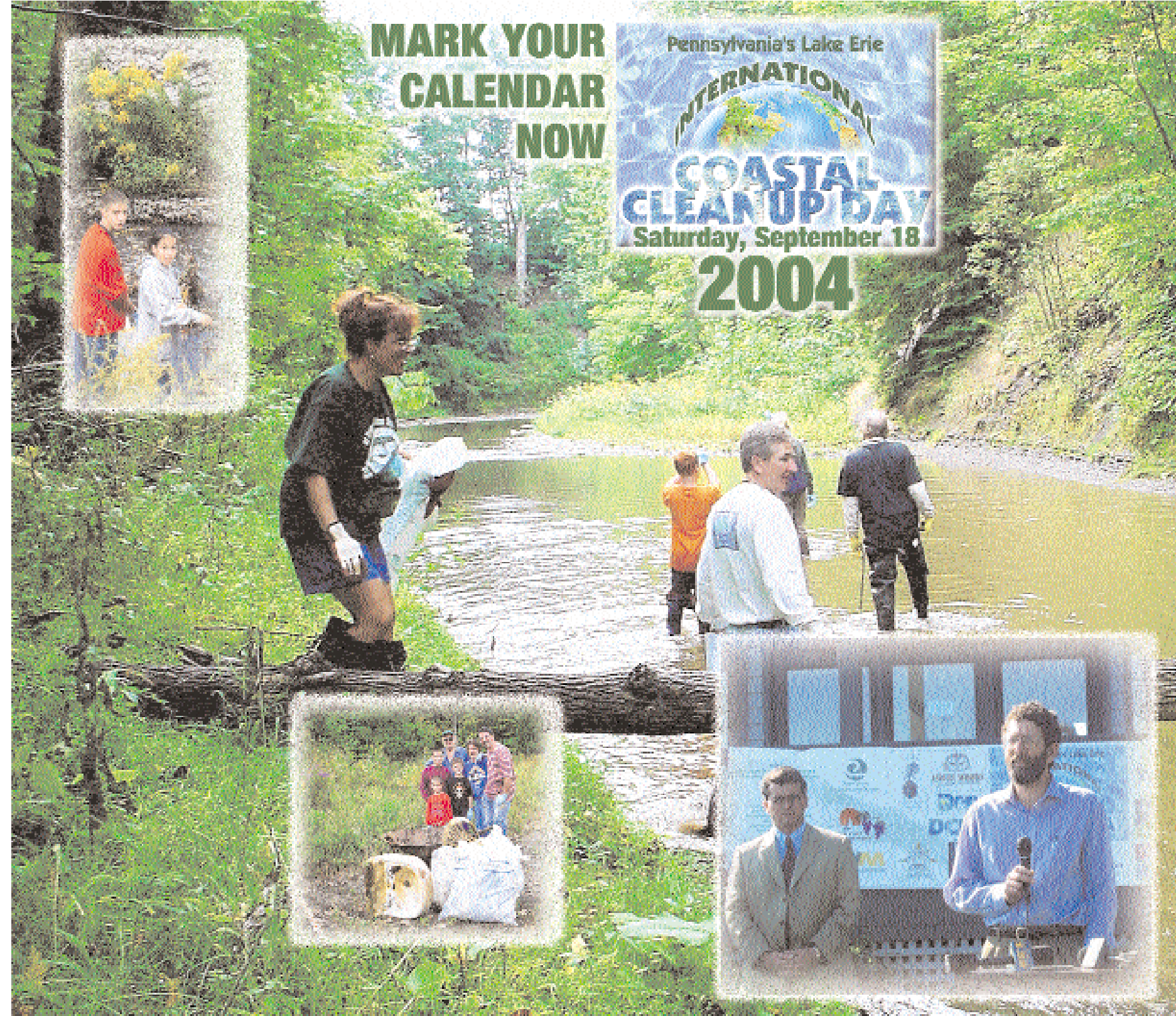


Yellow

Magenta

Cyan

Black



**MARK YOUR
CALENDAR
NOW**

Pennsylvania's Lake Erie
**INTERNATIONAL
COASTAL
CLEANUP DAY**
Saturday, September 18
2004

NIE "LENDING A HAND" SPECIAL SECTION SPONSORS



Erie Times-News in Education

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**Department of Environmental Protection Coastal Zone Management
GLANF* • WREN****



*Partial funding provided by Great Lakes Aquatic Habitat Network and Fund.

**Water Resources Education Network - Partial funding provided by the League of Women Voters of PA Citizen Education Fund through a section 319 Federal Clean Water Act grant from the U.S. EPA administered by PA Department of Environmental Protection.

'LAKE ERIE ICC STEERING COMMITTEE CONSISTED OF REPRESENTATIVES FROM THESE ORGANIZATIONS'

- PA DEP Coastal Zone Management • Asbury Woods Nature Center • PA DEP • Lake Erie-Allegheny Earth Force • PA Sea Grant - Penn State Behrend • Presque Isle State Park • LERC •
- PLEWA • North East Township • Erie County Conservation District • Baker Creek Watershed Association • Liberty Iron and Metal Co. Inc. • Erie Times-News In Education •
- ECEC/Partnership For A Healthy Mill Creek • Erie County Department of Planning • Waste Management •

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**Lending
A Hand**
for a Cleaner Coastline

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**PA DEP
Coastal Zone
Management
Program**



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ABOUT THE COVER:

Cover illustration: Josh Joint is a Commercial Art senior at Central High School who was previously featured in an Erie-Times News article about regional wildlife artists. Josh has been winning national wild life art competitions since seventh grade. Josh intends to major in illustration at the Columbus College of Art and Design.

The coastal cleanup writing and art project

We asked local students to submit both visual art and written works for consideration in this Earth Day special section. Mingling student work with research gathered from various other sources, including data from the International Coastal Cleanup and comments from the experts, has culminated in this presentation of pertinent information that will enlighten and motivate. You can also visit www.goerie.com/coastalcleanup to see more.

Joe Krol, Commercial Art teacher at Central High School shares the process by which his students approached this assignment:



"The class started the project by conducting research relevant to the written work requested. After analyzing the differences among the various types of writing needed, all sophomore, junior, and senior students produced an article, an editorial, a letter to the editor, and a poem. Each piece began as a "map of words" — evolving into a detailed outline, a carefully edited rough draft, and a final draft that needed to meet very specific criteria of procedure and organization. (To the surprise of many, research and writing is a very big part of the Commercial Art curriculum.) Hard copy of the final drafts were turned in as a class assignment, while a copy was e-mailed to the Times News office for possible publication.

After completing the preliminary research and meeting with representatives from the Erie-Times News, the class produced submissions for special section cover art, an editorial cartoon, and an illustration of the Lake Erie watershed. Each piece started with writing the specific message to be conveyed (relying on previously completed research) and the symbolism to be employed to best convey that message. Students then drew concept thumbnails — writing a rationale for the concept of choice. From the selected visual concept, a variety of design thumbnails were completed followed by value studies, color and technique studies, a detailed line drawing, and over-sized finished art. The execution of finished art required students to rely on drawing and painting skills under development during the entire four years of our 12-hour per week course. Although some discussion of work in-progress was encouraged, each student was responsible for using established procedures to produce uniquely interesting art that conveyed their original written message while meeting the printing specifications provided by the Erie-Times News.

The Erie-Time News staff and the Earth Day special section partners then chose pieces that best met their needs. In some instances, after a review, some of the art was returned to the Commercial Art classroom for modification before being accepted for publication."



The staff of Erie Times-News in Education and the sponsors and partners responsible for the production of this special section would like to extend deepest gratitude to the teachers and students who participated in making this project possible. Our only regret is that space did not allow us to showcase all the talent demonstrated by the submissions received. Go to www.GoErie.com/coastalcleanup to see more student work.

Above: Central High School Commercial Art junior, Bryan Jares.

< Central High School Commercial Art sophomore, Victoria Ranowiecki.

CREDITS:

- EditorAnna McCartney, NIE Coordinator
- Graphic design and page layout.....Debbie Kelly
- Contributing editors.....Margarita Dangel, OSB (Earth Force)
-Pat Lupo, OSB (Earth Force and JrPLEWA)
-Allison Phillips (Gannon University student)
-Todd Nunes (Gannon University student)
-Sarah Galloway (PLEWA)
-Don Benczkowski (ICC committee chairman)
-Freda Tarbell (ICC committee member)
-Lori Boughton (ICC committee member)
-Anne DeSarro (ICC committee member)

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Great PA clean up day

Pollution solutions

by Anna McCartney

Think before you toss.

Buy recycled products and products that can be recycled. Read the labels and look for recycling logos.



Start a recycling program at home, at school or in your community if one does not exist.

Organize regular clean ups at your school. Try to get as many students involved as possible. Make sure to include classrooms, hallways and the school grounds. Keep data so you can determine the source of the problems. Come up with ideas for solutions to the litter problem.

Start a Neighborhood Waste Watch. Go for hikes in your neighborhood with your family and friends and document the litter. Is there a problem? Join together with other interested people and start a cleanup program and get other neighbors involved.

THE FOLLOWING HAVE SCHEDULED A CLEAN UP IN THEIR NEIGHBORHOODS:

Mt. Calvary 6th Grade: April 27th from 4:30-6:30 pm

Klein Elementary School 6th Grade: April 23rd from 2 - 4 pm

Holy Family 6th Grade: April 22nd from 12:30 - 2 pm

John Horan Garden Apartments April 24th from 1 - 3 pm

Let us know what you are doing for earth day.

If you want to help at any of these events please contact: Lake Erie-Allegheny Earth Force at 899-2572.



Look for ads in the newspaper and determine which ones are the most effective in getting you to act. Design an ad to get your friends and family to participate in next year's ICC Day. What information should your ad include?



Tons of litter everywhere. As the results from the International Coastal Cleanup show, we are responsible for a large percentage of it. What can you do to make a difference - at home, in school and in your community? You can use some of the ideas below or use your imagination to come up with your own.

Find out from the county courthouse who owns abandoned properties. Then clean up vacant lots: turn them into mini-parks or play areas as soon as you have cleaned them up: otherwise vandals will turn them into private dumps again

If you live near wooded areas that have been or are still being used for dumpsites contact the proper authorities to help you clean it up.

Try to pass an ordinance requiring candidates to remove their campaign posters from trees, poles and buildings within one week of Election Day.

Contact your local government officials and review local ordinances on littering, junked autos and signs. Campaign for active enforcement of existing legislation and work to have new legislation enacted where it is needed.

Use cloth bags the next time you or your family goes shopping. Encourage other people to use cloth bags instead of plastic bags for grocery and other shopping.



come on my friends!

by Michelle Baker Edison Elementary School, Grade 4

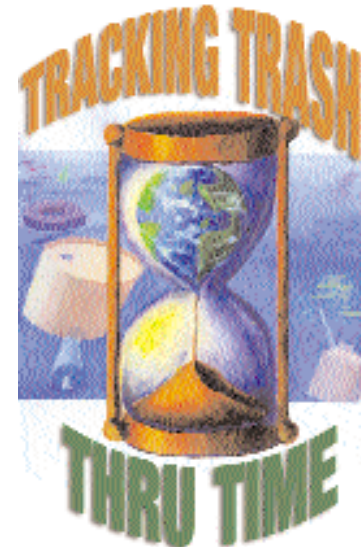
- Come on my friends,
- It's time it's time
- To pick up trash in yards
- Even if it's not yours or mine.
- The trash that people throw on the ground
- It really goes around.
- The animals, they hurt and cry
- Come on my friends
- It's time it's time to pick up trash in yards
- Even if it's not yours or mine

water

by Victoria Ranowiecki, Central High School sophomore

- Crystal clear, flowing
- Liquid cool and fresh
- Streaming over rock
- And shale
- Freely.
- Like wind or bird or fish
- No beginning
- Never ending
- Forever streaming
- Figures.
- Several foreign creatures
- Coming and going
- In groups at times
- Sometimes alone
- Purpose.
- Their own business
- Their own lives
- Ignorance.
- As they leave
- They leave this place
- A mess
- Destroyed.

< Through her "One Block at a Time" program, Sister Mary Lou Kownacki encourages children of all ages to pick up in their neighborhood.



Teacher resources & Activities page

2002
The Fresh Kills Landfill on Staten Island was reopened to accept the 1.2 million tons of debris from the World Trade Center following the September 11 terrorist attacks.

2003
More than 600 environmentally conscious volunteers at nine shoreline cleanup locations all over Erie County, PA joined thousands of volunteers all over the world to participate in the 17th annual International Coastal Cleanup.



This groundhog found a bunch of litter when he dug his tunnel. Help him find his warm bed.

- Wool sock 1-5 years
- Cigarette butts 1-5 years
- Banana & orange peels up to 2 years
- Plastic coated paper 5 years
- Plastic bags 10-20 years
- Plastic film containers 20-30 years
- Nylon fabric 30-40 years
- Leather 30-40 years
- Aluminum cans 500 years
- Tin cans 50 years
- Glass bottles 1,000 years
- Plastic bottles and styrofoam - indefinitely

Make Every Day Earth Day!
For more student work, pictures and information about this project and for information about Lake Erie's International Coastal Cleanup visit www.goerie.com/coastalcleanup

Check out these excellent resources for information and activities that are sure to get kids learning about and involved in issues that affect their future.

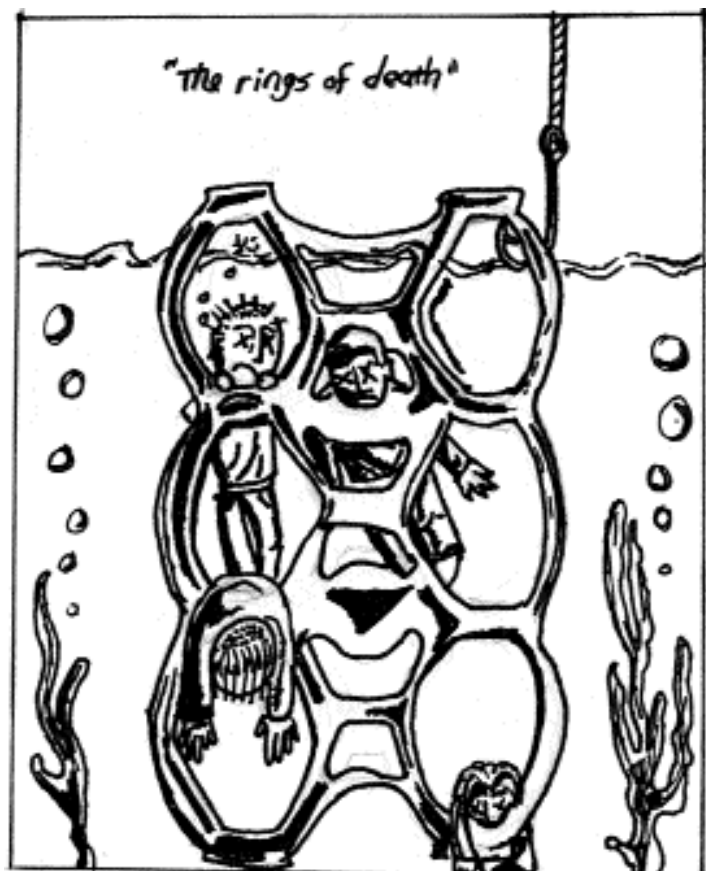
- www.earthforce.org/lea
- www.coastalcleanup.org
- www.noaa.gov/coasts.html
- www.dcnr.state.pa.us/education
- www.cleanpaforests.org
- www.pacleanways.org
- www.fish.state.pa
- www.pgc.state.pa.us
- www.dep.state.pa.us
- www.emappa.dep.state.pa.us/emappawebsite/emapWIMN/viewer.htm
- www.egbar.org/teachers1.html
- www.newsrelief.com/contentareas/scienceinthenewssample.html
- www.earthday.net (Details about Earth Day)
- gcmd.gsfc.nasa.gov/Resources/Learning (NASA on monitoring)
- www.epa.gov/earthday
- www.ecokids.earthday.ca/pub (EcoKids online)
- www.planetpals.com/earthday
- www.vocabulary.com/VUearthday.html

FOR MORE ACTIVITIES, CONTACT PA CLEANWAYS AT (724)836-4121.

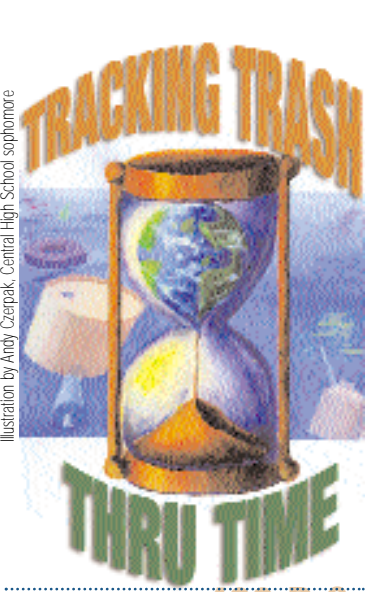
Look for the items listed here in the mountain of trash and circle all that you can find.

- child's plastic swimming pool
- 2 rolled carpets
- 4 concrete blocks
- upholstered chair
- filing cabinet
- bed headboard
- coat hanger
- lawn chair
- lawn mower
- mantle clock
- 4 mattresses
- stove
- dryer
- plunger
- recliner
- refrigerator
- 3 six pack rings
- office swivel chair
- 3 television sets
- telephone
- 19 tires
- toilet
- tricycle
- umbrella
- couch

What can you find in this mountain of trash?



Editorial cartoon by Robert Elliot, Central High School Junior



Are we really the source of the problem?

by Anna McCartney

In just one day in 2002, volunteers found 259 animals entangled in some form of debris. Marine litter is a serious problem in the oceans and coastal environments worldwide. It is not just some garbage on the beach or in the water that can easily be cleaned up.

And the problem keeps getting worse. Marine litter kills, injures and causes pain and suffering. It is a vicious killer of marine creatures from the smallest to the largest creatures including mammals, seabirds and many other life forms. It is a visible threat to wildlife, but also an invisible threat to all life.



Plastic for breakfast, anyone?

Photo courtesy of NOAA Photo Library

Marine litter travels over long distances and much of it eventually ends up in the oceans. It is found almost universally in the marine and coastal environments (oceans and seas, lakes and streams, salt marshes, estuaries, beaches) - not only in densely populated regions but also in remote places far from any inhabited areas.



Any ideas how this sea turtle died?

Photo courtesy of NOAA Photo Library

Most of this marine litter persists for decades and can form traps that kill and harm over and over again. It consists mainly of plastics (and of metal and glass) - materials that do not break down easily or quickly.

On September 20, 2003 over 600 local volunteers decided to join thousands of people from all 50 U.S. States, its 5 territories and more than 100 other countries around the world in the 18th International Coastal Cleanup.

The story doesn't end with the trash collection. These volunteers wanted to heighten awareness and to change the behavior responsible for the debris, which causes damaging effects to our waterways and wildlife.



Sea turtle in a "happy habitat"

Photo by Sandra Edwards (sandra@brstudies.com). Reprinted with permission.



This is not the latest in seal fashion!



Who would dream of harming this precious life? That's exactly what you could be doing when you litter.

Photos courtesy of NOAA Photo Library

400 B.C.
Athens, Greece, organizes the first municipal landfill in the Western world and requires waste disposal at least one mile from city walls. Virtually anything considered unwanted waste is left in the dump.

200 A.D.
The first sanitation force is created by the Romans. Teams of two men walk along the streets, pick up garbage, and throw it into a wagon.

1348
The Black Death epidemic reaches Europe from Asia, caused in part by garbage tossed into unpaved streets and vacant spaces, which attracted rats. Fleas that traveled on the backs of infected rats quickly spread the disease to humans. Millions of people died.



1388
Reacting to waste disposal methods that involve simply throwing garbage out of windows and doors, the English Parliament bans waste disposal in public waterways and ditches.

Laws are developed requiring that garbage be taken outside of the city gates, but 12 years later in Paris, garbage has piled up so high outside the gate that it actually interferes with the defense of the city.

1551
The first recorded use of packaging: German papermaker Andreas Bernhart begins placing his paper in wrappers labeled with his name and address.

1657
Residents of New Amsterdam (New York) are among the first to pass laws prohibiting the throwing of trash into the streets, but street conditions remain the homeowners' responsibility.

Yellow

Magenta

Cyan

Black

Yellow

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1776

The first metal recycling occurs in America when patriots in New York City melt down a statue of King George III and make it into 42,088 bullets.

1785

The first cardboard box made in America is manufactured in Philadelphia by Frederick Newman.

1810

The tin can is patented in London by Peter Durand.

1834

Charleston, WV, enacts a law protecting garbage-eating vultures from hunters.

1858

The Mason jar is invented, allowing fruits and vegetables to be preserved.

1860

Private scavenging companies and municipal crews begin working together to clean up New York. They remove 15,000 horse carcasses from the city streets (city horses have rough lives pulling street cars: their average life expectancy is only two years!)



An estimated 10,000 hogs roam the streets of New York City, gorging on garbage.

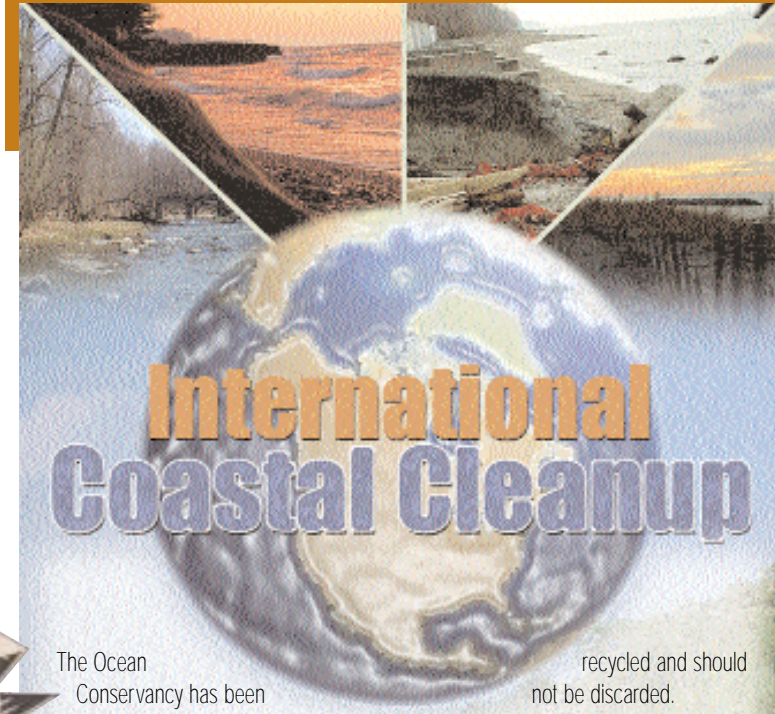
1866

New York City's Metropolitan Board of Health declares war on trash, forbidding the throwing of dead animals, garbage or ashes into the streets.

1868

Chemist John Hyatt invents celluloid for billiard balls. The balls sometimes spark on collision and even explode, requiring a search for improvements that lead to the invention of plastics, an industry that Hyatt can be said to have founded.

History of the ICC by Anna McCartney



The Ocean Conservancy has been sponsoring the International Coastal Cleanup (ICC) since 1986 when it first took place along the Texas coastline with 2,800 volunteers participating. It is now the oldest and largest beach and waterway cleanup with data collection in the world.

On September 20, 2003, more than 600 local volunteers gathered at nine shoreline cleanup locations all over Erie County to participate in the ICC. It was expanded locally for the first time. In addition to Presque Isle State Park, the only location for many years, volunteers also cleaned the Elk Creek and Walnut Creek access areas; Walnut Creek at Asbury Woods; the mouth and headwaters of Mill Creek; McDannel Run at Six Mile Creek and Seven Mile Creek; Cascade Creek at Presque Isle Bay and Garrison Run; and North East Marina at Freeport Beach and Twenty Mile Creek.

By 2002 the number of volunteers rose to over 400,000 representing 100 nations for the one-day event. Volunteers removed 6,262,959 total items from 12,410 miles of shoreline and waterways, equivalent to over three quarters of the circumference of the earth. Cumulatively from 1986 to 2002, the ICC removed 89 million pounds of debris from over 130,000 miles of shoreline.

This clean up is unique due to the international effort and data collection. The data is then compiled into an international 'snapshot' of the types of garbage found.

Solutions to the some of the problems caused by Marine Litter have occurred through this effort. For example since 1989, data collected in the U.S. shows that invertebrates, fish, seals, sea turtles, birds, dolphins and whales all suffer needless deaths and injuries as a result of entanglement. Although six-pack rings cause some entanglements, the number one culprit is monofilament fishing line. Fishing line has also entangled scuba divers.

Because of this information, some industries are changing their products to be more environmentally friendly. Six-pack rings are now photodegradable and new plastics made out of starch are being developed making them biodegradable. Monofilament fishing line can now be

recycled and should not be discarded.

Photos and design by Kyle Beckman, senior at McDowell High School and Erie County Voc-Tech School

The ICC and the Presque Isle area of concern

by Lori Boughton, Director of DEP's Office of the Great Lakes

Pennsylvania's 63 miles of coastline on Lake Erie gives us access to one of the world's greatest natural resources – the Great Lakes. But we have also experienced some of its biggest environmental problems. Called the Sweetwater Seas, the Great Lakes hold 6 quadrillion gallons of water and are bordered by two countries, the United States and Canada. In 1909, the governments of these countries realized the need to work together in using this shared resource and entered into the Boundary Waters Treaty which deals with both water quality and water use. It also created the International Joint Commission (IJC), a joint Canadian and American federal government agency that gives advice to the federal governments on Great Lakes issues.

Over time and with more people living along its shores, the lakes became very polluted. Again, the United States and Canada saw a need to act and in 1972 entered into the Great Lakes Water Quality Agreement. Through this Agreement, the two countries pledged to work together to protect the Great Lakes and tackle the environmental problems.

The Agreement has been updated as issues and challenges have changed over time. In 1987, the Agreement named forty two "Areas of Concern" or AOCs around the Great Lakes that needed special attention. Presque Isle Bay became the forty-third AOC in 1991 after people from Erie wrote a letter to the United States Government asking that it be added.

The environmental problems in Presque Isle Bay have been the result of chemicals flowing into the Bay from industry and the watershed over many years. Many of the industries are now gone and those that remain are not adding polluted water into the Bay. However, there are still problems in the watershed and these are the focus of our ongoing efforts to clean up the Bay.

Projects like the International Coastal Cleanup give us the chance to learn that the problems are not only caused by industry but also are caused by the actions of every person. After spending three hours picking up trash, people see first hand the result of our carelessness. The data collection showing the number of cigarette butts, plastic bags and other litter makes us aware just how big the problem is. Hopefully, this information will make people think twice before littering again. Any work to clean up the watershed positively affects the Bay.

Presque Isle Bay is a treasure worth protecting and part of what makes Erie Erie-sistable. If you want to learn more about the Area of Concern or become involved, check out the Department of Environmental Protection's Website at www.dep.state.pa.us/dep/deputate/fieldsops/nw/nw.htm or call Lori Boughton at (814) 332-6186. You also won't want to miss the special Erie-Times NIE 16-page supplement on May 10, 2004.

WE WANT A CLEAN BEACH
by Becca Morton,
Our Lady's Christian School, Grade 4

*People litter the beach.
Other people cut their feet.
Why?
Because some people throw their bottles.
Birds and animals throttle for air.
Cigarette butts are everywhere.
People make a fuss over everything you drop.
Fish can't swim, animals limp.
Why don't you learn?
We yearn for clean.
A clean beach is what we need,
But you break that dream.
So help us out so we can stop the pollution
If only you try.*

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Earth force projects, con't.

NORTH EAST MIDDLE SCHOOL



After Earth Force Explore students at North East Middle School learned about the litter and data collected in the 2003 International Coastal Cleanup, they were curious about the litter

habits of their peers. The group of 13 students conducted a survey of litter in the 6th, 7th, 8th grade and common halls of the school. They cataloged the litter according to type and location. The group feels there is a litter problem in their school and that the behavior of their peers could continue into the outdoor environment from a lack of awareness. Ideas were generated for how to make their peers aware of the problem, but no solutions have been initiated.

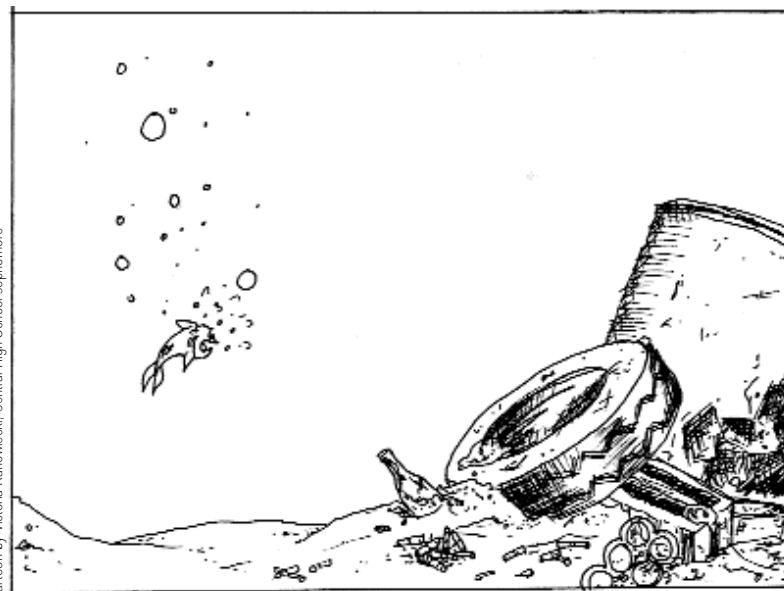


The Kindergarten students from the **Montessori Children's House of Erie** established a new procedure for their classroom – **EARTH FRIENDLY LUNCHES**. They reduced the trash in their classroom dramatically by using lunch boxes, containers for the food and cloth napkins. Biodegradable materials such as apple cores and banana peels are separated and composted on the school property. Recycling containers are available for paper, cans, and glass.



Design an ad or write a letter to the editor to encourage people to stop littering.

Editorial cartoon by Victoria Ranowicki, Central High School, sponsor



KIDQUOTES

"If you see someone litter, tell them, report them, or pick it up yourself."

—Jordan Wright, Brady McGill, Tyler Chilcott, and Lauryn Donikowski, Klein Elementary

"We, the people of the U.S., are 4.6% of the world's population, but we produce 33% of the world's solid waste."

—Ashton Haynes, Amanda Bohrer, Mitchell Shove and Alyssa Demsey, Klein Elementary School

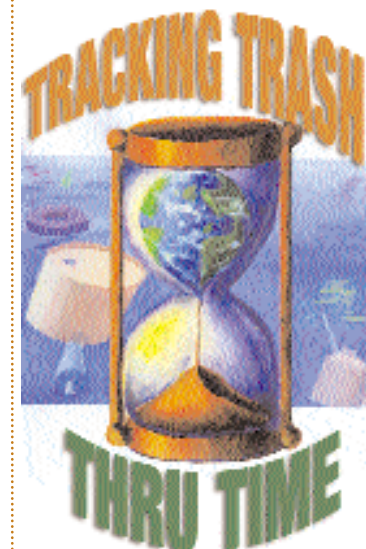
"Please get the mayor involved. Please talk him into doing a litter prevention program."

—Ashley Groucutt, Jacob pochatko and Joshua Cooper, Mt. Calvary School

"You can also carry a litterbag around when you take walks around your neighborhood. Then just in case you find any litter you can pick it up and help to keep the world beautiful."

—Message from Mt. Calvary's 6th Graders

Let us hear about your projects and solutions to the litter problem. This is not a one-day project. Changing the way we live and becoming involved is the best way to conserve our resources and help our environment. We will highlight your programs in the following months in special NIE newspaper features.



1989

In 1989, the coastal cleanup becomes the International Coastal Cleanup (ICC) with Canada and Mexico's participation. Just three years later, 33 countries participated; in 2002, 100 nations took part-an all-time high.



Arizona archaeologist William Rathje recovers corn-on-the-cob intact after 18 years in an Arizona landfill, indicating that just because we put biodegradable trash in a landfill, doesn't mean it will decompose and become smaller in size. People had

thought that as food wastes decomposed in landfills, it would allow us to increase their capacity.

Laws requiring recycling to be an integral part of waste management have been enacted by 26 states. IS YOUR STATE ONE OF THEM?

1990

McDonald's announces plans to stop the use of polystyrene packaging of its food due to consumer protests.

1996

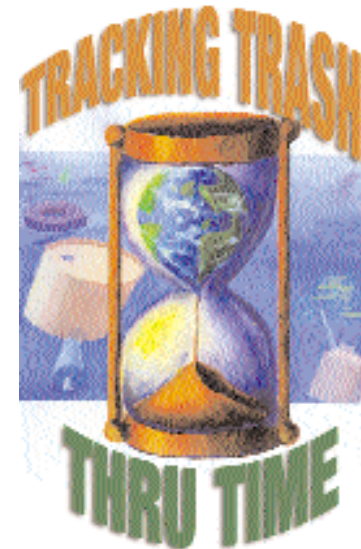
An attempt to pass a solid waste flow control bill in the U.S. House of Representatives fails.

1997

EPA increases America's recycling goal to 35% by 2005.

1998

Seven years of consolidation of solid waste companies reaches its peak when the largest in the U.S., Waste Management, merges with the number three company, USA Waste, whose management takes over the new Waste Management.



1986

Rhode Island becomes the first state to pass mandatory recycling laws for aluminum and steel cans, glass, newspaper, and soda bottles (PET) and milk jugs (HDPE) plastic.

The Fresh Kills Landfill on Staten Island, NY becomes the largest landfill in the world.

1987

A Long Island garbage barge known as Mobro 4000 leaves a New York port on March 22 with 6,000 tons of garbage bound for a southern landfill. The barge is rejected by the states of Louisiana, Alabama, Mississippi, Florida, and New Jersey, as well as Belize and Mexico. After a journey of 173 days, the load, mostly paper, is ultimately incinerated near the Long Island landfill from which it had originally been taken. The trip of the Mobro is followed on television and in newspapers and creates the impression that the U.S. does not have enough places to dump garbage.

1988

The EPA estimates that more than 70 percent, or at least 14,000 of the landfills operating in 1978 have since closed because they didn't meet new higher landfill standards.

In an effort to divert waste from landfills, Assistant EPA Administrator Winston Porter sets a U.S. recycling goal of 25% to be met in the next four years. The goal is met in 1996.

Medical waste washes up on eastern U.S. beaches. One result is the Medical Waste Tracking Act, a two-year plan to set up procedures to track these hazardous wastes.

The Plastic Bottle Institute develops a material-identification code system for plastic bottle manufacturers. (This is our current #1-6 system.)

Earth force projects

by Margarita Dangle, OSB Earth Force

Over the past few months Earth Force students at participating schools have been using the data collected on September 20, 2003 at the Lake Erie International Coastal Cleanup to learn about the causes, problems and issues associated with litter. In addition to the writing and art activities included in this supplement, students used the Earth Force six-step problem-solving framework, which addresses local concerns, is rooted in balanced research, and promotes sustainable solutions to design a solution to littering.

If you would like to become an Earth Force School contact Lake Erie Allegheny Earth Force at 814-899-2572.

JFK a more Earth friendly place and to reduce the impact of litter on McDaniel Run.

MONTESSORI SCHOOL

6-9 year olds

Litter Project: Waste Reduction and Litter Patrol of the school playground. Students are doing an inventory of garbage in and outside of our school just like the coastal cleanup day. They hope they will make the earth a better place.



GLENWOOD ELEMENTARY SCHOOL

6th Grade

Litter Project: Litter and illegal dumping throughout history and waste reduction in our community today. Glenwood researched the history of litter and illegal dumping and the students built a castle for their presentations.

EARTH FORCE YOUTH ADVISORY BOARD

Litter Project: Adoption of the lower east side blocks and an anti-litter campaign

EDISON ELEMENTARY SCHOOL

After-School Program

The small group of Earth Force students dedicate one hour after school on Fridays. They are exploring ideas to decide how they can make a difference about litter in their school and the community.

ERIE FAMILY CENTER > Explorer After School Program

Litter Project: Neighborhood Clean up. The students have participated in role-playing activities - confronting "litter bugs." They also made posters and collages dealing with biodegradability. Some projects for the future include a litter survey around the building of the Erie Family Center and education awareness projects throughout their schools and communities.

JOHN F. KENNEDY CENTER

Drug Free Nature Kids

The youth at JFK are working to find a way to reduce litter and clutter that accumulates around the center. They are considering increasing the number of garbage cans and introducing recycling bins and ashtray bins for cigarette butts. Their goal is to make

JFK a more Earth friendly place and to reduce the impact of litter on McDaniel Run.



MT. CALVARY SCHOOL v

6th Grade Litter Project: Clean up McDannel Run

The students are organizing a clean up event and will attend a meeting with the Mt Calvary PTC and a neighborhood group to educate them about the effects of litter. They are also hoping one of the groups will volunteer to adopt the clean up as an annual event.



KLEIN ELEMENTARY SCHOOL

6th Grade (both classes) Litter Project: Litter Patrol Program



As part of their investigation the students discovered in a 10-minute search over 50 different items of litter in the school building and on the school grounds. They decided to do something about it. Currently they are working on a Litter Patrol Program for their school that 6th graders would continue every year. The

program entails a clean up day, educational session for younger students and a regular litter patrol.

WATTSBURG AREA MIDDLE SCHOOL

6th Grade Litter Project: Advertising Campaign

The students studied the ICC data using the Erie Times News In Educations ICC pages, interviewed Don Benczkowski from DEP Coastal Zone Management Program and decided that the students at their school should know more about the impact of litter. The class will develop video clips to be viewed at their school TV Program.



HOLY FAMILY

6th Grade Litter Project: Cloth bags instead of plastic

The students were deeply disturbed as they found out how litter can harm wildlife and

aquatic life. Knowing that 18% of all litter travels to our waterways and from there into the ocean they couldn't believe what impact plastic has. Plastic breaks up into smaller and smaller pieces but stays plastic. Plastic also absorbs toxins in the water and becomes very dangerous for aquatic life that mistakes the plastic for food. Knowing this the 6th graders from Holy Family will approach a local store and try to convince people to switch to cloth bags instead of plastic bags. You can help us by sewing cloth bags that we will hand out around Earth Day. Please contact: Richard Rexford at 452-4720.



An Erie Times-News In Education special section | April 21, 2004 | www.GoErie.com/nie

Dear community

by 4th grade Edison Elementary students

These letters by 4th grade Edison Elementary School children demonstrate the love and care that they have for our aquatic environment and its inhabitants. Heeding their wise advice will help ensure the preservation of the sport that so many enjoy.

Please don't litter. Fish and birds are dying because of fishing line. Please help us pick up your gear. We count on you. Please help us! Thank you.

-Christopher Petri

If junk is laying in the water, like nets or wires the fish will get caught. They will die. So cleanup all your stuff on the ground. I hope you will listen to me.

-Your friend, Alex Kujawinski



Fish need water like we need oxygen. When some people go to Lake Erie and see dead fish they may never want to come back. All because of this we lose visitors.

-Your friend, Selma Sinanovic

TRY THIS: Americans make 2.3 trips to the grocery store each week. If people use 5 to 10 bags each time, how many do they use in a week? How many in a year?

Oh the places it goes! It can go on the road It might cover a toad If it gets in the water It could bother an otter. It can wash down the drains Whenever it rains. And oh what a sight On a bike or a hike. Oh the places it goes.

Can you guess what it is?

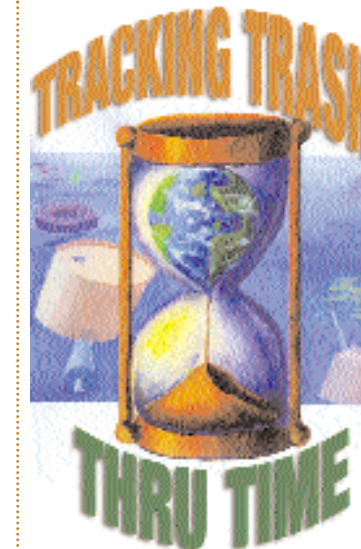
Please take care of your fishing gear. Once in the newspaper it showed an eel tangled in fishing line. You guys are killing my 11th favorite sea animal.

-Your friend, Brain Hollenbeck



Look for articles that discuss an environmental issue. Read the article closely. Underline the statements you feel are facts and circle the statements you feel are opinions.

Look for articles about the environment. Can you find ones that deal with local, state, national or international environmental issues? How do these affect you and your family? What can you do to make positive changes?



1874

Concerns about unhealthy sanitary conditions in England prompt a new invention in Nottingham-"The Destructor" provides the first systematic incineration of municipal solid waste (MSW). Curbside recycling begins for the first time in the United States in Baltimore.

1885

The first garbage incinerator in the U.S. is built on Governor's Island, New York. By 1914, 300 incinerators are located in the U.S. and Canada.

1888-1913

A survey shows selected American cities generate 860 pounds of garbage per capita, compared with 450 pounds for English cities and 319 for German cities.

1890

The Boston Health Department proclaims burning waste to be the "best and safest" means of disposal. But because of the high cost of commercial incinerators, the department recommends burning waste in home kitchens.

1895

Col. George E. Waring Jr. is appointed New York City street cleaning commissioner of New York City. He develops the first practical, comprehensive system of refuse management in the U.S. Among his other reforms and innovations, he is the first to attempt to separate refuse on a large scale, to allow the city to recover and resell some of the materials and allow street crews to handle them more easily. His plan requires everyone to keep organic waste, rubbish and ashes in separate containers and begins the city's first municipal recycling program. In 1898 he takes over from "scow trimmers," who rummage through dumping scows (headed for the ocean) for materials with resale value, and establishes the first rubbish-sorting plant in the U.S. The city's recycling operation was closed in 1925 due to complaints about odors, and ocean dumping gradually resumed until it was outlawed again in the 1980's.

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Barry the bag by Kristin Phillips, LEA Earth Force member, 11th grade student from Villa Maria Academy

I never imagined I would travel so many miles on an adventure that led me so far from my home. My name is Barry Bag and this is my story.

As I kept floating along, getting further and further away, I began to hear the sound of birds. Then, a seagull flew so close to me - and away I went, strung around his neck.

The poor bird stopped to try to shake me off, but I hung on. Off he flew and in a short time a beach came into view. Just as we reached the sand, a wind blew me off the bird, and I crashed on a sunny dune on Presque Isle, in Erie Pennsylvania.

I was sitting on the sand, looking at Lake Erie, when a dog came sniffing around me and I became tangled between his legs. His master freed me but unfortunately tossed me away, and I rolled into the lake. Wind and current swept me towards Lake Ontario.

I have not only seen Niagara Falls, but I have been OVER them. The plunge was terrifying,

so I shut my eyes. When I opened them, I was in Lake Ontario caught on a fish that carried me into the St. Lawrence Seaway and eventually ended up in the Atlantic Ocean.

Right now, I'm still in the ocean, floating along as just one bag in the huge pile of garbage that is ending up here. Marine life can get helplessly caught in the plastic that ends up in our waterways. To add to this tragedy, animals such as marine turtles confuse plastic bags like me for jellyfish and can choke or starve to death.

It may not seem like much, but even a light piece of litter like me can cause a lot of damage. Please consider what happens to all the millions of bags that are carried away from a local store each day. What you can do to keep them out of the environment? ☺

Photo by John MacCrimmon, supervisor at Rochester Institute of Technology



1895

King C. Gillette, a traveling salesman, tired of sharpening his razor collection, invents the disposable razor blade.

1902

Municipal solid waste collection, i.e. curbside pickup, becomes the norm in cities- 79% of the U.S. cities surveyed by the Massachusetts Institute of Technology provide it. Trash is taken to the "town dump."

1904

The nation's first major aluminum recycling plants open in Chicago and Cleveland.



1908

The U.S. allows permit mail, which opens the door for direct mail advertising. Paper cups replace tin around the U.S. in vending machines, in public buildings and on trains. America also becomes the leading producer of paper and paper products (about 640,000 tons) and the leading consumer (38.6 pounds per capita). To meet increasing demand and the fear of deforestation, the U.S. steps up imports of rags and wastepaper. By 1916 the U.S. produces 15,000 tons of paper per day, using about 5,000 tons of old paper.

Manufacturers develop means to remove printer's ink from old newspapers through a defibering process, while other processes turn old paper into cardboard and pasteboard.

1912

Cellophane (clear plastic) is invented by Swiss chemist Dr. Jacques Brandenberger, which encourages the use of plastic packaging.

1914

Source reduction of waste is on the wane because people consider it too costly and it affects too little of the waste stream. Incineration also struggles in the U.S. because of problems adapting the English model.

The local coastal cleanup results

by Emm Venesky
from Northwest Collegiate Academy

I t's getting close to that time of year when we all travel to the dark pits of our bedroom closets and find our bathing suits and beach towels still coated with sand residue from last year's beach fun.

Y es, summer is almost here! That means only one thing to many Erie residents and Erie visitors: Presque Isle and other Erie beaches.

Even though we have become accustomed to the sights of plastic bags, bottles, and cans scattered throughout the grass and trees, and on the beaches, it could be different. We could all do our part to keep pollutants and litter from making their way into our water.

We don't have to wait until the yearly September International Coastal Cleanup for volunteers to do it for us. We can learn from the data collected on September 20, 2003 by over 600 volunteers what we must do to make a difference.

Not only do we need to be concerned about point source pollution (see pages 8 and 9) from sewage treatment and

industrial plants getting into the water, but we also must worry about the trash that is thrown on the ground. Not surprisingly, the highest percentage of litter found along the coast was cigarette butts. Even though the rare attention given to the Erie Times-News headline on the Tonight Show with

Jay Leno* humored Erie residents, prevention of this kind of litter being carried into the water should be a priority of all smokers. It can be as easy as disposing of cigarette butts properly in the first place.

Although the results clearly show that non-point sources of pollution are a big problem we cannot forget the problems caused to our waterways by pesticides used on our lawns and for agricultural purposes. We can also encourage businesses and factories to be aware that we want them to keep our water clean.

One thing is certain, if you are a resident who just enjoys the lake or a factory worker, business owner, fisherman or a visitor to our area, you can prevent these harmful pollutants from entering the water so cleanups will become unnecessary. By being aware of what you throw away and where you throw it, you can help Lake Erie and other waterways stay as clean and beautiful as they were meant to be. Just think of how you can help make life better for the infinite number of aquatic organisms who make the water their home. ☺



"On the December 8th airing of the Tonight Show, Jay Leno poked fun at the Erie Times-News during his popular "Headlines" segment. Referring to the November 12, 2003 Times' article by Erica Erwin entitled "Little white butts litter beach", Jay elicited laughter from his audience by calling attention to the humorous headline. Demonstrating that humor can be used to draw attention to the litter problem that besieges our planet, Ms. Erwin effectively addresses the seriousness of the problem in her article. Go to GoErie.com/search.html to read "Little white butts litter beach."

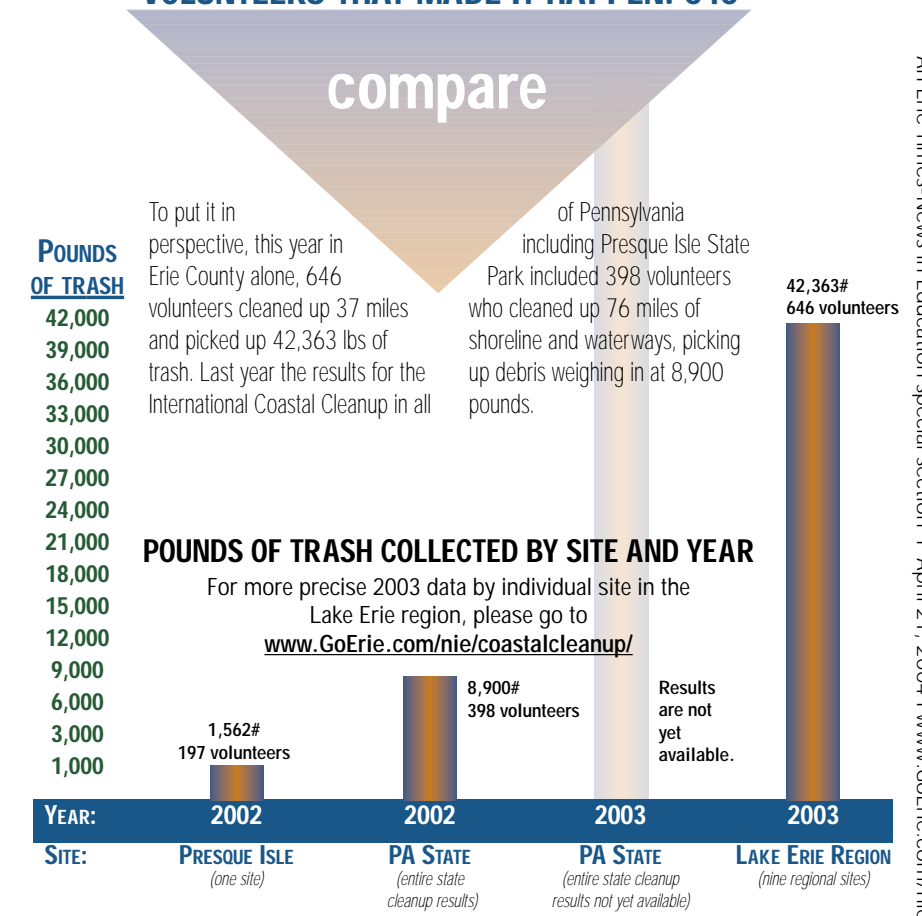
LAKE ERIE TRIBUTARY/LAKE ERIE SHORELINE MILES CLEANED: APPROXIMATELY 37 MILES
POUNDS OF TRASH, RECYCLABLES AND TIRES COLLECTED: 42,363 LBS
VOLUNTEERS THAT MADE IT HAPPEN: 646

TOP TEN LIST

Lake Erie's International Coastal Cleanup 2003 top ten types of litter found:

10	tires are tied with clothing/shoes
9	building materials
8	balloons
7	toys
6	straws/stirrers
5	cups/plates/forks
4	bags
3	food wrappers
2	beverage containers
#1	cigarette butts

Which types of litter can be recycled and which cannot?



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How and why we litter: intentional and unintentional



by Megan Grotkowski JrPLEWA
12th grade student from Northwest Collegiate Academy

The **FOUL SHOOTER** throws litter at a bin, it misses the bin and the shooter just walks away.

The **CLEAN SWEEPER** arrives at a table where others have littered, they simply sweep the waste to the ground.

The **GRINDERS** are smokers who grind their cigarettes into the ground.

The **FLAGRANT FLINGER** is the one, without any apparent care, throws litter through the air.



Illustration by Bryan Jares, Central High School Junior

The **90%er** puts most of the waste in the bin, but some is left behind or dropped.

The **WEDGER** stuffs pieces of litter into gaps, between seats and other places.

The **INCHER** is the person who leaves litter then slowly moves away from it.

The **UNDERTAKER** buries litter, often under the sand.

Litter is thrown away in its proper place or recycled. This person also often cleans up after others.

flick

by Greg Barone, Central High School

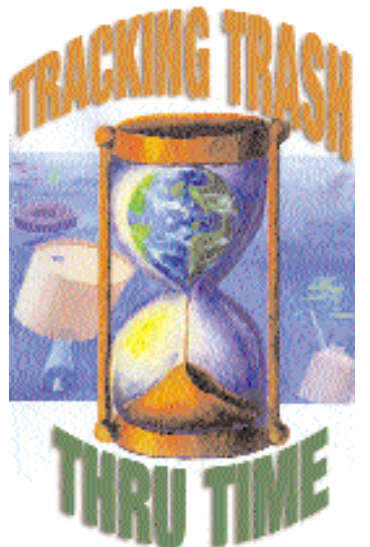
Another one falls to the ground
Though its ashes are already there
So why should I care
Yellow and white pavement
The cement fights against the smoker's carelessness
But gray is a color of the past
The forest and grass
They were once green
Now lay waste covered in tar and nicotine
The over populating drug
Is used up and laid to waste on the dirty rug that is our planet
Why won't they can it?
They just drop it
To lay there
And no one seems to care
They walk briskly past
Never losing pace
They stare blankly like the dead
cigarette butt
A clean Earth will last
No concerned expression on their face
Across the dirty ground of used up ash
The ground is engulfed with cigarettes
But no one sees it as a threat
At least not yet.



Illustration by Lindsay Rodgers, Central High School senior

Unintentional littering happens, because:

- Weather conditions contribute to the litter problem by blowing it around and washing it down the storm drains, etc.
- Animals rip trash bags open and dig garbage up, etc.
- Trash flies off trucks, cargo or personal items get lost or left behind, and debris from accidents cause litter, etc. ☺



1978 cont.

chemical waste there 25 years earlier. They covered it up and then sold the property to the Niagara Falls Board of Education, which placed a school and playground on the site. Lawsuits for damages continued into the mid-1990's. The Love Canal incident is cited as a prime cause in the creation of the Comprehensive Environmental Response and Liability Act, also known as Superfund, in 1980.

1979

The EPA issues landfill regulations that prohibit open dumping.

1980

Per capita production of waste reaches 8 pounds per day, up from 5 pounds in 1970 and 2.75 pounds in 1920.

1985

First Adopt-A-Highway program started in Texas to address litter along state-maintained roads.

In 1985, EPA's Office of Toxic Substances contracted with the Center for Environmental Education to conduct a study of plastic marine garbage. The resulting report, *Plastics in the Ocean: More Than a Litter Problem*, was the first to identify plastics as the number one marine debris hazard. It also established the Center (now known as The Ocean Conservancy) as an authority on this emerging issue.



That same year, a staff member at the Center was appalled at the amount of trash she found littering the shores of South Padre Island, Texas. Determined to make a difference, she organized the Center's first beach cleanup held in 1986. In just three hours, 2,800 Texans picked up 124 tons of trash from 122 miles of coastline. *This is the predecessor of the International Coastal Cleanup.*

¹ *Research by Keep America Beautiful, Inc., web page: <http://www.kab.org/litter1.cfm>
² *Research by Keep America Beautiful, Inc., web page: <http://www.kab.org/litter1.cfm>



Keeping butts out of the bay

by Alison Philips
Gannon University student

On a warm summer evening, you and your out of town friends decide to walk along Dobbins Landing to watch the sunset from the Bicentennial Tower in downtown Erie, Pennsylvania.

However, to reach the Bicentennial Tower, you must navigate a path through the maze of cigarette butts, which cover the ground. Instead of watching the waters of Presque Isle Bay shimmer in the sunset, you stare at the ground beneath you and wonder, "How many cigarette butts ARE there?"

Megan Grotkowski and Sr. Pat Lupo of JrPLEWA



Several JrPLEWA (Pennsylvania Lake Erie Watershed Association) students and educators including Megan Grotkowski their Co-Chairperson, decided to answer this question. Two cleanups resulted in a collection of more than 12,000 cigarette butts in three and one-half hours.

The students noticed that a large number of cigarette butts were located around the very containers that had been placed for the purpose of reducing the number covering the ground.

They decided to use the findings from these sites in their Cigarette Butt campaign to change the practices of smokers and to educate the residents of Erie about the effects of litter on the environment.

In January 2003, JrPLEWA also received an \$18,000 grant from the General Electric Foundation, for their work to collect and share information with others.

Even though JrPLEWA students come from different schools in Erie County, they share a common dream - to live in a time when there will be no cigarette butts or other litter to count.
- Source: www.pacleanways.org

Students have been approaching the businesses, stores, and restaurants along the path of the assessment and have been asking them to place a "Cigarette Butt Campaign" sticker (shown here) on their windows and provide ashtrays for their customers and employees.



They even met with city council and asked for their assistance to provide more ashtrays and to establish permanent metal signs in downtown Erie.

So far, the group has received support from both businesses and nonprofit environmental groups. And for her work in this project

Megan Grotkowski, age 17, a leader in creating and carrying out the "Cigarette Butt Campaign" was awarded a \$1,000 scholarship this spring from Pennsylvania CleanWays. She is the first young person to receive this scholarship designed to honor a young person from Pennsylvania, ages 16-21, for a project that helps solve the problem of littering or illegal dumping.

GET INVOLVED!

High school students interested in joining JrPLEWA, or businesses interested in purchasing outdoor smoking stations may contact Sr. Pat Lupo, OSB at (814) 899-2572.

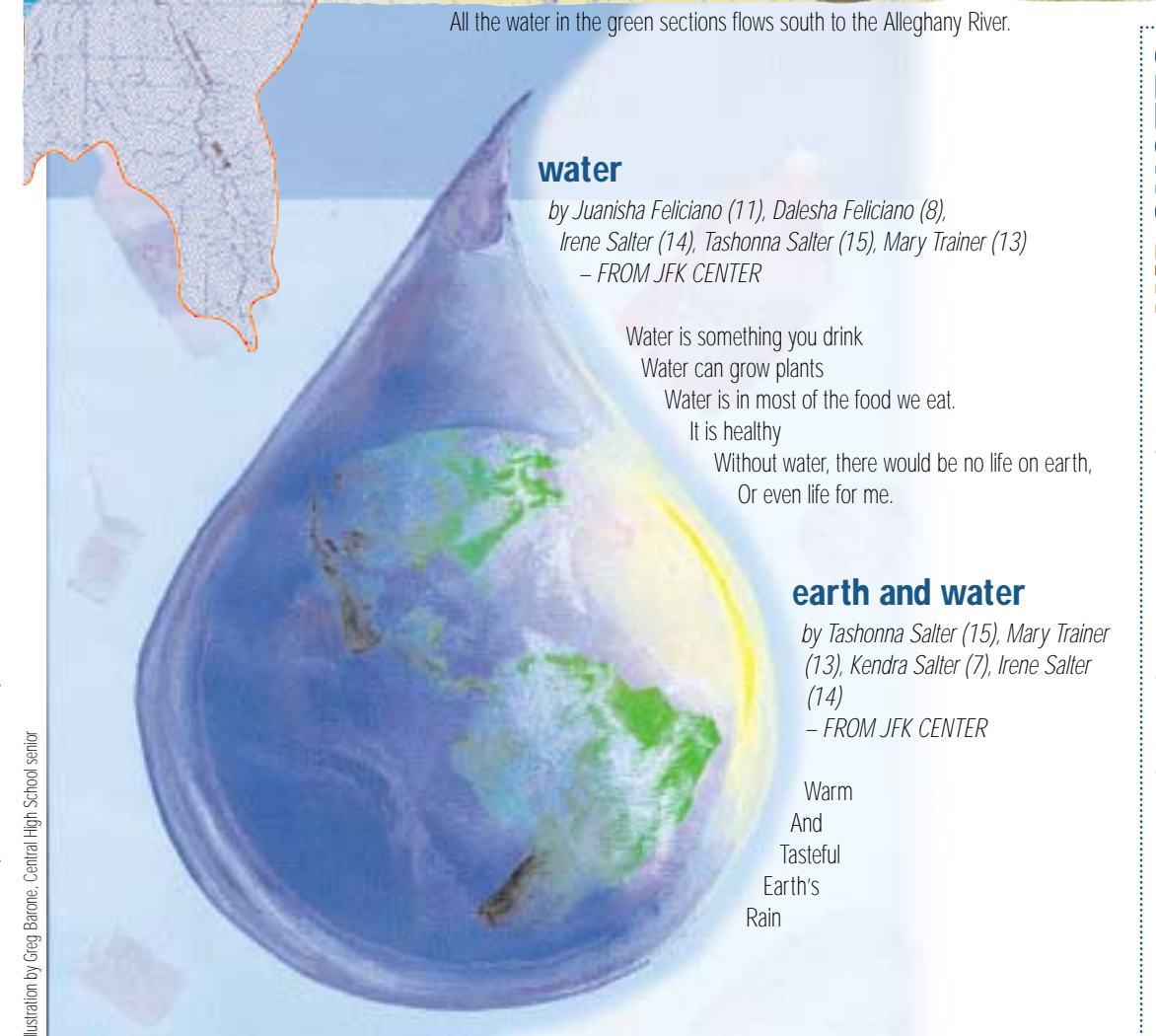
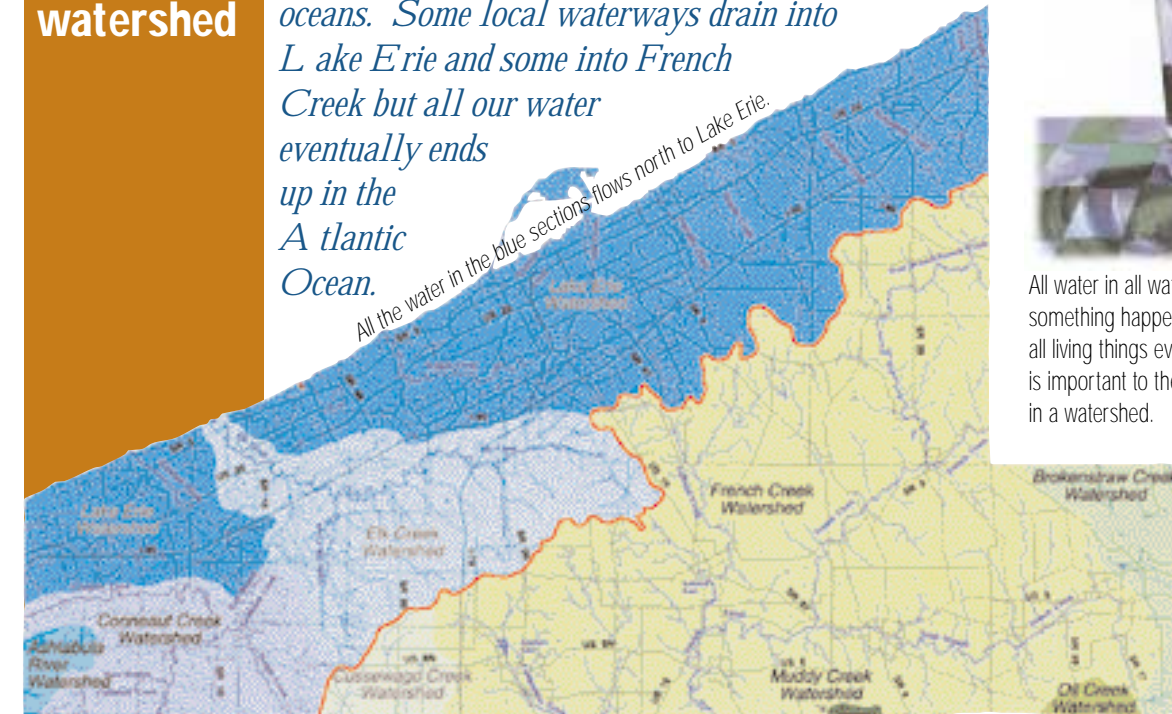
For the past two years, JrPLEWA students have been concentrating on gathering data about their sub watersheds and on implementing action projects that focus on the protection, the restoration, and the sustainable development of the Pennsylvania Lake Erie Watershed.

CIGARETTE LITTER FACTS: It is estimated that several trillion cigarette butts are littered worldwide every year. That's billions of cigarettes flicked, one at a time, on our sidewalks, beaches, nature trails, gardens, and other public places every single day. In fact, cigarettes are the most littered item in America and the world. Cigarette filters are made of cellulose acetate, NOT COTTON, and they can take decades to degrade. Not only does cigarette litter ruin even the most picturesque setting, but the toxic residue in cigarette filters is damaging to the environment, and littered butts cause numerous fires every year, some of them fatal.
-From CigaretteLitter.Org



Every one lives in a watershed

A Watershed is an area of land that includes all the water that flows across or under it and drains into a wetland, stream or lake. Small watersheds drain into larger watersheds. Large watersheds drain into even bigger bodies of water like lakes and oceans. Some local waterways drain into Lake Erie and some into French Creek but all our water eventually ends up in the Atlantic Ocean.



All water in all watersheds is connected. When something happens to water in one place, it can affect all living things everywhere. This watershed connection is important to the community, because everyone lives in a watershed.

To find out more about watersheds contact our local Watershed Specialist, Sarah Galloway at (814) 825-6403 or watersheds@treedrops.net

water

by Juanisha Feliciano (11), Dalesha Feliciano (8), Irene Salter (14), Tashonna Salter (15), Mary Trainer (13) - FROM JFK CENTER

Water is something you drink
Water can grow plants
Water is in most of the food we eat.
It is healthy
Without water, there would be no life on earth, Or even life for me.

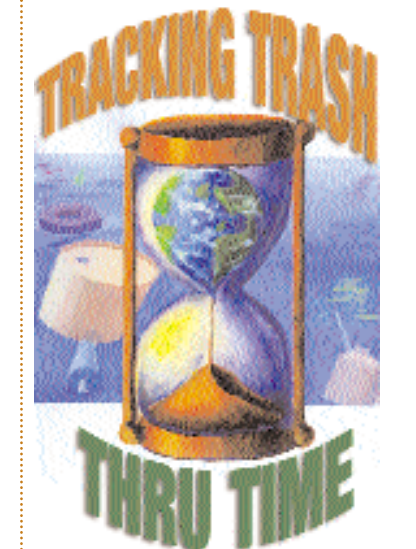
earth and water

by Tashonna Salter (15), Mary Trainer (13), Kendra Salter (7), Irene Salter (14) - FROM JFK CENTER

Warm
And
Tasteful
Earth's
Rain

WATERSHED ACTIVITY

Unlike our sewer systems, water that enters our storm drains is not treated before it mingles with our streams, creeks, lakes, rivers and oceans. Take a "storm drain hike" in your neighborhood or around your school with your class. Locate as many as you can on your hike and draw a map noting street names and locations of the drains. Write a brief description of what you found next to each storm drain. Share an idea you have for eliminating storm drain pollution.



Experimentation takes place with turning waste into energy, such as steam, electricity, liquid or solid fuels, alcohol or fuel bricks. The methods have little impact because existing energy sources are cheap. Also, in response to wartime shortages, the U.S. Government establishes the Waste Reclamation Service, which stresses the value of waste.

1920's Population growth begins spreading out: society becomes more consumer and service-oriented, and generates significantly more waste. The U.S. Government becomes more deeply involved in the affairs of the city. Filling in wetlands with garbage, ash and dirt becomes popular.

1924 Farm use (fertilizers, animal feed) is the most popular form of waste disposal at 38 percent in a survey of U.S. cities, followed by incineration at 29 percent and dumping at 17 percent.

1934 Dumping of municipal waste at sea becomes illegal. Industrial and some commercial wastes are immune from the law.

1935 The first beer can is produced by Krueger's Cream Ale in Richmond, VA. Over the next six months, company sales increased 550% because customers loved the convenience.

The first sanitary landfill is built in Fresno, CA. Closed in 1987, the landfill is now on the Superfund list of the nation's most polluted sites.

1939-40 Wartime shortages increase the demand for reusing tin, rubber, aluminum, paper, fats and other materials to help the war effort.

1944 Dow Chemical Company invents Styrofoam.

KIDQUOTES

"If we were living in the 15th century we would invent a sewage system and a landfill." -Aneshia, Hector, Kayla and Samantha, Glenwood Elementary

"Don Benczkowski came to talk to our class and inspired us to help and preserve the environment that we live in. We even got a few good laughs." -Lilah Richardson and Rachael Dahn, Wattsburg Area Middle School

"Sister Margarita came into our class for a few times to teach us about protecting our environment, but this time she was here to prove that when you clean up, it does not always have to be about work it can also be about having fun." -Rachael Dahn and Lilah Richardson, Wattsburg Area Middle School



Yellow

Magenta

Cyan

Black

Yellow

Magenta

Cyan

Black



Impact on quality of life

by Freda Tarbell
DEP Regional Spokesperson

What would our lives be like if no one paid any attention to keeping our watersheds clean? What if we just dumped our trash, used oil and toxic chemicals onto the ground so rainfall and snowmelt could wash them into Lake Erie and rivers and streams?

1946
Sanitary landfills become a preferred disposal alternative to open dumping.

1948
Fresh Kills landfill is opened in Staten Island, NY. It later becomes the world's largest city dump. Fresh Kills and the Great Wall of China are the only man-made objects visible with the naked eye from space.

1950's
In-house garbage disposal units become popular. In some cities, it's estimated that 25-30 percent of all garbage is ground up.

1953
The anti-litter association, Keep America Beautiful forms.

1958
The group that eventually becomes the National Solid Waste Association forms.

1959
The American Society of Civil Engineers publishes a standard guide to sanitary landfilling. It suggests compacting the refuse and covering it with a daily layer of soil to fight odors and rodents.

1960's
Plastic begins getting extensive use as packaging. Pop tops or pull tabs on beverage cans become popular.

1961
Proctor & Gamble begins test-marketing the disposable diaper.

1962
Rachel Carson's book Silent Spring is published. It carefully outlines the deadly result of using the pesticide DDT and becomes the bible for the environmental movement.

1965
Aluminum cans for beverages are introduced.

In 1859, when throwing trash in the streets was outlawed in London, people threw their trash into the Thames River. That summer the stench from the polluted river was so bad the English government was forced to close Parliament. Yuk! Our local waterways are much better off than that, but they still suffer from too many people carelessly discarding trash and waste rather than disposing of it properly. Keeping our water and watersheds clean benefits us in many ways. First, we can feel confident when we drink that glass of cold water on a hot summer day that the water will help keep us alive rather than make us sick. After all, our bodies are at least 65 percent water and we need clean water for our very survival.

Fish and wildlife depend on clean water for their survival, too. Our quality of life is enhanced by the presence of wild animals that share this corner of Pennsylvania with us. Who hasn't been fascinated by fish swimming in a stream, amused by the antics of gulls at the beach, captivated by a blue heron as it spreads wide its wings and takes flight? A clean watershed protects these creatures and enriches our lives.

Our opportunities for outdoor recreation also benefit from a clean watershed. A clean watershed allows us to swim, water ski and fish with assurance that our health will not be compromised by contaminated water. Even though environmental protection programs in the United States have successfully improved water quality during the last 30 years, a recent national water quality inventory shows that over 30 percent of surveyed waters in the nation remain too polluted for fishing, swimming and other uses.

When we think about environmental threats to clean water, many of us picture smoke-belching industrial facilities, leaking hazardous waste facilities, and messy oil spills. When we think about environmental problems, we often overlook water pollution caused by small nonpoint sources, especially pollution at the household level. In fact, the leading cause of water quality degradation in the United States is nonpoint source pollution — pollution coming from sources other than facilities or industries regulated by government environmental agencies.

Nonpoint source pollution occurs when rainfall and snowmelt move over and through the ground, picking up and carrying away pollutants, finally depositing them into lakes, rivers, wetlands, coastal waters, and even our underground sources of drinking water. Whether it's how we heat our homes, what we do with our trash, food scraps or used oil, or how we

OUT THE NEWSPAPER

Use the business pages or other stories that deal with development that might cause change in the ecology of the watershed. For each situation, list the advantages and disadvantages the development may have for the ecology of the area. Write a letter to the editor or draw an editorial cartoon to present your views on land use changes.

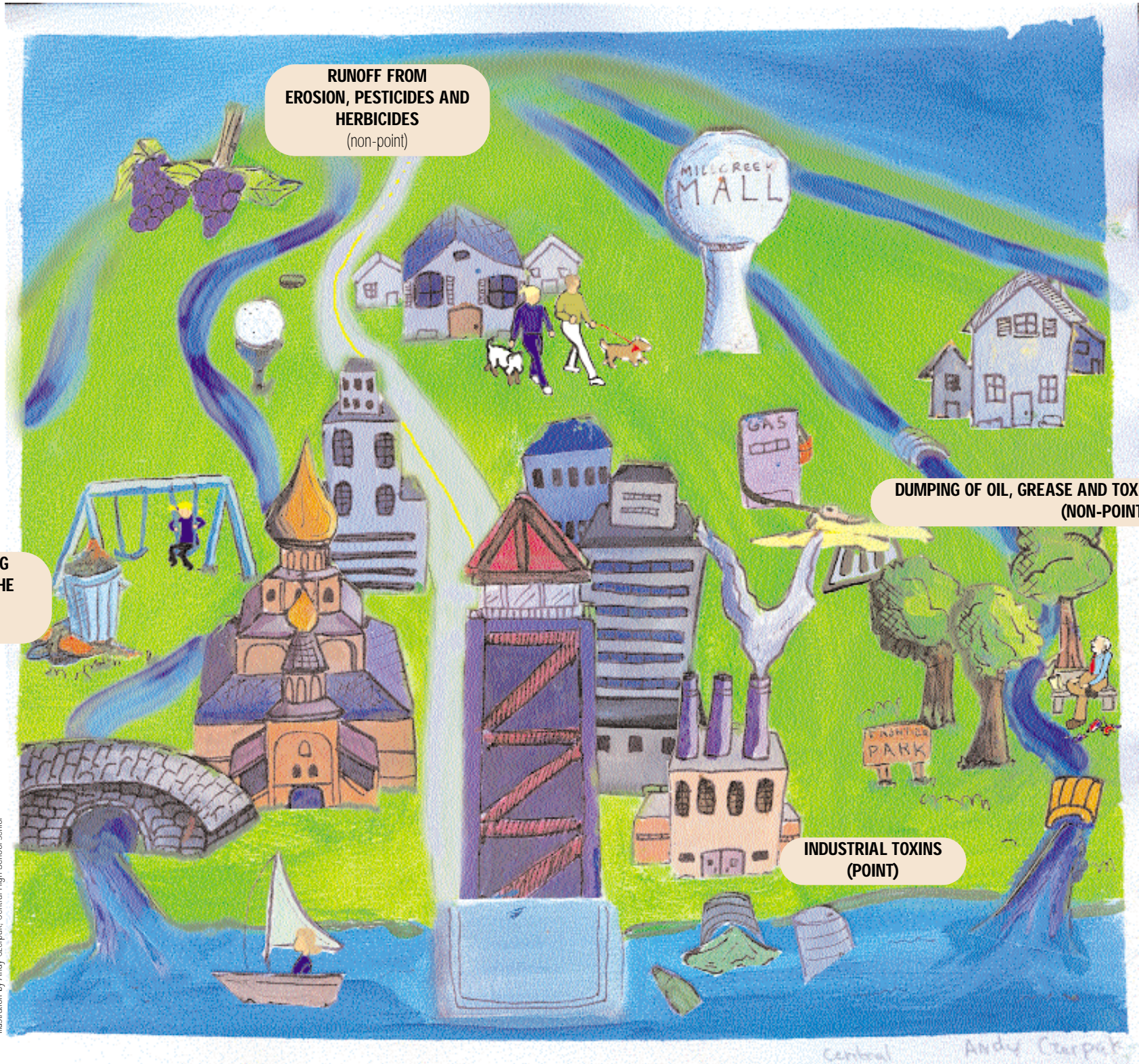
Use the business pages or other stories that deal with development that might cause change in the ecology of the watershed. For each situation, list the advantages and disadvantages the development may have for the ecology of the area. Write a letter to the editor or draw an editorial cartoon to present your views on land use changes.

It's up to all of us to protect our watersheds, our health and our environment. It all adds up to a better quality of life.

KEEP AMERICA BEAUTIFUL

DEBRIS FINDING ITS WAY INTO THE WATERSHED (non-point)

Point and Non-point SOURCES OF POLLUTION



Point Source Pollution means you can find the point or pipe where the pollution is entering the river or waterway.

Non-Point Source Pollution means you can't trace the source of the pollution once it enters the river or waterway.

List the types of pollution you see on this drawing. If the pollution cannot be traced, what clues can help you find where it came from? Is the majority of the pollution found from the PA Lake Erie International Coastal Cleanup point source or non-point source pollution?

Impact on economics

by Freda Tarbell
DEP Regional Spokesperson

Since the passage of the Clean Water Act more than 30 years ago, our nation has made significant progress in protecting and restoring the physical, chemical and biological integrity of our waters and watersheds. We can see the results in Lake Erie and other waterways of northwestern Pennsylvania. Much of this progress is attributable to the control of pollution from industry and sewage treatment plants. However, persistent issues remain.

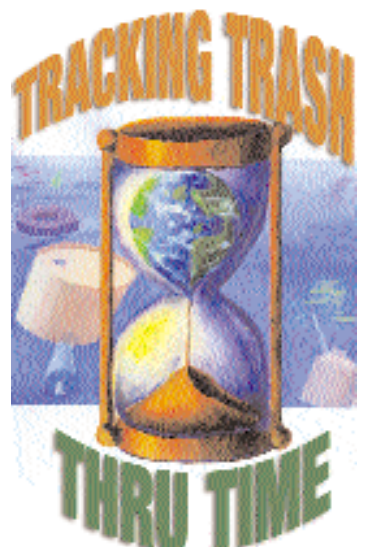
They are related to nonpoint sources that range from outdated agricultural practices on farms to a malfunctioning septic system in a private yard, from illegal dumps to lawn mowers that need to be tuned. This means that individuals, families, businesses and municipalities have a major role to play in determining the watershed vitality of the region, and the health of our watersheds is linked to the health of our local economy.

We need clean water and soil to grow crops and raise healthy farm animals. Farmers rely on pure and plentiful resources to provide an adequate food supply for us. Erie County is home to the nation's third largest grape growing area. Agriculture and agricultural-related industries contribute \$45-billion a year to Pennsylvania's economy and hundreds of thousands of people depend on those businesses for their livelihood.

Tourism is another major industry in northwestern Pennsylvania that relies on watershed health. People are drawn to the region's waterways and forests for boating, fishing, hunting, swimming, camping, birding and hiking. Tourists on vacation frequently look for pleasant vistas with clean air and water. Every year, over 4-million people visit Presque Isle State Park. Tourist dollars support restaurants, motels, recreational businesses, sports stores and gas stations. A robust watershed also plays a role in attracting new businesses and retaining businesses that are already established. The people who lead industries that provide goods and services find it easier to attract qualified employees when quality of life indicators, including a healthy natural environment, are positive. Progressive employers frequently get involved in initiatives with other community partners to improve watershed health.

A number of studies have concluded that states with stronger environmental policies consistently out-perform the economies of states with weaker environmental policies. As an example, Professor Stephen Meyer of MIT rated all fifty states according to the strictness of their environmental protection policies. He then compared those ratings with indicators of economic health, such as overall growth, employment growth and construction growth, over a period of nearly twenty years. His conclusion? States with stronger environmental policies consistently out-performed the weaker environmental states on all of the economic measures.

So when we safeguard our watersheds and promote the health of natural communities, we are doing a big favor for ourselves. By being good stewards of our watersheds, we increase economic opportunities in northwestern Pennsylvania and offer residents a greater probability for prosperity.



1968
President Johnson commissions the first comprehensive survey of solid waste since cities began keeping garbage records in the early 1900's. Cities collect and dispose of 140 million tons of solid waste.

The U.S. aluminum industry begins recycling discarded aluminum products, from beverage cans to window blinds.

1969
Rubber reclaiming drops to 8.8 percent from 19 percent in 1958.

1970
The enactment of the Clean Air Act leads to the closing of many incinerators.

The first Earth Day focuses attention on environmental concerns. Recycling's chasing arrows logo is introduced on that day.

There are an estimated 15,000 authorized land disposal sites, but as many as 10 times that number of unauthorized dumps. A study in the mid-1970s states that 94 percent of the landfills surveyed did not meet the minimum requirement for a sanitary landfill.

1970's
Resource recovery becomes increasingly popular in some circles, but others say it's not viable because it's not economically profitable. Compactor trucks comprise a majority of all collection vehicles.

1971
Oregon passed the nation's first bottle bill as an anti-litter law. The law resulted in a dramatic reduction in beverage container litter and gained widespread public support. Four years after implementation, the bottle bill had a public approval rating of 90 percent.

The U.S. Environmental Protection Agency is created. It is charged with the mission "to protect human health and to safeguard the natural environment."