

# **IUB and IUPUI Electronic Waste Collection Days**



*The creation of a community electronic waste collection event*

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## **Executive Summary**

Electronic waste (e-waste) is the hot topic of our current era. E-waste is comprised of electronic equipment such as computers, televisions and cell phones that have reached the end of their useful life. This e-waste is then either improperly or properly treated. Improper disposal methods consist of storing the waste for years in the home, disposing the waste in a landfill or giving the waste to “sham” recyclers who then export the waste to developing countries with poor environmental regulations. Proper disposal involves disposing the e-waste via drop off centers, permanent small e-waste collection programs or mass community collection events. The latter of these “proper” options formed the basis for the spring 2009 Indiana University Task Force project and the overarching goal; to collect as much e-waste in the Bloomington and Indianapolis communities as possible while also educating the community about e-waste. Additionally, the project team decided that it would be useful to collect quantitative and qualitative information at the e-waste collection event from the participants. As a result, this report begins by detailing the process involved with the creation of the first major e-waste collection experience for the cities of Bloomington and Indianapolis with the support of Apple Inc. that took place on April 30, May 1 and May 2, 2009. Additionally, this document provides greater insight into e-waste recycling tendencies.

The intensive advertising efforts and dedicated individuals from the IU campuses, Apple Inc. and the community resulted in the success of the event. A total of 832,000 pounds or 416 tons of e-waste was collected in total. Hopefully this event will be conducted again in the future at Indiana University or at other universities around the United States and this report will serve as a template for the project work.

## **Introduction**

During the first Indiana University Bloomington and IUPUI Electronic Waste Collection Days during April 30, May 1 and May 2, a grand total of 832,000 pounds or 416 tons of electronic waste (e-waste) was amassed. While IUPUI hosts an annual Tox Away Day event to collect hazardous waste and a smaller collection event occurred in Bloomington a few years ago, nothing of this proportion has ever been conducted in Indiana before. As a result, it was extremely important to carefully organize and plan the event to ensure it would transpire flawlessly and be well advertised to the public. Fortunately an excellent team of media, purchasing and e-waste specialists from IUPUI, IU Bloomington and Apple Inc. as well as generous support from University Information Technology Services (UITS) and the Indiana University Sustainability Task Force allowed the project to emerge as an excellent example for other universities and communities who may desire to conduct similar e-waste collection events in the future. In order to understand the impetus for the event, it is first necessary to comprehend the importance of proper e-waste treatment and current solutions to the e-waste problem.

### ***The Problem***

According to a recent report by the Environmental Protection Agency (EPA) Office of Solid Waste, in 2007 only 18 percent of electronic products that had reached the end of their lifecycle were recycled (Electronics Waste Management in the United States, 2008). With the onslaught of the technology boom in the 20<sup>th</sup> century, more electronic waste is in existence than ever before. Unfortunately various hazardous materials are typically incorporated into electronic items, such as cathode ray tubes (CRTs) that are used in computer monitors, televisions, video cameras and other products. Unfortunately the CRTs contain lead. Without proper disposal and treatment, these CRTs can become major environmental contaminants. The main pathways for improper disposal are either land filling of electronic waste or sham e-waste recycling. The latter of these pathways results in the exportation of products to developing countries with lax environmental regulations.

Land filling of e-waste is a common problem in the United States because if a community resident throws away computers or batteries, this is considered household hazardous waste by federal law and therefore is exempt from national regulation. While some counties and states have banned e-waste from entering landfills, there is still no national legislation prohibiting e-waste dumping. The main problem with e-waste entry into regular landfills is that the liners are not meant to deal with the toxic components found in these products. For example, the Anchorage, Alaska landfill experiences large quantities of e-waste disposal every year and an increase has occurred this year due to the imminent high definition television (HDTV) switchover. Not only does this waste occupy valuable space in the landfill, but the toxic materials in the waste such as mercury, lead and cadmium leak to the very bottom of the landfill's liner. Workers are then forced to pump this leachate from the landfill to a treatment plant. However, while the plant can deal with the waste through sewage treatment ponds and later incineration, a portion of the lead enters the Cook Inlet even though it is a very negligible quantity. It is important to bear in mind that in the future, while this landfill will be capped for eternity, the toxic substances will remain in the earth and will continue to leak through the soil over time. If this electronic waste were recycled in the first place, all of this chaos would have been avoided (Bryson, 2009).

Additionally, there are companies in existence who claim to have legitimate e-waste recycling operations, when in reality this waste is illegally exported to developing countries

where the hazardous components of the waste will pollute the environment. E-waste recycling is expensive, hence the reason why consumers are typically charged a recycling fee at drop-off centers. Sham recyclers claim to handle the waste in a sustainable manner, but decide to bypass the expense of legitimately recycling material and instead ship this non-functional e-waste with other functional equipment to buyers in developing countries that are willing to purchase a shipment of highly valuable goods even if some of the shipment is comprised of non-usable e-waste (Schmidt, 2006). This e-waste is typically distributed to poor families who attempt to extract the precious metals in these items, such as gold, which they will eventually sell. However the process used by these individuals to extract the metals usually involves open-air burning with no way to treat the toxic byproducts, resulting in environmental and human toxicity. Interestingly this exportation process is still not illegal in the United States because Congress has not ratified the Basel Ban, a 1994 agreement among developed countries to ban the export of any goods containing hazardous materials such as e-waste (What is the Basel Ban?, 2008).

### ***The Solution***

Currently there is a growing obsession with producer responsibility; the concept that producers will “take back” their electronic products once they have reached the end of their useful life and properly treat and/or dispose of these products. In Europe and the United States this model has become very popular. The European Union has a directive dealing with waste electrical and electronic equipment (WEEE) that details how member states need to enforce producer responsibility standards both by assuming ownership for products at the end of their lives and also inputting less hazardous materials at the beginning of a product’s life to minimize the amount of hazardous waste overall (Sander, Schilling, Tojo, van Rossem, Vernon, & George, 2007).

While the United States does not have any national legislation regarding electronic waste management, some states have passed their own legislation mandating producer responsibility for e-waste. For example, Washington State passed a law in 2006 that states that both computer and television manufacturers need to offer convenient ways for consumers to properly recycle their e-waste. The law took effect on January 1, 2009 (Electronic Product Recycling Program - Final Cost Benefit and Least Burdensome Analysis for Amendments to Chapter 173-900 WAC and Chapter 173-303 WAC, 2007).

When the idea of an electronic waste collection event emerged as a project for the Indiana University Sustainability Task Force, it was natural to use an electronic producer to provide recycling services because of this producer responsibility model.

## **Methods**

### ***Preparation***

The first step of the process was to find a credible electronic waste producer who would be willing to partner with Indiana University on a project of this magnitude. To emphasize the importance of the event and attract a quality group of potential partners, a relationship developed with the Indiana University Purchasing Department because a contract would ultimately need to be signed with whatever producer was ultimately chosen. During the fall semester of 2008, a request for proposals (RFP) was developed by Kristin Hanks (mentor for the e-waste project) and the IU Purchasing Department distributed this to various electronic waste producers and recyclers. Proposals were received and reviewed by the Indiana University team during January 2009. After detailed conference calls and e-mail correspondence it was clear that Apple Inc. would offer the best and most transparent recycling services for the project.

Apple not only possessed extensive experience with University e-waste collection events such as the University of Michigan and the University of Hawaii but also clearly detailed their process for e-waste recycling. For the Indiana University event, Apple planned to hire contract laborers and rent trucks with security capabilities in order to haul the waste to Sims Recycling Solutions in Chicago, IL. Sims Recycling Solutions is a certified e-waste processor with both the International Standard Organization (ISO) 14001 and 9001 standards. Sims is able to properly treat and reuse the lead and silica in monitors via shredding, glass pulverization and electro-magnetic separation. Other electronic wastes are dealt with in a similar manner, first by completely shredding the items, which provides data security, and later separating the products into their component parts of plastic, metal, glass and other commodities. Sims also discloses all of its downstream vendors for plastic, glass, hazardous waste and other market segments (Appendix A).

However Apple stipulated that if Indiana University were to use their services, e-waste collection events would need to be offered in Indianapolis as well as Bloomington. This added another level of coordination complexity to the event, but resulted in greater cross campus collaboration.

### ***Coordination***

- **Creating a Base**

From the very beginning it was clear that this project was destined to receive a great deal of attention from the University, Apple Inc. and the community. As a result, it was necessary to clearly define the rationale, goal and beginning steps of the project in one comprehensive document so that the work would be seen as legitimate and necessary. The Official Project Overview Document (oPOD) was the culmination of these needs and exhibited a professionalism that was crucial at the beginning of the project's formation. This document included initial key contacts and a rough project timeframe and advertising plan. This facilitated the project development because whenever someone inquired about the project, the oPOD could be forwarded to the interested party.

- **Connecting with Key People**

The first main step was to determine who should join the Indiana University coordination team throughout the duration of the project. Indiana University Purchasing was already a strong partner, but the power of the Office of University Communications was also necessary in order

to make sure the event would be well advertised. After connecting with Valerie Pena and Nancy Clensy in the Office of the Vice President of Public Affairs and Government Relations and Jennifer Boehm who is the Director of Community and Government Relations for IUPUI, a media plan was developed that incorporated strategic e-mail and press release blasts, television and radio appearances, advertisements and more (Appendix B). Lastly, the project team also needed to connect with the right people in Apple Inc. The three main individuals who brought rich experience to the project were Apple's Higher Education Account Executive, Recycling Manager and Event Management Specialist.

In order to maintain close contact with this powerful team, weekly conference calls were organized and accompanied by detailed agendas. Minutes were prepared after each meeting so progress of the project could be tracked. This documentation will also be useful for future collection projects or for other universities who want to conduct similar events.

- **Location**

While initially the project team considered holding the collection event in the parking lot of various residential halls, it was ultimately decided that the only suitable Bloomington location would be the Stadium because of the massive traffic flow that was expected from the event. However, this selection limited the possible days for the event to April 30, May 1 and May 2 because of the Little 5 bicycle race and the spring football game.

The Indianapolis site was also problematic because of the Mini Marathon which occurred during the time frame of the event. This meant that the team had to research locations that were located farther away from the campus because of the marathon. Ultimately, the Indianapolis State Fairgrounds was decided upon. For both of these events, the Purchasing Departments worked hard to formalize the contracts and conduct thorough negotiations to ensure the event would be a success.

- **Necessary Materials & Outreach**

As the project began to develop in greater detail, it was necessary to identify exactly how the event should be presented to the public and what the project team and task force wanted to learn from the experience. The main components of this project piece were the event logo, website, survey, media materials and outreach.

In order to present a unified front to the community, the project team realized that a logo would greatly aid the event. As a result, graphic design artist Carolyn Dew was asked to create a logo for the event (Illustration 1). The resulting logo was well received by the planning committee and became an integral portion of the advertising efforts.

Additionally, the project team wanted a unified website for the event that would easily lead interested parties to a source of information. While at first this seemed like a daunting task because no one in the immediate project team possessed extensive website creation expertise and also didn't have adequate time to dedicate to website development, Apple provided a solution. For past events, Apple created temporary websites for its university events by a partnership with PowerOn. The project committee decided to take advantage of this wonderful opportunity and all of the relevant event information was placed on the website ([www.indiana.poweron.com](http://www.indiana.poweron.com)), including a link to a survey for event participants. From this website, links to university specific pages were posted in order to provide additional information like departmental regulations and current sustainability projects.

Furthermore, due to the newness of e-waste as a topic of interest, there is a lack of both quantitative and qualitative data with regard to recycling tendencies. This collection event provided a perfect venue to collect additional information from the event participants by means of an online survey. This survey would allow the project team to analyze demographics, recycling tendencies and a multitude of other variables (see survey questions in Appendix C). However in order to obtain permission to ask event participants to take the online survey on the project website, it was necessary to gain approval through the Indiana Research Board. Approval was granted well before the event and allowed all survey results to be published in the future. Furthermore, the project team decided that having volunteers hand out magnets with the main project website URL that had a link to the survey would be the most effective way to ensure survey participation (Illustration 2). As a result, volunteer coordination became an integral part of the event planning process.

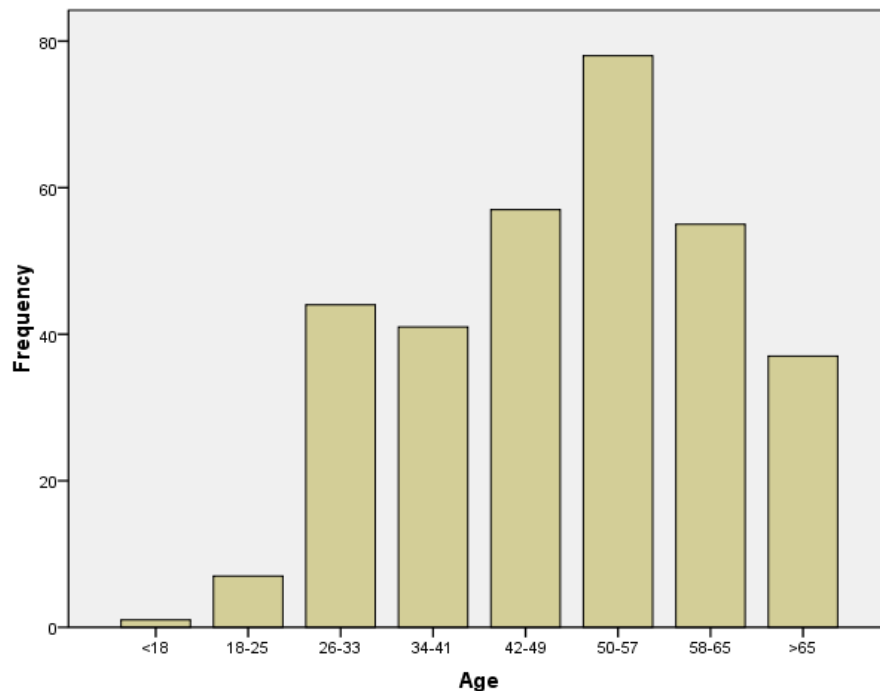
Lastly, additional media materials and outreach efforts also made the event a success. The Office of the Vice President of Public Affairs and Government Relations created the fliers, posters and magnets for the event. Additionally, the Purchasing Department helped with the press release that was sent to numerous entities and listservs. Also, internal resources such as a link on the Indiana University Knowledge Base were utilized to enhance awareness about the event. Furthermore, as a result of the fabulous media plan that was created early in the planning process, numerous radio and television interviews as well as magazine and newspaper publications allowed the event to gain popularity and prestige with the public.

## **Findings**

The Electronic Waste Collection Days was extremely well received by the University and the Bloomington and Indianapolis communities. Not only did more than 2,000 cars frequent the drop off events over the three day period, but approximately 322 people responded to the online survey. The fact that incredible volunteers informed event participants of the URL on the magnet and the importance of taking the survey is no doubt the reason that so many results were collected. While additional analysis still needs to be conducted on the survey data, some basic conclusions may be inferred from an initial examination.

<b>Total Pounds Collected</b>	832,000
<b>Total Cars At Event on May 2</b>	2,006
<b>Approximate # of Survey Responses</b>	322

For example, the 50-57 age class yielded the highest frequency of event participants out of the Bloomington and Indianapolis locations, followed closely by the 42-49 and the 58-65 age groups (Figure 1).



**Figure 1.** Age distribution of e-waste survey respondents

Additionally, an analysis of distance traveled to the e-waste event yields that most of the participants came from locations within 0-5 miles. However, some participants appear to have come from outside Bloomington, with 17 out of those surveyed driving more than 21 miles to the event (Table 1).

**Table 1.** Distribution of distance driven to e-waste collection event

Distance		
	Frequency	Cumulative Percent
0-5 miles	176	55.2
6-10 miles	92	84.0
11-15 miles	19	90.0
16-20 miles	15	94.7
>21 miles	17	100.0
Total	319	

*\*Note: The total here is 319 because not all respondents answered every question.*

Additionally, to assess some of the factors that caused people to deliver their goods to the e-waste event, participants were asked to rank a number of factors that could have caused them to attend the event by marking one of the following options on the survey response form: Don't Care, Moderately Important, Very Important or Don't Know. The factors were: (#1) there was no charge to recycle the electronic devices, (#2) friends and family were recycling their electronic devices so the event participant decided to recycle theirs too, (#3) the event participant felt like they would help the environment by recycling their electronic devices and (#4) the drive through the drop-off event was convenient for the event participant. Below are the resulting pie charts from each factor and the corresponding rankings.

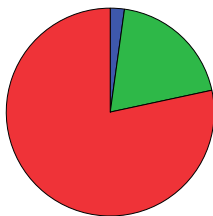
**Key:**

**Blue** = Don't Care

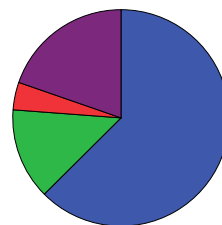
**Green** = Moderately Important

**Red** = Very Important

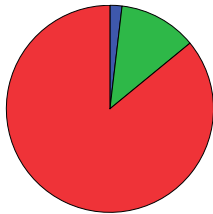
**Purple** = Don't Know



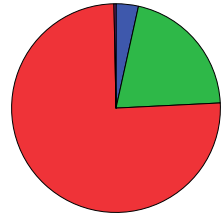
**Factor #1: No Charge to Recycle**



**Factor #2: Family & Friends Recycled**



**Factor #3: Help Environment**



**Factor #4: Drive Through Convenience**

From this data, it appears that helping the environment and having no charge to recycle at the event were the top factors that determined whether someone would recycle their e-waste. However, whether or not family and friends recycled their e-waste had relatively little importance on whether someone would recycle.

Additional analysis of the entire survey will take place in the coming weeks and results will be published.

### ***Challenges***

As with all major undertakings, the project team faced some challenges during the course of the planning process. The main issue that became apparent immediately was that university departments could not legally drop off any electronic items with hard drives directly to the event; these items needed to be brought directly by the university surplus stores. This was initially problematic because there was confusion among departments regarding what items they could bring to the collection event. Ultimately, Apple graciously agreed to pick up the waste at the surplus stores and bring it to the event. In the case of IUPUI, this pick up needed to occur earlier than usual because the surplus store had to be cleaned out for the Race for the Cure event and Apple was able to accommodate this request.

Additionally other satellite IU campuses, such as Indiana University South Bend, wanted to participate in the event but would have difficulty transporting their waste to Bloomington. Once again, Apple agreed to send trucks in order to pick up their waste and bring it to the collection event.

Lastly, even though there were no data erase services offered at the site of the event, all the equipment was transported in securely locked trucks that traveled directly to Sims Recycling Solutions in Chicago whereupon the waste was shredded into pieces about 1 inch in diameter so that data present in the equipment would be destroyed. However, it was difficult to communicate this to everyone who heard about the event and it seemed that some potential participants were wary to bring their hard drives and computers without the added security of on-site data erase services. Although many of the advertisements stated that it was advisable to wipe all hard drives and data storage devices before coming to the event, this could have deterred some people from bringing their goods to the event.

### ***Costs & Benefits to the University***

Although Apple incurred the majority of the costs for the event, the university also provided support and these costs are important to include. Firstly, the staff time for the purchasing and media relations personnel is an obvious cost, as well as the Sustainability Task Force and UITs intern payments.

Additionally, the advertising component of the project was subject to certain costs, specifically the expense for fliers and posters as well as a front page banner in the Herald Times. These costs were covered by the Office of the Vice President of Public Affairs and Government Relations. Furthermore, UITs supported the event through providing the financial support to purchase the magnets that were given to event participants and the Informatics Department allowed use of their Survey Monkey link so that an unlimited number of responses could be received. Internal website costs were also incurred by the Sustainability Task Force and IUPUI because pages were developed to highlight university and department specific information.

Lastly, various outside parties provided benefits to Indiana University's efforts, such as the free use of the weather channel banner owned by the Monroe County Solid Waste District. Additionally, free graphic design services like those provided by Carolyn Dew for the event logo

and simple word of mouth exchanges all were extremely important benefits that resulted in the overall success of the event.

### ***Lessons Learned***

Although the event was very well advertised and reached a broad audience, there are other ways that the project team could have enhanced the knowledge of the event to people in schools and the community. The main area that could be improved is outreach at community and school events. Unfortunately, the project team was extremely busy around the time of the collection event and was unable to invest significant man hours in educating and informing the public about E-Waste Collection Days at various Earth Day activities and other events that take place every year. In the future, this event-advertising component could become integrated into the media plan.

Furthermore, the event could incorporate more bilingual advertising, particularly Spanish. One radio advertisement was conducted in Spanish on WFHB's *Hola Bloomington* (91.3 & 98.1FM), but other than this there were no other bilingual announcements about the event and there is a large Hispanic community in Bloomington and Indianapolis. Additionally, the online survey was only written in English. If a survey or other data tool will be a part of future events, both English and Spanish translations could be available.

### **Conclusion**

Obviously this event was a major success and was positively received by the Bloomington and Indianapolis communities. Based on the positive commentary from both the survey and personal conversations since the event, transforming the 'Electronic Waste Collection Days' event into an annual or biannual affair would be well received by the community.

However long term strategies for dealing with electronic waste management should be considered and developed. Specifically, there is a need for a permanent small e-waste collection system on the Indiana University campuses. Other universities have already incorporated similar systems into their own campuses, such as the University of Vermont (UVM). UVM started the 'Techno Trash collection program' for smaller e-waste items such as batteries and ink jet cartridges that are collected in multi-compartment containers (Spiegel, 2009).

Furthermore, current opportunities for e-waste recycling already exist and citizens need to become better informed of these possibilities. In Bloomington, the Monroe County Solid Waste Management District offers electronic waste recycling at their central recycling station (3400 South Walnut, Bloomington IN 47401).

As awareness grows about e-waste through events like Electronic Waste Collection Days, existing collection efforts and the creation of future e-waste collection programs, we are providing a healthier and more secure environment for future generations.

## Illustrations



**Illustration 1.** Event Logo



**Illustration 2.** Magnet Design

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**Appendix A: Sims Downstream Vendors**



**Downstream Vendors List**

Revised April 18, 2007

<b>Precious Metals</b>		
	<b>Xstrata</b> 4100-181 Bay St. Toronto, Ontario Canada M5J2T3	<b>Norddeutsche Affinerie AG</b> Hovestrasse 50 D-20539 Hamburg Germany
	<b>Umicore</b> A. Greinerstraat 14 B-2660 Hoboken Belgium	<b>Johnson Matthey</b> Orchard Road Royston Hertfordshire England SG8 5HE
<b>Leaded Glass</b>		
	<b>Doe Run</b> Casteel Drive Viburnum, MO 65566	<b>Xstrata</b> 4100-181 Bay St. Toronto, Ontario Canada M5J2T3
<b>Plastics</b>		
	<b>Plastic Nation Inc.</b> 20283 State Road 7 # 104 Boca Raton, FL 33498	<b>One Source Recycling, Inc</b> 2131 Harlem Road Loves Park, IL 61111
<b>Batteries</b>		
	<b>Inmetco</b> 245 Portersville Road Ellwood City, PA 16117	<b>Doe Run</b> HWY KK Boss, MO 65440
<b>Base Metals</b>		
	<b>Kormet Enterprises, Inc.</b> 5421 W. Howard St. Skokie, IL 60077	<b>O'Brien Recycling Corp.</b> 10062 Franklin Ave. Franklin Park, IL 60131
<b>Mercury Containing Items</b>		
	<b>Fluorecycle, Inc.</b> 27780 W. Concrete Dr., Unit A Ingleside, Il. 60041	<b>Mercury Waste Solutions, Inc.</b> 21211 Durand Avenue Union Grove, WI 53182
<b>Toner Cartridges</b>		
	<b>Covanta Secure Energy</b> 2320 South Harding Street Indianapolis, IN 46221	

\*NOTE: Downstream vendors subject to change without notice.

## **Appendix B: Media Plan**

### **March**

- 9 Website Launch [www.indiana.poweron.com](http://www.indiana.poweron.com) - COMPLETE
- 23 Meet with Kelly (Blgt. Chamber) Story line for April Business Network Edition (**PAGR**)
- 30 IUB/IUPUI Departmental E-News Blast (**Ethan Ax draft of document**)  
Email Blast to Educators in K-12 system (**Nancy Clensy/Jennifer Boehm**)  
Email out to City of Indianapolis Sustainability office, Indiana Recycling Coalition, Greater Indianapolis Chamber of Commerce green initiative, Nonprofit News, Nonprofit Solution Center initiative, for them to promote. (**Jennifer Boehm**)

### **April**

- 2 Live at IU (Event Box & Calendar) – (**Nicole Roales**)
- 8 Press Release #1 sent to wide spread media (**Univ. Communications**)  
**This release will appear on the Newsroom site as soon as it goes out.**  
Make sure this includes Living Green and Green Peace, need to see how much this covers Indy media or whether we need to do an additional release especially with regard to small regional papers in the Indy area (**Nicole/UC could you touch base with Rich Schneider at IUPUI if you need his help here**).

Press Release to Indy Sustainability Committee/Blgt. Sustainability Committee (**Nancy/Jennifer get e-mail addresses to Nicole by 4/3/09**)

Press Release to IN Recycling Committee/Monroe County Solid Waste Mgt. (**Nancy/Jennifer get e-mail addresses to Nicole by 4/3/09**)

Press Release to City/County Offices of Bgt/Indy (**Nancy/Jennifer get e-mail addresses to Nicole by 4/3/09**)

PSA sent to wide spread radio media (**University Communications Mike Pipher/Dave Rust**)

Chamber of Commerce Email Blast to members Blgt/Indy (**Nancy/Jennifer get e-mail addresses to Nicole by 4/3/09**)

CVB/ICVA Email Blast to members (**Nancy/Jennifer get e-mail addresses to Nicole by 4/3/09**)

BEDC/IED Email Blast to members (**Nancy/Jennifer get e-mail addresses to Nicole by 4/3/09**)

IUPUI internal promotion of this event to Tax Away day via JagNews, Inside IUPUI, JagTV and others (**Schneider/Boehm**)

Events Calendar and Campus News link on IUPUI's home page (**Schneider/Boehm**)

- 9 Active for Life Calendar (**Nicole Roales**)

- 9 IUB/IUPUI Departmental Flyer Release (**Ethan Ax to compose**) – **could be linked to release issued 4/8/09**

Possible feature (spotlight) item for IU Bloomington Web site (**Nicole will mention to Thom Atkinson**)

- 10 Electronic Home Pages – Story Topic: What can be collected (**Jane S. & Steve H.**)
- 14 Prospective on Policy Calendar (**Nicole Roales**)
- 15 E-Waste Event Button on IU Gateway 4/15 – 5/2/09 (**Univ. Comm./Creative Services**)
- 16 WGCL Afternoon Edition Radio Show 4pm-6pm – Apple Interview (**Valerie**)  
Live at IU Calendar (**Nicole Roales**)
- 19 Flyer and Earth Day Outreach to K-12 School System (???)

- Earth Day Press Release – Story Topic: Preserving the Environment by not dumping
- 21 Discoveries (Event Box & Calendar) (**Nicole Roales**)
- 24 Electronic Home Pages – Story Topic: When and How to Participate (**Jane S. & Steve H.**)
- 24 HT/Indy Star Story (**Valerie/Jennifer**) (**Steve Hinnefeld for HT?**)
- Chamber Email Blast to members Blgt/Indy (**Nancy/Jennifer**)
- BEDC/IED Email Blast to members (**Nancy/Jennifer**)
- CVB/ICVA Email Blast to members (**Nancy/Jennifer**)
- 28 WGCL Afternoon Edition Radio Show 4pm-6pm (**Valerie**)
- 29/30 HT/Star Paid Advertisement – bottom front page strip (**PAGR/Valerie/Jennifer**)
- Press Release on Collection from first day – artwork with weight (**Chris Meyer or another UC photographer** to capture photos (photo gallery) on first day of collection)
- Email News Release to all IUB/IUPUI ( **may not be possible; needed??**)

## May

- 1 HT/Star Paid Advertisement – bottom front page strip (**PAGR Valerie/Jennifer**)
- B97 – Live Remote (**Valerie**) **possible radio station for remote in Indy (Jennifer)**
- Press Release on Collection from first day (artwork)
- 2 Press Release on Collection To Date (artwork)
- 3 Press Release on Total Collection to All local media outlets (artwork)
- (available that quickly??)

Work on possible morning live broadcast from event in Indy, possible editorial from Lenore and/or Rich in the Star. If the bill in the General Assembly (HB 1589) gets passed into law, that would be a nice way to gain some attention for the event. **Jennifer** will keep in touch with the Indiana Recycling Coalition on this.

## **Appendix C: Survey Questions**

### **Demographic Questions**

Please indicate your age:

Younger than 18      18-25      26-33      34-41      42-49      50-57      58-65  
older than 65

Which electronic waste day did you attend:

Bloomington (at the IU Athletic Stadium)  
Indianapolis (at the Indiana State Fairgrounds)

Where did the electronics you brought come from?

They were personal property  
They were from a local school, business, or other group  
They were a mix of personal and group equipment

### **Awareness Questions**

How much would you say you know about the importance of recycling electronic waste?

Nothing                      very little              a moderate amount              very much

How important are the following issues today:

Air pollution	Trivial	Not Important	Somewhat Important	Very Important	Urgent
Water pollution	Trivial	Not Important	Somewhat Important	Very Important	Urgent
Greenhouse gas emissions	Trivial	Not Important	Somewhat Important	Very Important	Urgent
Global climate change	Trivial	Not Important	Somewhat Important	Very Important	Urgent
Pollution from electronic waste	Trivial	Not Important	Somewhat Important	Very Important	Urgent
Water shortages	Trivial	Not Important	Somewhat Important	Very Important	Urgent

### **Motivation Questions**

Approximately how many miles did you come to recycle your electronic waste today?

0-5 miles      6-10 miles      11-15 miles      16-20 miles      21 miles or more

How important were the following factors in deciding to bring your electronic devices to the 2009 Indiana University Electronic Drop-Off Event? (Please select one option for each factor)

Factor #1: There was no charge to recycle my electronic devices

Don't Care      Moderately Important              Very Important              Don't Know

Factor #2: My family/friends were recycling their electronic devices so I decided to recycle mine too

Don't Care      Moderately Important              Very Important              Don't Know

Factor #3: I felt like I would help the environment by recycling my electronic devices

Don't Care      Moderately Important              Very Important              Don't Know

Factor #4: The drive through drop-off event was convenient

Don't Care      Moderately Important      Very Important      Don't Know  
Were there any other factors that prompted you to bring in your items today?

**Alternatives to Event Questions**

What is the most convenient way for you to recycle your electronics?

- Take them to a city/county recycling center
- Take them back to a retail store
- Mail them back to a manufacturer
- Take them to a local charity
- Other: Please specify

Who do you think should typically pay for the safe recycling of electronic products?

- Consumer/User
- Retail store
- Electronics manufacturer
- Government agency
- Other: Please specify

If this event had not been available, what would you have done with the devices you brought today?

Please tell us what you brought to the e-waste event:

Feel free to leave any other comment here: