

# Sustainable Materials Management Schools

## INTRODUCTION

The occasional series of international fact sheets on this web page provides summary information on selected topics relevant to the functions and activities of the EPA programs that manage waste, clean up contaminated sites, promote the productive use of land, and address emergencies. An important purpose of the papers is to promote a fuller understanding of actions around the world to protect the environment in relation to these subject areas. The international fact sheets do not establish policy or represent the views of EPA. Each fact sheet provides information and electronic links to other sources of information that can provide the reader with a fuller understanding of the material. For organizational purposes, the fact sheets have been placed in four broad categories:

- Treaties, Directives, and Policies
- New Directions in Program Management
- Innovative Approaches to Environmental Protection
- Emerging Issues

## TOPIC SUMMARY

This fact sheet on **Schools** identifies some environmental stewardship policies and practices used in schools abroad to promote **resource conservation and reuse**, as well as **safe chemicals management** concepts to help prevent waste. In the United States, innovative initiatives associated with children's health and schools, e.g., those related to chemical clean-outs and the application of vendor servicing concepts, have received significant attention. The fact sheet is not comprehensive; rather it provides a starting point for readers interested in investigating the topic.

## RESOURCES CONSERVATION AND REUSE INITIATIVES

### Country Examples

Australia. Waste management strategies have been produced by all levels of government in Australia. The *No Waste 2010 Management Strategy* adopted by Australia's Capital Territory in Canberra exemplifies programs to encourage resource conservation and reuse as alternatives to landfilling. The strategy establishes a framework for sustainable resource management and identifies actions, including school-related initiatives such as **Waste Wise Schools** (an initiative distinct from US EPA's Waste Wise Program), to achieve the goal of a waste-free society. See <http://www.nowaste.act.gov.au/education/schools>. The action-based Waste Wise Schools initiative, co-sponsored by governments across Australia and non-profit organizations including the Gould League and EcoRecycle Victoria, helps reduce waste, reduce costs, and develop a "waste-wise" ethic in schools. It includes a Best Practices Guide and Teacher Workshops. Waste Wise Schools provides school accreditation, promotes waste audits, and emphasizes both smart purchasing and composting practices. On the Gold Coast of Australia, schools have adopted the

**Wipe out Waste Challenge** to minimize waste through activities such as litter plans, waste audits, recycling programs, and composting. Since 2000, over 55,000 students have participated in Wipe Out Waste activities. See <http://www.envirocom.com.au/gcwaste/home.htm>.

**Canada.** In Canada, a national **Waste Reduction Week** takes place annually in October. Schools are a focus of activities in 2006. See <http://www.wrwcana.com/schools.htm> - and school kits have been developed to support the campaign to promote waste reduction in educational programs. Materials support the use of school waste assessments and environmental purchasing. Regional waste reduction initiatives that include schools exist across Canada. See <http://www.wrwcana.com/links.htm>

**Ireland.** In Ireland, An Taisce, the country's largest independent environmental organization, along with several private sector partners, has co-sponsored **Green Schools**. See <http://www.antisce.org/projects/greenschools.html>. Green Schools is an initiative of the international Foundation for Environmental Education. Currently, about half (over 2000) of Irish primary and secondary schools participate in the program. Primary goals of the initiative include waste minimization and energy efficiency. Each "Green school" undertakes an environmental review, develops an action plan, and evaluates its activities.

**New Zealand.** Like Australia, New Zealand emphasizes "active" environmental stewardship programs in schools. The **Waste Wise Organic Recycling Programme** provides schools with "closed loop" vermicomposting systems to reuse lunchroom and other organic wastes. See <http://www.wastewise.org.nz>. The program receives support from the New Zealand Ministry's Sustainable Management Fund. The **Enviroschools Programme** is sponsored by the Enviroschools Foundation. It models sustainability in all aspects of school life to reinforce environmental education and emphasizes the importance of recycling and composting. See <http://www.enviroschools.org.nz/>.

**United Kingdom.** **Schools Waste Action Club (SWAC)** projects have been established in eight locations across England by **Waste Watch**, a national non-profit organization, to promote waste reduction, reuse, and recycling. See <http://www.wastewatch.org.uk/education/swacs.aspx>. SWAC resources include curriculum-based educational materials, teacher training, and planning support for schools. SWAC activities support goals of the United Kingdom's **Waste & Resources Action Programme (WRAP)**, which was created in 2001 as a not-for-profit company to promote sustainable waste management solutions in response to the UK government's Waste Strategy 2000 and subsequent policies. See <http://www.wrap.org.uk/>. WRAP encourages the development of markets for recycled wastes in schools.

## **Safer Chemicals Use and Disposal**

Improper chemical uses or disposal may pose serious safety concerns. Laboratory chemicals, cleaning supplies, and pesticides increasingly are the focus of safety concerns in schools – both in terms of product use and disposal. Non-toxic alternatives to such products have received more attention as a result of this awareness. For example, an Australian non-profit community network called **Chemical Awareness in Schools** (<http://www.netspeed.com.au/rdi/cas/mainpg.html>) is devoted to non-toxic alternatives to cleaning, maintenance, and pest control products used in schools.

Innovative strategies to encourage safer chemicals management in schools and other settings - such as **vendor servicing and chemical management services** (for a description of these

approaches, see [http://www.chemicalstrategies.org/cms\\_defined.htm](http://www.chemicalstrategies.org/cms_defined.htm)) rely upon the creation of economic efficiencies in business practices and new ways of thinking about the life cycles of toxic or hazardous substances. One such strategy, **Chemical Leasing** (CL), is a service-oriented business model that focuses on the entire life cycle of chemical products. The United Nations Industrial Development Organization (UNIDO) has implemented CL demonstration and training projects in several nations, including Russia and Mexico, to increase the efficient use of chemicals while protecting human health. See <http://www.unido.org/doc/55775>. Development of CL in Austria dates back to early 2002, when the Austrian Environment Ministry and major companies initiated two studies to compile and evaluate the various attempts to implement service-oriented strategies such as leasing models in the chemicals industry in Austria. See [http://www.nwicpc.ru/proj\\_chl\\_doclist\\_eng.htm](http://www.nwicpc.ru/proj_chl_doclist_eng.htm).

## SOME U.S. ACTIVITIES AND ADDITIONAL RESOURCES

Government agencies at the Federal and State levels in the United States have taken important steps to address issues associated both with resource conservation and reuse and safer chemicals management in schools. Described briefly below are some EPA initiatives and associated web links.

- **EPA Healthy School Environments.** <http://epa.gov/schools>. A gateway to on-line resources on environmental health in schools, including assessment tools, for parents, teachers, school officials, and design professionals
- **EPA Schools Chemical Cleanout Campaign (SC3).** <http://www.epa.gov/epaoswer/osw/consERVE/clusters/schools/index.htm>. EPA program on clean out of excess, legacy, unused, and improperly stored chemicals, from schools and provide chemicals management training
- **Chemical Management Services.** <http://www.epa.gov/minimize/cms.htm>. Chemical Management Services (CMS) is a business model in which the customer purchases chemical services rather than just chemicals. With the assistance of EPA, CMS has been piloted for use in US schools
- **Schools and Mercury.** <http://www.mercuryinschools.uwex.edu/project/index.htm>. Information on how to reduce mercury hazards, avoid chemical liabilities, develop planning tools, and establish collection programs for mercury
- **Asbestos in Schools.** [http://www.epa.gov/asbestos/pubs/asbestos\\_in\\_schools.htm](http://www.epa.gov/asbestos/pubs/asbestos_in_schools.htm). Information on asbestos hazards and steps to reduce risks in schools.
- **Integrated Pest Management in Schools.** <http://www.epa.gov/pesticides/ipm/>. Answers to questions about IPM and related information about its uses by schools
- **Environmental Education - Resources.** <http://www.epa.gov/enviroed/resources.html>. Links by environmental topic to resources for educators and students
- **Green Cleaning.** <http://www.epa.gov/oppt/epp/pubs/products/cleaner.htm>. "Green cleaning" practices can reduce health, safety, and environmental risks.
- **State Mercury School Programs.** <http://www.epa.gov/epaoswer/hazwaste/mercury/school.htm>. Information on State mercury management legislations and programs.