



# New York Water Environment Association

Clarkson University  
Chapter

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## CLARKSON ENVIRONMENTAL DESIGN TEAM WINS NATIONAL COMPETITION

This year's team of Clarkson University students took home two awards in the 11<sup>th</sup> Annual Environmental Design Contest held April 9 - 11 on the campus of New Mexico State University in Las Cruces, N.M. The Clarkson team, also known as Clarkson University Remediation Engineers or CURE, won first place and \$2,500 for their mining pit wall stabilization design. They also won the Intel Corporation Award for Environmental Innovation, with \$2,500 prize money and a traveling trophy, for the most innovative and efficient design in the overall competition.

Sponsored by WERC: A Consortium for Environmental Education and Technology Development, the contest challenges student teams to provide solutions to environmental problems that have been submitted by private industry and government agencies.

The team developed a mine wall stabilization process that will inhibit the future generation of acid mine drainage of an open pit mine by coating them with a reactive layer. Acid mine drainage often leaches heavy metals from the soil; coating the walls of the mine neutralizes the acid

runoff and prevents the generation heavy metal containing drainage, which is of significant health concern. One of the most innovative feature of the CURE design is that one hundred percent of the materials used in the sealant mixture were recycled waste products from other processes. At the competition, the students demonstrated their solution

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CURE Team 2000-2001

## Earth Day Clean-up

Garbage, garbage everywhere, but who is going to clean it up? If you guessed NYWEA you guessed partially right. This year on Earth Day, April 22<sup>nd</sup>, NYWEA, along with ASCE and XE held an Earth Day Clean-up. There was plenty of trash to pick up on campus being the day after Madstop Festival. Members and non-members met Sunday at ten in the morning in front of Cheel to help. With plenty to do, groups were formed into a campus clean-up crew and

Adopt-a-highway group. More than several members of the fraternity TEP chipped in as well in both activities.

The Adopt-a-highway effort took place down the road from the school on County Route 59. Here students picked up everything from bottles to an ethernet cable along a 1.5 mile stretch of highway. Approximately four bags of litter were picked up. The trash was then dropped off at the Potsdam Highway department to dispose of properly.

The nice weather made for an enjoyable walk and experience for those who participated.

At the same time as  
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Earth Day Helpers

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### CLARKSON ENVIRONMENTAL DESIGN TEAM WINS NATIONAL COMPETITION *cont.*



Mike Collier explaining the CURE process to judges and team representatives (Kim Davey, Jeremiah Johnson, Jennifer Caufield, Mike Collier) holding the two awards (below)

(Continued from page 1) with a bench-scale model using wall material from the open pit mine, and made formal presentations to the judges from industry, government and academia.

The Intel Corporation Award was presented for the best solution to an environmental problem. Top criteria for this award are innovative and efficient design, use of waste material in the solution to the problem, and effective use of computer software. Since the CURE process solved an environmental problem with waste products from other processes and utilized a computer model to

design the mixture application, the process was selected as the most innovative with respect to the Intel criteria among the other 22 teams.

The 12 Clarkson students involved in the contest were: chemical engineering majors Wendy Casazza '01 (Southbury, Conn.), Michael E. Collier '01 (Auburn, N.Y.), Kim S. Davey '01 (Petersburgh, N.Y.), Rockell S. Davis '01 (Brooklyn, N.Y.), Kodi J. Duprey '01 (Ogdensburg, N.Y.), Jeremiah Johnson '01 (Forestport, N.Y.), Patricia M. McTigue '01 (Shelton, Conn.) and Melissa L. Smith

'01 (Prospect, N.Y.); civil and environmental engineering majors Jason Ammerman '02 (East Greenbrush, N.Y.), Charles W. Bennett '01 (Trumansburg, N.Y.), Jennifer L. Caufield '01 (Pulaski, N.Y.); and industrial hygiene major Debra C. Ackerman '01 (Jordan, N.Y.). The team was advised by Stefan Grimberg and Thomas Young, both faculty in the Civil and Environmental Engineering department. The CURE team is sponsored through a generous grant from the Eastman Kodak Company.

-Stefan Grimberg



### Earth Day Clean-up *cont.*



Adopt-a-highway

(Continued from page 1) Adopt-a-highway was taking place, other students decided to take part in the campus clean-up. This entailed walking around campus picking up trash and recyclables. From this alone students filled about five bags of trash, and recycled the bottles.

Later that evening Kiewit Company and ASCE sponsored a BBQ for those who helped out in the Earth Day activities. Hot dogs, hamburgers, and even veggie burgers were served to show appreciation for those who participated on Earth Day, and as a closing activity for

the semester. It was a very fun and productive day for all of the members involved.

-Laura Bertrand



Campus Clean-up

### Adopt-a-School Program

NYWEA students including: Anahita Ahmadi, Heather Raymond, Angela Link, Brendan Williamson, Bridget Sorrell, Francis Gross, Jason Hime, Charles Bennett, Kevin Graves, and Kyle Munley participated in the Adopt-A-School program held at Potsdam High School in early March of this year. For those who aren't familiar with this program, Adopt-A-School entails working with a local high school and forming an activity to help the students

learn more about an aspect of NYWEA. This year, our group went to the Potsdam High School and worked with Mr. Sipher's Natural Resource class and his AP Environmental Science class. The activity done consisted of an ion-exchange lab using Gatorade. The goal was to teach the students how one method of removing waste from wastewater in industry works. In the classroom, each group of students removed the color out of Gatorade by using an ani-

onic resin to show that ion exchange really does work! The color in the Gatorade was meant to represent the contaminate that needed to be removed. There were questions prepared for the students as part of the lab, and at the end of class we discussed the results and got quite a bit of positive feedback. We're looking forward to holding another activity next year. Thank you to all that participated!

- Anahita Ahmadi



Experiment (more pictures on page 4)



## Do You Know Where That is Going to End Up?

Wait! Stop! What are you doing? Don't throw your recyclable bottles and cans in the garbage! Did you know that it takes approximately 80 years to degrade an aluminum can and it takes 1 MILLION YEARS to degrade a glass bottle? Fellow students, you throw out plastic and glass bottles, aluminum cans, and print your papers out 5 times on the printers in the ERC because you spelled your name wrong. Have you ever stopped to think about where all that waste goes? Let's stop being so careless, acting like our everyday actions don't really matter. This is real! We can't just 'throw out' everything we are done with.

Due to a poor perception of recycling on the

Clarkson campus the local chapter of the New York Water and Environment Association (NYWEA) has decided to "get the gears rolling" and prove to everyone just how rewarding it can be. The program started last spring with three bins with the goal to make people more aware of their everyday actions. Redeemable soda bottles were selected as the object for collection but not because NYWEA was trying to make a profit. They were chosen because the number recycled could be viewed in a quantitative manner we are all familiar with-money. But concern arose amongst the Clarkson student body that we were merely collecting redeemable soda bottles to make a profit

regardless of the two maple saplings purchased last year from the Refundable bottle program that now decorate the courtyard between Cheel and CAMP. The profits were not kept for personal benefit, they were returned to the campus. They were returned to you.

The recycling initiative was expanded this year with the addition of three new bins. NYWEA's blue and green RECYCLING bins can now be found in the ERC, Rowley (by the vending machine), Camp (in the atrium), the Science Center (3<sup>rd</sup> floor by the café), on the first floor of the new Snell Hall, and in Moore House. Although the original initiative was to collect redeemable bottles and

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**"the two maple saplings purchased last year from the Refundable bottle program that now decorate the courtyard between Cheel and CAMP"**

## ***Former Clarkson NYWEA PRESIDENT Joins nywea as a guest speaker this spring***

On Thursday March 8<sup>th</sup>, Clarkson graduate and former NYWEA president Andy Bishop '99, of Woodward and Curran Engineering gave a brief lecture entitled, "Initial Evaluation and Optimization of a Paper Mill Fiber Recovery System" in the Cheel Barben Rooms. Andy spoke about a paper mill in New Jersey that was making an attempt to recover fibers from the plant effluent. This fiber recovery

system was installed to save the plant \$1,000,000 dollars in expenses paid to the local treatment plant. However the reality of the system was that the plant was paying \$200,000 to operate the new system. Woodward and Curran were called in and performed an overhaul of the system. The company found a new solution to the company's problem, and even though it could not save the company the \$1,000,000 it

was originally proposed they did obtain savings of around \$300,000. Being a recent graduate, it was interesting to find out what entry-level engineers do, and how the engineering firms carry about business. Andy was also very willing to speak with students about getting a job and "real world" experience, which was very informative to those who stuck around to listen.

-Brett Gobe

***"Initial Evaluation and Optimization of a Paper Mill Fiber Recovery System"***

## Expansion of Recycling Program

You may know our organization mainly due to the presence of green and blue recycling containers located in various buildings on campus, but that is all about to change. The New York Water Environment Association (NYWEA) is proud to announce an expansion in our recycling efforts to include paper. This new program

takes the paper mishaps people make when using copy machines along with the fliers people receive and turn them into a product that can be used by all. We are currently collecting paper which still has one blank side from the copy rooms and the mail room in Rowley Laboratories. We have placed boxes in both rooms with signs on them to

identify their purpose. Through the help of the duplicating department we are able to transform the paper into notepads that can be used for anything from scratch paper to message pads. As it is with most things, this program was started on a small scale, but in the future we hope to incorporate even more collection sites.

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NYWEA Student Chapter is an organization for students pursuing a career in the environmental field. Meetings take place once a month in Cheel Barben Rooms and include information about future projects, guest speakers, and occasionally refreshments are provided. Local chapter dues are \$5 and state dues are \$25. Joining NYWEA is a great way to meet other students in the environmental field, and professionals already in the field.

## Interested in joining NYWEA??

EMAIL Laura Bertrand at [Bertralj@clarkson.edu](mailto:Bertralj@clarkson.edu) to be placed on NYWEA's Email list OR now visit us on the web at [www.clarkson.edu/~nywea](http://www.clarkson.edu/~nywea)

More Adopt-a-School Pictures



## Do You Know Where That is Going to End Up? *cont.*

*(Continued from page 3)*

use the money to give something back to the Clarkson community, an increase in the number of bins created an increase in the number of non-redeemable bottles collected on a weekly basis. Bins in areas adjacent to snack bars (especially the one in the ERC) were receiving non-redeemable juice and water bottles in the same ratio as

redeemable soda bottles. NYWEA members did not ignore this observation but built on it. Currently they are sorting the redeemable and non-redeemable bottles collected in each bin contrary to what everyone seems to believe. Each time the bins are emptied and sorted the number of redeemable vs. non-redeemable bottles collected is recorded. We need to determine this ratio in

order to see if Waste Stream (the current recycling provider for Clarkson) would supply designated areas with additional bins specifically for non-redeemable plastics, glass, and aluminum bottles.

But first, we need to prove that recycling on the campus is working and we, as a student body, are committed and will continue to do it. That means no more throwing

dirty coffee cups, straws, old homework, and gum wrappers in the bins. NYWEA might put up with it but Waste Stream won't. Help us prove that Clarkson students do care about our future and intend to do something about it.

- Jason Hime &  
Heather Raymond

## Expansion of Recycling Program *cont.*

*(Continued from page 3)*

It is our hope that in the future we can coordinate with the ERC in order to further expand our program. This would enable us to produce a higher quantity of notepads than we are currently capable of. Due to the fact that this program was launched recently, it has yet to be decided what the fate of the notepads will be. There

have been several good ideas associated with the best way to distribute them to the Clarkson community. One idea was to use them as a fundraising tool for our organization by selling them for \$0.25 per pad. Another was to give them away for free to professors and students. The third idea was to save a set quantity for Earth

Day and the information sessions held in Cheel and to pass them out. No one idea has been chosen yet and in the end a combination of all three ideas will probably be used.

-Angela Link