
Name of Organization: Erie County Department of Environment and Planning

Type of Organization: County

Contact Information: Mr. Thomas Hersey

Environmental Compliance Service

95 Franklin Street Room 1077

Buffalo NY 14075

Phone: (716) 858 - 7674 **Extension:**

Fax: (716) 858 - 7713

E-Mail: herseyt@bflo.co.erie.ny.us

Project Title: Erie County Pilot Computer Recycling Project

Project Category: Pollution Prevention and Reduction - BNS

Rank by Organization (if applicable): 0

Total Funding Requested (\$): 30,000 **Project Duration:** 1 Years

Abstract:

Since 1988 , Erie County has sponsored 4-6 Household Hazardous Waste (HHW) Collection days annually. The event is co-sponsored with our local municipal solid waste management organizations. Collection includes waste motor oil, antifreeze, gasoline, oil-based paints, paint thinner, pesticides, fertilizers, batteries, propane tanks/cylinders, tires and mercury containing materials. This project will utilize our existing Erie County staff and program format to implement a pilot collection of computers at two collection events. It is anticipated that the proposed computer collection events will divert 200-500 computers from the municipal waste stream. This will reduce loadings of lead, which is categorized by the USEPA as a Persistent Bioaccumulative and Toxic Pollutant (PBT), from entering the Great Lakes Basin. Other pollutants of concern include mercury, cadmium and phosphorous. The proposed pilot project will permit development of the program and inclusion of computer components at the HHW collection events.

Geographic Areas Affected by the Project

States:		Lakes:	
<input type="checkbox"/> Illinois	<input checked="" type="checkbox"/> New York	<input type="checkbox"/> Superior	<input checked="" type="checkbox"/> Erie
<input type="checkbox"/> Indiana	<input type="checkbox"/> Pennsylvania	<input type="checkbox"/> Huron	<input checked="" type="checkbox"/> Ontario
<input type="checkbox"/> Michigan	<input type="checkbox"/> Wisconsin	<input type="checkbox"/> Michigan	<input type="checkbox"/> All Lakes
<input type="checkbox"/> Minnesota	<input type="checkbox"/> Ohio		

Geographic Initiatives:

<input type="checkbox"/> Greater Chicago	<input type="checkbox"/> NE Ohio	<input type="checkbox"/> NW Indiana	<input type="checkbox"/> SE Michigan	<input type="checkbox"/> Lake St. Clair
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Primary Affected Area of Concern: Buffalo River, NY

Other Affected Areas of Concern: Niagara River, NY

For Habitat Projects Only:

Primary Affected Biodiversity Investment Area: Not Applicable

Other Affected Biodiversity Investment Areas:

Problem Statement:

As computers have become more popular, many innovative programs have been developed to recover those being discarded. In the last several years, computer sales have increased more than 25%. A 1991, a Carnegie Mellon study estimated that, as of 1995, 25 million computers have been discarded globally. Computers contain numerous heavy metals. Cathode ray tubes (CRT's), located in the monitors, have high levels of lead in the glass, as well as mercury, cadmium, and phosphorous in the vacuum tubes. A study by the University of Florida published in December 1999 examined the characterization of lead leachability from CRT's using the USEPA's Toxicity Characteristic Leaching Procedure (TCLP). The study concluded that CRT samples produced an average concentration of 19.35 mg/l of lead. That exceeds the regulatory limit of 5.0 mg/l. CRT's comprise about two-thirds of the weight of a typical workstation. Landfilling CRT's in an environmentally sound manner is costly and does not necessarily prevent the lead from leaching into the Great Lakes Basin. In western New York, computer recycling has evolved and with it programs of reuse and recycling of such component parts as metal and plastic. By recycling, any possible contamination from the various heavy metals is alleviated thereby protecting the Great Lakes Basin from lead contamination.

Proposed Work Outcome:

Erie County intends to utilize the existing Household Hazardous Waste Collection Program to implement two pilot computer collection days in May and June, 2001. Existing Erie County staff will coordinate and implement the computer collection program. Bid documents will be issued to at least three computer recycling and recovery companies in Western New York. Rochester Computer Recycling and Recovery and Aarwin, Inc. have been contacted by Erie County and are available to participate in this event.

The bid language will include the following requirements: The contractor will report to Erie County the number of computers collected, characterization of the waste stream, recyclability, costs for recycling/disposal and salvage value for recyclables. A survey will be conducted at the collection site to determine workability of the program and the feasibility of a fee-based drop off program. This data will be used by Erie County to determine permanent inclusion in the annual Household Hazardous Waste Collection days held six times a year. At a minimum, the following materials will be recycled:

Commodity	Weight
CRT	49%
Steel	20%
Scrap Plastic	13%

High Grade Breakage	10%
Mixed Metals	3%
Plastic	1%
Circuit Boards	3%
Copper Wires	1%

Although it is difficult to predict the exact amount and quality of computers collected, we do know that over 1000 residents attend each collection event. At two collection events in Binghamton, New York as part of the EPA Region 1 study "Analysis of Five Community Consumer/Residential Collections" April 1999, 11,403 lbs of computers were collected. We are estimating that between 200-500 computers will be collected. The average CRT/monitor has 19.3 mg/l of lead. The proposed collection will potentially prevent 3860-9650 mg/l of lead as well as other toxins from entering the Great Lakes Basin.

Project Milestones:

Dates:

Project Start	10/2000
Primary Outreach Campaign	11/2000
Computer Collection Day	05/2001
Computer Collection Day	06/2001
Project End	10/2001
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Project Addresses Environmental Justice

If So, Description of How:

Project Addresses Education/Outreach

If So, Description of How:

This project will educate the general public on the problem of disposing personal computers in their regular garbage. It will also educate the public on the potential for recycling the computers. In addition to the public, we expect to provide outreach to the business community on the potential for recycling their computers.

Project Budget:

	Federal Share Requested (\$)	Applicant's Share (\$)
Personnel:	0	10,000
Fringe:	0	2,800
Travel:	0	0
Equipment:	0	0
Supplies:	0	0
Contracts:	30,000	0
Construction:	0	0
Other:	0	0
Total Direct Costs:	30,000	12,800
Indirect Costs:	0	6,420
Total:	30,000	19,220
Projected Income:	0	0

Funding by Other Organizations (Names, Amounts, Description of Commitments):

None

Description of Collaboration/Community Based Support:

Collaboration will entail assistance of the municipal solid waste planning units in Erie County which include all municipalities. The existing HHW staff at the Erie County Department of Environment and Planning will be actively involved. In addition, community groups such as the Western New York Material Exchange Group, The Material Reuse Project (Buffalo) and local recycling and educational groups will be involved.