Building Successful Programs to Address Chemical Risks in Schools:

A Workbook with Templates, Tips, and Techniques

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http://www.epa.gov/sc3

This document is for general informational purposes only and should not be construed as advice concerning any specific circumstances. The templates, tips and techniques provided in this workbook are intended solely as examples of successful practices, do not impose legally binding requirements on EPA, states, or the regulated community, and may not apply to a particular situation based upon the circumstances. You are urged to consult appropriate experts concerning any specific situation or issue. Users are responsible for knowing and complying with all applicable federal, tribal, state, and local requirements. This document does not substitute for any EPA regulation and is not an EPA rule.

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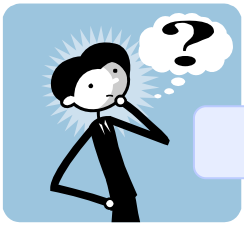
Introduction

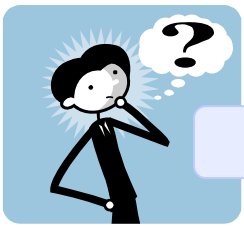


Why does EPA care about chemicals in schools?

Outdated, unknown, or unneeded amounts of dangerous or inappropriate chemicals are often found in K-12 schools across the nation, potentially putting students and staff at risk. Because of the nature of some of the chemicals, even small amounts may present a risk. Thus, dangerous chemicals represent one of the critical environmental health and safety issues schools must address.

See the EPA Web sites at http://www.epa.gov/schools and http://www.epa.gov/sc3 for more information.

The Environmental Protection Agency's (EPA) Schools Chemical Cleanout Campaign (SC3) promotes chemical management programs that remove outdated, unknown, or unneeded amounts of dangerous or inappropriate chemicals from K-12 schools. SC3 also promotes the creation of policies and practices that prevent future accumulations of chemicals and encourages responsible management practices of chemicals used in schools. These programs aim to minimize exposure to students and staff, thus improving the learning environment and reducing school days lost.



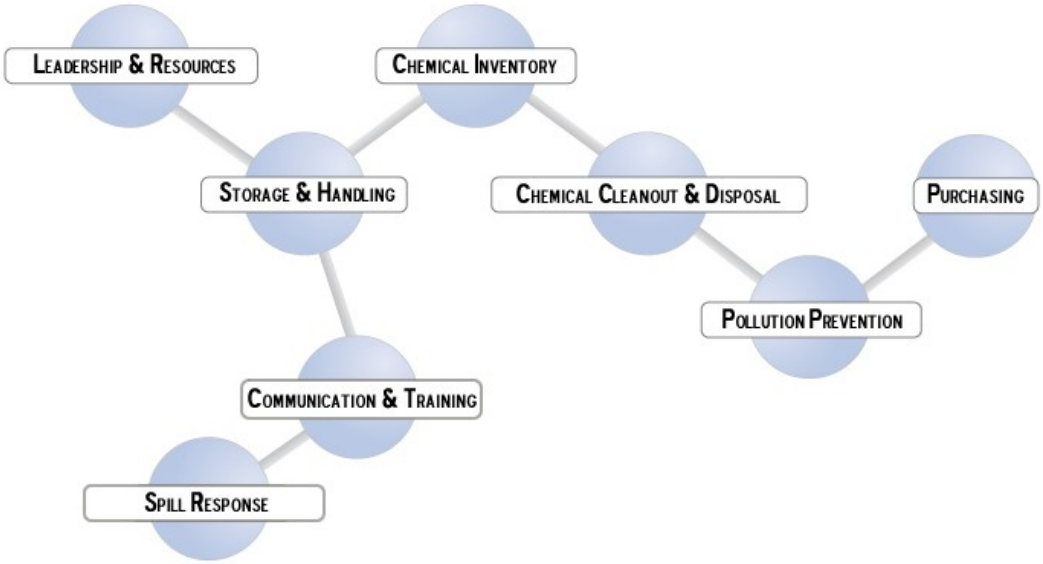
Why did EPA create this Workbook?

EPA's Schools Chemical Cleanout Campaign makes available a variety of tools to help you create or improve your program for responsible chemical management in schools. This Workbook provides advice and templates developed by successful SC3 programs in various states, localities, and tribes that can be used to help you design your own SC3 program. The tips, techniques, and templates in this Workbook can be applied and adapted for SC3 programs being developed and operated at the school, school district, or state level. We structured this Workbook in a way to help you identify what organizations and expertise are important to a program and what steps can be taken to get started or refine a program. So whether you are an employee of a school, local government, or local business, this guide will help you.

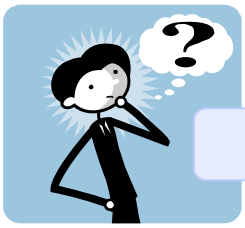
Please visit www.epa.gov/sc3 for this document and for more tools and information about responsible chemical management in K-12 schools.

What are the key components of a school chemical management program?

EPA reviewed many state, tribal, and local SC3 programs and found that the following components and functions are important for a school chemical management program:



Please note the components and functions represented here are in no particular order. While some of these themes may be related, the connections portrayed are random and do not imply any dependency.



Who should you include as members of your SC3 Team?

Creating an SC3 program should include an array of perspectives and expertise. Teaming up with people with a variety of expertise and an interest in safe schools and communities is important to successfully design, begin, and maintain a comprehensive, responsible chemical management program. Such programs can be developed and carried out in stages and still make a positive difference in the health and safety of a school, students, and staff.

Gaining the support of your superintendent or principal and school board is the logical place to start. Also, finding someone who is knowledgeable about or interested in responsible chemical management is important because they can serve as a "champion" of your SC3 program. You can also benefit from

a diverse team of partners to build and sustain an effective SC3 program. For example, you may need expertise not only in responsible chemical management, but also:

- School administration;
- Policy development;
- Contracts management;
- Curriculum development;
- Chemical safety training;
- Understanding regulatory requirements; and
- Risk management.

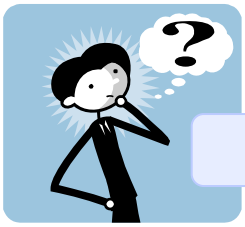
Most schools do not have the necessary expertise and trained personnel in-house. Therefore, depending on the unique circumstances and needs of your school, you may want to seek out and establish partnerships with any of the following entities:

These potential partners can help your school(s) by cost-effectively assisting with:

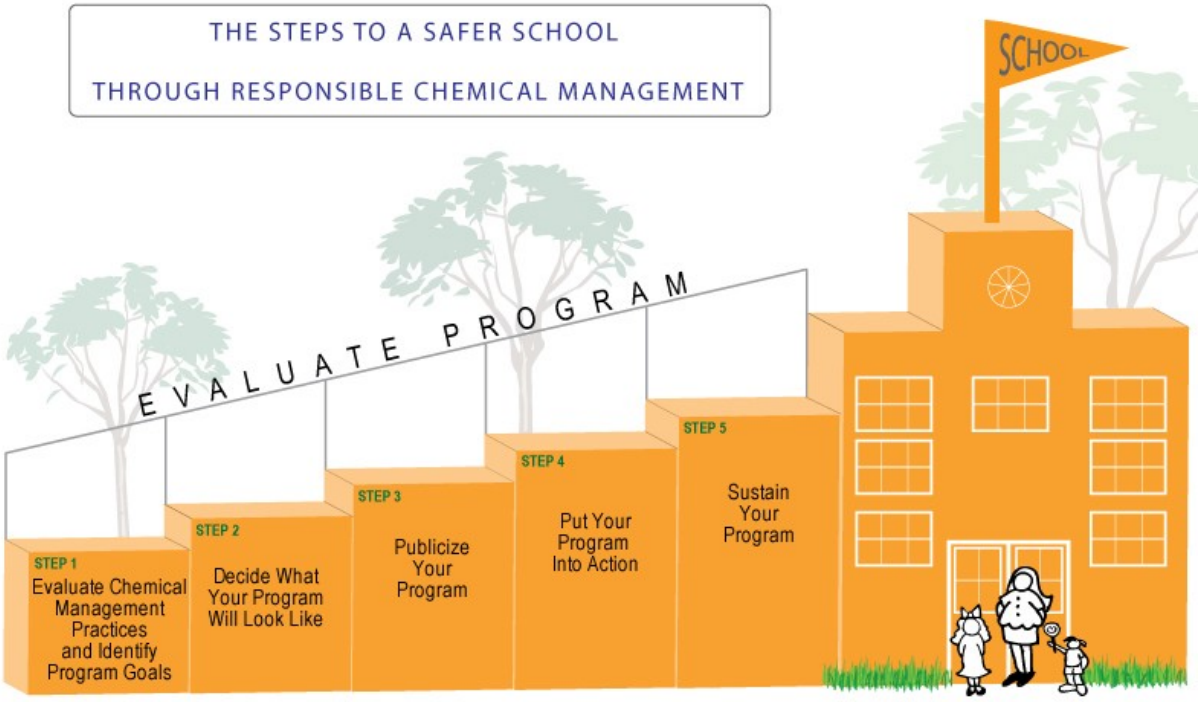
- Inventorying chemicals;
- Purchasing of chemicals (e.g., how to purchase fewer and/or less toxic chemicals);
- Budgeting for chemical management;
- Developing a sustainable chemical inventory system (e.g., proper storage and labeling);
- Packaging mismanaged/unnecessary chemicals for removal;
- Removing mismanaged/unnecessary chemicals;
- Proper disposal of unnecessary chemicals;
- Developing and conducting chemical management and safety training;
- Developing and implementing a chemical management program;
- Implementing improved chemical usage strategies (e.g., changes in a school's classroom and maintenance practices to minimize the quantity of chemicals used in experiments);
- Developing and implementing greener cleaning practices;

- Grant-writing assistance;
- Recruiting other SC3 partners; and
- Developing performance goals and measures to gauge chemical management success.

You probably already have relationships with some of these partners, which should make it easier to ask for their assistance in creating or improving your SC3 program. If you haven't yet cultivated relationships with these potential partners, consider contacting them to be part of your effort. Often potential partners are looking for ways they can help their local communities.



What are the steps to build a successful SC3 program?



The graphic above provides an outline of the basic steps of an SC3 program that will be discussed in this Workbook. Whether you are taking the first step towards responsible chemical management or refining an existing program, this Workbook shows you how to do each of these five steps, with tips, techniques, and templates from real world practitioners to assist you. In Exhibit 1 on the next page, we provide a checklist of activities we recommend for each of the five steps to building an SC3 program.

Exhibit 1: Checklist for Building an SC3 Program

Step One: Evaluate your chemical management practices and identify SC3 program goals

- Find a manager and identify a champion for your SC3 program.
- Identify potential stakeholders, partners, and customers.
- Start building your core SC3 Team.
- Conduct a visual tour to get first impressions of your school's chemical management situation, policies, and practices.
- Perform a comprehensive evaluation of your school's chemical management situation, policies, and procedures.
- Identify issues and agree to SC3 program goals.
- Develop performance measures to track the progress of your SC3 program.

Step Two: Decide what your SC3 program will look like

- Define the activities your program will perform.
- Create a timeline for starting and completing each activity.
- Identify the school/district personnel and potential partners who can perform SC3 activities.
- Identify potential roadblocks and ways to address them.
- Estimate the resources required to perform each activity.
- Identify potential sources of funding for the SC3 program.
- Enter into partnerships.
- Identify any regulations that may affect your SC3 program.

Step Three: Publicize your SC3 program

- Develop and deliver an effective program message with an informative program name or slogan.
- Identify target audiences.
- Use existing communication channels to publicize your program.
- Consider the most effective time of the year to perform communication and publicity efforts.

Exhibit 1: Checklist for Building an SC3 Program (Continued)

Step Four: Put your SC3 program into action

Section 1: Program Management

- Begin to put your SC3 program into action.
- Establish and modify existing chemical management procedures.
- Train appropriate groups on responsible chemical management.

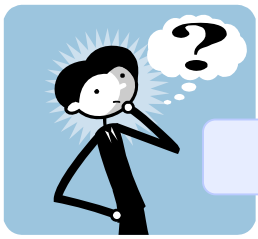
Section 2: Special Chemical Management Projects

- Perform an inventory of all chemicals and chemical products.
- Secure a chemical cleanout professional.
- Implement a green curriculum.

Step Five: Sustain your SC3 program

- Evaluate and measure your program's progress, methods, and capabilities.
- Keep chemical management policies and procedures up-to-date.
- Conduct periodic training.
- Communicate progress and success to keep enthusiasm and awareness high.
- Maintain relationships with partners.
- Estimate staffing and funding requirements and continue to look for new funding sources for ongoing SC3 activities.

Chapter 1 – Evaluate your Chemical Management Practices and Identify SC3 Program Goals



Why should you evaluate your chemical management practices?

Conducting an evaluation of your school's chemical management situation, practices, and policies is important for two reasons. First, it allows you to identify and address any potential issues regarding chemicals at your school (e.g., unlabelled, leaking chemical containers). Second, an evaluation will highlight priority areas that your SC3 program can address. While this chapter focuses on conducting an initial evaluation, we recommend that you periodically look at your school or school district's chemical management practices to identify and address any problems and consider any changes to your SC3 program priorities.

What does it take to get an SC3 program off the ground?

Getting the right people involved is an important first step. You want people who have an interest in school safety, in general, and possess effective chemical management skills, in particular. Successful SC3 programs tend to have two types of leaders: a program manager and a program champion. These leaders are permanent members of your SC3 Team. They work to get others involved who have a stake in school chemical safety, or who can help a school to evaluate, plan, begin, and maintain an effective SC3 program. Chapters 1 and 2 of this Workbook primarily address the activities of the program manager, while Chapter 3 describes the important role of the SC3 program champion in creating and communicating your school's SC3 program message(s).

This chapter provides a roadmap for creating an SC3 program tailored to the unique situation in your school. Throughout the remainder of this chapter, we discuss, in detail, the following key activities for creating your SC3 program:

Activity #	Description
1.	Find a manager and identify a champion for your SC3 program;
2.	Identify potential stakeholders, partners, and customers;
3.	Start building your core SC3 Team;
4.	Conduct a visual tour to get first impressions of your school's chemical management situation, policies, and practices;
5.	Perform a comprehensive evaluation of your school's chemical management situation, policies, and procedures;
6.	Identify issues and agree to SC3 program goals; and
7.	Develop performance measures to track the progress of your SC3 program.

The remaining chapters in this workbook provide you with more details about how to:

- Determine how your program will address chemical management issues (Chapter 2);
- Publicize your SC3 program (Chapter 3);
- Put your SC3 program into action (Chapter 4); and
- Sustain your SC3 program (Chapter 5)

Piece by Piece: Addressing Chemical Issues in Separate and Manageable Parts

You may find that there are a number of things you want to address with your SC3 program. Don't feel that you need to try and deal with every concern right away. It may be more effective if you approach different issues over time, when they might have the best chance of being completed. Remember that doing something is better than doing nothing.

Activity 1 – Find a Manager and Identify a Champion for your SC3 program

What is an SC3 Program Manager?

A Program Manager is the motivated individual who will lead the overall planning and day-to-day management of your SC3 program. An SC3 Program Manager is important to getting a program off the ground and keeping it running smoothly, because this person:

- Recruits and organizes others to help him or her set priorities, develop policies and procedures, and mobilize SC3 activities;
- Advises staff and students regarding policies and procedures;
- Takes responsibility for managing and tracking the SC3 program costs and savings; and
- Seeks necessary funding for SC3 projects (e.g., inventory tracking system, storage, training, cleanout, and disposal when necessary).

The best candidate would be someone already involved in chemical management in some capacity. Because you are concerned about responsible chemical management and are reading this workbook, you may be the Program Manager. Examples of types of personnel who would be a good fit for the role of SC3 Program Manager include, but are not limited to:

- School or district facilities manager;
- Lead science teacher;
- Chemical hygiene officer; or
- Risk manager.

Regardless of who becomes the SC3 Program Manager, we believe the roles and responsibilities of those involved in chemical management should be identified. It is a good idea to outline the different roles and responsibilities for your SC3 program to avoid any confusion or overlap. Your program manager will need to know the way the school or school district gets things done and be confident in taking action.

What is an SC3 Program Champion?

An SC3 Program Champion advocates, promotes, and educates others about the positive benefits of school chemical management programs, as well as the negative consequences of not addressing school chemical problems. A Champion can communicate the importance of the issue to a senior manager at the school or district level who has a direct influence on setting priorities, allocating budget, making policy, or launching initiatives or programs. This senior administrator may even be your SC3 Champion. Involving someone who is not only knowledgeable but also passionate is key to the long-term success of your SC3 program.

To select the best possible Champion, find someone that will make the cause a personal one.

Case Study of a Successful Program Champion

In 2005, Arlington Public Schools (APS) in Virginia conducted a comprehensive inventory of their chemical management system to determine the amounts of outdated, excess, and unknown chemicals that were in their facilities. As a science teacher, Ms. Maria Johnson took the initiative to develop and promote materials on responsible chemical management, as well as train staff on chemical use, storage, and disposal. APS used Ms. Johnson's materials as a basis for their citywide SC3 program. Arlington removed over 600 lbs. of chemicals from its secondary schools, and continues to use Ms. Johnson's materials to avoid chemical accidents and reduce safety issues. Ms. Johnson's efforts and leadership helped earn her and her school recognition from the EPA and the Department of Education. She continues to champion the SC3 program in APS by seeing that new staff is properly trained each school year. Read more about this success story at the following EPA Web site:

http://www.epa.gov/epaoswer/osw/conserve/clusters/schools/success/arlington.htm

Activity 2 – Identify Potential Stakeholders, Partners, and Customers

Successful SC3 programs should involve stakeholders, partners, and customers. The technical expertise for effective chemical management may not reside in a school or school district, so it's important to involve partners with the necessary expertise. Finding someone knowledgeable who can provide specific services or advice is important when building your SC3 program. After reading this Workbook section, try to come up with a list of potential stakeholders and partners to get involved with your school's program.

Stakeholders

A stakeholder is someone who is concerned with keeping a school safe from chemicals. Stakeholders should be aware of and on board with the direction of the SC3 program because they are usually in positions of influence. Examples of stakeholders include, but are not limited to:

- Administrators / board members;
- School principals;
- Department heads;
- Science, art, and vocational teachers;

- Business managers;
- Insurance representatives;
- School legal counsel;
- Facilities and custodial staff; and
- Risk managers.

PARTNERS

Partners are organizations or individuals outside of the school/district that can provide valuable assistance to an SC3 program. As discussed in the Introduction, partners can offer assistance with a variety of activities, including[1]:

- Inventorying chemicals;
- Purchasing of chemicals (e.g., how to purchase fewer and/or less toxic chemicals);
- Budgeting for chemical management;
- Developing a sustainable chemical inventory system (e.g., proper storage and labeling);
- Packaging mismanaged/unnecessary chemicals for removal;
- Removing mismanaged/unnecessary chemicals;
- Proper disposal of unnecessary chemicals;
- Developing and conducting chemical management and safety training;
- Developing and implementing a chemical management program;
- Implementing improved chemical usage strategies (e.g., changes in a school's classroom and maintenance practices to minimize the quantity of chemicals used in experiments);
- Developing and implementing greener cleaning practices;
- Grant-writing assistance;
- Recruiting other SC3 partners; and
- Developing performance goals and measures to gauge chemical management success.

EPA has formed partnerships with several organizations under its national SC3 program. These partners have committed to facilitate responsible chemical management in schools. Some of these organizations may have member companies in your area that could help your school or district. For help in identifying national partners and their member companies, check the SC3 web site or contact your regional SC3 champion. Contact information for regional SC3 champions can be found on the SC3 web site under "Where You Live" (http://www.epa.gov/epaoswer/osw/conserve/clusters/schools/live.htm).

[1] For a list of potential roles partners can play in your school or district, visit the EPA Partner Web site: http://www.epa.gov/epaoswer/osw/conserve/clusters/schools/partners.htm

In addition, there may be industries, organizations, and/or individuals in your area who are not national partners that could offer their expertise as an SC3 program partner to your school. Begin by looking at the relationships your school already has with members of your community, such as the fire department, a local college, or a local government agency. Check with other schools or school districts in your area. You may discover that there are local organizations that have already partnered with a school or district and would be willing to help your school. Such partners may be real assets because they have experience going through the SC3 partnership process. Here are some options to consider as you look for partners for your SC3 program:

- State educational and environmental agencies;
- Trade and professional organizations;
- National companies and local businesses (e.g., chemical suppliers, manufacturers, waste handlers, companies with community programs);
- Colleges and universities;
- Fire and police departments;
- Parents;
- School service organizations; and
- Local schools and/or districts that have an SC3 program.

Case Study in Successful Partnership Involvement

In 2005 and 2006, the Northwest Tri-County Intermediate Unit, a school service organization in Pennsylvania, began the Safer Schools Initiative to develop chemical inventories, conduct cleanout and training, and develop school chemical management policies. The Initiative used existing information from the local health department to help determine the extent of the problem in schools. A representative from a local pollution prevention organization also educated the Intermediate Unit on the problems in schools. The Initiative used the expertise and resources of the Northwest Regional Office of the Pennsylvania Department of Environmental Protection to assist with reviewing chemical inventories. This review also helped to mitigate costs by identifying substances that may not require hazardous waste disposal.

The program successfully removed 267 pounds of hazardous material from 16 schools, positively affecting 11,469 students. The program also included information about responsible chemical management activities such as the use of an in-service training program (teachers educated about chemical safety and green chemistry) and the establishment of stronger relationships between schools and businesses. The intermediate unit will continue to provide technical assistance and training as needed.

CUSTOMERS

Customers are individuals interested in having a safe and healthy school, such as students, teachers, staff, and parents.

People working in or attending schools are obvious customers. Parents are important customers because they entrust schools to provide a safe learning environment for their children. Parents with the necessary skills and resources can also be key partners to your program.

Activity 3 – Start Building your Core SC3 Team

To create a chemical management program that is effective and sustainable, the SC3 Program Manager should get people involved and committed to the effort. In addition to recruiting school/district employees, it is important to encourage the involvement of key stakeholders and potential partners. An SC3 program involves a team of individuals that collectively have direct involvement with or knowledge of every aspect of chemical management at a school, from purchasing chemicals to their ultimate disposal. Team members who are most helpful are those with knowledge of one or more of the following:

- School management practices, including purchasing;
- Curriculum development;
- Chemical management safety and training;
- Health concerns;
- Legal and regulatory aspects; and
- Risk management.

If your team doesn't have all of this experience and knowledge, use the team you have to start the program and add experienced people later. We suggest that the core team not grow too large or it could become difficult to make decisions and solve problems.

You may have existing teams already in place in your school/district that have some of the necessary expertise. These teams may serve as the basis for building your core team. Examples of teams that may already exist at your school/district include:

- Your school health or wellness team;
- Crisis planning team;
- Indoor Air Quality Tools for Schools team; or
- Other groups that focus on environmental health in school.

Activity 4 – Conduct a Visual Tour to Get First Impressions of Your School's Chemical Management Situation, Policies, and Practices

One way to quickly determine if your school's chemical management needs improvement is to take a visual tour of the school, especially those areas where chemicals or products containing chemicals are stored. At least two people from your team who are familiar with chemicals should conduct the evaluation. As you tour the school, be on the lookout for sights and smells that may indicate improper chemical management practices or examples where existing policies and procedures are not being followed. Chemicals should be handled or moved as little as possible. Chemical containers that are leaking or distorted should not be touched. Bring a notepad and a camera (if available) with you on the visual tour to record your observations and impressions. Also, in each area where chemicals are found, ask school staff for their opinion about current conditions and/or previous situations where chemicals may have been improperly stored, handled, or otherwise appropriate for attention.

Be sure to take notes and pictures during your visual tour so that you, your SC3 Team, and administrators have enough details upon which to set program priorities and respond to a potential chemical management situation.

A chemical may be appropriate for attention when it is:

- Stored in a container that is in poor condition (e.g., corroded, has crystals growing around the cap);
- Stored in inappropriate containers, such as buckets or reused food containers;
- Expired;
- Unidentified or not clearly labeled with the chemical name, date, and storage and handling requirements;
- Stored near incompatible chemicals (alphabetical storage is also inappropriate);
- Stored on deteriorating, unstable, or inappropriate shelving (e.g., flammables stored on wooden shelves, corrosives stored on metal shelves);
- Unsecured; or
- Unneeded or in surplus quantities.

The status of a chemical's management can be evaluated relatively quickly and easily. The visual evaluation doesn't have to include a detailed inventory of all chemicals -- a chemical inventory can be developed later when you put your SC3 program into action (see Chapter 4). However, if you see conditions that indicate an obvious chemical management problem, let your supervisor know that it should be addressed as soon as possible. Activity 5 in this chapter describes a more comprehensive process for fully evaluating your school's chemical management situation, policies, and practices so that you can get a better handle on pressing issues.

We suggest that you brief the school or district administrators about what you observed during your visual tour. Try to use this information to get people in authority to support the development of an SC3 program. It is possible that school management may want the SC3 program to first address some particular issues identified from the visual tour. If one of the first orders of business of the SC3 program is to evaluate the need for a chemical cleanout, please refer to Chapter 4 for guidance regarding how to get qualified personnel involved.

ACTIVITY 5 – PERFORM A COMPREHENSIVE EVALUATION OF YOUR SCHOOL'S CHEMICAL MANAGEMENT SITUATION, POLICIES, AND PROCEDURES

The comprehensive evaluation of your school's chemical management situation, policies, and practices should be a team effort led by the SC3 Program Manager.

The previous activity – conducting a visual tour of the school – is a good start, but to get a better understanding of your school's chemical management situation, you will have to dig a little deeper. In performing a comprehensive evaluation of your school's chemical management policies and procedures, you should:

- Collect:
  - Information about the chemical management situation, policies, and procedures at your school;
  - Materials such as invoices for the purchase and disposal of chemicals;
  - Information about science and art curricula; and
  - Information about chemicals used to keep the school clean, etc.
- Look at your school's SC3 policies and procedures to see how clear, complete, and up-to-date they are as well as how the policies and procedures are being followed;
- Talk to staff involved in any phase of the "chemical management lifecycle" (i.e., anyone involved in the purchase, storage, inventory, use, and disposal of chemicals and products containing chemicals); and
- Conduct a more in-depth analysis of the areas identified as a potential concern during the visual tour (Activity 4). If you noticed something in the visual tour, dig a little deeper and gather more information. The following paragraphs and Exhibit 1-1 give you some more details on this.

Case Study of Involving Partners in a School Evaluation

The Illinois Waste Management and Research Center and the Illinois Environmental Protection Agency (IEPA) provide free facility chemical management assessments (FCMA) to Illinois schools through the Illinois Sustainable Schools Project. FCMAs consist of a review of chemical inventories as well as storage, management, and disposal practices for both laboratory and facility chemical use. These assessments help in the use of an inventory system to track purchase, quantity, and disposal of chemicals used for facility maintenance and curricula at participating schools. These assessments also assist with the segregation, inventory, and packaging of chemicals identified for disposal. The IEPA's Green Schools Program can be found at the following Web site:

http://www.epa.state.il.us/p2/green-schools/index.html

Exhibit 1-1 provides an example of a completed worksheet for evaluating a school's chemical management situation, policies, and procedures. Note how the worksheet organizes questions for each phase of the chemical management lifecycle. The topics covered in the worksheet include all of the SC3 themes conveyed in the "molecule graphic" (see the Introduction of this Workbook); the lone exception is the "Leadership and Resources" theme which we addressed in Activity 1 earlier in this chapter and later on in Chapters 4 and 5.

Worksheet 1-1 in the Additional Tools and Examples section at the end of this chapter can be used to conduct a comprehensive evaluation of your school's chemical management situation, policies, and procedures; answer the questions to the best of your ability. Whenever you answer NO to any of the questions on the comprehensive evaluation worksheet, you should elaborate by capturing notes in the corresponding 'Description of Conditions' section. Share the completed worksheet with your SC3 Team to seek agreement on the areas to be addressed in your SC3 program We suggest you pay particular attention to those program development areas or topics for which you may need stakeholder input or the involvement of partner(s) with relevant expertise and capabilities.

Exhibit 1-1: Evaluating Your School's Chemical Management Situation, Policies, and Procedures (Example)

Question	Answer *(Circle One)*	Description of Conditions
Purchasing		
Does my school have a purchasing policy to evaluate chemicals before they come into the school?	*YES / NO*	*Chemicals are purchased in accordance with budgetary and curriculum needs.*
Does one person or a department do chemical purchasing?	*YES / NO*	*Chemicals often purchased by individual personnel and teachers when they need them.*
Are chemicals purchased for expected use within the calendar or fiscal year?	*YES / NO*	*Purchases are made in bulk to get a price discount; some chemicals purchased may last us four or five years.*
Does my school have a "green" or "microscale" chemistry curriculum?	*YES / NO*	*We have a standard chemistry curriculum with no particular preference for less toxic chemicals. Students often use toxic chemicals in experiments; they wear goggles.*
Have toxic chemicals been replaced with less toxic alternatives?	*YES / NO*	*I don't recall an instance where we changed the chemicals we purchased.*

Exhibit 1-1: Evaluating Your School's Chemical Management Situation, Policies, and Procedures (Example, cont'd)		
Question	Answer *(Circle One)*	Description of Conditions
Storage		
Does the school have a policy or set of procedures for storing chemicals (e.g., a Chemical Hygiene Plan)?[2]	*YES / NO*	*No policy but we make sure to tightly close all lids.*
Is there a staff member assigned to manage every chemical storage area?	*YES / NO*	*Head of chemistry department left; no one is responsible for checking storage areas in the summer.*
Are stored chemicals kept locked?	*YES / NO*	*Chemistry and custodial closets are locked at night but open during the day; art and ceramic studio is always open.*
Are chemicals accessible only to qualified handlers?	*YES / NO*	*Chemistry students allowed into storage during the day; art supplies available to use by anyone.*
Do all chemicals have up-to-date Material Safety Data Sheets (MSDS)? [3]	*YES / NO*	*Only the newest chemicals have this documentation; sheets don't always reside where chemicals are stored.*
Are all MSDSs kept together in a common location?	*YES / NO*	*Custodian often throws them away; art teacher has some sheets in desk; chemistry closet has current sheets with container on shelf.*
Are all chemicals labeled, including name, purchase/expiration dates, and storage information? [4]	*YES / NO*	*Some glass jars in chemistry closet just have handwritten name; custodian has spray bottles with no labels.*
Are chemicals stored according to type and group (not alphabetically)? [5]	*YES / NO*	*Liquids in the chemistry lab closet are stored together alphabetically.*
Inventory		
Is there a policy or set of procedures for identifying out-of-date chemicals?	*YES / NO*	*We follow the expiration or "use by" dates on containers that include this information.*
Is there a comprehensive list of chemicals stored onsite for all departments?	*YES / NO*	*Chemicals are purchased as needed; inventories completed only to determine next purchase; lists not kept.*
Are incoming chemicals added to a comprehensive list?	*YES / NO*	*No such list exists.*

[2]See the Occupational Safety and Health Administration's (OSHA) Laboratory Standard containing information on a Chemical Hygiene Plan (CHP): http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=standards&p_id=10106

[3] Figure 1-1 has the first page of a blank sample MSDS from OSHA; the following link: http://www.osha.gov/dsg/hazcom/msdsformat.html

[4] See Figure 1-2 for an illustration of a chemical safety label from Dana Farber Cancer Institute (DFCI).

[5] For a more definitive reference, see pages 19-23 of the School Chemistry Laboratory Safety Guide, produced by the U.S. Consumer Product Safety Commission (CPSC), the Centers for Disease Control and Prevention (CDC), and the National Institute for Occupational Safety and Health (NIOSH), available in PDF form at: http://www.cdc.gov/niosh/docs/2007-107/

Exhibit 1-1: Evaluating Your School's Chemical Management Situation, Policies, and Procedures (Example, cont'd)		
Question	Answer *(Circle One)*	Description of Conditions
Use		
Does my school have a Chemical Hygiene Plan or some kind of plan for responding to chemical emergencies?	*YES / NO*	*Attention is focused on rapid response to violence and fire emergencies.*
Are students and staff adequately trained to handle the chemicals they interact with?	*YES / NO*	*Only chemistry teachers and custodians receive training; students are briefly instructed on chemical safety in lab classes.*
Do areas where chemicals are used or handled have up-to-date safety guides and functioning safety equipment?	*YES / NO*	*No safety guides present in chemistry labs; students must share goggles for experiments.*
Disposal		
Are all hazardous/toxic wastes disposed of according to federal/state guidelines (e.g., NOT 'down-the-drain')?	*YES / NO*	*Custodians collect empty and unwanted containers and drive to transfer station, when necessary; we don't know what guidelines apply to us.*
Are used or outdated chemicals disposed of within a reasonable timeframe (e.g., not 'stockpiled' in storage rooms)?	*YES / NO*	*Old and unneeded chemicals are stored near rear loading dock until custodian transports to transfer station.*
Does the school retain a waste removal specialist to handle hazardous/toxic chemicals after use and/or outdated chemicals?	*YES / NO*	*We sometimes ask the chemical sales rep to take away stuff.*

Figure 1-1: Blank Material Safety Data Sheet (MSDS) (Example)

Material Safety Data Sheet
May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910 1200. Standard must be consulted for specific requirements.

U.S. Department of Labor
Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072

IDENTITY *(as Used on Label and List)*

Note: Blank spaces are not permitted. If any item is not applicable or no information is available, the space must be marked to indicate that.

Section I

Manufacturer's name	Emergency Telephone Number
Address *(Number, Street, City, State and ZIP Code)*	Telephone Number for Information
	Date Prepared
	Signature of Preparer *(optional)*

Section II—Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity, Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)

Section III—Physical/Chemical Characteristics

Boiling Point		Specific Gravity (H_20 = 1)	
Vapor Pressure (mm Hg)		Melting Point	
Vapor Density (AIR = 1)		Evaporation Rate (Butyl Acetate = 1)	

Solubility in Water

Appearance and Odor

Section IV—Fire and Explosion Hazard Data

Flash Point (Method Used)	Flammable Limits	LEL	UEL

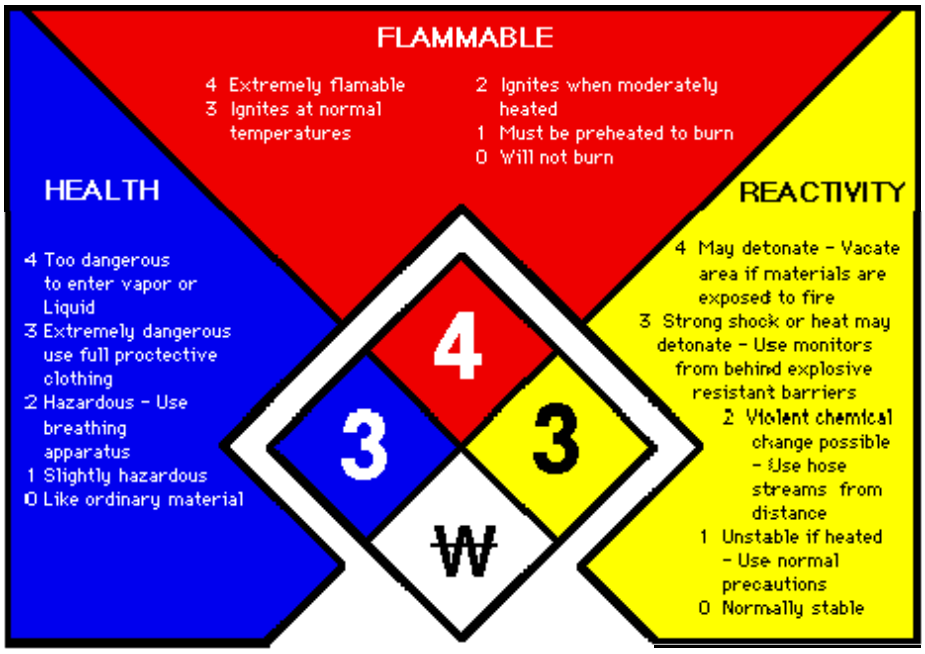
Extinguishing Media

Special Fire Fighting Procedures

Unusual Fire and Explosion Hazards

(Reproduce locally) OSHA 174 Sept. 1985

Figure 1-2: Chemical Safety Label



F.Y.I.

One helpful practice in maintaining Material Safety Data Sheets is to take a picture of each chemical container and attach it to its corresponding MSDS.

More information on chemical labeling can be found at the links listed below:

http://research.dfci.harvard.edu/ehs/Chemlabels/chemical_labels.htm [6]

And

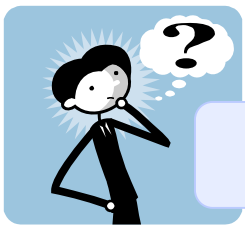
http://www.cdc.gov/niosh/docs/2007-107/ [7]

Helpful Link

The Washington State Department of Ecology's Hazardous Wastes and Toxics Reduction Program offers free downloadable hazardous waste labels:

http://www.ecy.wa.gov/programs/hwtr/hw_labels

[6] From the Environmental Health and Safety Office at the DFCI.
[7] School Chemistry Laboratory Safety Guide from CPSC, CDC, and NIOSH.



How do I figure out the issues or concerns that my SC3 program needs to address?

There are many different forms that an SC3 program can take. It all depends on the situation at your school or district. For example, an SC3 program may place a high priority on improving chemical purchasing, while another may focus on chemical storage.

The results of your visual tour and the comprehensive evaluation (using Worksheet 1-1) should help your SC3 Team identify and characterize areas that need to be addressed or improved. If your school or school district already has an SC3 program, the comprehensive evaluation worksheet can still be useful in determining areas to improve or new issues to address. Remember that you can begin an effective program by addressing only a few issues at a time.

Your school might not have a formal SC3 program and team, but still has made progress in establishing safer chemical management policies and procedures. Regardless, by conducting the evaluation activities outlined in Activities 4 and 5 of this chapter, your SC3 Team should have enough insights and information upon which to develop goals that will guide your SC3 program.

Activity 6 – Identify Issues And Agree To SC3 program Goals

Establishing SC3 program goals is an important step in making your school a safer place. Keep in mind that assigning specific timeframes to goals will allow you to stay on track with objectives. By setting concrete deadlines, the SC3 Team can prioritize and plan activities that work for your school.

How do I develop goals for my responsible chemical management program?

Setting goals for a program or project may be new to some on the team. The following tips will help guide the goal-setting activities:

- Look at your self-evaluation and set goals that address its main concerns;
- Consider insights and concerns from stakeholders, customers, and potential partners;
- Set goals that can be measured;
- Set reasonable goals that can be achieved within the desired timeframe; and
- Make sure your goals lead to a sustainable, successful SC3 program.

It is important to include stakeholders in setting your SC3 program goals. Because stakeholders have a vested interest in safe and clean schools, their perspectives can guide the nature and priority of the goals for your SC3 program. To avoid overlooking anyone's input or support, we suggest that all stakeholders be invited to share their expectations, needs, and capabilities with your SC3 Team at this stage.

Goals of your SC3 program should match the issues or areas of concern identified in your comprehensive evaluation worksheet (Worksheet 1-1). Use this worksheet to define program goals with your SC3 Team. Exhibit 1-2 provides an example of goals that match each issue or area of need. Use Worksheet 1-2 in the Additional Tools and Examples section at the end of this chapter to develop your SC3 program goals. To fill out the "Issue / Area of Need," on the goal-making worksheet, refer to the completed Worksheet for Evaluating Your School's Chemical Management Policies and Practices [Worksheet 1-1] and any input from your SC3 Team, stakeholders, customers, and potential SC3 partners.

Exhibit 1-2: Defining SC3 Program Goals that Address Issues / Areas of Need (Example)

SC3 Program Component	Issue / Area of Need	Program Goal
Purchasing	*(1) My school does not have a chemical purchasing policy.*	*(1) Establish purchasing policy that avoids 'bulk' ordering and emphasizes less or non-toxic alternative chemicals.* *(2) Centralize chemical purchasing at district level.*
Storage	*(1) Some stored chemicals are unlabeled.*	*(1) Establish policy requiring all onsite chemicals to be labeled according to state regulations.* *(2) Have copies of MSDSs for all chemicals stored onsite to be kept near chemicals and in principal's office.*
	(2) Storage areas are not secured.	*(1) All chemical storage areas shall be locked at all times with access limited to trained teachers and facilities personnel.*
Inventory	*(1) There is no way to know how many and what type of chemicals are present in the school.*	*(1) Establish an inventory policy and set of procedures.* *(2) Establish chemical inventory database that is updated when chemicals are purchased, used, or disposed of.*
Use	*(1) Our school has no contingency plan for a chemical emergency.*	*(1) Write an Emergency Response Plan within six months.* *(2) Hold yearly training courses for students and staff on proper chemical use and emergency procedures.*
	(2) Chemistry curriculum uses many chemicals that are known carcinogens.	*(1) Work with chemistry department to phase out experiments using carcinogenic chemicals.* *(2) Begin using a "green chemistry" curriculum in the next 2 years.*
Disposal	*(1) Chemicals are routinely poured down drain and put in trash.*	*(1) Develop disposal procedures for each chemical type used in the school.*

Tip: Consider Developing a Mission Statement

To set a long term vision for your school or district's SC3 program, you may consider writing a mission statement that briefly declares what your SC3 program aims to accomplish. Examples of a simple mission statement might be: 'The purpose of SC3 is to reduce chemical exposures and improve chemical management' or, 'SC3 aims to ensure that all schools in the district are free from hazards associated with potentially harmful chemicals'.

ACTIVITY 7 – DEVELOP PERFORMANCE MEASURES TO TRACK THE PROGRESS OF YOUR SC3 PROGRAM

The last activity in this section is to work on ways to measure progress towards accomplishing your SC3 program goals. This is important because success needs to be measured. "Performance measures" are what programs use to gauge progress towards goals. Developing measures of program success can be difficult, so we provide examples of metrics used by established SC3 programs. The key in developing performance measures is to tie them directly to goals by asking, "Will this performance measure demonstrate progress (or lack thereof) towards a specific goal or set of goals?"

The challenge in developing performance measures is to identify meaningful ways to demonstrate program progress that are straightforward and reflect your school's chemical management priorities. We suggest that they be clear and understandable so that someone not familiar with the SC3 program can readily understand the progress being made. It's okay that some performance measures you develop may be exclusively for management purposes while others are for reporting to stakeholders and customers. Having concrete evidence of program success is also beneficial to the program champion in garnering support when seeking additional resources and funding. Some typical measures of progress for a school's chemical management program include, but are not limited to:

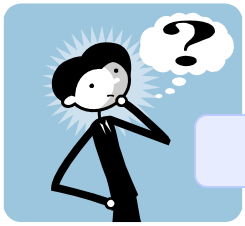
- Amount, by type and weight, of chemicals removed;
- Number of training sessions completed;
- Number of teachers, facilities personnel, and administrators trained; and
- School populations protected or serviced.

Measure progress by department, when appropriate. Sometimes a little competition can be good for morale and spur progress. Consider ways to challenge each department to reduce chemical purchasing, storage, and disposal.

Keep in mind that measurements of changes in behavior are an important indicator of program success. Evaluations of how well training exercises improve a staff's knowledge and expertise in chemical handling is an example of measuring positive changes in attitudes towards chemical safety.

All of the worksheets previously discussed in this section should help you when developing your performance measures. Exhibit 1-3 on the following page is an example of a completed worksheet for capturing performance measures that tie to specific goals. Worksheet 1-3 in the Additional Tools and Examples section at the end of this chapter can be used to define your performance measures. It's okay if your worksheet does not look like the one in the example, just try to be as detailed as possible.

Exhibit 1-3: Developing Performance Measures Based on Desired Goals (Example)			
Program Component	Goal	Deadline	Performance Measure
Purchasing	*(1) Establish centralized purchasing policy that avoids buying 'bulk' orders.*	*2 years*	*Number of bulk orders made then vs. now [every ordering cycle].*
	(2) Identify alternative chemicals for each hazardous chemical currently used.	*2 Years*	*Number (and %) of alternative chemicals substituted for use.*
	(3) Use less toxic/hazardous alternatives.	*1 Year*	*Number and quantity of toxic/hazardous chemicals on invoice then vs. now [every ordering cycle].*
Storage	*(1) Enact policy requiring all onsite chemicals to be labeled according to state regulations.*	*6 mo.*	*Number (and %) of passed "inspections" performed by the Program Manager.*
	(2) All chemical storage areas to be locked at all times unless accessed by trained staff.	*1 Year*	*Number (and %) of passed "inspections" performed by the Program Manager.*
Inventory	*(1) Establish chemical inventory database which accounts for all chemicals, their information, and incoming and outgoing product.*	*2 Years*	*Ratio of chemicals in physical inventory vs. not in database.*
Use	*(1) Hold yearly training courses that prepare students and staff for day-to-day chemical safety and emergency planning.*	*1 Year*	*Number of students and staff successfully trained each year.*
	(2) Work with chemistry department to phase out experiments requiring carcinogenic chemicals.	*1 Year*	*Number (and %) of lesson plans redesigned to feature less harmful alternatives.*
Disposal	*(1) Secure a partner or chemical cleanout professional to dispose of 'waste' chemicals.*	*1 Year*	*Number (and %) of unnecessary or outdated hazardous chemical containers removed from onsite storage.*

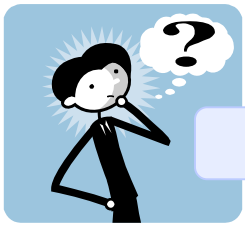


Summary

The activities for initiating your SC3 program are:

Activity #	Description
1.	Find a manager and identify a champion for your SC3 program;
2.	Identify potential stakeholders, partners, and customers;
3.	Start building your core SC3 Team;
4.	Conduct a visual tour to get first impressions of your school's chemical management situation, policies, and practices;
5.	Perform a comprehensive evaluation of your school's chemical management situation, policies, and procedures (Worksheet 1-1);
6.	Identify issues and agree to SC3 program goals (Worksheet 1-2); and
7.	Develop performance measures to track the progress of your SC3 program (Worksheet 1-3).

This first chapter walked you through the first stages of preparing to launch an SC3 program at your school or district. Chapter 2 will assist you in determining what your SC3 program can look like and what it will do to help develop and maintain responsible chemical management practices.



Additional Tools and Examples

This section contains some helpful links and blank exhibit worksheets to help you evaluate your school or district's chemical management situation, develop goals for your SC3 program, and create performance measures to measure progress. For ideas regarding the kinds of information you might capture on these worksheets, refer to the exhibits containing examples earlier in this chapter.

These EPA Web sites provide a variety of links to resources related to healthy chemical management in schools:

- SC3 Toolkit
- SC3 Resources
- Healthy Schools' Chemical Management Regulation Resources
- Healthy School Environments Assessment Tool (HealthySEAT)
- OSHA Standard for Occupational Exposure to Hazardous Chemicals in Laboratories

For more information on MSDS:

- OSHA Recommended Format
- EPA's SC3 Links

Worksheet #	Title
1-1	Evaluating Your School's Chemical Management Situation, Policies, and Procedures
1-2	Defining SC3 Program Goals that Address Issues / Areas of Need
1-3	Developing Performance Measures Based on Desired Goals

Worksheet 1-1: Evaluating Your School's Chemical Management Situation, Policies, and Procedures		
Question	Answer *(Circle One)*	Description of Conditions
Purchasing		
Does my school have a purchasing policy or an approved chemical list?	*YES / NO*	
Does one person or a department do chemical purchasing?	*YES / NO*	
Are chemicals purchased for expected use within the calendar or fiscal year?	*YES / NO*	
Does my school have a "green" or "micro-scale" chemistry curriculum?	*YES / NO*	
Have toxic chemicals been replaced with less toxic alternatives?	*YES / NO*	
Storage		
Does the school have a policy or set of procedures for storing chemicals (e.g., a Chemical Hygiene Plan)?	*YES / NO*	
Is there a staff member assigned to manage every chemical storage area?	*YES / NO*	

Worksheet 1-1: Evaluating Your School's Chemical Management Situation, Policies, and Procedures (cont'd)		
Question	Answer *(Circle One)*	Description of Conditions
Storage (cont'd)		
Are stored chemicals kept locked?	*YES / NO*	
Are chemicals accessible only to qualified handlers?	*YES / NO*	
Do all chemicals have up-to-date Material Safety Data Sheets?	*YES / NO*	
Are all Material Safety Data Sheets kept together in a common location?	*YES / NO*	
Are all chemicals labeled, including name, purchase/expiration dates, and storage information?	*YES / NO*	
Are chemicals stored according to type and group (not alphabetically)?	*YES / NO*	

Worksheet 1-1: Evaluating Your School's Chemical Management Situation, Policies, and Procedures (cont'd)		
Question	Answer *(Circle One)*	Description of Conditions
Inventory		
Is there a policy or set of procedures for identifying out-of-date chemicals?	*YES / NO*	
Is there a comprehensive list of chemicals stored onsite for all departments?	*YES / NO*	
Are incoming chemicals added to a comprehensive list?	*YES / NO*	
Use		
Does my school have a Chemical Hygiene Plan or some kind of plan for responding to chemical emergencies?	*YES / NO*	
Are students and staff adequately trained to handle the chemicals they interact with?	*YES / NO*	
Do areas where chemicals are used or handled have up-to-date safety guides and functioning safety equipment?	*YES / NO*	

Worksheet 1-1: Evaluating Your School's Chemical Management Situation, Policies, and Procedures (cont'd)		
Question	Answer *(Circle One)*	Description of Conditions
Disposal		
Are all hazardous/toxic wastes disposed of according to federal/state guidelines (e.g., NOT 'down-the-drain')?	*YES / NO*	
Are used or outdated chemicals disposed of within a reasonable timeframe (e.g., not 'stockpiled' in storage rooms)?	*YES / NO*	
Does the school retain a waste removal specialist to handle hazardous/toxic chemicals after use and/or outdated chemicals?	*YES / NO*	

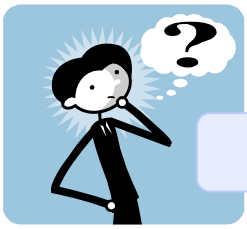
Worksheet 1-2: Defining SC3 Program Goals that Address Issues / Areas of Need		
SC3 Program Component	Issue / Area of Need	Program Goal
Purchasing	*(1)*	
	(2)	
Storage	*(1)*	
	(2)	
Inventory	*(1)*	
	(2)	
Use	*(1)*	
	(2)	
Disposal	*(1)*	
	(2)	

Worksheet 1-3: Developing Performance Measures Based on Desired Goals			
Program Component	Goal	Deadline	Performance Measure
Purchasing			
Storage			

Worksheet 1-3: Developing Performance Measures Based on Desired Goals (cont'd)			
Program Component	Goal	Deadline	Performance Measure
Inventory			
Use			

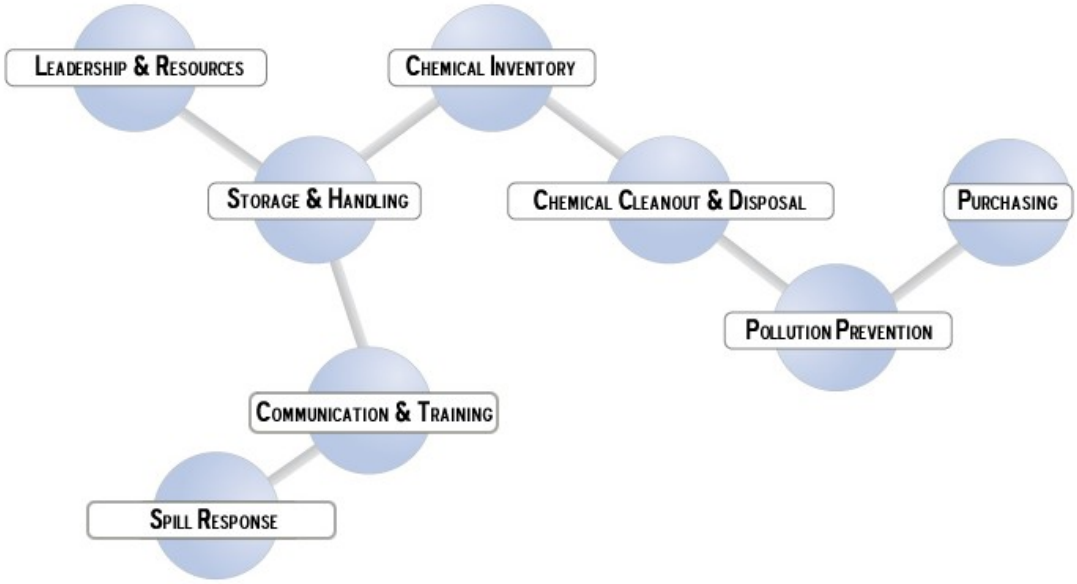
Worksheet 1-3: Developing Performance Measures Based on Desired Goals (cont'd)			
Program Component	Goal	Deadline	Performance Measure
Disposal			

Chapter 2 - Decide What Your SC3 Program Will Look Like



Why should I define key components of my SC3 program?

As with any new major project, it makes sense to break things down into manageable pieces. In Chapter 1, we suggested that you define SC3 program goals that match the major elements of responsible chemical management outlined in the molecule graphic.



This chapter helps you define the activities and methods you can use to accomplish your SC3 goals. SC3 programs come in all shapes and sizes, but at a minimum, we suggest that you design your program to:

1. Conduct periodic chemical inventories;
2. Plan and budget for chemical purchases, management and disposal;
3. Establish environmentally preferable purchasing practices;
4. Encourage school staff to use the smallest amounts of the least hazardous chemicals; and
5. Offer chemical management and safety training for school staff.

Remember that no matter which areas and components of a chemical management program you are developing at this point, doing something is better than doing nothing. Ideally, your program will develop policies and procedures to promote responsible chemical management. In Chapter 4 (Activity 2: *Establish and modify existing SC3 Policies and Procedures*), we guide you through the process of developing a "chemical management plan" of policies and procedures geared towards the needs of your school or district.

To get started on defining what your SC3 program can look like, you can refer to the Chapter 1 worksheets that help you to develop SC3 program goals. The next step is to develop a detailed plan of action that can help you achieve each of those goals. Here is a list of activities for establishing your SC3 program:

Activity #	Description
1.	Define the activities your program will perform;
2.	Create a timeline for starting and completing each activity;
3.	Identify the school/district personnel and potential partners who can perform SC3 activities;
4.	Identify potential roadblocks and ways to address them;
5.	Estimate the resources required to perform each activity;
6.	Identify potential sources of funding for the SC3 program;
7.	Enter into partnerships; and
8.	Identify any regulations that may affect your SC3 program.

Once you have defined the components of your SC3 program, you should refer to:

- Chapter 3 for crafting an SC3 message and conducting communication efforts; and
- Chapter 4 for ideas on how to put your program into action.

How can I determine if my SC3 program goals can be achieved?

In Chapter 1, we provided a template that you can use to develop SC3 program goals and assign a timeframe for accomplishing each goal. It's now time to answer the question "can each SC3 program goal be achieved *within the desired timeframe*?" The best way to go about answering this question is to focus on the milestones or goals that your school wants to achieve in the upcoming year. To do this, we suggest that your SC3 Team *roughly* estimate the needed labor and out-of-pocket costs to reach these annual milestones; we'll give you more details on this step in Activity 5 later on in this chapter.

Some key points to remember as you begin to set your timeframe for accomplishing your goals are:

- Take care not to overburden any particular team member, school/district employee, or partner with SC3 responsibilities for the upcoming year.
- Identify ways that potential partners can contribute to achieving the goal by providing funds and in-kind services.
- If you can find the necessary personnel to perform SC3 activities and have the budget to cover out-of-pocket costs, then you have a realistic plan for achieving milestones for the upcoming year.
- Your SC3 Team may need to adjust timeframes for accomplishing some goals if the necessary staff time and budget are not available for the upcoming year.
- Try to recognize current year and out-year budget and personnel constraints early on and make the necessary adjustments to your team, deadlines, and SC3 budget requests.

ACTIVITY 1 – DEFINE THE ACTIVITIES YOUR PROGRAM WILL PERFORM

In most cases, there is more than one way to achieve a goal. Your team should evaluate various options for achieving a goal and adopt the best option for your school.

First, identify some basic options for approaching a specific problem or issue. For example, if one of your SC3 goals is to "purchase less toxic chemicals," there are a variety of ways to go about it, such as:

- Determining if a chemical is really needed to do the job or if there are non-chemical methods to accomplish the task;
- Identifying appropriate less-toxic alternatives to chemicals in use;
- Evaluating using smaller quantities of toxic chemicals when alternatives are not readily available;
- Pushing for changes in district-level purchasing;
- Creating an 'accepted use' list for chemicals allowed in your school; or
- Some combination of the above.

Second, for each option, we recommend that you evaluate what expertise is needed and who has this expertise. Consider whether you have the necessary expertise "in-house" or if it makes sense to have the SC3 activity be partially or wholly performed by another organization or vendor. Explore how to go about finding the skills from other sources, such as enlisting partners that have the necessary skills or hiring a chemical management specialist (see Chapter 4).

Third, define the activities that need to be undertaken to achieve each goal. For each set of activities, we suggest that you adopt performance measures to track progress towards achieving a goal. Exhibit 2-1 contains an example of a set of activities designed to achieve a specific goal: "Purchase less toxic chemicals." This exhibit also contains examples of performance measures that can be used to gauge progress towards achieving the goal of purchasing less toxic chemicals. Worksheet 2-1 in the Additional Tools and Examples section at the end of the chapter can be used to capture the activities and performance measures that your team agreed to for each SC3 program goal.

Exhibit 2-1: Developing SC3 Activities and Performance Measures to Achieve Program Goals (Example)	
Example SC3 Program Goal: Purchase Less Toxic Chemicals	
Activity	Performance Measure(s)
i. Have a face-to-face meeting with all school/district personnel who purchase chemicals to map out chemical usage and buying patterns.	*a. Number of containers or quantity of toxic/hazardous chemicals listed on chemical purchasing invoices [measured every ordering cycle].* *b. Number and quantity of alternative chemicals purchased [measured every ordering cycle].* *c. Number of chemicals changed out for less hazardous alternatives [measured every ordering cycle].*
ii. Determine which chemicals are toxic and need to be replaced and which are toxic and could be incorporated for use.[1]	
iii. Determine if chemicals that pose health and safety risks are really needed to complete a job, or if replacement with safer alternatives or non-chemical solutions is an option.	
iv. Research possible non-chemical alternatives before consulting with chemical vendors, as they may have a bias towards using chemicals.	
v. Have chemistry, vocational, and art department heads, and the lead custodian or risk manager meet with a chemical supplier to discuss alternatives to hazardous chemicals currently used by the school.	
vi. Each department evaluates the list of less-hazardous alternatives that would reduce potential harmful exposures and lower disposal costs.	
vii. If possible, each department creates a table of price comparisons and a chemical use plan that estimates chemicals (and budget) needed for the following year. Consider the entire lifecycle when estimating cost.	
viii. Consult with person or department in charge of purchasing alternative chemicals and reduced quantities of toxic chemicals to purchase.	

Activity 2 – Create a Timeline for Starting and Completing Each Activity

When setting deadlines for the completion of SC3 activities, we suggest that they be realistic so that assigned personnel are motivated to stay on track and goals can be achieved. For ongoing activities, we recommend that you identify intermediate milestones that show progress toward goals and keep SC3 Team members enthusiastic and positive about making a difference.

Exhibit 2-2 provides a worksheet that illustrates an example of how to track and measure progress towards the goal of purchasing less toxic chemicals. In Exhibit 2-2 we use the same example performance measures portrayed in Exhibit 2-1. Worksheet 2-2 in the Additional Tools and Examples section at the end of this chapter can be used to track progress over time. The worksheet enables your program to take "snapshots" of progress after 1 semester, a year, and two years, but feel free to adjust these timeframes to fit your team's preferences, and your school's or district's needs.

[1] See the brief description of Green Cleaning on page 2-5 and some helpful links in the Additional Tools and Examples section at the end of this chapter.

Exhibit 2-2: SC3 Progress Report (Example)				
Example SC3 Program Goal: Purchase Less Toxic Chemicals				
Performance Measure	Baseline Year	After First Year	After Second Year	Status as of __/__/__
a. Quantity of toxic/hazardous chemicals ordered measured through purchasing invoices [measured every ordering cycle].	*27oz*	*20oz*	*10oz*	*Phasing out toxic usage; working to phase out bulk orders of HVAC chemicals for the boiler room; have begun to use alternatives.*
b. Quantity of alternative chemicals purchased [measured every ordering cycle].	*3oz*	*7oz*	*1lb*	*Alternative cleaning products and lab chemicals are becoming easier to find; having hard time finding alternatives to toxic ceramic glazes.*
c. Number of chemicals changed out for less hazardous alternatives [measured every ordering cycle].	*3*	*5*	*9*	*Difficult to convince some teachers and facilities personnel to switch to alternative chemicals.*

There are benefits to keeping a written record of progress in the manner illustrated in Exhibit 2-2:

- It is great for briefing management and customers on progress and accomplishments; and
- It can help the SC3 Team stay on track.

Useful Resource: Greening your Cleaning

One way to have an impact that could reduce the amount of potentially harmful chemicals used in your school is to evaluate the option of Green Cleaning sanitation practices. Green cleaning involves selecting alternative products when appropriate, using those products properly, and taking other steps to reduce risks while maintaining a satisfactory level of cleanliness and disinfection. Check out EPA's Green Cleaning Web site for additional resources:

http://www.epa.gov/epp/pubs/products/cleaner.htm

ACTIVITY 3 – IDENTIFY THE SCHOOL / DISTRICT PERSONNEL AND POTENTIAL PARTNERS WHO CAN PERFORM SC3 ACTIVITIES

If you have any doubts about the technical capabilities of school personnel to perform an SC3 task, don't hesitate to reach out to a qualified partner or vendor.

Exhibit 2-3 continues our purchasing example and illustrates how a worksheet can be used to assist you in deciding what personnel should be assigned to perform an SC3 task.

In general, you will be evaluating "in-house" (school or district) personnel and "external" entities (e.g., partners, parents, vendors). Worksheet 2-3 in the Additional Tools and Examples section at the end of this chapter can be used to assign personnel resources to specific activities.

Exhibit 2-3: SC3 Staffing Plan (Example)

Example SC3 Program Goal: Purchase Less Toxic Chemicals

Activity	What do we need to accomplish?	Who can do this?	
		In-house	*External*
i. Have a face-to-face meeting with all school/district personnel who purchase chemicals to map out chemical usage and buying patterns.	*A list of chemicals we currently buy, how they are used, and purpose they serve.*	*Heads of all chemical-using departments in school*	*Chemical supplier representative(s)*
ii. Have chemistry, vocational, and art department heads, and the lead custodian meet with a chemical supplier(s) to discuss alternatives to hazardous chemicals currently used by the school.	*A list of alternative chemicals that we can substitute for more hazardous chemicals currently in use.*	*Chemistry, custodian, and art department heads*	*Chemical supplier representative(s)*
iii. Each department evaluates the list of less-hazardous alternatives that would reduce potential harmful exposures and lower disposal costs.	*Department head decision to adopt the recommended list of alternative chemicals.*	*Any staff familiar with school's chemicals (teachers and/or custodians)*	*Chemical expert (if nobody is available internally to do this)*
iv. If possible, each department creates a table of price comparisons and a chemical use plan that estimates chemicals (and budget) needed for the following year.[2]	*Revised curriculum plan that details types and quantities of alternative chemicals to be purchased.*	*Staff familiar with chemicals, budgeting, and curriculum planning*	*Partner familiar with chemicals and ideally, curriculum planning*
v. Advise person or department in charge of purchasing of alternative chemicals and reduced quantities of toxic chemicals to purchase.	*A presentation or memo about preferred alternative chemicals and more hazardous chemicals to be avoided.*	*Staff member possessing good presentation skills and, ideally, previous experience with budget planning*	*Partner familiar with presentation computer programs*

[2] To help staff forecast use and demonstrate reductions, visit the Office of the Federal Environmental Executive's Green Cleaning Pollution Prevention Calculator: http://www.ofee.gov/janitor/index.asp

ACTIVITY 4 – IDENTIFY POTENTIAL ROADBLOCKS AND WAYS TO ADDRESS THEM

The best plans are those that anticipate potholes and roadblocks. Your SC3 Team should anticipate how a plan might be sidetracked in any way and be ready to take appropriate action to avoid problems that may arise (e.g., submit recommended changes in policy well in advance and get the people authorized to make these changes behind them). Sometimes a problem cannot be avoided, so you will need to be effective in making the necessary adjustments.

In Exhibit 2-4, we provide an example of a tool your team can use to anticipate potential obstacles and plan ways to overcome them. The exhibit focuses on the purchasing goal we have been discussing throughout this chapter. Worksheet 2-4 in the Additional Tools and Examples section at the end of this chapter can be used to identify and plan for potential roadblocks so that your SC3 program will maintain momentum and continue towards its goals.

Tip: Be Aware of Potential Delays

Delays in getting approvals on budget requests and changes in policy are likely to be one of the biggest obstacles you face. Learn when such requests need to be made so you are prepared and can see how the timing affects your schedule. Be sure to allow for enough time and get started early!

Exhibit 2-4: Identifying Potential Obstacles and Solutions (Example)		
Example SC3 Program Goal: Purchase Less Toxic Chemicals		
Activity	**Potential Obstacles**	**Ways to Avoid or Correct the Problem**
i. Have a face-to-face meeting with all school/district personnel who purchase chemicals to map out chemical usage and buying patterns.	*Hard to coordinate schedules for an in-person meeting. Inadequate information regarding usage or purchasing arrangements.*	*Align meeting times to associate with weekly staff meetings or mandatory teacher workshops to ease scheduling conflicts; Develop a semester 'outline' of chemicals used.*
ii. Have chemistry, vocational, and art department heads, and the lead custodian meet with a chemical supplier(s) to discuss alternatives to hazardous chemicals currently used by the school.	*Current supplier is back-ordered on some of the alternative chemicals we would like to purchase.*	*Investigate and seek information from other suppliers.*
iii. Each department evaluates the list of less-hazardous alternatives that could reduce potential harmful exposures and lower disposal costs.	*Some department heads are unfamiliar with alternative chemical substitutes, and are not willing to adopt them.*	*Get chemical sales reps to answer questions and address concerns. Tap an experienced partner to weigh in on the recommended list of alternative chemicals.*
iv. If possible, each department creates a table of price comparisons and a chemical use plan that estimates chemicals (and budget) needed for the following year.	*Alternative chemicals may be safer, but some are substantially more expensive.*	*Work with staff in each department to alter curriculum and usage patterns to lower costs. Enlist the Program Champion to back budget requests.*
v. Advise person or department in charge of purchasing of alternative chemicals and reduced quantities of toxic chemicals to purchase.	*Purchasing authority may overlook alternative options.*	*Follow up any memo with a phone call or in-person meeting with purchasing personnel to convey importance.*

ACTIVITY 5 – ESTIMATE THE RESOURCES REQUIRED TO PERFORM EACH ACTIVITY

In some cases, there are no additional labor costs when school and district personnel are doing SC3 program business – school chemical management can be made part of their job. However, your school may have overtime policies that come into play for some personnel performing SC3 activities, so your SC3 Team may need to set aside some budget for in-house support. For example, SC3 activities performed when school is not in session (e.g., holiday breaks, summer, after hours) may involve a separate expense.

Consider when and how partners can help the SC3 Team with funding contributions or voluntary labor.

In Exhibit 2-5, we provide an example of an estimate of in-house labor costs to perform an activity related to the goal of purchasing less toxic chemicals. Worksheet 2-5 in the Additional Tools and Examples section at the end of this chapter can be used to estimate the labor costs for each activity; you can use the worksheet to estimate partner and vendor costs, too, if applicable.

Exhibit 2-5: SC3 Labor Cost Estimate (Example)

Example SC3 Program Goal: Purchase Less Toxic Chemicals

Activity: Have a face-to-face meeting with all school/district personnel who purchase chemicals to map out chemical usage and buying patterns

Job Title	Hours	Rate	Other	Total
Dept. Head	4	$25/hour	Supplies ($45)	$145
Custodian	2	$13/hour	NA	$26
Teacher	2	$20/hour	NA	$40
			TOTAL:	$211.00

If you need outside expertise for an SC3 activity, first consider involving your partners and estimate the number of hours of in-kind service they can offer, or, in those instances where you need to hire a vendor (e.g., a chemical inventory specialist), you will need to budget for the out-of-pocket expense. You can probably use school requisition forms and procedures to gain the resources that you need. Other times, when the activity might not be covered by a normal requisition, you may need to create and publish a Request for Proposal to obtain the services of a qualified vendor (see Chapter 4 for an example of a request for proposal to retain a cleanout specialist).

Completed worksheets outlining the specific support your program requires can be used to show partners where they can assist your program and what resources you would like them to commit.

In adding up the budget requirements for all SC3 activities for the upcoming year, your team may come to the conclusion that you won't have all that you need for a comprehensive program. Remember, you can build your program a piece at a time, choosing to begin some SC3 activities later on. Whatever you do, it is important for the SC3 Program Champion to support your team's budget requests.

ACTIVITY 6 – IDENTIFY POTENTIAL SOURCES OF FUNDING FOR THE SC3 PROGRAM

It's possible your program can rely on one "golden goose," but most programs will need to tap multiple funding sources to remain viable.

Obtaining funds is necessary for any program. The success of almost every activity you undertake will depend in some part on securing funding resources. The SC3 Team should explore several options for obtaining funds rather than solely depending on one funding source. Having multiple funding sources will more likely give you a stable financial base that will help you expand and sustain your chemical management program.

Your SC3 Team should become knowledgeable and savvy regarding how the budget process works in your school or district. You can use the expertise on your team to help you navigate the budget process so that the necessary resources can be obtained to support your program. We provide a description of a variety of funding sources that your SC3 Team may want to consider:

STATE AND LOCAL AGENCIES: State and local departments that address the environment, education, labor, health and safety, and agriculture may have funding or can provide in-kind services for SC3 programs. Another possible option is to try to use funding that you have received from other sources to obtain state matching funds for your SC3 program. Be sure to also check out the Grants and Funding page of EPA's Pollution Prevention (P2) Web site (http://www.epa.gov/p2/pubs/grants/index.htm) for more information regarding matching funds from state programs.

The Fort Worth Independent School District (FWISD) in Texas reported that EPA funding was a "catalyst" for getting their school board to contribute $55,000 to their program. See the Additional Tools and Examples section for this and other state, tribe, and regional SC3 successes.

SCHOOL AND SCHOOL DISTRICTS: Some SC3 programs require that schools contribute to the costs of chemical removal, training, or other activities. A school's financial contribution into its own program validates the need for long-term responsible chemical management. Your school may not yet budget for responsible chemical management. You can speak to someone familiar with your school's budget to find out if SC3 would fit into the existing budget or if it could be added later. Consider expanding existing programs such as your coordinated school health program (CSHP)[3]; Indoor Air Quality/Tools for Schools; multi-hazards planning team; HealthySEAT or EMS; or Integrated Pest Management program (IPM). Also, you can speak with anyone on your SC3 Team who has experience working with your school district about exploring potential sources of technical assistance and funding.

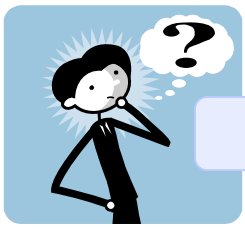
LOCAL BUSINESSES, INDUSTRIES, FOUNDATIONS, AND GROUPS: Local organizations can also help you achieve your SC3 goals. Look for corporate sponsorship or charitable donations of services and funds. You can also look for competitive grant programs. You can ask the members of your SC3 Team to help find existing connections to these organizations. You may also need to research your locality to find any likely local sources for program funding and support. Local sources of funds and resources are often available from businesses with ties to the community either directly or through their charitable foundations. Consider contacting local industries that have the chemical experience and technical expertise to potentially offer in-kind services to your program. You can speak with people involved in other groups around the school and within your community for potential contacts and resources specific to your area.

FEDERAL AGENCIES: There may be funds available from federal agencies in the form of grants (see www.grants.gov). Funds may be available from EPA through grants offered by the Office of Solid Waste and Emergency Response, the Office of Children's Health Protection and Environmental Education, the Office of Air and Radiation, the Office of Pollution Prevention and Toxics, and the EPA regions. Other federal agencies and programs with relationships to schools, such as the Department of Education, Centers for Disease Control, and Community Action for a Renewed Environment (CARE: see http://epa.gov/care/) should also be explored.

[3] This is a Centers for Disease Control & Prevention program and each state has a coordinator. You can find out more information about this program at: http://www.cdc.gov/HealthyYouth/CSHP/

ACTIVITY 7 – ENTER INTO PARTNERSHIPS

Partners are an excellent source of technical expertise and in-kind support for your SC3 program. This section offers guidance on how the SC3 Team might go about establishing and maintaining partnerships to support your SC3 program.



Target a range of partners to ensure that you have more than one source for advice and assistance throughout the life of your SC3 program.

How do I recruit partner organizations to the SC3 Team?

Children are our most important resource. Many organizations within your community have people working to keep children safe. These organizations may wish to partner with your school to achieve responsible chemical management, so you may want to gauge their interest and get them involved. Consider the following approach:

- Research the organization (e.g., talk to knowledgeable people in the community, contact the Chamber of Commerce, or even conduct an Internet search);
- Identify the person who can make or influence decisions;
- Arrange for a face-to-face meeting, if possible, or set up a conference call;
- Engage the decision-makers in your school or district, if possible;
- Be prepared (see list below); and
- Follow up your initial contact.

Cultivating an appropriate mix of partners who ideally are dedicated to offering long-term technical expertise and financial resources will help maintain a robust SC3 program.

Another approach would be to pull together a number of potential partners for a school-sponsored meeting and follow up with the steps listed above. Even if an organization is not interested in partnering now, they may want to in the future. Contact them again at a later date to reassess their interest.

When the SC3 Team first meets with a potential partner, be sure to employ effective meeting practices (see Chapter 4, Activity 1: *Begin to Put your SC3 Program into Action*, page 4-5). At your meeting you will want to cover the following topics:

- Purpose: State generally what will be covered in the meeting and what you hope to achieve by the end of the meeting. Ask meeting participants if there are other topics they would like covered and their goals for the meeting.
- Current Situation: Describe the current chemical management situation you are addressing. It may not be necessary to go into detail; however, you should be prepared to answer specific questions about your chemical management situation (e.g., estimated quantity of chemicals, general condition of containers, etc.)
- Responsible Chemical Management Program: Provide potential partners with an overview of your plan to address the situation. Give a summary of the goals of the plan, the content, and the strategy and milestones you have laid out.

- Partner Assets: Explain how the potential partner is uniquely suited to be part of the solution. Provide details about the plan and where you see them being most able to contribute. Ask for input and be open to ideas about their expertise and ways they would like to participate.
- Partnership Benefits: Explain the benefits of partnering beyond protecting students and staff. Be prepared to offer partners meaningful incentives, such as public recognition, a certificate or plaque, or a school award (see below).
- Next steps: Summarize any agreements that were reached; outline outstanding questions and how they will be addressed; clarify next steps; and arrange for a future meeting.

Useful Resource: Local Emergency Planning Committees

Local Emergency Planning Committees (LEPCs) are groups that allow for emergency management organizations to communicate about chemical hazards in the community and cooperate to provide information regarding chemical risks to the public. Given their experience and connection to local industries, you should try to contact your local LEPC. For a database of LEPCs nationwide, visit: http://yosemite.epa.gov/oswer/lepcdb.nsf/SearchForm?OpenForm

Developing incentives for partners to come on board can really help get a partnership started. Partners may have a number of motivations for joining up with a school's SC3 program. Some of the benefits of becoming involved in a successful partnership may include:

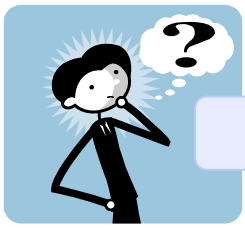
- Protecting the health and safety of children and school personnel;
- Protecting the environment;
- Preventing fires and spills;
- Demonstrating community leadership;
- Improving the local schools;
- Gaining recognition locally from your school or district through community media outlets;
- Gaining national recognition from EPA through the national SC3 program (the SC3 web site, press events, and/or a recognition award); and
- Earning credit toward EPA's Performance Track (see http://www.epa.gov/perftrac).

Tip: Be Prepared with Information when Reaching out to Potential Partners

Being up front about any and all issues can provide a potential partner with a clearer picture of the school's chemical management situation. To better manage a potential partner's expectations, consider bringing the following relevant documents to your first meeting:

- Completed status worksheets summarizing school chemical information;
- Photos of chemical situations that need to be addressed;
- Contact information; and
- 'Partner Appendix: Why Become Involved in School Chemical Management' (included in the Additional Tools and Examples section at the end of this chapter).

Providing these items should help answer many initial questions a potential partner may have about your program and can make your first meeting as productive as possible.



How can everyone get the most out of an SC3 partnership?

Understand that some partners may only be available to help on a single project, while others could commit to a long-term association.

Once a partner has agreed to enter into a relationship with your school or district, knowing the types of activities your SC3 program will be conducting should give your SC3 Team and partners a better idea of where assistance may be helpful. Because your initial meeting with a partner likely gave them a basic understanding of your chemical management situation and the plan to address it, you should use subsequent meeting(s) with a partner to do some of the following:

- Gain an expert opinion on your chemical management situation;
- Brainstorm approaches to addressing issues specific to your school; or
- Agree on the roles and responsibilities of both the school and the partner.

A good way to clearly define the components and expectations, including roles, responsibilities, and limitations, of the new partnership is to develop a partnership agreement, a team charter, or a letter of intent. This document should outline the elements of the relationship, including but not limited to:

- The specific tasks that a partner can perform or assist with;
- The proposed schedule for agreed upon activities; and
- The ways your school or district can recognize a partner's efforts.

In Exhibit 2-6, we provide an example of an SC3 Partnership Agreement to give you an idea of what is included. Consider using this and other partnership agreements (links provided in the Additional Tools and Examples section at the end of this chapter) to outline a version for your school or district if your SC3 Team and partner(s) decides that doing so will benefit your partnership.

Exhibit 2-6: Sample Partnership Agreement

Partnership Agreement Between _____ (Partner Name) and _____ (School/District Name)

Through this agreement, [Partner's Name], hereafter referred to as "SC3 Partner", joins in partnership with [School/District Name], to help create healthier school environments for students and personnel. SC3 Partner intends to support the goals of the Schools Chemical Cleanout Campaign (SC3) program, which are to: remove accumulations of unnecessary chemicals from schools; facilitate implementation of responsible chemical management practices; and raise awareness of the potential risks to students and school personnel created by mismanaged chemicals. The SC3 Partner intends to promote responsible chemical management in [School/District Name]. [School/District Name] intends to cooperate with other parties to this agreement to support these same goals.

Exhibit 2-6: Sample Partnership Agreement

Partner Role

SC3 Partner intends to provide, without charge to [School/District Name], resources or services in the following areas at [insert name of school(s) or school district(s)]:

- ❑ Inventory chemicals
- ❑ Develop a sustainable chemical inventory system
- ❑ Package mismanaged/unnecessary chemicals for removal
- ❑ Remove mismanaged/unnecessary chemicals
- ❑ Proper disposal of chemical waste
- ❑ Develop chemical management training
- ❑ Conduct chemical management training
- ❑ Assist with the development of a chemical management program
- ❑ Assist with the implementation of a chemical management program
- ❑ Recruit other SC3 Partners
- ❑ Develop performance goals and measures to gauge chemical management success
- ❑ Administer SC3 Partner Program to Trade Association/Organization member companies and other interested parties
- ❑ Other (describe) _____

  _____

  (Use additional pages if necessary)

The SC3 Partner agrees to provide services to [School/District Name] in the amount of [# of hours] each [duration of time (e.g., semester, year, etc.) to addressing the aforementioned resources and services.

School / District Role

[School/District Name] will provide the SC3 Partner with the following recognition opportunities:

- ❑ Presence at publicity opportunities (e.g., local media events, PTA meetings, etc.)
- ❑ Prominent display of SC3 Partner name and logo in communication and outreach materials to stakeholders
- ❑ Recognition as program partner in all press releases, with opportunities for SC3 Partner quotes

Limitations

This Partnership Agreement describes the actions [Partner Name] agrees to undertake as a SC3 Partner. It does not impose any legally-binding obligations on [School/District Name], nor is [School/District Name] imposing, through this Agreement, any legally-binding obligations on the SC3 Partner or on any other entity.

This Partnership Agreement does not create any right or benefit, substantive or procedural, enforceable by law or equity against [School/District Name], their officers or employees, or any other person.

Effective Date, Modification, and Termination

This agreement becomes effective upon the date of the last signature. This agreement will be in effect for [# of years] from the date of the last signature. It may be modified or amended only through written agreement of all signatories. Any signatory may terminate this agreement by providing 30 days written notice to the other parties.

_____

Signature and Date, SC3 Partner Representative

_____

Signature and Date, School's Legal Counsel / Principal / School Board Director

Agreeing early on what is involved in the partnership will help manage expectations and interactions in the future. As the terms of your partnership are developed, consider the factors that will keep your relationship successful going forward:

- Revisit the partnership agreement on a schedule that works for you both. As your partnership moves along, revisit your commitments and adjust them, if necessary, to meet both your needs and those of your partner.
- Keep open communication. Staying in contact with your partner is very important as the program progresses. Agree on how often you should meet or have phone calls. It is especially important to communicate with partners well in advance concerning upcoming events with which they should be involved.
- Discuss national partnership opportunities. Your partner may want to gain additional recognition for their role in keeping schools safe. Be sure to inform them of the opportunity to become a national partner with EPA.

In addition to the items mentioned above, refer to Chapter 5, Activity 5: *Maintain Relationships with Partners* (page 5-7) for additional guidance on how to maintain a healthy relationship with partners as your program develops.

ACTIVITY 8 – IDENTIFY ANY REGULATIONS THAT MAY AFFECT YOUR SC3 PROGRAM

In planning your SC3 program, it is important for you to remember that you need to comply with the applicable federal, state, and local rules and regulations regarding chemical management and safety. Any number of government authorities could potentially impact the design, performance, sustainability, and ultimate success of your SC3 program. These regulations are designed to keep people and the environment safe. To comply, you will want to investigate pertinent legal issues prior to taking any action.

Cultivate the involvement of partners who understand applicable regulations related to school chemical management. These partners can be invaluable sources of legal and technical advice.

There are a variety of ways in which laws and regulations may play a role in how your SC3 program operates. For example:

- School Safety Regulations. It is likely that there may be limitations on the types of activities that can be performed during school hours. If you are planning a cleanout during school hours, make sure that you notify school management, get the necessary permits, or simply reschedule to a date and time that is compliant with applicable laws and regulations.
- Chemical Disposal Restrictions. There are regulations governing the proper disposal of chemical wastes. The Resource Conservation and Recovery Act (RCRA) regulates hazardous waste generators. A "generator" is any person, or site, whose processes and actions create hazardous waste. Refer to the EPA Hazardous Waste Generator link in the Additional Tools and Examples section at the end of this chapter for more information in determining whether your school generates hazardous waste, and if so, your generator status. Additionally, MSDSs are good sources of information on proper disposal of specific types of chemicals. Finally, check with your local Publicly Owned Treatment Works (POTWs); they may be able to help you determine the appropriate methods of disposal for chemicals.

- OSHA. The Occupational Safety & Health Administration requires that laboratories (that are subject to OSHA regulation) potentially exposing workers to hazardous materials have a written Chemical Hygiene Plan. Refer to the OSHA links in the Additional Tools and Examples section at the end of this chapter for more information on chemical safety and compliance.
- Labor Laws. Some laws put limits on the amount of overtime that school personnel can work.

Partners with legal and chemical management experience can be extremely useful in reviewing your planned SC3 activities and advising you of any potential shortfalls or issues you need to be aware of (e.g., state and local agencies). You may want to conduct some background research into local, state, and federal laws pertaining to chemical management. We provide some links for you to begin your research:

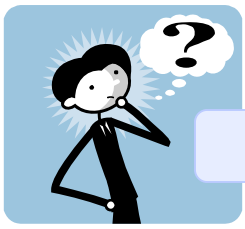
- EPA listing of state environmental agencies related to Solid & Hazardous Waste: http://www.epa.gov/epaoswer/osw/stateweb.htm
- State Environmental Agencies: http://www.epa.gov/epahome/state.htm
- EPA Regional office sites can be found at the web sites with this format. Simply change the number for each region (1—10): http://www.epa.gov/region1/

Keys to Sustained Success: Use Best Practices

Two useful compliance guides to review from EPA's Region 2 provide best management practices applicable to schools' environmental concerns:

A primary environmental compliance guide for K-12 schools:
http://www.epa.gov/region02/children/k12/k12pdf.htm

An environmental compliance guide for art programs at K-12 schools, colleges and art studios:
http://www.epa.gov/region02/children/k12/artpdf.htm



Summary

The activities for developing an SC3 program to achieve your chemical management goals are:

Activity #	Description
1.	Define the activities your program will perform (Worksheet 2-1);
2.	Create a timeline for starting and completing each activity (Worksheet 2-2);
3.	Identify the school/district personnel and potential partners who can perform SC3 activities (Worksheet 2-3);
4.	Identify potential roadblocks and ways to address them (Worksheet 2-4);
5.	Estimate the resources required to perform each activity (Worksheet 2-5);
6.	Identify potential sources of funding for the SC3 program;
7.	Enter into partnerships; and
8.	Identify any regulations that may affect your SC3 program.

This chapter helps you to identify the activities and support needed to achieve your SC3 program goals. Chapter 3 will assist you in developing and delivering your program message to secure participation, enhance awareness, and change behaviors.

Additional Tools and Examples

This section of the chapter contains helpful links to conduct further research and blank exhibit worksheets to help you get started with developing and defining the various components of your SC3 program. For ideas regarding the kind of information you might capture on these worksheets, you can refer to the exhibits containing examples earlier in this chapter.

These Web sites have useful information on potentially hazardous chemicals:

- OSHA Fact Sheet dealing with hazardous chemicals in laboratories
- OSHA Standard for Occupational Exposure to Hazardous Chemicals in Laboratories
- Informational booklet from OSHA (gives an overview of Chemical Hazard Communication)
- EPA definition of hazardous waste generators and how to determine your hazardous waste generator status
- Summary of State, Tribal, and Local SC3 programs

These sites provide information on Green Cleaning:

- Green Seal
- Green Cleaning Network
- Healthy Schools Campaign Green Clean Schools

Worksheet #	Title
2-1	SC3 Activities and Performance Measures to Reach Program Goals
2-2	SC3 Progress Report
2-3	SC3 Staffing Plan
2-4	Identifying Potential Obstacles and Solutions
2-5	SC3 Labor Cost Estimate

Worksheet 2-1: SC3 Activities and Performance Measures to Reach Program Goals	
Goal:	
Activities	Performance Measure(s)
i.	a. b.
ii.	c.
iii.	d. e.
iv.	f.
v.	
vi.	

Worksheet 2-2: SC3 Progress Report				
Goal:				
Performance Measure	Baseline Year	After First Year	After Second Year	Status as of __/__/__
a.				
b.				
c.				
d.				
e.				

Worksheet 2-3: SC3 Staffing Plan			
Goal:			
Activity	What do we need to accomplish?	Who can help?	
		In-house	*External*
i.			
ii.			
iii.			
iv.			
v.			
vi.			

Worksheet 2-4: Identifying Potential Obstacles and Solutions		
Goal:		
Activity	Potential Obstacles	Ways to Avoid or Correct the Problem
i.		
ii.		
iii.		
iv.		
v.		

Worksheet 2-5: SC3 Labor Cost Estimate				
Goal:				
Activity:				
Job Title	Hours	Rate	Other	Total

Chapter 3-Publicize your SC3 Program

Why is it important to publicize my SC3 program?

SC3 programs need support – financial and moral – and active participants to be successful. By publicizing your program and actively reaching out to potential partners and stakeholders, you can create interest and momentum for your SC3 program. This chapter describes some of the activities you can undertake to create a message and attract attention to your program.

The activities for creating and spreading your SC3 program message are:

Activity #	Description
1.	Develop and deliver an effective program message with an informative program name or slogan;
2.	Identify target audiences;
3.	Use existing communication channels to publicize your program; and
4.	Consider the most effective time of the year to perform communication and publicity efforts.

Activity 1 – Develop and Deliver an Effective Program Message with an Informative Program Name or Slogan

Creating a program message is important to publicizing your SC3 program and gaining the necessary support for long-term success.

Why should I create a program message?

Communication and publicity are critical to SC3 program success. Your efforts to reach out to and communicate with various stakeholders and partners play a key role in:

- Securing *participation* in your SC3 program (See Chapter 4 regarding putting your program into action);
- Enhancing *awareness* of chemical safety issues; and
- Changing *behaviors* so that effective chemical management can be sustained over time (See Chapter 5 regarding program sustainability).

Your communication and publicity efforts begin with developing an effective message to promote your SC3 program. Your program message should be eye-catching and distinctive.

How do I develop an effective message?

Schools often have a variety of programs, initiatives, and campaigns vying for the attention and involvement of people, so it is important to develop a message that is distinctive and well timed. Develop a clear, simple, and compelling message about the importance of responsible chemical management in creating a safe environment for students and school staff. In crafting your message, you may want to consider:

- The target audience you are trying to reach;
- The central theme of your message and how it may relate to "big picture" and overall priorities of your school or district;
- Supporting statements;
- Existing communication channels to spread the message in your school or district; and
- The best time to begin publicizing your message.

A catchy program name or slogan can help your program make a memorable splash and maintain interest. Examples of program names and slogans include:

- "Rehab the Lab;"
- "Clean Sweeps Program;"
- "Healthy Schools;"
- "Safer Schools Initiative;"
- "No Recess for Chemicals;" and
- "Clean Out Your Chemicals"

You should 'brag' about any chemical management successes you may have had so far. Touting how your school may have quickly and effectively responded to leaking containers can be helpful in gaining support and resources for your SC3 program.

You should address some specific situations that will soon be tackled under your SC3 program, as well as activities that will prevent problems in the future by instituting responsible chemical management policies and practices.

Initially, we suggest that your emphasis be on publicizing your program name or slogan and articulating achievable, worthy goals (See Chapter 1 regarding development of program goals). If your stakeholders and partners believe that the program is a worthy effort and that goals are achievable they will be inclined to participate.

Tip: Essentials of a Winning Message

An effective message should have a central concept with no more than 3 points, and should be:

- Relevant to the audience receiving it;
- Credible;
- Concise and memorable;
- Clear and non-technical; and
- Focused and compelling.

ACTIVITY 2 – IDENTIFY TARGET AUDIENCES

To ensure your message is as successful as possible, you and your team will want to consider the various ways you might deliver it to specific audiences. Tailoring your central message to each target audience increases your chances of gaining support for your program.

Who are the target audiences of the SC3 program message?

As you develop your program message, think about which program components should be emphasized when promoting your SC3 program to each stakeholder and partner. Exhibit 3-1 provides an example of how SC3 program components may map to these target audiences. Worksheet 3-1 in the Additional Tools and Examples section at the end of this chapter can be used to evaluate messages and topics of interest to your stakeholders and partners.

Exhibit 3-1: SC3 Program Components of Interest to Target Audiences (Example)

Target Audience	SC3 Program Components					Example "Hot" Topics
	Purchasing	Storage	Inventory	Use	Disposal	
Administrators	*X*	*X*	*X*	*X*	*X*	*Liability and budget*
Potential Industry Partners	*X*	*X*	*X*	*X*	*X*	*Public relations opportunity*
Teachers & Staff		*X*	*X*	*X*	*X*	*Classroom safety, curriculum, and professional responsibility*
Students		*X*		*X*	*X*	*Feeling safe*
Parents		*X*		*X*	*X*	*Their children's health*
Local Business	*X*				*X*	*Good neighbor*

Activity 3 – Use Existing Communication Channels to Publicize Your Program

To publicize your program, we recommend that you use existing approaches and products that your school or district has found to be most effective. For example, no need to reinvent the wheel when a school already has a widely read newsletter or heavily attended meetings (e.g., PTA).

"Piggybacking" on existing events and forums ensures a captive audience and saves time and money. It also eases scheduling difficulties and allows school personnel to participate without interfering with their personal time and resources.

A successful strategy may be to tap into the current communication channels to reach as many stakeholders, potential partners, and customers as possible. Attempting to create new communication channels and publicity events can be time consuming, expensive, and may, in the end, not be effective. For example, given the demands on people's time, scheduling a separate (additional) meeting involving folks who already attend another school function may lead to lower than desired attendance.

You should also consider whether to take advantage of other initiatives, meetings, or programs that complement or are consistent with SC3 program efforts to get your message out. Exhibit 3-2 provides examples of various communication and publicity methods that may reach your target audiences. Worksheet 3-2 in the Additional Tools and Resources section can be used to look at the different communication methods that may be available to you and your SC3 Team.

Leveraging an Existing Communication Network

Iowa has a statewide TV network that every school can access. A partner organization, the Metro Waste Authority, used this medium to reach out to teachers to train them on responsible chemical management. This is an excellent example of using an existing resource to cost-effectively reach many teachers. Metro Waste Authority's Rehab the Lab program is described here:

http://www.mwatoday.com/sch_reh.html

Exhibit 3-2: Methods of Communication and Publicity for your Program Message (Example)				
Intended Results	Target Audience	Pros	Cons	Resources Needed
Continuing Education/Teacher and Facilities Personnel Training				
Create awareness; Change behaviors regarding chemical use in classrooms and facilities.	*Teachers*	*Uses an existing forum to reach a captive audience.*	*Getting participation.*	*Trainer; incentives and materials.*
Article in Parent Newsletter				
Generate participation in SC3 and prompt parent/student discussions on chemical safety.	*Parents*	*Uses an established product for conveying information to parents.*	*No face-to-face interaction; SC3 message could get "lost".*	*Design and writing time.*
Presentations for PTA and Teacher/Staff Meetings				
Spread awareness; Identify potential participants.	*Parents, Teachers*	*Program information brought directly to their attention; Can answer questions immediately.*	*Need to have plan.*	*Prep time and materials.*
Newspaper Articles and PSAs				
Spread awareness; Identify potential participants; Gain media attention to attract supporters.	*General Public, Local Community, Partners*	*Wide-reaching exposure; article write-up would be inexpensive.*	*Need to develop PSA or set up interview.*	*Newspaper personnel; writing time.*
Brochure and Pamphlet Campaign				
Spread awareness; Encourage feedback and participation.	*Administrators, Teachers, Local Community*	*Able to present variety of program information.*	*No personal interaction; easily disregarded.*	*Printing equipment; labor; planning; distribution and design time.*
Publicized Program Launch and Press Conferences				
Generate enthusiasm and support among community; Gain media attention to attract supporters.	*General Public, Local Community, Partners*	*Exposure to potential partners; Message is widespread.*	*Requires a lot of coordination and commitment.*	*Equipment; labor.*

How do I get people involved and committed to the program?

Publicizing your program is important, but you will need to reach out to those people and organizations that your team believes are critical to long-term program success.

For example, face-to-face discussions, calls and group meetings allow for that all-important personal touch to recruit a partner for their financial resources and expertise. If your SC3 program is organized at the school district level, it may be appropriate to reach out to individual schools and nearby communities to garner support. At the school level, local meetings and other forums are great venues to discuss responsible school chemical management.

You should spread your message beyond your school and into the community. Keeping everyone informed can help in attracting additional support and possible resources to build and sustain the program.

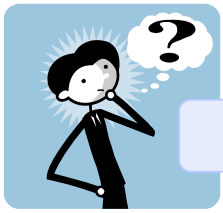
The main message here is that personalized, live contact is more likely to generate excitement and secure the commitment of individuals and organizations than an email or a letter. Your SC3 program's target audiences are much more likely to offer their support or participation if they are asked directly. People need to know about your program and how they can make a difference.

In addition to gaining a commitment from those who can help get your SC3 program up and running, you should be reaching out to customers and stakeholders to push for long-term changes in the attitudes and behaviors of all those involved in the school chemical management lifecycle (e.g., science, art, vocational, and facilities personnel, as well as administrators). Even for staff in your school or district that have little to no involvement with chemicals on a regular basis, you still want their support as you work to promote responsible chemical management. You can gain this support for your SC3 program by communicating the fact that everyone who works at your school or district benefits from working in a safe and healthy facility. By securing support within your school or district from as many individuals as possible, you will increase your chances of establishing and maintaining your SC3 program.

You can keep personnel and partners committed by publicly recognizing their contributions and giving them credit for program accomplishments.

Activity 4 – Consider the Most Effective Time of Year to Perform Communication and Publicity Efforts

Determining when to launch a new program is an important consideration. Factors relating to staff and partner availability or funding accessibility at certain points in the year may make your efforts more likely to succeed.



When is a good time to launch an SC3 program?

It has been said, "timing is everything." Most schools have a lot of ongoing activities and programs throughout the year vying for attention and involvement. Look for opportune times to conduct certain SC3 activities or perform communication and publicity efforts. For instance:

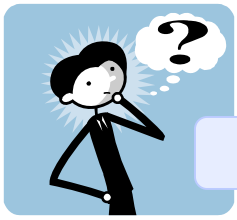
- A chemical inventory or cleanout might be safer if it is carried out during summer months when fewer students, teachers, and staff are present.
- Stakeholders may be more receptive to a public rollout of your SC3 program near the beginning of the school year when students are settled and 'back-to-school' is still on the public's mind.

You should work with your SC3 Team to gain insights into when is a good time to launch the SC3 program, keeping in mind other projects that may compete for attention, involvement, and funding. Pick a time to launch your SC3 program that will optimize participation, funding, and results.

The National Cancer Institute offers Guidance on Communication

The National Cancer Institute has put together a book on "Making Health Communication Programs Work." In Stage 3 of this book, they describe how to conduct a health communication program. There is a significant amount of helpful information provided that could be applied to setting up and launching an SC3 program and preparing to communicate that message to the public and partners. Visit their Web site for more information at:

http://www.cancer.gov/pinkbook/page7



Summary

The activities for creating and communicating your SC3 program message are:

Activity #	Description
1.	Develop and deliver an effective program message with an informative program name or slogan;
2.	Identify target audiences (Worksheet 3-1);
3.	Use existing communication channels to publicize your program (Worksheet 3-2); and
4.	Consider the most effective time of the year to perform communication and publicity efforts.

This third chapter helps you to create and communicate your SC3 program message to obtain participation, enhance awareness, and change behaviors. Chapter 4 offers guidance regarding how to take action with your SC3 program and perform certain chemical management projects.

Additional Tools and Examples

This section contains some helpful links and blank exhibit worksheets to help you craft your program message, and evaluate communication and publicity methods and activities that can best reach your target audiences. For ideas regarding the kinds of information you might capture on these worksheets, refer to the exhibits containing examples earlier in this chapter.

We have included links that offer additional help in developing the various aspects of your communication and publicity methods:

- General guidelines for media messages from The Points of Light Foundation
- Stage 3 of NCI's *Making Health Communication Programs Work*

EPA's Pay As You Throw Program:

- http://www.epa.gov/payt/top5.htm
- http://www.epa.gov/payt/pdf/other.pdf

Worksheet #	Title
3-1	SC3 Program Components of Interest to Target Audiences
3-2	Methods of Communication and Publicity for your Program Message

Worksheet 3-1: SC3 Program Components of Interest to Target Audiences						
Target Audience	Purchasing	Storage	Inventory	Use	Disposal	"Hot Topic"
Administrators						
Potential Industry Partners						
Teachers & Staff						
Students						
Parents						
Community						
Local Business						

Worksheet 3-2: Methods of Communication and Publicity for your Program Message				
Intended Results	Target Audience	Pros	Cons	Resources Needed
Method:				
Method:				
Method:				
Method:				
Method:				

Chapter 4 – Put Your SC3 Program Into Action

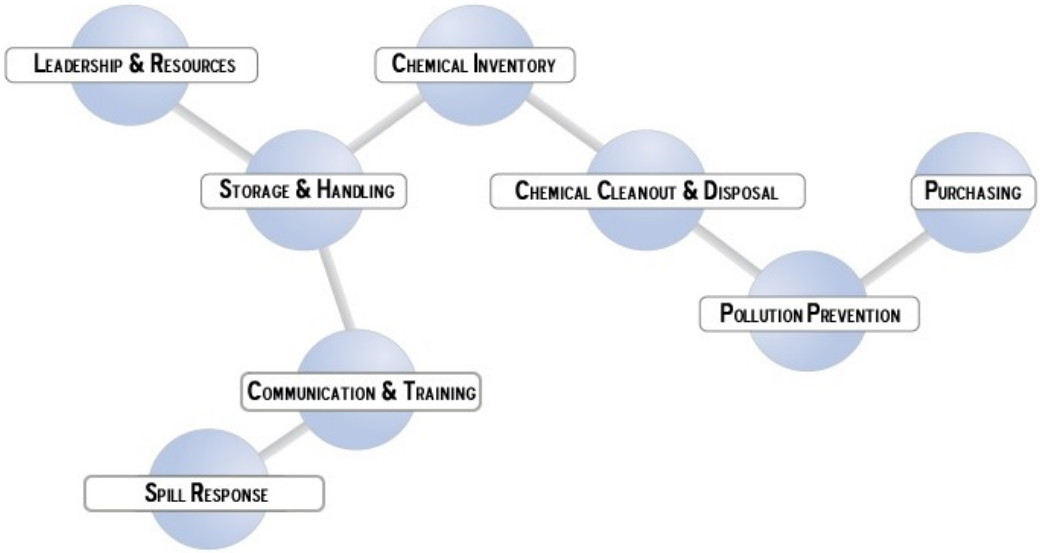
OVERVIEW

The purpose of this chapter is to guide you through the process of putting your SC3 program plan into action. This chapter builds upon the work you did in completing the program planning worksheets provided in Chapter 2 of this Workbook. For those of you who did not complete the Chapter 2 worksheets, but developed an SC3 program plan on your own, that's ok! Before you put your SC3 program plan into action, you may still want to refer to Chapter 2 to make sure that you have covered all the bases (e.g., assigning and scheduling tasks, getting program partners on board).

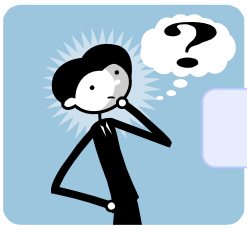
Regardless of how you developed your SC3 program plan, you will find Chapter 4 to be helpful in launching components of your program or undertaking a special chemical management project (see Sections I and II of this chapter, respectively). At a minimum, your SC3 Team should be planning to:

- Remove inappropriate, outdated, unidentified, and unneeded chemicals (if appropriate);
- Prevent future chemical mismanagement in schools through training, curriculum and policy change, and finding long-term management solutions; and
- Raise awareness of chemical issues in schools and promote sustainable solutions.

Ideally, your SC3 Team has a plan that addresses all of the major elements of responsible chemical management. These chemical management themes are commonly found in successful SC3 programs, so we encourage you to consider them if you have not already done so.



Please note the components and functions represented here are in no particular order. While some of these themes may be related, the connections portrayed are random and do not imply any dependency.



How do I put my SC3 program into action?

OK. You've talked to a lot of people; checked your school for any situations that need to be addressed immediately; created a plan of action with milestones; have thought about how the SC3 Team will measure performance; identified a champion that is working to communicate your message loud and clear; and built a team that is ready to go. So what's next? Now it's time to put all of that preparation into action.

As you go through this chapter, you will find a list of three (3) activities to establish a solid SC3 program. We also describe three (3) "Special Chemical Management Projects" that your program may undertake at some point. Here is a list of activities and projects that we will be covering:

Activity #	Description
Program Management	
1.	Begin to put your SC3 program into action;
2.	Establish and modify existing chemical management procedures; and
3.	Train appropriate groups on responsible chemical management.

Project #	
Special Chemical Management Projects	
1.	Perform an inventory of all chemicals and chemical products;
2.	Secure a chemical cleanout professional; and
3.	Implement a green curriculum.

SECTION 1: PROGRAM MANAGEMENT

ACTIVITY 1 –BEGIN TO PUT YOUR SC3 PROGRAM INTO ACTION

PULL TOGETHER SC3 PROGRAM PLANNING MATERIALS

In Chapters 1 and 2, we identified a variety of materials to collect or prepare when developing your SC3 program. Your team will want to refer to this information regularly, so it makes sense to have the following items in one place:

- List of goals and performance measures;
- Completed worksheets from Chapters 1 – 3 (e.g., Worksheet 1-1: *Evaluating Your School's Chemical Management Situation, Policies, and Procedures*);
- Existing procedures;
- Partnership agreements; and
- Chemical management plan (see Activity 2 in the Program Management section).

It is a good idea to compile all these materials (and other documents you think are important) into a 'living document'. The document can be kept in an electronic or physical file folder. Establishing a single location for these materials can help the school to:

- Retain "institutional knowledge" of chemical management conditions, plans, and practices;
- Find information pertaining to chemical safety in your school or district; and
- Inform management, administrators, and district staff of SC3 Team projects that have been initiated, completed, or planned for future implementation.

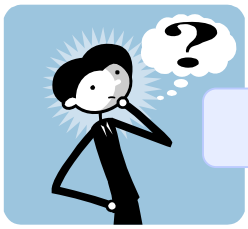
Tip: Treat your SC3 Plan as a 'Living Document'

When creating a central place to store SC3 materials, it is a good idea to arrange them in categories to find things quickly. One simple and effective way to do this is to create basic tabs or headers to group related documents. Below we provide examples of some straightforward labels to consider using:

- Who's involved and contact information
- Project plan and milestones
- Inventories
- Progress reports and annual summary of activities
- Chemical management procedures (e.g., storage guidelines, inventory methods, etc.)
- Workbook worksheets
- Partner materials (e.g., contact numbers, partnership agreements, etc.)
- SC3 Team meeting notes
- Communication and publicity materials
- Training materials
- Future project ideas

DO WHAT IS MOST IMPORTANT FOR YOUR SCHOOL RIGHT NOW

Your SC3 Team has set priorities for a responsible chemical management program at your school. Now you need to integrate the priorities of your program with those of your school. We suggest you start by taking actions that quickly achieve worthwhile results for your program and the school.



Where can we have the greatest impact now?

One way to energize your team is to brainstorm things you can do right now to reduce risks quickly and at a low cost. Revisit the issues identified during your visual tour and comprehensive evaluation (See Chapter 1, Activities 4 and 5) and discuss ideas to readily correct or improve your school's chemical management situation. Exhibit 4-1 provides examples of solutions that can be implemented quickly and inexpensively. Worksheet 4-1 in the Additional Tools and Examples section at the end of this chapter can be used to help your team come up with some quick and easy solutions to reduce risks.

Exhibit 4-1: Identify Low Cost, Quick Fixes to Chemical Management Situations

Issue/Area of Need	Solution	What is Needed
i. *Chemicals are stored in unlocked areas*	*Purchase locks and distribute keys to appropriate teachers and staff*	*3 locks with keys: $45*
ii. *Chemical usage and storage areas are not clearly marked*	*Purchase signs to post around chemical usage and storage areas to alert to the presence of chemicals*	*8 signs[1]: $24* *Screws: $5*
iii. *Chemical handling procedures and safety instructions are faded, illegible, and missing from some chemical usage and storage areas*	*Reprint/reorder documents relating to chemical safety and ensure they are present everywhere chemicals are used or stored and in a central location*	*Reprinting handling procedures: Insignificant cost* *Request new instructions for chemical handling from manufacturer: Insignificant cost*

[1] Temporary signs can be downloaded and printed for free at the following Web site: http://www.compliancesigns.com/freesigns/

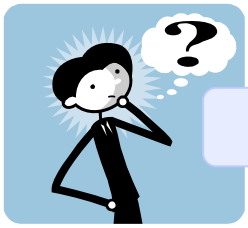
To figure out where your SC3 Team can make some of these low cost quick fixes, you will want to hold a team meeting to discuss options and assign tasks. Your SC3 Team will have many meetings as your program moves forward, so we offer some suggestions to make your SC3 team meetings as efficient, productive, and interesting as possible:

- **Prepare and distribute an agenda before the meeting.** Include the purpose of the meeting, a list of topics to address, and the amount of time that will be devoted to each topic's discussion. Allow some flexibility to add or remove discussion topics.
- **Let people know what to expect.** Let your SC3 Team know in advance what you will talk about, what you hope to get out of the meeting, and what they could do to be best prepared.
- **Be efficient with everyone's time.** Members of your SC3 Team have other responsibilities, so you need to stick to the timing suggested in the agenda, including starting and ending on time. If a topic requires more discussion, table it for the next meeting. Move on to new topics when discussions begin to lose focus and become repetitive.
- **Identify action items and next steps.** Make sure your action items are clear and have realistic deadlines. Set the date and time for your next SC3 Team meeting so members can check their availability, suggest items for the agenda, and come prepared.
- **Get feedback on how things went.** Be sure to talk with your SC3 Team afterwards to get an idea of what helped, what didn't, and see what can be changed for the next meeting.

Tip: Making Consensus Decisions

Remember, making a consensus decision does not require unanimous agreement. Rather, a consensus decision occurs when everyone in a group can agree to live with the decision that is ultimately made. On major issues regarding priorities and approaches, it is important to get team members to weigh in. Everything does not need to be put to a vote, but you will want to ensure that a majority agrees on important topics and others will respect and support the team's decision. Below are a few suggestions for facilitating a consensus among SC3 Team members:

- Encourage and consider input from every person;
- Discuss disagreements and explore options and potential compromises; and
- Keep a record of important discussions to refer to in the future.



How do we set priorities for the first year?

After taking care of some low-cost quick fixes, your SC3 Team will want to prioritize what you want to do in your SC3 program's first year. Remember, prioritizing tasks isn't necessarily a ranking of what is more important (it wouldn't be part of your program if it wasn't important!), but a way to determine what to concentrate on at this time. Setting priorities for the first year will help everyone involved focus on specific tasks with near-term deadlines so they can begin their projects confidently.

Make sure you have the time and resources to carry out each activity in your plan.

Schools and/or districts are going to have different chemical management priorities. Determining what to make a priority in your first year can depend on a number of factors, such as:

- Urgency of the issue;
- Impact/benefit of the activity;
- Ability to make significant progress within the first year;
- Budget availability;
- Stakeholder support of the issue; and
- Competing school priorities.

In Exhibit 4-2, we provide an example of weighing the various factors that can affect how you determine your SC3 program's priorities in the upcoming year. Worksheet 4-2 in the Additional Tools and Examples section at the end of this chapter can be used to help your team prioritize tasks. Review the goals and activities you developed in Chapters 1 and 2 (you should have them organized in a central place!) and the worksheets used to help develop specific tasks, including:

- Worksheet 2-3: *SC3 Staffing Plan*
- Worksheet 2-4: *Identifying Potential Obstacles and Solutions*
- Worksheet 2-5: *SC3 Labor Cost Estimate*

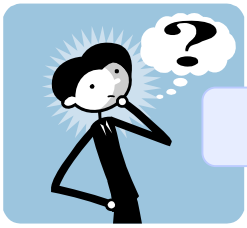
Exhibit 4-2: Identify SC3 Priorities for the First Year			
Activity	Resources Needed	Priority	Makes Progress Toward which Goals
i. Have a face-to-face meeting with all school/district personnel who purchase chemicals to map out chemical usage and buying patterns.	*A list of chemicals we currently buy, how they are used, and the purpose they serve.*	*High*	*Purchase less toxic chemicals; Establish a Green Chemistry curriculum; Minimize disposed chemical waste*
ii. Have chemistry, vocational, and art department heads, and the lead custodian speak with a chemical supplier(s) to discuss alternatives to hazardous chemicals currently used by the school.	*A list of alternative chemicals that we can substitute for more hazardous chemicals currently in use.*	*Medium*	*Purchase less toxic chemicals; Establish a Green Chemistry curriculum*
iii. Each department evaluates the list of less-hazardous alternatives that would reduce potential harmful exposures and lower disposal costs.	*Department head decision to adopt the recommended list of alternative chemicals.*	*High*	*Purchase less toxic chemicals; Establish a Green Chemistry curriculum*
iv. If possible, each department creates a table of price comparisons and a chemical use plan that estimates chemical quantities (and budget) needed for the following year.[2]	*Revised curriculum plan that details types and quantities of alternative chemicals to be purchased.*	*Medium*	*Purchase less toxic chemicals; Minimize disposed chemical waste*
v. Advise person or department in charge of purchasing of alternative chemicals and reduced quantities of toxic chemicals to purchase.	*A presentation or memo about preferred alternative chemicals and more hazardous chemicals to be avoided.*	*Low*	*Purchase less toxic chemicals; Minimize disposed chemical waste*

[2] To help staff forecast use and demonstrate reductions, visit the Office of the Federal Environmental Executive's Green Cleaning Pollution Prevention Calculator: http://www.ofee.gov/janitor/index.asp

In Exhibit 4-2, we focused on a single goal to illustrate how to prioritize activities to achieve a goal. Your team may want to complete Worksheet 4-2 for each goal you plan to address in the first year of the program. Remember, some activities make progress toward multiple goals, so you don't have to achieve one goal before moving on to the next. You may find it easier to gain support or keep participants focused by sticking to one goal, but activities with the greatest priority under any goal should be tackled first. Be aware that your priorities may change as your program progresses through its first year. Your team should always be prepared to reprioritize tasks and adjust to any significant changes.

MANAGE AND COORDINATE INITIAL SC3 ACTIVITIES

After determining what your SC3 program will do in its first year, it is important to make sure everyone involved knows what their roles will be. You should continue to actively manage tasks and address issues as they arise to keep things running smoothly.



How do we get team members started?

When beginning a task or activity, be sure that team members are comfortable with their responsibilities and have a clear idea of what they are going to do. Everyone helping with a task should be comfortable with the following:

- Knowing what is expected of them;
- Having a plan of action;
- Being aware of deadlines; and
- Having what they need to do their job (e.g., contact numbers for partners, instructional materials, etc.).

As you begin getting team members working on the priorities your program will address in its first year, your team should consider keeping its agenda organized by scheduling activities and milestones on a calendar. Try to make this calendar easy to update and access by the SC3 Team (e.g., one that is electronic and/or web-based) so everyone can be aware of what is happening. As members of your school's community, your SC3 Team should have a good idea of when schedules get crowded, when people are available, and when coordinated efforts are the most effective. Getting everyone together to plan out when to do things and writing them down can help keep your SC3 program on track.

You may even consider incorporating your school's calendar into your SC3 calendar to get an idea of when other events may take up the school's attention, allowing your SC3 Team to craft a schedule that avoids competing for the school's limited time and resources. Maintaining a calendar will also help keep track of:

- Related events that may be linked with SC3 activities;
- Availability of partners;
- Training schedules;
- Team members' workload levels;
- Availability of budget;
- Upcoming deadlines; and
- Achieved milestones.

In Exhibit 4-3, we provide an example of an SC3 program calendar being used to keep track of significant dates. Write down initial ideas and schedules with your SC3 Team to develop a final, centralized version (remember, if possible, try to make the calendar electronic and online so it can be easily updated and viewed by the team).

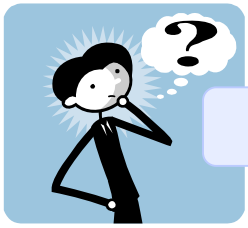
Exhibit 4-3: SC3 Program Calendar

Color Code:	SC3 Event	School Event	Important Deadline

October						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5 - *SC3 Team Meeting; 4 PM; Library*	6	7
8	9 - *Draft of purchasing budget for year due*	10	11 – *Teacher workshop*	12	13	14
15	16	17	18	19 - *SC3 Team Meeting; 4 PM; Library*	20	21
22	23	24	25 - *IT Partner: setup chemical tracking program*	26	27	28
29	30	31 – Holiday party	Reminders for Next Month: ➢ Conducting Inventory (11/15-16) ➢ Training for Purchasing Staff (11/23 or 11/25) ➢ Status Update to Teacher Workshop (11/28)			

Keep Referring to the Calendar

Have you ever worked on a project where no one met the deadlines or achieved milestones according to the schedule? Chances are that the project manager did not follow the timeline set forth at the beginning of the project. Make sure that the team focuses on the SC3 calendar at each meeting. Make adjustments if necessary, but keep the whole team focused on the 'living calendar'.



How do we keep our SC3 program running smoothly?

Making sure team members have all the necessary support to fulfill their responsibilities is key to making your SC3 program's first year, and subsequent years, a success. Most likely, the best person suited to keep things running smoothly is the SC3 Program Manager (which may be you!). As a coordinating member of your team, they can be responsible for the following:

- Working closely with those performing tasks;
- Providing support and troubleshooting;
- Ensuring budget is available;
- Coordinating with multiple stakeholders, especially partners; and
- Working to meet deadlines while remaining flexible.

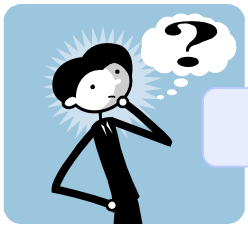
Be aware of overburdened team members and partners, and re-task or relax deadlines, when necessary.

In addition to staying on top of separate tasks, the SC3 Program Manager should periodically bring the team together to discuss progress and next steps. Holding SC3 team meetings can help share the collective energy and keep everyone up to speed on the big picture. Your SC3 Team should establish regular meetings after putting your program into action to review its implementation and evaluate some of the following topics:

- Progress against the SC3 project schedule;
- Troublesome issues;
- New developments (if applicable);
- Schedule changes (if necessary);
- Next steps/new action items; and
- Recognition ideas.

TRACK PROGRESS AND TELL YOUR STORY

As your SC3 program kicks off, you'll want to keep track of what is getting accomplished. Other people will begin to notice your team's efforts, and you will want to keep them informed of how your program is progressing.



How do we track progress in the first year?

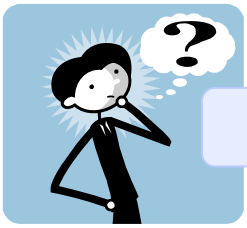
Tracking progress in the first year of your SC3 program involves making note of efforts undertaken and results achieved. Recognize any low cost quick fixes that your SC3 Team may have completed and the benefits to the school. Every activity undertaken by the SC3 Team should provide a benefit or improvement to chemical management at your school or district, no matter how small. As your SC3 Team carries out activities during the first year, be sure to document the resulting benefits or improvements, especially when a task is completed.

Consider tracking outputs and outcomes. For example, recording the number of outdated, leaking, or corroded chemical containers removed in a cleanout would be an *output*, while counting the number of students who were made safer because those chemicals had been removed would be an *outcome*. Also keep in mind the performance measures you may have developed in Chapter 1 in Worksheet 1-3: *Developing Performance Measures Based on Desired Goals* to show progress made toward your goals. Recording information to support these measures will help set a baseline for evaluating improvements to chemical management in the future.

Every SC3 program should strive to achieve lasting change in chemical management behaviors in your school or district. Having people who understand and support responsible chemical management is key to sustaining it. Recording behavior changes is an excellent way to track the progress made by your SC3 program. Exhibit 4-4 provides an example of a worksheet to track behavior changes within an SC3 program. Worksheet 4-4 in the Additional Tools and Examples section at the end of this chapter can be used to indicate behavior changes within your own school or district.

Exhibit 4-4: Measuring Behavioral Change			
Original Behavior (before program)	Behavior After 3 Months of Implementation	Desired Behavior	Benefit/Improvement
Chemical storage area locks were not properly secured	*Chemical storage areas are locked 60% of the time when checked randomly*	*Chemical storage areas are always locked when no one is present*	*There is a reduced risk of chemicals being stolen or misused*
Students did not always wear personal protective equipment (PPE) when conducting experiments in class	*Students wear PPE about 40% of the time when lab walk-throughs are conducted*	*Labs involving chemicals have 100% PPE use*	*Students are safer from accidental chemical exposure*
Used and unwanted chemicals were disposed of down the drain	*25% of chemicals are improperly disposed when lab walk-throughs are conducted*	*Chemicals are disposed of according to the appropriate laws and regulations*	*School is in accordance with the law and contributing to a healthier environment*

An excellent way to see behavior changes as a direct result of your SC3 program is to observe how people behave before and after formal training or informal instruction. Your SC3 Team may want to think of what behaviors to measure and make a point of addressing them in formal training, staff meetings, and classroom settings. Consider your desired behaviors when developing your training plan and curriculum (see Activity 3 of this chapter).



When should we tell everyone what we are doing?

First impressions are important. Once your team has made some of the low-cost quick fixes and begun to tackle first year priorities, you should let stakeholders and customers know about the progress made to date and what you plan to do next.

Another important message you will want to promote is how your partners have helped your SC3 program. Acknowledging partner participation in your school or district's chemical management efforts is a great way to raise awareness of what your program is doing and strengthen the relationship with your partners. Consider some creative ways that your SC3 Team can recognize a partner for their dedication to improving safety in your school or district.

Refer to Activity 3 in Chapter 3 for utilizing existing communication channels to communicate recent progress and upcoming efforts.

What are some good ways my SC3 Team can recognize partners for their contributions to responsible chemical management at our school?

- Presenting an award at a public ceremony or school board meeting
- Contacting local media to inform them of a partner's efforts
- Publicizing their assistance in a school newspaper or website
- Informing U.S. EPA of partner's successful cooperation

In the textbox below, we provide an example of a brief press release that can be given to local media to publicly recognize both a partner's assistance as well as successful chemical management efforts. Another way to show partners you are appreciative of their assistance to your school or district is by presenting them with a letter of recognition. Exhibit 4-5 provides a template of a letter of recognition that can be adapted by your school or district. Consider adding language and content to this template to develop your own letter showing your school's gratitude for a partner's assistance.

Sample Press Release:

LOCAL BUSINESS HELPS KEEP SCHOOL SAFE

[Name of Partner Company] Helps [Name of Your School] Remove Unwanted Chemicals

[Your school] is honoring its local partner, the [Partner Company], at a ceremony today for its continued commitment to making the school a safe environment for students and staff. [Principal's name], the principal, presented a plaque to the company for assisting the school's "Schools Chemical Cleanout Campaign" team remove unneeded and outdated chemicals over the past week. The school recently began addressing its chemical management practices and called on [Partner Company] to volunteer their handling and removal services. [Partner Company] is also playing a significant role in helping [your school] develop training courses for teachers and staff, as well as working with the school to find safer chemicals to include in their curriculum and maintenance program. Both [your school] and [Partner Company] are confident that these efforts will not only help save the school vital funds, but also help prevent future cleanouts and accidents. Many schools across the country have recently taken action to rid their facilities of unwanted and potentially harmful chemicals that may build up in chemistry labs and custodial closets and are implementing chemical management plans to prevent future accumulations.

Exhibit 4-5: Template for a Letter of Recognition

School Name and Address (use school letterhead if possible)

Date

Partner Contact
Partner Name and Address

Dear (Partner Contact),

On behalf of (School Name), we would like to recognize the vital assistance (Partner Name) provided in helping to keep our school safe by assisting our school's SC3 team with (Partner Assisted Activity).

The SC3 team is truly grateful that you were so generous with your time and resources in assisting our efforts. You should know that, because of your help, (Positive Benefit/Outcome of Partner Assisted Activity). Your contribution to our school's responsible chemical management program and concern for the well being of our community is greatly appreciated and key to our continued success.

We hope you are as pleased with the success of your efforts as we are, and we hope that we can collaborate on similar projects in the near future.

Sincerely,

Name of Principal/School Board Member/Appropriate Department Head

Activity 2 – Establish and Modify Existing Chemical Management Procedures

Establish procedures and integrate them into a chemical management plan

Having clear, proven procedures in place is key to creating a solid and lasting foundation for responsible chemical management. As you begin to put your SC3 program into action, your SC3 Team should revisit the existing set of chemical management procedures and determine if any changes need to be made. Copies of current procedures may be at the school, the district offices, and/or at the state level. The SC3 Team may want to update existing chemical management procedures to make sure they:

- Take a comprehensive look at the entire school environment;
- Are clear and easily understood by the lay public;
- Are up to date with laws and best practices.

Start by taking a look at the materials you pulled together in the beginning of this chapter. Consider the support you will need to eventually implement any changes your SC3 Team decides to make to the procedures. Ask yourself the following questions: is there a formal process my team needs to follow to make these changes happen and from whom does the team need to gain approval? Actively involve senior management with the responsibility for approving changes in procedures.

The chemical management procedures maintained by the SC3 Team form the foundation of your school's chemical management plan. A school chemical management plan defines how chemicals and products containing chemicals are dealt with from before they enter a school to the time they are used up or disposed of. The plan functions as a tool to reduce risks, prevent future cleanouts, and create a healthier school environment by providing an approved set of practices for managing chemicals that can be referred to by students, staff and visitors. This document may include guidelines on:

- Hazard communication and response;
- Environmentally preferable purchasing;
- Curriculum;
- Chemical inventories;
- Safe usage guidelines;
- Chemical hygiene in areas where chemicals are used;
- Chemical labeling;
- Chemical storage; and
- Disposal.

Be sure to visit the Resources page at the SC3 Web site, where you will find helpful material to assist with the development of a chemical management plan.

In Exhibit 4-6 we provide an example of common elements that may be found in a school's chemical management plan. Your SC3 Team can use this template to organize your school's own procedures into a comprehensive document outlining the proper guidelines for dealing with chemicals. Notice that the categories for procedures are similar to the tabs or headers you may have created when centrally organizing all your SC3 materials in Activity 1 of this Chapter.

Exhibit 4-6: Chemical Management Plan Template

- General Rules and Procedures
  - Responsibilities of students, staff, and administration
- Purchasing Guidelines
  - List of qualified staff
  - Inventory/tracking protocols
- Storage Procedures
  - Storage guidelines
  - Chemical storage access
  - MSDS requirements
  - Labeling protocols
- Chemical Usage Procedures
  - Personal Protective Equipment (PPE) requirements
  - Safety equipment requirements
  - Waste reduction techniques
- Curriculum
  - Acceptable experiments/procedures
- Training Program Information
  - Topic-specific materials
- Disposal of Chemical Waste
  - Regulatory requirements
- Emergency Spill and Accident Response
  - Emergency procedures
  - Reporting requirements

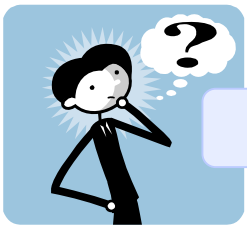
As your team sets out to develop a chemical management plan, you should involve partners and look at plans created and used by other schools and districts. To give you an idea of what a chemical management plan might look like, consult the following links for guidance and real world examples:

- Guidelines for Developing a Chemical Management Plan
- Laboratory Chemical Management Program for Vermont Schools (pg. 55)
- Los Angeles Unified School District Office of Environmental Health and Safety School Laboratory Chemical Hygiene and Safety Plan

Activity 3 – Train Appropriate Groups on Responsible Chemical Management

Identify what your chemical management training will look like

It will be necessary to train people on safe chemical management practices. This can be done in formal settings (e.g., a set-aside time with an instructor and training materials) or informally (e.g., a five-minute portion of a weekly staff meeting). Some training can be done informally as part of daily activities (i.e. those involving the use of chemicals) while other training will require dedicated time.



Who needs to be trained?

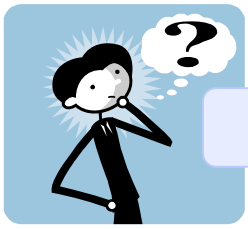
Anyone involved in an aspect of school chemical management should be considered a candidate for training that your SC3 program will be undertaking.

As you think about the content of your training, consider who your audience will be. Keep in mind that different audiences need to know different things. A good approach to take is to develop a core training module that outlines the basic ideas of practicing responsible chemical management (e.g., dos and don'ts of storage, disposal, etc.). Other modules may focus on more specific subjects (e.g., conducting a chemical inventory, etc.).

Consider partners who may be familiar with regularly conducting training sessions (e.g., fire department, etc.).

Some typical audiences may be:

- Purchasers;
- Teachers;
- Custodial staff;
- Administrators; and
- Students.



What topics should I include in my SC3 training?

The content of your training sessions should focus on what attendees can do to make schools safer and protect the environment. At a minimum, the training should cover the important procedures that the school has adopted. Whenever the SC3 Team changes a procedure or practice, make note of who needs to know and choose the most efficient means for informing them. Ask partners and community members with chemical management experience to help design your training. You should also research training methods used successfully by other schools and organizations to adapt and develop your own. To save you time, we provide a list of links to materials you can tailor to your own school's situation and procedures. Feel free to use these or seek out other training materials:

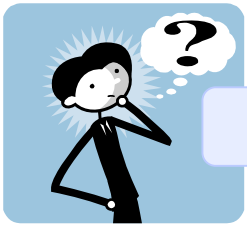
- OSHA's Model Training Program for Hazard Communication
- British Council's Training of Trainers Manual
- See if any local, regional, or state agencies have any helpful guidance material on developing effective training.

Exhibit 4-7 provides examples of what you may want to cover with each audience. Use Worksheet 4-7 in the Additional Tools and Examples section at the end of this chapter to develop a plan of what you want each audience to know.

Exhibit 4-7: SC3 Training Topics by Target Audience

Training Topics	Target Audience				
	Teachers	Custodians	Administrators	Purchasers	Students
Purchasing	*What chemicals should not be purchased; potential less hazardous alternative chemicals*	*What chemicals should not be purchased; potential less hazardous alternative chemicals*	*Complete understanding of the school's purchasing policy*	*Complete understanding of the school's purchasing policy*	
Storage	*How to understand an MSDS; Proper storage and labeling protocol; tracking what and how much of each chemical is in storage; spotting leaking/corroded containers*	*How to understand an MSDS; Proper storage and labeling protocol; tracking what and how much of each chemical is in storage; spotting leaking/corroded containers*	*How to understand an MSDS; Proper storage and labeling protocol*	*General knowledge of storage and labeling protocol*	*How to understand an MSDS; spotting leaking/corroded containers*
Inventory	*How to conduct an inventory (either comprehensive or chemicals they are responsible for)*	*How to conduct an inventory (either comprehensive or chemicals they are responsible for)*	*Complete understanding of the steps involved in conducting an inventory and tracking chemicals*	*Understanding of how chemical inventories may influence purchasing patterns*	
Usage	*Proper chemical handling; promoting safe techniques and PPE use; minimizing waste and preventing spills during use*	*Proper chemical handling; minimizing waste and preventing spills during use*			*Handling chemicals; using safety equipment; minimizing waste and preventing spills during experiments*
Disposal	*What can and can not be dumped down the drain; how to handle used chemicals; where and how to store used chemicals for offsite removal*	*What can and can not be dumped down the drain; how to handle used chemicals; where and how to store used chemicals for offsite removal*	*Complete understanding of the school's disposal policy*	*Knowing which purchased chemicals have the highest disposal costs*	*What can and can not be dumped down the drain*
Emergencies	*Emergency procedures outlined in Chemical Management Plan*	*Emergency procedures outlined in Chemical Management Plan*	*Emergency procedures outlined in Chemical Management Plan*	*Knowing which purchased chemicals present potential hazards*	*What to do in case of spill/accident*
All target audiences should be aware of and understand the federal state, and local regulations that may impact a school's chemical management program.					

After you have trained everyone on the basics of responsible chemical management, you will need to conduct 'refresher' training periodically (see Activity 3 of Chapter 5). Also, consider how and when you will need to train new teachers and staff on responsible chemical management.



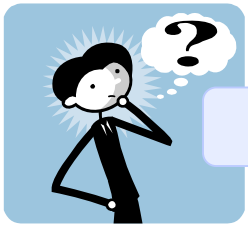
Who will perform the training?

We all get more from teachers who really know their stuff. Good chemical management trainers can come from your SC3 Team, the staff at your school or district, or a partner or member of your local community. Look to individuals with a specialized interest or knowledge of chemical management topics, especially if they helped design some of your training material; a familiarity with the subject, your school, or school procedures can make their participation even more valuable.

What to Look for in a Chemical Management Trainer

Trainers who are dynamic speakers and can speak from experience are more effective and memorable. As you consider who will lead training sessions, consider looking for those who have:

- Expertise on the subject
- Practical, real world experience
- Effective communication skills
- A solid understanding of the school's chemical management situation



How can I best plan training events?

After considering who will be trained and what the content of their training will be, your SC3 Team will need to decide where and when the training will be held. Always try to take advantage of existing venues or forums (e.g., classroom settings, weekly staff meetings, teacher workshops, etc.) to reach your audience and avoid imposing new time commitments. If you are unable to use an established forum or event to conduct training, work to find a time that is the most convenient for your audience to attend.

Consider other types of training events (e.g., CPR, emergency planning, etc.) already in place, not only for effective training techniques, but also as potential forums to include SC3 training.

Exhibit 4-8 gives some helpful tips on how to conduct a formal training session.

Exhibit 4-8: Basics of Conducting Formal Training

- Have a Message. You should know what you want people to learn from each training session. Have specific objectives that you want the audience to know when they leave training.
- Keep it Interesting. Anyone can stand in front of a group and read from a manual; the point of holding a training session is to bring the material to life and make it memorable. Try to incorporate ways to make your training material more easily absorbed (e.g., show a video, have group interaction, conduct hands-on exercises, etc.)
- Be Efficient. People have other responsibilities to keep and drawn out sessions may cause them to lose interest.
- Follow up Training. Because you will ideally conduct training at least once a year, you should continue to evaluate how effective each session is. Getting feedback from attendees, observing behavior changes, and having brief quizzes to measure how well material was absorbed are great ways to measure results and assess the effectiveness of training to identify areas for improvement.

SECTION 2: SPECIAL CHEMICAL MANAGEMENT PROJECTS

This section presents three detailed projects that are common among successful chemical management programs. At the very least, we highly recommend that you develop a chemical inventory.

PROJECT 1 - PERFORM AN INVENTORY OF ALL CHEMICALS AND CHEMICAL PRODUCTS [3]

Why should I conduct a chemical inventory?

Completing a chemical inventory not only provides your school or school district with a better understanding of your chemical management situation, but also serves as a tool for future chemical management. A well-organized inventory provides information on chemical type, quantity, purchase date, and location. Having detailed and recorded knowledge of the chemicals present at your school or in your school district is important to making responsible purchasing decisions, considering safe storage arrangements, evaluating use, and accurately estimating removal and disposal costs.

Tip: What is included in the inventory?

At a minimum, we suggest that a chemical inventory include the following information for each chemical or product:

- Chemical or product name;
- Place(s) where material is being stored (room, name, building);
- Program(s) using the material and whether it is currently being used;
- Date of purchase (if unknown, write "prior to" and the inventory date); and
- Amount of material currently in school (by location).

[3] This material (and the Tip: What is included in the Inventory?) comes from the Florida School Chemical Cleanout Manual and is being used with permission from the Florida Department of Environmental Protection, Division of Waste Management, Bureau of Solid and Hazardous Waste.

What is involved in performing a chemical inventory?

Establishing an accurate inventory is very important to maintaining a safe and healthy learning environment. Prior to completing an inventory, you should gather relevant pieces of information to determine where to find all the chemicals in your school or district and the overall scale of your chemical management program. You should have the following pieces of information ready before you begin your inventory:

- Number and type (e.g., high school, vocational) of schools;
- Location of schools and proximity to each other;
- Locations of chemicals (within school facilities);
- A completed Worksheet 1-1 (*Evaluating Your School's Chemical Management Situation, Policies, and Procedures*) for each facility to briefly outline their chemical management situation, policies, and procedures;
- School staff responsible for those locations;
- Hours and dates schools can be accessed to inventory chemicals; and
- Previous chemical incidents.

As you conduct your inventory, remember to note any chemical that appears to be appropriate for attention. A chemical may be appropriate for attention when it is:

- Stored in a container that is in poor condition (e.g., corroded, has crystals growing around the cap);
- Stored in inappropriate containers, such as buckets or reused food containers;
- Expired;
- Unidentified or not clearly labeled with the chemical name, date, and storage and handling requirements;
- Stored near incompatible chemicals (alphabetical storage is also inappropriate);
- Stored on deteriorating, unstable, or inappropriate shelving (e.g., flammables stored on wooden shelves, corrosives stored on metal shelves); or
- Unsecured.

You should also note whether particular chemicals appeared to be unneeded or in surplus quantities.

Remember, conducting a chemical inventory may pose risks to the individuals taking the inventory; therefore, we recommend that only those who have technical knowledge about the chemicals be involved. Students should not participate in inventories! In some cases an inventory may take many hours to complete—it is important not to underestimate the amount of time required to complete the inventory. Administrators may not be aware of the time commitment and the importance of an accurate inventory; therefore, it is very important to inform them.

If you are new to the school and/or a recent inventory has not been conducted, you need to be especially cautious. Serious injury can result from touching or moving chemicals that have become shock sensitive or pressurized. If any chemical container is unmarked, bulging, leaking, rusted, cracked, has a degraded top,

contains a liquid above a solid, or crystals in a liquid, we recommend that it not be moved unless you are sure that it is safe to do so. If you feel that conducting an inventory might not be safe with current in-house staff, we encourage you to seek professional help from a qualified partner or outside source.

Here is a list of things to remember when completing an inventory:

1. Allow ample time to conduct the inventory.

2. Know where all chemicals used in the school are located and that you have access to those locations. Some of the places you may find chemicals are science classes and laboratories, art classes / studios, maintenance sheds, cleaning closets, and office supply areas.

3. Have a plan to deal with potential explosives if they are found and verify that everyone listed in the plan is familiar with their role. You should contact your county's sheriff's office for information about access to the services of a "bomb squad" if needed. Also, we suggest that you notify your local sheriff and fire departments that you will be doing an inventory, especially if this is the first inventory in several years.

4. Work in pairs, never alone. It is best if one team does the entire inventory.

5. Areas in which you are working should have adequate lighting and ventilation.

6. Wear appropriate Personal Protective Equipment (PPE). This should include gloves, chemical splash goggles, a lab apron, and closed-toed shoes.

7. Have quick access to a phone and a recently tested eyewash and safety shower.

8. Have a written response plan nearby in case of a spill or accident and verify that all participants have read it in advance.

One person should act as the recorder and the other person should read the names of the chemicals. The reader should be sure to pronounce the names correctly and confirm that they have been recorded accurately. While completing an inventory, you may identify outdated, unknown, or unnecessary chemicals in need of disposal. Project 2 discusses what is involved in conducting a chemical cleanout to rid your school of these potentially harmful chemicals.

What steps do I take after completing a chemical inventory?

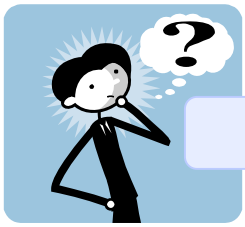
After completing your comprehensive inventory, you should meet with your team to discuss potential next steps for your SC3 program to take. In Exhibit 4-9, we provide an example of a checklist that can be completed after conducting an inventory to further evaluate your school or district's chemical management situation. The SC3 Team can use Worksheet 4-9 in the Additional Tools and Examples section at the end of this Chapter to help evaluate your chemical management situation after conducting an inventory.

Exhibit 4-9: Post-Inventory Evaluation of your Chemical Management Situation (Example)

Question	Status	Action Taken
How many chemical containers are: 1) Unlabeled? 2) In poor condition? 3) Expired? 4) No longer used or essential? 5) Unsecured?	1) 22 2) 15 3) 10 4) 30 5) 145	*Properly dispose of any mismanaged chemicals in compliance with applicable regulations.*
How much of the following chemical do I use every year? ➢ Chemical A ➢ Chemical B ➢ Chemical C	➢ Chemical A: 1 gallon ➢ Chemical B: 50 ounces ➢ Chemical C: 100 ounces	*See next step.*
Given the amounts above, how many years worth of chemical do I currently have?	➢ Chemical A: 3 years ➢ Chemical B: 200 years ➢ Chemical C: 27 years	*Keep only 1 year supply; Dispose of remaining chemicals.*

After conducting an inventory and discussing your findings with your team, you may decide that the chemicals you have stored in your school or district facilities are not being mismanaged. This is great news! If your SC3 program determines that chemical mismanagement does not need to be addressed, it will allow you to focus on other areas of your program. However, if you do decide that the level of chemicals being managed may present a health and/or safety risk to students and staff, you should consider conducting a chemical cleanout (see Project 2: *Secure a Chemical Cleanout Professional*).

PROJECT 2 - SECURE A CHEMICAL CLEANOUT PROFESSIONAL

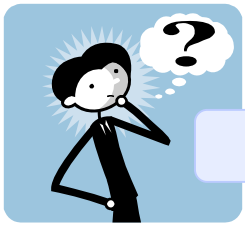


Why should I conduct a chemical cleanout?

If your chemical inventory identified chemicals in your school and your SC3 Team determined they presented a health and/or safety concern, you should consider performing a chemical cleanout. A chemical cleanout addresses immediate threats as well as unneeded chemicals and, together with other responsible chemical management practices, helps to prevent accidents before they happen. Conducting a chemical cleanout that includes proper disposal is an important step to creating a safer school that protects the health and safety of students and staff. A chemical cleanout may be necessary in science laboratories, art and vocational classes, facility maintenance areas, janitorial closets, and even the nurse's office.[4]

Here are some outdated and improperly stored chemicals in need of removal and disposal. (From The Local Hazardous Waste Program in King County's Rehab the Lab program, in King County, WA)

This section of the workbook provides information to help you with your chemical cleanout and disposal.



How do I get started on a chemical cleanout?

There are four sub-activities for effectively managing the chemical cleanout and disposal process:

A. Evaluate your chemical inventory and create a list of chemicals to dispose (a disposal list);
B. Identify a qualified professional(s) to assist in the cleanout and disposal process;
C. Prepare for chemical cleanout and disposal; and
D. Take additional steps to reduce the need for future chemical cleanouts.

[4] Please see http://www.epa.gov/epaoswer/osw/conserve/clusters/schools/manage.htm for additional details on areas in your school where chemical hazards may be found.

Sub-Activity A – Evaluate your Chemical Inventory and Create a List of Chemicals to Dispose (A Disposal List)

If you are not qualified to do an initial evaluation of your chemicals, ask a technical expert from your partner team.

Your first activity in the cleanout process is to review your initial inventory (See Project 1: *Perform an Inventory of All Chemicals and Chemical Products*) and develop a disposal list of chemicals that should be removed. This list can be created using information from your initial chemical inventory and be as detailed and as comprehensive as possible. You can use this supporting information in securing a qualified professional to conduct a cleanout (See Tip: *What do I include in the disposal list?*). Completing this disposal list will help you to:

- Identify chemical management problems or cleanout issues that need immediate attention or action (e.g., situations that might pose health and safety concerns to students and staff, such as potential explosions or fires);
- Rank and prioritize schools and areas of the school(s) needing cleanout;
- Estimate the types and quantities of chemicals for removal in the cleanout;
- Identify chemicals needing special handling (e.g., radioactive or explosive, shock sensitive, unknown); and
- Identify activities that need the expertise of a qualified professional (e.g., removing and disposing of chemicals).

You can include this disposal list in your Request for Proposal (See *What is A Request for Proposal?* in Sub-Activity B) to give bidders a clearer picture of what you have on hand and help them estimate the amount of help that you need. After you secure a qualified partner or hire a chemical management contractor, they can use your disposal list as they assess the extent of the problem at your school. Often, they find additional chemicals that may need to be removed from your school, so don't be surprised if that happens.

Tip: What do I include in the disposal list?

A disposal list typically contains information on the following (you may not be able to find all of this information, so provide as much as you can):

- Types of chemicals including chemical name and/or hazard classification;
- Chemical Abstract Service (CAS) registry number;
- Chemical concentration;
- Chemical expiration date;
- Type and condition of storage container (e.g., glass bottle, broken seal);
- Amount of each chemical (e.g., liters, milliliters);
- Location of chemicals in school and/or location within classroom or storage area; and
- Chemicals requiring specialized handling or disposal techniques (e.g., radioactive, explosive, shock sensitive, unknown).

The information included in Exhibit 4-10 is provided as an example disposal list. Worksheet 4-10 in the Additional Tools and Examples section at the end of the chapter can be used to gather information on chemicals you may consider disposing.

Exhibit 4-10: Chemical Disposal List (Example)

Chemical Name	CAS Number	Concen-tration	Exp. Date	Amt. & Size of Container for Disposal	Type of Container	Amount (est.)	Storage Location
1-Propanol	71-23-8	100%		2x500 ml	poly	750	Flammable Cabinet, Room 202
Acetone	67-64-1		none	2x4 L	poly; metal	4.5	Flammable Cabinet, Room 202
Aluminon	569-58-4		none	25 grams	glass	20	Chemical Storage Shelves, Room 110
Aluminum	7429-90-5	100%	none	2 oz	plastic cup	5	Flammable Cabinet, Room 202
Aluminum	7429-90-5	100%	none	2 x 500 ml	glass jar	850	Chemical Storage Shelves, Room 110
Aluminum Sulfate	10043-01-3	100%	none	1x 5 lb	glass	3.25	Flammable Cabinet, Room 202

SUB-ACTIVITY B - IDENTIFY A QUALIFIED PROFESSIONAL(S) TO ASSIST IN THE CLEANOUT AND DISPOSAL PROCESS

It is important to have a qualified and experienced professional to handle the chemical cleanout process, including packing, removing, transporting, and disposing of the chemicals. You may have this expertise in your school district; however, it is likely you may need to call on partners or outside professionals. In the Introduction to this Workbook, we identified a variety of potential partners who may contribute to the success of your SC3 program. For example, organizations such as chemical manufacturers and engineering firms, fire and police, and colleges and universities are good sources for advice or labor in the performance of chemical cleanouts and disposal. These potential partners can help to:

- Identify additional chemicals to add to your disposal list;
- Identify chemicals that can be safely disposed without a chemical cleanout professional[5];
- Prepare chemicals for disposal;
- Develop requests for proposal for cleanout service providers;
- Coordinate your cleanout and disposal with other community hazardous waste events, if possible, to reduce the cost of disposal; or
- Dispose of unwanted chemicals.

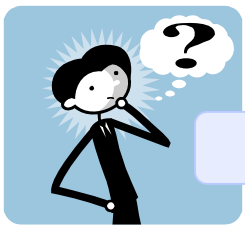
For each partner that may assist with chemical cleanout and disposal, it is important to define clear roles and responsibilities.

Remember that only qualified personnel should be involved with chemical handling, packing, removal, and transport to bring about a safe and successful cleanout. Disposal of chemicals and chemical waste must be done in compliance with local and state regulations as well as with the federal Resource Conservation and Recovery Act. A qualified professional will be aware of the proper cleanout and disposal techniques and applicable regulatory requirements. In addition, using qualified personnel will help to minimize chemical exposure to students and staff, environmental damage, and the likelihood of accidents and their associated costs. One way to evaluate and competitively select a qualified hazardous waste disposal contractor is to issue a request for proposal (RFP).

I don't know much about cleanout and disposal professionals. How do I find one?

- Check your state environmental agency Web site for company listings and information. While most agencies cannot recommend a specific company, they may be able to provide you with contact information for a number of service providers.
- Check with your school's business manager(s) for companies that may have provided similar services in the past.
- Perhaps a college or university or an industry partner in your area can perform the cleanout and disposal or has a contract you can tap into.

[5] If you are unable to involve a qualified professional to do this, it may be safer to wait until you have secured a contractor who can safely determine which chemicals, if any, can be disposed without a contractor's professional removal.



What is a Request for Proposal?

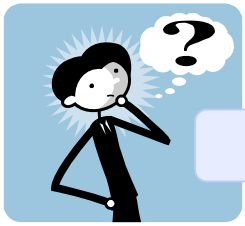
A Request for Proposal (RFP) is an invitation for service providers to bid on a contract to provide a service or product to a customer. In an RFP, you spell out the services and qualifications you seek in a professional and describe your needs in sufficient detail so that vendors can bid a realistic, competitive price. In response to an RFP, qualified professionals submit a proposal describing how they plan to meet your requirements. For a sample RFP, see Exhibit 4-11 in the Additional Tools and Examples section at the end of this chapter.

We have provided examples of common components of an RFP for chemical cleanout and disposal services. Every situation is unique, so tailor your RFP to your specific needs and your state and local requirements! You should consult with your school or district's legal counsel to be sure you have included all legal requirements for a contract.

Exhibit 4-11 in the Additional Tools and Examples section at the end of this chapter is an actual RFP used by a regional education unit to solicit bidders to assist with school chemical cleanout and disposal. In developing an RFP, it is important to define "evaluation selection criteria" that reflect your particular program needs so that bidders can write responsive proposals.

Tip: Common Components of an RFP

- Statement of work or "SOW" (i.e., the services you want a vendor to provide);
  - Chemical inventory services (see Project 1 in this chapter for more information)
  - Packing
  - Transport
  - Treatment and Disposal
  - Reconciliation of items removed/disposed or provide waste manifests
- Evaluation selection criteria;
- Period of performance (i.e., the timeframe over which you require the SOW services to be performed);
- Specifications of what you consider to be a qualified service provider (e.g., can the contractor provide a sufficient, competent, and trained staff to receive, handle, weigh, package, store, and transport chemicals?);
- Insurance requirements;
- Items to include in cost estimate (Refer to the Question titled "How do I estimate cleanout and disposal costs?" in this chapter for tips on what is typically included in a cost estimate); and
- Your organization's standard legal or regulatory language.



How do I advertise an RFP?

There are a variety of ways to communicate the opportunity for qualified vendors to bid on your RFP. Typically, organizations advertise on their Web sites, in trade publications, on e-mail distribution lists, or in local newspapers. Your organization may have a special process for RFPs. You should ask your manager or supervisor for specific guidance on how and where to advertise RFPs. Consider other venues that may appeal to chemical cleanout service providers, such as trade publications. Also consider asking partners to help with advertising and distributing your RFP.

You should keep timing in mind when issuing an RFP. Consider timeframes for budgeting, advertising, collecting vendor responses, and your SC3 program's goals.

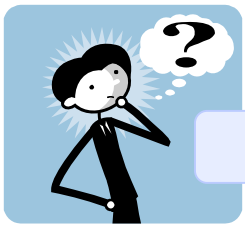
Advertising your RFP in a local newspaper is easy. With a simple transmittal letter, you are on your way! For example:

Hometown Newspaper
Attention: Legal Advertising

To Whom It May Concern:

Please run the enclosed "Request for Proposals" in your paper on January 6, 9, and 17, 2009. Billing for these ads along with a tear sheet should be forwarded to my attention at the address above.

Please confirm that you have received this request, by contacting me at (123) 456-7890 or myemail@myorganization.com. Thank you in advance for your prompt action and cooperation in executing this request.



How do I select a qualified professional?

You may have multiple entities that respond to your RFP. So, how do you compare them and find the one that is right for you? You want the vendor to be both qualified and propose an approach that meets your needs. Also check to see if the RFP includes minimum vendor qualifications. Exhibit 4-12 provides a sample checklist to document prospective vendor qualifications. In addition to ensuring that a vendor is qualified, you can evaluate a vendor by how well it tailors an approach to meet your needs. In reading a vendor's proposal, "score" them by the quality and completeness of their approach to performing all of the services in your SOW. For example, a vendor that proposes an approach guaranteeing that all work will be done after school and on weekends may be a better choice because of minimal potential disruptions to school operations. Also remember that while your evaluation and selection of the most qualified vendor is an ideal approach, your school or district may have a selection policy (e.g., lowest qualifying bid) that affects your decision.

Exhibit 4-12: Vendor Qualifications Checklist

Vendor Name:_____

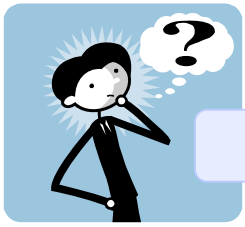
Ensure that your vendor meets all applicable Federal, State and Local requirements before selecting.

The Vendor:

1. Can pack the chemicals? ☐
2. Can transport the chemicals? ☐
3. Can treat and dispose of the chemicals? ☐
4. Can reconcile the chemicals? ☐
5. Carries all of the proper insurance? ☐
6. Has chemical technicians that have proper training and certifications? ☐
7. Has truck drivers that have proper training and certifications? ☐
8. Can provide acceptable USDOT compliance history? ☐
9. Can provide acceptable USEPA compliance history? ☐
10. Can provide acceptable OSHA compliance history? ☐
11. Can provide acceptable TSDF compliance history? ☐
12. Has all the appropriate permits for transportation? ☐
13. Has all the appropriate permits for storage? ☐
14. Has all the appropriate permits for treatment and disposal? ☐

Tip: Other questions to help compare potential cleanout professionals

- What are the qualifications and experience of your staff?
- Will you be using subcontractors for any of your services?
- Is your company bonded, licensed, insured?
- Does your company have copies of necessary permits?
- Have you had any citations or violations in the past 5 years?
- Can you provide references?
- What is your plan for responding to the SOW (i.e., what is their process or approach to performing the required services and achieving objectives outlined in the RFP)?



How do I estimate cleanout and disposal costs?

Your RFP should request potential qualified vendors to include a price quote or cost estimate. Thus, you should provide sufficient details in the RFP to enable potential bidders to have a basis for their price quotation (e.g., identify the number of schools to be cleaned out, the types and quantities of chemicals evaluated in the inventory, etc.). The collection of bidders will "define the market price," but be mindful of price quotes at the low and high ends of the spectrum – attempt to understand the underlying assumptions. Exhibit 4-13 is an example of a price quote that a qualified professional may send in response to your RFP; it contains some typical costs associated with chemical cleanout and disposal.

Typical cleanout and disposal costs range from $2,000-$5,000 per school.

Exhibit 4-13: Sample Price Quote

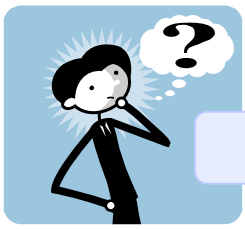
Re: Disposal of *My High School's* Waste

Our company is pleased to submit a detailed quotation for the management, transportation and disposal of the hazardous materials located at *My High School*.

Given our understanding of the scope of work per the chemical inventory that was provided us, we present the following Price Estimation to complete this project.

This estimate specifies the following services to be carried out and the requirements to be met:

- Materials will be classified and marked with a label giving the chemical name or composition, or the MSDS must be available. The cost for marking each container is $XX.00
- Materials will be segregated by compatibility, hazard class and disposal requirements. The cost for segregation of materials is $XX.00.
- Lab packing materials into drums and/or DOT approved over packing containers. The cost of lab packing each drum is $XX.00. Lab packs will be labeled to meet state and federal regulations.
- Completion of appropriate documentation, manifests, and shipping documents. The cost for preparing these documents is $XX.00.
- Lab packs will be transported to our facility for storage/transfer/processing for final disposal. The cost for these services is $XX.00.
- Materials that are not included in this price quote include: radioactive materials, shock sensitive compounds, biological wastes, explosives, and pressurized cylinders and/or gases unless otherwise stated in the attached Price Estimation.
- This proposal is valid for 45 days from the issue date.



Are there ways to lower disposal costs?

You may want to consider ways to potentially minimize the costs associated with the disposal of the chemicals removed from your school. State and local organizations use a variety of approaches that result in cost-effective solutions. Please keep in mind that not all of these examples may be applicable to your situation. You should explore the legal or regulatory impacts of any technique before getting started! Exhibit 4-14 provides examples of some real world cost saving techniques that you can consider for your SC3 program.

Exhibit 4-14: Examples of Cost Saving Techniques

Technique	Type of Cost Savings	Real World Example
Leveraging a household hazardous waste (HHW) collection event for chemical disposal.	Transportation and labor.	The Tennessee Department of Environment and Conservation used an existing contract to do HHW collection and facilitate simultaneous cleanouts of school labs.
Use a knowledgeable partner to help identify substance(s) that can be safely disposed of without a hazardous waste contractor.	Packing, labor, transportation, and disposal.	The Northwest Tri-County Intermediate Unit in Pennsylvania leveraged the State environmental agency to review inventories and denote items that could be safely disposed.
Work with a partner organization to take advantage of an existing disposal contract.	Disposal (lower rates)	In Iowa, in the early stages of their chemical management efforts, the Metropolitan Waste Authority partnered with EPA Region 7 to use existing chemical management services.
Incorporate performance-based contracting in your RFP.	Disposal, chemical purchasing, future chemical management.	A pilot program in Lansing, Michigan incorporated performance-based contracting clauses to encourage cleanout professionals to find ways to minimize costs while providing other chemical and resource lifecycle services.
Negotiate disposal rates by combining multiple cleanouts.	Lower disposal rates and reduce cost for lab packing, labor, and transportation.	Qualified school personnel in the Fort Worth, Texas Independent School District collected smaller amounts of waste from all district schools prior to one large consolidated disposal to save on transportation costs and negotiate a lower disposal rate per drum of hazardous waste.

Exhibit 4-14: Examples of Cost Saving Techniques (cont'd)		
Identify agency assistance for removal of radioactive wastes.	No-cost removal of radioactive chemicals.	The Illinois Emergency Management Agency has launched a program to help schools safely dispose of radioactive materials. IEMA officials collect the materials and send them to a radioactive waste disposal facility. The Illinois program is one of several around the country; other states include Connecticut, Colorado and Vermont.[6]
Research your chemical management regulations to identify potential ways to lower costs.	Reduced packing and transportation costs.	Rochester City School District, New York environmental personnel talked to regulators about the amounts and types of chemicals that could be legally and safely transported by the school district to a proper disposal facility.

Sub-Activity C – Prepare for Chemical Cleanout and Disposal

After you identify a qualified cleanout professional or other qualified partner and enter into an appropriate agreement or contract, the chemical removal and disposal process can begin. Communication and coordination with the person performing the cleanout and disposal is important. You should obtain a copy of their recommended plan of action for the cleanout and disposal project and ensure you understand and agree with the steps and details. Such upfront discussion will minimize performance risks and bolster chances that the project will be completed safely, with minimal disruption, and within budget.

For instance, you may want to ask the following questions so that you know what to expect when the cleanout occurs:

- When during the school day/week will the cleanout occur?
- Is there anything our school can do to help you prepare for the cleanout (e.g., mark chemicals slated for removal)?
- What safety precautions should we take?
- What areas of the school will you need access to?
- What school staff needs to be present during the cleanout?
- What should I expect on the day of the cleanout (i.e., what are the steps of the cleanout process)?

Due to financial or other constraints, you may not be able to remove all of the identified chemicals at one time from one or more schools. Any amount of potentially dangerous chemicals that can be removed from a school helps to prevent accidents before they happen.

While you may not personally be involved in cleanout activities, someone knowledgeable about the conditions and locations of chemicals in your school should be available to answer questions and facilitate communication to help guarantee cleanout success.

[6] Learn more about the Illinois Emergency Management Agency's Orphan Source Recovery Program--High School Initiative: http://www.state.il.us/iema/publications/pdf/Radiation_In_Schools.pdf

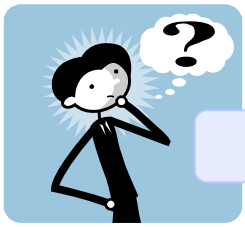
SUB-ACTIVITY D – TAKE ADDITIONAL STEPS TO REDUCE THE NEED FOR FUTURE CHEMICAL CLEANOUTS

Congratulations on completing the chemical cleanout of your school. You should take the appropriate steps to ensure that you don't have to undertake another cleanout again. It will be important to develop and adhere to responsible chemical management practices to minimize the chance of having to conduct future cleanouts. Chapter 5 of this Workbook provides some helpful guidance in this regard:

- You should keep your policies and procedures current by periodically evaluating your SC3 program (Activity 2: *Establish and modify existing chemical management procedures*); and
- See the Textbox "*Key to Sustained Success: Maintaining Chemical Inventories"* on page 5-1.

Project 3 – Implement a Green Curriculum

Putting Together a Green Curriculum



What is a "green curriculum"?

A "green curriculum" involves the use of more environmentally friendly, less hazardous chemicals in the smallest possible quantities. The purpose of a green curriculum is to reduce waste, minimize treatment after use, and conserve energy and resources. A green curriculum can be used in almost any discipline that involves chemicals, such as:

- Chemistry;
- Biology;
- Physics;
- Art;
- Photography; and
- Vocational courses (e.g., woodworking class, auto/machine shop, etc.).

'Greening' a course curriculum can result in:

- Fewer chemicals consumed throughout the school year;
- Less waste being produced;
- Fewer students exposed to chemicals;
- Lower risk of spills or accidents; and
- Lower costs associated with chemical purchases, storage, and disposal.

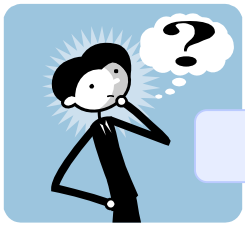
Learn More about the Green Curriculum Concept

The concept of a green curriculum borrows from the practices of "green" (or 'sustainable') and "microscale" (or 'small-scale') chemistry. The following links provide some helpful background information on how these concepts promote a greener curriculum:

- http://www.epa.gov/opptintr/greenchemistry/index.html
- http://www.uoregon.edu/~hutchlab/greenchem/whygreen.html
- http://www.microscale.org/about.asp
- http://www.epa.gov/epaoswer/osw/conserve/clusters/schools/resources.htm#labs

For more information on developing green curricula for specific classes, see Web site links provided on page 4-24.

In addition to *educational* settings, the principles of green curricula can also be applied to reducing chemicals used in the *operational* aspects of your school (i.e., janitorial/sanitation). As discussed in Chapter 2 of this Workbook, "green cleaning" involves selecting environmentally friendly products when appropriate, using those products properly, and taking other steps to reduce risks while maintaining an appropriate level of cleanliness and disinfection. Be sure to visit EPA's Green Cleaning resource page and refer to the Additional Tools and Examples section at the end of Chapter 5 for additional resources.



How can I start a green curriculum in my school?

As with any change your SC3 Team makes to improve chemical management in a school, a green curriculum needs to be embraced and implemented by those who are affected. In this case, the teachers and department chairs where green curriculum is being proposed must be engaged and supportive of the effort. Your team will need to gauge the level of interest among people who could help make it happen. Identify a teacher – preferably a department head – who knows the current curriculum and would like to take on the task of assessing:

- What changes could be made to existing curricula to use smaller quantities and less hazardous chemicals; and
- The costs (or cost savings!) of any changes to existing curricula.

Success Stories: Going Small in Rhode Island

After attending a teaching workshop, Mrs. Kathleen Beebe, a teacher and a Chemical Hygiene Officer in Rhode Island, found that 'greening' her school's chemistry classes did not require major changes to the curriculum itself. Instead, her approach was to modify current experiments to use smaller quantities of chemicals. In addition to saving money and requiring less time to prepare chemicals for instructional labs, Mrs. Beebe's school realized a number of other benefits to adopting a green curriculum, including:

- Students can work in smaller groups and receive more hands-on experience.
- Errors can be minimized since experiments are easy to run multiple times.
- Minimal set up time allows students the opportunity to set up experiments themselves and increases time for discussion and interaction among students about what they are learning.
- Experiments are safer for students to conduct since fewer chemicals are involved and disposal concerns are minimized.

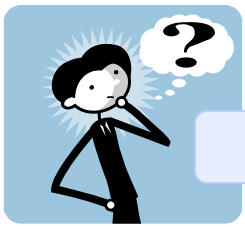
In Exhibit 4-15, we describe some common motivations that a school may have to adopt a green curriculum. Have your SC3 Team refer to these motivations when discussing green curricula with teachers and administrators.

Exhibit 4-15: Motivations for Supporting a Green Curriculum

Stakeholder	Motivation	What to Mention to Them
Department Heads and Teachers	*Time savings, Potential to improve learning, Risk reduction*	• *Smaller amounts of chemicals used means less to store, track, and clean up;* • *Smaller chemical amounts may mean more students can participate (groups of 2 instead of 4);* • *More experiments can be redone if mistakes should occur given their scaled down approach; and* • *Small amounts (droppers) of chemicals used in class may not pose as great a threat to health and safety as large amounts (bottles).*
Administrators and School Board Members	*Risk reduction, Cost savings*	• *Storing, using, and disposing of smaller amounts of less hazardous chemicals can significantly reduce risks to students and school staff;* • *Having to purchase and dispose of less chemicals saves money; and* • *Using and disposing of less hazardous chemicals and waste may help lower insurance and disposal costs.*

Some teachers who have adopted a green curriculum found that a good place to start is the microscale approach of using smaller quantities of chemicals in current classroom assignments. Work with department heads and teachers on how to make the microscale approach work for them. More complex changes to a curriculum along the lines of substituting new 'green' chemicals and introducing new labs or assignments may require permission and/or approvals beyond the department, so make sure that the appropriate administrators are involved in the decision-making process. You may find that curricula in your school are routinely revisited or revised each year. Discuss opportunities for incorporating elements of a green curriculum with the appropriate people whenever a school revisits a particular course of study.

Look to partners who may have experience with developing curricula, such as colleges and your state's Department of Education.



How should we design our green curriculum?

Because they are most familiar with the content and structure of the courses and the educational standards, teachers and department chairs are in the best position to determine how a curriculum can be made "greener." Members of the SC3 Team who work in a department where chemicals are being used are ideal candidates to champion the development of a green curriculum.

There are numerous ways to green the curriculum. Depending on the chemicals and processes involved, you may wish to start with one approach or a combination of approaches and build on as your green curriculum matures. Choose approaches that are best suited for a certain course or department, which may include:

- **Eliminating the use of specified chemicals.** Consider phasing out or stopping immediately the use of chemicals that pose a risk to the health and safety of the school. Some examples to check out are included below:
  - King County, Washington's Rehab the Lab
    - http://www.govlink.org/hazwaste/publications/highrisktable.pdf
  - American Chemical Society
    - http://membership.acs.org/c/ccs/pubs/NotInSecondarySchools.pdf

Use MSDSs to compare less hazardous alternative chemicals for potential substitution in a curriculum.

- **Reducing the quantity of chemicals used.** Adapting lesson plans to use smaller amounts of chemicals is a great way to reduce the amount of chemicals needed in storage, the quantity of waste produced in the classroom, and the level of chemical exposure students experience. See the text box entitled "An Effective Solution" below for additional information on using fewer chemicals in your school's curricula.

- **Using safer chemicals and practices.** Consider substituting your current chemicals with alternatives that are less hazardous and/or toxic. Also, researching alternative experiments, processes, and activities for courses and operational activities that incorporate the techniques mentioned above is a key part of both a greener curriculum and practicing more responsible chemical management. Some helpful resources to identify less hazardous, alternative chemicals (and processes) to adopt are listed below:
  - Massachusetts Institute of Technology's (MIT) Green Chemical Alternatives Purchasing Wizard
    - http://web.mit.edu/environment/academic/purchasing.html
  - Illinois EPA and WMRC's Greening Schools
    - http://www.greeningschools.org/

Check out Illinois EPA's listing of alternatives for devices containing mercury: http://www.epa.state.il.us/p2/green-schools/mercury-free-alternatives-for-schools.pdf.

Remember to keep administrators involved in the process, as appropriate. Administrators can assist with budget questions, purchasing procedures, and getting your green curriculum approved, if necessary. To give you an idea of what others are doing to 'green' school curricula, we provide a variety of Web links below organized by classroom subject.

An Effective Solution: Use Smaller Quantities of Chemicals

Adopting a microscale approach at first may be less expensive and easier to implement than redesigning a curriculum by eliminating experiments using dangerous chemicals or modifying experiments by substituting alternative green chemicals. However, some microscale practices may require new, specific equipment and thus, additional upfront costs. Teachers in each department will need to collaborate to identify where changes can be made to reduce risks, save costs, and maintain or enhance the educational experience.

Green Curriculum Resources for Different Types of Classes

Chemistry:

- http://www.govlink.org/hazwaste/schoolyouth/rehab/labs.htm
- http://www.state.tn.us/environment/sc3/greenchemistry.shtml
- http://academic.scranton.edu/faculty/CANNM1/dreyfusmodules.html
- http://fusion.stolaf.edu/gca/
- http://greenchem.uoregon.edu/gems.html
- http://www.deq.utah.gov/Schools/pollution_prevention.htm
- http://www.epa.gov/greenchemistry/pubs/educat.html

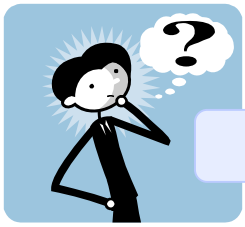
Biology:

- http://www.greeningschools.org/resources/view_cat_teacher.cfm?id=2
- http://www.govlink.org/hazwaste/publications/rehabbio.pdf
- http://www.chem.harvard.edu/resources/green_labs/index.php

Art:

- http://www.greeningschools.org/resources/view_cat_teacher.cfm?id=1
- http://www.environmentaldefence.ca/toxicnation/artist/index.htm
- http://www.c2e2.org/arts_workshop_05/princeton_pdf.pdf
- http://www.uic.edu/sph/glakes/harts1/HARTS_library/substitutes.tx
- http://www.watoxics.org/safer-products/choosing-safer-products-art-and-craft-supplies
- http://www.deq.utah.gov/Schools/appendix1_resources_contacts.htm

Roll Out Your Green Curriculum



How do we incorporate green curricula into our classes?

Curriculum changes can start small and evolve over time. A teacher may decide to introduce a few experiments or activities gradually in their class(es) as they have the time and resources. Depending on the changes made to the curriculum, it may be necessary to modify chemical purchasing practices, and/or purchase new equipment.

One way to introduce a curriculum is by conducting a "pilot" to refine the techniques in one class before implementing the green curriculum in other classes. For example, a large school with multiple chemistry classes may want to roll out the new curriculum in a single class instead of changing practices in all classes at the same time. In a small school with only one class targeted for a green curriculum, a pilot may consist of simply going forward with a subset of the planned lab changes instead of implementing the full curriculum for the class term. Piloting a green curriculum can help your department to:

- Adjust the quantities of chemicals being used;
- Test new equipment and chemicals; and
- Get feedback from students.

Once you determine when a new curriculum will begin, give a heads-up to the school's purchasing agent. You don't want to buy chemicals that you'll be phasing out!

As a new curriculum is implemented, remember to keep track of changes to show the benefits associated with 'greening' your teaching methods. For example, try to track the following:

- The amount of chemicals used each class term;
- The number of harmful or hazardous chemicals no longer used/purchased;
- The amount of waste generated; and
- The costs or cost savings for each class term.

Using different chemicals and chemical quantities will require a shift in purchasing procedures. By working with your SC3 Team, teachers, administrators, and purchasers you can align chemical purchasing with green curriculum changes. Remember to factor in disposal costs when considering the purchase price of chemicals. The cost of disposal for unneeded chemicals is likely to be greater than the savings from buying in bulk.

Tip: Look to Teachers Who Have Adopted a Green Curriculum

There is a lot to be learned from those who have already tried something new. The SC3 Team may be able to help by identifying teachers at other schools who may be willing to share lesson plans and lessons learned in rolling out green curricula in their classrooms. You could also post an inquiry at an online discussion forum for teachers.

Summary

As you went through this chapter, you worked through a list of six (6) activities and projects to help you successfully put your SC3 program into action. Here, in summary, is the list of them:

Activity #	Description

Program Management

1. Begin to put your SC3 program into action;
2. Establish and modify existing chemical management procedures; and
3. Train appropriate groups on responsible chemical management.

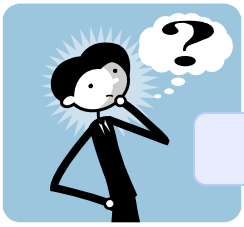
Project #

Special Chemical Management Projects

1. Perform an inventory of all chemicals and chemical products;
2. Secure a chemical cleanout professional; and
3. Implement a green curriculum.

This fourth chapter helped you to carry out your SC3 program and undertake some vital chemical management projects. The next section (Chapter 5) will assist you in continuing to evaluate and sustain your SC3 program.

Note: We plan to add more activities and projects to this Chapter in the future. If you have questions about this chapter that you would like to discuss, refer to the SC3 Web site's "Where you live" page for the appropriate contact for your state that can help you. The SC3 Web site is an excellent source of additional information, as are the resources listed at the end of this document.



Additional Tools and Examples

This section of the chapter contains helpful links to conduct further research, a sample RFP, and exhibits and worksheets to help you work toward getting your SC3 program in place:

Click on the "Resources" section of EPA's Schools Chemical Cleanout Campaign Web site and then go to "Developing a Chemical Management Program" for additional help on:

- Regulatory Requirements
- Chemical/Disposal Inventories

Worksheet #	
4-1	Identify Low Cost, Quick Fixes to Chemical Management Situations
4-2	Identify SC3 Priorities for the First Year
4-4	Measuring Behavioral Change
4-7	SC3 Training Topics by Targets Audience
4-9	Post-Inventory Evaluation of your Chemical Management Situation
4-10	Chemical Disposal List

Exhibit #	Title
4-11	Sample RFP
4-12	Vendor Qualifications
4-13	Sample Price Quote
4-14	Examples of Cost Saving Techniques

Worksheet 4-1: Identify Low Cost, Quick Fixes to Chemical Management Situations		
Issue/Area of Need	Solution	What is Needed

Worksheet 4-2: Identify SC3 Priorities for the First Year			
Activity	Resources Needed	Priority	Makes Progress Toward which Goals

Worksheet 4-4: Measuring Behavioral Change			
Original Behavior (before program)	Behavior After 3 Months of Implementation	Desired Behavior	Benefit/Improvement

Worksheet 4-7: SC3 Training Topics by Target Audience					
Training Topics	Target Audience				
	Teachers	Custodians	Administrators	Purchasers	Students

Worksheet 4-9: Post-Inventory Evaluation of your Chemical Management Situation		
Question	Status	Action Taken
How many chemical containers are: 1) Unlabeled? 2) In poor condition? 3) Expired? 4) No longer used or essential? 5) Unsecured?	1) 2) 3) 4) 5)	
How much of the following chemical do I use every year? ➢ ➢ ➢	➢ ➢ ➢	
Given the amounts above, how many years worth of chemical do I currently have?	➢ ➢ ➢	

Worksheet 4-10: Chemical Disposal List							
Chemical Name	**CAS Number**	**Concentration**	**Exp. Date**	**Amt. & Size of Container for Disposal**	**Type of Container**	**Amount (est.)**	**Storage Location**

All RFPs should go through your legal department and be tailored to meet your specific requirements.

Exhibit 4-11: Sample RFP

ABC Regional Education Unit
123 Main St.
Anywhere, PA 16412

Hazardous Chemicals Collection and Disposal 2005-2006

BID SPECIFICATIONS

1. Scope of Services

The Contractor shall provide all of the following services where required for all generating sites:

- **Identification** – The Contractor must be able to identify and dispose of all known and unknown hazardous waste chemicals. If an unknown chemical is not identified, it shall be considered as "hazardous" for the purposes of transportation and disposal.

- **Packing** – The Contractor must sort and package all waste chemicals according to USDOT, USEPA, OSHA and PADEP regulations.

- **Transportation** – The Contractor will provide all proper transportation, labeling, manifests, and documentation according to all state, USDOT and USEPA regulations.

- **Treatment and Disposal** – The Contractor shall provide or arrange with a subcontractor, as approved by the Intermediate Unit, for the proper treatment and disposal of all hazardous waste chemicals. The first options would be to recycle, refine, or recover the waste for reuse so that new raw materials are not required and so that waste pollutants never reach the land, the water, or the atmosphere, and resources are conserved. The second option would be to treat the waste to reduce its toxicity and its potential for harming the environment. The third option is disposal by landfill or incineration with proper disposal of the residual ash. No wastes should be directly landfilled except those without specific available treatment technology. The Contractor shall also submit a chain of custody form for each hazardous chemical, including a Certificate of Destruction, Disposal, or Recycling. The Contractor shall be required to provide compliance histories for the disposal facilities as well. The chain of custody form shall be substantially in the form attached to this bid specification.

- **Reconciliation** – The Contractor must provide a manifest sheet for each hazardous waste removed from each site within 60 days of removal (PCB and Dioxin wastes may require additional time). The Contractor shall also provide accurate invoicing that is generator site specific. Invoicing shall include:
  - All materials used at each site.
  - All applicable labor and transportation fees.
  - Transportation and disposal fees.

- **Compliance with Laws** – The Contractor, in the performance of the obligations of this bid specification and award, agrees to comply with all applicable federal and Pennsylvania regulations, specifically including regulations of the Pennsylvania Department of Transportation and the Pennsylvania Department of Environmental Protection.

The Contractor will only pickup the chemicals that are listed on the enclosed school inventory lists. No additional add-ins are to be collected and disposed of. If chemicals are picked up and disposed of that are not on the lists the cost for those chemicals will be the responsibility of the Contractor.

The Contractor will schedule all of the pickups at the participating schools in the most efficient manner possible, so that extra transportation costs are not incurred from backtracking. Pickups shall be scheduled with the principal that is provided on the school inventory lists.

2. Vendor Qualifications

Bids are designed to achieve the best price for a common commodity. However, due to the short and long term liability of the hazardous waste generator, vendor qualifications become a prerequisite. Any RFP for lab pack services shall include several qualifying requirements. Failure to comply with any of the required qualifications for any time during the contract shall result in termination of the contract.

Insurance

A qualified vendor must submit proof of the following insurance:

- **Contractor's Pollution Insurance** –Contractor shall have coverage of at least $2,000,000 that provides coverage for the services contemplated in the bid specifications.
- **General Liability Policy** – Contractor shall have coverage of at least $1,000,000 occurance/$2,000,000 aggregate. Contractor shall have XCU.
- **Contractor's Liability** – Contractor shall have coverage of at least $2,000,000.
- **Automobile Policy** – Contractor shall have coverage of at least $1,000,000. MCS90 enclosed.
- **Professional Errors and Omissions Liability** – Covers errors the contractors may make – applicable to unknown identifications; Contractor shall have coverage of at least $1,000,000.
- **Workmen's Compensation Insurance** – Covers all workers; Contractor must have coverage of at least $500,000 (federal minimum).
- **Transporter Pollution Liability** – Covers cost of spill cleanup during all modes of transportation; Contractor must have coverage of at least $5,000,000 (DOT requirement).
- **Pollution Legal Liability Insurance** – Covers immediate environmental damage to the disposal site; Disposal Facility must have coverage of at least $2,000,000.
- **Environmental Impairment Liability** – Covers long term environmental damage to the disposal site; Disposal Facility must have coverage of at least $5,000,000.
- **Indemnification** – Contactor shall provide indemnification to the Intermediate Unit and assume full responsibility and liability for all chemicals, including but not limited to spills, transportation, treatment and disposal, whether handled by the Contractor or its subcontractor. The ABC Regional Education Unit shall be named as additional insured for all policies.

Training

A qualified vendor shall have the following training:

- **Chemical Technicians** – All on site employees must have 40 Hour Health and Safety Training complying with 29 CFR 1910.120(e)(3)(i). This is an OSHA standard for lab pack work.
- **Truck Drivers** – All drivers must have the appropriate training required in 29 CFR 177 and 383. These are DOT standards for Hazardous Material Transporters.

Your organization may already have an RFP template you can use to get started! This will ensure you include references to all appropriate legal and/or regulatory clauses.

Compliance History

All bidding vendors must submit a detailed history of all citations for the last 5 years, including:

- **USDOT Compliance History** – A track record of highway safety;
- **USEPA Compliance History** – A record of environmental safety;
- **OSHA Compliance History** – A record of employee safety; and
- **TSDF Compliance History** – A record of inspections by state agencies and corrective action taken.

Reference to citations for the purposes of this provision shall include information concerning all notices of violation, civil penalties and assessments, criminal actions, and similar detailed history.

Permits

All bids must include all applicable permits for transportation, storage, and treatment for all disposal facilities including the final landfills.

Subcontractors

All subcontractors used must be listed and fulfill all vendor qualification requirements.

Hazardous Chemicals Collection and Disposal 2005-2006

Price Breakout

Colby Lake	$ _____
Colby Valley	$ _____
Copeland Central	$ _____
Carlisle	$ _____
East Middletown (2)	$ _____
Ellston County Vo-tech School	$ _____
Ft. Langley	$ _____
General Marston	$ _____
Ginley	$ _____
Hay Creek	$ _____
Mapleville	$ _____
McDouglas	$ _____
Merriweather	$ _____
North Cumberland	$ _____
Northeast Gains Academy (2)	$ _____
Newton	$ _____
Sage City	$ _____
Upland Marshall	$ _____
Van Buren	$ _____
TOTAL PRICE:	**$** _____

See Exhibit 4-3 for more details on cleanout costs you may want qualified professionals to estimate.

CHAIN OF CUSTODY/MANIFEST FOR HAZARDOUS CHEMICAL DISPOSAL

Generator School District Name and Building Address:

Description of the Hazardous Chemicals (Use additional pages as necessary):

Name of Chemical	No. of Containers	Type of Container	Total Quantity	Description

Generator School District Certification: I hereby declare that the contents of this consignment are fully and accurately described on the above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper conditions for transport by highway, rail or water according to applicable international and national government regulations.

Printed/Typed Name	Signature	Date

Transporter Acknowledgment of Receipt: I hereby declare that all of the materials identified hereinabove, except such discrepancies as noted hereinafter, have been received by me for proper disposal in accordance with applicable international and national government regulations. I certify to the generator that the contents of this consignment will be transported to a permitted or licensed facility for disposal, destruction, or recycling as permitted by applicable law and regulations.

Printed/Typed Name	Signature	Date

Discrepancy Indications Space (if none, write "None"):

Subcontracted Transporter Acknowledgment of Receipt: I hereby declare that all of the materials identified hereinabove, except such discrepancies as noted hereinafter, have been received by me, from the contracting party identified hereinafter, for proper disposal in accordance with applicable international and national government regulations. I certify to the generator and transporter that the contents of this consignment will be transported to a permitted or licensed facility for disposal, destruction, or recycling as permitted by applicable law and regulations. (Use additional pages, if necessary).

Contracting Party Name and Address (Please identify the individual agent or employee of the Contracting Party):

Printed/Typed Name	Signature	Date

Discrepancy Indications Space (if none, write "None"):

Disposal/Recycling Facility Acknowledgment of Receipt: I hereby declare that all of the materials identified hereinabove, except such discrepancies as noted hereinafter, have been received by me for proper disposal and/or recycling in accordance with applicable international and national government regulations. I certify to the generator that the contents of this consignment will be disposed, destroyed, or recycled as permitted by applicable law and regulations, in accordance with this facility's permit or license.

Printed/Typed Name	Signature	Date

Discrepancy Indications Space (if none, write "None"):

COMPLIANCE REPORT FORM

Compliance Background. (Note: Copies of specific documents, if applicable, must be made available to the Intermediate Unit upon its request.) List all documented conduct of violations or enforcement actions identified by the USDOT, USEPA, OSHA, PADOT, PADEP, pursuant to applicable law and regulations, terms and conditions of an operating permit or plan approval or order by Contractor or any related party, using the following format grouped by source and location in reverse chronological order. Attach additional sheets as necessary. See the definition of "documented conduct" for further clarification.

Date	Location	Plan Approval/ Operating Permit#	Nature of Documented Conduct	Type of Enforcement Action	Status: Litigation Existing/Continuing or Corrected/Date	Dollar Amount Penalty
						$
						$
						$
						$
						$
						$
						$
						$

List all incidents of deviations of the USDOT, USEPA, OSHA, PADOT, PADEP regulations, terms and conditions of an operating permit or plan approval or order by Contractor or any related party, using the following format grouped by source and location in reverse chronological order. This list must include items both currently known and unknown to the Department. Attach additional sheets as necessary. See the definition of "deviations" for further clarification.

Date	Location	Plan Approval/ Operating Permit#	Nature of Deviation	Incident Status: Litigation Existing/Continuing Or Corrected/Date

CONTINUING OBLIGATION. Contractor is under a continuing obligation to update this form using the Compliance Review Form if any additional deviations occur between the date of submission and the Intermediate Unit's action on the Contractor's bid.

Definitions:

"Related Parties" shall be the applicant and any general partner, parent, or subsidiary of the applicant or permittee for a plan approval or operating permit including a general plan approval and general operating permit.

"Documented conduct" shall mean any activity that occurred at a source owned or operated in Pennsylvania by the Contractor, permittee or a related party within 5 years prior to the date of submission of the compliance review form identified as a violation of the environmental laws, the regulations, a plan approval, permit or order issued by USDOT, USEPA, OSHA, PADOT, or PADEP. The term includes, but is not limited to, activities which are described in or the subject of the following: All Notices of Violation issued by the PADEP, USEPA, or OSHA or any other authorized enforcement or regulatory agency in Pennsylvania against the Contractor, permittee or related parties; All administrative orders, civil penalties, permit suspensions or revocations, and civil penalty actions issued by the PADEP, USEPA, or OSHA or any other authorized enforcement or regulatory agency in Pennsylvania against the Contractor, permittee or related parties; All consent decrees, consent orders and adjudications, consent order and agreements, consent assessments, letter agreements, stipulations or other settlements between the PADEP, USEPA, OSHA, or any other authorized enforcement or regulatory agency in Pennsylvania against Contractor, permittee or related parties; All Pennsylvania court proceedings, including proceedings before the Environmental Hearing Board, involving Contractor or related parties; All summary, misdemeanor, or felony convictions, or pleas of guilty or pleas of no contest that have been entered in Pennsylvania against Contractor or related parties pursuant to any environmental laws or regulations; and Any suspension, revocation or denial of reissuance of any operating permit issued to the Contractor or related parties pursuant to the environmental laws or regulations.

"***Deviations***" shall mean all activities that occurred at a source owned or operated in Pennsylvania by the Contractor, permittee or related party within the 5 years prior to the date of submission of the compliance review form that has not been formally documented by the PADEP, USEPA, OSHA or another authorized enforcement or regulatory agency in Pennsylvania which otherwise did not conform to the application law or regulations promulgated thereunder, plan approvals, permits or orders of the PADEP, USEPA, or OSHA. The identification of a deviation on a compliance review form does not constitute a waiver of a defense to liability under the law for the activity disclosed. The term includes, but is not limited to, the following: All unauthorized, accidental releases or emergency releases of hazardous chemicals into the environment; All malfunctions of equipment, the maintenance of which, is necessary to prevent such releases; All other deviations of the environmental laws, regulations, terms or conditions of operating permits or plan approvals and orders of any state or federal enforcement agency by the Contractor or any related party, whether or not these deviations have been documented.

I, _____, being duly sworn according to the law depose and state, under penalty of law as provided in 18 Pa. C.S. §4944, that I am the representative of the Contractor, identified above, authorized to make this affidavit. I further state that the information provided with this form, after reasonable inquiry, is true and complete to the best of my belief and that there are reasonable procedures in place to insure that documented conduct and deviations are identified and made part of the compliance review information contained in the Compliance Review Form.

***

Exhibit 4-12: Vendor Qualifications Checklist

Vendor Name:_____

Ensure that your vendor meets all applicable Federal, State and Local requirements before selecting.

The Vendor:

1) Can pack the chemicals? ☐
2) Can transport the chemicals? ☐
3) Can treat and dispose of the chemicals? ☐
4) Can reconcile the chemicals? ☐
5) Carries all of the proper insurance? ☐
6) Has chemical technicians that have proper training and certifications? ☐
7) Has truck drivers that have proper training and certifications? ☐
8) Can provide acceptable USDOT compliance history? ☐
9) Can provide acceptable USEPA compliance history? ☐
10) Can provide acceptable OSHA compliance history? ☐
11) Can provide acceptable TSDF compliance history? ☐
12) Has all the appropriate permits for transportation? ☐
13) Has all the appropriate permits for storage? ☐
14) Has all the appropriate permits for treatment and disposal? ☐

Exhibit 4-13: Sample Price Quote

Re: Disposal of *My High School's* Waste

Our company is pleased to submit a detailed quotation for the management, transportation and disposal of the hazardous materials located at *My High School*.

Given our understanding of the scope of work per the chemical inventory that was provided us, we present the following Price Estimation to complete this project.

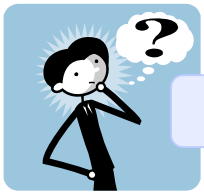
This estimate specifies the following services to be carried out and the requirements to be met:

- Materials will be classified and marked with a label giving the chemical name or composition, or the MSDS must be available. The cost for marking each container is $XX.00
- Materials will be segregated by compatibility, hazard class and disposal requirements. The cost for segregation of materials is $XX.00.
- Lab packing materials into drums and/or DOT approved over packing containers. The cost of lab packing each drum is $XX.00. Lab packs will be labeled to meet state and federal regulations.
- Completion of appropriate documentation, manifests, and shipping documents. The cost for preparing these documents is $XX.00.
- Lab packs will be transported to our facility for storage/transfer/processing for final disposal. The cost for these services is $XX.00.
- Materials that are not included in this price quote include: radioactive materials, shock sensitive compounds, biological wastes, explosives, and pressurized cylinders and/or gases unless otherwise stated in the attached Price Estimation.
- This proposal is valid for 45 days from the issue date.

Exhibit 4-14: Examples of Cost Saving Techniques

Technique	Type of Cost Savings	Real World Example
Leveraging a household hazardous waste (HHW) collection event for chemical disposal	Transportation and labor	The Tennessee Department of Environment and Conservation used an existing contract to do HHW collection and facilitate simultaneous cleanouts of school labs.
Use a knowledgeable partner to help identify substance(s) that can be safely disposed of without a hazardous waste contractor	Packing, labor, transportation, and disposal	The Northwest Tri-County Intermediate Unit in Pennsylvania leveraged the State environmental agency to review inventories and denote items that could be safely disposed.
Work with a partner organization to take advantage of an existing disposal contract	Disposal (lower rates)	In Iowa, in the early stages of their chemical management efforts, the Metropolitan Waste Authority partnered with EPA Region 7 to use existing chemical management services.
Incorporate performance-based contracting in your RFP	Disposal, chemical purchasing, future chemical management	A pilot program in Lansing, Michigan incorporated performance-based contracting clauses to encourage cleanout professionals to find ways to minimize costs while providing other chemical and resource lifecycle services.
Negotiate disposal rates by combining multiple cleanouts	Lower disposal rates and reduce cost for lab packing, labor, and transportation	Qualified school personnel in the Fort Worth, Texas Independent School District collected smaller amounts of waste from all district schools prior to one large consolidated disposal to save on transportation costs and negotiate a lower disposal rate per drum of hazardous waste.
Identify agency assistance for removal of radioactive wastes.	No-cost removal of radioactive chemicals	The Illinois Emergency Management Agency has launched a program to help schools safely dispose of radioactive materials. IEMA officials collect the materials and send them to a radioactive waste disposal facility. The Illinois program is one of several around the country; other states include Connecticut, Colorado and Vermont.
Research your chemical management regulations to identify potential ways to lower costs.	Reduced packing and transportation costs	Rochester City School District, New York environmental personnel talked to regulators about the amounts and types of chemicals that could be legally and safely transported by the school district to a proper disposal facility.

Chapter 5 - Sustain Your SC3 Program



What can I do to sustain my program?

Congratulations! Your SC3 program is off the ground and you are doing good things. Now the challenge is to sustain that success. An important part of maintaining a safe learning environment is to continue to follow responsible chemical management policies and procedures, and periodically evaluate program progress and make adjustments, as necessary. This chapter focuses on ways to keep your program current and ensure that those involved in chemical management continue to do the right things. The activities to sustain your SC3 program are:

Activity #	Description
1.	Evaluate and measure your program's progress, methods, and capabilities;
2.	Keep chemical management policies and procedures up-to-date;
3.	Conduct periodic training;
4.	Communicate progress and success to keep enthusiasm and awareness high;
5.	Maintain relationships with partners; and
6.	Estimate staffing and funding requirements and continue to look for new funding sources for ongoing SC3 activities.

Key to Sustained Success: Maintaining Chemical Inventories

No school wants to find itself in a situation requiring a significant chemical cleanout. A key to preventing a potentially dangerous chemical situation in your school is to keep tabs on the chemicals your school buys, stores, uses, and disposes. One way to do this is to keep your school's chemical inventory system up-to-date with information regarding:

- Location;
- Quantity;
- Condition; and
- Age of every chemical at your school.

You should periodically check that all components of your inventory are up-to-date and that the people managing it are functioning efficiently and effectively. In addition to preventing a potential costly cleanout, a comprehensive chemical inventory can help your school make more cost-effective and healthy purchasing decisions, as well as indicate if school policies are being followed. Finally, you should check to see that the school is continuing to evaluate the need for the chemicals and alternate ways of doing business.

ACTIVITY 1 – EVALUATE AND MEASURE YOUR PROGRAM'S PROGRESS, METHODS, AND CAPABILITIES

After initially putting your program into place, you should be prepared to evaluate the goals, strategies, and activities you originally developed for your program to determine if they need to be revised or expanded. You should evaluate all aspects of your SC3 program. This includes, but is not limited to:

- Evaluating how well you are doing according to your performance measures;
- Determining how effective your methods and approaches to issues have been in putting your program in place;
- Analyzing how well your strategies have worked in undertaking each activity;
- Identifying any success factors; and
- Recognizing the obstacles you have faced.

You can use the worksheets you created in Chapter 2 (Worksheet 2-1: *SC3 Activities and Performance Measures to Reach Program Goals* and Worksheet 2-2: *SC3 Progress Report*) and record progress made. If goals are on track or ahead of schedule, communicate this message of success to program participants to sustain the momentum of your program. Where you find that your actual results are behind your desired results, you should address the issues in more detail. To do this, Worksheet 2-4: *Identifying Potential Obstacles and Solutions* can be used to see if you and your team prescribed actions to prevent or remove obstacles. You should work with your team to evaluate how to deal with any existing obstacles and get progress back on track. It may be necessary to create a new plan to identify potential obstacles and solutions.

Tip: Use Software to Track SC3 Activities

Remember that EPA provides a valuable software tool that gives school districts the ability to evaluate and manage different aspects of their school safety and health issues, including chemical management. The Healthy School Environments Assessment Tool (HealthySEAT) is downloadable for use by school districts to perform analyses at the school and district levels and easily manage school specific conditions and progress. Be sure to visit the Healthy SEAT Web site at http://www.epa.gov/schools1/healthyseat/index.html

In addition to evaluating the progress of your program, you also should periodically review the goals you and your core team created. Evaluating the capabilities and objectives of your program is something that you should do on an annual basis, at a minimum. For existing program goals, some helpful resources to review and use are the following worksheets from Chapter 2:

- Worksheet 2-1: *SC3 Activities and Performance Measures to Reach Program Goals*;
- Worksheet 2-2: *SC3 Progress Report*; and
- Worksheet 2-4: *Identifying Potential Obstacles and Solutions*.

As your team evaluates school conditions and as the SC3 program matures, your team may want to set new goals. For example, some programs initially focus on only one or two aspects of the chemical management lifecycle, such as Purchasing and Storage, but once they address these topics, they are ready to move on to new challenges. Revisit your original evaluation of the school's chemical management situation (see Chapter 1 Worksheet 1-1: *Evaluating Your School's Chemical Management Situation, Policies, and Procedures*) and determine how and where to expand your

program's capabilities to address issues identified at the time. If you are adding new goals, use Worksheets 2-3: *SC3 Staffing Plan* and 2-5: *SC3 Labor Cost Estimate* to prepare budget requests, and assign new tasks to team members.

Also remember that:

- New performance measures may be necessary to better track progress toward your goals; and
- Many aspects of your program will be subject to changes of one type or another.

Your experiences should give you greater knowledge of and familiarity with the proper handling, use, and disposal of chemicals to make the school safer. This, in turn, should help you to shape and refine program goals to create a program that can sustain success over the long term.

Activity 2 – Keep Chemical Management Policies and Procedures Up-to-Date

From your core SC3 Team, you should assign one or two people to take the lead on reviewing and updating policies and procedures for responsible school chemical management.

To determine that chemicals in your school or district are being handled in the best possible way, you and your team should regularly evaluate your chemical management policies and procedures. Staying current with best practices and methods should help avoid potential risks and cleanouts in the future. In addition, someone on the team should keep current on state and federal regulations regarding the purchase, use, storage and disposal of the chemicals in your inventory.

How can I keep my chemical management policies and procedures up-to-date?

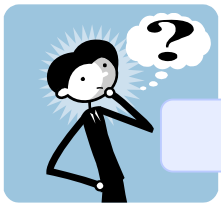
Whenever you update SC3 policies and procedures ask: "who needs to know about these updates?" Then let them know!

The long-term success of your SC3 program depends on being able to keep responsible chemical management policies and procedures up-to-date. Chapter 1 of this Workbook provides a worksheet for evaluating school conditions and practices that may need to be addressed by an SC3 program (Worksheet 1-1: *Evaluating Your School's Chemical Management Situation, Policies, and Procedures*). You may want to perform this self-evaluation activity at least once a year to improve your program and catch problems before they pose health and safety risks – make these SC3 self-evaluations a part of the way you do business.

Advances in school chemical management are likely to occur, so it's a good idea to keep up-to-date on new approaches that you may want to incorporate in your school's SC3 policies and procedures. Visit the SC3 Web site periodically for new tools and information, and consult your state's environmental agency to check if there are new or revised regulations. Also, use team members, partners, and other available resources with knowledge of chemical requirements to ensure that chemical procedures at your school or district are aligned with all appropriate regulations.

ACTIVITY 3 – CONDUCT PERIODIC TRAINING

Chapter 4 provided guidance on how to develop a chemical management curriculum and train those involved in the use and disposal of chemicals. To sustain the progress your program has made in changing attitudes and behaviors regarding responsible chemical management, it will be necessary to periodically train *new* school personnel and students, and conduct refresher training for those who have already been trained. Your team will need to periodically update the curriculum developed as part of Program Management Activity #3 in Chapter 4 so that it is current and reflective of the most current best practices. Refresher training should be conducted periodically, focusing on the most important principles and practices. Just like your initial training, refresher training can be done in formal or informal settings and should be tailored to meet the needs of your target audience(s).



What should our training program look like over time?

In launching your school's SC3 program, your team likely developed instructional materials and conducted *initial* training for those involved in chemical management. It will be necessary to periodically update the training program, as well as train new teachers, facilities personnel, and students to reflect new approaches and regulatory requirements. Even if they have already received training elsewhere, it will probably be a good idea for them to learn about the specific requirements in your district.

Informal training can be very effective. Look for opportunities to "piggyback" onto existing training forums or convey reminders when staff and teachers are actually using, storing and disposing of chemicals.

For those who have already been trained, you should conduct "refresher" training on the most critical topics. Refresher training is most appropriate for teachers and facilities personnel who already went through the initial training conducted when your school launched its SC3 program. You should provide practical information that staff can easily incorporate into their daily activities. A good way to develop 'refresher' training material is to take a look at the initial training conducted and focus on emphasizing the most important topics. You may also want to address areas where you have seen difficulties arise since the last training. Be sure to take into consideration any lessons learned and feedback you may have received after holding the initial training sessions. Most importantly, you should keep training information consistent and up-to-date to ensure that your target audiences are practicing responsible chemical management.

Key to Sustained Success: Ongoing Training Efforts

The Science Safety Project Committee of the Maryland Science Supervisors Association has developed a Science Safety Manual. The committee manual guides schools in making instructional decisions that would support improved performance for all students. The Manual communicates clearly the best safety practices in the science classroom and laboratory and provides guidelines for School Science safety, including guidelines for managing, handling, and disposing of hazardous chemicals. Read more at: http://www.mdk12.org/instruction/curriculum/science/safety/

The Kentucky Department of Education, in cooperation with the Center for School Safety, the State Fire Marshall, the Department of Health, Kentucky Occupational Safety and Health Program, the Kentucky Science Teachers Association, and a private laboratory safety consultant, created a CDROM-based tool. The CD promotes and ensures best practices, current information, and readily accessible resources and recommendations related to safety issues in the science classroom and laboratory. The CD also includes both professional and regulatory standards specifically for Kentucky teachers and students and provides practical resources for creating and maintaining a science safety plan, including a chemical management component.

As discussed in Chapter 4, students can have a role in responsible school chemical management too. Educating students generally centers on three areas: safety, chemical lifecycle management, and pollution prevention. Student chemical safety training primarily involves setting ground rules at the beginning of a course regarding the proper handling of chemicals. Common topics include:

- Raising awareness of hygiene, handling, and emergency procedures;
- Learning to properly use Personal Protective Equipment (PPE);
- Recognizing common safety symbols;
- Understanding materials safety data sheets; and
- Responding to a chemical accident.

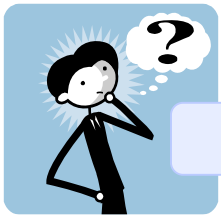
It is also important to involve students in the concepts of overall chemical life cycle management and pollution prevention. Some examples of topics to discuss with students are:

- The benefits of purchasing and using less hazardous and/or toxic chemicals;
- Safe storage practices;
- Designing experiments in a way that use smaller quantities of chemicals; and
- Proper disposal procedures.

On those days in which chemicals are in use, teachers can give helpful reminders when describing the daily lesson. This kind of informal training is cost-effective and easily incorporated into school operations. Your team should refer back to the specific training content identified for target audiences (See Exhibit 4-7) to get an idea of what topics to include in refresher courses.

ACTIVITY 4 – COMMUNICATE PROGRESS AND SUCCESS TO KEEP ENTHUSIASM AND AWARENESS HIGH

Communicating SC3 accomplishments is a great way to bolster commitment to responsible chemical management. If you have a good story to tell, you should convey it in public forums, school staff/management meetings, and widely circulated newsletters.



Is communicating program progress important to sustaining success?

Absolutely. Initial SC3 communications efforts aim at *getting* people involved. Once a school's SC3 program is up and running, the challenge is *keeping* people involved and maintaining good habits regarding responsible school chemical management. A successful program is important to sustaining management support. It might be beneficial to retain detailed information regarding your program, in case a change in management or budgeting occurs. Some examples of information to keep as records might be:

- Yearly progress reports;
- Performance measures;
- Expenditures and other budgetary data; and
- Inventories of equipment and supplies.

You should consider maintaining a "days without a chemical problem" sign in the teachers' lounge. Most industrial plants prominently display similar signs as a daily reminder and to instill pride in making the work environment safe.

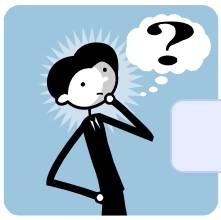
Having documentation of how your program functions and what it has accomplished is good for instances where you should "sell" the effectiveness and benefits of your program. Maintaining contact with local media outlets and community members should also give you an opportunity to announce any changes or successes in your school or district.

In addition, you should continue to cultivate good relationships with current partners to keep them committed to providing expertise and assistance. Furthermore, if you find that your program's needs aren't being met or you've expanded your program's capabilities and developed new needs, it may be necessary to find and involve new partners to provide support (e.g., a local university may be helpful to your school's efforts to develop a new chemistry curriculum). You should refer back to Chapter 2 for guidance on approaching potential partners and acquiring their support.

An effective way to sustain senior management backing is to give them a chance to speak with the media during publicity events.

ACTIVITY 5 – MAINTAIN RELATIONSHIPS WITH PARTNERS

Open communication and frequent recognition are key for encouraging partners to continue assisting your school's SC3 program. Keeping partners aware of your school's plans will help them understand the next steps in improving your program and how they can provide expertise and resources to ensure progress is made in keeping your program up-to-date.



How do I maintain an effective ongoing relationship with my partner?

As we've mentioned before, it is possible that your school will not have all the expertise or the time to undertake the different aspects of chemical management. Therefore, it is likely that partnerships will be critical to sustaining your SC3 program year after year.

In Chapter 2 Activity 7: *Enter into Partnerships* (page 2-15), we briefly outline some of the factors your SC3 Team should consider to keep your partner relationships healthy. Consider the following recommendations to help maintain an effective working relationship with your partner(s):

- Keep open communication. Staying in contact with your partner is very important as the program progresses. Agree on how often you should meet or have phone calls. It is especially important to communicate with partners well in advance concerning upcoming events with which they should be involved. Be sure to keep partners updated about any changes that may affect your school's SC3 program, including priorities, budgets, or roadblocks, as a partner may be able to fill a need when it arises.
- Re-evaluate the partnership and make adjustments. Even if you have not entered into an official partnership agreement, the SC3 Team should plan on periodically meeting with partners to revisit commitments and accomplishments, as well as share upcoming plans, to gauge a partner's continued interest in helping the school.
- Work with partners to identify additional help. Current partners can be very helpful in reaching out to other potential partners. Talk with your partners about contacts they may have with other organizations that can help your school.
- Discuss national partnership opportunities. You may find that a partner wants to make a greater commitment to helping SC3 programs. Be sure to inform them of the opportunity to become a national partner with EPA.

Remember, you can look to partners and vendors to provide the following kinds of assistance:

- Performing a periodic evaluation of your school's chemical inventory and storage areas (see Chapter 1);
- Performing, if necessary, chemical cleanout and disposal services (see Chapter 4);
- Providing information about advances in microscale or green curricula (see Chapter 4);
- Providing information about new developments in responsible chemical management; and
- Conducting training and refresher workshops.

Key to Sustained Success: Ongoing Partner Assistance

The Jefferson County Local Emergency Planning Committee (JCLEPC) provided assistance to Colorado public schools by developing policy guidelines for procuring environmentally preferable chemicals to help curb the use of toxic chemicals in chemistry lab exercises. JCLEPC will also develop training and policy guidelines that can be adopted statewide.

The Illinois Environmental Protection Agency's (IEPA) Office of Pollution Prevention delivers a workshop modeled for science teachers. By sending a teacher to the workshop, the participating school can receive a free pickup of hazardous school waste through the IEPA. The workshops themselves offer information on several issues, including:

- Methods of teaching with non-toxic and less hazardous materials in science classes;
- Safe storage practices for hazardous materials; and
- Procedures for disposing of hazardous materials.

Activity 6 – Estimate Staffing and Funding Requirements and Continue to Look for New Funding Sources for Ongoing SC3 Activities

To ensure that the different aspects of your program have the support they need, you and your team should determine the funding and labor costs necessary to maintain your SC3 program on a yearly basis.

What kind of funding do I need to maintain my SC3 program?

By this time, you have put a well thought out program in place that addresses responsible chemical management. Through this process, you have planned and budgeted SC3 program activities to most effectively and efficiently achieve your goals. By doing this, you have taken proactive steps to minimize the cost of maintaining your program. The purpose of an SC3 program is to make responsible chemical management a part of day-to-day operations in your school. Ideally, there should be a level cost to operate and maintain your SC3 program. Each year, the SC3 program manager should estimate the hours and budget required to do the following:

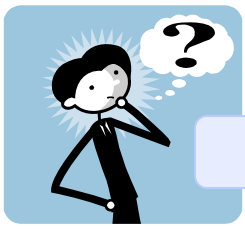
- Re-evaluate and update chemical management policies and procedures;
- Further develop and evaluate the effectiveness of training curricula;
- Update and evaluate the functioning of the inventory system; and
- Properly dispose chemicals that are no longer needed.

Your school's budget may not cover all the costs of maintaining responsible chemical management. We have provided examples of methods for potentially procuring funds to sustain your SC3 program:

- The Local Hazardous Waste Program in King County's Rehab the Lab program in King County, Washington, offered assistance, free of charge, to King County schools to manage their hazardous chemicals. The cost was $560,000 over a four-year period and was primarily funded by surplus sewer and garbage collection fees. In addition, the state provided matching grants to cover the cost of the initial site audit, collection and disposal costs, and teacher training.

- Kansas Department of Health and Environment (KDHE) launched Kansas's Lab Chemical Sweep to offer a free, one-time collection of obsolete or unwanted potentially hazardous chemicals. Funding for the program originated from the $1.00 per ton solid waste tipping fee paid to the state for all waste disposed of at landfills.

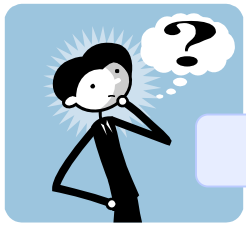
Remember to keep in mind the costs of any new or expanded SC3 program activities. If you only developed a few components of your program at a time, costs for adding components and improving your program should be considered.



Summary

The activities to sustain your functioning SC3 program are:

Activity #	Description
1.	Evaluate and measure your program's progress, methods, and capabilities;
2.	Keep chemical management policies and procedures up-to-date;
3.	Conduct periodic training;
4.	Communicate progress and success to keep enthusiasm and awareness high;
5.	Maintain relationships with partners; and
6.	Estimate staffing and funding requirements and continue to look for new funding sources for ongoing SC3 activities.



Additional Tools and Examples

Here are some links from the SC3 Resources Web site, where you can find other valuable information and tools: http://www.epa.gov/epaoswer/osw/conserve/clusters/schools/resources.htm

General School Resources

- SC3 Tool Kit
- Evaluation of Results from EPA's Schools Chemical Cleanout Campaign
- Protecting Health and the Environment at K-12 Schools, Including Art Programs
  - Environmental Compliance and Best Management Practices: Guidance Manual for K-12 Schools
  - Environmental Health & Safety in the Arts: A Guide for K-12 Schools, Colleges and Artisans
- Healthy School Environment Resources
- Healthy School Environments Assessment Tool (HealthySEAT)
- National Institute of Health (NIH) Mad as a Hatter Mercury Abatement Campaign
- Children's Health Protection
- Healthy Schools for Healthy Learning
- Health and Safety Guide for K-12 Schools in Washington
- Tribal Schools Compliance Assistance Notebook
- EPA's Schools and Mercury Web site
- EPA Schools Web Portal

Developing a Chemical Management Program

General Chemical Management Program Resources:

- CPSC and NIOSH School Chemistry Laboratory Safety Guide
- Chemical Management Resource Guide for School Administrators
- Idaho's Department of Environmental Quality's Waste Management Educational Tools: Chemical Roundup
- Pollution Prevention Measures for Safer School Laboratories
- The Los Angeles Unified School District (LAUSD) Office of Environmental Health and Safety (OEHS)
- Lansing Michigan School District Case Study

- Rehab the Lab
- Colorado Department of Public Health and Environment: Guidance on Chemical Management in Schools

Chemical Inventory:

- Montana DEQ School Labs: Evaluating School Lab Chemicals
- Florida SC3
- The State of Tennessee's SC3 Inventory Procedures Web site

Material Safety Data Sheets (MSDS):

- The NIOSH Pocket Guide to Chemical Hazards
- Where to Find MSDS on the Internet

Regulatory Requirements:

- A List of State Environmental Departments
- Occupational Exposure to Hazardous Chemicals in Laboratories
- EPA's Hazardous Waste Generators
- Lab Waste at Educational Institutions
- Environmental Management Guide for Small Laboratories

Chemical Use and Management

Green Cleaning:

- EPA's Environmentally Preferable Purchasing (EPP)
- Green Janitorial Products and Services
- Green Cleaning Pollution Prevention Calculator
- Guide to Green Cleaning: Healthier Cleaning & Maintenance Practices and Products for Schools
- New American Dream Clean Schools
- Household Products Database
- Western Regional Pollution Prevention Network: Janitorial Products Pollution Prevention Project
- INFORM's Cleaning For Health: Products and Practices for a Safer Indoor Environment
- Association for Professionals in Infection Control and Epidemiology (APIC) Guideline for Selection and Use of Disinfectants

Integrated Pest Management:

- Integrated Pest Management in Schools

- National School IPM Information Source

Greening Labs and Lesson Plans:

- Green Chemical Alternatives Purchasing Wizard
- Green Chemistry Experiments for High Schools
- Green Your Lesson Plans
- Least Toxic Chemistry Labs: King County, Washington
- Green Chemistry Institute: American Chemistry Society
- National Microscale Chemistry Center
- Science Safety Information Guides

School Nurses:

- Children's Health: Safe Workplaces and Healthy Working Places, Environmentally Healthy Schools
- EnviRN
- The National Association of School Nurses Position Statement on Environmental Impact Concerns in the School Setting

Communication

Brochures:

- Chemicals in Schools: Partner for Healthy School Environments
- Chemicals in Schools: Solutions for Healthy School Environments

Public Service Announcements:

- Is Chemical Safety Part of the Equation?
- You Work Hard to Keep Your Students Safe from Bullies and Drugs. But What About Chemicals?

Presentations:

- Chemical Safe Schools in Rhode Island (PDF)
  - PowerPoint Version
- Improving Chemical Management in Maine Schools (PDF)
  - PowerPoint Version
- No More " Methyl Something": Improving Management of Curriculum Chemicals in Schools (PDF)
  - PowerPoint Version
- Planning for Environmental Health and Safety Issues in Schools (PDF)
  - PowerPoint Version

Why Become Involved in School Chemical Management?

Your organization can play an important role in addressing a critical health and safety issue facing many schools: chemical management. EPA has launched a national Schools Chemical Cleanout Campaign (SC3) to address this issue. Critical to success of local SC3 programs in schools is the contribution of expertise and resources from organizations like yours.

Chemicals are found throughout schools, and when handled responsibly, are useful and necessary educational tools. They allow students to conduct experiments in the lab, create works of art in the studio, and restore vehicles in the automotive shop. However, when chemicals are improperly managed they can pose risks to students, staff, and the environment, as well as cause lost school days. Potential chemical hazards such as explosives, toxics, and cancer causing agents can be found in science classes, vocational and trade shops and visual arts studios. Chemicals like formaldehyde, cadmium, and mercury may be present in classrooms or maintenance areas, cafeterias, nurses' offices, school grounds, and athletic fields.

Because you are reading this, your organization most likely has an interest in becoming involved in helping schools responsibly manage their chemicals. By assisting schools with their chemicals, your organization can help prevent fires and spills, protect the environment, avoid lost school days, and most importantly, protect the health and safety of children and school personnel in your community. By partnering with a school, EPA, or state agency, your organization can make a difference in the lives of many.

WHAT ARE THE BENEFITS OF BEING A PARTNER IN SCHOOL CHEMICAL MANAGEMENT?

Becoming an SC3 Partner is a win-win proposition for you and the schools you assist. Your organization can benefit from becoming involved in school chemical management in the following ways:

Benefits to a Partner Organization

- Organizational pride and satisfaction from improving school health and safety.
- Enhanced image as a leader in the community.
- Recognition that comes with being part of a federal campaign that has the backing of the EPA and other agencies.
- Heightened organizational visibility via recognition on high-traffic Web sites, in the media, and at recognition events.
- Eligibility for credit for EPA's Performance Track program (if applicable).

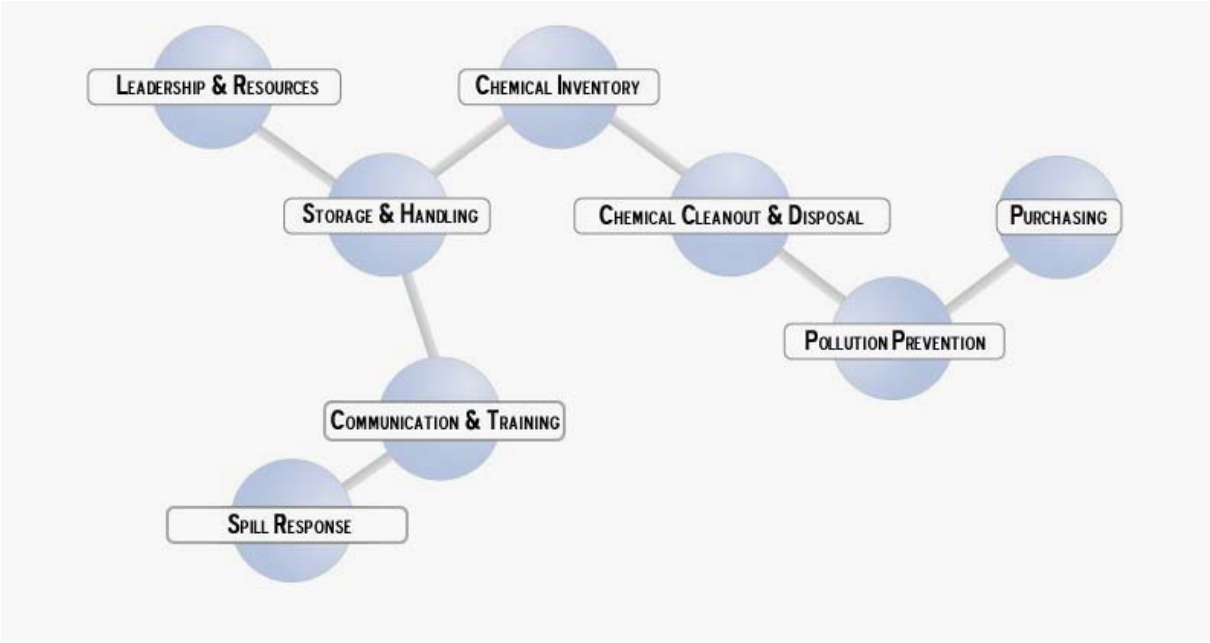
More details on the benefits of becoming an SC3 Partner follow. First, let's examine the value your organization can bring in the growing campaign to improve school chemical management.

Why Become Involved in School Chemical Management?

How can your organization improve chemical management in schools?

Many schools or districts do not have the necessary experience and resources to develop and sustain a responsible chemical management program. That's where organizations like yours can step up and help make a positive difference in schools. Your organization can be part of a team made up of schools, school districts, other SC3 Partners, states, EPA and others, all representing a wide variety of expertise and sharing an interest in safe schools. Partners, each with discreet responsibilities, are vital to successfully designing, initiating, and maintaining a comprehensive and responsible chemical management program.

The graphic below illustrates the key elements of a successful SC3 program. These are areas and issues a school or district may require your organization's expertise and experience to address. *Please note the components and functions represented here are in no particular order. While some of these themes may be related, the connections portrayed are random and do not imply any dependency*



Examples of activities that current SC3 Partners are performing or participating in include:

- Conducting cleanouts of outdated, unknown, or unneeded chemicals;
- Performing chemical inventories;
- Developing a chemical management plan;
- Providing technical expertise for unfamiliar processes (e.g., requests for proposals or writing contracts);
- Establishing a system to track the purchase, storage, and disposal of chemicals;
- Developing performance goals and measures to gauge chemical management success;
- Developing and conducting chemical management training; and
- Recruiting other organizations to become partners and help achieve program goals.

Why Become Involved in School Chemical Management?

How can my organization benefit from partnering with a school?

Your organization is an essential part of a community. By teaming up with a local school and other organizations that care about children, you will be demonstrating your leadership and your concern for that community. There are a number of ways a school or school district may publicly recognize your organization's efforts to make schools safer:

- Presenting an award to a partner at a public ceremony or school board meeting;
- Drafting a press release or contacting local media outlets to inform them of a partner's efforts;
- Publicizing a partner's assistance in a school newspaper or Web site; and
- Informing the U.S. EPA of a partner's successful collaboration.

Different schools will have different approaches to recognizing partners. Once you find a school to help, your organization can discuss more specifically how the school may publicly recognize your contributions. See Chapter 4, page 4-13 of this SC3 Workbook for an example of a press release a school might use to recognize your organization's efforts.

How can my organization benefit from partnering with EPA?

In addition to partnering locally with a school or district, EPA encourages you to consider signing an EPA SC3 Partnership Agreement[1]. This agreement can echo the terms of a partnership with an individual school, and also define the terms and conditions for participating in other SC3 projects. EPA helps partners find schools and offers guidance on how to work effectively with schools. The agency also offers a number of ways in which they can recognize a partner's efforts:

(1) SC3 Individual Partner Press Event

Organizations can sign an SC3 Partnership Agreement (note: a blank agreement is provided at the end of this appendix). This agreement indicates that your organization is committed to promoting responsible chemical management in K-12 schools. EPA will recognize your commitment to promoting responsible chemical management in K-12 schools by presenting your organization with a plaque at a recognition event that will include the press and other media.

From left to right: Deborah Edwards, Deputy Director, Office of Safe and Drug Free Schools, US Department of Education; Jennifer Abril, Director, ChemStewards, SOCMA; Susan Bodine, Assistant Administrator, OSWER, EPA

(2) SC3 Partner Recognition Web Site

Your organization will also be added to the Partners Page on the SC3 Web site as an official national partner. Once you have worked with the school or school district and have results to share, a success story about your partnership will be posted on the EPA Web site so other schools, partners, and the public can learn about your achievements.

(3) SC3 Recognition Events

EPA routinely holds recognition events to recognize schools and partners. In 2007, when the national SC3 program was launched, EPA held two national press events to recognize SC3 Partners. EPA has plans to hold similar events in the coming years.

[1] http://www.americanchemistry.com/s_rctoolkit/sec.asp?CID=1819&DID=6828

Why Become Involved in School Chemical Management?

(4) SC3 Partner Network

As an SC3 Partner, your organization becomes part of a national network of companies, federal, state and local agencies, national organizations, and EPA. These organizations have committed to facilitating responsible chemical management in K-12 schools. Through this network you have the opportunity to learn about and share best practices and solutions to overcoming barriers and issues in SC3 partnerships, programs, and projects. SC3 Partners will also have the opportunity to build valuable business relationships with other partners. Periodic SC3 Partner Meetings that include other partners, EPA, and other agencies will give you a chance to provide input to the EPA on the direction of the national SC3 program.

(5) Trade Journal Articles

SC3 has placed articles about the program in trade association journals. EPA will work with your organization to incorporate your contributions into these articles.

From left to right: Elin Miller, Regional Administrator, Region 10; Kolin Anglin, President, NAHMMA; Deborah Edwards, Deputy Director, Office of Safe and Drug Free Schools, US Department of Education; Susan Bodine, Assistant Administrator, OSWER, EPA

PRESS RELEASES FOR EVENTS THAT INCLUDED PARTNERS:

EPA Calls for Partnering on School Chemical Safety

No Recess for School Chemicals

Why Become Involved in School Chemical Management?

Once you decide to enter a partnership, there are some key steps you need to take before getting started. Refer to the "How Do I Get Involved in a School Chemical Management Project" section of this appendix for more information on how to get started on helping out schools and districts in your area.

Background on EPA's Performance Track Program

EPA's Performance Track Program recognizes environmental excellence by encouraging facilities with strong environmental records to go above and beyond their legal requirements. The Performance Track program recognizes SC3 partnerships as credit for meeting the renewal requirements. To qualify for membership renewal, a facility (or organization) must meet all of the criteria required for entrance into the program. In addition, the facility must demonstrate good-faith improvement toward meeting its environmental performance goals. Check out the examples below for more information on how partnering with a school can benefit your organization.

DESCRIPTION OF A SAMPLE ALTERNATE GOAL INVOLVING SC3 UNDER PERFORMANCE TRACK
http://www.epa.gov/performancetrack/program/sample_altcomm.htm

EXAMPLE OF ONE COMPANY USING SC3 AS A PERFORMANCE TRACK ALTERNATE GOAL
https://yosemite.epa.gov/opei/ptrack.nsf/vRenewalViewPrintView/D5F924FC36CAB985852572F8005C924A

Why Become Involved in School Chemical Management?

How Do I Get Involved in a School Chemical Management Project?

Regardless of whether a school or school district has already launched an SC3 program or is simply interested in improving its chemical management situation, you can work with school officials to figure out how to best support their efforts. The first step is to get your management to determine the level of support that your organization is willing to provide. The next step is to identify a school or school district that could use your assistance, and determine the kinds of projects in which your organization can play a role. EPA can help you identify schools in your area, offer guidance on how to work with schools on SC3 projects, and recognize skills and resources within your organization that would be useful to a school's chemical management program.

WHAT ARE SOME THINGS TO THINK ABOUT WHEN APPROACHING MANAGEMENT?

Before approaching a school or school district, you will likely need to get management approval. Your management will need to decide whether school chemical management is an area in which it would like to volunteer staff time and expertise. If the answer is 'yes', then you will want management to focus on the types and level of support your organization is prepared to offer (e.g., time, money, resources). This will allow your organization to approach a school with a clear idea of what it is willing to do in an SC3 partnership. Regardless of the method you choose to approach and inform your management, there are a few topics you may want to cover with them:

- The ways your organization can benefit from getting involved in SC3;
- The benefits to the school, school district and community;
- The various ways your organization can help; and
- The level of investment your organization could make in SC3.

There are a few different ways that an organization can support a school or school district in SC3:

- Provide assistance through a single project with a defined start and end date, such as a chemical cleanout or a training;
- Provide ongoing sustainable support to the school through activities such as yearly responsible chemical management training for teachers and other staff; or
- Be available only in the event of an emergency or natural disaster.

Your organization may choose one or more of these paths over time. Regardless, ***any*** level of assistance your organization can provide will help to improve school safety.

Once your organization has decided to get involved in school chemical management, it's time to identify a school or school district to help.

Partnering with EPA to Address Chemical Management in Schools
When approaching your management regarding getting involved in school chemical management, consider how becoming a partner in EPA's national SC3 program might be of interest to your organization. Refer to Part 1 of this Appendix, *Why Become Involved in School Chemical Management?,* for a listing of the benefits of partnering with EPA.

HOW DO I GET STARTED?

Your organization may have an existing relationship with a school(s) that can be used to get started with helping responsibly manage chemicals. In addition, you should contact the EPA SC3 Account Manager responsible for your region to enlist their help in finding a school or school district with which to work. The table below provides a listing of EPA SC3 Account Managers to contact for answers to questions about SC3 and how your organization can get involved with a school on an SC3 project.

EPA Points of Contact on the Schools Chemical Cleanout Campaign (SC3)
By Geographic Region

Kristina Meson	Eileen Naples	Cyndy Merse	Rhonda Minnick
Meson.kristina@epa.gov	Naples.eileen@epa.gov	Merse.cynthia@epa.gov	Minnick.rhonda@epa.gov
703-308-8488	703-308-0216	703-308-0020	703-308-8771
EPA Region 2 New Jersey New York Puerto Rico US Virgin Islands 7 Tribal Nations	EPA Region 1 Connecticut Maine Massachusetts New Hampshire Rhode Island Vermont Tribal Nations	EPA Region 4 Alabama Florida Georgia Kentucky Mississippi North Carolina South Carolina 6 Tribal Nations	EPA Region 3 Delaware Maryland Pennsylvania Virginia West Virginia District of Columbia
EPA Region 6 Arkansas Louisiana New Mexico Oklahoma Texas 65 Tribal Nations	EPA Region 10 Alaska Idaho Oregon Washington Pacific Northwest Indian Country	EPA Region 5 Illinois Indiana Michigan Minnesota Ohio Wisconsin 35 Tribal Nations	
EPA Region 7 Iowa Kansas Missouri Nebraska 9 Tribal Nations	EPA Region 8 Colorado Montana North Dakota South Dakota Utah Wyoming 27 Sovereign Tribal Nations	EPA Region 9 Arizona California Hawaii Nevada Pacific Islands Over 140 Tribal Nations	

In addition to the above contacts, there is a SC3 contact in each region who knows about schools that can use your assistance. The contact information for each region can be found at the "Where You Live" page on the SC3 Web site:
http://www.epa.gov/epaoswer/osw/conserve/clusters/schools/live.htm

HOW WILL EPA AND MY ORGANIZATION WORK TOGETHER?

EPA will work with you to answer your questions and help your organization get involved in a school SC3 project that fits well with your capabilities. EPA provides information resources and guidance on various chemical management topics on the SC3 Web site. You can also contact an EPA Account Manager or a regional SC3 lead for help with the following:

- Identifying schools which may need assistance;
- Brainstorming ways your organization can assist a school; and
- Forming teams to make the project a success.

When you contact the EPA SC3 Account Manager or a regional SC3 lead, there are a few questions they may ask to assess how your organization can be of greatest assistance to a school (see below). Some of these questions are good ones to pose to your management as you brainstorm how the organization will get involved in SC3.

Potential Questions When Considering A School Chemical Management Project	
1. Where is your organization located?	
2. Has your organization ever worked with a school or school district? If so, might you want to work with them again?	
3. What type of expertise can you offer to a school?	
a. Chemical inventory? Cleanout? Disposal?	
b. Providing chemical management training?	
c. Providing emergency chemical management services to a school or school district?	

Potential Questions When Considering A School Chemical Management Project	
d. Writing contracts or request for proposals for school cleanouts?	
e. Enlisting other partners/building a partnership team?	
4. Does your organization belong to another EPA program such as Performance Track or the National Partnership for Environmental Priorities?	

Communicate openly with EPA about the types of assistance your organization can provide and any reservations that you may have. EPA SC3 Account Managers and regional SC3 leads are skilled at matching a school's needs with an organization's capabilities, and in finding other partners to complement your organization's role on a school project.

If your organization decides to become an EPA partner, you will be asked to sign an SC3 Partnership Agreement[1]. This agreement simply indicates that your organization is committed to promoting responsible chemical management in K-12 schools, and does not impose specific requirements upon your organization.

EPA will recognize your commitment to promoting responsible chemical management in K-12 schools by presenting your organization with a plaque at a recognition event that will include the press and other media. Your organization will also be added to the Partners Page on the SC3 Web site.

HOW WILL EPA HELP MY ORGANIZATION?

Once your organization reaches out to EPA and expresses an interest to get involved in an SC3 project, EPA will do a variety of things to arrange an SC3 project that matches the expertise and resources you want to volunteer:

1. EPA will form a team to help you find a school. At a minimum, the team will include your organization, EPA SC3 Account Managers, and regional SC3 leads. State agencies and other SC3 partners (refer to the SC3 web site: www.epa.gov/sc3 and click on "Partners") may join the team as well.

2. Once a school is identified, the team will:

   - Identify an SC3 champion at the school or school district who will generate support within the school or school district and, possibly, the community (The champion will likely be your primary point of contact within the school);
   - Determine the scope of the project; and
   - Assist in clearly defining roles and responsibilities.

[1] http://www.americanchemistry.com/s_rctoolkit/sec.asp?CID=1819&DID=6828

3. EPA can then help to:
   - Attend (possibly through conference call) initial meetings with the school; and
   - Put you in contact with other organizations that have conducted or facilitated an SC3 project.

4. EPA will be available to you throughout the project if you have questions or need support. When the project achieves a significant milestone or after the project is successfully completed, the team—especially EPA-- will help you gain local and national recognition by posting your accomplishments and success stories on the SC3 Web site.

5. Your organization may be eligible to receive an award (Note: an enforcement screen will likely be needed to qualify your organization as an award recipient).

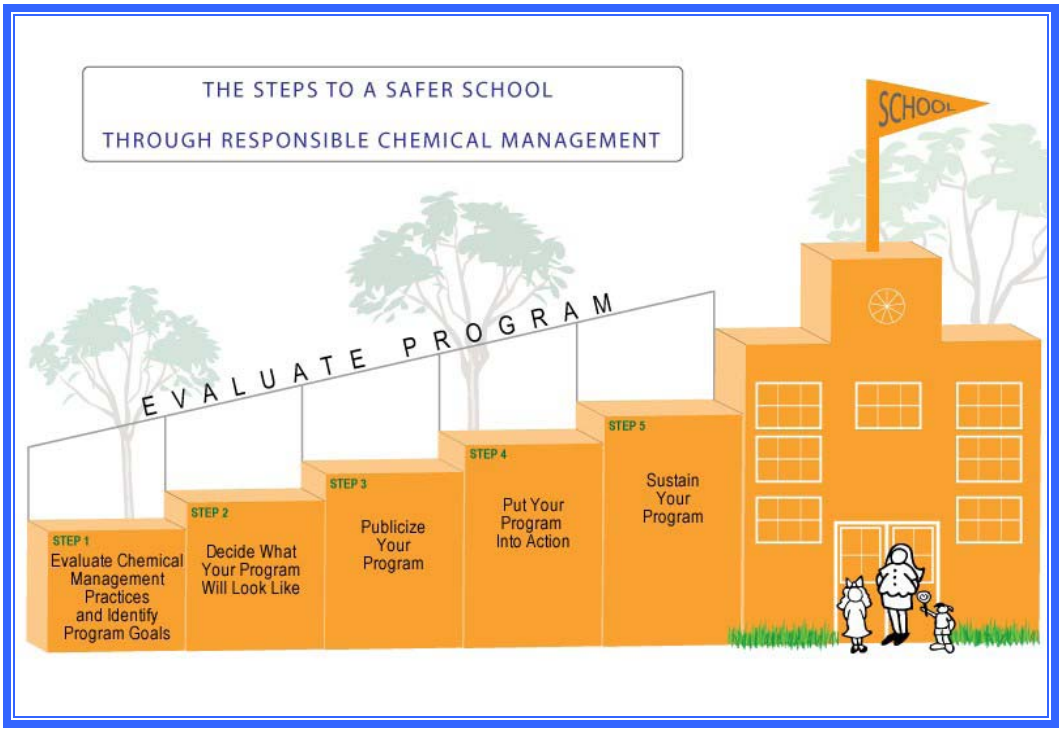
HOW SHOULD I APPROACH THE INITIAL MEETING WITH A SCHOOL OR SCHOOL DISTRICT?

It depends. If you find a school has already evaluated or begun to evaluate its chemical management situation, school officials will not need background on the merits of establishing an SC3 program. Instead, consider speaking with them about how your organization's experience and expertise could help them. If a school has not addressed its chemical management situation or launched an SC3 program, it may be more appropriate to discuss the merits of undertaking projects to improve school chemical management. In this section we provide you with tips to handle either situation.

When you begin working with a school, it will be important to gauge how far along the school is in developing and implementing an SC3 plan. In your initial discussions with school officials, listen carefully to how your organization can best address their needs and then be prepared to offer suggestions. If a school is unsure about how to proceed, discuss potential options, referring them to the graphic below to get an idea of how developed their chemical management program may be. Let school officials know how your organization can help with any or all of the "steps to a safer school…"

Why Become Involved in School Chemical Management?

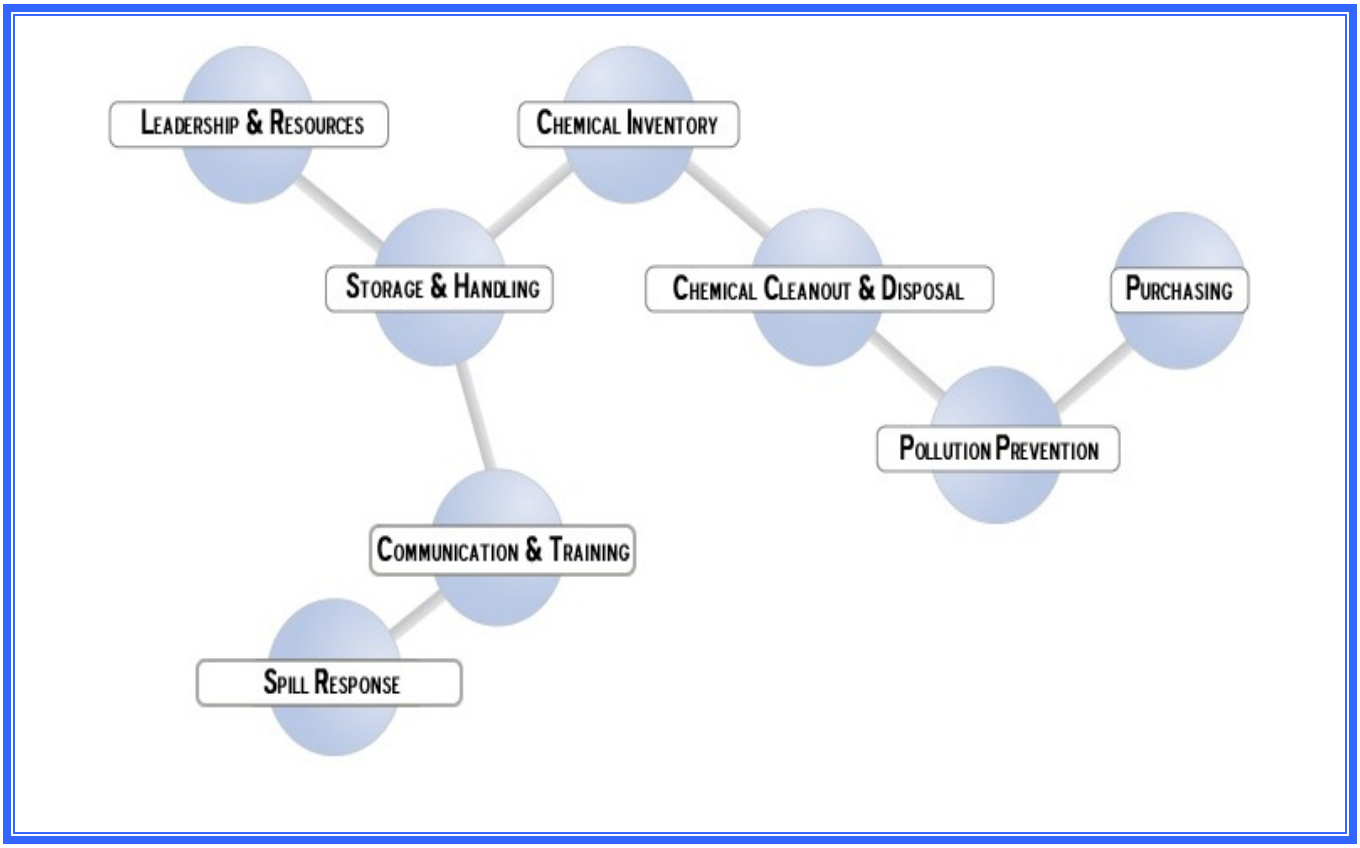
How Do I Get Involved in a School Chemical Management Project?



For schools that are not familiar with the importance and benefits of responsible chemical management, the initial meeting gives your organization the opportunity to provide the school with some background on the topic and convey how you can help. Make sure to tie your service efforts to tangible benefits, such as:

- Saving money on purchasing and disposing of chemicals;
- Reducing the use of dangerous chemicals in schools;
- Preventing dangerous and costly spills and releases, resulting in school days lost;
- Reducing liability and loss of public confidence; and
- Making the school safer for students and staff.

In your initial discussions with a school or school district, refer to the following graphic which illustrates the key elements of a successful SC3 program. Point out to the school those areas and issues that your organization's expertise and experience may address. *Please note the components and functions represented here are in no particular order. While some of these themes may be related, the connections portrayed are random and do not imply any dependency.*



As you prepare for the initial meeting, keep in mind that some schools or districts may:

- Require more information on developing or improving an SC3 program, which is provided in other parts of this Workbook. Other resources can be found on the SC3 Web site.
- Be somewhat skeptical about why your organization wants to get involved. Keep it positive and focus on the ways your organization can improve the school's chemical management situation.
- Be somewhat cautious about going into detail concerning their chemical management situation.
- Have competing priorities and may not want to start tackling this issue right away.
- Have a chain of command and may need to get approval from people not at the meeting. This may take some time.
- Need to be reassured that they will be working with a team to ensure the success of the project.

BACKGROUND ON HOW SCHOOLS ARE OPERATED

Perhaps you are a parent of a K-12 student and are familiar with the school at which your child attends. If you do not have ties to a school in your area, however, it may not be immediately apparent how schools operate.

Working with schools and school districts may present challenges that are not found when working with other institutions. Some things to keep in mind include:

- Schools are operated and managed at a local level;
- Schools are governed and influenced by a complex set of institutions (which means that it may take longer than expected to arrange and carry out a project);
- Schools have unique priorities, standard operating procedures, and challenges; and
- Schools may not realize that they have a chemical mismanagement problem or may want to avoid the appearance that they are not protecting their students adequately.

HOW SHOULD I FOLLOW UP AN INITIAL MEETING WITH A SCHOOL?

Be sure to follow up the initial meeting with a school by:

- Answering questions;
- Providing additional information;
- Bringing in the EPA for added support;
- Scoping out the project(s) discussed; and
- Capturing and/or codifying the specific terms of the project(s).

As with any joint venture, it is necessary to clearly define the terms and expectations of the agreement early on so both parties know what to anticipate as the project moves forward. A good way to outline the roles, responsibilities, and limitations of both parties is by preparing a partnership agreement, a team charter, a statement of purpose, or some other document agreeable to both parties. If you choose to use a partnership agreement, you may use the Sample Partnership Agreement at the end of this section as a model and modify the language so that both you and the school are comfortable. Whatever form the document may take, it should address the following:

- The specific tasks that your organization and the school intend to perform; and
- A proposed schedule for agreed upon activities, including a beginning and end date, if applicable.

Clearly defining the elements of the relationship makes both parties aware of their responsibilities and can help to manage expectations over time.

Maintain an open dialogue with your partnering school and adjust formal agreements, as necessary. Get to know and communicate regularly with the school's SC3 champion as he or she will be a source of information on the school and its chemical management needs as the project moves forward.

Below is an example of a partnership agreement that your organization can sign to partner with a school to responsibly manage their chemicals.

Sample Partnership Agreement

Partnership Agreement Between _____ (Partner Name) and _____ (School/District Name)

Through this agreement, [Partner's Name], hereafter referred to as "SC3 Partner", joins in partnership with [School/District Name], to help create healthier school environments for students and personnel. SC3 Partner intends to support the goals of the Schools Chemical Cleanout Campaign (SC3) program, which are to: remove accumulations of unnecessary chemicals from schools; facilitate implementation of responsible chemical management practices; and raise awareness of the potential risks to students and school personnel created by mismanaged chemicals. The SC3 Partner intends to promote responsible chemical management in [School/District Name]. [School/District Name] intends to cooperate with other parties to this agreement to support these same goals.

Partner Role

SC3 Partner intends to provide, without charge to [School/District Name], resources or services in the following areas at [insert name of school(s) or school district(s)]:

- ❑ Inventory chemicals
- ❑ Develop a sustainable chemical inventory system
- ❑ Package mismanaged/unnecessary chemicals for removal
- ❑ Remove mismanaged/unnecessary chemicals
- ❑ Proper disposal of chemical waste
- ❑ Develop chemical management training
- ❑ Conduct chemical management training
- ❑ Assist with the development of a chemical management program
- ❑ Assist with the implementation of a chemical management program
- ❑ Recruit other SC3 Partners
- ❑ Develop performance goals and measures to gauge chemical management success
- ❑ Administer SC3 Partner Program to Trade Association/Organization member companies and other interested parties
- ❑ Other (describe) _____
  (Use additional pages if necessary)

The SC3 Partner agrees to provide services to [School/District Name] in the amount of [# of hours] each [duration of time (e.g., semester, year, etc.) to addressing the aforementioned resources and services.

Sample Partnership Agreement

School / District Role

[School/District Name] will provide the SC3 Partner with the following recognition opportunities:

- ❑ Presence at publicity opportunities (e.g., local media events, PTA meetings, etc.)
- ❑ Prominent display of SC3 Partner name and logo in communication and outreach materials to stakeholders
- ❑ Recognition as program partner in all press releases, with opportunities for SC3 Partner quotes

Limitations

This Partnership Agreement describes the actions [Partner Name] agrees to undertake as a SC3 Partner. It does not impose any legally binding obligations on [School/District Name], nor is [School/District Name] imposing, through this Agreement, any legally binding obligations on the SC3 Partner or on any other entity.

This Partnership Agreement does not create any right or benefit, substantive or procedural, enforceable by law or equity against [School/District Name], their officers or employees, or any other person.

Effective Date, Modification, and Termination

This agreement becomes effective upon the date of the last signature. This agreement will be in effect for [# of years] from the date of the last signature. It may be modified or amended only through written agreement of all signatories. Any signatory may terminate this agreement by providing 30 days written notice to the other parties.

_____

Signature and Date, SC3 Partner Representative

_____

Signature and Date, School's Legal Counsel / Principal / School Board Director

Why Become Involved in School Chemical Management?
How Can I Continue to Help Schools Improve Chemical Management?

Ideally, your organization will continue to work with a school beyond an initial SC3 project to improve the chemical management situation and be available to assist with new challenges. Near the end of your organization's initial project, you will probably ask, "What's next"? We offer a variety of steps you can take to answer that question, and continue to find ways to improve school chemical safety:

Periodically revisit and reassess any agreements with your partnering school. You may find that your organization's role in improving a school's chemical management situation changes over time. Revisit your commitments and adjust them, if necessary, to meet both your organization's needs and those of your partnering school.

Engage EPA for guidance. As your SC3 project develops you may need additional help or advice. The EPA SC3 Account Manager and regional SC3 lead are valuable resources to contact. They may know of a partner with the expertise that you need or they may have heard how another partner resolved a similar situation. Don't hesitate to call on them with your questions.

Keep open communication with the project team, especially the SC3 champion. As your initial project progresses, make sure to stay in touch with the school SC3 Team, especially the SC3 champion and the EPA SC3 Account Manager (or the regional SC3 lead). Agree on a time to periodically catch up with the school. Inquire about other projects, initiatives, and plans, and explore the school's receptiveness to your assistance.

Have a plan for issue resolution, should that become necessary. Everybody on an SC3 Team wants a project to be a success, but sometimes a problem arises that requires the perspective of someone not so close to the situation. Consider developing a procedure ahead of time for addressing problems that may arise and following it when necessary.

Achieve results and communicate them to your management and the SC3 project team. As your project nears completion, be sure to inform your management of positive impacts and results. Keep track of the types and levels of assistance your organization provided so that your organization can make an informed decision about partnering with other schools or districts. Explore the creation of a success story and possible recognition at a local or national press event.

Consider helping other schools. You may find that after a time, the school you have been helping has its chemical management under control and requires little to no ongoing assistance from your organization. You might explore other schools in the area to find one that could benefit from the guidance and help you can offer.

Consider assisting when there is an emergency. Even if the school or school district has established a sustainable responsible chemical management program and your help is no longer required, consider how your organization may be of assistance when there is a natural disaster or other emergency.

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