

Solid Waste Operations



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City of Lincoln

Public Works and Utilities Department



Solid Waste Operations Annual Report FY 05-06

MISSION

Solid Waste Operations, (SWO) provides responsible and economical management of all solid wastes generated within Lincoln and Lancaster County in order to ensure the protection of human health and the environment. Solid Waste Operations provides effective waste reduction, waste diversion, material reuse and recycling programs, and efficient waste transfer and waste disposal operations that comply with local, state and federal regulations and the Lincoln – Lancaster County Integrated Solid Waste Management Plan.



VISION

Solid Waste Operations will emphasize solid waste management hierarchy concepts and the Integrated Solid Waste Management Plan to develop and maintain waste disposal facilities and recycling programs for Lincoln and Lancaster County residents. Our waste reduction, material reuse, and recycling programs, and waste transfer and disposal facilities will remain environmentally sound and operate economically efficient far into the future. We will develop innovative methods to provide stable funding for solid waste management programs and ensure quality solid waste management services and programs remain available to the residents of Lincoln and Lancaster County.

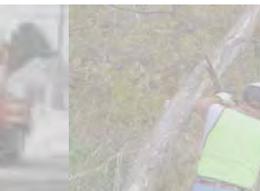
OPERATING PHILOSOPHY

We emphasize efficiency, cost effectiveness and resource conservation in all aspects of our operations. We seek networking opportunities and participate in professional development training in order to remain technically competent in all aspects of solid waste management. We respond to the demands and challenges of a constantly changing industry in a collaborative, service – oriented manner. We encourage public – private partnerships and welcome opportunities to partner with businesses in providing economical services.

As a result of this public private partnership, waste collection in the community is provided by the private sector through waste hauling firms and the City is responsible for the disposal of the waste and operation of the City's disposal facilities.

YEAR IN REVIEW

Solid Waste Operations provided for the environmentally safe disposal of 285,445 tons of municipal solid waste in FY 05-06. This included 10,143 tons of special waste from Lincoln's businesses and institutions and 7,264 tons of waste through the 48th Street Small Vehicle Transfer Station. A total of thirty people work for Solid Waste Operations.





Managed 86,159 tons of construction and demolition debris at the North 48th Street Construction & Demolition (C & D) Landfill.

SWO experienced 44,872 customer visits at the 48th Street Small Vehicle Transfer Station and 81,973 customer visits at the Bluff Road Landfill in FY 05-06.

Managed a total of 18,722 tons of grass, leaves and wood waste through the Bluff Road compost facility.

Managed 546,988 gallons of leachate (liquids from the garbage) generated at the Bluff Road Landfill.

SWO collected 6,881 tons of recyclables from residents through the network of voluntary recycling drop-off sites in the City and County.

SWO assisted in administering the Biosolids Land Application Program, which applied 41,529 tons of biosolids on farm ground in Lancaster County.

SWO provided “Garbology” curriculum to 1,725 second grade students in Lincoln and Lancaster County.

SWO recycled a total of 711 tons of scrap metal through the Bluff Road Landfill and North 48th Street Transfer Station.

SWO removed freon, PCB Ballasts, and mercury switches from 3,307 appliances.

SWO recycled a total of 6,400 car passenger tires through the Bluff Road Landfill and North 48th Street Transfer Station.

Initiated the final capping and closure of Phase 3 at the Bluff Road Landfill.

Initiated the development of a new solid waste cell (Phase 10) at the Bluff Road Landfill.



EXEMPLARY PROGRAMS



Appliance De-manufacturing: FY 05-06 was the first year of operation for the new Appliance De-manufacturing Facility at the North 48th Street Transfer Station. Staff have been trained to remove Freon from Freon containing appliances to insure that there are no accidental release of greenhouse gases. All appliances entering the 48th Street Transfer Station had technicians remove the Freon gas as well as any PCB capacitors, and mercury switches. The recovered Freon is recycled while the other material

is disposed of through a hazardous waste disposal contractor. A total of 3,307 appliances were processed through the de-manufacturing facility. A total 711 tons of scrap metal was recycled through the two disposal facilities.



North 48th Street Transfer Station: This facility serves as a one-stop center for solid waste disposal and recycling needs for Lincoln and Lancaster residents with small vehicles. In addition to disposing of household waste, the facility can accept construction and demolition debris, and recycles the following material: used oil, batteries, tires, appliances, scrap metal, yard waste, brush, newspapers, cardboard, residential mixed paper, glass food and beverage containers, tin cans, aluminum cans, and plastic #1 & 2 containers. Residents can also obtain wood chips and LinGro compost from the facility.

Special Waste Permit Program: Solid Waste Operations works closely with the Lincoln-Lancaster County Health Department to coordinate the special waste permit program with local businesses and institutions. A total of 2,288 special waste permits were processed in FY 05-06. This program helps to divert toxic and hazardous waste generated by local businesses. In addition to the special waste permit program, SWO inspects loads of waste coming into the facility on a random basis to ensure that no hazardous or banned materials enter the landfill. In FY 05-06 a total of 158 random load inspections were undertaken.

In FY 05-06 SWO contributed \$746,289 to the Health Department to help defray the cost of the special waste permit program, the clean-up of illegal dump sites, refuse hauler licensing, solid waste nuisance complaints and other solid waste related services provided by the Health Department.

Space Saving Efforts: The operating permit for the Bluff Road Landfill allows the use of alternative daily cover of the waste at the close of the day instead of 6 inches of dirt. The City utilizes tarps as daily cover instead of the 6 inches of dirt whenever possible. In FY 05-06 SWO was able to deploy the tarps as daily cover of the waste 172 days. This represented 47.5 % of the days that the landfill was open. This effort has resulted in significant space savings for the landfill.

Grants: In an effort to reduce operating costs the SWO seeks grants whenever feasible. In FY05-06, SWO successfully secured four grants from the Waste Reductions and Recycling Incentive Fund administered by the Nebraska Department of Environmental Quality totaling \$340,830. These grants included recycling containers for three new recycling sites; recycling containers for public buildings; recycling education funds; and a landfill compactor.

Recycling Drop-off Program: SWO manages a network of 29 recycling drop-off sites in the City and County. In FY 05-06 a total of 6,681 tons of recyclables were received at the recycling sites. This amount represented the largest quantity of material received at drop off sites in its history. In addition, the City received the most revenue from the sale of recyclables during the year. A total of \$221,903 in revenue was received for the recyclable material. Revenues covered 60% of the annual operating costs of the program. The net cost to SWO to service the recycling drop-off sites was \$21.68 per ton collected for the fiscal year. The program is close to breaking even due to the avoided disposal costs of \$21 per ton if the material were disposed of.





Biosolids Land Application Program: In FY 05-06 41,529 tons of biosolids from the Theresa Street Waste Water Treatment plant were applied on 49 farm fields totaling 2,030 acres. This program saves valuable landfill space and provides farm cooperators with a cheap source of fertilizer and organic matter for their fields. SWO works with the Wastewater Division and the University of Nebraska Extension Service in Lancaster County to coordinate the program.

SOLID WASTE OPERATIONS PROGRAM OVERVIEW



Bluff Road Landfill:

The Bluff Road Landfill is the second largest landfill in Nebraska. The operation of the landfill is often used as a model by the state solid waste industry. SWO staff are highly trained and have many years of experience in effectively managing Lincoln's municipal solid waste in an environmentally sound manner. It complies with all local, state and federal regulations regarding the operation and closure of a solid waste disposal facility. The life of the landfill is projected to be until 2030.

The Bluff Road Landfill has a tipping fee of \$14 per ton that became effective January 1, 2007. This charge is the lowest disposal fee in the State. In order to better manage capital improvement projects at the landfill, SWO issued revenue bonds for the final capping project of Phase 3 and the new phase development for Phase 10. The total amount of revenue bonds used on this project was \$2.85 million. This has allowed the City to keep the landfill tipping fee low. The facility is open 362 days out of the year. The National Solid Waste Association of North America has certified the Superintendent and Assistant Superintendent as Managers of Landfill Operations (MOLO).



48th Street Transfer Station:

This is located at the old landfill that closed in 1988. In order to provide a safe and convenient location for residents with small vehicles to dispose of their waste a small vehicle transfer station was developed at this site. Waste is transferred to a semi-trailer, which is then transported to the Bluff Road Landfill for disposal. This reduces traffic at the main landfill.

In addition to handling solid waste, the facility operates a recycling drop-off site, an appliance de-manufacturing facility, used oil, automobile battery, and tire recycling services. The facility also has wood chips and LinGro compost available to distribute to the public.

The facility is open seven days per week and is open a total of 359 days a year.



Construction and Demolition Debris Landfill:

The 48th Street disposal facility served as Lincoln's depository for municipal solid waste from 1956 through 1988. Due to the decomposition of the waste, the landfill has settled. In order to obtain proper slopes and drainage on the facility, the City received permission to dispose construction and demolition waste on top of the old landfill. This action has saved the City from purchasing over one million cubic yards of fill dirt to properly cap the landfill. It is projected to last until 2023.

Revenue bonds totaling \$2.15 million were also issued in FY 05-06 to cover closure costs of old landfill portions at the 48th Street Facility. This helps to keep disposal costs low at the Construction and Demolition Debris Landfill. Construction and demolition debris can be disposed at this facility for \$4.00 per ton.

Yard Waste Composting Facility:

The Nebraska Integrated Solid Waste Management Act requires that grass clippings and leaves be banned from disposal from April 1- November 30 of each year. The City has developed a 16 acre composting facility next to the Bluff Road Landfill to process 18,000 to 20,000 tons of organic material. SWO produces a wood chip landscape mulch and “LinGro” compost from this operation. In FY 05-06 SWO generated \$53,334 in revenue from the sale and delivery of compost and wood chips. In addition, SWO had a tipping fee charge of \$15.75 per ton for the yard waste deposited at the composting facility.

Recycling:

SWO operates on-site recycling services at its disposal facilities as well as the recycling drop-off sites throughout the City and County. These programs are financed through revenues from disposal facility fees, sales of recycled materials and the occupation tax.

The following materials are recycled at the disposal facilities: tires; lead acid batteries; used oil; appliances; and scrap metals. In FY 05-06, 711 tons of scrap metal, 6,400 tires and 4,325 gallons of used oil were recycled at the disposal facilities.

The Recycling office is responsible for the recycling drop-off sites as well as promoting recycling in the business community and public education activities related to recycling. Roughly two-thirds of the recycling office budget is related to the operation of the recycling drop-off sites in the City and County. Revenues from the recyclables received at the recycling sites covered 60% of the cost of the program in FY 05-06. SWO collected 6,881 tons of recyclables.

Public education efforts include a “garbology” curriculum that all 2nd grade students in Lincoln Public Schools participate in. The program explains how waste is managed and stresses the importance of practicing the three R’s of reduce, reuse and recycle. Through the “Lincoln Recycles” education campaign, SWO encourages the public to do the right thing and recycle. They publish an annual guide to recycling and increase awareness about recycling through print and electronic media advertisements.

SWO also supports business recycling through WasteCap Nebraska, which promotes waste reduction and recycling in the private sector. Last year businesses that participated in the WasteCap program recycled over 15,580 tons of waste.

