

A Cultural History of Waste Disposal

Environmental Policy and Park
Redevelopments

Benjamin A. Lawson

First published 2025

ISBN: 978-1-032-56071-7 (hbk)

ISBN: 978-1-032-56072-4 (pbk)

ISBN: 978-1-003-43372-9 (ebk)

1 A Cultural History of Waste

(CC-BY-NC-ND 4.0)

DOI: 10.4324/9781003433729-1

The funder for this chapter is University of Arkansas - Fort Smith Boreham
Library Open Access Fund.



 **Routledge**
Taylor & Francis Group
LONDON AND NEW YORK

earthscan
from Routledge

1 A Cultural History of Waste

This book presents a cultural history of waste, focusing on the symbolic aspects of waste instead of engineering or the insider details of municipal politics. The case studies of New York, Toronto, and Tel Aviv are exceptional because their recently closed landfills are currently being redeveloped into large public parks. Small sections of these parks are now open to the public, although the areas comprising the towering landfill mounds are not yet safe due to ongoing environmental remediation. The booster promotion of these parks as “green lungs” (*i.e.*, urban parks that provide a break from the concrete and boost public health) offers a window into contemporary policy goals and assumptions about the role of waste and waste sites in urban public space. The landfill-park redevelopments showcase optimistic perspectives of hope that the future will be better than the past, but they are best understood as external to actual solutions. Parks have a long history of being the only suitable land use of former landfills due to escaping gases rendering the land unstable for the development of buildings or solid structures for many years. Despite the redevelopment of these cities’ closed landfills into parks, Toronto, Tel Aviv, and New York still truck most of their garbage to landfills, longer distances than before. These cities have yet to find a sustainable waste-disposal solution.

The specifics of waste-disposal policy are best understood at a municipal or regional level. An international analysis that situates waste within the fabric of urban development patterns, in specific local contexts, provides more nuance than one with strict national boundaries. This study focuses on the examples of New York City, Toronto, and Tel Aviv presented as parallel cases to emphasize the international scale of issues concerning municipal solid waste (MSW) disposal and waste-site redevelopment. There are more similarities than differences across these case studies despite national differences because comparable constraints—whether economic, legislative, or environmental—were in all three examples.

Historians believe the past context matters; description of historical events is one way of unearthing that context. The history of waste disposal (how we got to where we are) matters for understanding why there are so many waste sites, as well as providing the context for considering what to do now

2 *A Cultural History of Waste Disposal*

and in the future with large, polluted waste sites. This study comprises two main parts: history (circa 1940 to 2000) and park redevelopment (circa 2000 to the present). The unifying theme concerns questions of sustainability and urban space. Does transforming a former landfill into a park supersede the decades of pollution and problematic waste-disposal policy? In some ways, yes, in others, no.

Three of the world's largest landfills provide the anchor of this book: New York's Fresh Kills Landfill, Toronto's Keele Valley Landfill, and Tel Aviv's Hiriya Landfill. New York City established the Fresh Kills Landfill on the far-west shore of the borough of Staten Island in 1946. Fresh Kills would be the city's primary disposal site until 2001 and it was the largest landfill in the world at the time of closure. New York is isolated as a municipality but also has borough-level politics; much of its metropolitan region is in other states, subject to different policies. Toronto has a different history in that it established several landfill sites since the mid-twentieth century, and its largest landfill, Keele Valley, was open from 1983 to 2002, fitting the original contract of 20 years. Toronto had a regional-level government—Metropolitan Toronto (Metro)—from 1954 to 1998 that owned and operated the landfill located in the city of Vaughan, northwest of Toronto. At its closure, Keele Valley was the largest landfill in Canada. Tel Aviv established its Hiriya Landfill in 1952, and it would be the main disposal site until 1998. Since the 1970s, Tel Aviv has had a municipal-region-wide government entity for sanitation, the Dan Region Association of Towns, and Hiriya is located between Tel Aviv and the neighboring city of Ramat Gan. Hiriya was the largest landfill in the Middle East.

By the end of the twentieth century, Keele Valley, Hiriya, and Fresh Kills were the largest landfills in their respective nations, and due to their proximity to densely populated areas, they served as visual reminders of an unsustainable policy of waste management. Their ongoing redevelopments into large public parks cut to the heart of issues and debates about sustainable waste policy and waste-site redevelopment. Having a landfill reclaimed as a green lung by becoming a park is a powerful rhetorical tool for policymakers, boosters, and about the success of sustainable development. The history of these landfill sites as mountainous waste sites hated by locals for decades, now being promoted as natural areas and places for people to gather, is necessary to understand the magnitude of that symbolic switch from landfill to park.

A Cultural History of Waste

Cultural history involves examination of the context, symbolism, and meaning beyond the surface level. Whereas most environmental historians have focused on the technical and policy aspects of sanitation, or on disasters like the devastation caused by pollution, this study centers on media coverage, booster rhetoric, and artistic representation in addition to policy. In drawing

a line from past landfill to the future park, the historical chapters show the connection between recurring sanitation problems, environmental regulation, and the post-1987 sustainable development mindset that buoyed the redevelopment of exceptionally large waste sites into parkland.

Connecting the present and future use as parkland to the past use as landfill is essential. There is not a practical disconnection between waste site and park even though culturally these represent opposite sides of the spectrum. Parks are a natural end-use for a landfill, as seen in many historical examples including New York's Flushing Meadows Corona Park at the former Corona Meadows Ash Dump in Queens, and Great Kills Park at the former Great Kills Landfill in Staten Island.¹ Toronto's past examples of landfill parks include Beare Hill Park, which includes the mounds of the former Beare Road landfill.² Tel Aviv's history is different, with previous dumps in Azor and Mikve Israel, with the added complication of much Palestinian land and villages being developed over (*i.e.*, "erased" by Israeli settlement).³ Boosters present the creation of parks at landfills as a healing of the site, a sort of return to the original state of nature comparable to the arc of Romantic paintings like Thomas Cole's *The Course of Empire* series which ends with nature re-emerging from the ruins of a collapsed, decadent city. This reference to art is relevant because the ideals of landscape presented by nineteenth-century artists like Cole have influenced landscape architects, including James Corner (the designer of Freshkills Park), and artists are directly involved in the park-redevelopment projects.⁴ At the outset, what this shows is the importance of the idea of a "bad" polluted site versus a "good" natural site which is pervasive in booster rhetoric about landfill parks. Fore-fronting cultural history allows us to unpack and examine the assumptions and past events that have contributed to such a mindset.

Waste is a growing topic of scholarly inquiry from a range of specializations. The history and contemporary issues of waste are interdisciplinary, with scholarship blossoming in fields ranging from environmental history, geography, engineering, philosophy, sociology, anthropology, eco art, landscape architecture, and the developing fields of waste and discard studies. The breadth of disciplines shows the myriad perspectives scholars have taken in analyzing waste: ranging from broad theory to specific sites.

Waste studies, and the related field of discard studies, is an example of the recent proliferation of interdisciplinary scholarship related to waste. Recent publications like Max Liboiron and Josh Lepawsky's *Discard Studies* (2022) and the *Routledge Handbook of Waste Studies* (2022), edited by Zsuzsa Gille and Josh Lepawsky, have helped define the conceptual borders of the field. Some highlights of these works are that municipal solid waste is only a small fraction of waste; the vast majority is industrial and there are huge environmental concerns about recycling, especially the use of plastics, that nullify much of the feel-good rhetoric about recycling being a part of sustainable development. Moreover, scholars have a bias toward the affluent nations of the Global North, overlooking the wide-reaching consequences of inequality

4 *A Cultural History of Waste Disposal*

across the Earth. Waste, or discards, has implications beyond objects and has connections with policy biases against marginalized groups including gender and disability. Waste and discard studies scholarship engages with questions cutting to the heart of assumptions of normalcy within human society.

This book engages with themes relevant to waste and discard studies but is a work with disciplinary roots in history.⁵ Garbage or waste history is a sub-field of environmental and public policy history.⁶ Existing histories of waste tend to emphasize government regulations, local policy measures, the rise of consumerism, and environmental activism. Historical analysis is grounded in what happened, prioritizing descriptive detail over theory to build an argument. Landfill-park projects are gaining attention among landscape architects, urban planners, and architects in the interdisciplinary field of landscape urbanism.⁷ Landfill parks are local projects, but word spreads and the same firms submit proposals for redevelopments around the globe.

The Importance of Site

The starting point is the site: a specific plot of land, with environmental and landscape features, human uses and meanings, and economic and political values. Landfills are physical sites, chosen for specific reasons, utilized for a set purpose, where environmental remediation and redevelopment are dependent on the specifics of the site. A landfill serves an essential purpose for a city or region, so it also has a wider footprint of all the places where waste comes from to be discarded, and this study will examine some of those aspects while maintaining focus on the physical site of the specific landfills: Fresh Kills, Keele Valley, and Hiriya. The ongoing park redevelopments of these landfills likewise underscore the significance of the site as teams of planners, city officials, landscape architects, and artists work to alter the future uses, designs, and discourses about that site. Moreover, the relative success of each of these parks will depend on location-specific trends as well as general considerations like the redevelopment's design.

The anthropologist Mary Douglas described “dirt” in her seminal study *Purity and Danger* from 1966 as “matter out of place” and “waste” as matter put in its proper place of disposal.⁸ She saw dirt as a challenge to the established order, thus the distinction. Many scholars use her definition as a starting point for analysis, especially in the fields of waste and discard studies. The history of waste disposal, however, shows that waste also poses a threat to the established order when it is not managed effectively. As will become clear in the historical parts of this study, in New York, Toronto, and Tel Aviv, wastes were rarely in “the proper place” for long due to the difficulties of finding suitable disposal sites to manage the increased tonnage and novel types of waste in post-1950s consumer society. Douglas's distinction between dirt and waste holds as a tool for analysis, although her conception of waste being properly managed represents an often-unattained ideal.

Waste may be tangible objects like recyclable packaging, municipal solid waste, and nuclear waste or may be non-tangible concepts like what a society values or rejects. The concept of value, for example, is central to analyzing waste since something being wasted implies a loss in potential gains.⁹ Waste studies scholars have emphasized the significance of industrial and commercial waste (*i.e.*, by-products of production, construction discards, and materials generated by commercial enterprises) since it comprises roughly 97% of the total; municipal solid waste—the garbage that people discard in their everyday lives—is only 3%.¹⁰ Even that small percentage is significant: the mountains of garbage at Fresh Kills, Hiriya, and Keele Valley are a visual testament. Theoretical concepts can be helpful to understand the discarding of tangible objects like municipal solid waste. This study will center the physical site, and the towering mounds of garbage, at three specific landfills where decades of waste disposal created a waste site that is now undergoing remediation and redevelopment.

How contemporary cities dispose of waste is an essential question, based on the economics, politics, environment, legal requirements, and particular circumstances. Every municipality has a means of dealing with waste, even if essentially ignoring it, as waste is common to every city. Garbage and waste history is part of the cyclical (or linear, if not including recycling and reuse) model of production, consumption, and discarding. This cycle is the base structure of waste history. Within it, interruptions provide times and places in which to focus analysis. Waste history, as a topic immersed in political decisions and environmental inequalities, also provides insight into power structures like decision-making: for example, what people will benefit, and which ones suffer from where a municipality located its waste disposal site? Disproportionately, waste sites are in impoverished areas where residents have less political influence; environmental justice activism calls attention to the racial aspect of this. In the United States, awareness about the racial aspects of siting waste disposal came to the forefront with the 1982 publication of *Toxic Wastes and Race in the United States*.¹¹

Environmental justice will not play a large role in this study because that aspect was not as significant at Fresh Kills, Keele Valley, or Hiriya compared to other waste sites. A city-wide study of New York, Toronto, and Tel Aviv, however, would find many aspects of environmental inequalities of racial or ethnic identity and income level reflected in proximity to waste and polluted sites.¹² Focusing on the specific landfill sites, these three case studies happen to fit more of a trend of metropolitan-sprawl encroachment. The Keele Valley and Hiriya Landfills were established in areas on the outskirts of the city, and over recent decades development has moved closer to them, to where they are now in urbanized areas. Fresh Kills is in Staten Island, which has New York City's highest proportion of white residents—in contrast to the area of Brooklyn where the proposed Brooklyn Navy Yard incinerator was defeated. The location of Fresh Kills on the far western shore of the island next to industrial areas of New Jersey means that it has more of a barrier

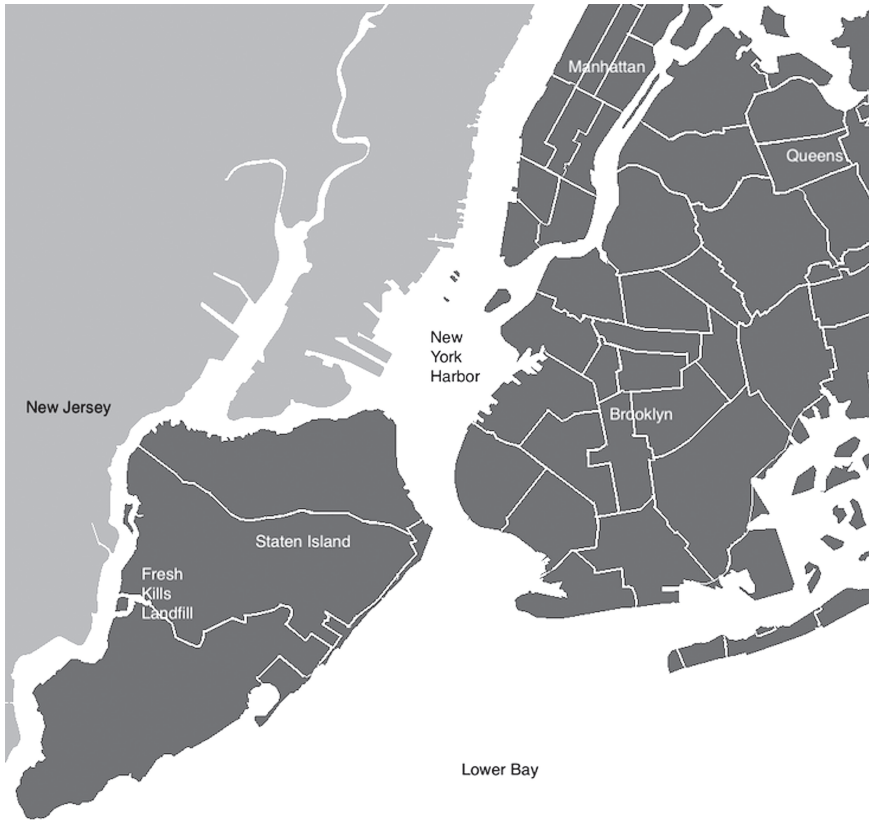


Figure 1.1 Map of the location of the Fresh Kills Landfill within New York City.

Source: Adapted from a CC image on Wikimedia: https://commons.wikimedia.org/wiki/File:Neighbourhoods_New_York_City_Map.PNG

from the developed parts of New York, with some exceptions like the Staten Island Mall (which opened in 1973) adjacent to the eastern side of the landfill. New York's closure of Fresh Kills has increased the impact of its waste on rural communities out of state—in danger of fitting the model of affluent areas exporting wastes to impoverished, minority-race, areas as criticized by the environmental justice movement.¹³

The history of waste borders on the history of science, which is a field largely of specialists—scholars who understand the inner workings of a scientific field need depth of specialization. Yet, for the larger picture of cultural history, something is to gain from seeing the changes and continuity over time not from the perspective of that scientific field. Consider the history of sanitary engineering: manuals on waste management techniques are updated to reflect the most recent methods and erase past techniques that have been replaced as best practices. A historian can identify the chronology

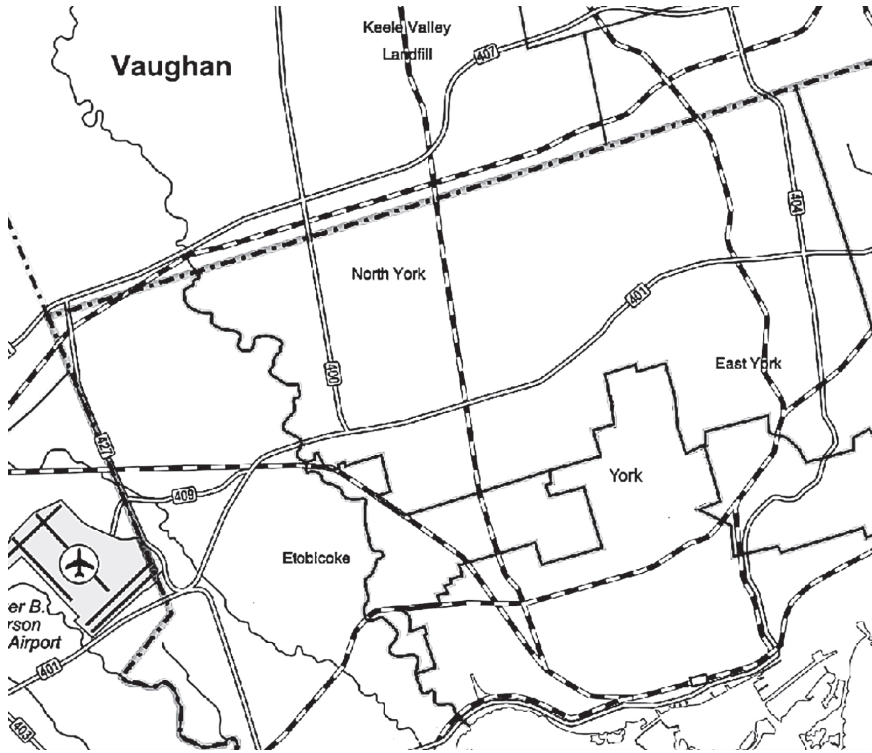


Figure 1.2 Map of the location of the Keele Valley Landfill within Greater Toronto.

Source: Adapted from a CC image on Wikimedia: https://en.wikipedia.org/wiki/File:Downtown_Toronto_map.png

and reasons for the updated techniques and chart those changes (or periods of continuity) to make an argument about the significance and meaning.¹⁴ A historian of the disposal methods of previous decades must seek out the erasures from the pages. That is, again, a function of the scientific and pragmatic focus of engineering and not a criticism of those manuals. A certain knowledge of the technical aspects of engineering is necessary to understand the nuances of these changes, but the big picture should be clear to readers without specialized knowledge. Rather than focus on a sort of linear progress of techniques from past “backward” practices to today’s “sanitary” techniques, readers should recognize that the policymakers and engineers of the past generally saw their practices as sufficient. Conceptions of what techniques are sufficient have changed over time, along with environmental regulations following such concerns.

The analytic focus of this book is how the past use as landfill impacts the present-day redevelopments and promotion rhetoric about the future as parks—which represents a “healing” of the site for some boosters. The



Figure 1.3 Map of the location of the Hiriya Landfill within Greater Tel Aviv.

Source: Adapted from a CC image on Wikimedia: https://commons.wikimedia.org/wiki/File:Location_telaviv.png

history matters as context to understand the complexities and ironies of waste-site redevelopment. Nevertheless, this book will not go into the minutia of national environmental legislation, municipal politics, or engineering techniques—which are the usual focus of scholarship on municipal solid waste (MSW) disposal. These topics are inarguably important—and there is a wealth of existing scholarship, some of which informs the present work—but as a cultural history of waste, the focus will be on the search for the meaning and significance of certain ambiguities and aspects of municipal waste disposal and the redevelopment of waste sites. The redevelopment of waste sites is itself a burgeoning field of scholarly work—primarily outside the disciplinary confines of history—so the contribution of this book to that field is applying a historian’s emphasis on context to analyze the ongoing work of transforming waste sites into large public parks.

Landfills in an ISWM

Three enormous landfills comprise the focus of this book. Yet, New York, Toronto, and Tel Aviv did not only rely on these landfills for their waste

disposal. They used an integrated waste management system (ISWM) of combining different methods to coordinate disposal. From the 1940s to circa 2000, the historical frame of this book, these three cities oscillated from having their disposal policy working well to times when it faced serious challenges. The reasons for the periods of success and periods of challenge become clear from the local historical context of each municipality.

Regarding landfills, some critics opine that their poor environmental record (compared to some criteria analyzed against other disposal methods) means they will likely be phased out in the future. Yet, in New York, Toronto, and Tel Aviv, landfills remain a staple disposal method and that is likely not changing anytime soon as dependence on landfills remains strong in the United States, Canada, and Israel. To make a blanket statement that the use of landfills *a priori* was a policy problem represents an ahistorical analysis. Reuse, recycling, compost, incineration, and landfilling are partial solutions worth investing in as part of an ISWM, and in no way does this book argue for the superiority of landfill as a waste-disposal practice.

The argument against landfills has a stronger basis in the affluent nations of north-western Europe than in North America or Israel. Western Europe has a longer history of using incinerators on a large scale to reduce landfilling, due to its different historical context where resource recovery incinerators were more widely adopted. In the 1990s across the United States, it looked like high-tech incinerators would replace aging landfills, but environmental justice and Not In My Backyard (NIMBY) protests scuttled such plans.¹⁵ Citizen concern about cancer-causing discharge—in particular, dioxin—was a major reason people across the United States protested the proposed incinerators. Waste also has a very different history (and so, likely, future) in “developing” nations compared to “developed” nations—in the Global South people scavenging and living among huge unlined landfills is more common than in the Global North.

Historical details from New York, Toronto, and Tel Aviv show that large-scale landfills became more important as environmental regulations increased, despite increased environmentalist critiques of landfills. This disconnect between ideals and history is one reason the scholarly discipline of history can weigh in on topics more commonly analyzed by environmental scientists, sociologists, and scholars with a present-day perspective. History shows what happened, within specific contexts, so may be a useful corrective to well-meaning environmentalist ideals.

These municipalities were constrained by many considerations, especially budget concerns, and did not disregard environmental considerations by choice. Significant problems they faced included: resistance (*e.g.*, NIMBY and environmental justice protests) from locals when siting recycling plants, landfills, or incinerators and the lack of local sites that fit governmental siting regulations. Faced with these and other constraints, these cities turned to large-scale landfills in recent decades as the backbone of their disposal policy.

Climate change is another consideration increasingly levied against landfills: landfills release greenhouse gases, especially methane, contributing to climate change. Large landfills are now typically equipped with infrastructure to capture escaping gases to be used as energy. This technique of capturing escaping gases is most economically feasible for larger landfills because there is a limited time frame after which decomposition of waste slows, which is about 30 years for a large landfill. Despite the increasingly widespread use of such energy-producing technologies, it is not possible to capture all escaping gases from landfills. Likewise, pollution concerns such as the leakage of polluted fluids (leachate) are serious problems at many sites.

The remaining environmentalist argument regarding waste disposal is that using less stuff (*i.e.*, breaking the cycle of production, consumption, waste) is the best long-term answer. The United States, Canada, and Israel operate on the cyclical system of production (jobs as the basis for individuals' income), consumption (individuals buying the products produced), waste (the residue left over, whether packaging or leftovers, from the production and consumption stages). All three of these stages are dependent on the others: technically, this cycle often functions as a linear model due to limitations with recycling; the environmentalist model, including models of sustainable development, seeks to make it more of a cycle where discards feed back into production. The proposal of using less stuff has radical implications requiring wholesale changes; therefore, it remains marginal as the cyclical model of society is based on people having jobs, which necessitates consumers of products produced and hence a means to manage waste. Complicating this issue is that corporations are also reluctant to change practices of planned obsolescence and often make it more difficult to repair than to replace. Likewise, the widespread use of disposable packaging is something that many corporations explicitly lobby policymakers and promote as the responsibility of the consumer to discard properly—instead of recognizing that much waste could be avoided by reverting to pre-1950s practices of reusable containers or a more reductionist style of packaging.

The last consideration is that of the technological fix. Advances in technologies that allow solutions to previously difficult problems have happened before. Sometimes, the so-called technological fix makes sense from an engineering angle, but it faces significant local opposition (*e.g.*, protests of high-tech incineration's release of dioxin) or is market-driven (*e.g.*, municipal recycling policy is often driven by economic considerations). Attention to the historical context casts doubt on rhetoric that promises a quick technological solution for issues of waste disposal. In some ways, the landfill-park redevelopments at Fresh Kills, Keele Valley, and Hiriya are examples of technological fixes, since they utilize sophisticated techniques in seeking to produce a public good that will allow the mitigation of the worst effects of inefficient waste disposal.

The Global Context

This book is international and comparative in scope. Instead of focusing on a single nation or city, it shows differences and similarities in different contexts. One aspect showcased by the comparison of New York, Toronto, and Tel Aviv is the interplay between municipal, regional, and national policymaking. New York was isolated from its region politically, so faced greater hardships in waste policymaking. Toronto and Tel Aviv both had regional policymaking bodies for waste disposal (Toronto's ended in 1998), which alleviated some concerns but created different types of problems. All three cities struggled to adapt to national or state/provincial environmental regulations once those were finally implemented and enforced in the late twentieth century.

Combining these three case studies leads to great richness for analysis of urban-environmental history and waste management. In the United States, New York City has by far the most books (scholarly and general audience) published about it. Part of this is because of New York's central role in U.S. history, as well as it being the nation's largest city and metropolitan area. In Canada, Toronto (and the Toronto region) is a major metropolitan area that similarly resonates as one of Canada's most quintessentially urban places. Historically a sprawling city, Toronto is commonly associated with public policy favoring automobiles and hence a poor environmental record. Tel Aviv is Israel's most Westernized city. The legacy of colonialism is especially clear in Tel Aviv, due to its growth just north of the city of Jaffa during the British-Mandate period.¹⁶

When considering the "developed" nations of the United States, Canada, and Israel, readers may keep in mind the contemporary applicability of local and indigenous knowledge as a counter perspective to the mainstream Western narrative that technology and development equal progress.¹⁷ Sanitation has long been a part of key tropes of modernization and civilization and a marker of wealth and status. By the mid-nineteenth century, sanitation was one of the standards by which Europeans (and European-descended settlers) defined themselves as more civilized than other peoples. This discourse connects with the narrative of the "civilizing mission" of which Europeans—and European-settled nations like the United States, Canada, and Israel—defined themselves as more advanced, with better technology. The impetus for modern sanitary infrastructure came from Europe, and so the spread of it to other nations was part of the regularization of the built environment.¹⁸

Within the colonial system, sanitation was a façade for racial segregation and a means for Europeans to maintain control of the regularized/modernized sections of the city. In the name of sanitation, Europeans could raze sections of the city and rebuild in a manner that was akin to their desires; they could then exercise political and economic power to keep out natives from the newly built section. Europeans often did not bother to improve the

sanitation of areas they did not habituate, except when they were interested in expanding their power in some manner. Issues of waste remain different in the Global South from those in the Global North. Landfills, whether open-face dumps or sanitary landfills, are common places for the poor to live and work throughout the Global South.¹⁹ Such practices, of impoverished people living alongside dumping sites and scavenging landfills for a source of sustenance and salvaging saleable goods, were common in Europe and North America until about a hundred years ago. With the regularization of waste collection and disposal in the Global North, policymakers closed the loophole of informal scavenging—even going so far as to sell the rights to scavenge.²⁰ Currently, international bodies like the United Nations (UN) are working to improve sanitation in the Global South, but their efforts sometimes raise suspicion among locals.²¹ Sanitation seems like a cut-and-dry issue—good sanitation as a universal human right. Waste disposal and sanitation are inseparable from the larger context of the struggle for power, the legacy of racism, and development patterns that take little care of the needs of low-income locals. In nations throughout Africa, for example, there are areas of highly regularized urban development contrasted with areas of informality (*i.e.*, places where non-governmental actors effectively run the community).²² The shipping of waste from the cities of the Global North to facilitate development projects in the Global South is another clear example of both the commodification and existential threat posed by wastes.²³

In the contemporary world the inequality of sanitation remains in plain sight, if often hidden from the mainstream cultural consciousness. In Israel, more so than in the United States or Canada, this takes direct form as conflict and war. Scholars of Tel Aviv have identified urban planning as a weapon against Palestinian Arabs, going back to the city's initial founding.²⁴ In Canada and the United States, one example of this is First Nations and indigenous communities—especially the Reservations—where improper sanitation is a continuing reminder and legacy of settler colonialism.²⁵ Even within the affluent nations of the Global North, there are ongoing inequalities that are observable through the unevenness of proper sanitation; nevertheless, the nations of the Global North have modern sanitation systems that are widespread to a scale not seen in the less-affluent nations of the Global South.

Garbage is something tangible that people encounter and create during everyday life yet is also something we don't think about much in the nations of the Global North unless there is a specific problem with disposal. Improperly disposed of organic wastes quickly become smelly and slimy. Improperly disposed of packaging piles up quickly and takes up space, such as an overflowing bin. A common saying about waste is that it is “out of sight, out of mind” when disposed of properly. One step toward developing more sustainable waste disposal, therefore, is to be more mindful about our consumption habits and about what we are wasting. This is the sentiment behind the call to reduce and reuse, instead of relying on methods like recycling, incineration, and landfill. In the nations of the Global North the prevailing cultural

discourse is about waste as a personal and a societal effort to engage with consumerism and consider alternatives to traditional waste management techniques. This book focuses on three especially large landfills in wealthy nations; the ongoing redevelopments of those landfills show that even waste sites decried for decades as symbols of poor waste disposal policy can quickly become symbols of much-needed green space and cutting-edge sustainable development.

Nations in the Global North have increased environmental regulation of waste disposal since the 1970s; these regulations have many loopholes but have improved disposal policies and reduced threats to public health. Even among the United States, Canada, and Israel, we see differences in the timeline and type of policies devised and implemented for waste disposal since the 1970s. Israel, for example, waited to implement strict binding requirements for solid-waste disposal until circa 1990, after which it aggressively worked to close noncompliant sites like the Hiriya Landfill. The discourse about waste disposal and sustainable development as seen in this book about the creation of Freshkills Park, North Maple Regional Park, and Ariel Sharon Park are rooted in the prosperity and affluence of the Global North. An informal way of describing the redevelopment of these landfill parks is that they are “First World Problems” that come from an abundance of resources. New York, Toronto, and Tel Aviv have many deep-seated problems about their environmental and sanitary history—as well as ongoing problems with current policies—but the issues there are firmly rooted in these cities’ history of affluence and abundance of consumer goods.

Redeveloping huge waste sites into parks is a sign of that city and nation’s privilege. New York, Greater Toronto, and Tel Aviv can afford to redevelop former landfills into parks because the governments and private individuals there are willing to provide funding and promote the projects. The fact that New York, Tel Aviv, and Toronto are transforming their closed landfills into parks is directly related to their affluence and willingness to invest in the considerable costs such redevelopments entail. Sometimes a “park” is a euphemism for a space left to sit fallow and unused, but the projects to create Freshkills Park, North Maple Regional Park, and Ariel Sharon Park are highly engineered and expensive projects. Earlier examples of landfills being artfully redeveloped into urban parks—such as Byxbee Park in Palo Alto, California, and Danehy Park in Cambridge, Massachusetts—were more intermediate in terms of size and ambition compared to the grand scale of these three ongoing projects. Comparable redevelopments of waste sites—including factories, incinerators, or landfills—may be found across Europe and wealthy Asian nations like South Korea and Japan.

It is easy to overemphasize the role of democracy in analyzing waste disposal policy. The wealth of the nation matters more than its specific government style in determining the likelihood of comparison. In democratic nations, however, we do see policy makers utilizing the local press to reach the public. In New York, Toronto, and Tel Aviv, local officials sought support

from the voting residents and took time to speak through the media about waste-disposal policy and engineering concerns, while trying to show their continued competency for the job. Nevertheless, officials in all three cities sometimes made decisions side-stepping the democratic process (e.g., approving landfill sites or extending their use without holding a popular vote). Moreover, many city officials directly involved in policy decisions were appointed, not elected. Regardless of whether elected or appointed, they sought to manage locals' expectations and perceptions of waste management and sustainability. The statements to the local press provide insight into this aspect of municipal policy; often, newspapers were the main source where locals learned about the details of their city's waste disposal policy.

Environmental Regulations

Governmental regulations of the environment established new standards for waste disposal, but the immediate impact was to encourage municipalities to extend the use of their existing disposal sites. Costs were a primary consideration since the new regulations often required environmental conditions precluding local sites and the political process of negotiating with other municipalities to establish a new waste-disposal site was fraught with expenses and complications. One of the primary costs is the transportation of waste to the disposal site; as local options began to disappear and/or become more difficult to establish, municipalities faced rising costs of disposing waste farther away from the urban area. New York, Toronto, and Tel Aviv all found ways to prolong their local sites to avoid such expenses. The regional coordination of waste disposal (in Toronto and Tel Aviv but not in New York) helped with some aspects but was far from a panacea.

Histories of waste disposal often focus on government legislation, like the United States' Resource Conservation and Recovery Act (RCRA) passed in 1976, with the newly created Environmental Protection Agency (EPA) beginning regulations in 1979, but such a focus gives a false sense of accomplishment. The nuts and bolts of the implementation of policy mean that it is not sufficient to note when legislation was passed and assume it quickly had the impact its promoters intended. It is more significant to note when governments successfully enforced such regulations. Even so, New York's flouting of regulatory standards remained flagrant after RCRA—the New York Department of Sanitation never even had a permit to operate Fresh Kills; its eventual decision to close Fresh Kills was partially due to RCRA. In Ontario, the Ministry of Environment (MOE) was established in 1971—the MOE was the government agency that was most directly involved in Metropolitan Toronto's policies. Keele Valley was a newer landfill, so much more advanced than either Fresh Kills or Hiriya—both of which were essentially open-faced dumps. In Toronto, the story is more about the difficult process of establishing Keele Valley post-regulation and how nearly immediately after its founding, concerns about lack of disposal capacity in Greater Toronto remained

widespread. In 2002, the MOE abruptly closed Keele Valley due to pollution concerns. Israel's Ministry of Environmental Protection (MEP) was not established until 1988; however, the Ministries of the Interior and of Health were involved in MSW oversight before the establishment of the MEP. With the implementation of solid-waste regulations in the 1990s, Israel's MEP worked to force Tel Aviv's closure of Hiriya along with the nation's other unlined and unsanitary dumps.

The closure of Fresh Kills in 2001, Keele Valley in 2002, and Hiriya in 1998 occurred once loopholes in government regulation were closed. Such loopholes allowed municipalities time to change their disposal methods to avoid undue economic hardship. In all three cities, adjusting to new regulations required significant economic costs and makeshift solutions as any new disposal sites had to be compliant. Clear instruments of forcing compliance were the real harbinger of change. Enormous costs of finding new landfill sites were the primary impediment to siting, along with higher environmental standards of where landfills were allowed.

Costs to upgrade infrastructure to comply with new regulations were so high, in part, because of decades of environmental neglect. In economic terms, pollution was historically regarded as an externality, a cost that in normal market transactions buyers and sellers can avoid; a pro-environment economic strategy adds the environment as one of the variables assessed when analyzing which policies would best reach the desired ends. Realizing the need for new policies addressing the costs of pollution is a positive step despite the high costs of remediation. The United States' passage of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) in 1980 was a milestone of this. This act became known as the Superfund Act due to the enormous sums required for environmental remediation caused by the previous treatment of pollution as an externality. Many former landfills were, or are, Superfund sites; the high costs of environmentally managing a noncompliant landfill became apparent after the passage of CERCLA. With the policy of making the municipality responsible for cleanup costs (*i.e.*, environmental remediation), there was incentive to not utilize sites that would generate significant pollution. Additionally, threats of environmental disaster made it more difficult to find townships or municipalities willing to open sites for large cities' MSW disposal; following strict guidelines and paying higher fees was a necessity.

The transition from noncompliant waste-disposal sites to updated sites required by government legislation was a slow process. Even with awareness that it was economically beneficial in the long run to dispose of wastes at a state-of-the-art site, short-term costs and other limitations were critical. New York, for example, put all its hope into a proposed multi-incinerator plan that was foiled by citizen protest in 2001, the year Fresh Kills closed. This plan's defeat and the closure of Fresh Kills forced New York to utilize costly transportation of waste to states across the United States as a temporary measure. Toronto's unexpected closure of Keele Valley due to a court

order in 2002 forced it to truck waste across the border into Michigan at great expense. Tel Aviv's inability to find a regional site after Hiriya's closure in 1998 meant that its garbage was trucked to a landfill in the Negev Desert.

Sustainable Development and Waste

This book identifies a change circa 1987 with the “waste crisis” in rhetoric, media coverage, and how policymakers were communicating to the public in New York, Toronto, and Tel Aviv. All of them used the story of the *Mobro 4000* barge in some way to recognize existing or soon-to-be problems and push for changes that would make the situation better. Moreover, 1987 was significant as the year of the UN's Brundtland Report's terming of “sustainable development” which gave justification to recycling and resource recovery policies of the late 1980s and early 1990s. The emphasis on sustainable development, recycling, and acknowledging the problems of previous policies meant that policymakers, engineers, and the media began emphasizing steps that society or the municipality could take to make things better.

Sustainable development prioritizes the need for practical, economic, and politically expedient development to take place while not wasting natural resources to ensure decent conditions for future generations. In the 1980s, the policy push for sustainable development was buoyed by concerns about pollution, especially awareness of the extremely high costs of toxic-waste cleanup (*e.g.*, CERCLA) that led to greater willingness on the behalf of governments to environmentally regulate corporations or municipalities to prevent such pollution. Greater awareness of waste, such as a push for recycling, also formed a basis for municipal policies of sustainable development. International conferences, such as the 1992 Rio Earth Summit, developed a generalized plan for how nations could develop policies to encourage sustainable development and address climate change—with mixed real-world impact. Despite the optimism of that time, the Rio conference did not lead to actionable changes. Subsequent meetings, like 1997 in Kyoto and 2015 in Paris, likewise have not led to actionable policies or their targets have been rejected by influential nations like the United States.

The Norwegian philosopher and environmental activist Arne Naess took the concept of sustainable development a step farther, and his insights into deep ecology help frame the societal and cultural backdrop of the issues. Naess held that a nation must be developed with considerations of ecology and not simply economic and industrial processes (as is the norm): “The richest industrial country is not a developed country if it is not in a process of ecologically sustainable development.”²⁶ He recognized the important step of the UN's 1987 Brundtland Report but noted its limitations doomed it to being unfit for reaching an ecologically sustainable development. Naess argued that there is “no way back” to a pristine, never-touched-by-humans past, but “there is a way back to ecological sustainability.”²⁷ He used the example of reforestation, but we can consider his argument in terms of

landfill redevelopment into parks. He saw possible reforestation as a slow multi-generational process, requiring money, labor, and political willpower, but a necessary process that could restore “ecological sustainability and meets the vital needs of people.”²⁸ For Naess, reforestation (as a long-term process requiring changes in peoples’ everyday habits) would serve as a catalyst for the revolutionary change of consumption decreasing in wealthy, industrialized nations as people re-oriented their lives to more sustainable approaches. Such views, he realized, were optimistic and required immediate action but would only take shape in future generations. Redeveloping landfills into parks requires such a return to nature, wilderness, or reforesting, often explicitly in the park master plans. The process of allowing these ex-waste sites to become parks or natural areas will not happen overnight but can be part of a long-term strategy.

The booster promotion of the park redevelopments is (much like the promotion of recycling) based on convincing people that the parks somehow erase or assuage the decades of waste-disposal policy that led to the creation of such gigantic landfills. Redeveloping a mountainous landfill (a symbol of a failed waste-disposal policy) into a “green lung” park (a symbol of sustainable development and rejuvenation of a polluted site) requires booster promotion to make sense to the populace. The park redevelopments do not address previous or current problems with waste-disposal policy but are a redirection of attention.

It will take time to redevelop former landfills as parks, requiring also shifting political and social mindsets. Large sections of the planned parks will



Figure 1.4 Fresh Kills seen from the recently opened Owl Park Fields in 2013.

Source: Photo by the author.

not be open to the public for over 30 years after the closure of the landfills. Yet, the remediation of waste at the sites, allowing them to revert to “natural areas” as well as places for human recreation, could be an example of the second-best restoration of sustainable development that “meets the vital needs of people,” like Naess describes. The ecology of the former landfills is a difficult topic, as pollution remains, and will remain, long term. Fresh Kills leaks polluted fluids (leachate) into the tides. Keele Valley and Hiriya both polluted groundwater in the region. Environmental remediation may address the worst concerns of pollution at the sites, but constant vigilance is required for the foreseeable future. Transforming landfills into parks now is an action taken today for a more sustainable reality enjoyed by our descendants.

Landfills are not areas fit for conventional development, because of the leachate and gases released by decaying garbage, which pollutes the surrounding area and makes the ground unstable. Prior to closure, Fresh Kills, Keele Valley, and Hiriya were visible symbols of non-sustainable policy. According to booster discourse about landfill-park redevelopments, redeveloping a landfill into a park—promoted as a place for public gathering, tourism, and fun—does much more than change the use of the site. If successful, these projects will change how people view, talk, and feel, which gives the city a progressive image. In terms of urban design and policy, the concept of sustainable development is most useful as a shorthand way of conveying the view that green policies are a viable policy choice.

Theories of Land Use and Development

As sites that enabled cities to discard waste for decades, landfills play a central role in the underlying structures shaping urban form. Economics, as well as social/cultural attitudes, comprise these structures, which have been most clearly defined by Marxist-influenced scholars like Henri Lefebvre in *The Production of Space* (1974, translated into English in 1991), David Harvey in *Social Justice in the City* (1973, updated in 2009), and Neil Smith in *Uneven Development* (1984, updated in 2008).

Smith’s concept of uneven development provides the clearest insight into the economic forces that underlie land use and development according to the logic of capitalism.²⁹ Space is an inclusive term denoting the area, including specific sites, of human and non-human use. Smith argues that the inequalities inherent in capitalism take geographical form as unequal development; some areas will accumulate greater resources, value, and emphasis than others. We can apply this concept to understand waste sites and their redevelopments. A waste area like a landfill is first produced as a necessary place to hold the unwanted aspects of society (*e.g.*, disposable packaging, other discards). In redevelopment as a park, the dynamics change from the conception as a waste space to a nature space, or a useful place for recreation. This fits capitalism as the relative value of the place takes precedence: a landfill, as waste-disposal place, makes money for its owner/operators until filled up; a

park, once redeveloped, will in theory add value to the area (*e.g.*, rising home values) through desirability and the social capital of parks being pleasant places. In both senses, as waste sites and as parks, the geographical site of landfills plays a role in maintaining the dynamics of capitalism and the cyclical/linear model of production, consumption, discarding/recycling of goods.

Capitalism casts nature as a resource, but at the same time, Smith and Lefebvre recognize a universal or absolute nature encompassing beyond the human sphere. These dual views of nature both serve the interests of capital. Casting nature as external allows people to justify the domination of nature and the view of nature as universal allows a discourse that depoliticizes social forces (like the exploitation of class relations) as being natural or above sociopolitical choices. Society's dual but contradictory understanding of space prevents the recognition that capitalist production is what produces space through environmental transformation. This analysis, further clarified by Harvey, means that neoliberalism, or the political and economic approach of reducing government regulations and prioritizing the free market, is playing a major role in recent trends like landscape urbanism and the construction of landfill parks.³⁰ For Marxist-influenced critics, seeking to erase parts of the past's environmentally destructive policies through park redevelopment may amount to "greenwashing" (*i.e.*, false environmentalism) to further neoliberal ends.

Shaping Cities through Landscape Architecture and Art

The park redevelopments at Fresh Kills, Keele Valley, and Hiriya are examples of landscape urbanism, a developing field circa 2000 combining the expertise of landscape architects with architects and urban planners to propose novel methods of urban-land use. It was instrumental in the shaping of landfill-park redevelopment plans in the early 2000s, including at Fresh Kills, Hiriya, and Keele Valley. Central to landscape urbanism are concepts of function, use, ecology, and emphasizing the importance of sites. The designer of Freshkills Park, James Corner, has written some of the most insightful descriptions of landscape urbanism and its aims.³¹ Some commentators identify Freshkills Park as the best example of a realized landscape-urbanism project, but Corner prefers to see it as a site where several ideas/designs were tested but is not a fully realized project encapsulating the ideals of landscape urbanism.³²

Cities are incredibly complex. Traditionally, urban planners, engineers, architects, and landscape architects have viewed nature (ecology) as being outside of and separate from the city. In past decades, urban planners and city officials drew up plans focused more on technical aspects, not ecological-focused design. Landscape architects were commissioned for landscaping, including the strategic use of plants to construct an idealized nature in urban parks, but remained on the periphery of most urban planning projects. Landscape urbanism brings landscape architecture to the forefront of urban planning, by emphasizing how urban landscapes like rivers,

marshes, and landfills have important infrastructure functions and are best designed with appreciation and use of nature instead of “the engineer’s zeal for control.”³³

Many of the same landscape architecture firms compete in international design competitions. This means that ideas such as landscape urbanism are applied to local circumstances by design firms and not typically developed in a local context with strict national or regional distinctions. Local authorities devise the standards for the competitions and decide on the winning bid, but most of the competing firms are international in scale and focus; Peter Latz (Hiriya) and James Corner (Fresh Kills) are both examples of this. At Keele Valley, the situation is different in that the local government, Vaughan’s planning commission, is running the plans and redevelopment.

Artists have traditionally been seen as separate from real-world urban planning projects, but such distinctions are fading away in recent projects, including the redevelopments of Fresh Kills and Hiriya. James Corner considers the pioneers of land art, especially Robert Smithson, Michael Heizer, and Richard Long, as influential theorists on examples of cultural landscape, relevant to landscape architects. Artists typically focus more on the idea, image, and emotional/philosophical aspects, whereas landscape architects maintain a connection to a (potential) real-world project with political and economic contexts. Complicating such a distinction are artists like Mierle Laderman Ukeles, the New York Department of Sanitation’s Artist In Residence, who take a conceptual approach. Ukeles’s work has a didactic purpose, and she has direct involvement in the creation of Freshkills Park, including constructing physical works at the site.

Eco art, or environmentally conscious art, is a significant development of the late twentieth century and is relevant to landfill and waste-site remediation. Eco artists have collaborated with landscape architects, urban planners, and city officials in the landfill-park redevelopments. At Fresh Kills and Hiriya, artists and the art world (museums, art collectors and donors) had a direct role in the international design competitions and public representation of the redevelopment projects. For example, Martin Weyl, an organizer of the international competition for Hiriya’s redevelopment, served as curator at the Tel Aviv Museum of Art and oversaw two exhibitions about Hiriya’s past, present, and (potential) future at the museum. At Keele Valley there is not a comparable connection, illustrating the importance of local context and serving as a reminder against blanket statements.

The Limits of Historical Analysis

It is a fraught process to use history to analyze the present day and the future. Contrary to the popular phrase, history does not repeat itself. Rather, history allows us to examine examples from the past within a fuller context. That context, gained by distance from the blinders of the present, allows us to more dispassionately assess how context (*e.g.*, policy, economy, social/

cultural attitudes) influenced events, individuals, and policy decisions. We can see a clearer picture of how the various factors led to the actual events. In the present day, we are too invested in living within the contexts to see so clearly, so we are in danger of missing the relevance of significant factors. Even with the superior clarity history provides in past events, we cannot simply apply those lessons to the present or to the future. There are lessons we may glean from historical research, but they are not axioms that foretell the future.

Hopefully the landfill-park redevelopments will be successful. Yet, examples from the past that did not turn out so positively serve as a warning not to take booster rhetoric at face value. There are many such cautionary tales. Great Kills in Staten Island is one example: a former landfill transformed into a park has had to undergo environmental remediation after the discovery of significant pollution continuing to emanate from the site. Nevertheless, the context of past problems (such as the lack of awareness about pollution) is not the same as the present projects, as these redevelopments are using the latest methods to limit the threat of pollution by the time the landfill-mounds park sections open at the sites.

Landfill-park redevelopments are positive projects. The planning process for these parks has been going on for years and is very detailed. Public support for the park development is high, and with the aid of public and private money, the parks at present have sufficient funding. The parks also provide a forum for public discourse about garbage, conservation, and sustainable urban policy. Increasing public awareness of issues such as how peoples' everyday habits have an impact on the environment is a good development. If the public does use Freshkills Park, North Maple Regional Park, and Ariel Sharon Park, then the landfill-park projects are examples of progress. Continuing to use new landfills while redeveloping some of the older ones into large-scale public parks is not a perfect solution, but it represents the sort of creative thinking necessary to begin addressing the ongoing issues of sustainable development and waste disposal in large, sprawling metropolises.

Notes

- 1 Benjamin Miller, *Fat of the Land: Garbage of New York The Last Two Hundred Years* (New York: Four Walls Eight Windows, 2001), 190–91.
- 2 L. Anders Sandberg et al., eds., *Urban Explorations: Environmental Histories of the Toronto Region* (Hamilton, ON: L.R. Wilson Institute for Canadian History, 2013), 315–17.
- 3 Mikve Israel was Tel Aviv's primary dump before Hiriya and is the location of a long-standing Zionist agricultural school. The Azor garbage dumpsite was on the location of a former Muslim cemetery. Meron Benvenisti, *Sacred Landscape: Buried History of the Holy Land Since 1948* (Berkeley, CA: University of California Press, 2000), 32–33.
- 4 James Corner, *The Landscape Imagination: Collected Essays of James Corner, 1990–2010* (New York: Princeton Architectural Press, 2014), 161–64.

5 Environmental historians focused on the United States like Martin Melosi and Joel Tarr from the 1980s and 1990s recounted sanitary improvements since the late nineteenth century while decrying environmental degradation. Feminist historians like Susan Strasser reminded that reuse and recycling had long been common domestic pursuits, part of a properly run household and a patriotic duty until the end of World War Two; Maureen Flanagan detailed how early twentieth-century women's rights activists argued that sanitation, including municipal waste collection, was part of the expanded "domestic sphere" and so a place relevant for female social reformers. Environmental justice received renewed attention after 2000 with successes like the defeat of the Brooklyn Navy Yard incinerator, as covered by Matthew Gandy and Julie Sze. Sweeping histories of urban sanitation continued in the 2000s, most significantly Melosi's revised editions of *Garbage in the Cities* and *The Sanitary City*. Recently, Melosi published a book-length study of Fresh Kills. Also of note is Ted Steinberg's ecological history of the New York City region. In terms of histories of waste management policies in the United States, Lily Baum Pollans's work offers an analysis focused on the limits of recycling and potential ways of improvement using the examples of Boston and Seattle.

Martin Melosi, *Garbage in the Cities*, revised (Pittsburgh: University of Pittsburgh Press, 2005); Martin Melosi, *The Sanitary City: Urban Infrastructure in America from Colonial Times to the Present*, abridged (Pittsburgh: University of Pittsburgh Press, 2008); Joel Tarr, *The Search for the Ultimate Sink: Urban Pollution in Historical Perspective* (Akron, OH: University of Akron Press, 1996); Susan Strasser, *Waste and Want: A Social History of Trash* (New York: Owl Books, 1999); Maureen A. Flanagan, *Seeing with Their Hearts: Chicago Women and the Vision of the Good City, 1871–1933* (Princeton, NJ: Princeton University Press, 2002); Matthew Gandy, *Concrete and Clay: Reworking Nature in New York City* (Cambridge, MA: MIT Press, 2002); Julie Sze, *Noxious New York: The Racial Politics of Urban Health and Environmental Justice* (Cambridge, MA: MIT Press, 2006); Martin Melosi, *Fresh Kills: A History of Consuming and Discarding in New York City* (New York: Columbia University Press, 2020); Ted Steinberg, *Gotham Unbound: The Ecological History of Greater New York* (New York: Simon and Schuster, 2014); Lily Baum Pollans, *Resisting Garbage: The Politics of Waste Management in American Cities* (Austin, TX: University of Texas Press, 2021).

6 For Toronto and Tel Aviv, there are less specialized works about waste sites, but there are works on analysis of the region or nation's environmental history. Books on Toronto's urban environment that touch on waste include an edited volume about environmental issues in greater Toronto by L. Anders Sandberg et al. and Jennifer Bonnell's history of one of Toronto's two main river valleys. For Tel Aviv, the focus is either about Israel's environment or books about Tel Aviv's urban history. Daniel Orenstein, Alon Tal, and Char Miller's edited volume and Alon Tal's monograph provide the most comprehensive accounts of environmental history. Urban histories of Tel Aviv, such as Mark LeVine's and Sharon Rotbard's, tend to focus on Zionism and urban planning as a tool of land-takeover from Palestinian Arabs. L. Anders Sandberg et al., eds., *Urban Explorations: Environmental Histories of the Toronto Region* (Hamilton, ON: L.R. Wilson Institute for Canadian History, 2013); Jennifer L. Bonnell, *Reclaiming the Don: An Environmental History of Toronto's Don River Valley* (Toronto: University of Toronto Press, 2014); Daniel Orenstein, Alon Tal, and Char Miller, eds., *Between Ruin and Restoration: An Environmental History of Israel* (Pittsburgh: University of Pittsburgh Press, 2013); Alon Tal, *Pollution in a Promised Land: An Environmental History of Israel* (Berkeley, CA: University of California Press, 2002);

- Mark LeVine, *Overthrowing Geography: Jaffa, Tel Aviv, and the Struggle for Palestine, 1880–1948* (Berkeley, CA: University of California Press, 2005); Sharon Rotbard, *White City, Black City: Architecture and War in Tel Aviv and Jaffa* (Cambridge, MA: MIT Press, 2015).
- 7 *The Landscape Urbanism Reader*, edited by Charles Waldheim, provided an overview of that emerging discipline, including essays about redesigning urban spaces like brownfields. Landscape architect Mira Engler analyzed park-redevelopment projects and took part in the design competition for Hiriya. More recently, Jeong Hye Kim focused on Seoul, South Korea’s redevelopment of a former landfill. Charles Waldheim, ed., *The Landscape Urbanism Reader* (New York: Princeton Architectural Press, 2005); Mira Engler, “Hiriya in the Museum: Tel Aviv Museum of Art,” *Public Art Review* 11, no. 2 (Spring/Summer 2000): 31–34; Jeong Hye Kim, *Waste and Urban Regeneration: An Urban Ecology of Seoul’s Nanjido Post-Landfill Park* (New York: Routledge, 2020).
 - 8 Mary Douglas, *Purity and Danger: An Analysis of Concepts of Pollution and Taboo* (New York: Routledge, 2002), 44.
 - 9 See, for example, Michael Thompson, *Rubbish Theory: The Creation and Destruction of Value*, 2nd ed. (London: Pluto Press, 2017).
 - 10 Max Liboiron and Josh Lepawsky, *Discard Studies: Wasting, Systems, and Power* (Cambridge, MA: MIT Press, 2022), 9.
 - 11 Commission for Racial Justice, “Toxic Wastes and Race in the United States: A National Report on the Racial and Socio-Economic Characteristics of Communities with Hazardous Waste Sites” (United Church of Christ, 1982), <https://www.ucc.org/wp-content/uploads/2020/12/ToxicWastesRace.pdf>.
 - 12 For two examples on environmental justice activism in New York, see Matthew Gandy, *Concrete and Clay: Reworking Nature in New York City* (Cambridge, MA: MIT Press, 2002); Julie Sze, *Noxious New York: The Racial Politics of Urban Health and Environmental Justice* (Cambridge, MA: MIT Press, 2006).
 - 13 For a seminal account of environmental justice, see Robert D. Bullard, *Dumping in Dixie: Race, Class, and Environmental Quality*, 3rd ed. (Boulder, CO: Westview Press, 2000).
 - 14 Michel Foucault identifies this approach to history as seeking “interruptions” or breaks from the continuity. Michel Foucault, *Archaeology of Knowledge*, 2nd ed. (London: Taylor and Francis, 2013), 4.
 - 15 See, for example, Matthew Gandy, *Recycling and the Politics of Urban Waste* (New York: Earthscan, 1994); Matthew Gandy, *Concrete and Clay: Reworking Nature in New York City* (Cambridge, MA: MIT Press, 2002).
 - 16 Mark LeVine, *Overthrowing Geography: Jaffa, Tel Aviv, and the Struggle for Palestine, 1880–1948* (Berkeley, CA: University of California Press, 2005), 15–27.
 - 17 Jessica Hernandez, *Fresh Banana Leaves: Healing Indigenous Landscapes through Indigenous Science* (Huichin, unceded Ohlone land aka Berkeley, CA: North Atlantic Books, 2022).
 - 18 For a succinct introduction to how European (especially English) developments impacted waste management policies in the nineteenth-century United States, see Martin Melosi, *Garbage in the Cities*, revised (Pittsburgh: University of Pittsburgh Press, 2005), 1–16. Readers interested in details on how municipal policies and planning in general were influenced directly by European models; see Daniel T. Rodgers, *Atlantic Crossings: Social Politics in a Progressive Age* (Cambridge, MA: The Belknap Press of Harvard University Press, 1998), 131–59.
 - 19 Zsuzsa Gille and Josh Lepawsky, eds., *The Routledge Handbook of Waste Studies* (New York: Routledge, 2022), 55–67.
 - 20 The primary innovator of late nineteenth-century municipal waste-disposal policy in the United States—Col. George Waring in New York City—sought to put

24 A Cultural History of Waste Disposal

- scavenging under municipal control and limit the ability of immigrants to scavenge. Martin Melosi, *Garbage in the Cities*, revised (Pittsburgh: University of Pittsburgh Press, 2005), 59.
- 21 For information about sanitation measures in cities across the globe, see United Nations Settlement Programme, *Solid Waste Management in the World's Cities: Water and Sanitation in the World's Cities, 2010* (London: Earthscan, 2010), <https://unhabitat.org/solid-waste-management-in-the-worlds-cities-water-and-sanitation-in-the-worlds-cities-2010-2>.
 - 22 Garth Myers, *African Cities: Alternative Visions of Urban Theory and Practice* (London: Zed Books, 2011), 70–103.
 - 23 Simone M. Müller, *The Toxic Ship: The Voyage of the Khian Sea and the Global Waste Trade* (Seattle, WA: The University of Washington Press, 2023), 52–55.
 - 24 Mark LeVine, *Overthrowing Geography: Jaffa, Tel Aviv, and the Struggle for Palestine, 1880–1948* (Berkeley, CA: University of California Press, 2005); Sharon Rotbard, *White City, Black City: Architecture and War in Tel Aviv and Jaffa* (Cambridge, MA: MIT Press, 2015); Benjamin A. Lawson, *Frontier Metropolises: Tulsa, Indian Territory and Tel Aviv, Palestine* (Muskogee, OK: Indian University Press, 2017).
 - 25 Benjamin A. Lawson, “American Indians and Solid Waste,” in *Encyclopedia of American Indian Issues Today* (Santa Barbara, CA: Greenwood, 2013).
 - 26 Alan Drengron and Bill Devall, eds., *The Ecology of Wisdom: Writings by Arne Naess* (Berkeley, CA: Counterpoint, 2008), 295.
 - 27 Drengron and Devall, *The Ecology of Wisdom*, 290.
 - 28 Drengron and Devall, *The Ecology of Wisdom*, 291.
 - 29 Neil Smith, *Uneven Development: Nature, Capital, and the Production of Space*, 3rd ed. (Athens, GA: University of Georgia Press, 2008).
 - 30 See, for example, David Harvey, *A Brief History of Neoliberalism* (New York: Oxford University Press, 2007).
 - 31 Interested readers should peruse Corner, *The Landscape Imagination: Collected Essays of James Corner, 1990–2010*.
 - 32 See, for example, Richard Weller’s analysis in the Afterword of Corner’s collected writings. Corner, *The Landscape Imagination: Collected Essays of James Corner, 1990–2010*, 358.
 - 33 Waldheim, *The Landscape Urbanism Reader*, 25.

Bibliography

Collections and Archives

Archives of Ontario (Toronto, Ontario).
City of Toronto Archives (Toronto, Ontario).
City of Vaughan Municipal Archives (Vaughan, Ontario).
Library of Congress (Washington, DC).
New York City Municipal Archives (New York, NY).
Staten Island Museum and Library Archives (New York, NY).
Tel Aviv-Yafo Municipal Archives (Tel Aviv-Yafo, Israel).
Tel Aviv-Yafo Museum of Art, Library and Archive (Tel Aviv-Yafo, Israel).

Publications

Alexander, Judd H. *In Defense of Garbage*. Westport, CT: Praeger Publishers, 1993.
Allen, Michelle. *Cleansing the City: Sanitary Geographies in Victorian London*. Athens, OH: Ohio University Press, 2008.

- Allon, Fiona, Ruth Barcan, and Karma Eddison-Cogan, eds. *The Temporalities of Waste: Out of Sight, Out of Time*. New York: Routledge, 2021.
- American Public Works Association, Committee on Refuse Disposal. *Municipal Refuse Disposal*. Chicago, IL: Public Administration Service, 1961.
- Anderson, Jerry L. *Environmental Law Practice: Problems and Exercises for Skills Development*, 3rd ed. Durham, NC: Carolina Academic Press, 2010.
- Azaryahu, Maoz. *Tel Aviv: Mythography of a City*. Syracuse University Press, 2007.
- Azaryahu, Maoz and S. Ilan Troen, eds. *Tel Aviv, the First Century: Visions, Designs, Actualities*. Bloomington: Indiana University Press, 2012.
- Bagchi, Amalendu. *Design, Construction, and Monitoring of Sanitary Landfill*. New York: John Wiley and Sons, 1990.
- Bagchi, Amalendu. *Design of Landfills and Integrated Solid Waste Management*, 3rd ed. Hoboken, NJ: Wiley, 2004.
- Beardsley, John. *Earthworks and Beyond*, 4th ed. New York: Abbeville Press Publishers, 2006.
- Benvenisti, Meron. *Sacred Landscape: Buried History of the Holy Land Since 1948*. Berkeley, CA: University of California Press, 2000.
- Bermann, Marshall. *All That Is Solid Melts into Air*. New York: Penguin, 1982.
- Biggs, Lewis, ed. *Art, Money, Parties: New Institutions in the Political Economy of Contemporary Art*. Liverpool: Liverpool University Press, 2004.
- Blumberg, Louis and Robert Gottlieb. *War on Waste: Can America Win Its Battle with Garbage?* Washington, DC: Island Press, 1989.
- Bonnell, Jennifer L. *Reclaiming the Don: An Environmental History of Toronto's Don River Valley*. Toronto: University of Toronto Press, 2014.
- Browning, Elizabeth Grennan. "Wastelanding and Racialized Reproductive Labor: 'Long Dyings' in East Chicago from Urban Renewal to Superfund Remediation." *Environmental History* 26, no. 4 (2021): 753–754.
- Bullard, Robert D. *Dumping in Dixie: Race, Class, and Environmental Quality*, 3rd ed. Boulder, CO: Westview Press, 2000.
- Capes, William Parr and Jeanne D. Carpenter. *Municipal Housecleaning: The Methods and Experiences of American Cities in Collecting and Disposing of Their Municipal Wastes—Ashes, Rubbish, Garbage, Manure, Sewage, and Street Refuse*. New York: E.P. Dutton & Company, 1918.
- Calthorpe, Peter and William Fulton. *The Regional City*. Island Press, 2001.
- Carr, C. "Fresh Kills Becomes an Urban Artwork." *The Village Voice*, May 28, 2002.
- Cembalest, Robin. "Talking Trash with Mierle Laderman Ukeles: An Artist Finds Meaning in Garbage." *The Forward*, November 25, 1994.
- Cohen, Lizabeth. *A Consumer's Republic: The Politics of Mass Consumption in Post-war America*. New York: Knopf, 2003.
- Cole, Luke W. and Sheila R. Foster. *From the Ground Up: Environmental Racism and the Rise of the Environmental Justice Movement*. New York: New York University Press, 2001.
- Commission for Racial Justice. "Toxic Wastes and Race in the United States: A National Report on the Racial and Socio-Economic Characteristics of Communities with Hazardous Waste Sites." United Church of Christ, 1982. <https://www.ucc.org/wp-content/uploads/2020/12/ToxicWastesRace.pdf>.
- Corner, James. *Recovering Landscape: Essays in Contemporary Landscape Architecture*. New York: Princeton Architectural Press, 1999.
- Corner, James. *The Landscape Imagination: Collected Essays of James Corner, 1990–2010*. New York: Princeton Architectural Press, 2014.
- Cronon, William, ed. *Uncommon Ground: Rethinking the Human Place in Nature*. New York: W.W. Norton and Company, 1996.
- Desfor, Gene and Roger Keil. *Nature and the City: Making Environmental Policy in Toronto and Los Angeles*. Tuscon: The University of Arizona Press, 2004.

- Deutsch, Sarah. *Women and the City: Gender, Space, and Power in Boston, 1870–1940*. New York: Oxford University Press, 2000.
- Douglas, Mary. *Purity and Danger: An Analysis of Concepts of Pollution and Taboo*. New York: Routledge, 2002.
- Drengson, Alan and Bill Devall, eds. *The Ecology of Wisdom: Writings by Arne Naess*. Berkeley, CA: Counterpoint, 2008.
- Ekbladh, David. *The Great American Mission: Modernization and the Construction of an American World Order*. Princeton, NJ: Princeton University Press, 2011.
- Ekstrom, Karen, ed. *Waste Management and Sustainable Consumption: Reflections on Consumer Waste*. New York: Routledge, 2015.
- Eldredge, Niles and Sidney Horenstein. *Concrete Jungle: New York City and Our Last Best Hope for a Sustainable Future*. Berkeley, CA: University of California Press, 2014.
- Engler, Mira. “Waste Landscapes: Permissible Metaphors in Landscape Architecture.” *Landscape Journal* 14, no. 1 (1995): 11–25.
- Engler, Mira. “Hiriya in the Museum: Tel Aviv Museum of Art.” *Public Art Review* 11, no. 2 (Spring/Summer 2000): 31–34.
- Engler, Mira. *Designing America’s Waste Landscapes*. Baltimore: Johns Hopkins Press, 2004.
- Estrin, David and John Swaigen. *Environment on Trial: A Guide to Ontario Environmental Law and Policy*, 3rd ed. A Project of the Canadian Institute for Environmental Law and Policy. Toronto, ON: Edmond Montgomery Publications Limited, 1993.
- European Commission. *Being Wise with Waste: The EU’s Approach to Waste Management*. Luxembourg: Publications Office of the European Union, 2010.
- Fensterstock, Ann. *Art on the Block: Tracking the New York Art World from Soho to the Bowery, Bushwick and Beyond*. New York: Palgrave MacMillan, 2013.
- Finkelpearl, Tom. *Dialogues in Public Art*. Cambridge, MA: MIT Press, 2000.
- Fishman, Robert. *Bourgeois Utopias: The Rise and Fall of Suburbia*. New York: Basic Books, 1987.
- Flanagan, Maureen A. *Seeing with Their Hearts: Chicago Women and the Vision of the Good City, 1871–1933*. Princeton, NJ: Princeton University Press, 2002.
- Forkey, Neil S. *Canadians and the Natural Environment to the Twenty-First Century*. Toronto: University of Toronto Press, 2012.
- Foucault, Michel. *Archaeology of Knowledge*, 2nd ed. London: Taylor and Francis, 2013.
- Franklin Associates, LTD. *Solid Waste Management at the Crossroads* (No location listed), December 1997.
- Fulford, Robert. *Accidental City: The Transformation of Toronto*. Boston: Houghton Mifflin Company, 1996.
- Gandy, Matthew. *Recycling and the Politics of Urban Waste*. New York: Earthscan, 1994.
- Gandy, Matthew. *Concrete and Clay: Reworking Nature in New York City*. Cambridge, MA: MIT Press, 2002.
- Ganz, Deborah and Claire Weisz. “Extreme Sites: The Greening of Brownfields.” *Architectural Design* 168 (2004).
- Gelfand, Mark I. *A Nation of Cities: The Federal Government and Urban America, 1933–1965*. New York: Oxford University Press, 1975.
- Gille, Zsuzsa. *From the Cult of Waste to the Trash Heap of History: The Politics of Waste in Socialist and Postsocialist Hungary*. Bloomington, IN: Indiana University Press, 2007.
- Gille, Zsuzsa and Josh Lepawsky, eds. *The Routledge Handbook of Waste Studies*. New York: Routledge, 2022.

- Goldfield, David R. and Blaine A. Brownell. *Urban America: From Downtown to No Town*. Boston, MA: Houghton Mifflin Company, 1979.
- Goldstein, Eric and Mark Izeman. *The New York Environment Book*. Washington, DC: Island Press, 1990.
- Gordon, Colin. *Mapping Decline: St. Louis and the Fate of the American City*. Philadelphia: University of Pennsylvania Press, 2008.
- Haight, Murray E. *Municipal Solid Waste Management: Making Decisions in the Face of Uncertainty*. Waterloo, ON: University of Waterloo Press, 1991.
- Harvey, David. *A Brief History of Neoliberalism*. New York: Oxford University Press, 2007.
- Harvey, David. *Social Justice and the City*. Athens, GA: The University of Georgia Press, 2009.
- Hauser, Victor L. *Evapotranspiration Covers for Landfills and Waste Sites*. Boca Raton, FL: CRC Press, 2009.
- Hawkins, Gay. *The Ethics of Waste: How We Relate to Rubbish*. New York: Rowman & Littlefield Publishers, Inc., 2006.
- Hays, Samuel P., ed. *Explorations in Environmental History: Essays*. Pittsburg, PA: The University of Pittsburg Press, 1998.
- Hernandez, Jessica. *Fresh Banana Leaves: Healing Indigenous Landscapes through Indigenous Science*. Huichin, unceded Ohlone land aka Berkeley, CA: North Atlantic Books, 2022.
- Hird, Myra J. *A Public Sociology of Waste*. Bristol: Bristol University Press, 2022.
- Humes, Edward. *Garbology: Our Dirty Love Affair with Trash*. New York: Avery, 2012.
- Jackson, Kenneth T. *Crabgrass Frontier: The Suburbanization of the United States*. New York: Oxford University Press, 1985.
- Jacobs, Jane. *The Death and Life of Great American Cities*. Reprint. New York: Vintage Books, 1992.
- Katz, Eric. "The Big Lie: The Human Restoration of Nature." In *Environmental Restoration: Ethics, Theory, and Practice*, edited by William Throop, 83–93. Amherst, NY: Humanity Books, 2000.
- Kim, Jeong Hye. *Waste and Urban Regeneration: An Urban Ecology of Seoul's Nanjido Post-landfill Park*. New York: Routledge, 2020.
- Kirkwood, Niall. *Manufactured Sites: Rethinking the Post-Industrial Landscape*. London: Spon Press, 2001.
- Lasch, Christopher. *Culture of Narcissism*. New York: W.W. Norton, 1979.
- Latham, Michael E. *Modernization as Ideology: American Social Science and "Nation Building" in the Kennedy Era*. Chapel Hill: University of North Carolina Press, 2000.
- Latham, Michael E. *The Right Kind of Revolution: Modernization, Development, and U.S. Foreign Policy from the Cold War*. Ithaca: Cornell University Press, 2010.
- Lawson, Benjamin A. "American Indians and Solid Waste." In *Encyclopedia of American Indian Issues Today*, edited by Russell M. Lawson, 703–712. Santa Barbara, CA: Greenwood Press, 2013.
- Lawson, Benjamin A. "Garbage Mountains: The Use, Redevelopment, and Artistic Representation of New York City's Fresh Kills, Greater Toronto's Keele Valley, and Tel Aviv's Hiriya Landfills." PhD (Doctor of Philosophy) thesis, University of Iowa, 2015. <https://doi.org/10.17077/etd.dty9nazt>.
- Lawson, Benjamin A. *Frontier Metropolises: Tulsa, Indian Territory and Tel Aviv, Palestine*. Muskogee, OK: Indian University Press, 2017.
- Lawson, Benjamin A. "Israel: The Politics of Waste." In *Sustainable Planet: Compelling Issues and Solutions for Our Environment's Future*, edited by Barbara J. McNicol, 496–504. Santa Barbara, CA: ABC-CLIO, 2021.

- Lawson, Benjamin A. "The United States: Producing, Collecting, and Eliminating Wastes." In *Sustainable Planet: Compelling Issues and Solutions for Our Environment's Future*, edited by Barbara J. McNicol, 504–513. Santa Barbara, CA: ABC-CLIO, 2021.
- LeBor, Adam. *City of Oranges: Arabs and Jews in Jaffa*. London: Bloomsbury Publishing, 2006.
- Lefebvre, Henri. *The Production of Space*, 1974, translated by Donald Nicholson-Smith. Malden, MA: Blackwell Publishing, 1991.
- Levine, Allan. *Toronto: Biography of a City*. Madeira Park, BC: Douglas & McIntyre, 2014.
- LeVine, Mark. *Overthrowing Geography: Jaffa, Tel Aviv, and the Struggle for Palestine, 1880–1948*. Berkeley: University of California Press, 2005.
- Liboiron, Max and Josh Lepawsky. *Discard Studies: Wasting, Systems, and Power*. Cambridge, MA: MIT Press, 2022.
- Lindner, Christoph and Miriam Meissner, eds. *Global Garbage: Urban Imaginaries of Waste, Excess, and Abandonment*. New York: Routledge, 2016.
- Lipták, Béla G. *Municipal Waste Disposal in the 1990s*. Radnor, PA: Chilton Book Company, 1991.
- Luton, Larry S. *The Politics of Garbage: A Community Perspective on Solid Waste Policy Making*. Pittsburgh: University of Pittsburgh Press, 1996.
- Lynch, Kevin. *The Image of the City*. Cambridge, MA: MIT Press, 1960.
- MacBride, Samantha. *Recycling Reconsidered: The Present Failure and Future Promise of Environmental Action in the United States*. Cambridge, MA: MIT Press, 2012.
- MacDowell, Laurel Sefton. *An Environmental History of Canada*. Vancouver: UBC Press, 2012.
- Mancini, Candice, ed. *Garbage and Recycling: Global Viewpoints*. Boston, MA: Greenhaven Press, Cengage Learning, 2010.
- Mann, Barbara. *A Place in History: Modernism, Tel Aviv, and the Creation of Jewish Urban Space*. Stanford University Press, 2006.
- Margulis, Lynn, James Corner, and Brian Hawthorne, eds. *Ian McHarg: Conversations with Students: Dwelling in Nature*. New York: Princeton Architectural Press, 2007.
- Matilsky, Barbara C. *Fragile Ecologies: Contemporary Artists' Interpretations and Solutions*. New York: Rizzoli, 1992.
- Melosi, Martin. *Garbage in the Cities: Refuse, Reform, and the Environment: 1880–1980*. College Station, TX: Texas A&M University Press, 1982.
- Melosi, Martin. *The Sanitary City: Urban Infrastructure in America from Colonial Times to the Present*. Baltimore, MD: Johns Hopkins University Press, 1999.
- Melosi, Martin. *Effluent America: Cities, Industry, Energy and the Environment*. Pittsburgh, PA: University of Pittsburgh Press, 2001.
- Melosi, Martin. *Garbage in the Cities*, revised ed. Pittsburgh, PA: University of Pittsburgh Press, 2005.
- Melosi, Martin. *The Sanitary City: Urban Infrastructure in America from Colonial Times to the Present*, abridged ed. Pittsburgh: University of Pittsburgh Press, 2008.
- Melosi, Martin. *Fresh Kills: A History of Consuming and Discarding in New York City*. New York: Columbia University Press, 2020.
- Merchant, Caroline. *The Death of Nature: Women, Ecology and the Scientific Revolution*. New York: Harper and Row, 1980.
- Miles, Malcolm and Tim Hall, eds. *Urban Futures: Critical Commentaries on Shaping the City*. New York: Routledge, 2003.
- Miller, Benjamin. *Fat of the Land: Garbage of New York the Last Two Hundred Years*. New York: Four Walls Eight Windows, 2001.
- Mitchell, Timothy. *Colonizing Egypt*. Berkeley, CA: University of California Press, 1988.

- Monk, Daniel Bertram. *An Aesthetic Occupation: The Immediacy of Architecture and the Palestine Conflict*. Duke University Press, 2001.
- Müller, Simone M. *The Toxic Ship: The Voyage of the Khian Sea and the Global Waste Trade*. Seattle, WA: The University of Washington Press, 2023.
- Mumford, Lewis. *The City in History*. New York: Harcourt Brace Jovanovich, 1961.
- New York City Department of Sanitation. "Mierle Ukeles, DSNY's Artist-in-Residence." Department of Sanitation, NY, Annual Report, 2007. [http://www.feldmangallery.com/media/ukeles/general press/2007_ukeles_dsnys annual report.pdf](http://www.feldmangallery.com/media/ukeles/general%20press/2007_ukeles_dsnys_annual_report.pdf).
- Nissim, I., T. Shohat, and Y. Inbar. "From Dumping to Sanitary Landfills—Solid Waste Management in Israel." *Waste Management* 25, no. 3 (2005): 323–327.
- Nochian, Ashkan, Osman Tahir, Suhardi Mualan, and Rui Ding. "Toward Sustainable Development of a Landfill: Landfill to Landscape or Landscape Along with Landfill? A Review." *Pertanika Journal of Social Science and Humanities* 27 (2019): 949–962.
- Oakes, Baile. *Sculpting with the Environment: A Natural Dialogue*. New York: Van Nostrand Reinhold, 1995.
- Omer, Mordechai. *Point of View: Approaches to Landscape Architecture in Israel*. Tel Aviv University, The Genia Schneiber University Art Gallery, May 17–July 31, 1996.
- Orenstein, Daniel, Alon Tal, and Char Miller, eds. *Between Ruin and Restoration: An Environmental History of Israel*. Pittsburg: University of Pittsburg Press, 2013.
- Pellow, David N. *Garbage Wars: The Struggle for Environmental Justice in Chicago*. Cambridge, MA: MIT Press, 2002.
- Pichtel, John. *Waste Management Practices: Municipal, Hazardous, and Industrial*. Boca Raton, FL: CRC Press, 2005.
- Pollans, Lily Baum. *Resisting Garbage: The Politics of Waste Management in American Cities*. Austin, TX: University of Texas Press, 2021.
- Porter, Richard C. *The Economics of Waste*. Washington, DC: Resources for the Future, 2002.
- Prakash, Gyan and Kevin M. Kruse, eds. *The Spaces of the Modern City: Imaginaries, Politics, and Everyday Life*. Princeton, NJ: Princeton University Press, 2008.
- Prasad, M. N. R. and Kaimin Shih, eds. *Environmental Materials and Waste: Resource and Recovery*. Boston, MA: Elsevier, Academic Press, 2016.
- Qian, Xuede, Robert M. Koemer, and Donald H. Gray. *Geotechnical Aspects of Landfill Design and Construction*. Upper Saddle River, NJ: Prentice Hall, 2001.
- Rathje, William and Cullen Murphy. *Rubbish! The Archeology of Garbage*. Tucson: University of Arizona Press, 1992, reprinted 2002.
- Reno, Joshua O. "The Life and Times of Landfills." *Journal of Ecological Anthropology* 18, no. 1 (2016).
- Roberts, J. Timmons and Melissa M. Tofflon-Weiss. *Chronicles from the Environmental Justice Frontline*. New York: Cambridge University Press, 2001.
- Rodgers, Daniel. *Atlantic Crossings: Social Politics in a Progressive Age*. Cambridge, MA: Harvard University Press, 1999.
- Rogers, Heather. *Gone Tomorrow: The Hidden Life of Garbage*. New York: The New Press, 2006.
- Rotbard, Sharon. *White City, Black City: Architecture and War in Tel Aviv and Jaffa*. Cambridge, MA: MIT Press, 2015.
- Royte, Elizabeth. *Garbage Land: On the Secret Trail of Trash*. New York: Back Bay Books, 2005.
- Sandberg, L. Anders, Stephen Bocking, Colin Coates, and Ken Cruikshank, eds. *Urban Explorations: Environmental Histories of the Toronto Region*. Hamilton, ON: L.R. Wilson Institute for Canadian History, 2013.
- Sanderson, Eric W. *Mannahatta: A Natural History of New York City*. New York: Abrams, 2009.

- Schneider, Daniel. *Hybrid Nature: Sewage Treatment and the Contradictions of the Industrial Ecosystem*. Cambridge, MA: MIT Press, 2011.
- Scott, James C. *Seeing Like a State*. New Haven: Yale University Press, 1998.
- Slymovics, Susan. *The Object of Memory: Arab and Jew Narrate the Palestinian Village*. Philadelphia, PA: University of Pennsylvania Press, 1998.
- Small, William E. *Third Pollution: The National Problem of Solid Waste Disposal*. New York: Praeger Publishers, 1970.
- Smith, Neil. *Uneven Development: Nature, Capital, and the Production of Space*, 3rd ed. Athens, GA: The University of Georgia Press, 2008.
- Smithson, Robert. "A Sedimentation of the Mind: Earth Projects." In *Robert Smithson: The Collected Writings*, edited by Jack Flam, 100–113. Berkeley, CA: University of California Press, 1996.
- Soja, Edward W. *Postmetropolis: Critical Studies of Cities and Regions*. Malden, MA: Blackwell Publishers, 2000.
- Solomon, Lawrence. *Toronto Sprawls: A History*. Toronto: University of Toronto Press, 2007.
- Sosna, Daniel and Lenka Brunclikova. *Archaeologies of Waste: Encounters with the Unwanted*. Havertown, PA: Oxbow Books, 2017.
- Starr, Laura. "Ayalon Park," "Extreme Sites: The Greening of Brownfields." Deborah Ganz and Claire Weisz, editors. *Architectural Design* 168 (2004): 69–76.
- Steinberg, Ted. *Gotham Unbound: The Ecological History of Greater New York*. New York: Simon and Schuster, 2014.
- Stevens, Barbara J. *Handbook of Municipal Waste Management Systems Planning and Practice*. New York: Van Nostrand Reinhold Company, 1980.
- Strasser, Susan. *Waste and Want: A Social History of Trash*. New York: Owl Books, 1999.
- Szaky, Tom. *Outsmart Waste: The Modern Idea of Garbage and How to Think Our Way Out of It*. San Francisco, CA: Berret-Koehler Publishers, Inc, 2014.
- Sze, Julie. *Noxious New York: The Racial Politics of Urban Health and Environmental Justice*. Cambridge, MA: MIT Press, 2006.
- Tal, Alon. *Pollution in a Promised Land: An Environmental History of Israel*. Berkeley: University of California Press, 2002.
- Tal, Alon. "The International Competition for the Reclamation of the Hiriya Landfill: A National Israeli Symbol in the 'Global' Arena." *Landscape Review* 13, no. 1 (2009): 31–46.
- Tammenagi, Hans. *The Waste Crisis: Landfills, Incinerators, and the Search for a Sustainable Future*. New York: Oxford University Press, 1999.
- Tarr, Joel. *The Search for the Ultimate Sink: Urban Pollution in Historical Perspective*. Akron, OH: University of Akron Press, 1996.
- Teaford, Jon. *The Metropolitan Revolution: The Rise of Post-Urban America*. New York: Columbia University Press, 2006.
- Tel Aviv Museum of Art. *Hiriya in the Museum*. Tel Aviv: The Tel Aviv Museum of Art, 2000.
- Tel Aviv Museum of Art. *Hiriya in the Museum 2: Proposals Submitted to the Public Competition for Detailed Landscape Design of the Landfill*. Tel Aviv Museum of Art, 2005.
- Thompson, Michael. *Rubbish Theory: The Creation and Destruction of Value*, 2nd ed. London: Pluto Press, 2017.
- Thompson, Vivian E. *Waste In, Garbage Out: Problems with Long-Distance Trash Transport*. Charlottesville: University of Virginia Press, 2009.
- Tierney, John. "Recycling Is Garbage." *The New York Times*, June 30, 1996.
- Towse, Ruth. *A Handbook of Cultural Economics*. Cheltenham: Edward Elger Publishing, 2005.
- Tufnell, Ben. *Land Art*. London: Tate, 2006.

- Ukeles, Mierle Laderman. *Manifesto for Maintenance Art 1969!: Proposal for an Exhibition "CARE"*. Accessed July 12, 2014. <https://queensmuseum.org/wp-content/uploads/2016/04/Ukeles-Manifesto-for-Maintenance-Art-1969.pdf>.
- Ukeles, Mierle Laderman. "Leftovers/It's About Time for Fresh Kills." *Cabinet* no. 6 (Spring 2002): 17–20. <https://www.cabinetmagazine.org/issues/6/ukeles.php>.
- Ukeles, Mierle Laderman, Paula Vilaplana de Miguel, and Evangelos Kotsioris. "Mierle Laderman Ukeles on (Re)Imagining Freshkills Park." *Museum of Modern Art (MoMa) Magazine*, July 14, 2023. <https://www.moma.org/magazine/articles/925>.
- UN-Habitat. *Solid Waste Management in the World's Cities: Pre-Publication Presentation*. Nairobi: UNON Print Shop, 2009.
- UN-Habitat. *Solid Waste Management in the World's Cities: Water and Sanitation in the World's Cities 2010*. London: Earthscan, 2010. <https://unhabitat.org/solid-waste-management-in-the-worlds-cities-water-and-sanitation-in-the-worlds-cities-2010-2>.
- United States Environmental Protection Agency. *Initiating a National Effort to Improve Solid Waste Management*, 1971.
- United States Environmental Protection Agency. "Criteria for Municipal Solid Waste Landfills." 40 CFR Part 258, October 9, 1991. https://archives.federalregister.gov/issue_slice/1991/10/9/50975-51119.pdf#page=42.
- United States Environmental Protection Agency. "Safer Disposal for Solid Waste: The Federal Regulations for Landfills." 530 SW-91 092, March 1993.
- United States Environmental Protection Agency. "Solid Waste Disposal Facility Criteria." EPA530-R-93-017, November 1993.
- United States Environmental Protection Agency. "Solid Waste and Emergency Response." 5306W, July 1997.
- United States Environmental Protection Agency. *Road Map to Understanding Innovative Technology Options for Brownfields Investigation and Cleanup*, 3rd ed. Washington, DC: U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response, Office of Superfund Remediation and Technology Innovation, 2001.
- United States Environmental Protection Agency. "Fact Sheet on Evapotranspiration Cover Systems for Waste Containment." EPA 542-F-11-001, 2011.
- Vogt, Christine, David Klenosky, Stephanie Snyder, and Lindsay Campbell. "Resident Support for a Landfill-to-Park Transformation." *Journal of Park and Recreation Administration* 33 (2015): 32–50.
- Voyles, Traci Brynne. *Wastelanding: Legacies of Uranium Mining in Navajo Country*. Minneapolis, MN: University of Minnesota Press, 2015.
- Waldheim, Charles, ed. *The Landscape Urbanism Reader*. Princeton University Press, 2005.
- Weilacher, Udo. *Syntax of Landscape: The Landscape Architecture of Peter Latz and Partners*. Boston: Birkhauser, 2008.
- Weintraub, Linda. *To Life! Eco Art in Pursuit of a Sustainable Planet*. Berkeley, CA: University of California Press, 2012.
- Wilczkiewicz, Małgorzata. "Freshkills Park (Staten Island, NY) as an Example of a Polluted Area's Transformation into a Public Space." *Geomatics, Landmanagement and Landscape* 2 (2017): 133–147.
- Yablon, Nick. *Untimely Ruins: An Archaeology of American Urban Modernity, 1819–1919*. Chicago, IL: The University of Chicago Press, 2009.
- Young, Gary C. *Municipal Solid Waste to Energy Conversion Processes: Economic, Technical, and Renewable Comparisons*. Hoboken, NJ: John Wiley and Sons, 2010.
- Zimmerman, Michael E. "Implications of Heidegger's Thought for Deep Ecology." *Modern Schoolman* 64 (November 1986): 19–43.

Websites

- Ariel Sharon Park. “פארק אריאל שרון—טבע ותרבות” (Ariel Sharon Park: Nature and Culture). Accessed January 8, 2024. http://www.parksharon.co.il/html5/sbs.taf?&did=10116&_id=9047&g=10116.
- Ariel Sharon Park. “הר הפסולת המשוקם” (The Restored Waste Mountain). Accessed January 8, 2024. http://www.parksharon.co.il/html5/sbs.taf?&did=10116&_id=9282&g=9051&SM=9282.
- Caniba, Joel. “North Maple Regional Park Program Update—September 2023.” City of Vaughan. Accessed December 13, 2023. <https://pub-vaughan.escribemeetings.com/filestream.ashx?DocumentId=148162>.
- City of Vaughan, Ontario. “NMRP 900 Acre Vision Park Map.” Accessed December 13, 2023. <https://www.vaughan.ca/sites/default/files/NMRP%20900%20Acre%20Vision%20Park%20Map.pdf?file-verison=1702497487395>.
- City of Vaughan, Ontario. “Project Updates | City of Vaughan.” Accessed December 13, 2023. <https://www.vaughan.ca/about-city-vaughan/projects-and-initiatives/community-projects/north-maple-regional-park-nmrp/project-updates>.
- Department of City Planning, New York City. “Fresh Kills Park Project.” Accessed August 7, 2024. <https://www.nyc.gov/assets/planning/download/pdf/plans/fkl/fkl.pdf>.
- Department of Cultural Affairs, New York City. “Percent for Art, 30 Years.” <http://www.nyc.gov/html/dcla/html/panyc/percent-for-art.shtml>.
- Electronic Intifada, The. Accessed June 20, 2024. <https://electronicintifada.net/>.
- Freshkills Park Alliance. “Mierle Laderman Ukeles.” Accessed June 21, 2024. <https://freshkillspark.org/os-art/percent-art>.
- “Freshkills Park: NYC Parks.” Accessed October 8, 2023. <https://www.nycgovparks.org/park-features/freshkills-park>.
- Latz+Partner. “The Hiriya Landfill, Tel Aviv, IL.” Accessed January 8, 2024. <https://www.latzundpartner.de/en/projekte/postindustrielle-landschaften/hiriya-tel-aviv-il/>.
- Matheny, Keith. “Canadian Trash Again Filling Michigan Landfills.” Detroit Free Press. Accessed January 8, 2024. <https://www.freep.com/story/news/local/michigan/2018/02/19/canadian-garbage-michigan-landfills-solid-waste/337837002/>.
- Ministry of Environmental Protection, Israel. “Waste Hierarchy: Reduce, Reuse, Recycle, Recover, Landfilling.” Accessed August 7, 2024. https://www.gov.il/en/pages/waste_treatment_hierarchy?chapterIndex=3.
- Palestine Remembered. Accessed April 12, 2024. palestineremembered.com.
- Ronald Feldman Gallery. “Mierle Laderman Ukeles.” Accessed October 9, 2023. <https://feldmangallery.com/artist-home/mierle-laderman-ukeles>.
- Staten Island Borough President’s Office. *The Fresh Kills Story: From World’s Largest Garbage Dump to a World Class Park*. Accessed August 7, 2024. https://www.youtube.com/watch?v=3hMhWOaX_0o.
- United Nations Framework Convention on Climate Change. “Hiriya Landfill Project.” Accessed August 10, 2024. <http://cdm.unfccc.int/Projects/DB/DNV-CUK1133526421.81>.
- United States Environmental Protection Agency. “RCRA Online.” Accessed August 10, 2024. www.epa.gov/rcraonline/.
- United States National Park Service, Department of the Interior. “Great Kills Park Environmental Cleanup Project.” April 2, 2019. Accessed June 14, 2019. <https://www.nps.gov/gate/learn/management/greatkillscleanup.htm>.