

SC-35 Safer Alternative Products

Description

Promote the use of less harmful products and products that contain little or no total maximum daily load (TMDL) or 303(d) list pollutants. Alternatives exist for most product classes, including chemical fertilizers, pesticides, cleaning solutions, janitorial chemicals, automotive and paint products, and consumables (e.g., batteries and fluorescent lamps).

Approach

Pattern a new program after the many established programs around the state and country. Integrate this best management practice (BMP) as much as possible with existing programs at your facility.

Develop a comprehensive program based on the following:

- The Precautionary Principle, which is an alternative to the Risk Assessment model, which says it is acceptable to use a potentially harmful product until physical evidence of its harmful effects are established and deemed too costly from an environmental or public health perspective. For instance, a risk assessment approach might say it is acceptable to use a pesticide until there is direct proof of an environmental impact. The Precautionary Principle approach is used to evaluate whether a given product is safe, whether it is really necessary, and whether alternative products would perform just as well.
- The Environmentally Preferable Purchasing Program to minimize the purchase of products containing hazardous ingredients used in the facility's custodial services, fleet maintenance, and facility maintenance in favor of using alternate products that pose less risk to employees and to the environment.
- The Integrated Pest Management or Less-Toxic Pesticide Program, which uses a pest management approach that minimizes the use of toxic chemicals and gets rid of pests by

Objectives

- Educate
- Reduce/Minimize
- Substitute Products

Targeted Constituents

Sediment	
Nutrients	✓
Trash	
Metals	✓
Bacteria	
Oil and Grease	✓
Organics	✓

Minimum BMPs Covered

 Good Housekeeping	
 Preventative Maintenance	
 Spill and Leak Prevention and Response	
 Material Handling & Waste Management	
 Erosion and Sediment Controls	
 Employee Training Program	✓
 Quality Assurance Record Keeping	



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methods that pose a lower risk to employees, the public, and the environment.

- The Energy Efficiency Program, which includes no-cost and low-cost energy conservation and efficiency actions that can reduce both energy consumption and electricity bills, along with long-term energy efficiency investments.

Consider the following mechanisms for developing and implementing a comprehensive program:

- Policies
- Procedures
 - ✓ Standard operating procedures
 - ✓ Purchasing guidelines and procedures
 - ✓ Bid packages (services and supplies)
- Materials
 - ✓ Preferred or approved product and supplier lists
 - ✓ Product and supplier evaluation criteria
 - ✓ Training sessions and manuals
 - ✓ Fact sheets for employees

Implement this BMP in conjunction with the Vehicle and Equipment Management fact sheets (SC-20–SC-22) and SC-41 Building and Grounds Maintenance.



Employee Training Program

- Employees who handle potentially harmful materials should be trained in the use of safer alternatives.
- Purchasing departments should be trained on safer alternative products and encouraged to procure less hazardous materials and products that contain little or no harmful substances or TMDL pollutants.
- Employees and contractors / service providers can be educated about safer alternatives by using information developed by a number of organizations, including those listed in the references and resources section of this fact sheet.

Potential Limitations and Work-Arounds

Some facilities may have space constraints, limited staffing, and time limitations that preclude implementation of BMPs. The following are typical limitations and recommended work-arounds.

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- Alternative products may not be available, suitable, or effective in every case.
 - ✓ Minimize use of hazardous/harmful products if no alternative product is available.

Regulatory Considerations

This BMP has no regulatory requirements unless a local/municipal ordinance applies. Existing regulations already encourage facilities to reduce the use of hazardous materials through incentives such as reduced:

- Specialized equipment storage and handling requirements;
- Stormwater runoff sampling requirements;
- Training and licensing requirements; and
- Record keeping and reporting requirements.

Cost Considerations

- The primary cost is for staff time to (1) develop new policies and procedures and (2) educate purchasing departments and employees who handle potentially harmful materials about the availability, procurement, and use of safer alternatives.
- Some alternative products might be slightly more expensive than conventional products.

Supplemental Information

This section provides some general information on safer alternatives. More specific information on particular hazardous materials and available alternatives is available in the references and resources section.

- Automotive products—Less toxic alternatives are not available for many automotive products, especially engine fluids. But there are alternatives to grease lubricants, car polishes, degreasers, and windshield washer solution. Refined motor oil is also available.
- Vehicle/trailer lubrication—Fifth-wheel bearings on trucks require routine lubrication. Adhesive lubricants are available to replace typical chassis grease.
- Cleaners—Vegetable- or citrus-based soaps are available to replace petroleum-based soaps and detergents.
- Paint products—Water-based paints, wood preservatives, stains, and finishes with low volatile organic compounds (VOC) content are available.
- Pesticides—Specific alternative products or methods exist to control most insects, fungi, and weeds.
- Chemical fertilizers—Compost and soil amendments are natural alternatives.

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- Consumables—Manufacturers have either reduced or are in the process of reducing the amount of heavy metals in consumables such as batteries and fluorescent lamps. All fluorescent lamps contain mercury; however, low-mercury containing lamps are now available from most hardware and lighting stores. Fluorescent lamps are also more energy efficient than the average incandescent lamp.
- Janitorial chemicals—Even biodegradable soap can harm fish and wildlife before it biodegrades. *Biodegradable* does not mean nontoxic. Safer products and procedures are available for floor stripping and cleaning as well as for carpet, glass, metal, and restroom cleaning and disinfecting. Use paper products with postconsumer recycled content and implement electric hand dryers.

Examples

There are a number of business and trade associations, and communities with effective programs. Some of the more prominent ones are listed in the references and resources section.

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References and Resources

Note: Many of these references provide alternative products for materials that typically are used indoors and disposed of to the sanitary sewer as well as alternatives to products that usually end up in the storm drain.

General Sustainable Practices and Pollution Prevention Including Pollutant-Specific Information

California Department of Toxic Substances Control at <https://dtsc.ca.gov/dtsc-website-archive/pollution-prevention-green-technology/>.

CalRecycle at <http://www.calrecycle.ca.gov/Business/Regulated.htm>.

City of Santa Monica Office of Sustainability and Environment at <http://www.smgov.net/departments/ose/>.

City of Palo Alto at <http://cleanbay.org>.

City and County of San Francisco, Department of the Environment at <http://www.sfenvironment.org/toxics-health/greener-business-practices>.

Green Business Program at <http://www.greenbiz.ca.gov/GRlocal.html>.

Product Stewardship Institute at <http://www.productstewardship.us>.

Sacramento Clean Water Business Partners at <https://www.cityofsacramento.org/Utilities/Stormwater/Clean-Water-Business-Partners>.

U.S. Environmental Protection Agency. *National Pollutant Discharge Elimination System (NPDES) Stormwater Discharges from Industrial Facilities* at <https://www.epa.gov/npdes/stormwater-discharges-industrial-activities>.

U.S. Environmental Protection Agency. *Region 9 Pollution Prevention Program* at <http://www.epa.gov/region9/waste/p2/business.html>.

Western Sustainability and Pollution Prevention Network at <http://wsppn.org/>.

Metals (mercury, copper)

National Electrical Manufacturers Association Environmental Stewardship at <http://www.nema.org/Policy/Environmental-Stewardship/pages/default.aspx>.

California Environmental Protection Agency Department of Toxic Substance Control. *New Regulations for Brake Pads Sold in California* at <https://dtsc.ca.gov/scp/brake-pad-legislation/>.

California Environmental Protection Agency Department of Toxic Substance Control. *Limiting Copper in Brake Pads* at <https://dtsc.ca.gov/scp/limiting-copper-in-brake-pads/>.

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State of Washington Department of Ecology. *Better Brakes Law* at <https://ecology.wa.gov/Waste-Toxics/Reducing-toxic-chemicals/Better-Brakes-law>.

Pesticides and Chemical Fertilizers

Bio-Integral Resource Center at <http://www.birc.org>.

California Department of Pesticide Regulation at <http://www.cdpr.ca.gov/dprprograms.htm>.

University of California Statewide Integrated Pest Management Program at <http://www.ipm.ucdavis.edu/default.html>.

Dioxins

Bay Area Dioxins Project at <https://abag.ca.gov/>.