

Make Haste and Take Care of Your E-Waste!

ENVS 411 - Sustainable Campus Humboldt State University

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Problem Background

In the past decade, the market has been flooded with small universal waste whose lives are short-lived. As students and consumers, we have observed the constant influx and usage of small electronics in the campus community. These can be seen in the form of I-Pods, cell phones, laptops, calculators, digital cameras and the list goes on. Due to the short life span and hazardous nature of these electronics, a proper and environmentally sound waste disposal system is needed to address this invasion of universal devices. According to a National Safety Council Study, in 1998, 20 million computers became archaic within the span of one year. The Environmental Protection Agency (EPA) estimated that in 2007 this number "has more than doubled." (EPA, 2010)

The EPA also states that approximately 18% (414,000 tons) of E-waste was collected for recycling and 82% (1.84 million tons) was disposed of, primarily in landfills. And what does the landfill do with the mountains of E-waste piling up each year? They package it up, put it in giant containers, and ship it off to developing countries such as Nigeria, Ghana, India, and China for an average of 5 to 10 cents a pound, says Jim Taggart, president of ECS Refining. Once the E-waste has reached the developing countries, people will come and melt down the electronics by "cooking circuit boards over coal-fired grills and dipping them into vats of acid to salvage precious metals, exposing themselves to a suite of poisons, including lead, which causes neurological damage. Afterward, the acid and rubble from burning were simply dumped." (Knudson, 2010) The people salvaging these tiny scraps of metal from *our* used electronics are the ones paying the ultimate price for our consumption and disposal habits. As Environmental Science students, we feel that this is unacceptable. The chemicals contained in this waste are detrimental to the environment and to human health. E-waste contains such hazardous wastes as;

- Cadmium- Cadmium accumulates in the body and resides in the kidneys and can severely damage the lungs and even cause death.
- Lead- Lead is contained in the circuit boards and monitor cathode ray tubes (CRTs) and attacks the nervous system in children and adults
- Mercury- Mercury is the most common toxic chemical found in E-waste and leads to cell damage.
- Plastics- When burned, plastics release dioxins that are extremely hazardous to human health. (Nakagawa, 2006)

All of which people are inhaling as they are "refining" our waste back to something profitable.

One solution to this growing problem is proper and safe E-waste disposal. The lack of proper universal waste disposal methods is not only relevant to this local community, but is a matter that needs to be addressed nationally. Low recycling rates, of approximately 18%, have remained more or less constant due to the increase in generation and consumption of electronics. Within the scope of the HSU campus community, the generation of E-Waste has steadily increased since 2007, when approximately 22,000 pounds were produced. This year, HSU has accumulated almost 26,000 pounds of E-Waste, and counting. (Comet, 2010).

Problem Statement

According to the Humboldt State University (HSU) Sustainability Coordinator, TC Comet, the present status of the E-Waste disposal system on campus is limited to only accepting HSU property. The campus community does not have permanent areas to bring small universal waste on campus. In thinking about the present status of the waste stream at HSU, we asked ourselves, how can we get HSU students to consistently dispose of their small universal waste (cell phones, batteries, chargers, calculators, etc.) properly on campus? Our approach to this solution was multifaceted and is explained in further detail in the following pages.

Globally, solutions to this problem have been growing. One key aspect of proper E-waste management is to reduce the amount of E-waste that is consumed. We in the U.S. are part of a consumer nation and the production of waste is inevitable. With E-waste being the fastest growing municipal waste, it needs to have proper and safe disposal measurements in place and organizations developed that are designed to be watchdogs over E-waste recyclers.

As far as proper disposal methods go, California has many E-waste recyclers including ECS refining (the organization receiving our collected E-waste), Onsite Electronics Recycling, ERI, and many more. Whereas these companies might have the best of intentions when collecting, recycling, and disposing of E-waste, no business or person is perfect and that is why watchdog organizations such as the Basel Action Network have been established.

The Basel Action Network BAN, named for the Basel Convention, was passed in 1994 as a multifaceted approach to the ban on the export of hazardous waste from richer to poorer countries. BAN is a trade barrier against the trade of toxic waste and its purpose is to protect human rights and environmental health as well as hold the producers and disposers of such waste accountable, as opposed to people in China or Nigeria who might have never seen, much less used the equipment. BAN "is the world's only organization focused on confronting the global environmental injustice and economic inefficiency of toxic trade (toxic wastes, products and technologies) and its devastating impacts." (BAN.org)

BAN approaches its mission in multiple ways; they actively fight against such actions by:

- Serving as the information clearinghouse on toxic waste issues. This is mostly used by journalists, researchers, and academics but is available to the public as well and has a vast amount of information about E-waste recyclers, incidents, achievements, and more.
- Holding press events to raise awareness about the growing problems with E-waste
- Collaborating with other organizations, both national and international, such as UNEP (United Nations Environmental Program) to participate in policy deliberations and meetings involving toxic waste trades as a NGO (Non-Governmental Organization)
- Research and investigate, producing photos and films about what is really going on with our E-waste in developing countries
- Campaigns;
 - o E-waste Stewardship Project- the certification of E-waste recyclers to disposal and handle the E-waste they receive domestically and responsibly
 - o Promoting legislation that holds producers responsible for their waste

o Working to ban Mercury to stop its use, extraction, production and trade

Under BAN is the E-waste Stewards certification which is an approved "certification program for electronics recyclers that prohibits the export of e-waste to developing countries". (BAN.org)

ECS Refining, the company that we and the entire CSU system use for E-waste disposal, is a certified E-waste Steward and as stated on their website, "This results in no landfill. No processing overseas. Just refining materials to their purest form." (ECSrefining.com)

Our project aims at addressing the lack of E-Waste disposal areas on campus. We have decided to take a holistic approach to this problem by advocating and educating the campus community on the proper E-Waste disposal measures. In addition, we would like to implement a permanent option for E-Waste disposal and establish biannual E-Waste collection drives.

Goal

To divert Humboldt State University Student's E-waste stream

Objectives

- 1. Reach 65% of the student, staff, and faculty through educating, promoting, and advocating proper E-waste disposal methods and consumption patterns
- 2. To get **50%** of the off-campus students, staff, and faculty to use the opportunity for proper E-waste disposal twice a year through E-waste drives.
- 3. To increase the on campus E-waste disposal options from 0 to 6 on a year-round basis through the use of E-waste recycle bins.

Project Alternatives

Preferred Alternative:

- Bi-annual E-waste drives
- · Six universal waste receptacles placed around campus
- Outreach

Alternative summary: This alternative will entail implementing six universal waste receptacles at high traffic locations on campus. These would be accompanied by proper signage regarding safe disposal of electronics. Bi-annual E-waste drives will be held at the end of each semester in the Library parking lot to collect a higher volume of waste from students. Surveys will be given to all students who drop off waste at the drive for data collection purposes. This data along with assistance from WRRAP will make the program long term. Outreach will occur through announcements as well as flyers near receptacles.

Alternative 1: No Action.

Alternative summary: Continue business as usual with E-waste disposal at HSU.

Why not?

Since 2007, the trend of E-waste accumulation at HSU has been a steady increase of approximately 1,000 pounds per year according to waste data provided by HSU Sustainability Coordinator, TC Comet. Currently, the E-waste levels for 2010 are at 25,703 pounds and counting. According to TC Comet, the CSU system has a contract with a hazardous/universal waste disposal facility in Santa Barbara, CA. Therefore, the E-waste taken from the campus is dismantled and disposed of domestically. HSU students are not included in this E-waste system on campus. The local areas available for students to safely drop off their E-waste include businesses such as the Arcata Recycling Center that charge for waste disposal. Prices vary from 10 cents/pound of household E-waste to \$13 for T.V., computer monitors and laptops. Electronic E-waste (non-household) is 28 cents/pound. (Arcata Recycling Center).

Our objective for this project is to reduce the amount of E-waste accumulating at HSU by 10% per year. This alternative would allow for the continuance of the current E-waste system on campus.

Alternative 2: Outreach

Alternative summary: This alternative would entail posting informational flyers on proper E-waste disposal as well as making announcements and tabling. The main focus of this alternative would be educating HSU students on proper E-waste disposal habits.

Why not?

While outreach may appear to be a highly effective means of achieving our goal, it does not force a change in behavior. Our objective is to reduce the amount of E-waste accumulated at

HSU by 10% per year. Flyers and announcements simply are not enough to change habits. Providing a more convenient, free and safe E-waste disposal program for students, in addition to outreach, is a feasible means to achieving our goal.

Alternative 3: E-Waste Drive

Alternative summary: This alternative would entail holding a bi-annual drive for the campus community one Saturday per semester. On and off-campus HSU students would be able to drop off their small electronics for proper disposal. A survey would be given to students at drop-off to gain data on the type of E-waste that is diverted due to this drive. This data could be used to make a more effective campus program for the future.

Why not?

The drive is a narrow alternative for students to dispose of their E-waste. The drives will occur one Saturday per semester for a few hours, which will affect the amount of students who will participate. If our objective is to continually reduce the E-waste by 10% each year, this drive will not suffice.

Alternative 4: Six universal waste receptacles on campus

Alternative summary: This alternative would entail placing six universal E-waste receptacles at six high traffic areas on campus.

Why not?

While the receptacles will provide a long term option for students for E-waste disposal, there would be no encouragement to use them. A drive would provide an opportunity to divert a larger percentage of E-waste each semester in contrast to the smaller sized receptacles. E-waste reduction of 10% per year will not be achievable with only six small receptacles. It also creates the possibility for overflow in the receptacles during peak waste periods such as the end of the semester when students are moving out of residence halls.

Implementation Strategies

The goal of this project is to reduce the waste stream generated by students coming out of Humboldt State University. We have decided to approach this problem through three main strategies. These strategies include:

1. Outreach and Collaboration:

Promoting awareness of proper E-waste disposal methods to the campus community:

- Creating informational flyers about the free E-waste drive opportunity to be placed in all available campus buildings (approximately 30)
- Making classroom announcements about the drive and implementation of E-waste receptacles on campus year-round
- Advertisement in the Lumberjack, KRFH, Humboldt NOW, Events Calendar, via emails/word of mouth

By educating our fellow student body members, we hope to reduce the amount of E-waste disposed of improperly and encourage behavioral changes towards the disposal of E-waste- such as recycling it as opposed to "throwing it away".

- 2. Working with Environmental Health and Safety Coordinator on campus, Tom Manoli, and Campus Sustainability Coordinator, TC Comet, to develop permanent E-waste disposal sites on campus to be maintained on a regular basis by the Plant Operations staff. We feel that by creating a permanent option for proper E-waste disposal, students will be able to make the educated choice to dispose of their unwanted broken or obsolete electronics in the most environmentally responsible manner available today.
- 3. Facilitating a campus E-waste drive on December 4th, 2010 to encourage proper E-waste disposal methods in HSU staff, students and faculty. This drive will aid in the reduction of student, staff and faculty E-waste that is improperly disposed of and which accumulates in landfills or is sent overseas.

Strategy

Our strategy for monitoring and evaluating this project will be to gain data from students, staff, and faculty. Achieving these strategies will be through the actions outlined below.

Monitoring

E-Waste Drive:

- Surveys (Enclosed herein) will be given to students, faculty, and staff who drop off waste at the
 drive.
- Survey results will be compiled for analytical data, to indicate the average lifespan of electronic
 waste as well as a need for this service.
- Waste Reduction Resource Awareness Program (WRRAP) will be taking over next year as the facilitator of the annual E-waste drive. To help WRRAP make this a successful event, we will create a management plan for the program.

E-Waste Receptacles:

- An inspection log will be kept for each of the receptacles providing a detailed description of the project over time as well as the consumption rate of each receptacle in their general area.
- Weighing E-waste that is turned in to the receptacles. The E-waste collected will be weighed and written on the inspection log.
- Organizational oversight will be provided by Waste Reduction Resource Awareness Program (WRRAP).

Evaluation

- Data will be compiled from the surveys taken at the E-waste drives along with the amount
 collected from the receptacles each semester. This will provide a basis for comparison of previous
 year's waste volume.
- An announcement will be put out at the drive and in the University Announcements asking for feedback from students, staff, and faculty who contributed to the drive.
- The volunteers that participated with the drive will be asked to evaluate the drive (i.e., the good, the bad, the ugly).
- Feedbacks will be taken by email and used to make revisions to the project for the future. This will ensure that the project improves and succeeds each year.

Results

Through collaboration with HSU Campus Sustainability coordinator, TC comet, six E-waste receptacles have been purchased for use on campus starting spring 2011. Proper signage has been designed and turned in to the related graphic designers for engraving. Signage and bins will be placed in six locations: Library, Founders Hall, Behavioral and Social Sciences, Forestry, Jolly Giant Commons and the UC Quad, starting in the spring. Funding for this project was provided by the Environmental Health and Safety Department on campus.

E-Waste Drive

A free campus E-waste drive was held on Saturday, December 4 from 10:00-3:00 at the Gist Hall Parking lot near Student Business Services. The drive attracted 91 HSU students, staff and faculty members. We had a volunteer staff of approximately 7-13 WRRAP and Plant Operations members. It is estimated that we received between 8,000-10,000 pounds of waste during that time. A final count is forthcoming upon weigh-in by TC Comet and Plant Operations staff. The main items collected were televisions, computer monitors and towers, printers and miscellaneous cords. Each customer at the drive completed a survey, included herein. The survey asked various questions regarding the shelf life of electronics in personal homes, disposal habits and willingness to use proper disposal measures if available. The results of the survey are as follows:

- The majority of people had between 0-5 "dead" (no longer in use) electronics in their home
- The majority of people kept their obsolete electronics for 6 months to a year in their home
- Most people said they would take their dead electronics to the recycling center
- Most people said they would use drop-off e-waste receptacles if available for free on campus

After talking with students, staff and faculty at the drive, a need was established to have an E-waste drive again in future semesters.

Conclusion

Overall, we think that this project was a success. Our results were above and beyond our expectations. Our original estimates for attendance were between 45-65 people and a hopeful 10% waste reduction. We received over 90 participants and diverted at least 36% of the current estimated waste stream flowing from HSU to the landfill.

The following items are areas in which we feel need improvement for future projects;

- 1. Start planning the drive/receptacles earlier in the semester
- 2. SURVEY:
 - a. Include in the survey a question about what media outlet worked the best in getting people to the event
 - b. Including a question about the patron's relationship with HSU; student, staff or faculty.

- 3. Confirm with Parking Services the day before the event that the parking lot has been cleared and there is reserved signage present
- 4. Increasing student attendance

E-Waste Drive Implementation Plan

People to Contact

Tom Manoli: Environmental Health and Safety Coordinator

Email: tfm7001@humboldt.edu

TC Comet: HSU Campus Sustainability Coordinator

Email: tcc4@humboldt.edu

Karyn Hoppe: Parking Services

Email: karyn.hoppe@humboldt.edu

Phase 1

• Pick an appropriate weekend date approximately 2 weeks before finals; make sure there are no other events that weekend (Coordinate with TC Comet)

- Reserve Gist Hall lower parking lot next to SBS; contact Karyn Hoppe from Parking Services for reservations. Make sure you reserve the parking lot with adequate time given for set up and clean up.
- Solicit volunteers for the event. All volunteers that will be handling waste MUST attend a proper Universal Waste training; contact Tom Manoli to set-up training times.
- Outreach, outreach! Template for flyers included. The following media sources should be used:
 - o Lumberjack
 - o KRFH
 - o University Announcements (can be found on the IT page of HSU website)
 - Humboldt NOW
 - o Emails; CCAT, ROSE and related campus organizations
 - o Housing office-drop off flyers 12 permitted as long as they are stamped
 - All flyers must be stamped at the information desk near Center Activities; limit of 50 per event.
 - Classroom announcements; as many as possible!

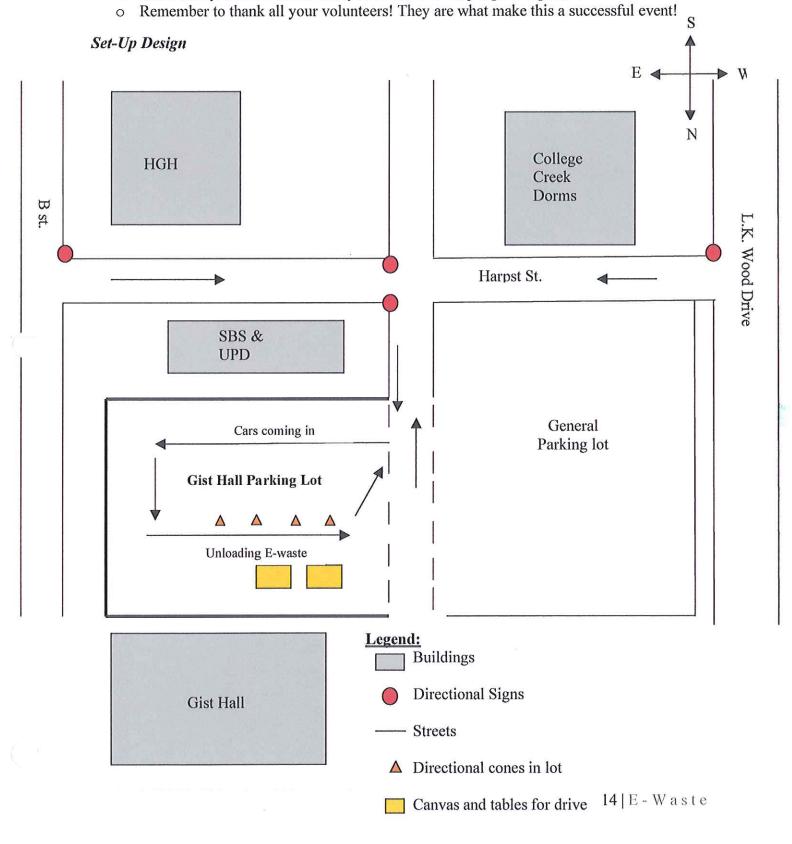
Phase 2: The EVENT!

- Plan on arriving at least an hour before the start of the event.
- Set-Up:
 - Two canvases provided by WRRAP
 - o 4-6 tables provided by Plant Operations (Contact TC)
 - Stack of chairs
 - Stakes for the direction signs
 - Proper Protective Equipment (PPEs) provided by Environmental Health and Safety Department (Contact Tom Manoli)
 - o Highly recommended: Provide refreshments for your volunteer crew.
 - Directional signs: Important to make multiple signs near the event with arrows in the direction of the event
 - Cone lane: cones provided Plant Operations (Contact TC)

 Collection materials, i.e. trash and recycling dumpsters, boxes and palettes, moving trucks, etc, provided by Plant Operations

Phase 3: Clean Up

o Make sure you left it better than you found it to keep a good reputation



Group Timesheet

Make Haste And Take Care of Your E-Waste!

MEETINGS	Kinsie	Carolyn	Robert
9/1/2010 (H)	1.5	1.5	1.5
0.45.0040.75			
9-15-2010 Meeting with T&TC		1	
9-22-2010 Meeting with T&TC		1	
9-28-2010 (M) (Prob. Statement)	1	1	2
10/4/2010 (H) 10/5/2010 (M) (goals and	2	2	21
objectives)			1
10-6-2010 (prepare for WRRAP			
mtg)	0.5	0.5	0.5
10-6-2010 (WRRAP)	0.5	0.5	0.5
10-10-2010 (R)	1.5	1.5	1.5
10-13-2010 (C)	0.5	0.5	0.5
10/18/2010 (C)	0.5	0.5	0.5
10-19-2010 (M) (Weighing alternatives)	1	1	1
10-20-2010 HAZ waste training			
10-26-2010 (M) (Monitor and			
Eval.)	1.5	1.5	1.5
10-27-2010 (T&TC)	l l	1	
10-29-2010 (H)	1.5	1.5	1.5
11-10-2010 (WRRAP)	0	0.5	0
11-15-2010 (MARCOM)	0.5	0.5	0
11-17-2010 (FLYERS)	1	1	1
11-19-2010 (H)	1.5	0	1.5
11-1-2010 (C)	1	1	1
11-28-2010 (K)	1	1	1
11/29/2010 (C)		1	11
12-1-2010 (H&S)	2	2	2
Booster club (12-3-2010)	4.5	3	4.5
Prep Work for drive(12-4-2010)	0.5	0.5	0.5
E-waste Drive (12-4-2010)	8.5	8.5	8.5
post drive (12-4-2010)	2.5	2.5	2.5
Paperwork (12-5 & 6-2010)	5.5	5.5	2.5
Present and polish (12-8-2010)	2	2	2
TOTAL	48.5	46	44

INDIVIDUAL TIMES:

Kinsie	hours
10/27/2010 (C)	1
Emails	2
Flyers/Thank Yous	5
Class Announcements	1
Individual total	9
Grand total	57.5

Carolyn	Hours
class announcements	0.5
Emails	4
Uni. announcements	0.3
Individual total	4.8
Grand Total	50.8

Robert	Hours
Class Announcements	0.5
Email	2
Individual total	2.5
Grand Total	46.5

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Universal Waste Receptacles Inspection Log Humboldt State University 1 Harpst Street

Date/Location:	Proper	Leakage	Clear	Comments?	Signature
Library	signage		access		
	Yes/No	Yes/No	Yes/No		,
70 Table 10	Yes/No	Yes/No	Yes/No		***************************************
	Yes/No	Yes/No	Yes/No		
	Yes/No	Yes/No	Yes/No		Name
Date/Location: UC Quad					
	Yes/No	Yes/No	Yes/No		
, 1000000000000000000000000000000000000	Yes/No	Yes/No	Yes/No		
W	Yes/No	Yes/No	Yes/No		
	Yes/No	Yes/No	Yes/No		
Date/Location: JGC					
	Yes/No	Yes/No	Yes/No		
	Yes/No	Yes/No	Yes/No		at a second
	Yes/No	Yes/No	Yes/No		
Date/Location: South Campus Marketplace					500
	Yes/No	Yes/No	Yes/No		nu n n
	Yes/No	Yes/No	Yes/No		
	Yes/No	Yes/No	Yes/No		
	Yes/No	Yes/No	Yes/No		
Date/Location: BSS					
	Yes/No	Yes/No	Yes/No		
	Yes/No	Yes/No	Yes/No		
THE POST OF STREET	Yes/No	Yes/No	Yes/No		
	Yes/No	Yes/No	Yes/No		
Date/Location: SCIB and WLDF					
	Yes/No	Yes/No	Yes/No		
	Yes/No	Yes/No	Yes/No		
	Yes/No	Yes/No	Yes/No		
	Yes/No	Yes/No	Yes/No		
	Yes/No	Yes/No	Yes/No		
	Yes/No	Yes/No	Yes/No		
	Yes/No	Yes/No	Yes/No		

"Make Haste and Take Care of YOUR E-Waste!"

Student E-Waste Disposal Habits Survey

- 1. Approximately how many pieces of "dead" (no longer in use) electronics do you have at your residence?
 - a. 0-5 b. 6-10 c. 11-15 d. 16+
- 2. How long on average do you keep your electronics before they become "dead" in your home?
 - a. 6 months -1 year b. 2-6 years. c. 7-15 years d. 15+ years
- 3. What do you do with your electronics when you no longer have use for them?
 - a. Take them to your local recycling center
 - b. Throw them away in the garbage
 - c. Store in your home for an indefinite time period
 - d. Re-gift
- 4. If there were available drop-off receptacles free of charge on campus for small electronics, would you use them?
 - a. Yes, always.
 - b. No, never.
 - c. Occasionally

Please list below all of the items that you dropped off at the E-waste drive today:

Make Haste and Take Care of YOUR E-Waste!

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	Answer A		Answer B	Answer C	Answer D
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Question 4 24	MIMIMIM	MININ IN			
Items Dropped Off at Drive	# Collected		Ì		
T.V.s	# Collected	W W W	WY	35	
Computer Monitors				45	
Laptops	THE WAY	n karxtasti	MILENI	40	
Stereos					
Printers	THE WELL	HIMIM	HILLI	al	
Cell Phones	THE WAY THE TE	HURTIT	THE T	41	
Microwaves	William A	man hi			
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DVD Players	THE COURT				
Mice	THE WAR				
Keyboards	AT WAYNA I				
Water Distiller	1				
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Kitchen Appliances	Utt.)				
Speakers	JAK II				
DVR Recorder	1				
Camera	HIL	<u> </u>			
Cords	MINITE				
Portable CD Players	H	45.14-5-5-5			
Remote Controls	WIL				
Amplifiers	W				
Towers	THE WAY	W 1118 112 1	Printer AG		
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calculator	1111				
cambride	-11-				
offee Gamer	1				
malkum rose	1				
HUM CLOCK	-11				
120000					
Wall Board	111				
Wall Road			la v		
MACATICA	1				
Palatolest	11	,			
Hard anve	111				
rv3	1				
1	,				
Chareec	III			IIII II VIII	
CAR	1111				
Charger Charger Character Comme					
MD M					
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yan - 1100	11				
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	The state of the s				

	tons	2007 Total		4th Qtr.	3rd Qtr.	2nd Qtr.	1st Qtr.		tons	2008 Total		4th Qtr.	3rd Qtr.	2nd Qtr.	1st Qtr.	tons	2009 Total		4th Qtr.	3rd Qtr.	2nd Qtr.	1st Qtr.		tons	2010 Total	4th Qtr.	פום ענו.	Zna Ctr.	1st Qtr.	
	25.34	50,670		35,540	15,130	0	0		62.95	125,890		38,790	23,100	33,160	30,840	55.37	110,740		33,700	21,160	27,880	28,000		33.44	66,880	0	71,000	25,840	29,440	Mixed Ctnrs N
	35.63	71,260		48,880	22,380	0	0	139	119.93	239,860		64,960	75,520	59,820	39,560	166.49	332,980		76,120	89,140	81,480	86,240	. 5	120.14	240,280	0	08,580	82,120	88,580	Mixed Paper Aluminum
	2.45	4,895		0	115	4,080	700		0.00	0		0	0	0	0	0.00	0		0	0	0	0		0.00	0	0		0 0	0	
	13.21	26,425		0	2,835	9,305	14,285		0.00	0		0	0	0	0	0.00	0		0	0	0	0		0.00	0	0	c	0 0	0	
	3.60	7,208		0	300	3,420	3,488		0.00	0		0	0	0	0	0.00	0		0	0	0	0		0.00	0	0	c	0 0	0	
	1.41	2,820		0	120	1,320	1,380		0.00	0		0	0	0	0	0.00	0		0	0	0	0		0.00	0	0	c	0	0	
	0.78	1,560		0	120	840	600		0.00	0		0	0	0	0	0.00	0		0	0	0	0		0.00	0	0	c		0	
	2.46	4,910		0	945	1,530	2,435		0.00	2000		0	0	0	0	0.00	0		0	0	0	0	1.0	0.00	0	0	c	0	0	Tin/Steel OCC
	46.87	93,740	2000	22.840	31,000	20,900	19,000		52.22	104,440		23,900	43,560	16,760	20,220	3.88	7,760		0	0	0	7,760		0.00	0	0	o	0	0	CC Office
	59.97	119,940	4	0	26,620	57,040	36,280		0.00	0		0	0	0	0	0.00	0		0	0	0	0		0.00	0	0	0		0	
	10.64	21,280	_	0	0	7,620	13,660		0.00	0		0	0	0	0	0.00	0		0	0	0	0		0.00	0	0	0	0	0	11
	13.36	26,720	_	э.	7,880	11,600	7,240		0.00	0		0	0	0	0	0.00	0		0	0	0	0		0.00	0	0	0	0	0	OMG Pa
	4.53	9,060	0,000	300	3,760	0	2,300		9.36	18,720		2,540	11,400	0	4,780	307.00	614,000		0	384,680	224,200	5,120		4.17	8,340	0	0	5,340	3,000	
	96.74	193,473	111,011		- 1	3,024	15,566		127.06	254,114		189,040	31,377	11,441	22,256	17.54	35,081		12,900	0	0	22,181		3.69	7,389	0	0	0	7,389	Metals Re
	121.12	242,240	200	200	242.040	0	0		5.57	11,140		0	0	11,140	0	4.39	8,780		0	100	8,680	0		0.00	0	0	0	0	0	Reuse Ap
H	0.90	1,792	1,070	1 270	413	0	0		1.78	3,565		170	2,540	790	65	2.26	4,515	-	0	2.700	1.425	390			4,460	.0	0	0	4,460	Applian Ele
4	11.15	22,299	2,004	2 657			0		17.35	34,707		w		8,080	0	 11.65	23,292 6,174,380		0 606,000	23.292 3	0	0		12.85	\$25,703	0	0	25,703	0	Electronics C&D
	189.44	378,880	_	0	271.260	107,620	0		1,920.42	3,840,840		0 3,184,620	650,380	1,340	4,500	3,087.19	,174,380		606.000	364.180	986.000	218,200		16.10	32,200	0	22,940	0	9,260	
	17.20	34,395	12,007	77 607	7 346	11.572	2,870	-	3.54	7,070		524	0	826	5,720	0.00	0		0	0	0	0		0.00	0	0	0	0	0	Books Misc.
	1.49	2,980 1	2,540	3 0	0	0	40		1.61	3,210 4		520	540	460	1,690		960		0	0	0	960		0.32	640	0	0	0	640	SC.
	658.27	1,316,547	Grand Total			1			2,321.78	4,643,556	Grand Total		C	7		3,656.24	7,312,488	rand Total	(2	7			192.95	Grand Total 385,892		7		,	



