

2003 Lake Superior Abandoned Household Waste Project Minnesota Pollution Control Agency (MPCA)

As part of the state's commitment to the Lake Superior Binational Program and its Zero Discharge Demonstration, the Minnesota Pollution Control Agency (MPCA) offered small amounts of money (i.e., no more than \$5,000) to counties in the Lake Superior watershed to carry out abandoned waste collections on public lands. Although counties were allowed a great deal of flexibility in the projects they could carry out with this money, the MPCA did make suggestions of appropriate activities based on collections already done by the Wisconsin Bear Hunters Association and another done by a snowmobile club in the Brainerd area.

The link to abandoned waste and the critical chemicals from the Lake Superior Lakewide Management Plan (LaMP) can be made through a variety of products. We were especially interested in white goods since some models contain mercury switches or PCB ballasts or capacitors. Other critical chemicals associated with abandoned waste include lead and other heavy metals as well as some of the organic chemicals listed in Table 2-1 in the Stage 2 LaMP.

The counties were first contacted about this project in August 2002. Hank Fisher at the Minnesota Office of Environmental Assistance offered valuable assistance in making personal contacts and following up with a variety of possible participants. Both the Lake County and St. Louis County solid waste officers expressed interest in the project. From reviewing other similar projects and interviewing participants, we preferred a timeframe that would have collections in the fall or the spring. In other seasons the waste is covered by snow or hidden by leaves. For this project, much of the "scouting" for abandoned waste sites was done in the fall of 2002 with the actual collections occurring in May and June 2003.



Lake County

Most of the work on this project was done by the Lake County Solid Waste Department, with help from the Highway Department, Sentenced-to-Serve crews and a contractor who had a loader equipped with tracks needed for the rugged terrain at some of the abandoned waste sites.

Table 1a summarizes the types and amounts of waste collected as part of the project as well as the disposal means. Fourteen sites were cleaned up and approximately 20 tons of trash was shifted out of the woods of Lake County to the proper disposal destinations. The cleanup included the remnants of a meth lab and a large skidder tire that by itself cost \$150 to dispose. Lake County spent more than the \$5000 from the state contract (see Table 1b) and has taken some legal action against some people who dumped trash that included their names and home addresses. Table 1b documents the costs associated with the project.

Table 1a. Abandoned waste collected by Lake County in 2003.

Material	Amount	Disposal
Batteries	4 lead acid (about 200 pounds)	Lake County household hazardous waste facility
Demolition waste	35 cubic yards	Disposal at Lake County demolition landfill
Electronic waste	3 TVs; 4 VCRs; 10 stereo components; 1 printer; 2 cordless appliances; 7 microwaves; 3 cell phones; 266 pounds of broken cathode ray tubes	Lifecyclers Electronic Recycling Services
Hazardous Waste	150 pounds haz waste; 90 fluorescent lamps	Lake County household hazardous waste facility
Recyclables	400 pounds (mostly aluminum cans)	Lake County recycle center
Scrap metals	6000 pounds	Will be processed through county's vendor
Small engines	1 snowmobile; 6 lawnmowers	Small engine repair class
Solid waste	20 cubic yards of municipal solid waste; 80-90 yards of carpet and padding; 10 couches/recliners; 3 mattresses	Collected in 40 yard roll-off dumpster; disposal at sanitary landfill
Tires	98 regular tires; 9 large tires; 1 skidder tire	John's Sanitary Removal
White goods	4 refrigerators; 3 dryers; 2 ranges; 6 water heaters; 2 dishwashers; 1 washer	Will be processed through county's vendor

Table 1b. Costs associated with the Lake County 2003 collection.*

Activity	Cost
Landfill tipping fee for solid waste	\$380
Tire disposal (98 regular tires; 9 large tires; 1 skidder tire)	\$539
Electronic waste disposal	\$901
Demolition landfill tipping fee	\$301
Solid Waste Department staff time	\$906
County owned equipment cost	\$1173
Equipment rental services (\$23 hours @ \$150 per hour)	\$3450
Grand total	\$7650

* does not include costs of items yet to be disposed

St. Louis County

This project was carried out by the St. Louis County Solid Waste Department, with help from other county employees, Arrowhead Regional Corrections Commission Sentenced-to-Serve crews, Iron Range Resources Rehabilitation Agency, the City of Chisholm and waste haulers.

Table 2a summarizes the types and amounts of waste collected as part of the project as well as the disposal means. Fourteen sites were cleaned up and approximately 35 tons (420 cubic yards) of trash was removed from the Iron Range countryside to the proper disposal destinations. Like Lake County, St. Louis County collected a large tire (500 pounds) that cost \$41 to dispose. None of the 35 white goods collected had mercury switches or PCB ballasts or capacitors. Table 2b documents the costs associated with the project.

Table 2a. Abandoned waste collected by St. Louis County in 2003.

Material	Amount	Disposal
Batteries	4	Interstate Battery
Demolition waste	1.63 tons	Hibbing Demolition Landfill
Electronic waste	8 TVs; 2 computer monitors; 12 small appliances	St. Louis County Landfill
Solid waste	29.92 tons	St. Louis County Landfill
Tires	169	Greenman Tire Recycling
White goods	9 refrigerators; 4 dryers; 14 ranges; 3 water heaters; 2 dishwashers; 3 washers	Quad City Recycling

Table 2b. Costs associated with the St. Louis County 2003 collection.

Activity	Cost
Appliance disposal	\$280
County staff time	\$402
Demolition landfill tipping fee	\$47
Equipment cost	\$2,127
Landfill tipping fee for solid waste	\$1,365
Mileage	\$123
Tire disposal (168 regular tires; 1 500 pound tire)	\$377
Grand total	\$4,721

Other Collections

Range Riders ATV Club

In April 2003, the Club collected 600 pounds of solid waste, 9 tires, 1 washer (no mercury found), 200 pounds of scrap metal, 5 paint cans and 2 gallons of oil from 42 miles of snowmobile trail in the Hibbing area. The oil and paint was disposed of at the St. Louis County Household Hazardous Waste Program.

Fond du Lac Reservation

Fond du Lac Reservation has a dropoff site for appliances. Clean up crews pick up appliances for people who can't bring them in themselves. The Fond du Lac Reservation Business Committee has supported this effort for several years now. Other efforts the Band has undertaken in the last few years are hazardous waste "clean sweeps", disposal of electronic waste, a new recycling/hazardous waste building, the disposal of waste tires, the installation of a waste oil tank, and the disposal of hazardous waste. Educational outreach within the community and schools is also a high priority. The amount of abandon waste is noticeably lower because of the effort put forward by the Fond du Lac Reservation Business Committee and the Environmental Program.

Grand Portage Reservation

Grand Portage Reservation disposes of white goods about every two years. Residents of Grand Portage take their "dead" appliances to the Transfer Station. When the appliances build up in numbers, they are removed. The last disposal occurred on November 13, 2002, when 115 regular appliances and 6 commercial appliances were removed at a cost of \$1,675 and were recycled at Balcum Appliance, Inc. of Superior, Wisconsin.

Recommendations

If similar projects are to take place in the future, we have the following recommendations:

- Provide flexibility so the local governments can take advantage of unique situations. In this project, Sentenced-to-Serve crews were used, but local outdoor recreationists might be highly motivated to assist in similar cleanup efforts.
- Provide sufficient time for the activities to be carried out after the contracts are executed.
- Scheduling should take into account the need for approval by county boards, department heads, etc.
- Expect to cover at least some of the staff time involved in these projects, especially in the current tight budget situations in local governments.
- Research services ahead of time so the best rates are available to participants. For example, in this project, tire disposal costs varied widely.
- Identify possible impediments ahead of time, such as the availability of specialized services to process hazardous waste, white goods recycling and electronic waste recycling.
- Promote proper disposal so the waste never reaches the woods, streambanks and trails where it is expensive to collect.