



**Burn,
Bury Or What?**

FILMSCRIPTS ON SOLID WASTE MANAGEMENT

This script is one of a series published to help lecturers, teachers, and group leaders prepare for viewing and discussion of solid waste management films. It is also intended for those in an audience who want a permanent record of the data presented in a film. It was written by Stuart Finley, Inc., the producer of the film, in close cooperation with staff of the Federal solid waste management program.

Titles and publication numbers of scripts for solid waste management films are shown below.

The Third Pollution SW-39c.1
Burn, Bury, or What? SW-39c.2
Recycling SW-39c.3
5000 Dumps SW-39c.4
In the Bag SW-39c.5
The Green Box SW-39c.6
The Stuff We Throw Away SW-39c.7
What's New in Solid Waste Management? SW-39c.8

Instructions for borrowing or purchasing these films are given with each script and are summarized in the brochure *Films Tell the Story*, available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 20402.

U.S. Environmental Protection Agency

1972

BURN, BURY, OR WHAT?

19 minutes, 16-mm motion picture, sound, color, 1970. Order no. M-2098-X*

BURN, BURY, OR WHAT? illustrates the solid waste disposal problems faced by the District of Columbia and gives the rationale for the selection of component facilities needed to serve this large city adequately. The film is designed to assist local officials in explaining technical information to civic groups and to engender public support for a comprehensive disposal system. Washington's program utilizes accepted and innovative techniques, such as shredding, baling, barging, incinerating, and sanitary landfilling.

Old map of Washington

Here is how a visitor described our new Nation's Capital in 1800:

"No stranger can be here a day . . . without conceiving himself in the company of crazy people . . . With great trouble and expense, much mischief has been done which will be almost impossible to remedy."

Current map of Washington

But Washington grew and prospered . . .

Burning refuse at Kenilworth

. . . despite an occasional fiasco.

One of the most notable of these was the city's burning dump at Kenilworth.

It burned from 1942 to 1968 . . . for over 25 years. A quarter of a million tons of refuse went up in smoke every year. Kenilworth was the largest single contributor to air pollution in the Washington area.

On Feb. 16, 1968, Mayor Walter Washington ordered the flames extinguished.

Kenilworth Landfill operation

Kenilworth has been transformed from an obnoxious burning dump into a model sanitary landfill. The United States Public Health Service awarded a demonstration grant. National Park Service planners, District of Columbia Sanitary Engineers, and their consulting engineers designed contours and operating procedures to permit the National Park Service (which owns the land) to convert it into a park.

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Cleared for TV.

Earth cover being applied

By the end of every day, the refuse is covered with clean earth. The *advantage* is that there is no more open burning . . . no more air pollution . . . and the area is being converted into a beautiful and useful park. The *disadvantage* is that the life of Kenilworth as a disposal area for Washington's solid waste was cut from perhaps 25 years to 15 months. The problem has changed from "how can we stop polluting the air" . . . to "how can we get rid of our city's 700,000 tons of solid waste a year".

Pan of Kenilworth showing complete earth cover

The city is on the spot. Refuse collections continue at the rate of about 2,200 tons a day. Where to put it? . . . How to process it? . . . Should we burn, bury, or what?

There are various alternatives . . . some more practical than others.

Compost at Houston composting plant

One alternative is composting. The refuse is sorted to remove items which are inappropriate, have salvage value, are oversized, or cause processing difficulties. The rest is ground and subjected to biological degradation. The end product resembles peat moss.

Stream of compost pours out of Houston plant panning to nearby stacks of unsold compost

This operating plant in Houston makes excellent compost but has considerable difficulty selling it. Composting is ideal for converting organic material into a stable and consistent form, but so far the process has not proven economical for cities disposing of large quantities of refuse because:

- you still have to dispose of the end product,
- there is no significant reduction in volume,
- the process requires considerable working area,
- it is expensive.

Composting: solution to the District of Columbia's solid waste dilemma? "No!" say the specialists.

Frostburg, Maryland abandoned strip mine landfill operation

Another ostensibly ideal solution is landfilling abandoned strip mines. Most early coal mining operations were violently disruptive. Some abandoned land might be rehabilitated by using solid waste disposal funds to finance the project. However, a distant city is faced with the multiple costs of: hauling and packaging solid wastes, transporting them by truck or railroad, and paying a royalty to local interests who, even then, are often disinterested in receiving someone else's trash. This regional landfill at Frostburg, Maryland is practical for

the nearby area it serves . . . but would be very expensive for cities as far away as Washington.

Brown Station Road Landfill in Prince Georges County, Maryland being compacted; cover being applied

Landfilling is today's most commonly acceptable solid waste disposal method. The Brown Station Road Landfill in Prince Georges County, Maryland is typical of a well-operated sanitary landfill. In flat terrain, the working face may be 8 to 10 feet high on a 4 to 1 slope so the heavy compactors can apply the maximum possible pressure to the refuse. Compaction eliminates voids which could harbor rodents and would cause differential settling later. A bulk density of about 1000 pounds per cubic yard can be achieved. The face is kept as narrow as possible to minimize equipment, personnel and the cover required.

The operating cost of a professionally run landfill usually amounts to \$3-\$3.50 a ton. When a city has adequate space nearby, landfilling is the most economical, acceptable method of solid waste disposal. Most city officials try to base their disposal program on landfilling, and turn to incineration only if available land is expensive or distant.

Ansonia, Connecticut incinerator being viewed by engineers

Incineration is another practical and economical alternative. By simply burning the combustible component of municipal refuse, volume can be reduced by up to 90 percent. These engineers are visiting a new incinerator at Ansonia, Connecticut . . . inspecting combustion temperatures, refuse feeding and handling . . . factors which determine incinerator efficiency.

Engineers on roof of incinerator at Ansonia inspecting scrubbers

Because cities today must set and enforce air pollution standards for industry, municipal engineers can't build or operate an incinerator which will contribute significantly to local air pollution problems. This incinerator has wetted baffles which greatly reduce stack emissions. Also, heat from the combustion process is used in this spray dryer for dewatering sewage sludge.

Stamford, Connecticut incinerator panning to stack to show insignificant smoke

Another new incinerator design . . . this one at Stamford, Connecticut. This unit disposes of oversized wastes and is equipped with electrostatic precipitators to control air pollution. Here, incineration was the most economical alternative because of high land costs.

Although outstanding results can be obtained by using both scrubbers and electrostatic precipitators, the precipitators here at Stamford appear to have solved an air pollution problem.

	Yes, the efficient, modern incinerator is a practical alternative.
D. C Sanitary Engineering Reports	The District of Columbia has developed a plan. It involves:
Incinerator	<ul style="list-style-type: none"> • a new incinerator • a baler • a barging system • a new, extensive sanitary landfill.
Baler	
Barge	
Landfill	
Washington area map	Here is how it will work.
Four present incinerators with smoke; smoke dissolves off	All four existing incinerators will either be closed entirely, or will be equipped with modern air pollution control devices.
Georgetown Incinerator	The Georgetown Incinerator site may be used as a transfer station serving the Western portion of the city.
Fort Totten Incinerator	The Fort Totten Incinerator . . .
Add the Mount Olivet Incinerator	and the Mount Olivet Incinerator will probably be modernized and share the load with . . .
Add new Kenilworth Incinerator	a new, large, efficient incinerator to be built near the Benning Road Power Generating Station. The long range plan calls for all Washington incinerators to be equipped with both scrubbers and electrostatic precipitators.
O Street Incinerator	The old O Street Incinerator will be torn down and replaced with . . .
Dissolve on baling-barging complex	a baling and barging complex nearby.
Barge route on the Potomac	The baled refuse will be barged down the Potomac River to a new long term sanitary landfill in Virginia.
D. C. Sanitary Engineering Reports	District of Columbia Solid Waste Management plans . . . projecting at least 25 years into the future . . . solving today's problems and preventing tomorrow's crises.
Oxon Run being landfilled	Kenilworth is filled. Now this new landfill at Oxon Cove is taking the city's refuse. Again, it's parkland owned by the National Park Service.
Same scene panning off to future fill areas	If the city could install, in the wink of an eye, the nearly \$35 million worth of improvements called for in its long-range plan . . . then the District of Columbia's new program could go into effect instantly. But, this preparation and construction will take about 2½ years. Meantime, you can't just stack up

the city's refuse. It must be properly disposed of somewhere.

Architect's plan for golf course

A noted golf course architect is designing a new eighteen hole golf course . . . working with a representative of the Department of the Interior. It's to be located at the site owned by the National Park Service at Oxon Cove, partly in the District of Columbia and partly in Prince Georges County, Maryland. The Oxon Cove landfill will be designed and engineered like Kenilworth. Interesting contours will provide a challenging golf course . . . another example of multiple benefits which can result from interagency project coordination . . . and another instance of refuse being used as a resource, providing a valuable service to the community.

Mount Olivet Incinerator

The Mount Olivet Incinerator was built in 1956 and has a nominal capacity of 500 tons a day. Air pollution control devices can be added and other improvements made.

Fort Totten Incinerator

The Fort Totten Incinerator was built in 1961. Here air pollution filters can also be added.

Georgetown Incinerator

The Georgetown Incinerator, built in 1932, is out of date, has a small capacity, and little land. Here, incineration will be discontinued and this facility may be converted into a transfer station.

O Street Incinerator

The O Street Incinerator, also built in 1932, cannot readily be modernized. It will be razed and . . .

Renderings of O Street baling-barging unit

a new unit built designed to receive refuse, shred it, bale it, and load it on barges.

New Kenilworth Incinerator drawings

Meantime, a new large-capacity incinerator is being built near the Benning Road Power Generating Station. When completed, it will be one of the world's most modern. A combination of cyclone mechanical separators and electrostatic precipitators will remove 99 percent of the particulate matter. These pollution controls are desired and needed by the public . . . who will ultimately pay for them.

Hammermill

Refuse which is going to be disposed of in a landfill must be compacted somewhere. When a distant landfill is to be used, it is cheaper to compact it before hauling. This hammermill shreds the refuse, thus reducing volume and making it easier to handle. Several shredders like this will be part of the O Street baling-barging complex.

Shredded refuse pours out of shredder

This shredded refuse is comparable to . . .

Paper into baler

waste paper which has been successfully baled for years.

Baler

The big refuse balers at O Street will be capable of accepting everything except oversized or nonshreddable items and incinerator residue.

Baling refuse will solve many problems: provide further compaction, facilitate handling, and minimize dirt and dust.

Bale strength test

But if a bale must be loaded on a barge, unloaded, transported by truck to the landfill, then placed in the fill . . . it must be strong enough to withstand an exacting test like this. Bent . . . but not broken!

Rail Haul on way to Cherry Hill Landfill

The District of Columbia's proposed, longterm sanitary landfill site is located at Cherry Hill in Prince William County, Virginia. For years, some of Washington's refuse has been brought to Cherry Hill by train and landfilled.

Beautiful scene at Featherstone Point

Additional capacity was recently obtained here by an exchange in which other, more attractive waterfront property at Featherstone Point was abandoned as a landfill site in order to preserve valuable wetlands along the Potomac.

Cherry Hill waterfront

For large-volume hauling, the planned barging system down the Potomac will be the most feasible and economical transportation method for the District of Columbia. Bales will be unloaded on a pier at this site . . .

Cherry Hill fill area

and trucked to nearby gullies which will be filled and contoured into useable land . . . providing Prince William County with new opportunities for development.

Cherry Hill gully to be landfilled

The capacity at Cherry Hill is sufficient to accommodate Washington's anticipated volume of solid wastes for the next 25 years . . . provided the Fort Totten, Mount Olivet, and Kenilworth Incinerators are operated as planned.

Cherry Hill operational plan

This new relationship between Washington, D.C. and Prince William County will be consistent with the proposed Washington Area solid waste interjurisdictional agreement as recommended by the Metropolitan Washington Council of Governments.

Baltimore's burning dump

Solid waste disposal problems plague all big cities. Here a nearby community still has its burning dump . . . befouling the air, risking the lives of scavengers, and blighting the landscape.

Arlington's smoky incinerator

Here, an East Coast city's incinerator pollutes the neighboring area.

San Francisco bay filling

And a West Coast city fills its bay to get rid of solid wastes . . . while conservationists protest.

Mayor Washington's car arrives at Kenilworth

Mayor Walter Washington returns to the Kenilworth dump he once extinguished . . . but, it's no longer a dump . . . now it's a model sanitary landfill.

Officials and members of the press eat lunch and talk

Officials of the District of Columbia and nearby jurisdictions and members of the press eat lunch.

It's true, Kenilworth's useful life as a solid waste disposal area was drastically shortened . . . but the inception of Kenilworth Park was correspondingly hastened, to the great benefit of this section of the city. The new program is based on planning concepts developed under grants to the city from the Public Health Service and the Bureau of Solid Waste Management. Solid waste disposal for Washington will be handled by a system of incinerators upgraded to modern standards and a two-phase landfill program with long term capacity.

Reverse view showing cover being applied over refuse; Kenilworth Park Plan

As the last refuse is buried at Kenilworth, Washington, D.C. moves on to a long-range solid waste program . . . replacing an unending series of emergencies with a planned system . . . replacing a dump with beautiful and useful parkland.

Kenilworth burning

The burning Kenilworth of yesterday had some very real causes. While the city's professional engineers proposed proper programs, funds were not made available to put them in effect. Public apathy permitted even greater quantities to be burned.

Kenilworth being landfilled

Then, as air pollution became more evident and neighborhood complaints began to increase, the situation changed, pressures built, and funds became available. The City and the Bureau of Solid Waste Management cooperated to create a sanitary landfill which could serve as a model for other cities. It was funded in part by a federal demonstration grant. But, what if the District of Columbia plan cannot be funded for one reason or another, or if interjurisdictional strife or local dissension tears apart the operating agreements which have been made, what then?

Probably some substandard or makeshift scheme would have to be devised to dispose of the 2,200 tons of solid wastes the city produces every day.

Collection of solid wastes in Washington

The District of Columbia solid waste disposal plan is a long-range program requiring:

- \$22 million for a new incinerator,
- several million more for incinerator improvements and conversions,
- \$9 million for a transfer and baling complex,
- the purchase of landfill equipment,
- the preparation of an extensive area for a sophisticated landfill . . .
- an improved program for citywide collection.

Expensive? Yes . . . but the requirement is urgent because:

- the average resident of Washington discards about 4 lb of refuse a day,
- total Washington solid wastes amount to about 700,000 tons a year.

Public opinion creates policy. Public pressure solves problems. There is no pressure greater than a city cluttered with uncollected refuse.

The District of Columbia has no choice. Its Department of Sanitary Engineering must collect and dispose of the city's huge volume of garbage and trash. This carefully prepared long-range plan is the most sensible solution.

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