

# PA Sea Grant Great Lakes Great Stewards Lake Erie Watershed ICC cleanup Taking local action for global change



## **Service-learning project to stop trashing the Lake Erie Watershed and keep debris and litter from reaching the Ocean**

Written by Anna McCartney for Pennsylvania Sea Grant's BWET project: **Great Lakes Great Stewards** with adaptations from the EarthEcho International "Water Planet Challenge CleanUp Service learning guide by Cathryn Berger Kaye for Participant Media and the Ocean Conservancy.

**Objectives** - To investigate, prepare, take action, reflect and demonstrate that local cleanups can have huge positive consequences

### **Students will be able to:**

1. describe the impact of trash and product use on water, wildlife and people.
2. describe the impact of positive actions that keep trash out local waterways and the ocean.

### **Materials**

- Student Data Collection Cards
- Teacher Data Summary Card
- Pencils and clipboards
- Plastic trash bags
- Gloves
- Ocean Conservancy ICC Poster
- PA Sea Grant/Erie Times-NIE pages about marine debris
- Camera

### **Standards**

- Apply the elements of scientific inquiry to solve problems
- Apply knowledge and understanding about the nature of scientific and technological knowledge
- Apply process knowledge and organize scientific phenomena in varied ways
- Apply mathematics in a variety of settings
- Explain concepts about the structure and properties of matter
- Explain sources and uses of earth resources
- Listen actively and speak clearly and coherently
- Use technology to learn, live and work
- Demonstrate civic and community engagement
- Demonstrate personal management and teamwork skills

## Great Lakes Great Stewards Lake Erie Watershed ICC Cleanup

# Who's Trashing the Ocean and Waterways? Be a Data Detective!

Every year thousands of people of all ages participate in the Ocean Conservancy's International Coastal Cleanup to remove and properly dispose tons of debris from watersheds and coastlines around the globe. But this cleanup also provides critical information for developing solutions to pollution problems associated with coastal and water-borne debris. How? Every volunteer group also documents the trash on International Coastal Cleanup Data Cards and shares it with the Ocean Conservancy. They analyze this data to determine the likely activities causing the debris in specific locations. They share this critical information to help citizens, community groups and schools, municipalities, business and industry, and government agencies prevent future pollution long after the event is over. By participating in the Great Lakes Great Stewards Lake Erie Cleanup you too are helping to solve this very preventable pollution.

### Have any ideas!

This is a problem you can help solve.

We already know the oceans and waterways need our help! Investigating the issue will reveal who, what, when and how so you can create your plan for a successful school neighborhood cleanup. Hopefully you will also solve the "why" so we can put an end to this preventable crime.

What body of water nearest you becomes the corridor for trash? Understanding your watershed will help you determine how trash makes its way to that waterway so you can stop it. Where will you decide to do your cleanup? Remember trash left anywhere often travels to local waterways and eventually to the ocean. You could decide to clean up a coastal beach area or simply a stretch of land along a river, lake, or creek. Or you could decide to clean up a deserted lot, park, or schoolyard anywhere in the watershed even if you can't see the nearest waterway!

**Before beginning any service-learning project it is important to answer the following:** "What resources does our group have? What are our skills and talents?" How can we use them to **investigate** ways to \_\_\_\_\_? (Fill in the blank - in this case "keep trash in our school neighborhood from reaching a local waterway, Lake Erie and eventually the ocean".

Use the **Personal Inventory document** in the **Resources section** to interview each other about your interests, skills, and talents. Make a list. Refer to this list as you organize into action teams and plan your cleanup. Does someone like to write? (Great for putting together a press release or blog entry or letter to the editor.) Any photographers? Get the idea?

### Now you are ready to begin the 6-steps of service learning to conduct a successful project.

(The six steps are often referred to by different names but the concepts are the same for every service-learning project. The titles: "Choose It, Research it, Plan It, Do It, Evaluate It and Share It" are those used by Earth Action for their Service Learning Program but in this case evaluation or "reflections is included after each stage.)

## Stage 1. Choose it

**(In this case this means choosing your site.** Use ideas you gather from your investigation to choose a place that you can clean up, tabulate the trash collected, and report the data on your data card, which will be added with every other school and ICC cleanup in your area and sent to the Ocean Conservancy.

Useful for finding information you need to make your choice:

**Media:** Which newspapers or websites cover local environmental issues about local waterways?

**Interview:** Whom could you interview to learn more? Think of organizations responsible for local parks or groups that organize regular clean up events in your area. Are there any scheduled clean-ups that you could join?

**Survey:** A school survey can help you find out quickly what concerns your classmates and how they may be willing to help. A few basic questions and you are ready to go.

**Observation:** Field trip! Where can you go, or send a few scouts, to capture the information you need? Perhaps a visit to a nearby stream or a beach walk or a neighborhood walk will show how much trash and how many people will be needed to clean it up. Maybe what needs cleaning up is a local park or even the school athletic field after a sports event.

### A Pause for Reflection - Discuss in pairs/small groups:

- Your favorite part of investigation
- New facts or ideas that you think is important
- Skills or abilities that will be helpful for moving forward to prepare and take action

## Stage 2. Research it - Why a cleanup? Why Now?

Read the **Pennsylvania Sea Grant/Erie Times-NIE environment pages**

([www.paseagrant.org](http://www.paseagrant.org)) for information that will make you think twice about using single-use products or tossing trash. Rather than biodegrade, plastic photodegrades—it breaks into tiny toxic bits. These fragmented particles cause further problems when jellyfish and other marine life ingest them as food and thus moves up the food chain. What are some of the other problems caused by all that trash?

**Learn more about trash, plastic pollution, threatened marine life, and ideas for action from these excellent resources:**

- **NOAA Marine Debris Program** [www.marinedebris.noaa.gov](http://www.marinedebris.noaa.gov) is part of the National Oceanic and Atmospheric Administration (NOAA), a division of the U.S. government. NOAA (<http://www.noaa.gov/>) funded the Sea Grant Great Lakes Stewards Watershed project and they also fund and support other projects and working with partners that address marine debris.
- **Ocean Conservancy**, [www.oceanconservancy.org](http://www.oceanconservancy.org) is the sponsor of the International Coastal Cleanup. Was founded in 1972 to promote healthy and diverse ocean ecosystems and oppose practices that threaten oceanic and human life. They strive for sound, practical policies that protect our ocean and improve our lives through cooperation between governments, businesses, scientists, policymakers, conservation organizations, and citizen advocates.
- **The Algalita Marine Research Foundation**, [www.algalita.org](http://www.algalita.org) is a California-based organization studying the impact of plastic marine pollution. Their easy-to-use classroom handouts address the affects of plastics in our environment. Their Sea Lab processes trash samplings picked up on their ocean excursions, and students attending their Environmental Charter High School research beach sand to determine the amount of plastic particles in it, called the “plastic load.”

**EXCEPTIONAL TEDtalks YOUTUBE VIDEOS:****TEDxGreatPacificGarbagePatch - Beth Terry - Living Plastic****Free:** <http://www.youtube.com/watch?v=3JXWRVrFiKs>**Dianna Cohen (co-founder of plastic pollution coalition): Tough truths about plastic pollution:** <http://www.youtube.com/watch?v=fddYApFEWfY>**Other excellent resources:**

- <http://www.earthecho.org/>
- <http://ecologycenter.org/>
- <http://watersheded.com/types/classroom-lesson-plans-activities>

**Getting some ideas?**

What information have you found that makes cleanups and data collection important? How can providing information to others be a part of your plan or part of an ongoing campaign?

**Brainstorm ideas** to continue the preparation. Consider:

- **Community Partners:** During investigation did a community organization inform you of an upcoming cleanup event? Did you find a partner that would be willing to help you with planning and action? An experienced group can be a great guide to help you organize and implement a cleanup.
- **Where and When:** What place in or near your school community needs a cleanup? Be sure to find out who is responsible for this area to arrange for permission. Think about best dates and times so you can complete your cleanup by October 15.
- **Budget and Supplies:** All the supplies you need have been provided. Is there anything else you need to get the job done well and keep everyone safe? Often a manager at a beach or park can arrange for trash removal after the cleanup is done. How will you deal with the recyclable items? Does your school recycle or will you need to take them somewhere else to be recycled?
- **Documentation:** Plan to record the entire service-learning process, including how you investigate, plan, act, evaluate, and share your project. Think of different ways you want to keep track. Refer back to the Personal Inventory to see what skills and talents your group has. Use any available technology—cameras, video, audio recorders.
- **Gathering and Reporting Data:** Record what you find at the beach, park, neighborhood, or school campus. This is extremely important. Take and use the Debris Collection Data Cards provided. These cards will help you keep track of your findings during the cleanup and be used to compile information needed by your teacher to send to the person in charge of data from all the cleanups.

**Remember safety: sample Safety Tips from the Ocean Conservancy:**

- Do not go near any large barrels or drums.
- Be careful with sharp objects and syringes.
- Wear gloves and closed toe shoes.
- Be aware of your surroundings and only go where you receive permission.
- Stay out of the dunes and natural areas
- Watch out for wildlife.
- Don't lift anything too heavy

## Stage 3. Plan it (before, during and after the event)

### Roles and Responsibilities

Knowing who does what by when makes planning run more smoothly and gets the jobs done. Working in small groups allows for distribution of tasks and a supportive approach to ensure success for everyone. Each group or Action Team can have specific assignments before the event, the day of the event, and after the event. Keep in mind that often, very often, an important question will emerge that sounds like, “How do we do this?” Finding out what skills you need and learning these skills is a big part of the service-learning process. So if you aren’t sure how to get something done, ask!

As you review these Action Teams suggestions you will see how they intersect and rely on each other. Use the outline below to adjust team names, alter the tasks as you like, and still make sure everyone is working together toward a common purpose. Remember to always be supportive! Find out what skills and assistance are needed so each person moves toward success for all.

**A Note about Working in Teams:** Teams have a job to do; however they can delegate to others. They just must make sure the job gets done. For example, any student can take photos even if they are not on the Documentation Team. All students can help count up and add up what is cleaned up. The Documentation Team may also take photos and count—they make certain the tasks get done.

**Logistics Action Team:** Responsible for general coordination/oversight to ensure place and date are established, all transportation and permissions are set, and partner communication happens.

**Before the Event:** Get the details worked out. Have oversight of any budget and work with the other teams to make sure the supplies they request are in place where and when they are needed. Communicate with adults at your school or youth organization to make sure all permissions and arrangements or parent volunteers (if needed) are arranged.

Be in contact with the partner organization so date, times, and any permission forms for this group is in place as well. Keep a master list of all the other Action Teams and who is responsible for what.

Prepare a timeline for the activities for the day of the event.

**Day of the Event:** Arrive with timeline in hand. Pay attention to getting the overall resources and supplies and people at the designated place at the designated time.

**After the Event:** Write thank you notes to all partners/adults that helped and send photos.

**Cleanup Team:** Responsible for organizing the work groups and ensuring all needed supplies and resources are obtained. And remember: Safety First!

**Before the Event:** Prepare an informational page about expectations and how to be safe at the event. Determine how to best involve all the people who come. Consider how much space you want to cleanup, the time allotted, and make a plan for getting the job done (this is real math!). Think of the supplies needed—will they be donated or do they have to be purchased (this may involve fundraising)? Will this involve your Promotion Team? Key supplies include gloves, trash bags to separate recyclable and non-recycled items, and bins (for sharp items that will break bags). What else might you need?

**Day of the Event:** You may need to arrive early or be first off the bus to set up the stations so everyone knows where to pick up supplies and where to go. Also, you get to cleanup!

**After the Event:** Make certain any cleanup after the “cleanup” is fully staffed so you leave only footprints and take only pictures.

**Promotion Team:** Responsible for getting the word out for more participants, bringing in any partners for donations, and meeting the press.

**Before the Event:** Check with all the other teams to find out if anything must be obtained through donations. Involve everyone in ideas for making community contacts. Write any letters for requests, make follow-up phone calls, do community outreach to create interest (attend a Chamber of Commerce or town meeting dressed as a turtle covered in plastic grocery bags), design or get posters from partner organizations and make sure they get posted, and prepare and follow up with press releases—find a sample Press Release in the Resources section. Also make sure any press kits are ready on the day of the event to hand out.

**Day of the Event:** Hang signage—that’s the banner or some visual that says who you are and what you are doing. Have press materials organized to hand out (using as little paper as possible).

**After the Event:** Thank everyone who donated. Write letters to any news folks who showed up.

**Documentation Team:** Responsible for making sure video and cameras are in place when needed from the very beginning or as early in the process as possible, capturing the investigating, preparing, action, and sharing and evaluation. This team also makes sure the data about what debris is collected is tabulated and given to the teacher to share with the ICC coordinator in your area.

**Before the Event:** Determine what media will be used to capture the information and create a signup for participation. Maintain a scrapbook for all documentation. Hand out copies of the Debris Collection Data Card and make sure everyone knows how to use them before and during your cleanup.

**Day of the Event:** Have all copies of the Data Card ready for use—remember the pencils and clipboards. Have media gear to take photos—make sure to get hands-on cleanup experience and follow up with a group photo behind all the bags of trash collected. Capture reflective comments from participants as they are cleaning up.

**After the Event:** Gather all the data. Work with the Learning Team to make sure any additional research and information gathering takes place. Sort the data and, once approved by all, give it to your teacher who will share it with the ICC coordinator.

## How to Collect Data:

Sample data collection tips from Ocean Conservancy’s Be a Data Detective!

- Collect data as a team, with one person recording items on the data cards, while others collect and bag trash.
- Bag all the debris you find on the beach and shoreline (above and below the waterline), but record information only on the items specifically listed on the data card.
- Use tick marks to keep count of items and enter the total in the box to the left of each debris item once you finish collecting trash.
- Use only numbers to record quantities. Do not write words such as “lots” or “many.”
- Leave natural items like driftwood or seaweed on the beach. Avoid stepping on dune plants and grass or other plants.

**Learning Team:**

Responsible for making sure the knowledge needed is always available about what is being done and making sure others know as well. You can also help design and lead reflection activities along with the Fun Team.

**Before the Event:** Gather facts to make sure everyone knows why the cleanup is taking place. Provide needed information to all the other teams, especially those writing compelling press releases or dressing like turtles. Determine how information and idea sharing will be part of the cleanup event.

**Day of the Event:** Have a bullhorn to announce an occasional fact!

**After the Event:** Review the data found during the cleanup and lead an activity for everyone to think about and determine what caused all of this trash and what you can do to refuse, reduce or reuse materials to cut down on trash in the first place. (This can lead to possible follow-up activities. See “Consider Your Findings” in the Sharing stage.)

**The FUN Team:**

Responsible for thinking about what will make this a fun, memorable, everyone-wants-to-be-there splash! Can design and lead reflection activities along with the Learning Team.

**Before the Event:** Generate ideas that make youth want to participate, know they are valued, and also enjoy what’s going on. This team may help review the work of others, such as the Promotion Team, to make sure the materials are lively, fresh, and have authentic “youth-did-this” appearance and presentation. Be ready to receive assignments from other groups as well. The Fun Team may take facts from the Learning Team and create games or word searches for kids to become more involved in the ongoing challenge of caring for this special “Water Planet”.

**Day of the Event:** Keep the fun alive! Have a cheer! Lead a song! Add the bounce in the day!

**After the Event:** Come up with a fun way to recognize the hard work and contribution of all the participants. Job well done!

**CONTINGENCY PLANS! ONE MORE PART OF BEING PREPARED:**

What are contingency plans? Imagine you planned a school dance and the band didn’t show up. Having music you can blast from a sound system is good planning. Being ready is getting ready for any surprises. Every team should imagine the unexpected and be prepared for anything!

**A Pause for Reflection - Occasionally as you prepare, generate different ways to reflect. A few ideas:**

Everyone find a favorite quote, like:

"You must be the change you wish to see in the world" —**Mahatma Gandhi**

- Spend a few minutes talking about how the quotes relate to the cleanup
- Work together to make a list of all the progress you’ve made. Look at the list compiled during the Personal Inventory. What skills and abilities are developing that could be added?

## Stage 4. Do it

This will be the day you have been working and waiting for - when all the investigating, preparing, and ongoing reflection come together for your Watershed Cleanup.

**What needs to happen the day of the big event? Here's a recap:**

**Logistics Action Team:** Arrive with timeline in hand. Pay attention to getting the overall resources and supplies and people at the designated place at the designated time. Make sure that all participants arrive with appropriate permissions and that any work with the partners is on time and on task. And then join the cleanup!

**Cleanup Team:** You may need to arrive early or be first off the bus to set up the stations so everyone knows where to pick up supplies and where to go. Also, you get to cleanup!

**Promotion Team:** Hang signage—that's the banner or some visual that says who you are and what you are doing. Have press materials organized to hand out (using as little paper as possible to be kind to Mother Earth).

**Documentation Team:** Have copies of the Debris Collection Data Card ready for use. Remember to bring pencils and clipboards. Have media gear to take photos and make sure to get hands-on cleanup experience.

**Learning Team:** Have a bullhorn to tell an occasional fact.

**Fun Team:** Keep the fun alive! Have a cheer! Lead a song! Add the bounce in the day!

Even with this overview, you will come up with other parts of your day that ensure that your collective action comes to life, is memorable, and makes a difference in your community. Be sure to complete the Cleanup Debris Collection Data Card. Have that information when you reflect and evaluate.

## A Pause for Reflection

During the actual event, the Documentation Team will be capturing what's happening and your thoughts, reactions, feelings, and impressions. They may adapt or use the questions below or come up with their own spontaneously as things happen in the moment that you didn't anticipate. And at the end of the day, or when you next get together, be sure to consider:

- what was your favorite part of the day?
- what was most surprising?
- what will you remember about what you have done in five years? How did you contribute?
- Imagine our Water Planet feeling better. What images and words best describe this?

## STAGE 5: Evaluate it

While you have been reflecting all along, now is the time to bring together all your thoughts, ideas, feelings, data, and questions. Use the Four Square Reflection Tool adapted from "The EarthEcho International Water Challenge Cleanup" in the Resources Section.

**Details and data: Report what you found:**

- How many people were involved?
- What area did you clean up?
- What items were found and in what quantities?

Your information will be used to understand the specific debris problems created in your watershed and how they contribute to problems others are facing as the trash moves downstream and to the ocean. It will also be used to develop solutions for water-borne pollution problems because your cleanup data will be added to data from around the country and the world to help tell a BIG story about the BIG impact of many small cleanup efforts.

The ICC data collected is one example of big, sometimes scary, or overwhelming numbers about the collective impact of many small actions that result in huge problems like the trash problem in our waterways. Can you think of other actions that add up to scary numbers?

However by working together on the ICC we are telling a different kind of story about how actions can add up to positive numbers and to positive changes. Your cleanup crew might be only three people, but you are still part of a much larger effort. Together we can each do a small part to stop the trash from entering our waterways and the ocean.

**Consider Your Findings**

You've just picked up a lot of trash. (Thank you!) Look back over the information you recorded using your Debris Collection Data Card. What does this information tell you about your local trash? Put on your detective caps and look at the numbers for clues. This critical analysis can generate more questions, new investigations, and more learning and service. Your insights will also help you with the next two stages of Reflection and Demonstration.

**Consider type and quantity of each item:**

**Where** might it have come from?

**Who** might have been responsible for the trash that ended up at your cleanup site?

**How** might you prevent this from happening in the future?

What if you found a ridiculous amount of straws on a beach? This might track back to the nearby kiosk that sells sodas. Eliminating straws can reduce expenses for the vendor and save sea turtles from ingesting toxic plastics.

Did you find too many cigarette butts by a local playground? Perhaps this is reason for a city council initiative banning smoking in public parks.

Finding wrappers from one fast food establishment? Meet with the management about a few well-placed clever and attractive signs describing proper disposal of trash.

**After you do the math, the numbers may point you in the next direction. The cleanup is just the beginning. The next step is ongoing advocacy on behalf of this water planet and all the people and wildlife that share it today and for generations to come.**

## STAGE 6: Share it

What a story! Think of all you have done and all you have learned. You have put your plan into action and seen the results. Now it's time for demonstration—the stage when you show others what you've learned about trash, debris, litter, and what we can do about this through your well-planned contribution to the community. This demonstration of your service learning can take any form you like: letters, articles, pamphlets, artistic displays, performances, or media presentations.

### To help you make the most of your demonstration, answer these questions:

- **Who:** is your audience? Are there any community partners who you might like to participate in the demonstration?
- **What:** do you most want to tell them about what you learned and how you learned it? **What** do you most want to tell them about how you provided service?
- **How** will you share your information?

Consider all the skills and talents of your group and use as many as possible as you come up with ways to demonstrate. Be sure to incorporate information and the processes you used during all the different stages. Include images—a picture is worth a thousand words. And do include the people dressed as turtles/marine animals or other lively expressions of what you did.

Sharing what you have learned and accomplished is a way to inform and inspire others. Sometimes students have done school or community presentations or returned to the Chamber of Commerce to tell what happened. They have written newspaper articles or press releases, or created websites. Be sure to look at the **Telling Your Story: Message Guidelines**

## What 's Next?

Congratulations! You have completed the PA Sea Grant Great Lakes Great Stewards Lake Erie Watershed ICC Cleanup. However, this is only the beginning. You will be able to choose another service learning project to stay actively involved in helping your community and creating a healthier planet by continuing to apply your talents, skills, and knowledge.

### Need some ideas?

Your group may want to expand your cleanup, or start a media campaign to raise community awareness for **ongoing litter reduction**. Most important of all: teach by example. What YOU do will spread the word. Make good choices.

**Use less. Reuse. Reduce. Watch what you purchase. Recycle. Spread the word.**

Or you may want to consider any of the examples from “What are other kids doing? In the resources section,

## Resources are on the following pages

# What are other kids doing?

## Ideas for service learning

Below are a few excerpts of Kids in Action from *Going Blue: A Teen Guide to Saving Our Oceans and Waterways* (Free Spirit Publishing, 2010) as well as other projects:

### **Location: Minneapolis, Minnesota, United States** **Hazardous Chemicals? Not in My Water!**

How can families and communities learn about how the products they purchase affect their health and environment? Students in grades 6-8 at The Blake School in Minneapolis decided to teach them. They made an inventory of products in their home, researched how hazardous the products were depending on their chemical content and their environmental effects if disposed of improperly, and then learned proper disposal methods. Students labeled these products in their homes and presented their research to families and other students in the community. Parents expressed amazement to learn they were using potentially toxic chemicals in their household, even in common cleaning products, and what their effects are on humans and other organisms in the surrounding environment. What are the results of the Blake students' efforts? A community of smarter shoppers who know how to make informed decisions when purchasing household items and also when disposing of them. In the long run, these actions will increase the health of local waterways and send a message to manufacturers that consumers want environmentally friendly products.

### **Location: Chagrin Falls, Ohio, United States** **Go Green—Drink Tap**

In Chagrin Falls, Ohio, the youth board of Community Partnerships for Youth created an awareness campaign about the destructive nature of disposable water bottles culminating in a Go Green Water Tasting. Stationed in a shopping center, the kids invited passersby to taste two water samples, choose the one they liked best, and then guess which sample was bottled water and which came from the tap. The tasters overall preferred tap water and guessed incorrectly that it was bottled water. Students gave out Go Green—Drink Tap T-shirts, bumper stickers, and reusable water bottles. Sharing facts in the community and in school raised awareness that not only is tap water better for the environment, it also tastes better than bottled water.

### **Location: Alameda, California, United States** **Save the Bay**

The San Francisco Bay is the largest estuary on the west coast of the Americas and serves many important natural functions. The bay also faces numerous challenges— from pollution to overdevelopment. Area students are involved in a wide range of projects investigating the bay and local creeks, while examining the human practices that can harm or help the bay. What's being done? In honor of Earth Day, science students at Wood Middle School in Alameda, California, took their concerns to the beach. They learned about the process of bioaccumulation, in which small sea creatures mistake microscopic bits of plastic for food and are poisoned when they ingest it. The students cleaned up a quarter-mile long segment of beach next to their school, removing and cataloguing all types of trash.

### **Location: Honolulu, Hawaii, United States** **Preserving Ka'ena Point**

Jutting out from the westernmost tip of O'ahu, Ka'ena Point is a sacred site. Early Hawai'ians revered the rugged and remote area as a place where departing spirits leapt into the ancestral realm. Today,

Ka'ena Point is a 59-acre state-owned nature reserve and remains one of Hawai'i's last coastal ecosystems, harboring nesting seabirds, monk seals, and native plants. However, after decades of overuse by visitors and rutting by four-wheel-drive vehicles, the sand dunes of Ka'ena Point are rapidly eroding into the sea. Eighth-graders at Punahou School in Honolulu have become part of a community effort to preserve and restore this endangered coastline. Teams started off by planting seedlings of native plants along a scarred section of the dunes. They hope the plants will halt the erosion and restore the pristine natural habitat.

**Bring Your Own Grocery Bag Campaign** - Conduct research and interviews to compare the environmental impacts of both plastic and paper grocery bags and the amount of landfill space they take up. Create a campaign to educate and encourage community members to use reusable grocery bags instead.

Resources

Paper, Plastic, or Something Better? <http://environment.about.com/od/recycling/a/reusablebags.htm>

Roots and Shoots Reusable Bag Campaign <http://www.rootsandshoots.org/campaigns/reusablebag>

**Create a Rain Garden**- Study the benefits of rain gardens and the scientific principles which support their use. Approach a local government or community agency to help you create a rain garden at your school, using native plants, trees and shrubs.

Resources

Create a Rain Garden [http://www.raingardens.org/docs/Create\\_A\\_Rain\\_Garden.pdf](http://www.raingardens.org/docs/Create_A_Rain_Garden.pdf)

Local watershed councils

Local soil and water conservation districts

**Downspout Disconnect Program** - Learn how roof rainwater runoff flowing directly from downspouts into sewers can cause sewage overflows into area rivers and streams. Educate the community and recruit homeowners to participate in a downspout disconnect program. Organize and lead others in disconnecting downspouts in the community.

Resources

Using Incentives and Other Actions to Reduce Watershed Impacts from Existing Development

<http://www.epa.gov/nps/natlstormwater03/18Hottenroth.pdf>

Redirect or Disconnect your Downspout [www.marc.org/Environment/Water/downspout.htm](http://www.marc.org/Environment/Water/downspout.htm)

**Energy Audits** - Learn about the environmental impact of energy use and explore ways in which individuals and organizations can reduce their energy consumption.

Conduct an audit in school, or in a senior citizens' home in the community, to determine if there are ways to reduce energy use. Present the results of the audit to the school/senior citizens.

**Reducing Energy Consumption** - Students learn how energy use impacts the earth, and how different practices can affect individual energy use.

Students design an “energy use” calendar or create a “challenge” to encourage other students, their families, and the greater community to reduce their consumption.

Energy Star [http://www.energystar.gov/index.cfm?c=home\\_improvement.hm\\_improvement\\_audits](http://www.energystar.gov/index.cfm?c=home_improvement.hm_improvement_audits)

Energy Audit Lesson Plan [http://www.thirteen.org/edonline/wue/energy2\\_procedures.html](http://www.thirteen.org/edonline/wue/energy2_procedures.html)

**Green Schools** - Learn about ways to green your school. Audit school practices in waste reduction, resource conservation and energy use. Reach out to another school and provide them with assistance and advice on how to green their school.

Resources

Tips: Green Your School: <http://www.newdream.org/work/school.php>

Green Your School Guide: <http://earthday.net/greenyourschool>

Energy Audit Lesson Plan [http://www.thirteen.org/edonline/wue/energy2\\_procedures.html](http://www.thirteen.org/edonline/wue/energy2_procedures.html)

**Adopt-a-Park-** Adopt a local park or greenspace area near your school, and coordinate with the parks management to plant and maintain a section of the park. Research the impact of green spaces in a community and develop an advertising campaign to promote the use of the park.

Resources

Our Cities Without Green Space: [www.aag.org/sustainable/gallery/projects/mugenyi.pdf](http://www.aag.org/sustainable/gallery/projects/mugenyi.pdf)

Project for Public Spaces: <http://www.pps.org/topics/whyneed/>

Our Cities Without Green Space:[www.aag.org/sustainable/gallery/projects/mugenyi.pdf](http://www.aag.org/sustainable/gallery/projects/mugenyi.pdf)  
[www.SOLV.org](http://www.SOLV.org)

**Making Enviro-Friendly Cleaners-** Learn about the chemicals contained in traditional cleansers and their impacts on humans and the environment. Research alternative methods of cleaning. Produce environmentally friendly cleansers to be used at school or to be given to local community agencies.

Discovery Channel: <http://planetgreen.discovery.com/go-green/green-cleaning/>

The Green Guide: <http://www.thegreenguide.com/doc/113/rites>

**Photo Point Monitoring** - Learn how watershed restoration projects can improve water quality and wildlife habitat. Monitor the health of restored sites using photo point monitoring techniques. Assist a local agency by monitoring a restoration project and submitting data to that agency.

A User Guide to Photo Point Monitoring Techniques for Riparian Areas:

<http://www.shim.bc.ca/methods/pdfs/ppmAqatex.pdf>

How We Protect Watersheds: <http://www.nature.org/popups/freshwater/watershed.html>

OWEB Guide to Photo Point Monitoring:

[http://www.oregon.gov/OWEB/docs/pubs/PhotoPoint\\_Monitoring\\_Doc\\_July2007.pdf](http://www.oregon.gov/OWEB/docs/pubs/PhotoPoint_Monitoring_Doc_July2007.pdf)

**Invasive Plant Removal** - Students learn about invasive plants and the challenges of controlling them. The students learn to identify and remove the invasive plants found near their school or throughout their community.

The Nature Conservancy: [www.nature.org](http://www.nature.org)

Oregon Invasive Species Council : <http://www.oregon.gov/OISC/>

Local watershed councils

Local soil and water conservation districts

**Macroinvertebrate Sampling-** Students learn about the importance of clean water for humans and animals, and how the presence or absence of certain macroinvertebrates can indicate the water quality of a stream.

Students learn how to properly sample for Macroinvertebrates.

Students sample macroinvertebrate life of a nearby stream and share this information with the local water agency

**Mentors for Healthy Living-** Students learn about the dangers of accumulating pharmaceuticals and the impact it can have on wildlife, human health and society.

Middle and/or high school students become mentors to elementary students to teach them the dangers of these chemicals and ways to live healthy lifestyles to avoid taking unnecessary medication.

**Physical Fitness for Elementary Students-** As part of a Physical Education class, high school students research and develop a series of fun and creative exercise classes for elementary students.

Students introduce the exercise activities to groups of students at a local elementary school.

**Photo Point Monitoring-** Students learn how watershed restoration projects can improve water quality and wildlife habitat.

Students learn how to monitor the health of restored sites using photo point monitoring techniques.

Students assist a local agency by monitoring a restoration project, and submitting their data to that agency.

**Riparian Assessment** - Students learn about the importance of healthy watersheds and how human behaviors can impact the health of rivers and streams.

Students learn how to complete a formal assessment of a riparian area near the school.

Students share their assessment with the local watershed council, government agency or other community members.

**Riparian Restoration Project** - Students restore an at-risk river or stream bank in their area by removing invasive species, planting and caring for native trees and shrubs, creating habitats for fish, and monitoring vegetation.

Students learn about environmental systems, local wildlife, and plant growth.

Students draw connections between the environment and its human inhabitants.

**Saving Water**- Students research and study water needs and usage in their community.

Students learn about conservation strategies from the water bureau.

Students design and publish a water-saving tip sheet to distribute to parents and community residents, and create a coloring book illustrating the tips for the community's youngest residents.

**Sustainable Gardening** - Students learn how traditional gardening methods can have a negative impact on water quality and other environmental indicators. Students research alternative methods and train community members in sustainable gardening.

**Tree Planting**- Students research the use of trees for environmental and social benefits.

Students plan and implement an event of their own, planting trees on school property, at a local park, or a restoration site.

[http://www.monitorwater.org/A\\_Waterproof\\_Case.aspx](http://www.monitorwater.org/A_Waterproof_Case.aspx)

<https://www.ffa.org/FFAResources/ffalearn/sourcesofdrinkingwater/Pages/default.aspx>

# Sample Press Release

**FOR IMMEDIATE RELEASE: Today's date**

## Catchy title:

**What:** Over 50 dedicated members of Youth In Action decided to do something about all the trash that has accumulated in the streets near their school.

To keep this trash from entering the nearest storm drain or stream they collected and documented each item and quantity they picked up - over 50 pounds in all.

**When: Date and time**

**Where: Location:**

**For more details, contact:** Dennis Dolphin (contact information)

**Why (give reasons why you participated in the cleanup):** The Great Lakes Great Stewards Lake Erie Watershed school cleanups are part of PA Lake Erie International Coastal Cleanup effort. "Whether we live near a coast or hundreds of miles inland, we are all connected to the ocean. It helps provide much of the food, water, and oxygen we need to survive," said Ann Fox, one of the participants at the event.

Marine debris is more than just an eyesore—it is one of the most pervasive issues currently facing our rivers, lakes, beaches, and the ocean. This trash negatively affects the quality of our drinking water, the health of our communities, is hazardous to wildlife and even hurts our economy. Most of the items found littering the ocean—cigarette butts, beverage containers, bags, car parts, and household appliances—come as a result of activities that take place on land. "Although marine debris is one of the most challenging of problems, it is also one of the most preventable." (this compelling quote by teacher and contact information)

Great Lakes Stewards will be featured on the weekly "your space" on the "Reconnect with your Environment" PA Sea Grant/NIE page in the Erie Times-News.

Note: Send your press release about your watershed learning-service projects to Anna McCartney at [axm40@psu.edu](mailto:axm40@psu.edu) and be sure to include a photo of your event. The photo needs to be in jpg format and be at least 500 KB.

# Personal Inventory

Interests, skills, and talents—we all have them. What are yours?

**Interests** - what would you like to know more about—for example, outer space, popular music, or a historical event like a world war. Are you interested in animals, movies, mysteries, or visiting faraway places? Do you collect anything?

**Skills and talents** - what you like to do or what you do easily or well? Do you have an activity you especially like? What is your favorite subject in school? Do you sing, play a musical instrument, or study dance? Can you speak more than one language? Can you cook? Do you like to garden? Do you prefer to paint pictures or play soccer? Do you have special computer skills?

Work with a partner and take turns interviewing each other to identify your interests, skills, and talents and to find out how you have helped and been helped by others. Then, compile a class chart of your findings. This will come in handy on your service-learning journey.

**Interests:** I like to learn and think about . . .

**Skills and talents:** I can . . .

**Being helpful:** Describe a time when you helped someone.

**Receiving help:** Describe a time when someone helped you.

Adapted From *The Complete Guide to Service Learning: Proven, Practical Ways to Engage Students in Civic Responsibility, Academic Curriculum, & Social Action* by Cathryn Berger Kaye, M.A., copyright © 2010.

# Gathering information about your watershed

What does your watershed need? Use the questions in the following four categories as guides for finding out. As a class, you might agree to explore one topic, for example, how litter impacts your watershed. Or you might decide to learn about general needs at school or in the surrounding area that impact your watershed.

Form small groups to gather information in different ways. **Then share your ideas.** Make a plan for gathering information using the four categories. If you are working in small groups, each group may want to involve people in other groups. For example, everyone could help conduct the survey and collect the results. Compile the information you learn into a list of community needs.

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## Media

What media (newspapers, TV stations, radio or other sources) might have helpful information? How can you use them to learn about your community?

## Interviews

Compile a list of people who are knowledgeable about your topic—perhaps someone at school or in a local organization or government office. Think of four questions you would ask this person and use the “Easy Student Publishing Interviewing Tips” in the Resource Section

### List the people you want to interview:

- 1.
- 2.
- 3.
- 4.

## Survey

A survey can help you find out what people know or think about a topic and get ideas for helping. Who could you survey—students, family members, neighbors? How many surveys would you want to complete? Write three survey questions.

### Questions for the survey:

- 1.
- 2.
- 3.

Who to survey:

How many surveys:

## Observation and Experience

How can you gather information through your own observation and experience? Where would you go? What would you do there? How would you keep track of what you find out?

Adapted From *The Complete Guide to Service Learning: Proven, Practical Ways to Engage Students in Civic Responsibility, Academic Curriculum, & Social Action* by Cathryn Berger Kaye, M.A., copyright © 2010.

# Reflection Tool

What worked or didn't work?	How do I feel?
Ideas?	Questions?

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## Blogs/newspaper entries/letters to the editor

### ○ **Teacher Blog –**

<http://b-wet.blogspot.com/2013/05/welcome-to-b-wet-blog.html>

This closed blog has been created so you can share with your Great Lakes Stewards colleagues and workshop presenters. Individuals can email any other participant, including the workshop presenters.

Set up your profile if you have not already done so. We would like teachers to post at least 2x per month but you can post as often as you want. We want you all to keep in touch so your service learning projects are meaningful experiences for you and your students.

#### **1. Ask for help or support**

#### **2. Share:**

- Successes
- Challenges
- Ideas about what works
- Photos
- Comments on other projects
- Links and resources you found useful
- ICC updates
- Student reaction
- Your reaction

### ○ **Tips for sharing your stories with others including the PA Sea Grant/Erie Times-News NIE page:**

If you want people to listen to what you have to say and remember the important points, tell a story. Think of your Cleanup as a great story waiting to be told.

#### **Here is a quick guide to making your stories memorable:**

- **Opening:** Paint a picture with words: Early on a misty Saturday morning, 125 students poured off buses eager to get to work. Always remember to show the images you want them to remember.
- **Background:** Provide the basic overview and context of the story you want to tell; be sure to mention what you have done is part of the Great Lakes Great Stewards Watershed Project.
- **Create Interest:** This is part of your story that holds your audience's attention. Compelling facts, human-interest anecdotes, including comments, and surprising statistics capture the reader. They make your story compelling and make a lasting impression.
- **Resolution:** Every story has a strong ending. Let people know what they can do and how they can become involved. Create relevance by moving the reader toward taking action.

#### **Communicating important messages:**

- Keep your story simple.
- Be authentic.

- Make the information relevant. Give your readers a reason to care.
- Vary the length of your sentences.

**Read your story aloud. Make sure this is your voice, your story, and your message. Have someone else read your story to edit it before you send it to be published.**

## ○ **Tips on Writing Effective Letters to the Editor**

The letters section is one of the most highly read sections in any newspaper or magazine. In addition, many web sites also now have special sections for readers to comment on issues of the day. Make sure you read the paper before you write to get an idea of their particular format and focus, and be sure to name specifically the editor you're addressing.

Letters to the editor are an easy way for you to voice your opinion to policy makers and to educate readers about issues that concern you. Letters to the editor can be used to correct facts in an inaccurate or biased article, to praise or criticize a recent article or editorial, or simply promote your opinion on an important issue.

*Key points:* Be timely – Capitalize on recent news and events, respond within 24 hours of a story if possible. Be sure to refer to the article or event you are responding to in the first sentence.

Keep it short and simple – Under 250 words ideally, even less if you can. Research the paper or magazine you are writing to see if they have a specific word limit. Keep your points clear and stick to one subject. Look at the editorial page of the publication you're writing to and copy the format they normally print.

Think locally – Demonstrate how this issue effects you locally, and - if possible - mention lawmakers or news makers by name to ensure you get their attention. Sign your letter. Include your name, address and telephone number. Papers may need to contact you if they are considering printing your letter. Don't worry—they won't print your phone or street address.

Follow-up. If the newspaper doesn't call you, call them! Speak to the person in charge of letters to the editor (You should know who this is before writing your letter). Ask if they plan on printing your letter, and if not, ask if they have any feedback for you. Thank them for their time and feedback.

Don't be discouraged if your letter is not printed. Every time you submit a letter, you are educating the editorial board of your paper and paving the way for future letters to be printed. Keep trying! Seal the deal. If your letter is printed, be sure to send IDA a copy so we can track our effectiveness. If you mention an elected official, or other newsmaker you may want to send them a copy too.

### **MORE RESOURCES:**

You can order up to 45 copies of **A Waterproof Case** for free at:  
[http://www.monitorwater.org/A\\_Waterproof\\_Case.aspx](http://www.monitorwater.org/A_Waterproof_Case.aspx)

This 36-page illustrated story teaches elementary schoolchildren (ages 8 to 11) the important role that water quality plays in maintaining harmony within aquatic habitats. The website includes lesson plans, activities, related links and other helpful information to supplement using *A Waterproof Case* with students. <https://www.ffa.org/FFAResources/ffalearn/sourcesofdrinkingwater/Pages/default.aspx>

## Interviewing Tips

1. **Plan ahead.** Know what to ask before you meet. Use the Biographer's Notebook worksheet for questions, or write your own on a separate page.
2. **Pick a quiet place.** A busy coffee shop isn't a good place to conduct an interview. A quiet place, like the person's home or yours is best. It's also important to turn off the television, radio and your cell phone.
3. **Ask. Ask. Ask.** Ask the person to spell his or her name for you and also any other proper names (people, cities, etc.). Ask them to slow down a bit if you can't take notes fast enough. Ask them to explain words or ideas with which you're not familiar. If you think you didn't hear something correctly, don't be afraid to ask them if you have it right.
4. **Listen carefully.** Listening is a good way to show you're interested and care about what the person is saying. It will also help you ask the right follow-up questions, and make sure you collect accurate information.
5. **Use a tape recorder or video recorder.** It's difficult to ask questions, listen to answers and write good notes all at the same time. A tape or video recorder will help so you can focus on your conversation.  
**Note:** Make sure to test your equipment before you start and bring extra batteries.
6. **Take notes.** Even if you're using a recording device, writing notes will help you remember ideas you have when the person is talking that you also want to ask about. Also be sure to write a description of the person. What do they look like? Sound like? How do they act?
7. **Be polite.** Listen. Don't interrupt or rush the person. At the end of your interview, thank the person for his or her time.
8. **Share your story.** The person you wrote about would probably enjoy hearing or reading your story. You might ask to visit again to read your finished story to them. Or, you could make an extra copy of your book to give as a gift.

