

## Attachment A (Part I & Part II)

### REAP Conservation Education Program Part I—Midterm and Final Report Form

*Please submit this completed form, along with Part II, via e-mail to Ross Harrison.  
If you include other documents, if possible please paste them at the end of this report rather than  
as a separate attachment.*

**Grant Recipient (organization name):** University of Northern Iowa

**Project Title:** Teaching Teachers and Future Teachers Solid Waste Alternatives

**Report Prepared by:** Susan Salterberg

**Project Number:** 07-02

**Date Submitted:** July 11, 2007

**Check one:**

Midterm report (covering July 2006-Dec. 2006 activities) **DUE: Jan. 15, 2007**

Final report (covering Jan. 2007-June 2007 activities) **DUE: July 15, 2007**

Note: Your Final Project Billing Form and documentation will be due to Kathleen Moench of the DNR and Ross Harrison on **August 31, 2007**. See Grant Agreement, Attachment B.

**1) Objectives and activities**

The REAP CEP Board expects all work outlined in your original proposal to be completed. At a minimum, briefly explain activities completed to date for the following, as well as the percent of total work completed to date. Include what is going well, and explain. Also include challenges, and explain. Add other objectives as you deem appropriate.

- 1) Market workshop
- 2) Market mini-workshops
- 3) Plan and coordinate all workshops
- 4) Conduct workshops and mini-workshops
- 5) Expose students to waste issues
- 6) Evaluate all workshops

<b>EXAMPLE</b>	<b>Percent completed to date</b>
<p><b>#1:</b> Market REAP CEP and workshops (i.e., public communications)</p> <p><b>Activities:</b></p> <ol style="list-style-type: none"> <li>1) Seven news releases published in: Iowa Reading Association, Iowa Middle Level Educators and Iowa Recycling Association newsletters as well as in the Creston, Clear Lake, Dubuque and Davenport newspapers.</li> <li>2) Two workshop announcements published in Iowa Environmental Council listserv and in Iowa Conservation Education Council newsletter</li> </ol> <p><b>Additional explanation:</b> The releases sent to local newspapers generated a lot of inquiries, and subsequent registrations from teachers. I will definitely do this again. The challenge is to get more middle school teachers enrolled, as they are the target audience, but seem to be more pressured than el ed teachers with NCLB requirements.</p>	80%
<p><b>#1: Market workshop</b> See Attachment A for copy of news release and a list of ways that the workshop was publicized.</p>	100%
<p><b>#2: Market mini-workshops</b></p> <p><b>Activities:</b></p> <ol style="list-style-type: none"> <li>1) Worked with a regional Iowa Reading Association group to speak to 90 teachers</li> </ol>	100%

<p>in spring 2007.</p> <p>2) Worked with the state Iowa Reading Association to speak in April. See below.</p> <p>3) Worked with two conference coordinators on speaking at their educator conferences in October, 2006.</p> <p>See additional information below. These mini-workshops were very easy to sell to conference planners.</p>					
<p><b>#3: Plan and coordinate all workshops.</b></p> <p><b>Activities:</b></p> <p>Partnered with East Central Iowa Council of Governments, the Cedar Rapids-Linn County Solid Waste Agency and other solid waste agencies to offer the workshop. See Attachment III for a copy of the course outline and syllabus.</p> <p>Planned presentations listed below, and partnered with East Central Iowa Council of Governments.</p> <p><b>Additional explanation, if needed:</b></p>					100%
<p><b>#4: Conduct workshops and mini-workshops.</b></p> <p><b>Activities:</b></p> <p>The following activities took place this quarter:</p>					100%
<p>151 educators were reached earlier, plus 134 during this time period for a total of 285. The grant's goal was to reach 150 educators, so we surpassed the goal substantially.</p> <p>Held Waste Reduction: Addressing the Overlooked "R" graduate credit teacher workshop on January 19-20 with 32 participants were in attendance, with a goal of 30-35.</p> <p><b>Additional explanation, if needed:</b></p>					
<p><b>#5: Expose students to waste issues.</b></p> <p><b>Activities:</b></p> <p>Teachers in the graduate credit workshop taught the mini-units, and educators exposed to waste issues through mini-workshops also had opportunities to use materials. See Attachment II for information.</p>					100%
<p><b>#6: Evaluate all workshops.</b></p> <p><b>Activities:</b></p>					

See Attachment II for copies of evaluation forms and results of evaluations.	

**2A) Are there changes in the direction of your project** (i.e., something different than outlined in your grant proposal)?

Yes       No

**2B) If yes, please explain the changes and the reason for them:**

*Note: Any major changes must be approved by the Board as soon as possible.* Contact Ross Harrison to determine whether board approval is needed for your proposed changes.

**3A) Is the project on schedule?**     Yes       No

**3B) If no, please explain:**

**5) Final report only: Please describe the contributions of third parties and of your organization to this project. List the contributors and their estimated financial contribution. Explain each contribution, if a non-cash contribution.**

Name of organization	Cash contribution	Matching contribution (non-cash)	Explanation, if non-cash
Example: Iowa Talented and Gifted Assoc.		\$500	Provided 10 hrs. of assistance reviewing curriculum materials valued @ \$20/hr.
Iowa DNR Solid Waste Alternatives Program	8771		
Teachers and/or solid waste agencies (registration fees—exceeded budget projection by \$100)	1600		
UNI CEEE	3378		
<b>TOTALS:</b>	<b>13749</b>		

**6A) Final report only. Please provide at least one concrete example of how your project met one or more of the environmental education goals listed below.**

- Understand environmental processes and systems (such as the earth as a physical system, the living environment, humans and their societies, and/or environment and society)
- Develop skills for understanding and addressing environmental issues
- Understand personal and civic responsibility
- Develop lifelong learning skills such as critical thinking, questioning and analysis skills
- Understand that human well-being is tied to environmental quality
- Understand and forge connections with their immediate surroundings
- Conserve and protect Iowa’s resources

(Example: The “Project X” helped students develop skills for understanding and addressing environmental issues, understand personal and civic responsibility and forge connections with their immediate surroundings. This was made possible through service-learning projects. Nearly all of the 260 students involved with Project X devoted a combination of around 10,000 hours on service-learning projects in their communities...from picking up litter and establishing recycling programs to selling used books and giving money earned to a charitable cause working on humanitarian and environmental causes.)

This is an example of what one teacher did with the materials introduced to her at the Waste Reduction: Addressing the Overlooked “R” workshop. One of the teachers taught about waste in her 6<sup>th</sup> grade social studies class, introducing students to:

- 1) fair trade (personal and civic responsibility); and

- 2) Material World (a book given to each workshop participant) to learn about equity, population issues and natural resources distribution.

The teacher also had them observe/analyze/process what they viewed in the book (developing lifelong learning skills such as questioning and analysis). Lastly, the teacher helped them understand and forge connections with immediate surroundings by taking a field trip to a fair trade shop and by discussing the local landfill.

**6B) Final report only. Testimonials from people influenced through your project help the CEP Board substantiate the need for this program. Please provide one but no more than three testimonials that address one or more of the environmental education goals listed in 6A. If possible, include identification information such as name, grade and subject taught, school and city. If you provide this information, you are responsible to secure written permission from the person quoted for use of the testimonial by REAP CEP.**

(Example: “My reactions ... were feelings of reward as I witnessed all my students (even the students who are toughest to keep on task and to keep motivated), totally involved and excited to perform a positive service for others. I will definitely do the...research and reporting project next year, along with another project related to waste management with my seventh graders.”—Margaret Hogan, 7<sup>th</sup> grade, Dyersville-Beckman High School, Dyersville)

“[The waste reduction mini-unit] definitely [met the goals and objectives of my class]. We have been talking about our place in the world and what we owe each other as a society. Each activity brought to light the amount of excesses we have in our culture.”—Lana Hollar, 7<sup>th</sup> grade, Mabel-Canton Public Schools

“[My principal] encouraged me to relate [waste reduction] to the [students’] world so it would become a concrete idea not just a topic... I took that to heart...I tried to point out things that they may do or see at home. The students responded very well to this, and ...they were very excited about the entire lesson, I think because it is so tangible for them.”—Darcy Drury, Kindergarten, Anson Elementary, Marshalltown, Iowa

**7A) Final report only. (Please read Questions 7A, 7B and 7C before responding.) Please summarize your project in three or fewer pages. This summary should include the following (including the headers), in the order shown below. Your honesty and frankness will be appreciated, and will help strengthen environmental education in Iowa.**

- **Project title and Project number:**
- **Organization’s name, contact person, website, phone and e-mail:**
- **Project’s purpose and targeted audience:**
- **Reflect on your project, providing a self-assessment. At a minimum, answer the following questions: Did your project go as planned? Explain what went well and why. Explain what you would do differently if you did the project again, and why.**
- **Please list the most relevant outputs,<sup>1</sup> and explain, if necessary.**
- **Please list the outcomes,<sup>2</sup> and explain, if necessary. Be sure to include the outcomes outlined in your grant proposal.**
- **Were there any negative outputs or outcomes, and/or concerns about the accuracy of your evaluation data, which you did not list above? If so, please identify the most relevant ones and explain.**
- **Identify your one to three most effective marketing tools (i.e., conferences, e-mails, flyers, news releases in local papers), describe your use of them, and why they were effective.**
- **At least one but no more than three photo(s) of activities in jpeg format.**

**Teachers and Future Teachers Solid Waste Alternatives—07-02**

University of Northern Iowa Center for Energy and Environmental Education

Susan Salterberg, [www.uni.edu/ceee/wastereduction](http://www.uni.edu/ceee/wastereduction), 319-337-4816, [salterberg@uni.edu](mailto:salterberg@uni.edu)

## **Purpose**

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<sup>1</sup> Measurements of production, such as number in attendance at a workshop.

<sup>2</sup> What important things happen as a result of the project, such as a documented change in behavior or new concepts learned.

The University of Northern Iowa offered mini-workshops about waste reduction to teacher education majors and/or teachers at educator conferences and meetings. They also offered one Waste Reduction: Addressing the Overlooked “R” graduate course to educators.

**Did your project go as planned? Explain what went well and why. Explain what you would do differently if you did the project again, and why.**

The project went as planned. We exceeded the mini-workshop goal by reaching more than 285 educators, and had 32 in attendance at the waste reduction workshop. At some educator conferences, when we offered a free book to teachers who attended the workshop, we had great response...sometimes more than 60 people packed into a room to participate in the session. Also, networking with Iowa Reading Association state leaders has resulted in bookings for additional speaking engagements. Lastly, it worked well to partner with the East Central Iowa Council of Governments. Their solid waste educator is very talented and engages teachers, sharing her techniques for educating about waste.

**Lessons learned:** I will think carefully before accepting the first slot of a conference—participants are still arriving and attendance seems to be very low. I now will ask specifically to not get that slot. Same goes for last session of a conference.

**Outputs:** The outputs were to reach 150-200 teachers or future teachers through educator conferences and/or meetings; and reach 30-35 educators through the waste reduction workshop. Both were met.

**Outcomes:** The outcomes are listed in Attachment II. West Delaware 6<sup>th</sup> grade science teacher Lisa Senne’s comment is indicative of some positive outcomes that happen as a result of the workshops and teachers’ mini-units: “...there has been carryover ... because the mini-unit was completed on February 22, and still kids [in mid-April] are writing in their journals and telling about things they’ve done outside of the school day related to reducing.” Here’s a summary of other ways the project has worked:

- All of the graduate course workshop participants indicated they observed a difference in behavior in at least some of their students because of the mini-units they taught. 88% reported they observed a difference in behavior during and/or after the mini-unit by 50% or more of their students.<sup>3</sup>
- 84% of those completing the graduate course evaluation form reported that 75% or more of their students demonstrated interest and/or curiosity about learning. And all educators felt that at least some of their students demonstrated curiosity about learning.<sup>4</sup>
- 100% of the graduate course teacher-participants indicated that, as a result of the workshop, they have taken at least one action to live in a more environmentally friendly manner. Of those, 54% reported that they have taken three or more actions.

No negative outcomes that I am aware of.

My most effective marketing tool was free registrations offered to teachers through support of solid waste agencies. The partnerships with SWAs are proving to be very useful...more so every year.

Three photos are attached at the end of this document.

**7B) The REAP CEP Board wants to share your successes and lessons learned with other environmental educators. However, they respect your wishes to not share on the web potentially sensitive information that you may not want readily accessible to others. With this in mind, may the**

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<sup>3</sup>Examples: more participation in school recycling, giving peers a hard time when wasteful, getting families to recycle.

<sup>4</sup>Examples: looking ahead in resource books(s), looking at books after unit was completed, talking to one another about issues outside of class.

summary you have written (as well as the photos submitted) for 7A be published on the REAP CEP website?

Yes     No (If no, please see 7C.)

**7C) If no, please omit the sections and/or revise the above summary for publication on the web. Include the revised section below. Note: The primary audiences for iowaee.org's website are formal and non-formal educators, who may be able to learn from your experiences—both positive and negative.**

**Please carefully write and review your summary to ensure it is in publishable format.**

**8) Final report: Please include attachments, including a copy of your evaluation form(s), your complete evaluation results, and a minimum of one photo in jpeg format. Some of this information may be published on the web, along with your project summary. Please clearly mark any attachments you do NOT want included on the website.**

**9) Mid-term and final reports: Include a completed Project Expenditure Summary with your mid-term and final reports. (See next page.)**

Per CEP's change that no longer requires a Project Expenditure Summary for the final report, it is not attached. UNI will send financial documentation by August 31.

**10) Other comments?**

## **Attachment A Marketing Efforts**

**News releases:** The release below was by UNI Marketing and Public Relations sent to media in the following communities: Marengo, Mount Vernon, Belle Plaine, Iowa City, Williamsburg, Vinton, Cedar Rapids, Waterloo, Waverly, Cedar Falls, Des Moines and Mason City.

A similar version was released to the media by solid waste/recycling education coordinators in Dubuque, Linn and Johnson counties.

**News items in newsletters and listservs:** Those that published information about the workshop included the 4Rs, Iowa Conservation Education Council, Iowa Environmental Council, and the Iowa Association of Naturalists' mailserv.

**Prepared brochure and placed it on-line** at [www.uni.edu/ceee/wastereduction](http://www.uni.edu/ceee/wastereduction). For the first time ever, created an on-line registration form at <http://www.uni.edu/continuinged/programs/career/wastereduction/interest/>.

**E-mail:** I sent more than 100 e-mails to schools, inviting teachers to participate in the waste reduction workshops. In addition, I sent e-mails advertising both workshops to former participants in the waste reduction workshops, and to those who expressed interest in the past but could not attend.

**Conference presentations:** Marketed workshops at conference presentations and through a follow-up listserv announcement to conference session participants.

10/4/06

FOR IMMEDIATE RELEASE

Contact:

Susan Salterberg, UNI Center for Energy & Environmental Education, (319) 273-2573

Vicki Grimes, University Marketing & Public Relations, (319) 273-6728

### **UNI offers two waste reduction graduate credit workshops for teachers**

CEDAR FALLS, Iowa -- Waste Reduction: Addressing the Overlooked "R," a one-hour University of Northern Iowa graduate credit course, will be held just north of Cedar Rapids in January and April of 2007, while an advanced version of that course, Service Learning: Moving "Reduce, Reuse and Recycling" Beyond the Classroom, will be held in November, 2006 and April, 2007, just west of Iowa City.

A limited number of free registrations will be available to kindergarten through 12th grade teachers for both courses, thanks to the support of local solid waste agencies, says course instructor **Susan Salterberg**, UNI Center for Energy & Environmental Education. A \$50 fee will be charged to those not receiving a free registration.

The Waste Reduction: Addressing the Overlooked "R" course will be held from 6 to 9 p.m. Friday, Jan. 19, and from 8:30 a.m. to 5 p.m. Saturday, Jan. 20. The follow-up workshop will be held Thursday, April 19, from 6 to 9:30 p.m.

The Service Learning: Moving "Reduce, Reuse and Recycling" Beyond the Classroom, will be held Friday, Nov. 3, from 6 to 9 p.m.; Saturday, Nov. 4 from 9 a.m. to 5 p.m.; and Saturday, April 14, from 9 a.m. to 12:30 p.m.

Go to [www.uni.edu/ceee/wastereduction/workshops.htm](http://www.uni.edu/ceee/wastereduction/workshops.htm) for information, or contact **Susan Salterberg**, instructor, for details at (319) 337-4816, (319) 273-2573 or [salterberg@uni.edu](mailto:salterberg@uni.edu). The courses are offered through Science Education and the Center for Energy and Environmental Education in the College of Natural Sciences.

UNI is able to offer the graduate credit, free books and lesson plans, and to the service-learning participants, grant funds to conduct a service project. The credit, resources and grant funds will be made available through funding support from the Resource Enhancement and Protection Conservation Education Program and the Iowa Department of Natural Resources Solid Waste Alternatives Program. Other supporters include solid waste agencies, landfills and the East Central Iowa Council of Governments. ###



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Good Morning! Monday, Oct. 16, 2006

## News

410 East Washington Street, Iowa City, IA 52240 Ph: (319) 356-5000

### News Releases

# IOWA CITY LANDFILL AND RECYCLING CENTER SPONSORS TEACHERS

Monday, October 16, 2006 - 10:39:00 AM

**Originating Department:** Engineering  
**Contact Person:** Jennifer Jordan  
**Contact Number:** 319-887-6160

The Iowa City Landfill and Recycling Center is pleased to offer sponsorship to a limited number of teachers from Johnson County who would like to attend a one graduate credit-hour workshop offered by the University of Northern Iowa. The two-part workshop, "Waste Reduction: Addressing the Overlooked R", will be held in Hiawatha at Prairiewoods Retreat Center in January and April of 2007. The workshop targets middle school language arts, science, social studies, math and TAG, but is adaptable to K-12th grades and will be held from 6 to 9 p.m. Friday, Jan. 19th, and from 8:30 a.m.-5 p.m. Saturday, Jan. 20th. The follow-up workshop will be held Thursday, April 19th from 6-9:30 p.m.

The course, which includes a tour of the Cedar Rapids-Linn County Landfill, is offered through science education and the Center for Energy and Environmental Education (CEEE) in the College of Natural Sciences. UNI is able to offer graduate credit and materials valued at \$75 to each participant through grants from the Resource Enhancement and Protection Conservation Education Program (REAP CEP) and the Iowa Department of Natural Resources Solid Waste Alternatives Program (DNR SWAP). Access to additional information concerning the program, may be obtained at <http://www.uni.edu/ceee/wastereduction/workshops.htm>, or, contact Susan Salterberg, instructor, at 319-337-4816, 319-273-2573 or [salterberg@uni.edu](mailto:salterberg@uni.edu).



**--OVER--**

5a) **Before I participated in this workshop**, my understanding of global impacts of U.S. waste generation was...

I knew nothing I knew a great deal

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1 2 3 4 5

5b) **Now that I have participated in this workshop**, my understanding of global impacts of U.S. waste generation is...

I know nothing I know a great deal

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1 2 3 4 5

6a) **Before I participated in this workshop**, my understanding that much of a product's waste is created prior to the consumer getting the product was...

I knew nothing I knew a great deal

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1 2 3 4 5

6b) **Now that I have participated in this workshop**, my understanding that much of a product's waste is created prior to the consumer getting the product is...

I know nothing I know a great deal

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1 2 3 4 5

7a) My ability to teach about waste issues **before I participated in this workshop** was...

Non existent High ability

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1 2 3 4 5

7b) My ability to teach about waste issues **now that I have participated in this workshop** is...

Non existent High ability

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1 2 3 4 5



12) Below are several workshop activities. Please circle the response that most closely depicts how you felt about each activity.

Icebreaker where participants reviewed and reported about a book	Not a good idea; try something else	Good	Excellent
Powerpoint: The Laws	Not a good idea; try something else	Good	Excellent
Round the Room activity, including: 1) Agatha's Feather Bed lesson introduction 2) Review of 4 books/lessons 3) Sorting of trash, recyclables, reuseables and examples of waste reduction 4) Shoe activity 5) Designing a landfill	Not a good idea; try something else	Good	Excellent
<b>--OVER--</b>			
Powerpoint #2: Progress and Challenges	Not a good idea; try something else	Good	Excellent
Introduction to Life of a Hamburger	Not a good idea; try something else	Good	Excellent
Deep breathing and quiet times	Not a good idea; try something else	Good	Excellent
Tour of landfill and recycling center	Not a good idea; try something else	Good	Excellent
Powerpoint #3: Review of Progress and Challenges, then "Reasons for Increase in Waste"	Not a good idea; try something else	Good	Excellent
Powerpoint #4: Household Hazardous Materials	Not a good idea; try something else	Good	Excellent
Lesson Plan: Who Polluted the Cedar River?	Not a good idea; try something else	Good	Excellent
Population information (not including lesson plans)	Not a good idea; try something else	Good	Excellent
Population Lesson Plans & AV Possibilities (Population Circle, Population Riddles, video)	Not a good idea; try something else	Good	Excellent
<i>A Quiltmaker's Gift</i> reading	Not a good idea; try something else	Good	Excellent
Lesson Plan: Food for Thought	Not a good idea; try something else	Good	Excellent

13) What is your level of **motivation to use the materials and information** introduced today? (select one)

- a) None      b) Somewhat motivated      c) Very motivated      d) I don't know

14) To what extent are you empowered to take action in your personal life to reduce waste?

Not at all

Highly empowered

Thank you. Your input will be used to improve future workshops and will be passed onto workshop funders.

\* \* \* \* \*

Thanks to the DNR Solid Waste Alternatives Program, the  
REAP Conservation Education Program, Solid Waste Agencies, and the University of Northern Iowa  
Center for Energy and Environmental Education for support of this workshop.

Educator Feedback—Part II workshop  
(WR-CR-2007)

1) Do you plan to use some or all of the waste reduction materials again? Check the most accurate answer.

Yes, I definitely want to teach about Waste Reduction again and use these resources.

Yes, I think I want to use the resources again.

No, I doubt I'll ever use the resources again.

2) Approximately how many students did you teach using this unit? \_\_\_\_\_

3) Did you use your mini-unit to help you meet standards and benchmarks, portfolio requirements and/or re-certification credit?  Yes  No

4) How often did you refer to the UNI waste reduction website?

I never went to the website

I went to the website 1-3 times

I went to the website 4-9 times

I went to the website 10 or more times

5) How was the website's functionality?

I was always able to access the website materials

I had a minor difficulty with the website, but it worked for me most all of the time

I had frequent difficulty with the website, so I couldn't access some materials or couldn't without difficulty

I always had difficulty with the website. It needs work!

Other, please explain: \_\_\_\_\_

N/A

6) Please indicate whether, if at all, you showed resources to and/or talked about the mini-unit with your colleagues.

I didn't share or talk with anyone  
colleagues

I shared and/or talked with 2-3

I shared and/or talked with 1 colleague

I shared and/or talked with 4 or more

7) Please indicate how, if at all, you used the expertise of local solid waste officials (check all that apply).

I didn't use the expertise of local officials  
information

I called or e-mailed for

I invited officials to be guest speakers

We toured landfill/recycling center

We have a tour planned

Other, please explain: \_\_\_\_\_

8) Why did you enroll in the Waste Reduction workshop? (Check all that apply.)

Recertification or graduate credit

I was interested in the topic

It was free

Other, please specify: \_\_\_\_\_

9) Is this the first time you have attended a workshop on environmental issues for graduate or recertification credit?  Yes  No

10) Do you plan to enroll in more environmental education workshops in the future?

Yes, if I learn about them

No

Don't know

11) Please help us determine what resources to provide to future workshop participants by circling the most accurate responses.

**Books:**

<i>Hungry Planet</i>	I have used this and plan to use it again	I have used this, but <b>won't</b> use it again	I haven't used this, but plan to in the future	I doubt I'll use this	N/A--I did not receive this book
<i>Agatha's Feather Bed</i>	I have used this and plan to use it again	I have used this, but <b>won't</b> use it again	I haven't used this, but plan to in the future	I doubt I'll use this	N/A--I did not receive this book
<i>The Quiltmaker's Gift</i>	I have used this and plan to use it again	I have used this, but <b>won't</b> use it again	I haven't used this, but plan to	I doubt I'll use this	N/A--I did not receive this book
<i>Stuff: The Secret Lives of Everyday Things</i>	I have used this and plan to use it again	I have used this, but <b>won't</b> use it again	I haven't used this, but plan to in the future	I doubt I'll use this	N/A--I did not receive this book
<i>Consumption and Waste</i>	I have used this and plan to use it again	I have used this, but <b>won't</b> use it again	I haven't used this, but plan to in the future	I doubt I'll use this	N/A--I did not receive this book
<i>The Table Where Rich People Sit</i>	I have used this and plan to use it again	I have used this, but <b>won't</b> use it again	I haven't used this, but plan to in the future	I doubt I'll use this	N/A--I did not receive this book
<i>The Wartville Wizard</i>	I have used this and plan to use it again	I have used this, but <b>won't</b> use it again	I haven't used this, but plan to in the future	I doubt I'll use this	N/A--I did not receive this book
<i>Material World: A Global Family Portrait</i>	I have used this and plan to use it again	I have used this, but <b>won't</b> use it again	I haven't used this, but plan to in the future	I doubt I'll use this	N/A--I did not receive this book

We are trying to select the books that you will get the best use from. Until 2007, teachers in this class received a copy of *Material World: A Global Family Portrait*, copyright 1994, instead of *Hungry Planet* (by the same author), copyright 2006. For the 2008 year, would you recommend this \$30 be used for...

*Hungry Planet*

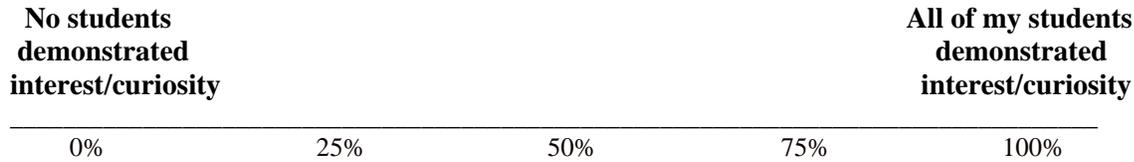
*Material World: A Global Family Portrait*

Some other book(s), please specify if you have ideas: \_\_\_\_\_

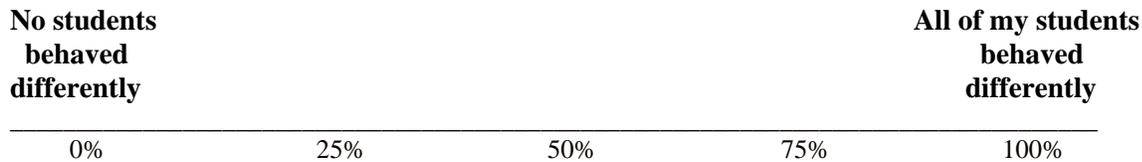
**SEE NEXT PAGE**

The following are behaviors (outcomes) that may have occurred as a result of the waste reduction mini-unit. Please place a checkmark on the continuum with your most accurate estimates of what occurred as a result of the mini-unit.

12) Your students demonstrated interest and/or curiosity about learning (such as but not limited to looking ahead in resource book(s), looking at books *after* the unit was completed, talking to one another about issues outside of class).



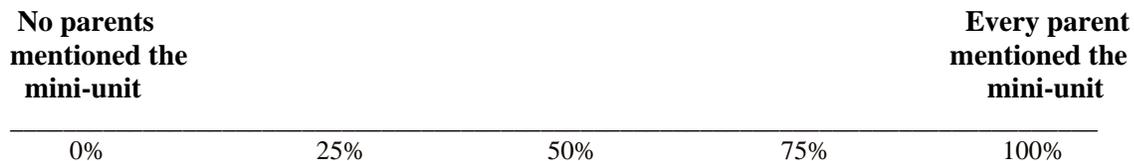
13) You observed a difference in your students' behavior during and/or after the mini-unit (such as but not limited to more participation in school recycling, giving their peers a hard time if they were wasteful, getting their family to recycle).



14) Did your school hold a function (such as parent/teacher conference) where you interacted with parents after the mini-unit was conducted?  Yes  No

If you answered yes to question 14, go to question 15. If you answered no, go to question 16a.

15) Parents/guardians attending a school function mentioned the waste unit, indicating students talked about what they learned.



16a) As a result of taking this workshop, have you taken any actions to live in a more environmentally friendly manner?

- |   |  |
|---|--|
| <input type="checkbox"/> I haven't taken any actions        | <input type="checkbox"/> I have taken one or two actions |
| <input type="checkbox"/> I have taken three or more actions | <input type="checkbox"/> I don't know                    |

16b) If you have taken one or more new actions as a result of what you've learned and experienced about waste issues this semester, please share at least one example.

17) *Were the expectations for this one-hour-of-graduate-credit course...*  
 Too rigorous                      About right                      Not rigorous enough

Thank you. Your responses help make the program better and help funders understand educators' needs.

**Evaluation Summary**  
**2007 UNI Waste Reduction: Addressing the Overlooked “R” Workshop**  
**Retrospective Post Workshop Survey Responses Part I**

This report summarizes data from 31 educators attending the 2007 Waste Reduction: Addressing the Overlooked “R” Workshop, Part I, on January 19-20, 2007. The workshop was hosted at Prairiewoods Retreat Center in Hiawatha, Iowa, and included a tour of the Cedar Rapids-Linn County Landfill and Recycle Center.

**Analysis**

The survey results suggest that educators, overall, were satisfied or very satisfied with the workshop. They were especially impressed with the materials provided to them; the tour of the landfill and recycling center; and the lesson plan, “Who Polluted the Cedar River” (which addresses solid and hazardous waste pollution in rivers).

Seven outcomes were identified and were achieved to varying degrees (see below for specifics). They included understanding of laws, accomplishments and challenges, and global impacts related to waste generation, management and recycling. Also included was understanding that much of a product’s lifecycle waste is created prior to consumer use and disposal, greater ability to teach about waste issues, and **anticipation of drawing on solid waste officials for assistance in teaching waste issues**. Eighty-seven percent of educators increased their interest in working with local solid waste officials. The overwhelming majority of those that did not increase their interest already had a high degree of interest in working with these local experts before attending the waste reduction workshop.

One hundred percent of participants indicated that they were “somewhat” or “very motivated” to use the materials and information introduced at the workshop. Of those, 68% were “very motivated.” In addition, 100% of participants were empowered to take action in their personal lives to reduce waste.

**Survey Results**

Below, participants indicated their satisfaction with the waste reduction workshop by circling the number that best corresponded to their answer.

	Not satisfied	Satisfied	Very satisfied
Overall workshop content		23%	77%
Facility		7%	93%
Food		7%	93%
Materials provided			100%
Transferability to your classroom		39%	61%

**Percentage of Change on Retrospective Post Workshop Survey** *The instruction on this portion of the survey was to circle the number that most closely represented the participants' self-described level of understanding with 1 being "I knew/know nothing" and 5 being "I knew/know a great deal."*

Survey Question	Decrease	Same	Increase
My understanding of laws about waste management is... (48% showed an increase by 2 to 4 points)	0%	6%	94%
My understanding of accomplishments and challenges in recycling and waste management is... (58% showed an increase by 2 to 4 points)	0%	3%	97%
My understanding of global impacts of U.S. waste generation is... (54% showed an increase by 2 to 4 points)	0%	10%	90%
My understanding that much of a product's waste is created prior to the consumer getting the product is... (61% showed an increase by 2 to 4 points)	0%	10%	90%

*The instruction on this portion of the survey was to circle the number that most closely represented the participants' self-described current level of ability with 1 being "non-existent" and 5 being "high ability."*

My ability to teach about waste issues is... (58% showed an increase by 2 to 4 points)	0%	6%	94%
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*The instruction on this portion of the survey was to circle the number that most closely represented the participants' self-described anticipation of drawing on the expertise of solid waste agencies with 1 being "I had/have no interest" and 5 being "Yes, I was/am sure of it."*

Do you anticipate in any way drawing on the expertise of your local solid waste educator or landfill staff for classroom activities? (71% showed an increase by 2 to 4 points)	0%	13%	87%
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<b>Overall Change</b>	0%	8%	92%
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100% of participants indicated that the workshop increased **content knowledge about waste issues** such that they are now better prepared to teach. (Thirty-two percent said it "provided new content knowledge," and 68% indicated it "refreshed content [they] already knew and provided new knowledge.")

Participants were asked, "To what extent will you be **able to use the activities, lessons and resources** introduced with the students you currently teach?" Ninety-one percent marked 3, 4 or 5 on a 5-point scale, with "1" being "not at all" and "5" being "a great deal." Of those 43% marked "5."

Participants were asked, "To what extent did the facilitator or other workshop participants **refresh or introduce you to new teaching strategies** so you are better prepared to teach more effectively?" Ninety-seven percent indicated that they "picked up a few new ideas" (42%) or were "reminded of strategies and picked up new ideas" (55%).

Below participants indicated how they felt about specific workshop activities and information.

	Not a good idea; try something else	Good or excellent
Icebreaker where participants reviewed and reported about a book (32% marked “excellent”)	10%	90%
Powerpoint: The Laws (13% marked “excellent”)	13%	87%
Round the Room activity, including: 6) Agatha’s Feather Bed lesson introduction 7) Review of 4 books/lessons 8) Sorting of trash, recyclables, reuseables and examples of waste reduction 9) Shoe activity 10) Designing a landfill (58% marked excellent)	3%	97%
Powerpoint #2: Progress and Challenges (13% marked excellent)	7%	93%
<b>Introduction to Life of a Hamburger (37% marked excellent)</b>		<b>100%</b>
Deep breathing and quiet times (23% marked excellent)	13%	87%
<b>Tour of landfill and recycling center (90% marked excellent)</b>		<b>100%</b>
Powerpoint #3: Review of Progress and Challenges, then “Reasons for Increase in Waste” (25% marked excellent)	7%	93%
Powerpoint #4: Household Hazardous Materials (19% marked excellent)	6%	94%
<b>Lesson Plan: Who Polluted the Cedar River? (94% marked excellent)</b>		<b>100%</b>
<b>Population information (not including lesson plans) (57% marked excellent)</b>		<b>100%</b>
<b>Population Lesson Plans &amp; AV Possibilities (Population Circle, Population Riddles, video) (69% marked excellent)</b>		<b>100%</b>
<b><i>A Quiltmaker’s Gift</i> reading (35% marked excellent)</b>		<b>100%</b>
<b>Lesson Plan: Food for Thought (48% marked excellent)</b>		<b>100%</b>

100% of participants were “somewhat” or “very motivated” to **use the materials and information** introduced at the workshop. Of those, 68% were “very motivated.”

Participants were asked, “To what extent are you **empowered to take action** in your personal life to reduce waste?” One hundred percent marked 3, 4 or 5 on a 5-point scale, with “1” being “not at all” and “5” being “a great deal.” Of those, 48% marked “5” and 48% marked “4.”

**Evaluation Summary**  
**2007 UNI Waste Reduction: Addressing the Overlooked “R” Workshop**  
**Survey Responses Part II**

Educator Feedback  
(WR-CR-2007)

1) Do you plan to use some or all of the waste reduction materials again? Check the most accurate answer.

**81%**--Yes, I definitely want to teach about Waste Reduction again and use these resources.

**19%**--Yes, I think I want to use the resources again.

No, I doubt I'll ever use the resources again.

2) Approximately how many students did you teach using this unit? **45 students on average per teacher**

3) Did you use your mini-unit to help you meet standards and benchmarks, portfolio requirements and/or re-certification credit?      **88%--Yes**       No

4) How often did you refer to the UNI waste reduction website?

**15%**--I never went to the website

**56%**--I went to the website 1-3 times

**25%**--I went to the website 4-9 times

**4%**--I went to the website 10 or more times

5) How was the website's functionality?

**56%**--I was always able to access the website materials

**25%**--I had a minor difficulty with the website, but it worked for me most all of the time

**4%**--I had frequent difficulty with the website, so I couldn't access some materials or couldn't without difficulty

I always had difficulty with the website. It needs work!

Other, please explain: \_\_\_\_\_

**15--N/A**

7) Please indicate whether, if at all, you showed resources to and/or talked about the mini-unit with your colleagues.

**4%**--I didn't share or talk with anyone      **70%**--I shared and/or talked with 2-3 colleagues

**7%**--I shared and/or talked with 1 colleague      **19%**--I shared and/or talked with 4 or more

7) Please indicate how, if at all, you used the expertise of local solid waste officials (check all that apply).

**44%**--I didn't use the expertise of local officials      **22%**--I called or e-mailed for information

**30%**--I invited officials to be guest speakers      **26%**--We toured landfill/recycling center

**8%**--We have a tour planned      **15%**--Other, please explain: \_\_\_\_\_

8) Why did you enroll in the Waste Reduction workshop? (Check all that apply.)

**81%**--Recertification or graduate credit      **78%**--I was interested in the topic

**59%**--It was free      **12%**--Other, please specify: \_\_\_\_\_

9) Is this the first time you have attended a workshop on environmental issues for graduate or recertification credit? **70%--Yes** **30%--No**

11) Do you plan to enroll in more environmental education workshops in the future?  
**59%--Yes, if I learn about them** **0%--No** **41%--Don't know**

11) Please help us determine what resources to provide to future workshop participants by circling the most accurate responses. *Note to CEP Board: Tallies are not shown for this section. If you would like this information, please contact Salterberg. Thank you.*

**Books:**

<i><b>Hungry Planet</b></i>	I have used this and plan to use it again	I have used this, but <b>won't</b> use it again	I haven't used this, but plan to in the future	I doubt I'll use this	N/A--I did not receive this book
<i><b>Agatha's Feather Bed</b></i>	I have used this and plan to use it again	I have used this, but <b>won't</b> use it again	I haven't used this, but plan to in the future	I doubt I'll use this	N/A--I did not receive this book
<i><b>The Quiltmaker's Gift</b></i>	I have used this and plan to use it again	I have used this, but <b>won't</b> use it again	I haven't used this, but plan to in the future	I doubt I'll use this	N/A--I did not receive this book
<i><b>Stuff: The Secret Lives of Everyday Things</b></i>	I have used this and plan to use it again	I have used this, but <b>won't</b> use it again	I haven't used this, but plan to in the future	I doubt I'll use this	N/A--I did not receive this book
<i><b>Consumption and Waste</b></i>	I have used this and plan to use it again	I have used this, but <b>won't</b> use it again	I haven't used this, but plan to in the future	I doubt I'll use this	N/A--I did not receive this book
<i><b>The Table Where Rich People Sit</b></i>	I have used this and plan to use it again	I have used this, but <b>won't</b> use it again	I haven't used this, but plan to in the future	I doubt I'll use this	N/A--I did not receive this book
<i><b>The Wartville Wizard</b></i>	I have used this and plan to use it again	I have used this, but <b>won't</b> use it again	I haven't used this, but plan to in the future	I doubt I'll use this	N/A--I did not receive this book
<i><b>Material World: A Global Family Portrait</b></i>	I have used this and plan to use it again	I have used this, but <b>won't</b> use it again	I haven't used this, but plan to in the future	I doubt I'll use this	N/A--I did not receive this book

We are trying to select the books that you will get the best use from. Until 2007, teachers in this class received a copy of *Material World: A Global Family Portrait*, copyright 1994, instead of *Hungry Planet* (by the same author), copyright 2006. For the 2008 year, would you recommend this \$30 be used for...

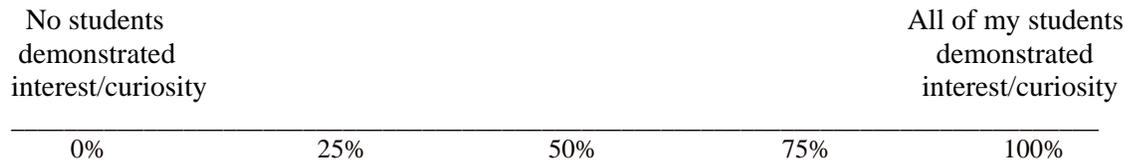
**30%--Hungry Planet** **30%--Material World: A Global Family Portrait**

**12%--Some other book(s), please specify if you have ideas:\_\_\_\_\_**

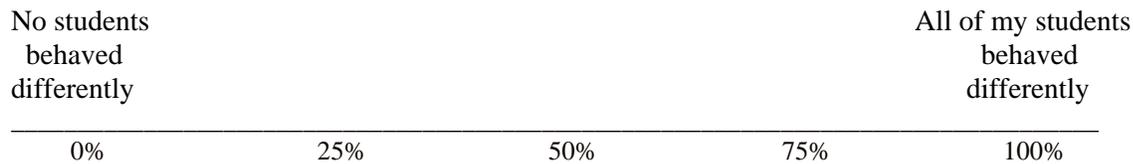
The following are behaviors (outcomes) that may have occurred as a result of the waste reduction mini-unit. Please place a checkmark on the continuum with your most accurate estimates of what occurred as a result of the mini-unit.

**Note to CEP Board: Tallies are not shown for questions 12 and 13, but summarized in the narrative section of the grant proposal. Contact Salterberg if you would like more information.**

12) Your students demonstrated interest and/or curiosity about learning (such as but not limited to looking ahead in resource book(s), looking at books *after* the unit was completed, talking to one another about issues outside of class).



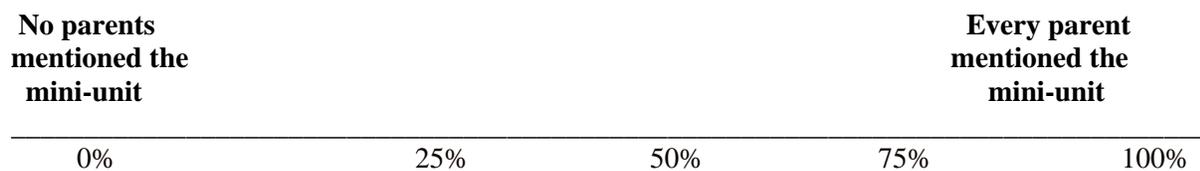
13) You observed a difference in your students' behavior during and/or after the mini-unit (such as but not limited to more participation in school recycling, giving their peers a hard time if they were wasteful, getting their family to recycle).



14) Did your school hold a function (such as parent/teacher conference) where you interacted with parents after the mini-unit was conducted? **9%--Yes 91%--No**

If you answered yes to question 14, go to question 15. If you answered no, go to question 16a.

15) Parents/guardians attending a school function mentioned the waste unit, indicating students talked about what they learned.



**100% of teacher-participants indicated that 50% of parents/guardians mentioned the waste unit.**

16a) As a result of taking this workshop, have you taken any actions to live in a more environmentally friendly manner?

___ I haven't taken any actions	<b>46%--</b>	I have taken one or two actions
<b>54%--</b> I have taken three or more actions	___	I don't know

16b) If you have taken one or more new actions as a result of what you've learned and experienced about waste issues this semester, please share at least one example.

17) Were the expectations for this one-hour-of-graduate-credit course...

Too rigorous	About right	Not rigorous enough
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**78% said “about right,” 14% said “between about right and too rigorous,” and 8% said “too rigorous.”**

Thank you. Your responses help make the program better and help funders understand educators’ needs.

**Results from Presentations Given at October 2007  
Talented and Gifted & Middle Level Educators Conferences**

Last year, Principal Investigator Susan Salterberg with the assistance from Kristin Simon (East Central Iowa Council of Governments solid waste educator) presented two sessions at the Iowa Talented & Gifted Conference, and four sessions at the Middle Level Educators Conference. A total of 137 participants attended these sessions, and most received a free book, free poster, and one or two lesson plans to use in their classrooms. Salterberg also presented to 82 educators at the Eastern Iowa Reading Council meeting, and to 53 educators at the Iowa Reading Association Conference. (Note: Approximately 12% of the reading educators had participated in some type of environmental education session or training in the past, suggesting this is indeed a new audience for conservation education.)

At the time of this writing, only the TAG and MLE participants have completed an evaluation, which was conducted 4-5 months after the conference sessions. **The results demonstrate the effectiveness of this type of approach for reaching new-to-conservation-education educators.**

- 72% of participants used the free resource one or more times in the past 4.5 months. Another 24% planned to use the free resources sometime in the future. (Note: **Nine percent had used one of the resources five or more times.**)
- 88% of participants answering this question said the free resource was “very helpful” or “moderately helpful” in helping educate their students.

When asked whether the concurrent session at the conference inspired participants and/or their students in any of the following ways, responses were as follows:

76%	I throw away fewer materials and recycle more
54%	I have shared these resources with colleagues
55%	I think more about purchasing decisions
53%	The book, poster and/or lessons generated good discussion
50%	I am interested in learning more about environmental lessons as a result of my experience with these materials. (Note: There was significant difference in the answer to this for those who received the book, <i>Agatha’s Feather Bed</i> , versus those who received <i>Stuff: The Secret Life of Everyday Things</i> . 73% from the former were interested in learning more, whereas 26% of the latter were interested in learning more. This may be because more teachers were elementary, and <i>Stuff</i> was not as user-friendly for that audience. Another reason may be that <i>Agatha’s Feather Bed</i> presents environmental concepts in a fun, light-hearted way, while the life cycle analysis book is heavier. However, the qualitative data from those who received the book about lifecycles suggest that it had a great impact on the students. See quotes below.)

Qualitative comments also show the need for more projects such as this. Five teachers who received a book about lifecycle analysis said it made students think in ways they hadn’t before and the book was used in interdisciplinary ways:

“Our school offers T-shirts for every activity, no matter how brief. Besides the expense, students now realize there is a high environmental cost to pay as well.”

“I built a great lesson between this book and the novel *Amos Fortune: Free Man*. He was a tanner during the Revolutionary War, and the book detailed the processes he used. We used a Venn diagram to compare/contrast the 2 methods.”

“I work with international students and Des Moines Public School students. We use the book and poster to generate discussions. The American students realize how wasteful our society is after this discussion. It is a very powerful book.”

“It really made them think about how everything in the room was invented. Also the implications of the items and their construction...”

“I am a Talented and Gifted teacher in 2 elementary schools. My students were very concerned about what they heard/learned. It got us all thinking. I would like to do a project with my student, i.e. research and then take action. But this is my first year at this position and I am a bit overwhelmed. I would love ideas from others. Please email me any.”



Two teachers in UNI's Waste Reduction: Addressing the Overlooked "R" course review some of the books given to them at the workshop.



A teacher in the Waste Reduction class shares information about the population, energy use per capita, natural resource use, and waste generated by people in Latin America. The class of teachers was divided up according to the population of each continent and sat in their respective continents (created using yarn). Through this exercise, teachers were introduced to a lesson plan that shows the differences in living conditions between people living around the world.



Instructor Susan Salterberg explains some of the differences in natural resources usage around the world.