technology Handbook 135, Life-Cycle Costing Manual: (http://www.bfrl.nist.gov/oae/publications/handbooks/135.pdf)
- Federal Energy Management Program Energy Cost Calculator: (http://www.fedcenter.gov/_kd/go.cfm?destination=ShowItem&Item_ID=8336)
- DOE EnergyPlus: (http://www.eere.energy.gov/buildings/energyplus/)
- CA Life-Cycle Cost Analysis Model: (http://www.green.ca.gov/LCCA/default.htm)

LCCA; major fleet equip; MN:

http://www.dot.state.mn.us/research/TS/2015/201516.pdf

LCCA; road improvements; links

- DOT: https://www.fhwa.dot.gov/infrastructure/asstmgmt/lccasoft.cfm
- DOT primer: https://www.fhwa.dot.gov/asset/lcca/010621.pdf
- CA: http://www.dot.ca.gov/hq/maint/Pavement/Offices/Pavement_Engineering/LCCA_Docs/LCCA_25CA_Manual_Final_Aug_1_2013_v2.pdf
- American Society of Civil Engineers from tri-state: http://www.asce.org/uploadedFiles/Issues_and_Advocacy/Our_Initiatives/Infrastructure/Content_Pieces/asce-eno-life-cycle-report.pdf
- BEES adapted for application to biobased products—see BEES for USDA (http://www.bfrl.nist.gov/oae/software/bees/bees_USDA.html)

Web link	Category
http://www.nj.gov/dep/	NJ DEP main web page
http://www.nj.gov/dep/dshw/rrtp/asphalt.htm	NJ DEP asphalt recycling
http://www.state.nj.us/dep/dshw/	NJ DEP solid waste & recycling resources
http://www.nj.gov/dep/parksandforests/forest/nj_forest_nursery.htm	NJ DEP reforestation
https://www.iso.org/standard/63026.html	**ISO 20400:2017** Sustainable procurement -- Guidance
http://www.njcleanenergy.com/commercial-industrial/home/home	NJ Clean Energy web page
http://www.njcleanenergy.com/commercial-industrial/programs/benchmarking/energy-benchmarking-home	NJ Clean Energy Benchmarking web page
http://www.njeit.org/	NJ Environmental Trust Infrastructure
http://www.state.nj.us/dca/divisions/dhcr/	NJ Div of Housing & Community Resources
http://www.epa.gov/epp/pubs/about/about.htm#c%20%20	Environmentally purchasing links
http://www.epa.gov/	US EPA main web page
https://industries.ul.com/environment	Certification organization
www.greenseal.org	Certification organization
www.astm.org	Society for Testing & Materials-standardization
http://www.aoac.org	Scientific analysis, organization
www.tappi.org	Tech Assoc of the Pulp and Paper Industry
https://www.gsaadvantage.gov/	find GSA "Environmental Program" products
http://www.epeat.net/	Global Greener Electronics
http://www.energystar.gov/	Energy Star rated appliances
http://www.greenguard.org/en/index.aspx	Green Building - Indoor Air Quality
http://www.usgbc.org/DisplayPage.aspx?CategoryID=19	LEED Certification for buildings
http://www.sustainablejersey.com/	NJ Municipal Certification Program
http://www.greenseal.org/	Green Seal

SAMPLE DEFINITIONS/CLAUSES

Alternate Environmentally Preferable Item – An item offered as an alternative to a specified Core List item, which meets the requirements of the United States Environmental Protection Agency (EPA) Comprehensive Procurement Guidelines developed pursuant to Federal Executive Order 13101.

ASTM International - American Society for Testing and Materials is an international standards organization that develops and publishes voluntary consensus technical standards for a wide range of materials, products, systems, and services.

Basis Weight (grammage) shall be measured according to Technical Association of the Pulp and Paper Industry (TAPPI) T 410, or International Organization for Standardization (ISO) 536 and shall meet the requirements as specified when measured as grams per square meter (g/m2, SI Units) or pounds/ream (lbs/ream, English units).

Bathroom Tissue. A class of soft paper products used to maintain personal hygiene, designed to disperse in septic tanks. Products herein this RFB come in rolls.

''biobased product'' means a product determined by the Secretary of Agriculture to be a commercial or industrial product (other than food or feed) that is composed, in whole or in significant part, of biological products or renewable domestic agricultural materials (including plant, animal, and marine materials) or forestry materials OR an intermediate feedstock.

-Some examples of agricultural resources that make up many biobased products include: soybeans, corn, kenaf, flax, jute, and numerous other types of crops that are harvested. -Current applications of these agricultural resources create products such as ethanol (corn-based), soy candles, soy-based lubricants, kenaf office paper, and bioplastics.

Biological Contaminants- Are or were living organisms, including, but not limited to: bacteria, molds, mildew, viruses, animal dander and cat saliva, house dust, mites, cockroaches, and pollen**.**

Byproduct- A secondary or incidental product deriving from a manufacturing process.

Brand Name/Trade Name – A name given to a product or service generally for marketing purposes.

Burst Test - Measures the pressure required to puncture a sheet of paper or paperboard as an indicator of its load carrying capacity under specific conditions.

Carcinogen- Chemicals listed as a known, probable, reasonably anticipated, or possible human carcinogen by the International Agency for Research on Cancer (IARC Groups 1, 2A, and 2B), National Toxicology Program (NTP Groups 1 and 2), United States Environmental Protection Agency Integrated Risk Information System (EPA IRIS weight-of-evidence classifications A, B1, B2, C, carcinogenic, known/likely human carcinogen, likely to be carcinogenic to humans, and suggestive evidence of carcinogenicity or carcinogen potential), or by the Occupational Safety and Health Administration (OSHA as carcinogens under 29 Code of Federal Regulations (CFR) 1910.1003(a)(1)); and those chemicals that fall into Carcinogenicity Hazard Category 1A and 1B under the Globally Harmonized System for Classification and Labeling of Chemicals (GHS).

Chemical Abstract Services (CAS) Registry - Is a collection of disclosed chemical substance information, containing more than 66 million organic and inorganic substances and 63 million sequences. Each CAS Registry Number (often referred to as a CAS Number): Is a unique numeric identifier; Designates only one substance; Has no chemical significance; and Is a link to a wealth of information about a specific chemical substance. A CAS Registry Number is a numeric identifier that can contain up to 10 digits, divided by hyphens into three parts.

Chemical Name– The scientific name used to give an accurate description of a substances' composition.

Code of Federal Regulations (CFR)- The codification of general and permanent rules published in the Federal Registrar by the executive departments and agencies of the Federal Government.

Colorant- Inks, dyes, or pigments which are capable of imparting color when added in the paper-making process.

Commercial Item Description (CID)- Product offered must meet or exceed the salient characteristics of the noted CID and, in addition, be compliant with the requests of the Town.

Comprehensive Procurement Guidelines– The United States Environmental Protection Agency (EPA) has published Comprehensive Procurement Guidelines (CPGs) developed pursuant to Federal Executive Order 13101. EO11 (Corzine) relies upon and incorporates these Federal guidelines. The CPGs are available via: http://www.epa.gov/epawaste/conserve/tools/cpg/. The related guidelines for purchasing products are currently at http://www.epa.gov/epaoswer/non-hw/procure/factshts.htm . Through the Comprehensive Procurement Guidelines (CPG), EPA designates items that must contain recycled content when purchased by federal, state, and local agencies, or by government contractors using appropriated federal funds. CPG is authorized under RCRA and updated every two years.

Concentrate- Product that must be diluted by at least eight parts by volume water (1:8 dilution ratio) prior to its intended use.

Contaminant- A physical, chemical or biological substance which is available at a level so high as to have a correlated deleterious effect on human and/or animal and /or the environment's health. In papermaking, it includes substances that may not be intentionally added, but is known to be present above 0.01% (100 parts per million) by weight (i.e.: in the papermaking additives as purchased).

Corrosive - A substance that causes visible destruction of, or irreversible alterations in, living tissue by chemical action at the site of contact.

Country of Origin Labeling- [COOL]- perishable agricultural commodities labeled to identify the country in which they were produced.

De-inking of Recovered Paper- For the purpose of this RFB, de-inking shall exclude using a solvent containing either chlorine or any chemicals listed by the EPA under Section 313 of the Emergency Planning and Community Right-To-Know Act.

Disinfectants – Chemicals used on inanimate surfaces to rapidly inactivate microorganisms.

Environmental attributes- Environmental characteristics of a product or service, such as energy or water efficiency, low-toxicity, biobased, and recycled-content.

Environmentally preferable- Products or services that have a lesser or reduced effect on human health and the environment when compared with competing products or services that serve the same purpose. The product or service comparison may consider raw materials acquisition, production, manufacturing, packaging, distribution, reuse, operation, maintenance, or disposal. (EO 13101, Section 201).

EPA- Environmental Protection Agency, USA- Information is currently available via: http://www.epa.gov/. EPA has begun to reconsider the specifications for Federal Agencies: EPA has given preference to multi-attribute standards and ecolabels (as opposed to those focused on single attributes) for which the agency has been able to confirm the availability of a competent certification body meeting conformity assessment criteria.

Executive Order 13101- Entitled *Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition*, Executive Order (E.O.) 13101 was signed on September 14, 1998. This Order replaces E.O. 12873 and reinforces the federal government's buy-recycled efforts. E.O. 13101 establishes a process for amending the CPG originally promulgated under E.O. 12873. E.O. 13101 requires EPA to amend the CPG every 2 years, or as appropriate. The Order also requires EPA to issue RMANs concurrent with the CPG amendments, and to update them periodically.

Executive Order 11, (EO 11) - Issued April 22, 2006, by Gov. Jon Corzine, EO11 encourages the purchase of environmentally preferable products in accordance with United States Environmental Protection Agency (USEPA) Comprehensive Procurement Guidelines developed pursuant to Federal Executive Order 13101. The full text of EO 11 is available here: http://www.state.nj.us/infobank/circular/eojsc11.htm.

FIFRA – Federal Insecticide Fungicide and Rodenticide Act.

Finishing Broke- Discarded paper resulting from any finishing (converting) operation, including, but not limited to winding, slitting, cutting, sorting, counting, cartoning, palletizing, and wrapping.

FDA- Food and Drug Administration information is available at: http://www.fda.gov/default.htm.

Force Majeure- extraordinary event or circumstance beyond the control of the contracting parties, such as a war, strike, riot, crime, or otherwise an event described by the legal term "act of God" (e.g., flooding, earthquake, volcano), that prevents one or both parties from fulfilling their obligations under the contract. Force majeure shall not excuse negligence or other malfeasance of a contractor, as where non-performance is caused by the usual and natural consequences of external forces (e.g., predicted rain stops an outdoor event), or where the intervening circumstances are specifically contemplated.

Forest Residue- Fibrous timber by-products of harvesting, manufacturing, extractive or woodcutting processes such as, but not limited to, chips, stumps, branches and sawdust.

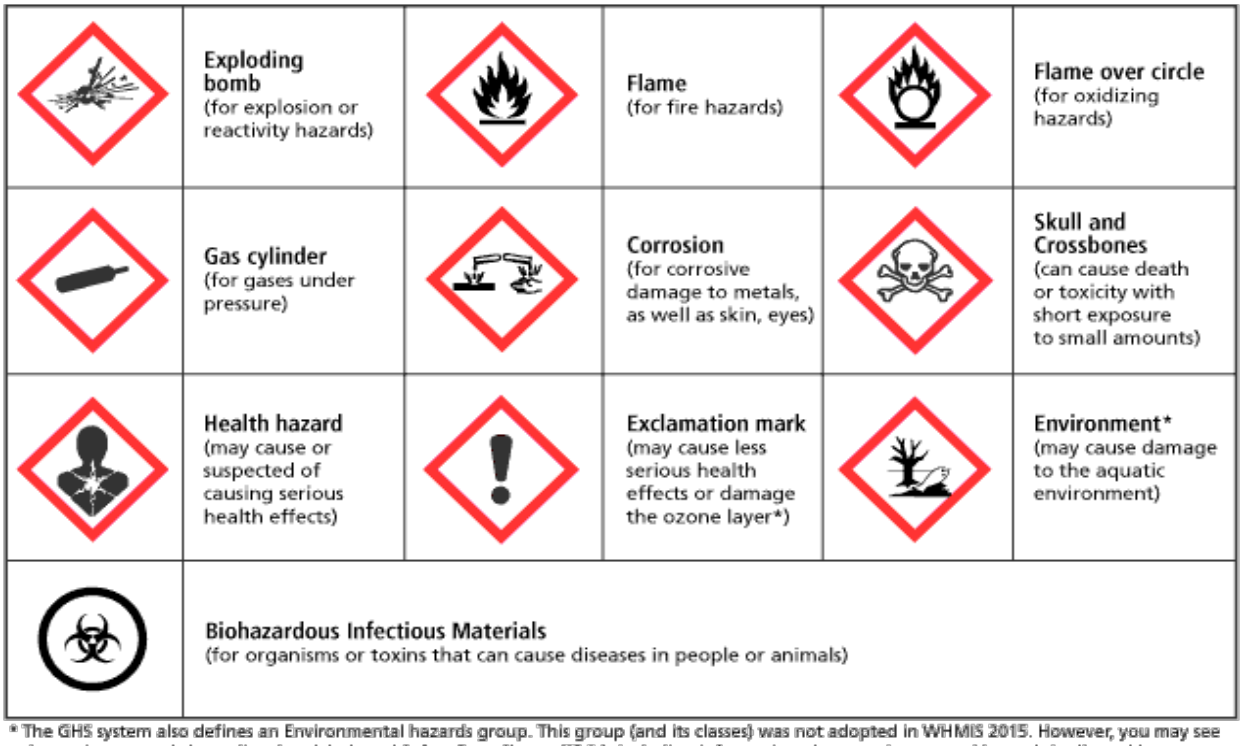
Fresh Water Use- The total amount of steam, process, and cooling water used in the manufacture of sanitary paper products, including water used during recovered material re-pulping or agricultural residue pulping, throughout the paper making process, and during converting (if applicable).

General-purpose cleaners - Products used for routine cleaning of hard surfaces including impervious flooring such as concrete or tile. It does not include cleaners intended primarily for the removal of rust, mineral deposits, or odors. It does not include products intended primarily to strip, polish, or wax floors,

and it does not include cleaners intended primarily for cleaning toilet bowls, dishes, laundry, glass, carpets, upholstery, wood, or polished surfaces. This category does not include any products required to be registered under FIFRA, such as those making claims as sterilizers, disinfectants, or sanitizers.

GHS- Globally Harmonized System of Classification and Labelling of Chemicals.–an internationally agreed-upon standard managed by the United Nations that was set up to replace the assortment of hazardous material classification and labelling schemes previously used around the world.

https://www.osha.gov/dsg/hazcom/ghsguideoct05.pdf



* The GHS system also defines an Environmental hazards group. This group (and its classes) was not adopted in WHMIS 2015. However, you may see the environmental classes listed on labels and Safety Data Sheets (SDSs). Including information about environmental hazards is allowed by WHMIS 2015.

Grade- The sum of the characteristics, including but not limited to the quality and condition of the commodity at the time of grading.

Halogenated solvents - Any solvent containing halogens including fluorine, chlorine, bromine and iodine. Halogens are highly reactive and have a tendency to bioaccumulate and exhibit toxic effects.

HAACP- Hazard Analysis Critical Control Point- A systematic approach to the identification, evaluation, and control of product safety hazards that are a biological, chemical, or physical agent that is reasonably likely to cause illness or injury in the absence of its control. This information is available at: http://www.cfsan.fda.gov/~lrd/haccp.html.

Ingredient- Any constituent of a product that is intentionally added or known to be a contaminant that comprises at least 0.01% by weight of the product.

ISO 20400- The International Organization for Standardization released ISO 20400, a standard for sustainable procurement; published April 21, 2017. ISO 20400 Sustainable procurement -- provides

guidance to organizations, independent of their activity or size, on integrating sustainability within procurement. It provides guidelines that can lead to improved economic, social and environmental outcomes. ISO 20400 does not contain requirements for suppliers and is not a tool to assess the sustainability performance of suppliers. ISO 20400 prescribes how organizations can integrate sustainability into the procurement process.

Institutions and standard accreditation bodies from 38 countries worked with ISO to develop these standards ISO20400 is particularly well supported, with 38 participating countries and 14 observing countries, which represents 65% of the world's population, 85% of world GDP and 73% of world carbon emissions. The work of four years, it has been designed to be a standard for all nations and cultures and is backed by the UN, OECD and ITUC.

According to ISO 20400, procurement goals should align with principles such as accountability, transparency, ethical operation, fair opportunity, labor rights and health work conditions, economic resource optimization, and innovative solutions. The sustainable procurement objectives should complement business objectives; it should be relevant, measurable and target oriented.

Unlike ISO 26000, guidance on social responsibility, ISO 20400 focuses specifically on the purchasing function. The Standard includes seven core subjects:

- Good governance: Planning, reporting, control and monitoring
- Fair Operating Practices: anti-corruption, fair competition
- Labor Practices: Labor protection, safe and healthy working conditions
- Human Rights: avoidance of unethical collusion; encouraging diversity
- Environmental Impact: climate change , pollution control, saving water, recycle waste
- Consumer Rights: Transparent and unbiased information
- Community: Giving back to the community, cycling economy

Sustainable procurement is a central tenet of social responsibility. ISO 20400l complements *ISO 26000:2010*, Guidance on social responsibility. ISO 20400 directs organizations to minimize their environmental footprint, review their impact on human rights and act to positively contribute to society and the economy. Practices explored in ISO 26000 such as due diligence, analyzing the sphere of influence, setting priorities and avoiding complicity are all practices encouraged in ISO 20400.

Kraft Paper- Paper or paperboard (cardboard) produced from chemical pulp produced in the kraft process. Kraft paper is made from at least 80% wood pulp. Pulp produced by the kraft process is stronger than that made by other pulping processes. Kraft pulp is darker than other woods, but can be bleached to make a very white pulp. The natural unbleached color of kraft paper is brown.

Materials in Solid Waste- materials found in the various components of the solid waste stream. General, solid waste has several components, such as municipal solid waste (MSW), construction and demolition debris (C&D), and nonhazardous industrial waste. Under RCRA Section 6002, EPA considers materials recovered from any component of the solid waste stream when designating items containing recovered materials.

level® is sponsored by the Business and Institutional Furniture Manufacturers Association (BIFMA) International. BIFMA requires all products bearing the **level** certification mark to be assessed for conformance to the ANSI/BIFMA e3 standard by an accredited third-party product certification body.

Product certification bodies will certify that products conform to the standard and authorize the use of the **level** certification mark in conjunction with the certified product. At the Prerequisite LEVEL: all participating manufacturers must have a design for environment (DFE) program in place, and an assessment of a variety of component parts.

LIFE CYCLE COST ANALYSIS - When performing an LCCA, conduct the same analysis with the **same parameters and assumptions across many different alternative products.**

Best option, theoretically. is to choose the product calculated as having the lowest total cost of ownership. Other factors, may influence your procurement decision. For example, if one product has a high initial cost, there may not be enough money in the current budget to purchase it, even if it will have a lower life-cycle cost than alternatives. Identifying the total cost of ownership requires looking at the entire process of procuring and consuming the product or service

Document each point to draw your conclusion(s)
-Use the life cycle analysis to evaluate products,
-Look at the cost of the product over its entire life rather than the initial purchase price.
-2 or more products may appear similar in performance, function and price; but one may be a better value because it lasts longer, uses less energy or produces less waste.

-Use what you learn for the next procurement cycle. Identify changes, at every stage of the life cycle, that can lead to environmental benefits and overall cost savings and you will be on your way to Strategic Sourcing. To perform an LCCA, we will take all of the estimates we have and sum them up over the life of the product.

Calculating Life-Cycle Cost
LCC =
[((Length of Time) x (annual average Operating, Maintenance, and Repair costs (including fuel and utility costs)) + Initial Cost + Replacement Costs] - Residual

-Replacement cost is cost for any system (or consumable) not expected to last the full time period. For a building, the replacement cost may need to be proportioned against the life of the structure.
-Residual is any remaining value you can recover at the end of the time period. If you can't sell it or trade it, there's none. The result for each alternative is its life-cycle cost (LCC). You can compare the life-cycle costs of the different alternatives to determine the alternative that is most cost effective over the time period.

(Material) **Safety Data Sheet** (MSDS)- Provides workers and emergency personnel with procedures for handling or working with that substance in a safe manner, and includes information such as physical data, storage, disposal, protective equipment, and spill-handling procedures. MSDS formats can vary from source to source within a country depending on national requirements.

Mill Broke- Paper discarded from any point in the manufacturing process, which is subsequently re-pulped and reprocessed. "Wet broke" is typically generated from the wire or presses, while "dry broke" emanates from the dryers, reel, and winder. Cannot be counted toward postconsumer or recovered fiber content, except the mill broke generated in the papermaking process using postconsumer and/or recovered fiber as feedstock toward "postconsumer fiber" or "recovered fiber" content, to the extent that the feedstock contained these materials. If the mill uses less than 100% postconsumer or recovered

fiber, only a proportional amount of broke can be counted toward postconsumer or recovered fiber content.

Mottled White Kraft Paper- A top skin of Bleached Kraft fibers on a Brown Kraft fiber base.

Mutagen- Substances designated as known to induce heritable mutations, regarded as if they induce, or which cause concern for humans owing to the possibility that they may induce heritable mutations in the germ cells of humans, and thus meets the criteria for categories 1 and 2 (H340 and H341) under the GHS-Harmonized System for the Classification of Chemicals Which Cause Mutations in Germ Cells (UN, 2003).

Neurotoxicity - Any adverse change in the development, structure, or function of the central and peripheral nervous system following exposure to a chemical agent (59 FR 42272, August 17, 1994.)

New Jersey Department of Environmental Protection- http://www.nj.gov/dep/.

Optical Brightener- Additives designed to enhance the appearance of colors and whiteness in materials by absorbing ultraviolet radiation and emitting blue radiation. These compounds are also known as fluorescent whitening agents. Optical brighteners may be used as a papermaking additive at a dosage not to exceed 200 parts per million (0.02%) by weight as added to the papermaking process. This level does not include any optical brighteners that may be present in the furnish through the use of recovered materials.

OSHA - Occupational Health and Safety Administration

Papermaking Additives- Materials intentionally added to paper or to the papermaking furnish to modify or improve certain paper properties or to facilitate the papermaking process. This definition encompasses all materials that enter the system except fiber and water, including, but not limited to: surfactants, detergents, defoamers, dispersants, foaming agents, collectors, wet strength resins, and biocides.

Papermaking Process- The process of using fiber, water and additives to make paper, including, but not limited to re-pulping, cleaning, screening, deinking, washing, bleaching, and papermaking.

Paper Napkins- A class of absorbent, disposable paper products that is typically folded and is suitable for wiping hands and mouth, including, but not limited to: retail beverage, luncheon, dinner, and guest towel napkins; institutional folded towels used with or without a dispenser; and institutional beverage, luncheon, dinner, and guest towel napkins.

Paper Towels- A class of absorbent, disposable paper products suitable for use in drying hands, wiping windows, cleaning equipment, or cleaning up spills, including, but not limited to: retail, perforated roll towels; retail, folded towels; institutional, hard wound roll towels; institutional, folded towels, and institutional, perforated roll towels.

Post-Consumer Material- A material or finished product that has served its intended use and has been diverted or recovered from waste destined for disposal, having completed its life as a consumer item. Post-consumer materials are part of the broader category of recovered materials. Post-consumer material does not include materials, agricultural residue, or by-products generated from, and commonly reused within, an original manufacturing and fabrication process.

Post-Consumer Material Calculations- The percentage of post-consumer material shall be calculated and certified based on the fiber weight of the paper. The calculation of recycled content based on fiber weight shall be performed using the following formula for post-consumer material:

Post-consumer Material x YieldPC_____

Recovered Material or Agricultural Residue x YieldR

Yield will depend on the product manufactured, the raw material, the level of contaminants and the cleaning and deinking technology employed. The percentage yield shall be calculated by dividing the total material output by the total material input.

Pre-consumer Material- Material generated in manufacturing and converting processes, such as manufacturing scrap and trimmings/cuttings.

Price per M– Pricing that is expressed in dollars per thousand units, or $/M.

Primary Packaging- Material physically containing and coming into physical contact with the product, including, but not limited to: the cap or lid of a bottle; paper and paperboard material such as roll cores, brown papers, wrappers, bands, and folding cartons; and plastic materials such as film wrappers and roll core inserts.

Processed Chlorine Free (PCF)- Recycled- or recovered-content papers in which chlorine or chlorine-containing compounds are not used in any of the unit processes used to manufacture the product, including, but not limited to, the re-pulping, screening, deinking, washing, and bleaching stages. (Manufactured without chlorine or chlorine derivatives. Chlorine and its derivatives are not to be used.)

Product as used- The most concentrated form of the product that the manufacturer recommends for a product's intended use. For example, if a manufacturer recommends a product be diluted 1:64 or 2:64 for use as a general-purpose cleaner, the product shall meet the environmental and performance requirements at a dilution of 2:64.

Recovered Materials- Waste materials and byproducts that have been recovered or diverted from solid waste stream, (that is generated after the completion of the paper manufacturing process; or fiber and broke recovery that contains 100% recovered material and is integral to the manufacturing process from which it was generated), but does not include materials and byproducts generated from, and commonly reused within, an original manufacturing process.

--Recovered material may include:

• Finishing waste generated after completion of the papermaking process (i.e., during converting), such as envelope cuttings; bindery trimmings; printing waste; cuttings and other converting waste (finishing broke); butt rolls and mill wrappers; obsolete inventories; and rejected unused stock.

• Post-consumer materials such as paper, paperboard, and fibrous materials from retail stores, office buildings, homes, etc., after they have completed their intended end-use.

• Fibers recovered from whitewater or wastewater, or mill broke (wet or dry) generated from the manufacturing process used only to make the certified product (i.e., mill broke containing 100% recovered material).

--Recovered material does not include:

• Fibers recovered from whitewater or wastewater, or mill broke (wet or dry) generated from the manufacturing process used to make non-certified products containing virgin material (i.e., mill broke containing any virgin material), regardless of whether such materials are used by the same or another company.

• Forest residue such as fibrous by-products of harvesting, extractive or woodcutting processes.

Recovered Materials Advisory Notices, RMAN- Provide purchasing guidance and recommendations for recovered and post-consumer material content levels for designated items.

Recycled Copy Paper– Paper that contains a specified percentage of post-consumer recycled material.

Recyclable- The package or product can be collected in a substantial majority of communities, separated or recovered from the solid waste stream and used again, or reused in the manufacture or assembly of another product package through an established recycling program.

Recyclability - the ability of a product or material to be recovered from, or otherwise diverted from, the solid waste stream for the purpose of recycling.

Recyclable Package - Package that can be diverted from the waste stream through available processes and programs, and can be collected, processed, and returned to use in the form of raw materials or products.

Recycled content - Materials that have been recovered from the solid waste stream, either during the manufacturing process (pre-consumer), or after consumer use (post-consumer) (see Federal Trade Commission Environmental Marketing Guides mentioned above for more detail). Executive agencies are required to purchase EPA-designated items with recycled content (40 C.F.R. Part 247). Purchasers may want to consider whether the material contains pre-consumer or post-consumer recycled content. Recycled content, under the Federal Trade Commission guides, includes recycled raw material, that would have otherwise been incinerated or land filled, as well as used, reconditioned and remanufactured components. For products that are only partially made of recycled material, a recycled claim should indicate the percentage, by weight, of recycled content in the finished product. Unless it is otherwise clear from the context of the sale, for products that contain used, reconditioned or remanufactured components, a recycled claim should make clear that such components are used, reconditioned or remanufactured. Manufacturers scrap material that would have, in any case, been incorporated into the product does not qualify as recycled under the Federal Trade Commission's guides. Refer to 16 C.F.R. § 260.7(e).

The recyclable claim should be adequately qualified to avoid consumer deception about which portions or components are recyclable. In addition, unless recycling collection programs for the product are available to a substantial majority of communities or consumers where the product is sold, claims of recyclability need to be qualified to indicate the limited of availability of recycling collection sites. A product that is made from recyclable material, but, due to its shape, size or some other attribute, is not accepted in recycling programs for such material, should not be marketed as recyclable. Refer to the FTC Environmental Marketing Guides, 16 C.F.R. § 260.7(d).

Recycled Fiber– Secondary fibers that have previously been used in a manufacturing process and have been reclaimed as raw material for another process.

Recycled Materials- Waste materials and by-products that have been recovered or diverted from solid waste and that can be utilized in place of raw or virgin material in manufacturing a product and consists of materials derived from postconsumer waste, manufacturing waste, industrial scrap, agricultural waste and other items, all of which can be used in the manufacture of new or recycled products.

Recycled Paper- Any paper having a total weight consisting of not less than 50% secondary waste material

Recycling- Series of activities, including collection, separation, and processing, by which products or other materials are recovered from the solid waste stream for use in the form of raw materials in the manufacture of new products other than fuel for producing heat or power by combustion.

Reproductive Toxin- A chemical listed as a reproductive toxin (including developmental, female, and male reproductive toxins) by the State of California under the Safe Drinking Water and Toxic Enforcement Act of 1986 (California Code of Regulations, Title 22, Division 2, Subdivision 1, Chapter 3, Sections 1200, et. Seq., also known as Proposition 65), substances designated as category 1 (H360), known or presumed reproductive toxicant, or category 2 (H361), suspected human reproductive toxicant, under the GHS, or a substance designated as having adverse effects on or via lactation (H362), under the GHS.

Sanitary Paper Products- Products covered by the Standard Industrial Code (SIC) 2676. Products including facial and bathroom tissues, paper towels and general-purpose wipes, and paper napkins. Products that are technically in this category by SIC code, but not covered by this standard, include nonwoven sanitary products, toilet seat covers, paper placemats, table coverings, general purpose disposable and flushable wipes containing cleaning agents or fragrances, disposable diapers, or sanitary napkins and tampons.

Secondary Packaging- Packaging used to contain primary package/s and typically used for merchandizing. This does not include case or shipping packaging or the primary package.

Single Wall Carton- A corrugated fiberboard carton made by gluing a sheet of fluted corrugated material between two flat sheets of linerboard.

Solid Waste- Waste materials from the manufacturing of the product not included in the finished product, which are not salable and are discarded. Sanitary waste (e.g., restrooms, etc.) and materials that are recycled are excluded.

Source Reduction- Altering the design, manufacture, or use of sanitary paper products to reduce the amount that would be disposed of in a landfill.

TAPPI- Technical Association of the Pulp and Paper Industry- www.tappi.org. When TAPPI standards are cited in the RFB, the current standards in effect at the time of the award shall be applied and take precedence.

Tensile Strength (Dry and Wet)- Product characteristics shall be measured for tensile strength in the machine direction and cross direction using the following methods: using TAPPI T 494/456- Product

characteristics shall meet the following requirements when tested according to TAPPI T 494 or ISO 1924/3 (dry tensile strength) and TAPPI T 456 (wet tensile strength), as measured in gram force/inch (gf/in, English units) [(1 gf/in = 0.3886 newton/meter (N/m); 1 ozf/in = 10.945 N/m)].

Total Recovered Materials Content- The total percentage of recovered materials that EPA recommends for that designated item.

Toxic chemical release- The release of toxic chemicals into the environment through transportation, manufacturing, and other uses and treatments.

Undiluted product- The most concentrated form of the product produced by the manufacturer for transport outside its facility.

USDA- United States Department of Agriculture. Federal certification/standards for food safety, sanitary conditions, nutrition and research for agricultural technology. Information available at www.usda.gov.

USEPA- United States Environmental Protection Agency

Virgin Fiber/Material- Fiber/material that is not of secondary, recovered or post-consumer origin; made from new or non-recycled fibers/materials.

Volatile Organic Compound (VOC)- Any organic compound which participates in atmospheric photochemical reactions leading to the formation of ozone, a respiratory irritant. It excludes those organic compounds which the ECP and Green Seal designate as having negligible photochemical reactivity. These compounds are taken based on the definition found in U.S Code of Federal Regulations Title 40 part 51 paragraphs.

Waste paper- Any of the following "recovered materials".

A. **Postconsumer materials** such as: paper, paperboard and fibrous wastes from retail stores, office buildings, homes, and so forth, after they have passed through their end usage as a consumer item, including; Used corrugated boxes, old newspapers, old magazines, mixed waste paper, tabulating cards and used cordage. All paper paperboard and fibrous wastes that enter and are collected from municipal solid waste.

B. **Manufacturing forest residues**, and other wastes such as: Dry paper and paperboard waste generated after completion of the papermaking process (that is, those manufacturing operations up to and including the cutting and trimming of the paper machine reel into smaller rolls or rough sheets) including: Envelope trimmings, bindery trimmings, and other paper and paperboard waste, resulting from printing, cutting, forming, and other converting operations, bag, box, and carton manufacturing wastes, and butt rolls, mill wrappers and rejected unused stock. Finished paper and paperboard from obsolete inventories of paper and paperboard manufacturers, merchants, wholesalers, dealers, printers, converters, or others.

Wood Pulp- Pulp originally generated from softwood or hardwood trees, such as but not limited to aspen, birch, eucalyptus, fir or pine.

EXCERPTS

- **DISCLOSURE OF PRODUCT COMPOSITION**

The bidder must furnish safety data sheets (SDS) or manufacturers' equivalent information sheets on the products and/or chemicals used in providing the product specified in this RFB with their proposal. These sheets must list complete chemical ingredients including the percentage composition of each ingredient in the mixture down to 0.1 percent, and the chemical abstract services numbers for those substances listing any potentially hazardous products, which may produce gas during or following application. Failure to supply this information shall result in rejection of the bid for those product applicable price lines.

- **RECYCLING CERTIFICATION**

The bidder's signature on the signature page certifies that the material offered contains the minimum percentage of post consumer material content. The State reserves the right to request a manufacturer's certification confirming post consumer material content either prior to award or during the period of the contract.

- **QUALITY CONTROL & CONTAMINANTS**

The manufacturer and distributor of products shall be responsible for compliance with 21CFR Ch. 1 Part 110 Current good manufacturing practices, 21CFR Ch. 1 Parts 120 regarding Hazard Analysis and Critical Control Point (HACCP) systems-quality controls as well as all other applicable guidelines as determined by the USDA FDA/CFSAN (Center for Food Safety and Applied Nutrition), EPA, etc., as applicable.

The papermaking process- shall not contain any papermaking additives or contaminants that are carcinogens, mutagens or reproductive toxins or that are known to produce or release carcinogens, mutagens, or reproductive toxins. An exception shall be made for titanium dioxide and carbon black used in colorants.

Additional Prohibited Substances- The papermaking process shall not contain the following substances as papermaking additives or contaminants:

• Chlorophenolic Biocides

• Fragrances

• Heavy metals, including but not limited to lead, chromium, or selenium both in the elemental form and in compounds

• Ozone-depleting compounds

Should biological, chemical or environmental contaminants be found, deleterious to human health, in the paper products sought, the product(s) affected shall be removed, with re-imbursement and/or replacement processed expeditiously by the contractor.

- **T-3034 LAUNDRY DETERGENT PACKETS**

In order to meet the requirements of Executive Order 76 which seeks to reduce certain environmental and health concerns associated with some cleaning products, and as a part of the State of New Jersey's

program to purchase Environmentally Preferable Products (EPPs), it is the intent of this Request for Proposal (RFB) to establish a contract for Powdered Laundry Detergent in Water-Soluble Packets. These packets, by meeting specific standards, are 1) less harmful to the users and other potentially exposed individuals and thus present a lesser impact to public health and the environment compared to conventional competing products and 2) perform at or beyond the performance standards established by the State. However, nothing in this standard in any way exempts compliance with any other occupational health or environmental standards. For purposes of this RFB, the minimum acceptable standards established for the performance of this product are based on the following environmental organization certifications:

A. The Green Seal Standard for Laundry Care Products for Industrial and Institutional Use (GS-51) http://www.greenseal.org

B. The US Environmental Protection Agency's Design for the Environment (DfE) "Safer Choice" program http://www2.epa.gov/saferchoice

C. Environmental Choice EcoLogo/UL program http://productguide.ulenvironment.com

- T-1956 LED SIGNAL INDICATIONS AND WARNING DEVICES

Federal Standard Paint Color Specification - **Federal Standard 595** Paint Spec - **Fed-Std-595 Color** Specification http://www.fed-std-595.com/FS-595-Paint-Spec.html

ITE – Institute of Transportation Engineering - **Institute of Transportation Engineers –ITE** http://www.ite.org/

LED - Light Emitting Diode

MUTCD - Manual on Uniform Traffic Control Devices

Manual on Uniform Traffic Control Devices (**MUTCD**) – FHWA http://mutcd.fhwa.dot.gov/

Nautical Mile (symbol M, NM or nmi)- a unit of length that is approximately one minute of arc measured along any meridian. By international agreement it has been set at 1,852 metres exactly (about 6,076 feet).

NEMA – National Electrical Manufacturers Association http://www.nema.org/pages/default.aspx