

2. How to Do Pollution Prevention Projects

SIX KEYS TO SUCCESS

Organization

Watershed protection is a complex, long term proposition. This guide aims to ease the process of implementing projects by offering step-by-step tips, checklists, and handouts. Expert help is necessary, *and* readily available.

Partnerships

Because everyone in the watershed must be informed and involved to prevent pollution, water quality agencies are eager to work with you. See references throughout this guide, and page 36 on forming partnerships. The inside back cover lists agencies that operate statewide.

Service-Learning

Through service-learning, students gain and apply knowledge, skills, and experience as they meet real community and environmental needs. Academic curriculum that includes service-learning becomes relevant (and fun!) as students apply what they have learned in real-world contexts. The Minnesota Graduation Standards (see box on page 6) and new national science standards call for such opportunities.

Research shows that well-run service-learning programs can strengthen social skills, self-worth, citizenship, workplace-readiness, pro-social behaviors, and academic learning.

Well-run programs include:

- Adequate **preparation**,
- **Meaningful service** that meets a real need, and
- Structured opportunities for **reflection** on service experiences.

Youth Empowerment

Young people want to contribute. In the process, they gain skills in investigation, problem-solving, communication, and working with adults. As one teacher put it: "Quality is required. This is not a drill."

Not every adult is comfortable tossing the reins to students. Time can be limiting factor. Involve students in leadership as much as possible. Add responsibilities as they – and you – gain skill and confidence. Field Reconnaissance (pages 25-32) and "Give Water a Hand" (see inside front cover) offer key strategies for youth empowerment.

Community Involvement

Educators cannot do it alone. Older students, senior citizens, agency staff and board members, lake associations, hunters groups, college students, Lions and other civic groups – and of course, parents, can provide invaluable on-site supervision and planning help. Community educators offer extensive skill and contacts.

Start Small; Build on Success

Make sure your first project is doable.



Put waste in
it's place



PROJECT STEPS

Following are basic steps for any project. Each of the detailed project descriptions generally include them. Steps may occur in an order other than the one given. In any case, begin to get students out in the community early so that projects become real for them.

1. Research your watershed.
2. Identify the problem or exploration you want to work on. "Pollution Prevention Project Examples," on the opposite page, offer one way to think of possible issues.
3. Develop partnerships to explore the issue.
4. Investigate key questions about the issue.
5. Organize and take action.
6. Compile and analyze your results and the process you used. What worked well? What should have been done differently?
7. Report your results. What did you discover? Who might want to know? What type of report is appropriate for class or youth group goals? (See the "Public Education" section, pages 8-11.)
8. What comes next? Celebrate accomplishment. Plan for future follow-up.

PROJECT STRUCTURE

Schools and organizations have included projects in a variety of forms:

- Action team through youth group or community organization
- Interdisciplinary teaching team
- Extracurricular club
- Integration into life science, earth science, biology, chemistry, civics, community service, or other academic course
- Onetime all-grade or all-school project (such as on Earth Day)
- Older students working with younger students
- Summer school, and summer camps and academies
- Environmental learning centers

Minnesota Graduation Standards

Pollution prevention projects can help students achieve the high standards of the Profile of Learning:

- Service-learning projects can be Performance Package tasks. For example, as part of a task to meet the Middle Level Standard, "Write and speak effectively in the English language," a student might write an article on threats to the lakes in her watershed, and submit it for publication in the local media. Environmental service-learning projects apply to *all* standards, not just Environmental Studies or Community Service. Examples of Performance Packages that apply to this type of project include:
 - Expert Interview - Intermediate Level: Students collect information from community meetings, then develop service projects to address an identified need.
 - Exploring Environmental Topics - High School Level: Students conduct scientifically rigorous investigation of an environmental topic, and develop an appropriate action in response.
 - Analyze Water Resource System - High School Level
- Through pollution prevention projects students can also gain skills to prepare them to meet the high standards. For example, students can learn to develop and pursue effective research questions while investigating causes of sedimentation.