

LOCAL POLICIES FOR ENVIRONMENTAL JUSTICE: A NATIONAL SCAN

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About the Tishman Environment and Design Center

The Tishman Environment and Design Center at The New School fosters the integration of bold design, policy, and social justice approaches to environmental issues to advance just and sustainable outcomes in collaboration with communities.

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Executive Summary

The following report provides a comprehensive look at recent efforts in 23 cities, three counties and two utilities across the United States to address environmental injustices through innovative reforms of zoning, land use, and other local policies. While local zoning codes and land use policies historically have been tools for segregating people and concentrating pollution in low-income communities and communities of color, community-based advocacy can transform these same tools into means for addressing cumulative burdens borne by environmental justice communities.

As the report lays out in Section 1:

- Municipalities are often at the epicenter of fierce land use conflicts that pit low-income communities and communities of color against polluting industries and the agencies that permit them.
- Today, we still face documented and persistent patterns of disproportionate distributions of pollution and unwanted land uses in communities of color and low-income communities. Not only do such communities face more pollution, but they are generally more susceptible to negative impacts from that pollution due to socio-demographic factors, such as having large young and elderly populations and/or pre-existing health conditions.
- These patterns have been created and perpetuated by facially racist and later supposedly “race-neutral” land use policies, such as segregationist zoning ordinances and the down-zoning of stable communities of color to industrial zones.
- State and federal environmental laws and regulations are inherently limited in their ability to address local siting of pollution burdens, and typically do not directly address or take into account the socio-demographic characteristics of impacted communities.
- Local solutions thus are critical to ensuring that all people are free from disparate and cumulative environmental burdens, and instead benefit holistically from development policies and practices. Municipalities have a number of tools and authorities that they can deploy to these ends.

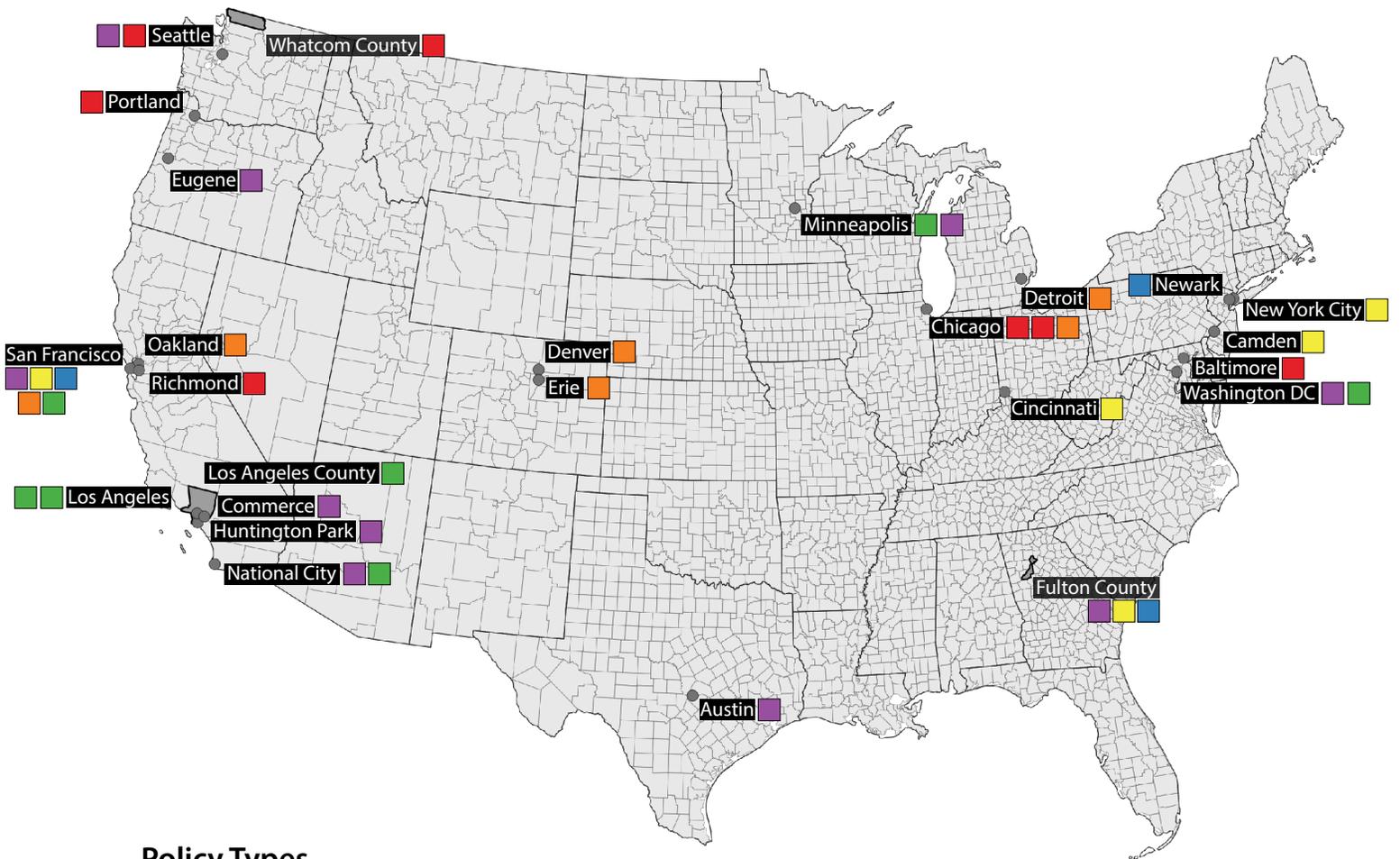
Section 2 presents a national review of 40 local policies focused on addressing environmental injustices (See Figure 1). It details how demands by local environmental justice activists have resulted in ground-breaking approaches to lessening cumulative burdens through the use of innovative local land use planning, zoning and development tools.

The reviewed approaches include both municipal and regional land use measures that fall into several categories:

1. Bans on specific types of polluting facilities typically sited in environmental justice communities
2. Broad environmental justice policies that incorporate environmental justice goals and considerations into a range of municipal activities
3. Environmental review processes applied to new developments
4. Proactive planning targeted at future development to address environmental justice via comprehensive plans, overlay zones, or green zones
5. Targeted land use measures that address existing sources of pollution, like amortization policies
6. Enhanced public health codes that reach both existing and new sources of pollution that impact public health

These examples provide practical models and inspiration for the many U.S. cities that face similar legacies of environmental injustice rooted in zoning and land use. Led and informed by the lived experience and expertise of local residents and strong community organizations, such places can take on environmental injustices proactively and transform themselves into true sanctuaries for all residents.

Figure 1. Local Environmental Justice Policies



Policy Types

- Bans
- General EJ policies
- Targeting Existing Land Uses
- Proactive Planning
- Public Health Codes and Policies
- Reviews

Municipal Zoning, Land Use, and Environmental Justice

Environmental Justice & Pollution

Municipalities are often at the epicenter of fierce land use conflicts that pit low-income communities and communities of color against polluting industries and the agencies that permit them. The environmental justice (EJ) movement in the United States first garnered national media attention in the 1980s due to this type of locational conflict, when residents of Warren County, North Carolina, fought the siting of a hazardous waste dump in their midst on the grounds of environmental racism. In 1987, the Commission for Racial Justice of the United Church of Christ (UCC) published a national study, “Toxic Wastes and Race in the United States,” which identified race as “the single most important factor in determining where toxic waste facilities were sited in the United States.”¹ These distributional conflicts reveal deeply entrenched injustices in the formation of our landscapes that give rise to an uneven distribution of environmental burdens and perpetuate environmental injustice broadly.

More than 30 years after the UCC study, there is still a documented and persistent pattern of disproportionate distributions of hazards and unwanted land uses in communities of color and low-income communities.² Environmental hazards can be posed by proximity and exposure to hazardous waste facilities, bulk material handling facilities, warehouses served by diesel trucks, fossil fuel storage and transportation sites, and various other industrial facilities that pollute the air, water and land. Other commonly cited problems that environmental justice communities combat include dust, odor, noise and light pollution, illegal dumping, and toxic runoff into neighborhoods and nearby waterbodies.

These environmental burdens are not only disproportionately concentrated in communities of color and low-income communities, but evidence also supports that these same communities are overwhelmingly more susceptible and vulnerable to the ill-effects from this exposure due to a variety of sociodemographic factors.³ For example, such communities may have larger child and senior pop-

ulations compared to other areas. Young children experience greater personal exposure than adults despite the same level of ambient pollution: their smaller bodies result in greater pound-for-pound exposure. Seniors can be more vulnerable to environmental exposures due to pre-existing heart, lung, and other health conditions. Low-income communities and communities of color also may be more likely to have been burdened by other environmental exposures in the past and/or to experience higher rates of psychosocial stress than other communities. In addition, such communities tend to have relatively low rates of health insurance.⁴ All of these factors can contribute to environmental burdens falling particularly hard on certain communities.

The effect of multiple pollutants from multiple sources combined with these underlying socio-demographic vulnerabilities in overburdened communities results in what is often termed “cumulative impacts.” “Cumulative impacts” is a framework for thinking about and assessing the vulnerability of communities taking into account both environmental and socio-demographic factors. The California Environmental Protection Agency (CALEPA) defines the term this way:

Cumulative impacts means exposures, public health or environmental effects from the combined emissions and discharges, in a geographic area, including environmental pollution from all sources, whether single or multi-media, routinely, accidentally, or otherwise released. Impacts will take into account sensitive populations and socio-economic factors, where applicable, and to the extent data are available.⁵

As a result of sustained advocacy from EJ activists and public health experts, agencies such as the U.S. Environmental Protection Agency (EPA) and CALEPA have created tools to describe cumulative impacts, using available data sources. These environmental justice screening tools can then be used to help identify areas of concern, set funding priorities, and target regulatory and enforcement attention.

How did we get here? How did it become the norm that people of color and low-income people live in close proximity to noxious land uses and suffer disproportionately from cumulative impacts related to where they live? Some of the early academic debates

about the existence of environmental injustice focused heavily on two theories, the “Minority Move In” hypothesis and the “Rational Market Forces” hypothesis.⁶ The first theory asserted that many of the locational conflicts in these communities were misplaced because communities of color “came to the nuisance.”⁷ Researchers claimed that if communities moved in after the industry was already there, then they willingly participated in living near toxics and no fault could be placed on the industries or government entities issuing permits.

In the Rational Market Forces theory, researchers posited that the location of noxious facilities was a natural outcome of market forces—that existing low land values and infrastructure attracted industries.⁸ Again, the researchers contended that this outcome was not the product of intentionally discriminatory acts, thus industries and government regulators were off the hook for environmental injustice.⁹ These theories were roundly challenged for their ahistorical approach and their lack of attention to the role that disparate impact (regardless of intention) plays in shaping injustice. Today, it is well understood that regardless of who moved in first or whether siting was intentionally discriminatory, these siting conflicts are a manifestation of deeper, structural forms of racism and injustice. These injustices are embedded in our spatial relationships and are enforced and perpetuated through land use planning and zoning rules.

In their 2001 book, *Environmental Justice From the Ground Up*, Luke Cole and Sheila Foster demonstrate how “race-neutral criteria” used for siting waste facilities were in fact not race-neutral when put into historical context. They cite Yale Rabin’s study on zoning decisions that shows how stable African American communities were down-zoned from residential to industrial zones in order to allow the growth of industry.^{10, 11} This pattern of down-zoning areas where people of color and low-income communities reside is well-documented in many cities including New York City; Durham, North Carolina; and Chicago.¹² Hazardous industries sought to locate their facilities where the value of land was low, and cities responded by setting up conditions through zoning codes to allow for co-location of these industrial uses in low-income communities of color that they deemed less desirable.¹³

Laura Pulido’s examination of the origins of environmental injustice in Southern California (2000) reminds us that these seemingly distributive conflicts have their origin in racist land use practices and past analyses of them have suffered from limited conceptions of racism. When we focus only on intentional, individualized cases of racism, we exonerate large segments of white society that benefit from white privilege expressed through land uses. Pulido reminds us that the ability of a noxious facility to locate in a black community is not a race neutral market outcome, but rather a byproduct of historical, racialized processes that devalue black spaces and accrue value to white spaces. The processes that form the basis of structural and institutional forms of racism include things like mortgage lending discrimination, redlining, restrictive covenants, support for suburbanization, and resistance by white people to integration. As Pulido writes:

White land is more valuable by virtue of its whiteness (Oliver and Shapiro 1995:147-61), and thus it is not as economically feasible for the polluter. Nor is it likely that the black community’s proximity to the industrial zone is a chance occurrence. Given the Federal government’s role in creating suburbia, whites’ opposition to integration, and the fact that black communities have been restricted to areas whites deemed undesirable, can current patterns of environmental racism be understood outside a racist urban history?¹⁴

The relationship between industrial zoning and communities of color also plays an important role in the creation of environmental injustice. Juliana Maantay’s in-depth 2002 study on New York City’s history of industrial zoning discusses how zoning acts a gatekeeper in terms of where noxious uses can be sited. She demonstrates how the concentration of noxious uses in industrial neighborhoods is partially due to the city’s re-zoning efforts over decades, which allowed more affluent areas to become more residential and areas that were predominantly communities of color to become more industrial. Using its zoning powers, the city effectively expanded industrial zones in communities of color over time through successive waves of what Maantay terms “expulsive” zoning.

“This set of practices,” she writes, “is characterized by displacement of poor and minority people (and industry) from gentrifying industrial zones, the intrusion of additional noxious land uses into predominantly poor and minority industrial areas, and the concomitant reduction of environmental quality there.”¹⁵

Affluent communities, racially and economically segregated and benefiting from a legacy of structural racism and white privilege, can effectively live a comfortable distance away from noxious industrial land uses while protecting their neighborhoods from industrial hazards through the use of expulsive zoning.¹⁶ The importance of zoning and land use then can be seen as relational – it matters not just where industrial uses are permitted, but also where they are not permitted, and how these differences persist and are exacerbated over time. While whiter, wealthier suburbs have successfully excluded noxious land uses through their local zoning, they have not completely escaped the environmental impacts of such policies. Several studies document the relationship between higher levels of racial segregation and increased levels of pollution.¹⁷ As we live in increasingly segregated metropolitan regions with disproportionate concentrations of pollution in low-income communities and communities of color, it is critical to reduce the pollution burden in an effort to improve our collective environment and achieve environmental justice.¹⁸

History of Land Use and EJ

Land use planning and zoning are among the most powerful tools that local governments can exercise. These critical functions can shape cities through incentivizing certain types of private development, driving property values in the real estate market, cultivating a tax base, or provisioning public services. The interests of private businesses, ordinary citizens, and the state often conflict in the desire to occupy, own, or modify the spaces that make up municipalities. In this struggle over land use are deeply embedded ideologies and histories that can inform our understanding of how to achieve environmental justice through a land use and planning lens.

At the turn of the 20th century, the adoption of urban planning in the United States was based on an instrumental rationale that saw land use rules and plans

as a way to avoid or minimize disruptive land use patterns brought on by increasing industrialization, urbanization, and large population fluxes due to migration and immigration. Local officials sought to find ways to separate out what they perceived to be generally incompatible industrial, commercial, and residential uses following a rational planning model popularized by planners such as Lewis Mumford. Urban plans shape the vision and set the guidelines for future development in a city and are often crafted by a powerful set of stakeholders, including industry and political leaders, and their frameworks tend to be long range, covering 20 to 30 years or more.

If land use planning is the way a city envisions its future, then municipal zoning is the mechanism by which it codifies and puts this vision into practice. Zoning ordinances have their legal origins in the “police power provision” of the state embedded in the United States Constitution which gives government the power to exercise reasonable controls over land use in order to protect the health, safety, convenience, and welfare of the public.¹⁹ Cities are allowed to zone land under their jurisdiction according to each state’s zoning enabling law. The act of zoning itself divides land into areas designated for different land uses, and zoning ordinances set up a legal framework for permitting and regulating land uses. Zoning is the most common form of regulating land uses in practice today, and it typically functions by designating, at minimum, residential, industrial, and commercial zones within city boundaries, using both a map and text detailing the boundaries and rules pertaining to each zone. These different zones have specific restrictions and rules about the form allowed in each zone, such as lot sizes, setbacks, and building heights; they also define allowed uses, including a list of specific types and categories of permitted uses versus special or conditional uses.²⁰ The implementation of land use planning can be altered to meet different ends through new zoning ordinances, and amendments to the text and maps of the existing zoning code in each city.

Zoning was first introduced as a legal instrument in 1916 in New York City when businessmen, the merchants in the Fifth Avenue Association, raised concerns about congestion and declining land values, propelled by what they perceived to be the encroachment by large skyscrapers from the garment industry as well as by the underlying fear of low income garment workers mingling with their high-end

shoppers.²¹ In 1926, the landmark zoning law case of *Village of Euclid v. Ambler Realty Co.* arose after a real estate firm attempted to develop its land for industrial purposes, and in response the Ohio town instituted zoning provisions that limited the industrial development of this privately held land. The firm sued the town claiming that the use of zoning constituted an overreach of the locality's police powers and a taking of private property. The underlying tension between existing middle-class homeowners and the potential incursion of lower-income factory workers also precipitated concerns. The Supreme Court upheld the right of the town to use zoning based on the assertion of public welfare. These early cases illustrate how zoning has functioned to exclude not just unwanted land uses, but, by fiat, unwanted groups of people.

In Richard Rothstein's 2017 book, *The Color of Law*, the author uncovers some of the motivating sentiments implicit in zoning's early days, when zoning laws were used to enforce de facto segregation or the exclusion of people of color.²² Racial zoning is an explicitly discriminatory form of zoning that was used to keep people of color out of particular parts of cities deemed more valuable and whiter. These early examples of racial zoning are ubiquitous in planning history as detailed in Rothstein's account.²³ Yale Rabin's study of the racialized origins of zoning documents the use of zoning tools to deepen the project of Jim Crow and racial discrimination through land use, stating, "*What began as a means of improving the blighted physical environment in which people lived and worked, became a mechanism for protecting property values and excluding the undesirables.*"²⁴ Studies show that while racial zoning was prominent in southern cities, such practices were not unique to these areas and continued to be used well past the 1950s in towns across America where large populations of African Americans were concentrated. As Christopher Silver reminds readers in his article on the Racial Origins of Zoning in American Cities, "Chicago, too, was a bastion of racial zoning enthusiasts."²⁵

In the decades since explicit racial zoning became illegal, environmental justice research demonstrates how racial zoning has not gone away but rather has become less explicit. Today racialized zoning takes the form of restricted residential mobility for low-income families of color desiring to live in higher-income, white neighborhoods that are generally less

polluted. Local laws have turned to income-based criteria as a more subtle discriminatory tool to enforce these patterns of land uses.²⁶

Rothstein describes this more subtle exclusionary zoning in detail,

In the years since the 1926 Supreme Court ruling, numerous white suburbs in towns across the country have adopted exclusionary zoning ordinances to prevent low-income families from residing in their midst. Frequently, class snobbishness and racial prejudice were so intertwined that when suburbs adopted such ordinances, it was impossible to disentangle their motives and to prove that the zoning rules violated constitutional prohibitions of racial discrimination. In many cases, however, ... localities were not always fastidious in hiding their racial motivations.²⁷

The example of expulsive zoning illustrates how towns use a variety of regulations that appear racially neutral on the surface to exclude people of color or low-income people. Some municipalities adopt minimum lot sizes, restrict the development of dense multi-unit housing or other forms of affordable housing, or bar industrial development outright. These regulations can have the same outcome as explicit racial zoning by effectively discriminating against sub-groups of people who fall into racial and class categories deemed undesirable.

Paths to Environmental Justice

Historically zoning codes and land use practices have had the effect of hardening disparities and expressing forms of institutional racism evident in the built environment. These processes continue to jeopardize the health and safety of communities of color and low-income communities throughout the country. If zoning and land use policies got us into this mess, they have the potential to get us out of it – to be harnessed effectively and affirmatively, to redress these impacts. Indeed, looking to zoning and land use policies to remedy local environmental injustices is critical, as state and federal environmental laws and regulations are limited in their ability to address the siting decisions that concentrate cumulative pollution burdens. Nor do these environmental laws directly speak to the socio-demographic char-

acteristics of communities impacted by multiple pollution sources or the development process that can drive siting decisions locally.

A variety of planning and zoning tools are available to municipalities for the purpose of addressing environmental justice, including comprehensive planning, eliminating nonconforming uses, using environmental reviews or impact analysis, and making change through local boards and commissions.²⁸ Cities can also strengthen public health and building codes, augment public review and notification processes, impose development fees, implement overlay zones or special zone designations, or simply tighten existing zoning codes to make them more protective in communities of color and low-income communities. All of these approaches can form the basis of targeted interventions by government officials that aim to affirmatively address both new and existing sources of pollution, using development and planning tools to formulate alternatives to unwanted land uses. The right balance of approaches for any given place will depend on local conditions and priorities, along with state law regarding the powers of local governments vis-à-vis land use and environmental regulation.

There are also more structural changes that can be pursued in tandem with these specific land use strategies. These include: adopting more affirmative state and federal environmental justice regulations and prioritization policies; reforming the land use development process itself (for instance by reexamining who serves on decision-making boards); improving the transparency and accountability of these boards; harnessing economic incentives and capital; and increasing the power of environmental justice communities to weigh in on these processes. To achieve environmental justice, we will need all these strategies, as well as state and federal action around residential racial segregation in our communities and strengthened environmental justice laws that address disparate and cumulative impacts. This study reflects a good many of these local strategies and provides some insight into the diversity of approaches already in use in cities across the country.

National Scan of Environmental Justice Land Use Policies

Introduction

Municipalities and local governments have distinct powers that can influence the spatial organization and types of development that occur in their jurisdiction. In the past decade, many of these localities have chosen to use their authority over local land use, planning, zoning and public health and welfare to address environmental justice. These municipal actions are in direct response to increased pressure from environmental justice advocates seeking multi-scalar and systemic responses to local conditions that constitute a disproportionate, cumulative burden on communities of color and low-income communities.

This section summarizes a nationwide review of existing municipal, county and local government initiatives that seek to explicitly address environmental justice through local land use planning, zoning, or policy tools. These initiatives take the form of ordinances, zoning code changes, public health codes, legislation, or administrative policies from a variety of local entities, including cities, counties, local utilities or regional public governing authorities. This study also draws on the existing body of literature on the topic, including a 2017 review of municipal environmental ordinances by the [Chicago Legal Clinic](#) (Daryl Grable, Tamara Sonenshein, and Keith Harley) on behalf of local environmental justice client organizations (Chicago Environmental Justice Network: [Little Village Environmental Justice Organization](#), [Southeast Environmental Task Force](#), [Southeast Side Coalition to Ban Petcoke](#), [People for Community Recovery](#), [Ixchel](#), and [Blacks in Green](#))

While the bulk of the current research focuses on policies that were adopted and implemented, there are a handful of proposed municipal environmental justice land use ordinances that were later rescinded or did not otherwise make it to full implementation. Such policies are included here to better illustrate a full range of possible policy options, as well as to provide some insight into the challenges policies face on the way to implementation. In total, 40 policies were examined from 23 municipalities, 3 coun-

ties, 2 municipal utilities, and model ordinances.

The methods utilized for this study included a qualitative summary review of online sources employing key word searches, document analysis and a limited set of unstructured interviews. The research included a national search for local legislative initiatives with an explicit mention of the terms *environmental justice*, *environmental racism*, *cumulative impacts* or *low income and communities of color*, together with land use terms such as *non-conforming use*, *overlay zone*, or *ban*. The search was initially conducted through online review of sources such as municipal and county websites, legislative databases (e.g., Legistar), academic journals, popular media sites like newspapers, and researcher knowledge of case studies in environmental justice communities. Additional details and clarifications about specific ordinances were derived using email and phone communication with representatives of enacting entities in municipal or county governments.

The decision to include a policy in this report was based on the following factors:

- The policy explicitly mentions environmental justice, or the impetus for policy enactment was tied to environmental justice.
- The policy is related to local land use, zoning, planning, public health or related issues.
- The policy was enacted by an entity at the sub-state level of government.

One of the most important review criterion for inclusion in the report was the explicit environmental justice focus of the policy. For example, to be included, policies either explicitly reference environmental justice in their text or were enacted to achieve environmental justice goals. Policies that were the result of local environmental justice advocacy and organizing, regardless of whether they explicitly mention EJ, were also included. There are numerous public health ordinances and fossil fuel bans across the country meant to address local environmental conditions, but often they lack a clear connection to environmental justice communities as the target areas of action, or they have not been driven by/ environmental justice advocacy; we did not include such ordinances in the report.

This national scan is not an exhaustive list, and we expect that there are more policies and ordinances proposed, in development or adopted that are not in-

cluded here. Nevertheless, this compilation reflects a robust set of policies aimed at achieving local environmental justice goals.

The municipalities where policies exist are mostly larger cities, concentrated on the East and West Coasts. It is not surprising to see this pattern, as these cities tend to have well-established environmental justice communities with a history of organizing, as well as political environments that may be more amenable to proposed EJ reforms. At the same time, the policies are not strictly limited to these regions, with examples from the Midwest, Southeast and South as well. These examples support the broader recognition of both environmental justice problems and the role of local policies in addressing them (though as noted in this report, the political climate in a particular state may limit the scope of local authority to address environmental justice).

That the adoption of EJ policies in certain areas of the country may be due to robust and well-organized local EJ organizations acting as policy advocates follows John W. Kingdon’s model of the “multi stream” policy process. In this model, several conditions must be present for a policy to be passed or implemented by policy makers:

1. The problem must be well defined and understood as an issue requiring a policy solution;
2. An effective policy solution must be crafted that can be advanced in response to the problem;
3. There must be an opening or opportunity, politically, for the policy to be considered and adopted, in other words, a receptive political environment; and
4. Policy entrepreneurs or organizations must be present to will usher the policy solution through the window of opportunity onto the official government agenda for passage.²⁹

Although we did not trace the exact trajectory of each of the policies, we can assume that some combination of these factors played a role in their passage.

While each policy has distinct features, key policy characteristics allowed us to categorize them according to distinguishing strategies or policy hooks used to address environmental justice issues. For example, several policies relied principally on the initiation of an environmental review for new or expand-

ing development proposals as a vehicle to assess the potential cumulative or disparate burdens of the proposal. Other policies were narrowly focused on a particular fix like outright prohibitions or bans of targeted industries or land uses. A few cities adopted general EJ policies to lay out commitments to broad EJ goals. While review-focused ordinances were typically limited to new development applications, some policies found creative ways to tackle existing land uses that contribute to cumulative burdens by phasing out incompatible land uses or imposing fees or restrictions on uses deemed harmful. Some municipalities used their public health codes to ensure protections from particular land uses that pose harm to EJ communities.

There are policies in this study that contain elements of more than one of these categories, in which case we catalogued them according to the most prominent policy feature. The six categories or types of policies included in this study are summarized in Table 1 below, and Table 2 lists all 40 policies according to these six typologies.

The category with the most policies is the “proac-

TABLE 1: POLICY TYPES	
1.	Bans on [new or expanded] unwanted land uses (7)
2.	General environmental justice policies (3)
3.	Reviews (7)
4.	Proactive planning (12)
5.	Targeting existing land uses (5)
6.	Public Health codes and policies (6)

“proactive planning” type, in which cities set out proactive plans, investments and goals aimed at advancing environmental justice. The policies in this category vary from innovative pilot programs targeting EJ communities like the Los Angeles Green Zones, to more traditional approaches like the addition of environmental justice elements to general plans. Other popular policy approaches include “bans” and “review processes,” which focus on proposed new developments that threaten to exacerbate environmental injustice and are often the source of fierce local land use conflicts. The policy types “targeting existing uses” and “public health codes” both attempt to address existing land uses through a variety of mechanisms including use restrictions, phase outs of incompatible or non-conforming uses, fees, targeted investments and institutional controls.

In some instances, municipalities or regions have

TABLE 2: NATIONAL SUMMARY OF LOCAL EJ LAND USE POLICIES

Bans (7)	General EJ Policies (3)	Reviews (7)	Proactive Planning (12)	Targeting Existing Land Uses (5)	Public Health Codes and Policies (6)
Baltimore, MD: Crude Oil Terminal Prohibition (2018) Ordinance No. 18.110.	Fulton County, GA: Environmental Justice Initiative (2010).	Fulton County, GA: Amendment to the 1996 Zoning Resolution (2004).	Fulton County, GA: 2035 Fulton County Comprehensive Plan	Huntington Park, CA: Zoning Code, Title 9, Planning and Zoning Regulations (2001).	Denver, CO: Rules & Regulations Governing Nuisance Odors
Chicago, IL: 17-9-0017-B Coke and Coal Bulk Material Uses (2014)	New York, NY: Local Laws No. 60 and 64 (2017).	Camden City, NJ: Sustainability Ordinance (2015).	National City, CA: Health and EJ Element (2012).	National City, CA: Amortization Ordinance (2006).	Chicago, IL: Final Rules for the Control of Emissions from the Handling and Storage of Bulk Material Piles (2014).
Chicago, IL: Code 17-9-0117-D Manganese-bearing Material Operation Uses (2018)	San Francisco, CA: EJ Program (2000).	San Francisco, CA: Ord No. 282-08, Conditional Use Permits for Power Plants (2008).	San Francisco, CA: Res No. 827-02, Electricity Resource Plan (2002).	San Francisco, CA: Public Utility Commission: Resolution No.09-0170 Environmental Justice Policy (2009).	San Francisco, CA: Health Code Article 38 to Install Enhanced Ventilation for buildings near roadways (2014).
Oakland, CA: Ban on Storage and Handling Coal and Coke Products (2016).		* Cincinnati, OH: EJ Ordinance (2009)	Minneapolis, MN: City Council Resolution Designating Green Zones (2017).	Minneapolis, MN: Amendment to Pollution Control Annual Registration (2016).	Erie, CO: Odor Ordinance Ord-17-250 (2017).
Portland, OR: Fossil Fuel Terminal Zoning Amendments (2016). Ordinance No. 188142.		Newark, NJ: Environmental Justice and Cumulative Impacts Ordinance (2016).	Washington, D.C.: EJ Amendments to 2006 Comprehensive Plan (2011).	Washington, D.C.: Dept. Energy & Environment Office of Enforcement and EJ (2009).	Richmond, CA: Requiring Enclosure of Coal and Petroleum Coke Storage and Transfer Facilities Ordinance (2018).
Whatcom County, WA: Interim Ordinance Imposing a Moratorium on unrefined fossil fuel (2017).		New Jersey EJ Alliance: Model Environmental Justice Municipal Ordinance (2012).	Los Angeles, CA: Clean Up Green Up Ordinance: No. 184248 (2016).		Detroit, MI: Amendment to Chapter 22 City Code, Regulating Bulk Materials (2017).
Seattle, WA: Resolution Opposing All New Fossil Fuel Infrastructure (2017).		Boston University: Model EJ Ordinance (2017).	Los Angeles, CA: Building standards Ord. 184245 (2016).		
			Los Angeles County: Green Zones Program (2015).		
		Seattle Public Utility: Environmental Justice and Service Equity Division (2005).			
		Austin, TX: East Austin Overlay District (1997).			
		Eugene, OR: Envision Eugene Development Plan (2013).			
		Commerce, CA Green Zones Policy (2013)			

* Denotes ordinance that was subsequently repealed

adopted several types of EJ-related policies aimed at different uses or issued by different entities. We categorized each policy separately; for example San Francisco (4), Los Angeles (2), and Chicago (3) each have several EJ related policies represented in this study.

Included in this review are guidance documents issued by state entities that specifically consider municipal land use tools to address EJ, as well as two model ordinances that were used to inform municipal policy making. These guidance and model documents provide useful insights for cities seeking to adopt specific land use strategies.

The following section describes a handful of the policies from each of the six typologies. These descriptions offer insights into (1) key elements of the policies themselves and (2) the process by which the policies were initiated, enacted, and implemented. The selection of this subsets of policies was based on the availability of information pertaining to the policy process as well as its representativeness or innovativeness. For descriptions of each policy and links to source materials, please refer to Appendix A.

Strategy 1: Bans

One of the most direct ways to mitigate negative impacts on environmental justice communities is to institute an outright prohibition or ban on specific land uses or industries deemed harmful to public health and the environment. The right of communities to say No to unwanted, noxious land uses continues to be a catalyst for environmental justice struggles across the globe.³⁰ The ability to resist industry proposals at the local level often runs into significant opposition, particularly in municipalities seeking to maximize their taxable properties and economic development opportunities. In communities where land values are already depressed and where there are existing concentrations of industrial users on land zoned for that purpose, the conditions are ripe for disproportionate concentrations of polluting land uses.

Objection to locally unwanted land uses (LULUs) was initially derided by planners and government entities as a parochial expression of “not in my backyard” (NIMBY) sentiments by residents seeking to selfishly guard their property values. But the

contestations over LULUs in environmental justice communities take on a wholly different meaning in the context of structural racism, patterns of uneven development and cumulative, disproportionate impacts. The right to resist these harmful land uses exerts pressure on the racist formations underlying industrial development and the profit-seeking goals of industries that benefit at the expense of EJ communities.³¹

There are several ways for municipalities to prohibit undesirable land uses under their general powers to protect human health and quality of life. A municipality’s existing zoning code may be amended to identify those uses it deems incompatible within a particular zone or pass a stand-alone prohibition of particular uses it deems undesirable. There are many examples of municipalities adopting bans or prohibitions intended to improve environmental conditions or protect public health and welfare. For the purposes of this study, only those bans or prohibitions involving environmental justice communities or driven by explicit concerns about environmental injustice were included.

Total bans of particular categories of uses can sometimes be challenged in court by industries or overturned by states based on assertions that cities are preempted in regulating certain industries by state law; that the municipality’s ban interferes with interstate commerce; or that the ban represents a “taking” of property, which then requires cities to compensate industries for the loss of economic value on their property. In many cases where cities have attempted to ban fossil fuel-related industries through their public nuisance codes, industries have mounted challenges using these arguments.³²

The vast majority of the policies under the category of bans focus on the processing, storage, or transport of fossil fuels. The past two decades have seen the marked expansion of domestic fossil fuel infrastructure due to increased natural gas fracking as well as processing of heavier, dirtier forms of crude oil and increased exports of coal and petroleum coke. In cities like Portland, Oregon and Baltimore, environmental justice community concerns over the expansion of fossil fuel infrastructure offer some useful insight into the ways in which a city’s zoning code can be modified to curb unwanted uses.

Seattle, Portland, Baltimore, Chicago, and Oakland

TABLE 3: BANS

City	Year	Policy Description
Chicago, IL	2014	The Coke & Coal Bulk Material Uses Ordinance, Chapter 17-9-0117-B , prohibits the development or expansion of petroleum coke and coal facilities in the City of Chicago.
	2018	The Manganese-bearing Material Operation Uses Ordinance bans new manganese handling facilities from opening and existing facilities from expanding.
Portland, OR	2016	The Fossil Fuel Terminal Zoning Amendments prohibit new Bulk Fossil Fuel Terminals in all base zones within the City of Portland.
Oakland, CA	2016	Ordinance 13385 banned the storage, loading unloading, stockpiling transloading and handling of coal and coke based on health and safety concerns associated with coal. The ordinance was since repealed.
Seattle, WA	2017	Resolution 31757 affirms the City of Seattle’s commitment to meet or exceed goals established in the Paris Climate Agreement and calls upon state and city entities to advance climate change related goals.
Whatcom County, WA	2017	Interim Ordinance Imposing a Moratorium on unrefined fossil fuel prohibits the acceptance and processing of applications and permits for new or expanded facilities in the Cherry Point Urban Growth Area of which the primary purpose would be the shipment of unrefined fossil fuels not to be processed at Cherry Point.
Baltimore, MD	2018	The Crude Oil Terminal Prohibition Ordinance 18.110 bans new or expanded crude oil terminals in the City of Baltimore by repealing and re-ordinating, with amendments Article 32- Zoning Section(s)1-218 and adding Article 32 Zoning Section(s) 1-304(v-1) of Baltimore City Code.

have passed ordinances that pertained specifically to the banning of fossil fuel storage and infrastructure expansion. Successful ordinances limiting the expansion, proximity and size of these operations were often contested heavily by the fossil fuel industries seeking to locate or expand operations in these cities. The successful passage of these bills even in the face of powerful industry opposition reflects the power of local nuisance laws and residents who marshalled public support for the bans. The following in-depth description of Baltimore’s ordinance, a ban on the expansion and further incursion of fossil fuel-related industries in the city, is representative of the kinds of bans that many of the other cities in this category passed.

Baltimore, Maryland

In 1910, Baltimore was the first American city to pass a residential segregation ordinance.³³ The city strictly enforced the ordinance, which divided neighborhoods by race, and immediately began evicting those who resided on a block with a 50 percent or greater population of a different race. In response to the Supreme Court deeming racial segregation in housing unconstitutional in 1917, Baltimore used other routes to exclude people of color from the financial benefits of homeownership, laying a foundation for the great racial disparities that persist today in the city.

Today in Maryland, low-income communities and communities of color face higher cancer risks from hazardous air pollutants than more well-off areas, and in the city of Baltimore, the number of children afflicted with asthma is twice the national average.

^{34, 35} Years of racial zoning policies and practices have helped to concentrate environmental hazards in communities of color. In 2013, a Massachusetts Institute of Technology study found that 113 people per 100,000 Maryland residents die as a result of emissions from car and truck traffic, trains and ships, commercial heating systems, and industrial smokestacks.³⁶ This same study also showed that Baltimore has the highest rate of deaths caused by air pollution of any major US city, and its residents are disproportionately impacted by the fossil fuel infrastructure concentrated in the city.

Baltimore hosts two crude oil export terminals that shipped more than 100 million gallons of crude oil through the city in 2013 and 2014. According to StandEarth, about 165,000 Baltimore residents live within a few yards of rail tracks serving crude oil trains and terminals, putting them in the “blast zone” if there were to be a crude oil explosion.³⁷ The knowledge of this public safety threat brought a coalition of community members, activists, and organizers together to campaign against crude oil trains in Baltimore’s most overburdened neighborhoods.

In 2014, Curtis Bay residents began organizing to fight a crude oil terminal proposed by Targa Terminals located in the Fairfield area of South Baltimore.³⁸ In 2016, Targa Terminals officially withdrew its application for the terminal due in part to resident opposition and legal challenges. After fighting off this crude oil terminal, the group first pushed for a study of the impacts of crude oil trains in the city. When this study bill was rejected by the city council, the coalition began to advocate for a more

aggressive approach to future proposals, arguing for the passage of a bill that would ban these facilities outright. Inspired by similar bans on the West coast, activists and residents in Baltimore sought to limit the expansion of crude oil infrastructure in that city—using local zoning codes to ban specific fossil fuel infrastructure. In 2018, the City of Baltimore officially became the first City on the eastern seaboard to pass a ban on new crude oil terminals.

The ban in Baltimore was the product of robust community activism over four years with a coalition of organizations that included local neighborhood groups like the Westport Neighborhood Association and national groups with local chapters like Clean Water Action. This bill was fueled by the organizing by environmental justice communities who saw the link between fossil fuel infrastructure and the legacy of residential, racial segregation. As Jennifer Kunze, an organizer with Clean Water Action, stated: “*Baltimore’s history of racist housing policy and redlining helped make this possible, and we still see the effects of it today in who is most exposed to environmental hazards.*”³⁹

In March 2018, the Baltimore City Council passed a ban on the creation or expansion of crude oil terminals in the city.⁴⁰ Federal law limits municipalities’ regulation of commercial rail traffic, so Baltimore used its jurisdiction over land use and zoning to ban the expansion of fossil fuel infrastructure in the city. Baltimore’s Crude Oil Terminal Prohibition Ordinance 18.110 is a zoning ordinance that bans new or expanded crude oil terminals by rail in the city by repealing and re-ordaining Article 32-Zoning Section(s) 1-218 and adding Article 32-Zoning Section(s) 1-304 and 1-304(v-2) of the Baltimore City Code. The zoning ordinance adds crude oil terminals to a running list of prohibited facilities in Baltimore, which includes: incinerators, junk or scrap storage

and scrapyards, nuclear power plants, solid waste sanitary landfills, storage on barges, belt conveyor systems used for the transfer of materials, and vehicle dismantling facilities.

Strategy 2: Environmental Justice Policies and Programs

Like state governments, municipalities can establish broad policies and programs with the purpose of furthering environmental justice, with a particular focus on land use policies. In this category, there are three jurisdictions with broad environmental justice policies or programs: New York City, San Francisco, and Fulton County, Georgia. Again, it is not surprising that these areas adopted environmental justice laws; they are all home to longstanding and vibrant environmental justice organizations and communities. Each of these cases provides a model for how cities or county governments can adopt broad ranging policies.

In 2017, New York City adopted legislation amending its Administrative Code to establish an Interagency Working Group and to design an environmental justice study. San Francisco instituted an Environmental Justice Program in 2000, with city staff and resources earmarked for a variety of programs, including a Community Health Plan, green space creation, and more than \$12 million in community grants to nonprofit groups serving environmental justice areas.⁴¹

In Fulton County, Georgia, the Board of Commissioners voted to establish the Fulton County Environmental Justice Initiative in 2010. The county approved funding for an Environmental Health Planner position and began to collaborate with the Department of Health and Wellness on strategies to

TABLE 4: Environmental Justice Policies and Programs

City	Year	Policy Description
San Francisco, CA	2000	The SF EJ Program award grants to local community projects and nonprofits and addresses health inequities, air quality, and renewable and efficient energy.
Fulton County, GA	2010	The Fulton County EJ initiative activities include community education/engagement, and partnership development, and policy development. The EJ initiative has resulted in the establishment of policies that require the consideration of the health impact on minority and low-income populations in the decision-making process for land use planning and zoning decisions.
New York City, NY	2017	New York’s Local Law 60 requires a study of environmental justice areas and establishes an environmental justice portal. Local Law 64 establishes an Interagency Working Group to develop an Environmental Justice Plan and provide guidance to agencies available data relating to environmental justice factors.

address public health issues using local tools (e.g., transportation, land use, solid waste disposal, water contamination, laws, ordinances, policies, and zoning).⁴² The Initiative has led to policy and planning changes such as an Environmental Justice Amendment to the Zoning Resolution in 2013, the Pipeline Amendment to the Zoning Resolution in 2014, and environmental justice content explicitly written into Fulton County’s Comprehensive Plan 2035.⁴³ While the county does not have jurisdiction over the city of Atlanta, its efforts may impact surrounding EJ areas due to interlinked economic and environmental conditions.

A closer look at New York City’s environmental justice laws offers useful insights into how cities can begin to institutionalize their commitment to environmental justice across multiple functions and agencies.

New York City, New York

New York City’s environmental justice laws have their origins in the long history of EJ advocacy led by some of the nation’s founding environmental justice organizations. These groups helped to push for a comprehensive approach to EJ across the city that would institutionalize and sustain the gains that many communities fought for over decades in places like the South Bronx, Harlem and Sunset Park. In April 2017, the New York City Council passed the Environmental Justice Policy Bill (INT No. 886-A) along with the Environmental Justice Study Bill (INT. No. 359).⁴⁴ Under the latter bill, officials created an interactive map of environmental justice communities and made it publicly available through an online portal.⁴⁵

Local Law 64 defines an “environmental justice area” as “a low-income community located in the city or a minority community located in the city.” “Low income,” in turn, is defined as “A census block group, or contiguous area with multiple census block groups, having a low-income population equal to or greater than 23.59 percent of the total population of such block group or groups.” And “minority community” is defined as “A census block group, or contiguous area with multiple census block groups, having a minority population equal to or greater than 51.1 percent of the total population of such block group or groups.”⁴⁶

The Environmental Justice Policy Bill amended Ti-

tle 3 of the city’s Administrative Code by adding a new Chapter 10 titled “Environmental Justice.” It established an interagency working group made up of representatives from city agencies, and an environmental justice advisory board made up of environmental justice experts appointed by city officials. The interagency working group has the responsibility of providing guidance to agencies on available data relating to environmental quality and environmental justice concerns and establishing an Environmental Justice Plan that guides the city and its agencies in incorporating environmental justice into citywide and agency-specific decision making.

Citywide initiatives may include projects that address environmental justice, measures for promoting equitable distribution of and access to environmental benefits, methods to ensure transparency in the city’s approach to environmental justice, and ways to advance environmental justice and public participation in decision-making processes. Agency-specific initiatives may include, but are not limited to, capital projects, agency enforcement actions, measures to promote public participation and transparency, and/or amendments to laws or rules.

Strategy 3: Review Processes

Environmental reviews can be a powerful way for municipalities to regulate development in their jurisdictions. Most municipalities already have a process in place to review proposals for new developments or expansion projects through their planning and zoning boards. The policies in this category add another layer of review focused specifically on the impact of development proposals on environmental justice communities. The purpose of many of these review policies is to ensure that new noxious developments do not exacerbate disproportionate and cumulative impacts in already overburdened areas. In some cases, the ordinances not only give municipalities the ability to review the impacts of new developments, but also seek to ensure that cities have the express authority to reject these applications or require changes that mitigate their impacts. Of the seven policies in this category, two are model ordinances developed to serve as templates for municipalities seeking to adopt an environmental review process that can address or mitigate environmental justice concerns.

Cincinnati passed an environmental justice ordi-

TABLE 5: Reviews

City	Year	Policy Description
Fulton County, GA	2004	An amendment to the 1996 Zoning Resolution was passed, requiring Environmental Impact Reports under Fulton County Municipal Code Section 28.3. Technical Evaluations and Reports. Under this zoning resolution, all rezoning and/or use permit petitions are required to include an Environmental Site Analysis and all industrial zoning applications are required to complete an Environmental Impact Report.
San Francisco, CA	2008	Ord No. 282-08 requires that in order for power plants to be developed in manufacturing 1 and 2 zoning districts, developers must obtain conditional use authorization from the planning or zoning board.
*Cincinnati, OH	2009	Cincinnati's Environmental Justice Ordinance requires any proposed project in Cincinnati to have an environmental justice permit administered by the Cincinnati Office of Environmental Quality to operate
New Jersey Environmental Justice Alliance	2012	NJEJA's Model Municipal Ordinance is a guide for municipalities to adopt or amend local laws to protect environmental and public health and includes a review process and tools for measuring progress, evaluating new projects, monitoring existing facilities, and taking corrective measures.
Camden, NJ	2015	Camden City's Sustainability Ordinance requires all new developments or modifications to submit an Environmental Impact and Benefits Assessment with their applications which will be reviewed by the Planning Board and Zoning Board of Adjustment and considered in the Board's decision making process.
Newark, NJ	2016	Newark's Cumulative Impacts Ordinance requires applicants for commercial or industrial developments within Newark to reference the city's ERI and prepare and submit an environmental checklist with the development application.
Boston University	2017	Boston University's Model EJ Ordinance uses an Environmental Justice Community Impact Assessment as its environmental review process which is triggered by whether a proposed project is expected to result in an increase in impact to the community in which that Proposed Project is located.

nance, later repealed, requiring that each new development application in the city include a list of substances expected to be emitted or stored by the facility and an accident risk analysis. As with Camden's and Newark's ordinances, the review requirement in Cincinnati meant that new development applicants were required to submit detailed information about their projects' impacts on local communities.

Both Boston University and the New Jersey Environmental Justice Alliance (NJEJA) created model ordinances meant to be used as guides for the creation of municipal ordinances that promote environmental justice. The model ordinances take different approaches to environmental reviews. However, both explicitly state that in the event of an applicant's failure to submit a complete assessment, or if the assessment results in a burden that cannot be mitigated, the appropriate authority may dismiss or terminate the initiative without prejudice. These model ordinances provide ideal language that empowers cities to do what many EJ communities seek: deny developments deemed harmful.

Often, review-focused ordinances are the result of sustained struggles by communities challenging individual development applications one at a time without much success. Challenging applications before planning and zoning boards is extremely difficult under traditional processes that lack environmental justice requirements. If a development applicant conforms to the existing zoning of a mu-

nicipality, most boards will not deny the applicant. Even when applicants request zoning variances, boards may be reluctant to deny applications. This reluctance stems from the fact that cities often rely on these projects, particularly those undertaken by large industries, to provide economic development for the city. In some cases, the industries also have political influence that can sway boards to rule in their favor. Another source of difficulty relating to these review processes is that cities are sometimes not well equipped to determine whether a proposed development poses harm.

This combination of pressures means that the review ordinances in this category do not always reflect the stronger language of the model ordinances, particularly the outright rejection of developments deemed harmful. Whatever the difficulties, the ability to systematically tighten the review process for new development proposals can provide some relief to residents responding to the constant flow of noxious proposals in their communities. The additional information and public processes generated by these reviews can increase resident awareness and involvement and city accountability. The following profiles of Cincinnati's and Newark's environmental review processes show how cities can structure reviews to create a higher bar for developments, as well as a cautionary note regarding the necessary resources for running such programs.

Cincinnati, Ohio

In 2009, Cincinnati passed an Environmental Justice Ordinance following many years of advocacy by the local environmental justice organization Communities United for Action (CUA). When CUA wrote and presented the original draft of the environmental justice ordinance in 2005, Vice Mayor David Crowley brought different interest groups together to revise the draft and pushed the legislation through different versions and amendments.⁴⁷ The ordinance passed in June 2009 by a 5-4 margin. When it passed, it was one of only a few examples of a local ordinance that codified the right of cities to reject development applicants on the basis of environmental justice.⁴⁸

The Environmental Justice Ordinance added Chapter 1041, “Environmental Justice,” to Title X of the Environmental Code of the Cincinnati Municipal Code.⁴⁹ The purpose of the ordinance was “to provide Environmental Justice to all citizens of Cincinnati by insuring that Proposed Projects will not have a material cumulative adverse impact on the communities in which they are located.”⁵⁰ The ordinance required any industry wanting to operate or significantly expand its operations in Cincinnati to have an environmental justice permit.⁵¹ The ordinance also created an Air Toxics Risk Assessment Review and air permitting process to be administered by the Cincinnati Office of Environmental Quality. The Office of Environmental Quality was required to collect pollution data and give notice to the public of all projects subject to the provisions of the ordinance. The ordinance focused on stationary sources of air pollution such as power plants and other large industrial facilities, and established that the city’s police power could be used to enforce regulations that protect citizens from adverse cumulative health and environmental impacts.

The ordinance created the role of an EJ Examiner in the Office of Environmental Quality to review permit applications and gave this person the power to reject permit requests for any project that met the definition for a public nuisance.⁵² The ordinance offered a detailed definition of what constituted a “public nuisance,” stating “A Proposed Project shall be considered a public nuisance if the EJ Examiner finds there is a reasonable basis to conclude that the Proposed Project will present an excess cancer risk, excess risk of acute health effects, or excess risk in the event of an accident.”⁵³ The EJ Examiner was to consider a variety of factors, including the number of pollution sources near the community

and their proximity to it; total toxic emissions; total criteria air pollutant emissions; traffic routes and major roads; parks and green belts; lead contamination and number of solid waste management and/or transfer facilities; Superfund sites; and hazardous waste sites.

Further, the ordinance stipulated that “the Office of Environmental Quality shall publish bi-annual reports identifying statistical pollution data for the entire City, including, to the extent available, a breakdown of such data by neighborhood.” It also required that the EJ Examiner review the public nuisance potential of a proposed project by examining several factors related to cumulative impacts of the project in the surrounding community, including: demographics, pollution burden, public health data, sensitive receptors, air pollutants, cancer risks, and risk modeling submitted by the applicant.”⁵⁴

The ordinance was fiercely opposed by many businesses, and in particular the Cincinnati USA Regional Chamber of Commerce, which created an Environmental Justice Task Force solely to conduct studies regarding the financial impact and economic burdens the ordinance would place on its members. Although the ordinance stated that an application fee could not exceed \$1,000, many businesses saw the ordinance as a financial burden.

In the end, the city did not implement the Environmental Justice Ordinance due to a budget deficit. Without sufficient funding or staffing, the Environmental Justice Ordinance became unenforceable, and in 2010 it was repealed. The city could not afford to implement the environmental justice ordinance due to a budget deficit.⁵⁵ What remains of the ordinance is a public notification process that informs residents within one mile of proposed projects and makes project information accessible on the city’s website. The public may submit comments on a proposed project, and such comments are sent to “the appropriate regulatory agency.” The public also has opportunities during city business hours to examine submitted information about a proposed project. The Cincinnati example provides useful insights into the challenges municipalities face due to budget constraints and industry challenges to aggressive review processes.

Newark, New Jersey

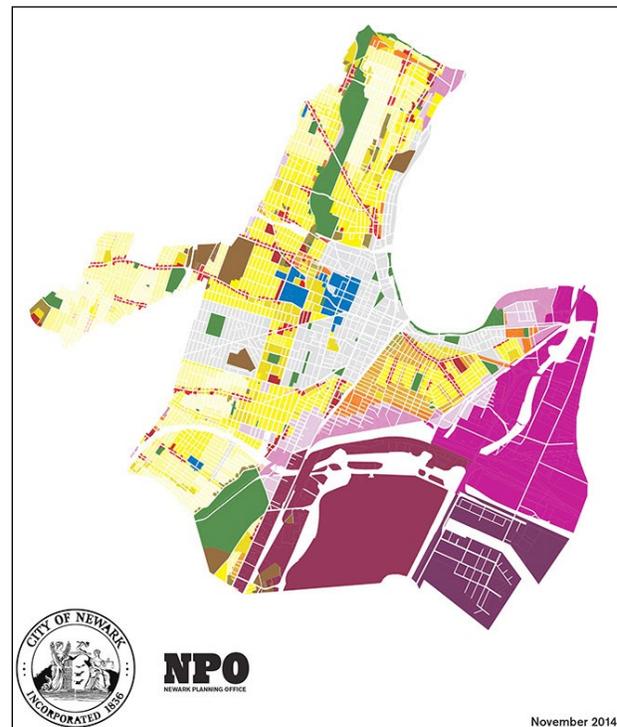
Newark has a long history of environmental justice activism as a result of the industrial legacy of polluting facilities and community response to this legacy. Permissive zoning, weak code enforcement, and residential racial segregation in the area led to the disproportionate siting of polluting facilities in low-income communities and communities of color. Although the state of New Jersey passed several executive orders beginning in the 1990s acknowledging the existence of environmental injustice, little regulatory reform followed to address the cumulative, disproportionate pollution burdens faced by EJ communities.

Frustrated by the lack of statewide action, advocates in the New Jersey Environmental Justice Alliance (NJEJA) set out to develop a model ordinance on cumulative impacts that cities could adopt as a way to protect communities from proposed new noxious facilities. The distinguishing characteristic of the model ordinance was that it included a provision granting a municipality the authority to explicitly reject development applications whose impacts could not be avoided or mitigated.⁵⁶ The model ordinance also set up an Office of Municipal Public Advocate to enforce implementation. These two important provisions were not included in the law that eventually passed in Newark, but the model ordinance still served as a useful foundation.⁵⁷

In 2013, the political climate changed after Mayor Cory Booker became a U.S. Senator and mayoral candidates publicly endorsed the adoption of an EJ ordinance. In 2014, Mayor Ras Baraka committed to the enactment of such an ordinance as part of his first 100 days in office. Newark's approach to environmental justice relied on a three-pronged approach that included: (1) incorporating environmental justice goals into the city's Master Plan and Sustainability Action Plan, (2) strengthening the existing zoning code to restrict or prohibit certain industrial uses, and (3) amending the development process to ensure the consideration of environmental justice and cumulative impacts when new developments were reviewed.

In 2015, Newark underwent a process to update its zoning code, which had not been updated since 1954. The updated zoning code included restrictions on the encroachment of residential development into industrial zones and created buffer areas between existing mixed industrial, residential, and

Figure 2. [City of Newark, New Jersey Zoning map](#)



heavy industrial areas. Most important, it included a new, more expansive list of prohibited and conditional land uses in the category of “Manufacturing, Heavy,” typically allowed only in Industrial Zone 3 reserved for the heaviest industries. The list of prohibited facilities was developed in consultation with EJ advocates like the Ironbound Community Corporation.⁵⁸ That same year, EJ advocates proposed an environmental justice and cumulative impacts ordinance and worked with city staff and attorneys to produce a final draft.

In 2016, Newark passed the Environmental Justice and Cumulative Impacts Ordinance, which amended Title 41 of the city's zoning regulations.⁵⁹ This ordinance requires all industrial or commercial development applicants with an environmental permit from the state, federal, or county regulating agency to submit an Environmental Justice Checklist. Development applicants are required to reference the city's Natural Resource Inventory as a baseline guide to assess cumulative impacts in the areas where they propose to develop. Once the development applicant submits the checklist, the application goes to the Environmental Commission for review and recommendations are then sent to the planning or zoning board. The ordinance does not mandate the denial of an application based solely on a negative determination from a review of the EJ checklist, which

was a key feature of the NJEJA model ordinance. The zoning board can use the EJ checklist and the Environmental Commission’s recommendations to help weigh the benefits and burdens of those proposals that seek variance approvals from the City. The ordinance has allowed increased public oversight and review of contested proposals in the city and has raised the requirements of the city agencies to participate in more thorough reviews of these proposals.

Strategy 4: Proactive Planning

Planning is a way that cities and other localities can envision future development and proactively work towards that vision. This may include a comprehensive plan, overlay zones, and/or green zones that explicitly aim to address environmental justice. This approach to environmental justice focuses on future development and is a way that cities can guide their growth, institute new standards, target investment, or attract beneficial developments. The 12 policies

listed below reflect a variety of approaches to proactive planning that cities, counties and regional entities can adopt.

Eugene, National City, Washington, D.C. and Fulton County have all used their comprehensive plans or master plans to set forth goals for achieving environmental justice. The comprehensive plan, also known as a general plan, master plan or land use plan, is a document meant to guide the future actions of a community and a tool for land use planning which can guide future growth.⁶⁰ States can incentivize comprehensive planning by making a financial package available to municipalities to carry out certain qualifying land use plans.

In Seattle, the Public Utility Agency, an agency with significant land assets in EJ communities, has sought to make targeted investments and commitments to mitigate pollution in EJ areas. Similarly, localities can use city planning to create more environmen-

TABLE 6: Proactive Planning

City	Year	Policy Description
Austin, TX	1997	East Austin Overlay District allows for future land development to be more consistent with its existing uses. It’s meant to minimize incompatible uses and provide an extensive notification mechanism to residents whenever a new use is proposed that is more intense than commercial use.
San Francisco	2002	Res No. 827-02 adopts the Electricity Resources Plan as a policy guide for electric energy specific actions & use.
Seattle Public Utility	2005	Environmental Justice and Service Equity Division supports the utility in realizing the goals of the Race and Social Justice Initiative.
Washington, D.C.	2011	EJ Amendments to 2006 Comprehensive Plan include a section entitled “Achieving Environmental Justice” with policies meant to protect communities from disproportionate exposure to environmental hazards as the city grows.
National City, CA	2012	The Health and EJ Element , created during a Comprehensive Plan Update, establishes environmental justice goals and policies regarding respiratory health and air quality, physical activity, healthy foods, access to health care, and contaminants in the home. The purpose of the added element is to identify public health risks and prioritize environmental justice issues.
Eugene, OR	2013	Envision Eugene Development Plan serves as the basic guiding policy document for land use planning in Eugene’s Urban Growth Boundary.
Los Angeles, CA	2016	Clean Up Green Up Ordinance: No. 184248 authorizes the establishment of a Clean Up Green Up Supplemental Use District within Boyle Heights, Pacoima/Sun Valley, and Wilmington.
		Building standards Ord. 184245 implements building standards and requirements to address cumulative impacts resulting from incompatible land use patterns within the city.
Fulton County, GA	2016	The 2035 Fulton County Comprehensive Plan is a policy guide for decisions about the development of Unincorporated Fulton County for years 2015-2035 and includes Environmental Justice Element which contains strategies for further incorporating health and the environment into decision-making processes.
Los Angeles County	2015	Green Zones Program seeks to enhance public health and land use compatibility in the unincorporated communities that bear a disproportionate pollution burden. Includes the development of a land use policy, community engagement, toxic hotspots map and prevention & mitigation efforts.
Minneapolis, MN	2017	City Council Resolution Designating Green Zones establishes a Green Zones Workgroup to develop data-driven recommendations with criteria for Green Zone designation, goals and strategies aimed at improving health and sustainable economic development.
Commerce, CA	2013	Green Zones Policy The policy establishes the green zones working group and adopts the 3 pillars of the zone (reduction, revitalization, reinvest). The group drafted an ordinance amending title 19 “zoning” of the Commerce municipal code to limit or prohibit certain industrial uses in proximity to residential and other sensitive uses.

tal equity by making development criteria stricter in areas that need protection from the cumulative impacts. Overlay zones or special use districts create a special zoning district over existing base zones with additional regulations or incentives that guide development or protect a specific resource.⁶¹ The City of East Austin uses an overlay zone to reduce the concentration of industrial activity near residential areas and mitigate the impacts of existing industrial pollution.

Going yet a step further than controlling cumulative pollution to affirmatively encouraging better economic development, Los Angeles and similar California communities have pioneered an innovative approach to environmental justice by designing a special “green zone” designation for EJ communities. Green Zones are areas designated for improved public health and economic development through the prevention and reduction of existing burdens, targeting investments, attracting greener developments and the involvement of local residents. Typically, this process includes greater regulation of polluting land uses, community decision-making, and investment in local economic development with an emphasis on green businesses and local employment opportunities.⁶² Green Zones are place-specific and customizable, but the community decision-making aspects, tools for designation, and steps for implementation are replicable. While this concept grew out of the environmental justice movement in California, and was adopted by the City of Los Angeles, Commerce and the County of Los Angeles, other cities like Minneapolis also pursued this approach, inspired by the work of communities in California. The following descriptions of the Los Angeles and Minneapolis processes and resulting ordinances demonstrate the extensive ground work done in support of these approaches, in particular in the case of Los Angeles through robust community organizing and strong partnerships.

Los Angeles, California

The Los Angeles Clean Up Green Up Ordinance originated in the concept of Green Zones developed by environmental justice organizations over the span of decade leading up to passage of the city’s ordinance. The purpose of Green Zones is to improve environmental and economic conditions in environmental justice communities through the prevention of new toxic facilities, mitigation of existing pollution burdens, and prioritizing local resident involve-

ment and investments that benefit communities.⁶³ Environmental justice organizations like East Yard Communities for Environmental Justice, Communities for a Better Environment and the California Environmental Justice Alliance are among the progenitors and experts in the development, implementation and advancement of the Green Zones framework.

In California, Green Zones emerged from environmental justice activists who sought relief from the constant battles over facility placement and pollution concentrated in their communities. Despite the development of a cumulative impacts screening tool (CalEnviroScreen) and more attention to environmental justice concerns in California than elsewhere, little progress was made in terms of mitigating existing toxic hot spots in the state. Many EJ activists felt that the technical nature of environmental regulations, industry opposition and complexity of regulating cumulative impacts at the state level meant that local planning avenues were more viable for addressing the concerns of EJ communities proactively.⁶⁴ The approach works by identifying highly impacted communities as green zones, directing benefits and programs into the areas, and giving these green zones first priority in terms of resources, regulatory attention, and green business development.⁶⁵

The California Environmental Justice Alliance’s 2015 *Green Zones Across California Report* logs 13 organizations in 11 environmental justice communities that are using the Green Zones approach. Many of these organizations were involved in the early development of the Green Zones framework that was the basis for the LA Clean Up Green Up Ordinance. Other jurisdictions, like San Francisco, Richmond, and the City Commerce as well as the County of Los Angeles have also adapted the concept to apply to their local conditions.

In 1996, environmental justice advocates from the non-profit Communities for a Better Environment and the philanthropic organization Liberty Hill Foundation convened the Los Angeles Collaborative for Environmental Health and Justice.⁶⁶ The Collaborative facilitated a process called “ground-truthing” in which residents collected data to document the environmental hazards in their communities. In the summer of 2008, workshops were held to help community members through verifying emissions sources against government databases and then mapping

where pollution sources and sensitive uses were missing from the data. The ground-truthing data informed a report titled “Hidden Hazards,” which highlighted conditions on the ground in EJ communities and documented underreported pollution in these neighborhoods.⁶⁷ The report made recommendations to the city of Los Angeles, one of which was the creation of Supplemental Use Districts in toxic hotspots with standards and guidelines for land use development.

In May 2012, the Collaborative sent a letter urging the Los Angeles City Council to vote in favor of the Clean Up Green Up Campaign on behalf of the 200 organization and businesses that endorsed the policy.⁶⁸ The Clean Up Green Up motion, CF 11-0112, and its companion motion, CF 11-0112-S1, would authorize the Department of City Planning to begin working on the Clean Up Green Up pilot policy and accept \$100,000 in matching funds. The planning department’s report recommended a two-year work plan in which research would be conducted to designate roles and responsibilities to regional, state, and federal organizations that regulate industrial land uses.⁶⁹ An ombudsman would be the designated position to lead business outreach and coordinate interaction between inspection and enforcement entities. The report also recommended exploring the possibility of a local fee-based inspection and enforcement program in addition to other potential revenue sources to minimize the impact this initiative would have on the city’s General Fund.⁷⁰

On June 19, 2013, the City Council approved the Clean Up Green Up Trust Fund Ordinance, which allowed the city to disperse funds coming from private donations, philanthropy, and other contributions for the development and implementation of Clean Up and Green Up strategies. This approval of funds directed the Department of City Planning to implement the Clean Up Green Up pilot in two phases. The first phase consisted of preliminary research, mapping and analysis, and was expected to take a year to complete. Phase 1 investigated what inspection and enforcement efforts, funding, fees, and programs currently existed and identified potential land use-based performance standards and funding opportunities. The second phase established the Ombudsman Program to orchestrate and prepare a strategy for the business sector.

In 2016, the Clean Up Green Up Ordinance (Or-

dinance No. 184246) (“CUGU”) amended the Los Angeles Municipal Code Section 1. Subsection D of Section 12.04 of Article 2 of Chapter 1 to include a Clean Up Green Up Overlay District within Boyle Heights, Pacoima/Sun Valley, and Wilmington. The policy takes a pilot approach in order to evaluate the effectiveness of the CUGU framework before applying it to all of Los Angeles.⁷¹ One section sets standards for the establishment of new Clean Up Green Up Districts in order to reduce cumulative health impacts. The development regulations cover site planning, enclosure, fencing, distancing requirements, building height, yard setbacks, landscaping, parking design, noise, and storage of merchandise. The ordinance makes use of a Supplemental Use District, a zoning tool that allows for more stringent development standards to apply to certain new construction, additions to major improvement projects, and changes of use.⁷²

To address the most relevant issues of each pilot area, adjustments were made to the regulations. For example, in Pacoima, changes were made to the solid waste landfill surface mining notifications. The building code was also changed to require higher air filter efficiency next to freeways, addressing some of the key areas of concern related to indoor air quality. Community groups also wanted to focus on the auto body industry and a distancing requirement was adopted which prohibits new or change of use hazardous automobile-related developments within 500 feet of a residential zone.⁷³

The ordinance establishes an ombudsman position to help local business owners navigate the new rules and provides business owners incentives to implement better practices such as energy efficiency. The city of Los Angeles made its business assistance program available to local businesses in the pilot communities, offering trainings, tax credits, rebates, loans and grants.⁷⁴ While certain businesses and industry associations pushed back on the passage of the CUGU ordinance, many local small-business allies endorsed the initiative, and were on board with changing business practices. For them, the appeal was having the support of the ombudsman.⁷⁵

Direct and indirect impacts have resulted from the adoption of the CUGU ordinance. A sustained campaign - led by local organizations and affected residents - was key to succeeding in the adoption of this policy.⁷⁶

Minneapolis, Minnesota

land uses that disproportionately impact EJ communities do have a few mechanisms available to them through targeted mitigation efforts like the implementation of buffer zones, the phasing out of noxious land uses that no longer conform to the existing code, or mitigation of hazards through code enforcement. Targeting existing land uses encompasses some of the policies covered under the categories of Bans and Public Health Approaches included in this study. For example, cities can, in some instances, ban existing uses if the property owners are able to utilize their property for other, more compatible and conforming uses. In some instances, cities can adopt moratoria on uses until proper public health or other regulations can be implemented. In this section, we review the policies adopted by National City, California; Minneapolis; the San Francisco Public Utilities Commission; Washington, D.C.; and Huntington Park, California, all of which are aimed at mitigating the existing disproportionate burdens faced by EJ communities

National City, California

National City's Amortization Ordinance is unique among the ordinances we reviewed in its approach to tackling existing noxious land uses. In general, unwanted nonconforming uses can be eliminated over time through local amortization laws. Such an approach negates the need for a local finding that the use constitutes a public nuisance and obtaining a court order to cease. National City, with a predominantly Latino population, has struggled for years with an excess of polluting industries due to mixed-use industrial and residential zoning. Homes

in this area are overburdened with nearby auto body shops, chrome plating shops, chemical supply houses, woodworking and painting companies, and diesel pollution from the nearby Port of San Diego.⁸² About 32,000 pounds of toxic air contaminants are released in the area annually, and asthma rates are disproportionately high.⁸³

At several City Council meetings and community workshops, community members expressed concerns about the impacts of these industries on their community. The community spent five years developing and advocating for the Westside Specific Plan, which was adopted in 2010. The plan addresses development and redevelopment patterns in the established area, calling for improved affordable housing and public transportation, pedestrian walkways, compatible land uses, and increased renewable energy. The Westside Specific Plan included the adoption of National City's Health and Environmental Justice Element in 2011, the first EJ element in California.

The Westside Specific Plan also created amortization guidelines for incompatible land uses, leading to the drafting of an amortization ordinance.⁸⁴ The local environmental justice organization, Environmental Health Coalition, spearheaded the effort to adopt this ordinance, and in 2006 National City passed the measure, Ordinance 18.108.230 Affirmative Termination by Amortization. The ordinance uses the legal process of amortization to terminate non-conforming land uses, i.e., uses that are no longer permitted under zoning regulations because of changes to those regulations.⁸⁵ In effect, it phases out industries

TABLE 7: Targeting Existing Land Uses

City	Year	Policy Description
Huntington, CA	2001	Huntington Park, California revised its zoning code for commercial/office/mixed-use zones to authorize imposing conditions in building/operating permits based on proximity to residential areas and the potential for adverse environmental impacts. The city focused on reducing diesel emissions after determining that they pose the most significant health risk for its residents.
National City, CA	2006	Amortization Ordinance Amortization is a process to terminate a nonconforming use after a period of time that is sufficient to allow the business to recover their investment in the use/business.
San Francisco Public Utilities Commission	2009	SFPU's Environmental Justice Policy states that its staff will develop training and environmental justice issues in conjunction with its other training efforts, expand workforce development strategies to include green job opportunities in EJ communities, identify and implement initiatives to avoid or eliminate disproportionate impacts of the utility's decision's and activities, and develop communication and participation strategies.
Washington, D.C.	2009	Energy & Environment Office of Enforcement and EJ ensures that all DC citizens receive equal protection under environmental laws and are provided meaningful opportunities to participate in environmental decision-making. DOEE enforces certain environmental laws like vehicle idling.
Minneapolis, MN	2016	Chapter 47- Energy and Air Pollution of Minneapolis Code of Ordinances is amended to include a Pollution Control Annual Registration requiring that all equipment that does or has the potential to impact the environment be registered with the city for a fee. This is a pollution impact fee that is administered by the city's public health department.

currently allowed to operate near sensitive use areas and sets up a process for the relocation of prioritized industries when the amortization period is triggered. After passage of the ordinance, National City began with identifying the non-conforming uses and collecting data from public records to assess them based on factors approved by the City Council. Non-conforming uses were ranked, and an amortization analysis was conducted on the top-ranked non-conforming uses.⁸⁶ Staff then recommended an amortization schedule for several non-conforming uses to the Planning Commission. The timeline for termination is based on several factors, including the cost of land and improvements, length of time the land use has existed, the adaptability of the land and improvements, the cost of moving elsewhere, whether the use is significantly non-conforming, compatibility with existing land use patterns and densities of the neighborhood, and threat to public health and safety.⁸⁷

Although adopted in 2006, the ordinance has rarely been invoked.⁸⁸ In December 2012, the city released a list of 137 businesses, in order of priority, that might fit the criteria for phasing out, using an EPA approved formula. Some businesses were able to change their practices or otherwise comply with the new zoning regulations in time, but two auto shops did not. In November 2013, the City Council approved and set a time frame for the phasing out of the two auto shop businesses.⁸⁹

Minneapolis, Minnesota

In early 2016, Minneapolis adopted the Pollution Control Annual Registration Fee (formerly the Pollution Control Annual Billing Fee). This is an annual registration for business owners, property owners, and landlords for equipment that creates or potentially creates pollution. The system was created to incentivize businesses and households to eliminate the use of outdated and hazardous equipment. The registration fee is mandatory and renewed annually. Those subject to the pollution control fee are non-residential properties and residential properties with four or more units where housing contains certain types of equipment and processes.⁹⁰ This type of pollution fee is a way that cities can incentivize the mitigation of existing pollution sources already located in their neighborhoods. This particular policy, because it is administered and implemented through the city's public health agency, overlaps with the policy category of Public Health Codes.

In April 2016, the city amended its License Fee Schedule to align fees to service, add fees for the amount of pollution emitted, and allow businesses that undertake voluntary emission-reduction projects to be temporarily exempt from fees.⁹¹ The structure was changed to charge polluters by emissions rather than by equipment. The fee target is the total dollar amount appropriated by the state legislature from the environmental fund to cover the costs of the Air Program. The adjusted fee target appropriations identified by the Minnesota legislature are divided by the total billable emissions from all facilities that submit an emission inventory in Minnesota combined. The fee is calculated using the most recent finalized inventory. The fee target is divided by the total number of tons of all (un-capped) billable pollutants listed in the most recently available annual emissions inventory of the facility. This calculation results in the dollar per ton fee that facilities pay. Option B registration permits and facilities emitting less than one-ton billable emissions pay a flat fee rate, and this amount is subtracted from the appropriation amount. Fees can be waived by reducing pollution.

According to the Mayor of Minneapolis, the change to the fee structure decreased emissions of criteria pollutants by 18,000 pounds and carbon output by six million pounds in its first year.⁹² Notably, registration for surface water protection from industry storm runoff was added as a requirement. Additionally, businesses that voluntarily undertake projects to reduce their emissions may receive temporary exemptions from the fee for a period of two to five years, depending on the amount of pollution they reduce.

The pollution fees pay for environmental work on polluted indoor and outdoor air, groundwater and surface waters, and land. The fees also help to pay for Minneapolis's Green Business Cost Share program, which provides funds for green business practices that focus reducing volatile organic compound emissions, particulate matter emissions, or other Hazardous Air Pollutants.

The pollution control fees funds are prioritized and targeted back into environmental justice communities within the Green Zones through higher percentage matches (20% citywide and 30% in Green Zones) on the Green Cost Share Program as well as higher project caps (\$20,000 citywide to \$30,000 in

Green Zones). Projects in the Green Zones have a higher priority for limited funding as well. The program includes specific outreach to these communities for both residential and commercial entities. The strategy saw 45% of projects taking place in the Green Zones in 2018 while the areas only contain 14% of the businesses. According to the City, the strategy is especially successful in attracting solar developers to these environmental justice communities.

Strategy 6: Public Health Codes and Policies

Cities have a special role to play in the protection of public health and safety. One of the ways that cities oversee public health is through the adoption of codes that enforce nuisance protections over things like noise, odor, dust and light. Prior to the passage of federal environmental laws like the Clean Air Act, many municipalities sought to curb these nuisances through public health codes that could shield residents from nearby industrial activities. Indeed, the Clean Air Act itself expressly recognizes the important role of local as well as state governments in addressing air pollution.⁹³ Municipalities may choose to adopt and enforce health codes to protect residents from various air pollutants that cause or aggravate health issues such as asthma.

While there are many public health codes adopted throughout the country, the policies featured in this section are primarily the result of efforts by EJ advocates to address public health impacts in their communities. Chicago, for example, adopted new public health codes to control activities that have

the potential to produce windborne dust particularly in EJ communities that are host to bulk storage facilities. San Francisco passed a new public health code article to make enhanced ventilation mandatory in buildings within an air pollution exposure zone specifically as a result of advocacy by residents in EJ communities in close proximity to highway infrastructure. Public health codes fall squarely under the police powers of cities, giving municipalities the authority to regulate nuisance conditions and protect public health.

San Francisco, California

In 2008, California State Senate Bill 375 was passed, directing the Air Resources Board to set targets for the reduction of greenhouse gas emissions. SB 375 emphasizes “smart growth” dense development near transit to reduce greenhouse gas emissions. To mitigate health impacts in such areas, the San Francisco Health Code Article 38, Enhanced Ventilation Required for Urban Infill Sensitive Use Developments was adopted. Enhanced ventilation systems are designed to protect against exposure to pollution in indoor spaces due to poor outdoor air quality in the surrounding area. Exposure to diesel exhaust, for example, is a recognized carcinogen based on studies showing an association between exposure to diesel exhaust and lung cancer.⁹⁴ Article 38 requires an air quality assessment and ventilation for certain urban infill residential developments and new residential construction projects in Air Pollutant Exposure Zones, areas exposed to greater concentrations of air pollutants due to their proximity to air pollution sources, including freeways.⁹⁵ Many of the EJ communities in California are close to highways and are thus disproportionately impacted by mobile-source

TABLE 8: Public Health Codes

City	Year	Policy Description
San Francisco, CA	2014	Health Code Article 38 requires new residential construction projects located in areas where models show poor air quality and pollution from roadways to install enhanced ventilation to protect public health. The law was updated in 2014 to improve consistency with CEQA and streamline implementation and revise the underlying map of the city's Air Pollutant Exposure Zone.
Chicago, IL	2014	Article II. Air Pollution Control Rules and Regulations puts in place specific operating and maintenance practices to minimize emissions of airborne particulate matter from the storage, on-site handling, loading, unloading, stockpiling, and Processing of Bulk Solid Materials.
Detroit, MI	2017	The Bulk Materials Ordinance requires bulk material facilities to install the necessary dust control measures to prevent the release of fugitive dust.
Erie, CO	2018	Odor Ordinance Ord-17-250 makes it unlawful and a public nuisance for any person, tenant, occupant or property owner to permit the emission of odor from any source to result in detectable odors that leave the premises and are detected by a reasonably prudent person with a normal sense of smell.
Richmond, CA	2018	The Ordinance requiring Enclosure of Coal and Petroleum Coke Storage and Transfer Facilities Ordinance requires enclosed storage and handling of coal moving through a bulk-cargo terminal on the city's waterfront beginning in 2020.

emissions.⁹⁶

In 2014 the code was amended by Ordinance 224-14 to improve consistency with the California Environmental Quality Act (CEQA).⁹⁷ Changes to Article 38 included a mandatory disclosure and monitoring of ventilation systems, improved air pollutant modeling with the aid of health data to create Air Pollutant Exposure Zones, and a requirement for updated, enhanced ventilation systems designed to protect against fine particulate matter.⁹⁸ Article 38 now applies to any Sensitive Use building located on a site within an Air Pollutant Exposure Zone that is either newly constructed, undergoing a major alteration, or the subject of an application for a Planning Department-permitted change of use.⁹⁹ The Air Pollutant Exposure Zone Map can be used to determine whether a development project will be required to install enhanced ventilation.¹⁰⁰ For buildings subject to Article 38 requirements, enhanced ventilation must be provided to all units in the building (as outdoor air quality at higher elevations is not consistently better than air quality at street level).¹⁰¹ A final building permit in an Air Pollutant Exposure Zone will not be issued by the Department of Building Inspections unless and until the Department of Health confirms that the development fulfills the ordinance.¹⁰²

The examples of public health codes included in this section were driven largely by the demands of local EJ communities to improve conditions of daily life in their neighborhoods. These codes can have significant impacts on the quality of life and well-being of those who are affected by toxic dust, air pollution, and odors in already overburdened and vulnerable communities. Public health codes are therefore powerful tools that cities can wield in their efforts to ensure that environmental justice goals are achieved.

State Directives and Guidance Documents for Municipal Environmental Justice Land Use

The relationship between states and municipalities when it comes to environmental justice can be complicated, as cities juggle local demands, external pressures, and limitations imposed by state jurisdiction over environmental regulation. The degree of autonomy municipalities can exercise in controlling their land uses' environmental implications varies

from state to state, and states can either mandate environmental justice policies (as in California) or strictly limit municipal regulations of fossil fuel industry operations by a municipality (as in Texas).

Some states seeking to further environmental justice goals emphasize the importance of the local land use functions of municipalities as a pre-requisite to environmental reviews by the state. State directives and guidance documents focused on local environmental justice measures are the result of strong statewide advocacy by environmental justice communities where proposed developments go through multiple levels of state, regional and city reviews and approvals. For example, in 2005, the California Air Resources Board (ARB) issued guidance aimed at municipalities' land use processes to mitigate air pollution, *the Air Quality and Land Use Handbook: A Community Health Perspective*. ARB describes the document as "intended to serve as a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process."¹⁰³

The ARB guidance document is focused on recommendations to local municipalities for ways to address air pollution sources that are too close to residential areas and sensitive land uses such as schools and playgrounds. According to the report, critical air pollution sources of concern include highways, ports, chrome platers, dry cleaners, and gas stations. Some of the key recommendations relate to restrictions on siting sensitive land uses near polluting sources, such as "...within 500 feet of a freeway, urban roads with 100,000 vehicles / day or rural roads with 50,000 vehicles / day."¹⁰⁴ These guidelines, while not mandatory, support municipal efforts to implement new zoning and land use codes that address cumulative impacts from multiple sources in local communities. The guidance provides useful technical research from state agencies with expertise in air pollution and air modeling that can inform municipal planning agencies with less air quality expertise.

A significant piece of California legislation pertaining to environmental justice and land use is Senate Bill 1000. In September 2016, Senate Bill 1000, Chapter 587 was passed, amending Section 65302 of the Government Code relating to land use. This bill, the "Planning for Healthy Communities Act," was authored by Senator Connie Leyva and cospon-

sored by environmental justice groups in the state, including the California Environmental Justice Alliance and the Center for Community Action and Environmental Justice. It requires that all general plans incorporate an environmental justice element. In part, it reads:

This bill would, in addition, add to the required elements of the general plan an environmental justice element, or related goals, policies, and objectives integrated in other elements, that identifies disadvantaged communities, as defined, within the area covered by the general plan of the city, county, or city and county, if the city, county, or city and county has a disadvantaged community. The bill would also require the environmental justice element, or related environmental justice goals, policies, and objectives integrated in other elements, to identify objectives and policies to reduce the unique or compounded health risks in disadvantaged communities, as specified, identify objectives and policies to promote civil engagement in the public decision-making process, and identify objectives and policies that prioritize improvements and programs that address the needs of disadvantaged communities.¹⁰⁵

SB 1000 defines a disadvantaged community as referenced in the EJ element as “an area identified by the California Environmental Protection Agency pursuant to [Section 39711 of the Health and Safety Code](#) or an area that is a low-income area that is disproportionately affected by environmental pollution and other hazards that can lead to negative health effects, exposure, or environmental degradation.”¹⁰⁶ Once jurisdictions identify environmentally disadvantaged communities (DACs), they are required to address a minimum of seven EJ-related issues in the general plan EJ element, including: (1) pollution exposure (including air quality), (2) food access, (3) public facilities, (4) safe and sanitary homes, (5) physical activity, (6) “civil” engagement (community engagement), and (7) prioritization of improvements and programs addressing the needs of DACs.¹⁰⁷ While some cities, like National City, previously adopted similar Environmental Justice elements in their General Plans, SB1000 institutionalizes the response of municipalities to environmen-

tal justice across the state with uniform standards for identifying EJ communities and a mechanism for mandating EJ goals and policies.

The bill was also accompanied by the development of the *SB 1000 Implementation Toolkit*, which provides implementation strategies for municipal planners to comply with the new state law, methods for facilitating community engagement plans, and potential funding sources to support implementation.¹⁰⁸ The toolkit was developed in collaboration by the California Environmental Justice Alliance and the private planning firm PlaceWorks, Inc.

Implementation of this bill is by the far the most wide-reaching state-level effort to embed environmental justice considerations into the land use policies of municipalities and counties in the country. The bill’s relatively recent passage (implementation began January 1, 2018) means it is likely to be the subject of future research into the impacts of addressing environmental justice via proactive land use policies.

Conclusion

Communities of color and low-income communities suffer from a legacy of racially biased and expulsive land use planning that has entrenched patterns of inequality for generations. While local land use laws have cemented racial and income disparities, they can also be deployed to dismantle these injustices. Moreover, municipal-level interventions to address environmental injustice can take diverse forms. This national scan of municipal policies has examined land use and zoning approaches that cities can undertake to tackle the distributive, procedural, and structural manifestations of environmental injustice expressed in the built environment. More than two dozen cities and counties all across the country explicitly and affirmatively have adopted policies that aim to prevent and reduce the burden of pollution and reinvest in EJ communities.

Ultimately, the efforts of well-organized, sustained, and expert local environmental justice organizations, together with allies in the academic and planning professions, drove the call to action at the local level. Fed up with inaction at the state and federal levels, and aware of inherent gaps in the reach of state and federal environmental laws with respect to local, cumulative impacts, EJ communities turned to their local institutions to formulate responses. This localization of efforts opened up the opportunity to hold local leaders and agencies more accountable to the expertise and demands of local environmental justice organizations and impacted residents. The insights gained from these policies will fuel a new era of local environmental justice policies taking a holistic approach to achieving environmental justice.

Endnotes

- 1 United Church of Christ, “Toxic Wastes and Race in the United States.”
- 2 Bullard et al., “Toxic Wastes and Race,” 371-411.
- 3 See U.S. Environmental Protection Agency, *EJSCREEN Technical Documentation*, 17-18.
- 4 See, e.g., U.S. Department of Health & Human Services, *Health Insurance Coverage: 2018*.
- 5 California Environmental Protection Agency, “Cal/EPA’s Framework for Cumulative Impacts Analysis,” 1.
- 6 Pastor, Sadd and Hipp, “Which Came First?”
- 7 Been and Gupta, “Coming to Nuisance or Going to Barrios?” 1-56.
- 8 Cole and Foster, “Environmental Racism.”
- 9 Cole and Foster.
- 10 Down zoning is the process by which an area of land is rezoned to a usage that is less dense and less developed than its previous usage. (See FreeAdvice, “Down Zoning,” <https://real-estate-law.freeadvice.com/real-estate-law/zoning/downzoning.htm>.)
- 11 Rabin, “Expulsive Zoning.”
- 12 Whittemore, “Racial and Class Bias in Zoning”; Maantay, “Zoning, Equity, and Public Health”; Pellow, “Environmental Inequality Formation.”
- 13 Cole and Foster.
- 14 Pulido, “Rethinking Environmental Racism in Southern California,” 16.
- 15 Maantay, “New York City and ‘Expulsive’ Zoning.”
- 16 Maantay, “New York City and ‘Expulsive’ Zoning.”
- 17 Jones et al., “Multi-Ethnic Study of Atherosclerosis (MESA)”; Morello-Frosch and Jesdale, “Residential Segregation and Estimated Cancer Risks.”
- 18 Massey, Rothwell, and Domina, “Changing Bases of Segregation.”
- 19 Chandler & Dale, “Zoning Basics,” 13-19.
- 20 Chandler and Dale.
- 21 New York City Department of Planning, “City Planning History.”
- 22 Rothstein, *Color of Law*, 52–53.
- 23 Rothstein, 51.
- 24 Rabin, *Expulsive Zoning*, 106.
- 25 Silver, “Racial Origins of Zoning,” 2.
- 26 Rothstein, 53.
- 27 Richard Rothstein, “The Color of Law,” 53.
- 28 Patricia Salkin, 5.
- 29 Kingdon, *Agendas, Alternatives and Public Policies*.
- 30 Temper, Del Bene, and Martinez-Alier, “Mapping Frontiers of Environmental Justice.”
- 31 Lake, “Planners’ Alchemy.”
- 32 Lynch, “Regulation of Fracking.”
- 33 Benson, “Segregation Ordinances.”
- 34 Alperg, Buckley, and White, “Socioeconomic and Racial Disparities in Cancer Risk.”
- 35 Baltimore City Health Department, “Asthma.”

36 Caiazzo, et al, “Air Pollution and Early Deaths.”

37 Chesapeake Climate Action Network and Clean Water Action, “Crude Oil Trains in Baltimore.”
(Data analysis from Stand.Earth, “Do You Live in the Oil Train Blast Zone,”
[https://www.stand.earth/stopoiltrains.](https://www.stand.earth/stopoiltrains))

38 Clean Water Action, “Company Withdraws Plan for Crude Oil Terminal in Baltimore.”

39 Fossil Free US blog.

40 Baltimore, Maryland, Zoning, Prohibiting Crude Oil Terminals, Ordinance 18.110, Council Bill
17-0150; Art. 32, § 1-218 (2018).

41 San Francisco Department of the Environment, “Environmental Justice Grant Recipients.”

42 National Association of City and County Health Officials, “Fulton County Environmental Justice
Initiative.”

43 Fulton County Board of Health, “Environmental Justice.”

44 Office of Costa Constantinides, “Council Passes Environmental Justice Legislation.”

45 New York, New York, *A Local Law to Amend the Administrative Code of the City of New York, in
Relation to Identifying and Addressing Environmental Justice Issues*, Local Law No. 064 (2017).

46 New York, Local Law 64.

47 Environmental Community Organization, “Environmental Justice.”

48 De Guire, “Cincinnati Environmental Justice Ordinance,” 236.

49 Cincinnati, Ohio, Ordinance No. 210-2009; Title X, Environmental Code, Chapter 1041,
Environmental Justice (2009).

50 Cincinnati, Code § 1041-3, Purpose.

51 Cincinnati, Code § 1041-5-L, Proposed Project. “The term Proposed Project shall include only
those activities that either seek to be or are currently located in whole or in part within the City of
Cincinnati.”

52 Cincinnati, Code § 1041-7, EJ Standard.

53 Cincinnati, Code § 1041-7, EJ Standard. “Public Nuisance” is described as “significantly
interfering with a public health or environmental right common to the general public.”

54 Cincinnati, Code § 1041-9, EJ Factors, 10-11.

55 Cincinnati, *An Ordinance Repealing and Re-Ordaining Cincinnati Municipal Code Chapter 1041,
Environmental Justice* (2010), [http://city-egov.cincinnati-oh.gov/Webtop/ws/council/public/child/
Blob/31215.pdf?rpp=-10&m=1&w=doc_no%3D%27201001382%27](http://city-egov.cincinnati-oh.gov/Webtop/ws/council/public/child/Blob/31215.pdf?rpp=-10&m=1&w=doc_no%3D%27201001382%27).

56 New Jersey Environmental Justice Alliance, “Model Ordinance,” 12.

57 Environmental justice groups advancing the ordinance included Ironbound Community Corp.,
NJEJA, Clean Water Action, Newark Environmental Commission.

58 Prohibited uses cited in the NZLUR under Heavy Manufacturing include: Vitrification, Plasma
Gasification, Pyrolysis, Cement Kilns, Automobile Shredder Residue (ASR), Medical Waste Auto
claving, Shredding, Animal Rendering, Electronic De-Manufacturing, Computer & Circuit Board
Recycling, Thermal Depolymerization, Sludge Processing and Incineration, Sewage Disposal,
Sediment Treatment Plants, Chrome Plating and Metals Plating Facilities, Hazardous or Medical
Waste Processing, Outdoor Scrap Metal Yards (shredding, processing, sorting), Oil and Gas
Refineries, and Power Plants over 150 megawatts using coal, natural gas, waste or waste
by-products including tires, sludge, cement, and biofuels. (See Newark Planning Office, *Newark
Zoning & Land Use Regulations*, 64-65.)

59 Newark, New Jersey, *An Ordinance Amending Title 41, Zoning and Land Use Regulations...
By Adding a New Chapter 19 Entitled “Environmental Justice and Cumulative Impacts,”*
No. 16-0803 (2016).

60 Conglose, “Comprehensive Planning.”
61 Miskowiak and Stoll, “Overlay Zoning.”
62 Communities for a Better Environment, “Green Zones.”
63 California Environmental Justice Alliance, “Green Zones Concept Paper.”
64 Personal communication, Angelo Logan and mark lopez! East Yard Communities for
Environmental Justice, August 21, 2018.
65 California Environmental Justice Alliance, “Green Zones.”
66 The Liberty Hill Foundation is a public philanthropic foundation that addresses equity and social
justice through grant-making, training programs, and support for public policy campaigns.
Communities for a Better Environment is an environmental justice organization that provides
environmental justice communities in California with organizing skills, leadership training, and
legal, scientific, and technical assistance for confronting environmental health hazards.
67 Liberty Hill Foundation, *Hidden Hazards*.
68 Blaney et al. to Los Angeles City Council.
69 For example, the LA Regional Water Quality Board, South Coast Air Quality Management
District, California Department of Toxic Substance Control, and U.S. EPA.
70 Los Angeles Planning and Land Use Committee, “Report on Clean Up Green Up Policy.”
71 Blaney et al. to Los Angeles City Council.
72 Los Angeles, California, *Clean Up Green Up Ordinance*, No. 184246 (2016).
73 Los Angeles, *Clean Up Green Up Ordinance*.
74 Liberty Hill Foundation, *The Guide to Green*.
75 Personal communication, Prichard, Michele.
76 Personal communication, Prichard, Michele.
77 Minneapolis Sustainability Office, “Minneapolis Population Characteristics.”
78 Minneapolis Sustainability Office, *Green Zones Final Report*.
79 Minneapolis, *Green Zones Final Report*.
80 Minneapolis, *Green Zones Final Report*.
81 Minneapolis, Minnesota, *Resolution Establishing Green Zones in the City of Minneapolis*,
No. 2017R-188 (2017).
82 Takvorian et al., “Community Planning for Power,” 76-78.
83 Hollenbaugh, “Putting Environmental Justice into General Plans.”
84 National City Development Services Department, *Final Westside Specific Plan*.
85 National City, California, Municipal Code, § 18.108.230, *Affirmative Termination by Amortization*
(2006).
86 National City, “Ranking Factors.”
87 National City, *Affirmative Termination by Amortization*.
88 National City Clerk, “Town Hall Meeting Amortization.”
89 Sampite-Montecalvo, “National City Boots Auto Businesses.”
90 Minneapolis Health Department, “Pollution Control Annual Billing FAQs.”
91 Minneapolis, Minnesota, Minneapolis City Code, Title 3, Chapter 47.40, *Pollution Control Annual*
Registration (2016).
92 Frey, “Green Growth & Urban Agriculture.”
93 42 U.S.C. § 7401(a)(3). (“The Congress finds . . . that air pollution prevention . . . and air
pollution control at its source is the primary responsibility of States and local governments.”)

APPENDIX A: POLICY SUMMARIES

STRATEGY 1: BANS

1. Baltimore, MD—Crude Oil Terminal Prohibition Ordinance (2018)
<http://ca.baltimorecity.gov/codes/Art%2032%20-%20Zoning.pdf>
 - Repeals and re-ordains Article 32-Zoning Section(s) 1-218 of the Baltimore City Code and adds Article 32-Zoning Section(s) 1-304 and 1-304(v-2) to the Baltimore City Code, banning new or expanded crude oil terminals by rail in the city.
2. Chicago, IL—Coke & Coal Bulk Material Uses (2014)
[http://library.amlegal.com/nxt/gateway.dll/Illinois/chicago_il/municipalcodeofchicago?f=templates\\$fn=default.htm\\$3.0\\$vid=amlegal:chicago_il](http://library.amlegal.com/nxt/gateway.dll/Illinois/chicago_il/municipalcodeofchicago?f=templates$fn=default.htm$3.0$vid=amlegal:chicago_il)
 - Amends Chicago Municipal Code Chapters 17-2, 17-3, 17-4, 17-5, 17-6, 17-9, and 17-17 concerning coke and coal bulk material facilities.
 - Prohibits new (and expansions of existing) storage, placement, retention, loading, unloading, stockpiling, or processing of coke and coal bulk material, and the undertaking of any improvements or development associated therewith (collectively, “coke and coal bulk material uses”), from being permitted in any zoning district.
 - Requires the reporting of coke and coal received, present, and throughput at existing facilities.
3. Chicago, IL—Manganese-Bearing Material Operation Uses (2018)
[http://library.amlegal.com/nxt/gateway.dll/Illinois/chicago_il/municipalcodeofchicago?f=templates\\$fn=default.htm\\$3.0\\$vid=amlegal:chicago_il](http://library.amlegal.com/nxt/gateway.dll/Illinois/chicago_il/municipalcodeofchicago?f=templates$fn=default.htm$3.0$vid=amlegal:chicago_il)
 - Amends the Municipal Code Chapters 17-2, 17-3, 17-4, 17-5, 17-6, 17-9, and 17-17 regarding manganese-bearing materials operations, distribution, and transportation.
 - Prohibits new (as well as expansions of existing) manganese-bearing material operations that store, load, unload, stockpile, or handle on-site the blending, mixing, crushing, screening, breaking, wet or dry cleaning, thermal drying, chemical treating, or any other processing of manganese-bearing material in any zoning district.
 - Requires the reporting of amounts of non-packaged manganese-bearing material received, present, and throughput at existing facilities.
4. Portland, OR—Fossil Fuel Terminal Zoning Amendments (2016)
<https://www.portlandoregon.gov/bps/article/621438>
 - Amends Title 33, Planning and Zoning, of the Portland City Code prohibiting the creation or expansion of “bulk fossil fuel infrastructure.”
 - Establishes fossil fuel terminals as a new land use category characterized by “marine, railroad, or pipeline transport access” and “either storage capacity exceeding two million gallons or transload facilities such as rail to ship loading.”
 - Classifies existing bulk fossil fuel terminals in industrial and general employment zones as limited uses that can continue to operate but not expand.
5. Oakland, CA—Prohibition on the Storage and Handling of Coal and Coke (2016)
<https://oakland.legistar.com/LegislationDetail.aspx?ID=2703785&GUID=7F763650-76BA-4688-AE73-87C297122D17&Options=&Search=>
 - Amends the Oakland Municipal Code to prohibit the storage, loading, unloading, stockpiling, transloading, and handling of coal and coke-based products due to health and safety concerns associated with coal.

- The City Council also adopted a resolution opposing the transportation of hazardous fossil fuel materials, including crude oil, coal, and petroleum coke, through the city of Oakland.
6. Seattle, WA—Resolution Opposing All New Fossil Fuel Infrastructure (2017)
<http://seattle.legistar.com/LegislationDetail.aspx?ID=3080546&GUID=D11B14E1-AEA0-4112-9AC8-9E4AF4D457FE&Options=&Search=&FullText=1>
 - Supports equitable price on carbon, creation of green career pathways, a review of the Seattle City Employees Retirement System investments in fossil fuels and calls on state entities to exercise their authority to halt and reject all new fossil fuel infrastructure projects within the state.
 - Requests that the Office of Sustainability and Environment (OSE) identify the key climate actions necessary to meet or exceed the Paris Agreement goals.
 - Requests that the Office of Planning and Community Development and OSE analyze and assess modifications to the city’s development regulations to prohibit new fossil fuel infrastructure projects in Seattle.
 7. Whatcom County, WA—Interim Ordinance Imposing a Moratorium on Unrefined Fossil Fuels (2017)
<http://documents.whatcomcounty.us/weblink8/0/doc/3742542/Page1.aspx?searchid=ea384cad-10c3-4778-a82e-9a786250ff87>
 - Places a six-month moratorium on all new or expanded facilities shipping unrefined fossil fuels in the Cherry Point Urban Growth Area, with the ability to renew one or more times.
 - Prohibits the filing, acceptance, and processing of new applications for conversion of land or water, and new building or structure permits for new or expanded facilities whose purpose it is to facilitate the increased shipping of unrefined fossil fuels.

STRATEGY 2: ENVIRONMENTAL JUSTICE POLICIES AND PROGRAMS

1. San Francisco, CA—Environmental Justice Program (2000)
<https://sfenvironment.org/overview/environmental-justice>
 - Implements a Community Health Plan.
 - Addresses food insecurity with technical assistance and green space creation.
 - Awards more than \$12 million in grant funds to nonprofit groups in Potrero Hill and Bayview–Hunters Point communities.
2. Fulton County, GA—Environmental Justice Initiative (2010)
<http://fultoncountyboh.org/boh/index.php/environmental-justice>
 - Implements EJ policies led by an environmental health planner who can collaborate with the Department of Health and Wellness staff and recommend strategies to address public health issues by leveraging the tools of other governmental and organizational sectors (e.g., transportation, land use, solid waste disposal, water contamination, laws, ordinances, policies, and zoning).
3. New York, NY—Local Law 60 to Require Study of Environmental Justice Areas (2017)
<https://legistar.council.nyc.gov/LegislationDetail.aspx?ID=1805815&GUID=8901A89B-078E-4D47-88D8-EA3E48E715A1>
 - Requires that the Environmental Justice Interagency Working Group design an environmental justice study identifying EJ areas within the city, describing environmental concerns affecting these areas, and identifying data, studies, programs, and other resources to advance EJ goals.
 - Requires the IWG to issue recommendations for legislation, policy, budget initiatives, and other measures to address environmental concerns affecting EJ communities.

4. New York, NY—Local Law 64 in Relation to Identifying and Addressing Environmental Justice (2017)
<https://legistar.council.nyc.gov/LegislationDetail.aspx?ID=2460360&GUID=0C9F8C9D-5F14-4C1E-B4AD-37BB96F82BA3>
 - Amends the Administrative Code of the City of New York to require the mayor to establish an Interagency Working Group (IWG).
 - Requires the IWG to develop a comprehensive Environmental Justice Plan.
 - Establishes an EJ Advisory Board consisting of mayoral and City Council speaker appointees, all of whom must have EJ qualifications, to make recommendations to the IWG.

STRATEGY 3: REVIEWS

1. Fulton County, GA—Environmental Site Analysis and Environmental Impact Reports (2004)
https://library.municode.com/ga/fulton_county/codes/code_of_ordinances?nodeId=APXBZORE_A_TIVGEPR_4.18ENADUS
 - Requires all zoning applicants to complete an Environmental Site Analysis (ESA) and all industrial zoning applications to complete an Environmental Impact Report (EIR).
 - Establishes that land use petitions can be considered by the Board of Commissioners only after the Fulton County Department of Planning and Community Services reviews the ESAs and EIRs submitted with proposed petitions for rezoning and/or use permits and makes recommendations to the Board of Commissioners based on the anticipated impact of the proposed use on an environmentally stressed community.
2. San Francisco, CA—Power Plant Conditional Use Authorization (2008)
<https://www.sfbos.org/ftp/uploadedfiles/bdsupvrs/ordinances08/o0282-08.pdf>
 - Amends Planning Code Section 226 to require that power plants in M-1 and M-2 zones obtain conditional use authorization by adding section 226.1 requiring additional findings.
 - Amends the Administrative Code to add Chapter 29A to require that the Board of Supervisors consider the criteria of Planning Code Section 226.1(c) prior to taking city power plant approval actions, making environmental findings, and making findings of consistency with the general plan and priority policies of Planning Code Section 101.1.
3. Cincinnati, OH—Environmental Justice Ordinance (2009)
http://cincinnati-oh.elaws.us/code/coor_titlex_ch1041
 - Added Chapter 1041, Environmental Justice to Title X, Environmental Code, of the Cincinnati Municipal Code.
 - Required any industry that wants to operate in Cincinnati and puts forth a plan meeting the definition of a “proposed project” to have an environmental justice permit to operate.
 - Created an Air Toxics Risk Assessment Review and air permitting process to be administered by the Cincinnati Office of Environmental Quality.
 - Required the Office of Environmental Quality to collect pollution data and give notice to the public of all projects subject to the provisions of the ordinance.
 - Repealed in 2010 due to lack of funding and staffing capacity. The city continues to implement provisions that constitute an enhanced public notification process for new proposed projects.
4. NJEJA—Model Ordinance (2012)
http://www.precaution.org/lib/muni_ord_master.pdf
 - Guides municipalities to adopt or amend local laws to protect environmental and public health.
 - Requires an Environmental Community Impact Statement as part of a development application and an official part of the development approval record.

- Requires an Environmental and Health Conditions inventory.
 - Requires a “checklist” and a Health Impact Assessment to evaluate whether the proponent of a project can show that the proposal will not worsen community health or the environment.
5. Camden, NJ—Sustainability Ordinance (2013)
http://www.sustainablejersey.com/fileadmin/media/Grants_and_Resources/Small_Grants/Past_Grants_Projects/Camden_City_2013_PSEG_20K_Sustainability_Ordinance.pdf
 - Requires new developments or modification applications to be submitted for review by the Camden City Planning Board and Zoning Board of Adjustment with an Environmental Impact and Benefits Assessment (EIBA).
 - Requires the Camden City Planning Board and Zoning Board of Adjustment to review the EIBA, consider the extent to which applicants can minimize their environmental and public health impacts and work with environmental partners to gather resources, and assist applicants with best practices for their land use.
 - Suggests that applicants implement best practices that minimize adverse environmental and public health impacts.
 6. Newark, NJ—Environmental Justice and Cumulative Impacts Ordinance (2016)
<https://newark.legistar.com/LegislationDetail.aspx?ID=2770971&GUID=D0C566D0-463A-482D-A4AC-78884351DA79&FullText=1>
 - Amends Title 41 of the city of Newark’s General Code “Newark Zoning and Land Use Regulations” by adding a new Chapter 19: Environmental Justice and Cumulative Impacts.
 - Sets up an Environmental Justice Policy Review for new development or redevelopment projects based on findings from the Natural Resource Index and the Environmental Review Checklists.
 7. Boston University—Ordinance to Protect Public Health and the Environment and to Promote EJ (2017)
<https://www.bu.edu/rccp/files/2017/04/EJ-Ordinance-Spring-2017.pdf>
 - Includes sections on public notice, public participation, administration, and enforcement around a model ordinance.
 - Includes an Environmental Justice Community Impact Assessment triggered by whether a proposed project is expected to negatively impact the community in which that project is located.

STRATEGY 4: PROACTIVE PLANNING

1. East Austin, TX—Overlay Zone (1997)
<http://www.austintexas.gov/edims/document.cfm?id=56658>
 - Changes the zoning within the Overlay District to less intense industrial use for future developments.
 - Requires that building permit approval rest on demonstrated compliance with zoning rules. Also requires submission of a utility plan to assure access to utilities and, for buildings or improvements greater than 999 square feet, a site plan that complies with neighborhood plans.
2. San Francisco, CA—Resolution Endorsing the Electricity Resource Plan (2002)
<https://sfbos.org/ftp/uploadedfiles/bdsupvrs/resolutions02/r0827-02.pdf>
 - Adopts the Electricity Resource Plan developed by the city’s Public Utilities Commission and the Department of Environment, which prioritizes maximizing energy efficiency, supporting affordable electric bills, supporting air quality, preventing environmental impacts, promoting opportunities for economic development, and increasing local control over energy resources. The plan has an explicit goal to “support environmental justice.”

3. Seattle Public Utilities—Environmental Justice and Service Equity Division (2005)
<http://www.seattle.gov/util/AboutUs/SPUandtheCommunity/ServiceEquity/index.htm>
 - Assists SPU and partner departments to carry out the city of Seattle’s Race and Social Justice Initiative with the aim of delivering inclusive and equitable service to customers across the city.
 - Maintains community partnerships and oversees the Women and Minority Business Enterprise program, Branch Equity teams, equity planning and analysis, community benefits, and the local hazardous waste management program.
4. Washington, D.C.—Comprehensive Plan “Achieving Environmental Justice” Section (2011)
<http://dcrules.elaws.us/dcmr/10-a625>
 - Includes policies meant to protect communities from disproportionate exposure to environmental hazards as the city grows.
 - Acknowledges the overconcentration of industrial uses in the District’s lower-income communities and the need to expand outreach.
 - Suggests studying the connection between public health and the location of industry to inform public policy decisions.
5. National City, CA—Environmental Justice Element (2012)
<http://www.nationalcityca.gov/Home/ShowDocument?id=5019>
 - Adopted as part of a comprehensive General Plan Update.
 - Includes specific citywide environmental goals and policies as well as policies that intersect or are related to other elements, such as Land Use and Respiratory Health and Air Quality.
6. Eugene, OR—Envision Eugene Comprehensive Plan (2017)
<https://www.eugene-or.gov/DocumentCenter/View/37261>
 - Adopted according to prior ordinance amending the text and maps of the Eugene–Springfield Metropolitan Area General Plan and providing for incorporation of the comprehensive plan.
 - Includes sections on public involvement, community health and livability, community resiliency, and public facilities and services, among others.
7. Los Angeles, CA—Clean Up Green Up Ordinance 184245 (2016)
<https://planning.lacity.org/ordinances/docs/cugu/184245.pdf>
 - Implements building standards and requirements to address cumulative impacts resulting from incompatible land use patterns within the city.
 - Establishes prohibited sources for outside or return air for air-heating or -cooling systems for all buildings and requires filters for new equipment.
8. Los Angeles, CA—Clean Up Green Up Ordinance 184246 (2016)
<https://planning.lacity.org/ordinances/docs/cugu/184246.pdf>
 - Creates a Supplemental Use District.
 - Applies site planning provisions to new sites as well as major improvements, additions, and/or changes of use.
 - Creates an ombudsman position to help local business owners navigate the permitting and environmental compliance processes and guide them through energy efficiency and other sustainability measures and processes.
9. Los Angeles County—Green Zones Program (2015)
http://planning.lacounty.gov/assets/upl/project/greenzones_board-motion.pdf
 - Enhances public health and land use compatibility in unincorporated communities that bear a disproportionate pollution burden.
 - Requires the LA County Office of Regional Planning to produce a map of contaminated sites, such as Superfund sites, brownfields, and toxic hot spots in unincorporated areas and provide

recommendations on targeted land use policies that can be used to improve the health and quality of life for surrounding residents.

- Directs the county planning agency to develop tools, including heat maps, equity scorecards, healthy design guidelines, and other approaches to evaluate, monitor, and advance equity objectives in the implementation of the General Plan.
- The county has undertaken “ground-truthing” exercises in collaboration with environmental justice communities in the jurisdiction.

10. City of Commerce, CA—Green Zones Policy (2013)

<http://eycej.org/wp-content/uploads/2012/09/Green-Zones-Policy.pdf>

- Developed and advanced by a city task force led by community organizations. Includes “consideration of a protective zone around sensitive land uses such as schools, playgrounds, homes, daycare, and senior centers to improve public health and could also include a green economic development zone overlay.”
- Encompasses three pillars to protect public health and create new job opportunities: 1) Reduce the level of existing impacts through voluntary business collaborations; 2) Revitalize local economic opportunities that contribute to a vibrant economy and increased jobs; and 3) Reinvest in key boulevards to bolster business and quality of life opportunities.
- A fourth pillar, preventing toxic exposure to residents from new land uses, was recommended but not adopted by the city.

11. Fulton County, GA—2035 Comprehensive Plan (2016)

https://dca.ga.gov/sites/default/files/fulton_county_comp_plan_2016_0.pdf

- Creates broad policies to guide land use and rezoning as the county evolves.
- Establishes community goals based on information from public hearings, community workshops, and steering committee meetings.
- Includes a Community Goals Element with environmental strategies that update and support existing environmental justice activities (Environmental Justice Initiative, Tree Ordinance, and Environmental Site Analysis reports) while promoting new land use plans for environmental justice and environmental conservation.

12. Minneapolis, MN—Resolution Establishing Green Zones in the City of Minneapolis (2017)

<https://lms.minneapolismn.gov/Download/MetaData/1177/SignedAct.pdf>

- Designates two Green Zones, and two pilot areas within those zones.
- Directs the City Coordinator’s Office of Sustainability and Office of Equity and Inclusion to establish a Southern Green Zone pilot-specific task force to work with staff and area stakeholders to develop a Southern Green Zone Work Plan.

STRATEGY 5: EXISTING LAND USES

1. Huntington Park—Zoning Code, Planning and Zoning Regulations (2001)

https://qcode.us/codes/huntingtonpark/?view=desktop&topic=9-4-2-9_4_203

- Amends city zoning code for commercial/office/mixed-use zones to authorize imposing conditions in building/operating permits based on proximity to residential areas and the potential for adverse environmental impacts.

2. National City, CA—Amortization Ordinance (2006)

<http://www.nationalcityca.gov/Home/ShowDocument?id=5978>

- Establishes an amortization system to phase out existing, “nonconforming” uses that pose negative impacts to surrounding communities.
- Amortization process includes identifying nonconforming uses. To assess non-conforming uses,

the City will collect data from public records to assess the following criteria: total cost of land and improvements, adaptability of the land for other permitted uses, compatibility with surrounding land uses and neighborhood densities, and possible threat to public health, safety, or welfare.

- The City can then use this assessment to: create a ranking of nonconforming uses; individual amortization analysis on the top-ranked nonconforming uses; and staff recommendations of amortization schedule to the Planning Commission for several nonconforming uses.
3. San Francisco, CA—Public Utilities Commission Resolution (2009)
<https://sfwater.org/modules/showdocument.aspx?documentid=3686>
 - Requires SFPUC staff to develop training on environmental justice issues, expand its workforce development strategies to include green job opportunities in EJ communities, identify and implement initiatives to avoid or eliminate disproportionate impacts of the utility’s decisions and activities, and develop communication and participation strategies.
 - Stipulates that the SFPUC will work with stakeholders, such as its Citizens Advisory Committee and Environmental Justice Subcommittee, to create a checklist of environmental justice guidelines to assess how SFPUC can lessen its impacts on overburdened communities and establish and fund EJ activities.
 4. Washington, D.C. —DOEE Office of Enforcement and Environmental Justice (2009)
<https://doee.dc.gov/oeej>
 - The Office of Enforcement and Environmental Justice (OEEJ) within the Department of Energy and Environment (DOEE) promotes environmental justice in air and water enforcement decisions, including creating meaningful opportunities for District low-income, minority, or limited-English residents to participate in DOEE environmental decision making.
 5. Minneapolis, MN—Amendment to Pollution Control Annual Registration Fee (2016)
https://library.municode.com/mn/minneapolis/codes/code_of_ordinances?nodeId=COOR_TI_T3AIP0ENPR_CH47ENAIP0_47.40POCOANREPC
 - Requires that all equipment that impacts or has the potential to impact the environment be registered with the city for a fee administered by the city’s public health department.
 - Connects the cost of industrial and residential environmental degradation to the cost environmental cleanup and provides monetary incentives to transition to more sustainable practices.

STRATEGY 6: PUBLIC HEALTH CODES AND POLICIES

1. San Francisco, CA—Health Code Article 38 (2014)
[http://library.amlegal.com/nxt/gateway.dll/California/health/article38enhancedventilationrequiredforu?f=templates\\$fn=default.htm\\$3.0\\$vid=amlegal:sanfrancisco_ca\\$anc=JD_Article38](http://library.amlegal.com/nxt/gateway.dll/California/health/article38enhancedventilationrequiredforu?f=templates$fn=default.htm$3.0$vid=amlegal:sanfrancisco_ca$anc=JD_Article38)
<https://sfbos.org/ftp/uploadedfiles/bdsupvrs/ordinances14/o0224-14.pdf>
 - Establishes Air Pollutant Exposure Zones as those areas within the City that, by virtue of their proximity to air pollution emissions sources, including Freeways, have substantially greater concentrations of air pollutants. These zones will be mapped according to the estimated cumulative PM 2.5 concentrations or cumulative excess cancer risk.
 - Requires the submission of an Enhanced Ventilation Proposal for existing residential projects and new residential construction projects in Air Pollutant Exposure Zones.

2. Chicago, IL—Rules and Regulations For Control of Emissions from the Handling and Storage of Bulk Material Piles (2014)
https://www.cityofchicago.org/content/dam/city/depts/cdph/environmental_health_and_food/RuleRegsContrEmisHStorBulkMatPiles.pdf
 - Issues rules and regulations for the implementation of environmental ordinances pursuant to Section 2-112-160(b) of the Municipal Code of Chicago.
 - Puts in place specific operating and maintenance requirements to minimize emissions of airborne particulate matter from the storage, on-site handling, loading, unloading, stockpiling, and processing of bulk solid materials.
 - Requires a Fugitive Dust Plan that indicates the locations of all dust sources, controls and monitoring devices at a site, including required fence-line dust monitors and wind speed monitors.

3. Detroit, MI—Bulk Materials Ordinance (2017)
<https://detroitmi.gov/sites/detroitmi.localhost/files/2018-08/Bulk%20Materials%20Ordinance%20Final.pdf>
 - Amends Chapter 22 of the Detroit City Code, Handling of Solid Waste and Prevention of Illegal Dumping.
 - Regulates the storage and transportation of bulk solid material to prohibit excessive fugitive dust.
 - Creates a fund and provides for enforcement mechanisms.

4. Erie, CO—Odor Ordinance (2017)
<https://erie.legistar.com/LegislationDetail.aspx?ID=3107865&GUID=A283FAE1-3943-4CAE-A3D4-CA7DCFAFF778&Options=&Search=>
 - Alters the town’s public health and safety code under the “Abatement of Nuisance” provision.
 - Makes it unlawful and a public nuisance for any person, tenant, occupant, or property owner to permit the emission of odors from any source that leave the premises and are detected by a reasonably prudent person with a normal sense of smell.
 - Can be used as a measure for regulating the local fracking industry.

5. Richmond, CA—Enclosure of Coal and Petroleum Nuisance Code (2018)
<http://sireweb.ci.richmond.ca.us/sirepub/cache/2/wnmvgzowe1xjezofb1er2wqh/53363401172019100221393.PDF>
 - Amends Chapter 9.22 Public Nuisances of the Richmond Municipal Code to require enclosure of coal and petroleum coke storage and transfer facilities.
 - Defines the open storage and transfer of coal and petroleum coke as a public nuisance and provides regulations for enclosed storage and transfer.
 - Defines excessive and glaring lights as a public nuisance.

6. Denver, CO—Rules & Regulations Governing Nuisance Odors (2017)
<https://www.denvergov.org/content/dam/denvergov/Portals/771/documents/EQ/Odor/Updated%20Nuisance%20Odor%20Rules-Regs%20Jan%202017.pdf>
 - Requires businesses within certain industry types, such as petroleum refining, pet food processing, and others, to develop and submit an odor control plan for approval by Denver’s Department of Environmental Health. Odor Control Plans identify odor sources, odor control technologies and practices, operation and maintenance plans, and timelines for implementation.
 - Requires an Odor Control Plan if the Department of Environmental Health receives complaints of odor from individuals or businesses more than five times within a 30-day period and the department verifies the source of the odor.
 - Requires an Odor Control Plan if a facility emits odorous contaminants that exceed state regulatory standards.

STATE DIRECTIVES AND GUIDANCE FOR MUNICIPAL EJ LAND USE APPROACHES

1. California—Senate Bill 1000 Land Use: General Plans: Safety and Environmental Justice (2016)
https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB1000
 - Amends Section 65302 of the Government Code relating to land use.
 - Requires the legislative body of each county and city in California to adopt a comprehensive, long-term plan with an environmental justice element upon adoption or next revision of two or more elements concurrently on or after January 1, 2018.
 - Requires that the element identify EJ communities and establish specific objectives and policies to reduce the particular health risks in these communities.
2. California Air Quality Management District—Guidance for Air Quality Issues Regarding Land Use (2017)
<http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/chapter-2---air-quality-issues-regarding-land-use.pdf>
 - Provides guidance on siting criteria for sensitive receptors and on job–housing balance, and suggests goals, objectives, and policies related to land use.
 - Suggests land use–related policies that rely on design and distance parameters to minimize emissions and lower potential health risk.

APPENDIX B: BIBLIOGRAPHY & RESOURCES

Alperg, Benjamin J., Timothy J. Buckley and Ronald H. Whaite. "Socioeconomic and Racial Disparities in Cancer Risk from Air Toxics in Maryland." *Environ Health Perspect.* 113, no. 6 (2005): 693–699. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1257593/>.

Anguelovski, Isabelle. "From Toxic Sites to Parks as (Green) LULUs? New Challenges of Inequity, Privilege, Gentrification, and Exclusion for Urban Environmental Justice." *Journal of Planning Literature* 31, no. 1 (2015): 23-36. doi:10.1177/0885412215610491.

Arnold, Craig Anthony. "Planning Milagros: Environmental Justice and Land Use Regulation." 76 *Denver U.L.R.* 1 (1998).

Arnold, Craig Anthony. "Land Use Regulation and Environmental Justice." 30 *ELR* 10395 (2000).

Arnold, Tony. "Planning for Environmental Justice." *Planning & Environmental Law* 59, no. 3 (2007).

Baltimore City Health Department. "Asthma." <https://health.baltimorecity.gov/node/454>.

Been, Vicki, and Francis Gupta. "Coming to the Nuisance or Going to the Barrios? A Longitudinal Analysis of Environmental Justice Claims." *Ecology Law Quarterly* 24, no. 1 (1997): 1-56.

Benson, T. B. "Segregation Ordinances." *Virginia Law Register* 1, No. 5 (1915): 330-356. https://archive.org/stream/jstor-1104063/1104063_djvu.txt.

Blaney, Elizabeth, Bill Gallegos, Jesse Marquez, Nury Martinez, and Leonardo Vilchis. Elizabeth Blaney et al. to Los Angeles City Council, Los Angeles, CA, May 3, 2012. http://clkrep.lacity.org/onlinedocs/2011/11-0112_misc_5-3-12g.pdf.

Bliss, Laura. "How Zoning Codes from 1923 Shaped Present-Day Chicago." CityLab, 23 Sept. 2016. <https://www.citylab.com/design/2016/09/zoning-codes-chicago/500705/>.

Bonorris, Steven, Ed. *Environmental Justice for All: A Fifty-State Survey of Legislation, Policies, and Initiatives*. 4th ed. San Francisco: University of California Hastings College of the Law Public Law Research Institute, 2010. <https://gov.uchastings.edu/public-law/docs/ejreport-fourthedition1.pdf>.

Bullard, Robert D. "Environmental Justice: It's More Than Waste Facility Siting." *Social Science Quarterly* 77, no. 3 (1996): 493-499.

Bullard, Robert D., et al. "Toxic Wastes and Race at Twenty: Why Race Still Matters After All of These Years." *Environmental Law* 38, no. 2 (2008): 371-411. https://www.researchgate.net/publication/265109133_Toxic_Wastes_and_Race_at_Twenty_Why_Race_Still_Matters_After_All_of_These_Years.

Bullard, Robert D., et al. "Environmental Health and Racial Equity: Building Environmentally Just, Sustainable, and Livable Communities." Environmental Justice Resource Center (2011).

Caiazzo, Fabio, et al. "Air Pollution and Early Deaths in the United States. Part I: Quantifying the Impact of Major Sectors in 2005." *Atmospheric Environment* 79 (2013): 198–208. doi:10.1016/j.atmosenv.2013.05.081.

California Air Resources Board. *Air Quality and Land Use Handbook*. https://www.arb.ca.gov/cc/landuse_test2.htm.

California Air Resources Board. "Air Resources Board Approves Land Use Planning Handbook." News release no. 05-09, May 4, 2005. <https://www.arb.ca.gov/newsrel/nr050405.htm>.

California Environmental Justice Alliance. "Green Zones." <https://caleja.org/what-we-do/greenzones/>.

California Environmental Justice Alliance. "Green Zones for Economic and Environmental Sustainability: A Concept Paper from the California Environmental Justice Alliance." 2011. http://caleja.org/wp-content/uploads/2011/06/2010_0000_green_zones.pdf.

California Environmental Justice Alliance. "Planning for Healthy Communities: Putting Environmental Justice Into General Plans." November 7, 2017. <https://medium.com/@cejapower/planning-for-healthy-communities-putting-environmental-justice-into-general-plans-4b443987e2af>.

California Environmental Justice Alliance. *SB 1000 Toolkit: Planning for Healthy Communities*. October 2017. <https://caleja.org/2017/09/sb-1000-toolkit-release/#form>.

California Environmental Protection Agency. *October 2004 Environmental Justice Action Plan*. Sacramento: California EPA, 2004. http://sehn.org/wp-content/uploads/2013/01/cal_epa.pdf.

California Environmental Protection Agency. "Cumulative Impacts: Building a Scientific Foundation." December 2010. <https://oehha.ca.gov/media/downloads/calenviroscreen/report/cireport123110.pdf>.

California Environmental Protection Agency & California Air Resources Board. *Air Quality and Land Use Handbook: A Community Health Perspective*. Sacramento: California EPA & CARB, 2005. <https://www.arb.ca.gov/ch/landuse.htm>.

Campbell, Heather E., Yushim Kim, and Adam Eckerd. *Rethinking Environmental Justice in Sustainable Cities: Insights from Agent-Based Modeling*. London: Routledge, Taylor and Francis, 2017.

Campbell, Heather E., Yushim Kim, and Adam Eckerd. "Local Zoning and Environmental Justice." *Urban Affairs Review* 50, no. 4 (2013): 521-52. doi:10.1177/1078087413505736.

Case, David. "The Role of Information in Environmental Justice." *Mississippi Law Journal* 81, no. 4 (2012).

Chandler, Michael, and Gregory Dale, "Zoning Basics." *Planning Commissioners Journal*, no. 42 (Spring 2001): 13-19.

Chesapeake Climate Action Network and Clean Water Action. "Crude Oil Trains in Baltimore: Too Dangerous for the Rails." http://chesapeakeclimate.org/wp/wp-content/uploads/2015/01/MD_OilTrains_FactSheet_1.23.18.pdf.

Clean Water Action. "Company Withdraws Plan for Crude Oil Terminal in Baltimore." July 11, 2016. <https://www.cleanwateraction.org/releases/company-withdraws-plan-crude-oil-terminal-baltimore>.

Cohen, R. A., and M. E. Martinez. “Health Insurance Coverage: Early Release of Estimates From the National Health Interview Survey, January–March 2018.” National Center for Health Statistics, 2018. <https://www.cdc.gov/nchs/data/nhis/earlyrelease/Insur201808.pdf>.

Cole, Luke W., and Sheila R. Foster. “Environmental Racism: Beyond the Distributive Paradigm.” Chapter 3 in *From the Ground Up: Environmental Racism and the Rise of the Environmental Justice Movement*. New York: NYU Press, 2000.

Communities for a Better Environment. “Green Zones.” <http://www.cbecal.org/issues/green-zones/>.

Conglose, John B. “Comprehensive Planning.” University of Illinois Extension, Local Community Resources. <https://extension.illinois.edu/lcr/comprehensiveplanning.cfm>.

Council of the City of New York, Office of Costa Constantinides. “City Council Passes Most Comprehensive Environmental Justice Legislation in Nation.” Press release, April 5, 2017. <https://council.nyc.gov/costa-constantinides/2017/04/05/230/>.

Daniels, Tom. *Environmental Planning Handbook*. 2nd ed. New York: Routledge, 2017.

De Guire, Jeannette. “The Cincinnati Environmental Justice Ordinance: Proposing A New Model for Environmental Justice Regulations by the States.” *Cleveland State Law Review* 60 (2012): 223. <https://engagedscholarship.csuohio.edu/cgi/viewcontent.cgi?article=1007&context=clevstrev>.

Environmental Community Organization. “Environmental Justice.” <http://env-comm.org/environmental-justice/>.

Fossil Free US. <https://gofossilfree.org/usa/baltimore-blog/>.

Freudenberg, N., M. Pastor, and B. Israel. “Strengthening Community Capacity to Participate in Making Decisions to Reduce Disproportionate Environmental Exposures.” *Am. J. Public Health* 101, Suppl. 1 (2011): S123–S130. https://ajph.aphapublications.org/doi/full/10.2105/AJPH.2011.300265?url_ver=Z39.88-2003&rft_id=ori%3Arid%3Acrossref.org&rft_dat=cr_pub%3Dpubmed.

Frey, Jacob. “Green Growth & Urban Agriculture.” <https://jacobfrey.org/green-growth-urban-ag/>.

Fulton County Board of Health. “Environmental Justice.” <http://fultoncountyboh.org/boh/index.php/environmental-justice>.

Gerrard, Michael B. “Environmental Justice and Local Land Use Decision-Making.” In *Trends in Land Use Law From A to Z: Adult Uses to Zoning*. Patricia E. Salkin, Ed. Chicago: American Bar Association, 2001.

Gerrard, Michael, and Sheila Foster. *The Law of Environmental Justice: Theories and Procedures to Address Disproportionate Risk*. 2nd Edition. Chicago: American Bar Association, 2008.

Grove, Morgan, et al. “The Legacy Effect: Understanding How Segregation and Environmental Injustice Unfold Over Time in Baltimore.” *Annals of the American Association of Geographers* 108, no. 2 (2017): 524–37. doi:10.1080/24694452.2017.1365585. https://www.fs.fed.us/nrs/pubs/jrnl/2017/nrs_2017_grove_001.pdf.

Gunier, R. B., et al. "Traffic Density in California: Socioeconomic and Ethnic Differences Among Potentially Exposed Children." *J Expo Anal Environ Epidemiol* 13, no. 3 (May 2003): 240–46. <https://www.nature.com/articles/7500276>.

Hoidal, Sten-Erik. "Returning to the Roots of Environmental Justice: Lessons From the Inequitable Distribution of Municipal Services." *Minnesota Law Review* 88 (November 2003): 193.

Hollenbaugh, Katie. "Planning for Healthy Communities: Putting Environmental Justice Into General Plans." American Planning Association, California chapter, 2017. <http://sdapa.org/planning-for-healthy-communities-putting-environmental-justice-into-general-plans/>.

Jones, Miranda R., et al. "Race/Ethnicity, Residential Segregation, and Exposure to Ambient Air Pollution: The Multi-Ethnic Study of Atherosclerosis (MESA)." *American Journal of Public Health* 104, no. 11 (2014): 2130-2137. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4202969/>.

Kingdon, J. W. *Agendas, Alternatives and Public Policies*. 2nd edition. Glenview, Ill.: Addison-Wesley Educational Publishers, 2010.

Lake, Robert W. "Planners' Alchemy Transforming NIMBY to YIMBY: Rethinking NIMBY." *Journal of the American Planning Association* 59, no. 1 (1993): 87-93.

Liberty Hill Foundation. *The Guide to Green (Los Angeles)*. Los Angeles. December 2017. https://www.libertyhill.org/sites/libertyhillfoundation/files/Guide2Green_LA.pdf.

Liberty Hill Foundation. *Hidden Hazards: A Call to Action for Healthy, Livable Communities*, by Martha Matsuoka, Michele Prichard, and James Sadd. Los Angeles. December 2010. <https://www.libertyhill.org/sites/libertyhillfoundation/files/hidden-hazards-low-res-version.pdf>.

Los Angeles City Council. Planning and Land Use Management Committee. *Report on Clean Up Green Up Policy Council File 11-0112, 11-0112-SI*. Los Angeles. 2012. http://clkrep.lacity.org/online-docs/2011/11-0112_RPT_PLAN_12-03-12.pdf.

Lynch, Kevin J. "Regulation of Fracking Is Not a Taking of Private Property." *U. Cin. L. Rev.* 84 (2016): 39. https://digitalcommons.du.edu/cgi/viewcontent.cgi?article=1012&context=law_facpub.

Maantay, Juliana. "Zoning, Equity, and Public Health." *American Journal of Public Health* 91, no. 7 (2001): 1033. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1446712/pdf/11441726.pdf>.

Maantay, Juliana. "Zoning Law, Health, and Environmental Justice: What's the Connection?" *Journal of Law, Medicine & Ethics* 30, no. 4 (2002): 572-488.

Maantay, Juliana. "Industrial Zoning Changes in New York City: A Case Study of 'Expulsive' Zoning." *Projections: The Planning Journal of Massachusetts Institute of Technology* (January 2002): 63-108.

Massey, Douglas S. "American Apartheid: Segregation and the Making of the Underclass." *American Journal of Sociology* 96, no. 2 (1990): 329-357. https://www.jstor.org/stable/2781105?seq=1#page_scan_tab_contents.

Massey, Douglas S., Jonathan Rothwell, and Thurston Domina. "The Changing Bases of Segregation in the United States." *The Annals of the American Academy of Political and Social Science* 626, no. 1 (2009): 74-90.

Mikati, Ihab, et al. “Disparities in Distribution of Particulate Matter Emission Sources by Race and Poverty Status.” *American Journal of Public Health* 108, no. 4 (April 1, 2018): 480-485. <https://ajph.aphapublications.org/doi/abs/10.2105/AJPH.2017.304297?journalCode=ajph>

Minneapolis Health Department. Environmental Services. “Pollution Control Annual Billing (PCAB) Frequently Asked Questions.” <http://www.minneapolismn.gov/www/groups/public/@regservices/documents/webcontent/wcms1p-081834.pdf>.

Minneapolis Sustainability Office. *Minneapolis Green Zones Workgroup Final Report*. Minneapolis, 2017. <http://www.ci.minneapolis.mn.us/sustainability/reports/WCMSP-201323>.

Minneapolis Sustainability Office. “Minneapolis Population Characteristics and Environmental Indicators Map.” Minneapolis, 2017. <http://www.ci.minneapolis.mn.us/sustainability/policies/WCMSP-187876>.

Miskowiak, Douglas, and Linda Stoll. “Planning Implementation Tools: Overlay Zoning.” University of Wisconsin–Stevens Point, Center for Land Use Education. November 2005. https://www.uwsp.edu/cnr-ap/clue/documents/planimplementation/overlay_zoning.pdf.

Mohai, Paul, and Robin Saha. “Reassessing Racial and Socioeconomic Disparities in Environmental Justice Research.” *Demography* 43, no. 2 (2006): 383-99. doi:10.1353/dem.2006.0017. http://webhost.bridgew.edu/ramey/www/g333pdf/mohai_gis.pdf.

Morello-Frosch, Rachel, and Bill M. Jesdale. “Separate and Unequal: Residential Segregation and Estimated Cancer Risks Associated With Ambient Air Toxics in US Metropolitan Areas.” *Environmental Health Perspectives* 114, no. 3 (2005): 386-393. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1392233/>.

Morello-Frosch, Rachel, and Russ Lopez. “The Riskscape and the Color Line: Examining the Role of Segregation in Environmental Health Disparities.” *Environmental Research* 102, no. 2 (2006): 181-96. doi:10.1016/j.envres.2006.05.007. <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.545.4825&rep=rep1&type=pdf>

National City. City Clerk. “Agendas & Minutes: Town Hall Meeting to Educate Community Regarding Nonconforming Land Uses and Amortization.” 2011. <http://www.nationalcityca.gov/Home/Components/Calendar/Event/2316/43?toggle=all&npage=35&sortn=EName>.

National City. Development Services Department. *Final Westside Specific Plan*. National City, March 16, 2010. <http://www.nationalcityca.gov/home/showdocument?id=13494>.

National City. “Ranking Factors.” <http://www.nationalcityca.gov/Home/ShowDocument?id=13377>.

National Association of City and County Health Officials. Public Health Assessment and Wellness: Model Practices. “Fulton County Environmental Justice Initiative.” <http://fultondekalb.ga.networkofcare.org/ph/model-practice-detail.aspx?pid=5695>.

Newark Planning Office. *Newark Zoning and Land Use Regulations*. November 2014. https://drive.google.com/file/d/1QOtcZHWTCaQUDE4RGz7Ax_Ff09c9rjw/view

New Jersey Environmental Justice Alliance. “Model Ordinance.” http://www.precaution.org/lib/muni_ord_master.pdf.

New York City Department of City Planning. “City Planning History: NYC Zoning History.” <https://www1.nyc.gov/site/planning/about/city-planning-history.page>.

Outka, Uma. “NEPA and Environmental Justice: Integration, Implementation, and Judicial Review.” *Boston College Environmental Affairs Law Review* 33, no. 3 (2006): 601. <https://lawdigitalcommons.bc.edu/cgi/viewcontent.cgi?referer=&httpsredir=1&article=1101&context=ealr>.

Pastor, Manuel, Jim Sadd, and John Hipp. “Which Came First? Toxic Facilities, Minority Move-In, and Environmental Justice.” *Journal of Urban Affairs* 23, no. 1 (2001): 1-21. <https://pdfs.semanticscholar.org/60ac/cd068f05494c6b834595655ad88a1e6a1298.pdf>.

Pearsall, Hamil, and Isabelle Anguelovski. “Contesting and Resisting Environmental Gentrification: Responses to New Paradoxes and Challenges for Urban Environmental Justice.” *Sociological Research Online* 21, no. 3 (2016): 1-7. doi:10.5153/sro.3979. <http://www.socresonline.org.uk/21/3/6.html>.

Pellow, David N. “Environmental Inequality Formation: Toward a Theory of Environmental Injustice.” *American Behavioral Scientist* 43, no. 4 (2000): 581-601. https://www.researchgate.net/publication/238334851_Environmental_Inequality_Formation_Toward_a_Theory_of_Environmental_Justice.

Pulido, Laura. “Rethinking Environmental Racism: White Privilege and Urban Development in Southern California.” *Annals of the Association of American Geographers* 90, no. 1 (2000): 12-40. <https://atrium.lib.uoguelph.ca/xmlui/bitstream/handle/10214/1833/30-Pulido.pdf?sequence=1>

Rabin, Yale. *Expulsive Zoning: The Inequitable Legacy of Euclid*. Chicago: APA Press, 1999.

Rothstein, Richard. *The Color of Law: A Forgotten History of How Our Government Segregated America*. New York: Liveright Publishing, 2017.

Rutledge, Philip, et al. *Addressing Community Concerns: How Environmental Justice Relates to Land Use Planning and Zoning*. National Academy of Public Administration, July 2003. <https://www.epa.gov/sites/production/files/2015-02/documents/napa-land-use-zoning-63003.pdf>.

Salkin, Patricia. “Intersection Between Environmental Justice and Land Use Planning.” *Planning and Environmental Law*, 58, 5 May 2006. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1029861

Sampite-Montecalvo, Allison. “National City Boots Auto Businesses.” *San Diego Union-Tribune*, August 19, 2015. <https://www.sandiegouniontribune.com/sdut-national-city-amortization-auto-businesses-2015aug19-story.html>.

San Francisco Department of the Environment. “Environmental Justice Grant Recipients.” <https://sfenvironment.org/article/environmental-justice-grant-recipients>.

San Francisco Department of Public Health. Environmental Health Branch. “Application for Article 38 Compliance Assessment.” <https://www.sfdph.org/dph/files/EHSdocs/AirQuality/Article38Application.pdf>

San Francisco Department of Public Health and San Francisco Planning Department. “Building Height Fact Sheet: Article 38 of the San Francisco Health Code Requires Enhanced Ventilation for All Units in a Building.” San Francisco, February 2014. <https://www.sfdph.org/dph/files/EHSdocs/AirQuality/OutdoorAirPollutantsatHigherBuildingHeights.pdf>

San Francisco Department of Public Health and San Francisco Planning Department. “Examples of Enhanced Ventilation Designs Applicable Under Article 38 of the San Francisco Health Code and Proposed 2014 Amendments.” San Francisco, 2014. <https://www.sfdph.org/dph/files/EHSdocs/AirQuality/Article-38-ExampleVentilationDesigns.pdf>.

Shertzer, Allison, Tate Twinam, and Randall P. Walsh. “Zoning and the Economic Geography of Cities.” *Journal of Urban Economics* 105 (2018): 20-39. <https://www.nber.org/papers/w22658.pdf>.

Silver, Christopher. “The Racial Origins of Zoning in American Cities.” In *Urban Planning and the African American Community: In the Shadows*, June Manning Thomas and Marsha Ritzdorf, eds. Thousand Oaks, Ca: Sage Publications, 1997.

Solomon, G. M., et al. “Integrating Environmental Justice Into Public Health: Approaches for Understanding Cumulative Impacts.” *Frontiers in Public Health Services and Systems Research* 5, no. 5 (2016): 9-14. DOI: <https://doi.org/10.13023/FPHSSR.0505.02>.

Sze, Julie. *Noxious New York: The Racial Politics of Urban Health and Environmental Justice* (Cambridge, Mass: MIT Press, 2007)

Takvorian, Diane, et al. “Community Planning for Power.” *Race, Poverty & the Environment* 15, No. 1 (2008): 76-78. https://www.jstor.org/stable/41554597?seq=1#page_scan_tab_contents.

Temper, Leah, Daniela Del Bene, and Joan Martinez-Alier. “Mapping the Frontiers and Front Lines of Global Environmental Justice: The EJAtlas.” *Journal of Political Ecology* 22, No. 1 (2015): 255-278. <https://journals.uair.arizona.edu/index.php/JPE/article/view/21108/20696>.

United Church of Christ. Commission for Racial Justice. *Toxic Wastes and Race in the United States*. Public Data Access Inc., 1987. <https://www.nrc.gov/docs/ML1310/ML13109A339.pdf>.

U.S. Department of Health & Human Services. Centers for Disease Control and Prevention. National Center for Health Statistics. *Health Insurance Coverage: Early Release of Estimates From the National Health Interview Survey, January–March 2018*, by Robin A. Cohen, Michael E. Martinez, and Emily P. Zammitti. 2018. <https://www.cdc.gov/nchs/data/nhis/earlyrelease/Insur201808.pdf>.

U.S. Environmental Protection Agency. *EJSCREEN Technical Documentation*. August 2017. https://www.epa.gov/sites/production/files/2017-09/documents/2017_ejscreen_technical_document.pdf.

U.S. Environmental Protection Agency. “Environmental Justice: Key Resources for Building a Community of Practice for Local Use Planning.” November 2014. <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100LBP8.pdf>.

Whittemore, Andrew H. “Racial and Class Bias in Zoning: Rezoning Involving Heavy Commercial and Industrial Land Use in Durham (NC), 1945–2014.” *Journal of the American Planning Association* 83, vo. 3 (2017): 235–248.

Wilson, Sacoby, Malo Hutson, and Mahasin Mujahid. “How Planning and Zoning Contribute to Inequitable Development, Neighborhood Health, and Environmental Injustice.” *Environmental Justice* 1, no. 4 (2008): 211-16. doi:10.1089/env.2008.0506. http://www.ced.berkeley.edu/downloads/pubs/faculty/hutson_2008_enviro-health.pdf.

World Health Organization. International Agency for Research on Cancer. “IARC: Diesel Engine Exhaust Carcinogenic.” News release no. 213, June 12, 2012. https://www.iarc.fr/wp-content/uploads/2018/07/pr213_E.pdf.