

Research Article

Cite this article: Szymanski A-M. Air Pollution Control in New Jersey and Ohio: Institutional Legacies and State Building, 1954–1970. *Studies in American Political Development* 39, no. 2 (October 2025): 202–224. <https://doi.org/10.1017/S0898588X25100242>

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Air Pollution Control in New Jersey and Ohio: Institutional Legacies and State Building, 1954–1970

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Abstract

Why was New Jersey able to construct a more robust air pollution control regime after World War II while Ohio lagged far behind? Moreover, why did Ohio — a pioneer in early air pollution control efforts — fall behind New Jersey during this period? Both of these states were heavily-industrialized, densely populated, and concerned about maintaining a competitive economy. This paper explores the role played by institutional legacies in shaping bureaucratic politics as well as the development of effective government agencies. It demonstrates that statewide action on air pollution was primarily shaped by the states' institutional legacies (or lack thereof) from the Progressive Era. In Ohio, extant urban pollution agencies remained the center of pollution control during the 1960s even as policymakers recognized their limited capacity to address air pollution. In contrast, policymakers in New Jersey could design a statewide agency virtually from scratch without disrupting existing institutions and their relationships with affected industries. While it took some time for New Jersey to develop an effective state agency, policymakers and pollution control advocates could focus on improving one statewide agency rather than several urban agencies, thus easing their path to developing an agency capable of regulating corporate activity.

“New Jersey is called the Garden State, but gardens haven’t had much chance lately in the state’s environment of smog-choked skies and polluted rivers,” wrote Richard Bragaw of the *Dayton Daily News* (Dayton, Ohio) in May of 1971. Nevertheless, Bragaw conceded that experts considered New Jersey to have one of the best state pollution control programs in the nation at that time. Moreover, even though “Ohioans pride themselves on the fact that the state was one of the first to get started on pollution programs,” Bragaw acknowledged that Ohio’s antipollution agencies were weak, underfunded, and understaffed compared to those from states like New Jersey.¹ Why did Ohio — a pioneer in the Progressive Era anti-smoke movement — fall behind New Jersey in air pollution control after World War II? Why was New Jersey able to partially overcome business opposition to air pollution control while Ohio remained imprisoned by it? More generally, what accounts for the development of effective state pollution control in the United States after World War II, given the historical institutional constraints on environmental policy?

In his sweeping account of the development of environmental policy in the U.S., David B. Robertson argues that “two distinctly American institutions have structured environmental policy: (1) extensive private owner control over the use of private land (or real property) and (2) a federal system that encourages states to compete in nurturing in-state industries, attracting new investment, and growing the state economy. These institutional arrangements have encouraged Americans to prioritize the use of natural resources for profit.” That said, Robertson acknowledges that during the 1960s and 1970s, the U.S. pioneered stringent, innovative environmental policies that helped the nation overcome the states’ tendency to eschew strict regulations on in-state industries, which always had the option of relocating to states with weaker regulatory regimes. Despite such measures, he maintains that the federal government and most states continue to face headwinds from a determined opposition of business interests, the agricultural sector, and ideological conservatives. In the end, Robertson suggests that only states with strong public support for environmental initiatives (e.g., California) can overcome the structural and economic barriers to secure effective environmental regulation.² This emphasis on states

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¹ Richard Bragaw, “New Jersey, Illinois Lead Smog Fight,” *Dayton Daily News* (Dayton, Ohio) (12 May 1971), 1, 19 (quotations on p. 19).

² David B. Robertson, “Leader to Laggard: How Founding Institutions Have Shaped American Environmental Policy,” *Studies in American Political Development* 34 (April 2020): 110–130 (quotation on p. 110). For example, Robertson cites David Vogel, *California Greenin’: How the Golden State Became an Environmental Leader*, (Princeton, N.J.: Princeton University Press, 2018) and Matthew Potoski, “Clean Air Federalism: Do States Race to the Bottom?” *Public Administration Review* 61 (2001): 335–42.

responding to strong public support for environmental initiatives is found in other studies as well.³ In the meantime, though, Robertson and other scholars downplay the importance of state and local agency capacity in accounting for the various patterns of environmental policymaking that emerged in post-war America.

Such neglect seems unwarranted because many scholars and policymakers in the 1960s and early 1970s were fixated on agency design and the importance of creating new bureaucratic structures that could act independently of business interests when developing regulatory policies and implementing them. As Paul H. Weaver wrote in 1978 (albeit about national regulation), “the new regulatory agencies are utterly unlike the old ones,” in part because their designers were aware of the social science literature which highlighted agency capture. Indeed, this “new social regulation” sought to ensure that environmental agencies focused on the public welfare by setting relatively specific deadlines and standards for pollution abatement and requiring the adoption of a “command and control” approach to regulation. Instead of monitoring particular sectors of the economy as was the case with New Deal era agencies, newly-established bureaucracies like the EPA regulated economic activity across sectors. Moreover, many (though not all) reorganization advocates contended that agencies ought to be led by solitary executives rather than by the multi-member commissions that had characterized New Deal era regulation in order to achieve greater efficiency and accountability to executive authorities.⁴

While much of the literature about the “new social regulation” concentrated on national developments, students of public administration were also focused on administrative design at the state level in the late 1960s and early 1970s as the states created their own environmental agencies. These scholars noted that “cozy relationships have sometimes developed between state officials and the polluters they are supposed to regulate” and maintained that the new state environmental agencies would have to attain structures which guaranteed independence from affected industries. These observers also noted the states often created “superdepartments” which combined pollution control with programs to manage natural resources, a structure they feared would shortchange the regulation of air and water pollution and encourage cooptation by private interests. Hence, they often contrasted the “superdepartments” with mini-EPAs, state agencies which focused entirely on pollution control. Finally, they chronicled the debate among state officials as to whether a unitary agency leader would be preferable to a plural one.⁵

³ Rebecca Bromley-Trujillo and John Poe, “The Importance of Salience: Public Opinion and State Policy Action on Climate Change,” *Journal of Public Policy* 40 (June 2020): 280-304; Scott P. Hays, et al., “Environmental Commitment among the States: Integrating Alternative Approaches to State Environmental Policy,” *Publius* 26 (Spring 1996): 41-58.

⁴ Paul H. Weaver, “Regulation, Social Policy, and Class Conflict,” *The Public Interest* (Winter 1978): 45-63 (quotation on p. 50); William Lilley III and James C. Miller III, “The New ‘Social Regulation,’” *The Public Interest* (Spring 1977), 49-61; R. Shep Melnick, *Regulation and the Courts: The Case of the Clean Air Act*, (Washington, DC: Brookings Institution, 1983): 5-8; 43. Indeed, President Nixon’s Advisory Council on Executive Organization (the Ash Council) recommended the abolition of the traditional commission form of six New Deal-era regulatory agencies to be replaced by a single administrator in order to achieve greater efficiency and accountability to the president. See President’s Advisory Council on Executive Organization, *A New Regulatory Framework: Report on Selected Independent Regulatory Agencies*, (Washington, D.C.: President’s Advisory Council on Executive Organization, 1971); Eileen Shanahan, “Washington Report,” *New York Times* (New York, New York) (21 February 1971): Section F, 7. For a critique of the Ash Council’s recommendations about accountability, however, see Simon Lazarus and Joseph Onek, “The Regulators and the People,” *Virginia Law Review* 57 (September 1971): 1069-1108.

⁵ Elizabeth H. Haskell and Victoria S. Price, *State Environmental Management: Case Studies of Nine States*, (New York: Praeger Publishers, 1973), quotation on p. 244.

This debate about environmental agency structure at the state level has been ongoing ever since. In 1975, one head of a state environmental protection agency rejected the criticism of “superdepartments” and instead maintained that “[t]he success of any reorganization depends upon the history of the programs being reorganized, the circumstances and timing of the reorganization, and the leadership that is given.”⁶ In the same year, a study of state agencies concluded that environmental policymaking was best implemented by either mini-EPAs or “superdepartments,” while anti-pollution agencies that resided in health departments were least effective.⁷ More recently, in 2016, Emily Bedwell found that agency structure had no impact on whether states adopted more extensive environmental policies, while JoyAnna Miller demonstrated in 2023 that mini-EPAs were generally more effective at air pollution control than “superdepartments” and agencies lodged in health departments.⁸

Regardless of their structure, studies have demonstrated that state air pollution control agencies have a substantial impact on policymaking and its outcomes.⁹ Hence, scholars would be wise to consider *how* they influence policy outcomes in addition to variables like agency structure, public support for the environment, and environmental group strength. This paper will compare environmental policymaking regarding air pollution in two states — New Jersey and Ohio — which were both more industrialized than average in the 1950s and 1960s and maintained very similar totals of value added from manufacturing (VAM). As Table 1 shows, these two states had diversified economies, though New Jersey derived more VAM from “chemicals and allied products” than Ohio, and Ohio obtained more VAM from “transportation equipment” and “primary metal industries.” Furthermore, most of the industries listed in the table for the two states were recognized as significant stationary sources of air pollution, including manufacturers of transportation equipment, chemicals, machinery, rubber and plastic products, food, and primary and fabricated metal industries.¹⁰ This similarity is important because some studies show that states are more likely to invest in pollution control if they have significant air pollution problems.¹¹ While both states

⁶ Douglas M. Costle, “Review of State Environmental Management,” *Ecology Law Quarterly* 4 (1975): 1007-1014, quotation on p. 1013.

⁷ T. L. Beyle, *Integration and Coordination of State Environmental Programs*, (Lexington, Ky: Council of State Governments, 1975).

⁸ Emily Bedwell, “Applying a Positive Theory of Organizations: A Closer Examination of State Environmental Protection Agencies,” (unpublished Ph.D. dissertation, University of Kentucky, 2016), 137; JoyAnna Hopper, *Environmental Agencies in the United States: The Enduring Power of Organizational Design and State Politics*, (Lanham, Md.: Lexington Books, 2020).

⁹ See, e.g., Evan J. Ringquist, “Does Regulation Matter? Evaluating the Effects of State Air Pollution Control Programs,” *Journal of Politics* 55 (November 1993): 1022-1045; Matthew Potoski and Neal D. Woods, “Designing State Clean Air Agencies: Administrative Procedures and Agency Autonomy,” *Journal of Public Administration Research and Theory* 11 (April 2001): 213-215.

¹⁰ Environmental Protection Agency, *Compilation of Air Pollutant Emission Factors*, (Washington, D.C.: U.S. Government Printing Office, 1972), Chaps. 5, 6, and 7; Michigan, Governor’s Advisory Council for Environmental Quality, *Report on Air Pollution, State of Michigan* (Lansing, Mich.: Michigan Department of Public Health, 1970). In fact, to this day, the manufacturing of chemicals, transportation equipment, food, and rubber and plastic products produce significant air pollution in the United States. See Environmental Protection Agency, “2022 TRI National Analysis,” (Environmental Protection Agency: N. p., 2024), 51. Available at https://www.epa.gov/system/files/documents/2024-03/complete_2022_tri_national_analysis.pdf. Accessed on 7 January 2025.

¹¹ See, e.g., A. Hunter Bacot, Roy A. Dawes, and Ann Sawtelle, “A Preliminary Analysis of Environmental Management in the United States,” *Public Administration Quarterly* 9 (1996):394-395; A. Hunter Bacot and Roy A. Dawes, “State Expenditures and Policy Outcomes in Environmental Program Management,” *Policy Studies Journal*, 25(1997): 355-370.

Table 1. Ohio and New Jersey in the 1960s: Population and Manufacturing

	Ohio	New Jersey	United States
Population (1960)	9,706,397	6,066,782	179,323,175
Population density (1960)	237.5 people per square mile	824.9 people per square mile	50.6 people per square mile
Per capita value added by manufacturing or VAM (1963)	\$1,522.14	\$1556.46	\$1209.80
Major industries (1963) listed in order of VAM (% VAM)	1. Transportation equipment (16.1%)	1. Chemicals and allied products (21.1%)	1. Transportation equipment (13.3%)
	2. Primary metal industries (14.2%)	2. Electrical machinery (13.2%)	2. Food and kindred products (11.3%)
	3. Machinery, except electrical (12.9%)	3. Food and kindred products (10.4%)	3. Chemicals and allied products (9.2%)
	4. Electrical machinery (10.0%)	4. Machinery, except electrical (7.1%)	4. Machinery, except electrical (9.0%)
	5. Fabricated metal products (6.9%)	5. Fabricated metal products (8.7%)	5. Electrical machinery (8.9%)
	6. Food and kindred products (6.8%)	6. Transportation equipment (6.2%)	6. Primary metal industries (8.0%)
	7. Rubber and plastic products (6.3%)	7. Apparel and related products (4.9%)	7. Fabricated metal products (6.1%)
	8. Chemicals and allied products (5.8%)	8. Primary metal industries (4.1%)	8. Printing and publishing (5.5%)
	9. Stone, clay and glass products (4.8%)	9. Printing and publishing (3.9%)	9. Apparel and related products (4.1%)
	10. Printing and publishing (4.3%)	10. Stone, clay and glass products (3.9%)	10. Paper and allied products (3.9%)

Sources: U.S. Census (1960) and U.S. Census for Manufacturers (1963).

contain fragile ecosystems and areas of natural beauty, neither state sought to market itself to the nation as an American paradise, and that image was not integral to their economic development plans. Both states were also subject to the “pseudocorporatism” that characterized air pollution control policymaking during these decades, and their public officials feared that imposing stringent regulations would lead to businesses relocating to areas with weaker air quality controls.

New Jersey was more densely populated than Ohio, but both were among top ten states in terms of population density. (See Table 1.) Both states also border Pennsylvania, home of Donora, a municipality of about 14,000 residents that suffered from an infamous lethal smog which killed over 20 residents and affected thousands of others in October of 1948.¹² Neither of these states framed environmental protection as a constitutional right,¹³ and neither are located in the South, the region that consistently showed the least amount of concern for environmental issues like air pollution in polls from the late 1960s and early 1970s.¹⁴ While other states have experimented with new agency designs for pollution control

since the 1970s, neither New Jersey nor Ohio have substantially reorganized their state-level environmental protection agencies since their initial development.¹⁵ Finally, both New Jersey and Ohio received federal aid for their air pollution control programs and witnessed the emergence of organized anti-pollution campaigns led by new and existing civic organizations, though these groups achieved their greatest visibility *after* — not before — the development of statewide agencies.

Despite these similarities, New Jersey was an environmental pioneer which developed a statewide air pollution control program in 1954 and enhanced its capacities during the 1960s while Ohio only developed its first state agency, the Air Pollution Control Board, in 1967. Furthermore, New Jersey’s air pollution control program has traditionally ranked higher than that of Ohio, which has consistently been among the top states with respect to the amount of toxic chemicals released into the air.¹⁶ This paper will demonstrate that statewide action on air pollution was primarily shaped by these states’ institutional legacies (or lack thereof) from the Progressive Era. In Ohio, extant urban pollution agencies remained the center of pollution control during the 1960s even as policymakers recognized their limited capacity to address air pollution. In contrast, policymakers in New Jersey could design a statewide agency virtually from scratch without disrupting existing

¹²Lynne Page Snyder, “The Death-Dealing Smog over Donora, Pennsylvania: Industrial Air Pollution, Public Health Policy, and the Politics of Expertise, 1948-1949,” *Environmental History Review* 18 (Spring 1994): 117-139; Gabe Schroeder, “Just Plain Murder”: Public Debate and Corporate Diplomacy in Donora’s Fight for Clean Air,” *The History Teacher* 45 (2011): 93-101.

¹³Emily Zackin, *Looking for Rights in All the Wrong Places: Why State Constitutions Contain America’s Positive Rights*, (Princeton, N.J.: Princeton University Press, 2013), chap. 3.

¹⁴Hazel Erskine, “The Polls: Pollution and its Costs,” *Public Opinion Quarterly* 36 (1972): 120-135. In contrast to the South, the Northeast (home to New Jersey) and the Midwest (home to Ohio) were more likely to be concerned about pollution than the South. In some

surveys from this period, the Northeast appeared to be more concerned about environmental issues than the Midwest; in other surveys, the Midwest appeared to be more concerned about such issues than the Northeast.

¹⁵Bedwell, “Applying a Positive Theory of Organizations,” 46, Appendix A.

¹⁶Scott Ridley, *The State of the States: 1987*, (Washington, D.C.: Fund for Renewable Energy and the Environment, 1987), 3, 6-9; Sirisha C. Naidu, et al., “Environmental Justice in Ohio,” *Review of Radical Political Economics* 45 (2012): 385, 395.

institutions and their relationships with affected industries. While it took some time for New Jersey to develop an effective state agency, policymakers and pollution control advocates could focus on improving one statewide agency rather than several urban agencies, thus easing their path to developing an agency capable of regulating corporate activity.

1. Statebuilding, policy centralization, and the development of air pollution control agencies

Much of the literature on statebuilding focuses on explaining the concentration of power within centralized governments and the ability of such authorities to exert control over economic and social activities throughout their territories. As scholars like Elisabeth Clemens have demonstrated, however, statebuilding in the United States has never been a purely linear process. Over time, there has been no wholesale, systematic progression, culminating in the centralization of power in autonomous national agencies. Instead, political entrepreneurs and public officials have ultimately fashioned a muddled, fragmented government which mixes national efforts with those of state, local, and private actors to create a bewildering array of governing structures — in short, Clemens' "Rube Goldberg state."¹⁷

Statebuilding in the environmental policy area has been no different. While those promoting the preservation of wildlife during the Progressive Era traversed the shift from local to state to national regulatory regimes in a relatively smooth fashion,¹⁸ opponents of water and air pollution were not so fortunate during the first half of the twentieth century. The national government would only develop national standards for air and water quality in the early 1970s, and even then, the states retained significant control over how to meet those standards once their implementation plans had been approved. Likewise, the Environmental Protection Agency (EPA) — the national agency which oversaw the implementation of these new standards — was not designed to grant its administrators untrammelled discretion to apply them. Instead, the EPA's regulation of air and water pollution relies on cooperative federalism, a variant of federalism in which national, state, and local governments interact cooperatively and collectively to solve common problems.¹⁹

To be sure, the adoption of the Clean Air Act Amendments of 1970 dramatically expanded the federal government's role in air pollution control, a policy area that had traditionally been the primary responsibility of the states. This legislation authorized the development of comprehensive state and federal regulations to

curb emissions from both stationary and mobile sources of air pollution. For mobile sources, the CAAA imposed emission standards on vehicles; for stationary sources, it established four major regulatory regimes: the National Ambient Air Quality Standards (NAAQS), State Implementation Plans (SIPs), National Emission Standards for Hazardous Air Pollutants (NESHAPs), and New Source Performance Standards (NSPS).²⁰ Indeed, since cooperative federalism in this period often involved the federal government's cooptation of state power (either partial or complete),²¹ analysts of American political development typically depict the development of agencies like the EPA during the years 1967 – 1975 to be part of the centralization narrative.

Because this variant of federalism was incorporated into air pollution control statutes beginning in 1967, the EPA has never been able to truly centralize the implementation of federal air quality legislation because the states could achieve regulatory primacy if they adopted standards that met or exceeded federal standards and demonstrated that they had the necessary equipment and personnel.²² In fact, the EPA was generally not prepared to implement the Clean Air Amendments of 1970, and by 1972, had approved the initial SIPs for all fifty states, the District of Columbia, and four territories.²³ Furthermore, the Environmental Protection Agency cannot require the states to increase their expenditures on pollution control, leaving such efforts subject to budget cuts when state coffers are empty.²⁴ While it retains the capacity to "federalize" some enforcement actions, the agency has rarely done so.²⁵ At best, with respect to air pollution, the EPA is empowered to withhold federal highway funds for areas of the states which are out of compliance with national air quality standards, a power it exercises infrequently.²⁶ Hence, the states retain significant autonomy and are responsible for the majority of inspections and enforcement actions associated with their State Implementation Plans, with only periodic interventions or threats of intervention from the EPA.²⁷

²⁰Richard Schmalensee and Robert N. Stavins, "Policy Evolution under the Clean Air Act," *Journal of Economic Perspectives* 33 (Fall 2019): 27–50.

²¹Joseph F. Zimmerman, *Congressional Preemption: Regulatory Federalism*, (Albany: SUNY Press, 2005), chap. 5.

²²Joseph F. Zimmerman, *Innovative Congressional Minimum Standards Preemption Statutes*, (Albany: SUNY Press, 2016), 56.

²³See Environmental Protection Agency, "Availability of Federally-Enforceable State Implementation Plans for All States," *Federal Register* 83 (5 December 2022), 74,315. More generally, state agencies are increasingly responsible for implementing environmental laws as the EPA has approved their applications to assume this responsibility. Whereas only forty percent of delegable environmental programs had been delegated to state agencies in 1994, the percentage had risen to over ninety by 2007. See Will Reisinger, et al., "Environmental Enforcement and the Limits of Cooperative Federalism: Will Courts Allow Citizen Suits to Pick Up the Slack?" *Duke Environmental Law and Policy Forum* 20 (2010): 16–24; Miles, "Overfiling and Underenforcement," *New York University Law Review* 95 (June 2020): 842–843.

²⁴For a study which documents the decline in state environmental funding in the wake of the 2008 recession, see Environmental Integrity Project, "The Thin Green Line: Cuts in State Pollution Control Agencies Threaten Public Health," (5 December 2019) which can be accessed via <https://environmentalintegrity.org/reports/the-thin-green-line/>.

²⁵One tool used by the EPA is overfiling, which "occurs when, after a state enforcement action, a similar federal enforcement action is initiated alleging that the same action violated the same law." However, overfiling is relatively rare. See Miles, "Overfiling and Underenforcement," 837–857 (quotation on p. 841).

²⁶Between 1990 and 1999, the EPA imposed sanctions in 18 instances in situations of noncompliance though it threatened to do so over 850 times. See Jonathan H. Adler and Nathaniel Stewart, "Is the Clean Air Act Unconstitutional? Coercion, Cooperative Federalism, and Conditional Spending after *NFIB v. Sebelius*," *Ecology Law Quarterly* 43 (2016): 671–722.

²⁷Miles, "Overfiling and Underenforcement," 844.

¹⁷Elisabeth Clemens, "Lineages of the Rube Goldberg State: Building and Blurring Public Programs, 1900–1940," in *Rethinking Political Institutions: The Art of the State*, eds. Ian Shapiro, et al., (New York: New York University Press, 2006), 380–443. See also Carol Nackenoff and Julie Novkov, eds., *Statebuilding from the Margins: Between Reconstruction and the New Deal*, (Philadelphia: University of Pennsylvania Press, 2014); Patricia Strach and Kathleen S. Sullivan, *The Politics of Trash: How Governments Used Corruption to Clean Cities – 1890–1929*, (Ithaca, N.Y.: Cornell University Press, 2022).

¹⁸Ann-Marie Szymanski, "Wildlife Protection and the Development of Centralized Governance in the Progressive Era," in *Statebuilding from the Margins*, chap. 5.

¹⁹As scholars like Daniel Elazar have rightly noted, cooperative federalism predates the twentieth century. However, Elazar's examples of cooperative federalism have little to do with today's regulatory policy. See his *The American Partnership: Intergovernmental Cooperation in the Nineteenth-Century United States*, (Chicago: University of Chicago Press, 1962). For a more relevant exploration of the development of cooperative federalism, see Kimberley Johnson, *Governing the American State: Congress and the New Federalism, 1877–1929*, (Princeton, N.J.: Princeton University Press, 2007). I concur with Johnson's overall approach which holds that the development of different variants of cooperative federalism has been a gradual, incremental process.

Because cooperative federalism in air pollution relies so heavily on state agencies for implementation, understanding the development of these bureaucracies and their capacity is an important endeavor. Indeed, many scholars acknowledge that state enforcement of environmental laws has created an unequal playing field, whereby some states maintain programs that exceed national standards while others lag behind.²⁸ Instead of focusing primarily on agency structure, this study considers the role of institutional legacies and how they shaped the development of state air pollution control agencies and their enforcement capacity. While some states drew upon existing agencies in creating their state-level departments, others chose to develop new bureaucracies altogether. These decisions, I argue, may have consequences for environmental regulation that persist into the twenty-first century. That is because agencies develop rules, practices, traditions, and shared attitudes and beliefs which are then transmitted to newcomers through socialization. Indeed, as bureaucrats collaborate to solve problems and complete tasks, they establish an organizational culture which determines “the way things are done around here” which then guides future behavior and practices.²⁹

Furthermore, students of American political development have long maintained that initial policy arrangements may shape the ensuing development of policy and politics.³⁰ In the case of Ohio, the development and entrenchment of urban air pollution control agencies prior to the 1960s had a significant impact on how policymakers, the business community, and civic groups responded to the increasingly salient issue of air pollution during this decade. Rather than pay the costs of uprooting the existing pollution control regime in Ohio, these interested parties worked within the limits of this system until forced by the federal government to develop a statewide approach to reducing the emissions of pollutants into the atmosphere. Moreover, even after the state government assumed a supervisory role over pollution reduction, Ohio merely layered state authority over the urban-based air pollution control agencies, allowing them to continue many of their long-established practices.³¹ In contrast, policymakers in New Jersey could “start from scratch,” so to speak, because the state was bereft of a powerful set of local pollution control agencies that were seeking to protect their autonomy.

²⁸Evan J. Ringquist, “Does Regulation Matter?,” Robert L. Glicksman, “From Cooperative to Inoperative Federalism: The Perverse Mutation of Environmental Law and Policy,” *Wake Forest Law Review* 41 (2006): 778–803; Neal D. Woods, et al., “You Get What You Pay For: Environmental Policy and Public Health,” *Publius: The Journal of Federalism* 39 (2009): 95–116; Reisinger, et al., “Environmental Enforcement and the Limits of Cooperative Federalism,” 23.

²⁹Edgar Schein, with Peter Schein, *Organizational Culture and Leadership*, 5th Ed., (Hoboken, N.J.: John Wiley and Sons, 2017); James Q. Wilson, *Bureaucracy: What Government Agencies Do and Why They Do It*, (New York: Basic Books, 1989); Hopper, *Environmental Agencies in the United States*.

³⁰Karen Orren and Stephen Skowronek, *The Search for American Political Development*, (Cambridge, England: Cambridge University Press, 2004), pp. 99–100; Robert Lieberman, *Shifting the Color Line: Race and the American Welfare State*, (Cambridge, Mass.: Harvard University Press, 1998).

³¹For examples of layering in other American institutions and how they can limit institutional and policy change, see Christopher McGrory Klyza and David J. Sousa, *American Environmental Policy: Beyond Gridlock* (Cambridge, Mass.: MIT Press, 2013), 8–10; Stephen Skowronek, *Building a New American State: The Expansion of National Administrative Capacities, 1877–1920*, (Cambridge, England: Cambridge University Press, 1982); Jeffrey Tulis, *The Rhetorical Presidency*, (Princeton, N.J.: Princeton University Press, 1988); Eric Schickler, *Disjointed Pluralism: Institutional Innovation and the Development of the U.S. Congress*, (Princeton, N.J.: Princeton University Press, 2001).

2. Progressive era legacies and post-war developments in air pollution control

In the United States, the anti-smoke movement was the first sustained effort to address the nation’s deteriorating air quality as industrialization proceeded apace. Emerging during the late 19th and early 20th centuries, this movement was a loosely-organized network of urban activists who sought to reduce the emissions of coal smoke by manufacturers, transportation companies, service industries, and various premises. These activists included clubwomen, physicians, “good government” progressives, real estate investors, and engineers, and their arguments for clean air emphasized concerns about health, cleanliness, aesthetics, property values, and efficiency. In response, many cities — including Newark, Cincinnati and Cleveland — developed air pollution agencies and adopted ordinances designed to reduce ongoing and future air pollution. For example, they often required businesses to install smoke abatement equipment and to secure building permits for all new construction and repairs to boilers and furnaces.³²

After World War II, air pollution control remained largely the responsibility of municipalities and a few counties. However, the growth of suburbanization soon underscored the inadequacy of such localized regulation. As urban residents moved to the suburbs, “an ever-larger number of polluting businesses were located outside of the boundaries of large cities and could therefore no longer be controlled by municipal officials.” While some municipalities sought to develop cooperative arrangements with nearby suburbs, these arrangements were entirely voluntary and depended on cooperation which was often not forthcoming. Worse yet, small cities typically could not afford to sustain a local program to address air pollution, and they were often at the mercy of local industries, which supplied jobs and other economic benefits to the community.³³

Meanwhile, scientists and engineers developed a broader understanding of air pollution during the postwar years. Prior to 1945, smoke inspectors had focused entirely on the “smoke” problem — the black or grey smoke produced by coal-burning engines and/or heating units in locomotives, steamships, manufacturing plants, homes, hotels, and other structures. However, by 1951, prominent engineers like Allen J. Johnson and George H. Auth endorsed the view which held that “[s]moke abatement is not the only objective; it is air purification. It is the unseen gases and fumes from all sources with which we are concerned; not coal smoke alone.” Indeed, by 1951, “thirty seven of fifty-six large American cities had revised their local ordinance since the end of World War II. Further, as a rule, regulations now no longer pertained only to the smoke nuisance but also to other types of airborne dust, the majority of laws even containing regulations on gaseous pollutants.” This growing consensus that air pollution involved both visible and invisible pollutants

³²David Stradling, *Smokestacks and Progressives Environmentalists, Engineers, and Air Quality in America, 1881–1951*, (Baltimore: Johns Hopkins University Press, 1999); Robert D. Grinder, “The Anti-Smoke Crusades: Early Attempts to Reform the Urban Environment, 1893–1928,” (Ph.D. dissertation, University of Missouri, 1973); Ann-Marie Szymanski, “Regulatory Transformations in a Changing City: The Anti-Smoke Movement in Baltimore, 1895 – 1931,” *Journal of the Gilded Age and Progressive Era* 13 (July 2014): 336–376.

³³Frank Uekoetter, *The Age of Smoke: Environmental Policy in Germany and the United States, 1880–1970*, (Pittsburgh: University of Pittsburgh Press, 2009), 150–155 (quotation on p. 151); Arthur C. Stern, “History of Air Pollution Legislation in the United States,” *Journal of the Air Pollution Control Association* 32 (January 1982): 44.

did not necessarily alter the practices of regulatory agencies, however.³⁴

As engineers expanded their understanding of air pollution, relevant municipal and county agencies were ill-prepared to assume broader responsibilities for the abatement of air pollution. The number of agencies grew from 55 in 1940 to 82 in 1950, but few of these agencies employed more than two persons. Moreover, these agencies struggled to hire qualified personnel as they offered uncompetitive salaries and required their employees to possess a wide range of technical, administrative, and political skills to be effective. Significantly, as the definition of air pollution broadened, the technical capabilities of pollution control personnel remained narrowly based in mechanical engineering and its mastery of furnace technology. Typically, mechanical engineers lacked the expertise necessary to grapple with the emission of gases and particle pollution from sources other than solid fuel combustion. Hence, pollution control agencies continued to focus on coal smoke and used crude tools (e.g., the Ringlemann Scale³⁵) to determine coal smoke violations even as this kind of pollution declined.³⁶ In short, there was a growing incongruity between the problem of air pollution and the stagnant agencies designed to address it, and few members of the general public noticed.

While civic associations still periodically mobilized municipal campaigns against air pollution after 1945, corporate participation in environmental policymaking dwarfed their modest efforts until the 1960s. To characterize the relationship between regulators and industry, Frank Uekoetter has coined the term “pseudocorporatism” to capture the collaborative relationship between air pollution control agencies and American industry that produced an unbalanced partnership in favor of the latter. As Uekoetter writes, “American industry was willing to advance on the clean air front more energetically than before or after, but at the same time, this willingness brought air pollution control into a fateful dependence on industry’s goodwill.” In fact, during the 1950s, industrial journals were strong proponents of clean air endeavors, and trade associations encouraged their members to adopt anti-pollution practices even if they weren’t legally required to do so. Of course, corporate leaders were partly motivated by their interest in reducing civil liability and avoiding more stringent regulations, but pollution control authorities welcomed their participation, thus giving them the last word regarding new limits on air pollution.³⁷

With the adoption of the Clean Air Act of 1963, the federal government proffered grants to encourage state governments to develop air pollution control programs which could establish air quality standards and implement them. However, as of 1966, only nine states could boast of such programs including heavily-industrialized states like New York, Pennsylvania, and New Jersey, as well as states like Oregon and Hawaii which were less developed.

At the same time, though, the federal government also distributed grants to cities and counties that maintained air pollution control programs. Hence, a state like Ohio could provide little in the way of financial and administrative support for state anti-pollution programs but nevertheless be home to five major municipal programs in Cincinnati, Cleveland, Columbus, Dayton, and Toledo.³⁸ In other words, while the federal government helped advance the development of state air pollution control programs, its willingness to subsidize local agencies reduced its capacity to challenge the entrenched urban units in Ohio and, in fact, reinforced their existence. Only in 1967, when the federal government threatened to develop air quality standards in the absence of state air pollution control programs, did Ohio respond by creating a statewide agency.

Although the federal government’s encouragement of local and state pollution control efforts sometimes fortified the fragmentation of these efforts, it was nevertheless the case that the states were in a better position to develop and implement public policies after World War II than in previous eras. During the middle of the twentieth century, state governments took a number of steps to modernize their operations. They began to emphasize centralized control of policy implementation and sought to create a more rational structure for their systems of agencies and commissions. Furthermore, they developed more professionalized legislatures that could increasingly rely on expert staff. Many states also strengthened their governors, granting them longer terms and greater control over the administrative apparatus. As demands for state action increased, the states responded by finding new sources of revenues to pay for new services and regulatory policies.³⁹ Indeed, the governments of both New Jersey and Ohio underwent many of these reforms, thus enhancing their capacity to govern. For example, by 1967, both states had lengthened their gubernatorial terms to four years, streamlined their state agencies, and adopted reforms to professionalize their legislatures.⁴⁰

3. New Jersey: the advantages of starting from scratch

Unlike Ohio and its well-organized anti-smoke movements in Cincinnati and Cleveland during the first half of the twentieth century, New Jersey lacked sustained, widespread activism against the emission of coal smoke prior to World War II. That is not to say that its residents never protested the ill-effects of the “smoke nuisance.” Rather, its public officials managed to minimize this problem by capitalizing on the electrification of some railroad lines⁴¹ and encouraging the reliance on cleaner-burning anthracite coal rather than the dirtier bituminous coal, sometimes through

³⁴ Allen J. Johnson and George H. Auth, eds., *Fuels and Combustion Handbook*, (New York: McGraw Hill, 1951), 471 (first quotation on p. 471); Uekoetter, *Age of Smoke*, 124-125 (second quotation on p. 125); Los Angeles County, *Air Pollution Control in the County of Los Angeles and Six Other Metropolitan Areas*, (Los Angeles: Los Angeles County, 1954), 31-33.

³⁵ The Ringlemann Scale is a way of measuring the apparent density or opacity of smoke. The scale involves five levels of density presented by a grid of black lines on a white surface, which if viewed from a distance, merge into various shades of grey. For its continued use today, see Akash Kumar, et al., “A Guide on Smokeless Flaring: Air/Steam Assisted and High Pressure Flaring,” *International Journal of Engineering Applied Sciences and Technology* 12 (2020): 517-520.

³⁶ Stern, “History of Air Pollution Legislation in the United States,” 44-47; Uekoetter, *Age of Smoke*, 124-128, 149-159; “To Fight City Smoke,” *New York Times* (23 October 1948), 14.

³⁷ Uekoetter, *Age of Smoke*, 114-115, 120-124, 159-168.

³⁸ U.S. Public Health Service, *State and Local Programs in Air Pollution Control*, (Washington, D.C.: U.S. Government Printing Office, 1966), 3-8.

³⁹ Jon C. Teaford, *The Rise of the States: Evolution of American State Government*, (Baltimore, Md.: Johns Hopkins University Press, 2002).

⁴⁰ See Barbara G. Salmore and Stephen A. Salmore, *New Jersey Politics and Government: The Suburbs Come of Age*, 4th Ed., (New Brunswick, N.J.: Rutgers University Press, 2013), chaps. 7-10; Thomas A. Flinn, “The Ohio General Assembly: A Developmental Analysis,” *State Legislative Innovation: Case Studies of Washington, Ohio, Florida, Illinois, Wisconsin, and California*, ed. James A. Robinson (New York: Praeger, 1973), 233-236; Department of Finance, *Implementation Progress Report, 1969: A Review of the Survey Report and Recommendations*, Council for Reorganization of Ohio State Government, (Columbus, Ohio: Department of Finance, 1969); Kevin F. Kern and Gregory S. Wilson, *Ohio: A History of the Buckeye State*, 2nd Ed., (Hoboken, N.J.: John Wiley and Sons, 2023), 409.

⁴¹ By replacing coal with electric power as their fuel, the railroads could significantly decrease their contributions to air pollution. However, electrification of the railroads required a heavy investment in equipment like transmission lines, substations, safety

the adoption of ordinances to that effect. With their access to the anthracite coal fields in northeastern Pennsylvania, New Jersey, New York, and Pennsylvania consumed more than two-thirds of the anthracite coal produced in the United States during these years.⁴² Of course, due to coal strikes, anthracite coal was not always available, and some businesses (like most railroads) used soft coal anyways. As a result, New Jersey residents did periodically agitate for the adoption of ordinances that outlawed the emission of dense smoke, often targeting the coal-burning railroads.⁴³ In response, though, the New Jersey Supreme Court nullified such restrictions, ruling that they were unreasonable and interfered with the railroads' rights to operate, per their charters.⁴⁴

Furthermore, anti-smoke agitation was often harder to sustain if a city lacked dedicated smoke inspectors and instead relied on general purpose officials like Board of Health officials to monitor the smoke nuisance. Burdened with a wide range of responsibilities, such officials were less likely to be responsive to residents' objections to air pollution. In Passaic, New Jersey, for example, a member of the Board of Health made a single visit to the Passaic Column and Lumber Company to investigate smoke and cinder complaints in April 1909 and concluded that "there is nothing about the plant to warrant action by the board."⁴⁵ This reliance on Board of Health officials was particularly common in New Jersey because most of the state's residents lived in a suburb or small city that could only sustain minor air pollution control efforts at best. In fact, whereas only about 35% of New Jerseyans lived in a city with a population of 100,000 or more in 1950, 68% of Ohioans lived in a city with more than 100,000 residents.⁴⁶ While Ohio cities like Cincinnati and Cleveland established substantial smoke inspection bureaus tasked with abating the smoke nuisance, anti-smoke agitation left a minimal footprint in New Jersey prior to World War II. Of its larger cities, only Newark and Jersey City maintained continuously operating air pollution control programs that lasted into the 1960s, and the latter's program was managed by the Board of Health, not a specialized agency.⁴⁷

devices, and related gear. That said, New Jersey was home to two significant electrified routes: the West Jersey and Seashore Railroad's route in southern New Jersey and the Pennsylvania Railroad's heavily traveled route from New York to Philadelphia (and later Washington, D.C.) which traversed the length of New Jersey and is now a part of the Northeast Corridor. See Michael Bezella, "Steam Railroad Electrification in America, 1920-1950: The Unrealized Potential," *The Public Historian* 4 (Winter 1982): 29-52.

⁴²"The Smoke Nuisance," *The Courier-News* (Bridgewater, New Jersey), (19 November 1914), 4; "Stop Smoke Nuisance," *Passaic Daily News* (Passaic, New Jersey) (20 June 1905), 1; "Jersey City Acts," *The Montclair Times* (Montclair, New Jersey) (23 May 1908), 4; "Enforcement of Soft Coal Ban Is Asked," *The Daily Standard* (Red Bank, New Jersey) (12 July 1929), 1. Indeed, Scott Hamilton Dewey emphasizes the use of anthracite coal to explain why New York city also avoided large-scale anti-smoke agitation prior to World War II. See his *Don't Breathe the Air: Air Pollution and U.S. Environmental Politics, 1945-1970*, (College Station: Texas A&M Press, 2000), 22, 27, 113-114.

⁴³"Plan to Assail Soft Coal Smoke Nuisance," *The Record* (Hackensack, New Jersey) (30 July 1912), 1; "South Bound Brook Will Put Stop To Smoke Nuisance," *Central New Jersey Home News* (New Brunswick, New Jersey) (10 May 1921), 9; "Sunday Afternoon Club In Move To Abolish Smoke Nuisance Here, Asks Action By City Council," *The Courier-News* (Bridgewater, New Jersey) (6 April 1928), 1; "Health Board To Get After Barking Dogs," *Ridgewood Herald-News* (Ridgewood, New Jersey) (17 August 1933), 1-2; "3rd Ward Plans Rally On R.R. Smoke Nuisance," *Courier-Post* (Camden, New Jersey) (30 June 1939), 15.

⁴⁴"Smoke Can't Be Stopped," *Passaic Daily News* (Passaic, New Jersey) (29 November 1910), 1; *Mayor v. Abercrombie*, 1904 N.J. Sup. Ct. 238 (1904); *Erie R. Co. v. Jersey City*, 83 N.J.L. 92 (1912).

⁴⁵"Lumber Company's Smoke No Nuisance," *Passaic Daily News* (Passaic, New Jersey) (6 April 1909), 1.

⁴⁶U.S. Census Bureau, *1950 Census of Population: Volume I*, (Washington, D.C.: U.S. Census Bureau, 1951), 30-6, 35-6.

⁴⁷Samuel B. Flagg, *City Smoke Ordinances and Smoke Abatement*, (Washington, D.C.: Government Printing Office, 1912), 16-17, 20-21; Board of Trade of the City of Newark,

By midcentury, New Jersey was well on its way to becoming the most suburban state in the nation as small townships broke away from existing municipalities to avoid high taxes or to flee from urban problems.⁴⁸ The state was also heavily-industrialized and densely-populated, which meant that mobile and stationary sources of air pollution were typically located in close proximity to populated areas.⁴⁹ Major stationary contributors to air pollution in New Jersey included power plants, incinerators, chemical manufacturers, oil refineries, smelters, copper and lead refineries, paint and varnish manufacturers, and foundries.⁵⁰ As railroads shifted from coal to diesel engines, their contributions to pollution diminished, to be replaced by the exhaust fumes of the increasing number of cars on the road.⁵¹ Air pollution was particularly noticeable in the northern counties of Bergen, Essex, Hudson, Middlesex, and Passaic, home to half of the state's population and two-thirds of its factories. A 1963 study revealed that urban areas had worse air quality than less-developed regions, and New Jersey pollution control officials declared the city of Camden to have "the worst air pollution problem of any area in the state" in 1961.⁵²

Air quality may have been the worst in the major cities, but it was the suburban, rural, and small industrial towns that were most active in demanding the abatement of air pollution in the state during the years 1945 – 1970.⁵³ In Passaic County, for example, Passaic (population ~ 54,000) empowered both its building and health inspectors to charge air polluters with city ordinance violations whereas Paterson (population ~140,000) did not. In the former community, the residents, including "housewives who...had the exasperating experience of seeing their wash covered with soot," demanded pollution abatement from their public officials, a condition lacking in Paterson, home of the fifth worst air pollution in the state.⁵⁴ By 1964, 50 out of the 568 municipalities in New Jersey had adopted air pollution control ordinances, but they maintained

Newark Industrial Exposition, (Newark, N.J.: Exposition Committee, 1912), 26; "City Officials Hear Newark Expert Talk On Smoke Abatement and Laws," *The Courier-News* (Bridgewater, New Jersey) (22 November 1928), 10; "Smoke is Down, Report Shows," *The Record* (Hackensack, New Jersey) (7 April 1939), 8; "Claims Newark is the First to Check Combustion," *The Morning Call* (Paterson, New Jersey) (1 September 1941), 18; "Low Volatile Coal Favored By Most of Men Questioned In Smoke Campaign," *The Cincinnati Enquirer* (Cincinnati, Ohio) (13 December 1946), 16; U.S. Public Health Service, *State and Local Programs in Air Pollution Control*, 8.

⁴⁸In fact, "[s]o many small localities developed that while the state's population in 1967 was 26 times larger than it was in 1810, the average municipal population was only 2.5 times larger." See Salmore and Salmore, *New Jersey Politics and Government*, 232-236 (quotation on p. 235).

⁴⁹Paul J. Lioy and Panos G. Georgopoulos, "New Jersey: A Case Study of the Reduction in Urban and Suburban Air Pollution from the 1950s to 2010," *Environmental Health Perspectives* 119 (October 2011): 1351.

⁵⁰Interstate Sanitation Commission, *Smoke and Air Pollution*, New York, New Jersey (New York: Interstate Sanitation Commission, 1958), 11, 20, 49, 76-86.

⁵¹Stradling, *Smokestacks and Progressives*, 171-172.

⁵²John Curley, "Air Pollution Growing, Especially in Five N.J. Counties," *The Record* (Hackensack, N.J.) (18 December 1963), 7; "Unwanted Honor," *The Courier-Post* (Camden, N.J.) (7 October 1960), 8 (quotation on p. 8); "Unlucky 13 Per Cent," *The Herald-News* (Passaic, N.J.) (20 December 1963), 4.

⁵³That is not to say that these kinds of communities uniformly supported clean air as there is plenty of evidence that some of them didn't care about this issue. See, e.g., "Public Lacks Interest in Wanaque's Air Pollution Program Board Says," *The Herald-News* (Passaic, N.J.) (17 November 1965), 33; Kenneth Earl, "Local Governments Called Unconcerned Over Air Pollution," *The Courier-Post* (Camden, N.J.) (20 January 1967), 17. However, the New Jersey residents who did agitate for clean air during this period tended to be from relatively small municipalities, not major cities.

⁵⁴"New Charge Faces Scrap Metal Firm," *The Herald-News* (Passaic, N.J.) (23 July 1959), 29; "Air Pollution at Tidewater Brings Fine," *The Herald-News* (Passaic, N.J.) (21 August 1959), 15; "Court Backs Air Pollution Control," *Asbury Park Press* (Asbury, N.J.) (18 January 1960), 8 (quotation on p. 8); Joseph Quartucci, "Polluted Air Part of Paterson Area Diet; Little Being Done About It," *The News* (Paterson, N.J.) (28 May 1965), 17.

small programs as they were generally small cities and towns.⁵⁵ Ultimately, these programs proved inadequate to address pollution that wafted across municipal lines, and suburbanites were at the forefront of demanding stricter regulation of the state's air quality.

4. The air pollution and control act: 1950 – 1962

Unlike Los Angeles, another pioneer in environmental policy-making, New Jersey didn't suffer from a persistent, eye-stinging smog that threatened the comfort and health of its inhabitants on a near-daily basis. To be sure, some New Jersey residents complained of being "dogged by diseased air, smoke, soot and the like," and there were local pollution panics in municipalities like Newark, Elizabeth, and Linden. However, the most extensive survey of New Jersey air quality during the early 1950s maintained that the state was not suffering from a widespread public health emergency.⁵⁶ Instead of focusing on local conditions, then, New Jersey residents like Charles Johnson of Woodlynne often seized on the afore-mentioned Donora environmental disaster in nearby Pennsylvania or the launch of the First U.S. Technical Conference on Air Pollution to prod the state legislature to act on air pollution. "We have witnessed the infamous Donora massacre in which a cloud of smog attacked, terrified and killed citizens of this Pennsylvania city," Johnson wrote to the *Courier-Post* in 1950. "When the smog cleared 20 deaths were recorded plus injuries to 5910 human beings. We want no more Donoras."⁵⁷

Led by Senator Walter H. Jones (R-Bergen County), the New Jersey legislature adopted a concurrent resolution in April 1950 that established an Air Pollution Study Commission, which met for two years before issuing a report of its findings and legislative recommendations. Though it was undoubtedly a legacy of the Progressive Era anti-smoke movement, the Newark Bureau of Industrial Hygiene and Air Pollution Control (NBIHAPC) played no role in shaping this commission, perhaps because it remained a relatively minor agency. The forerunner of the NBIHAPC, the Newark Bureau of Smoke Abatement, was founded in 1907 and expanded to employ fifteen officials during the 1930s. By 1948, however, while the bureau still claimed to be "a model agency in its field by national smoke abatement experts," it was comprised of only two full-time employees. In 1958, the municipal council created the Newark Bureau of Industrial Hygiene and Air Pollution Control which combined the efforts of the Bureau of Industrial Hygiene and the Bureau of Air Pollution. While this agency was tasked with both air pollution control and industrial hygiene, it sustained an office of but 20 employees, about half the size of the Cleveland Air Pollution Commission at this time. Significantly, the U.S. Senate Subcommittee on Air and Water Pollution recorded

that "[t]he city of Newark has a minimal air pollution program" in its report of the 1967 hearings on air pollution.⁵⁸

Instead of using the NBIHAPC as the basis of a new state-level agency, the New Jersey Legislature created an Air Pollution Commission that was staffed by five current and former state lawmakers (three Republicans and two Democrats), two professional engineers, an organized labor representative, a railroad executive, an oil company executive, and two individuals to represent the public, including a Rutgers plant pathologist. After two years of meeting, the commission issued its report in March 1952. This report reflected input from "the State Departments of Health and of Labor and Industry, together with a representative of the New Jersey Agricultural Experiment Station." It was also informed by a tour of urban air pollution agencies (including that of Cleveland) in which Commission members interviewed air pollution control officials about their programs.⁵⁹

In 1954, Senator Walter H. Jones responded to the commission's investigation by proposing a statewide measure to regulate air pollution, the Air Pollution Control Act (APCA). Though lawmakers considered the study commission's recommendations, they ultimately adopted a statute that incorporated the views of the Department of Health, which sought to administer the policy.⁶⁰ Signed into law on September 16, 1954, the APCA created a body similar in form to the traditional regulatory agencies: a nine-member Air Pollution Control Commission (APCC), staffed by members appointed to staggered four-year terms, which was situated in the Department of Health and empowered to investigate and propose "suitable rules and regulations designed to reduce as far as practicable the menace of air pollution." For purely local pollution, the Act authorized the APCC to develop county pollution control associations and appoint county notables to staff them. These county associations were to study the pollution problems in their counties and to recommend locally-applicable rules to the Commission. While the Commission would issue rules, the Health Department was responsible for disciplining polluters who violated such regulations.⁶¹

In 1956, Middlesex County became the first county to organize an air pollution control association; by 1957, seven more counties (Bergen, Passaic, Hudson, Essex, Union, Mercer, and

⁵⁵"Statement of Roscoe P. Kandle, Commissioner, New Jersey Department of Health," *Clean Air: Hearings Before a Special Subcommittee on Air and Water Pollution of the U.S. Senate Committee on Public Works, 88th Congress, 2nd Session*, (Washington, D.C.: Committee on Public Works, 1964), 572-588.

⁵⁶"Smoke Prevention," *The Courier-Post* (Camden, N.J.) (27 October, 1949), 10 (quotation on p. 10); New Jersey Air Pollution Commission, *Report to the New Jersey Legislature on Air Pollution in New Jersey and Recommendations for its Abatement, March 19, 1952*, ([Trenton, N.J.]: The Commission, 1952), 7.

⁵⁷"Air Pollution," *The Courier-Post* (Camden, N.J.) (11 January 1950), 10; "Study of Air Pollution is Urgently Needed," *The Courier-Post* (Camden, N.J.) (9 May 1950), 10; "Air Pollution," *The Courier-Post* (Camden, N.J.) (16 May 1950), 10; "Air Pollution Report Offers Mild Program," *The Courier-Post* (Camden, N.J.) (26 March 1952), 12; Donald Bolles, Jr., "Air Pollution Battle Spurred by Disaster," *The Record* (Hackensack, New Jersey) (5 January 1954), 3.

⁵⁸"Hess Heads Board On Air Pollution," *Central New Jersey Home News* (New Brunswick, New Jersey) (19 September 1950), 5; Board of Trade of the City of Newark, *Newark Industrial Exposition*, 26 "Bureau Becomes Big Brother," *Newark Star-Ledger* (Newark, New Jersey) (10 July 1948), 17 (quotation on p. 17); "Newark's Anti-Smoke Plan Pays Off, Schaum Says," *Newark Star-Ledger* (Newark, New Jersey) (6 May 1948), 13; "Smoke Inspectors Kept Busy," *Newark Star-Ledger* (Newark, New Jersey) (18 January 1949), 15; "Statement of Charles J. Maguire, Supervising Chief, Bureau of Industrial Hygiene and Air Pollution Control, Newark, N.J.," *Clean Air: Hearings Before a Special Subcommittee on Air and Water Pollution of the U.S. Senate Committee on Public Works, 88th Congress, 2nd Session*, (Washington, D.C.: Committee on Public Works, 1964), 612-613; Los Angeles County, *Air Pollution Control in the County of Los Angeles and Six Other Metropolitan Areas*, 50; *Air Pollution, 1967: Hearings Before the Subcommittee on Air and Water Pollution of the Committee on Public Works, United States Senate, Ninetieth Congress, 1st Session*, (Washington, D.C.: U. S. Government Printing Office, 1967), 1232.

⁵⁹New Jersey Air Pollution Commission, *Report to the New Jersey Legislature on Air Pollution in New Jersey*, (quotation on p. 6); "Commission Ready To Begin Drive Against Air Pollution," *The Record* (Hackensack, New Jersey) (19 September 1950), 1.

⁶⁰The Study Commission had proposed that the new act be implemented by an agency in the Department of Law and Public Safety whereas the final product lodged that responsibility in the Department of Health. In a similar fashion, the Study Commission had recommended a seven-member commission to regulate air pollution whereas the final legislation created a nine-member board.

⁶¹Gerard R. Moran, "The Air Pollution Control Act and its Administration," *Rutgers Law Review* 9 (1955): 642-654; "Air Pollution Bill is Signed," *Central New Jersey Home News* (New Brunswick, N.J.) (16 September 1954), 1 (quotation on p. 1).

Camden) joined it. The state Air Pollution Control Commission chose to focus on these eight counties because they were the counties “in which the population density and industrial concentration indicate the presence of air pollution control problems.” To staff these associations with volunteers, the APCC called for organizations to submit the names of three persons for each of the eight counties; these organizations included the county-level Boards of Agriculture, Medical Societies, Boards of Chosen Freeholders, the New Jersey Congress of Parents and Teachers, the New Jersey Society of Professional Engineers, the New Jersey State Chamber of Commerce, the Industrial Hygiene Association, and the New Jersey Health Officers Association. In addition to fostering county associations, the APCC also encouraged municipalities to develop their own pollution control measures in response to the findings of the county associations and the state commission, and they could rely on local agencies like their Boards of Health for enforcement.⁶²

Lacking regulatory teeth and funds to operate, the county air pollution control associations never lived up to their promise as sources of air pollution policy.⁶³ Meanwhile, state officials found it easier to formulate rules under the Air Pollution Control Act of 1954 than to enforce them. Before it issued any rules, the Air Pollution Control Commission had to hold public hearings which were potentially subject to judicial review. Following this process, the commission developed four codes by 1961: one which banned the open burning of refuse (1956); another which prohibited the emission of smoke with more than 40 percent density from any fuel-burning equipment (1958); one which limited the amount of fly ash derived from the combustion of solid fuel that could be discharged into the open air (1958); and one which provided for a general prohibition of air pollution (1961).⁶⁴

Though it managed to issue rules, the state government’s power to investigate possible polluters was initially hemmed in by an elaborate set of procedural rights, such as the respondent’s right to bar inspections. The Department of Health was empowered to impose the rules drawn up by the APCC, but the Act required the agency to go through a series of negotiations and attempts at persuasion before recommending coercion, an approach supported by the business community. Indeed, as of 1958, the Health Department had never invoked the Air Pollution Control Act’s penalty provision, which authorized the agency “to assess fines up to \$100 a week

for each week its orders” were violated. Instead, state pollution control officials claimed that more progress would be obtained through voluntary cooperation than by punishing violators.⁶⁵

Further evidence of the “pseudocorporatism” of the era could be found in the statute’s provisions regarding the composition of the Air Pollution Control Commission. While not explicitly pro-business, the law practically guaranteed that businesses which contributed to air pollution would have a seat at the table when the APCC made decisions. First, it limited the governor’s discretion to appoint the majority of the individuals who served on this board. According to this statute, the governor could select one member to represent the public, and three members of the Air Pollution Control Commission were to be the Commissioner of Health, the Commissioner of Labor and Industry, and the Secretary of Agriculture, gubernatorial appointees who could also designate someone from their respective agencies to serve in their stead. However, five members of the Air Pollution Control Commission were to be recommended by the New Jersey Health Officers Association, the New Jersey State Chamber of Commerce, the New Jersey Society of Professional Engineers, the New Jersey Manufacturers Association (NJMA), and the New Jersey Section of the American Industrial Hygiene Association. The governor had the authority to select members from short lists provided by these organizations. It is not surprising, then, that the 1955 Commission included employees of American Cyanamid, Hercules Power, Public Service Electric & Gas Company, and Esso Standard Oil Company, who viewed themselves as part-time volunteers rather than public administrators.⁶⁶

4.1. Building a stronger state air pollution control agency, 1962-1970

By the early 1960s, some New Jersey newspapers were complaining about the state’s “ineffectual air pollution program” and the APCC’s pro-business members. In 1962, the *Asbury Park Press* objected to the health department’s emphasis on conciliation and persuasion. “There’ve been a lot of conferences, an undue amount of conciliation, and very little persuasion,” the paper maintained. “Violators find they can stall and stall with little fear of anything serious happening. Air pollution cases drag on for three and four years.” The *Asbury Park Press* also reported that Commission Chief William R. Bradley, an employee of American Cyanamid who had been nominated by the NJMA, had developed a private consulting firm that represented accused violators of the state’s air pollution regulations. In fact, in one lawsuit against the Aglite manufacturing plant of Sayre & Fisher, Bradley had served as a consultant for both the citizen plaintiffs and the defendants and thus secured fees from both sides. For his part, Bradley denied having a conflict of interest in serving on both the Commission and as a private consultant for accused violators. He noted that since his service on the APCC was uncompensated, he was not a state employee. Furthermore, since the commission lacked the power to enforce the rules it promulgated, Bradley viewed his work there to be advisory in nature. Meanwhile, even if the governor wished to replace Bradley before

⁶²“Middlesex is First to Organize Unit to Control Air Pollution,” *Central New Jersey Home News* (New Brunswick, N.J.) (29 March 1956), 1, 18; “Ask Nominees in County for Air Pollution Control Board,” *The News* (Paterson, N.J.) (27 October 1955), 11 (quotation on p. 11); “Air Pollution Control Unit Investigating Burning Dumps,” *The Herald-News* (Passaic, N.J.) (14 December 1956), 18.

⁶³“Clean Air Unit to Try Persuasion,” *The Courier-News* (Bridgewater, N.J.), (7 January 1957), 17; “Wage Campaign for Cleaner Air,” *Central New Jersey Home News* (New Brunswick, N.J.), (4 October 1958), 10; Air Pollution Units May Be Reactivated,” *The Record* (Hackensack, N.J.), (6 May 1965), 24; Dolores Orlowski, “Pollution Curbs Lagging,” *The Morning Call* (Paterson, N.J.) (3 November 1966), 23.

⁶⁴New Jersey Air Pollution Commission, *A Progress Report of the New Jersey Air Pollution Control Commission*, (Trenton: New Jersey State Department of Health, 1958), 7-9, 21-28; “3,000 Citations Issued in Air Pollution Battle,” *Daily Record* (Long Branch, N.J.) (14 August 1962), 2. That said, the railroads successfully defeated the APCC’s proposed regulation to require the destruction of ragweed (a plant associated with hay fever) that grew on rights of way, highways, parks or playgrounds. This measure was deemed discriminatory as the railroads would have borne the primary responsibility and costs for abating this nuisance, and it was thus scrapped in favor of an educational program. “Seek to Cut Pollen Count,” *The Record* (Hackensack, N.J.) (20 August 1959), 5; “Ragweed Would Be Nothing to Sneeze At, Say Railroads,” *The Herald-News* (Passaic, N.J.) (22 September 1959), 1; “Ragweed Control and Railroads,” *The Courier-Post* (Camden, N.J.) (30 September 1959), 14; “Hit Back at Plants That Cause Misery,” *The Record* (Hackensack, N.J.) (5 August 1960), 40.

⁶⁵Moran, “The Air Pollution Control Act and its Administration,” 642-653; “Serious Problems Presented by N.J. Smog Brought to Fore,” *Central New Jersey Home News* (New Brunswick, N.J.) (1 December 1953), 1; “State Shies Away From Air Pollution Fines,” *Asbury Park Press* (Asbury Park, N.J.) (24 November 1958), 1 (quotation on p. 1).

⁶⁶Moran, “The Air Pollution Control Act and its Administration,” 652-653.

the conclusion of his four year-term, he could only do so for cause and in the wake of a public hearing.⁶⁷

Like the *Asbury Park Press*, suburban governments in New Jersey also faulted state agencies for their slow response to air pollution complaints. When municipalities referred air pollution complaints to the Health Department, they often discovered that the agency failed to act in a timely fashion. Borough councilmen from Rutherford complained that “[T]he system of referring complaints to the State Board of Health is getting nowhere and resulting in no action.” In a similar fashion, Dr. Joseph Matris, East Rutherford Sanitary Inspector, noted that “[I]f a municipal health official waits until the State is requested to send an investigator,...the problem may continue for days or weeks, or be ended (often temporarily) by the time a State official arrives to measure the amount of air pollution.” Instead of waiting for the board to act, several municipalities either authored their own air pollution control ordinances or relied on general nuisance or state codes to instigate legal action against polluters. Local officials and citizens lodged their complaints in Municipal Court, where magistrates had the authority to convict firms of violating codes and to fine them.⁶⁸

Of course, local fines often involved minor sums, (e.g., \$35), and no one pretended that local action alone could solve the problem of air pollution. In particular, suburban officials typically lacked expertise, the sophisticated equipment necessary to prove the existence of air pollution, and jurisdiction over polluters outside the boundaries of their municipalities.⁶⁹ Ultimately, the local governments’ response to state enforcement delays reflected the fact that they often bore the brunt of citizen complaints about air pollution. “We’ve got to get the people off our backs,” insisted Anthony Sachs, Sanitary Inspector for Carlstadt Borough, when opposing the suggestion of Carlstadt authorities to forward the citizenry’s complaints about local air pollution to the state Health Department.⁷⁰

Indeed, after the Air Pollution Control Act’s enactment in 1954, local governments witnessed an upsurge in citizen complaints about air pollution. In August 1956, 158 residents of Ridgefield Park signed a petition protesting the smell emanating from an open garbage dump in nearby Little Ferry. One hundred citizens of Woodbridge Township presented the township committee with a petition in September 1959, accusing the Koppers Coke Company and Hess Brothers Oil Company of being responsible for “heavy smoke, soot, and odors.” In Wall Township, “more than

45 residents packed the municipal building...to complain to the Township Committee of air pollution” in June 1960.⁷¹

Given the surge of criticism lodged against Air Pollution Control Commission and the Health Department after 1954, it is not surprising that air pollution became a political issue in New Jersey shortly thereafter. Candidates for the state legislature and governor focused on proposing solutions to the state’s weak enforcement of its codes, and support for air pollution control became a way for politicians to distinguish themselves from their competition. For example, Senator Walter H. Jones (R-Bergen County) had championed an air pollution program for several years as a state lawmaker and helped secure the enactment of the Air Pollution Control Act of 1954, which was signed into law by Democratic Governor Robert B. Meyner.⁷² Running for re-election in 1957, Jones reminded voters that he had backed the APCA while criticizing Governor Meyner for his failure to forcefully implement the measure and for diverting \$25,000 from the APCC to other state departments.⁷³ Jones then ran for the Republican gubernatorial nomination in 1961 against a fellow state senator, Wayne Dumont, Jr. (R-Warren County) and James P. Mitchell, a former labor secretary in the Eisenhower Administration. During this campaign, Jones used his record on air pollution to again criticize the Meyner Administration and to distinguish himself from his principal rival, Mitchell.⁷⁴

Despite his best efforts, Jones lost his primary race to Mitchell by eleven percentage points. Nevertheless, Mitchell and his Democratic opponent, Richard J. Hughes, both raised the issue of air pollution during the 1961 gubernatorial election campaign. Beginning in July, Hughes called for swifter action against industrial polluters in a few of his speeches, noting that “there have been some delays in enforcing compliance” of the Air Pollution Control Act. Furthermore, Hughes recommended the establishment of a “standing committee of industrial representatives to work with the state on air pollution control.”⁷⁵ Meanwhile, Mitchell also began to echo Jones’ critique of Meyner’s air pollution control record in some of his speeches. In contrast to the Meyner Administration, which had failed to adequately fund the APCA’s implementation, Mitchell promised in September that if he were elected governor, “he would provide sufficient funds for an effective battle against air pollution with a program of enforcement, research and education.” Like Hughes, Mitchell also sought an administrative response to pollution, and, in keeping with some new social regulation schemes, he proposed to replace the Health Department and the APCC with a “strong pollution agency headed

⁶⁷“Bradley Seen Losing State Pollution Job,” *Asbury Park Press* (Asbury Park, N.J.) (20 October 1961), 2; “State’s Air Pollution Chief Still Running Private Service,” *Asbury Park Press* (Asbury Park, N.J.) (11 January 1962), 1; “Why We Have Polluted Air,” *Asbury Park Press* (Asbury Park, N.J.), (14 January 1962), 8; “Terms Fear Stumbling Block in War Against Air Pollution,” *Asbury Park Press* (Asbury Park, N.J.) (9 February 1962), 1, 15; “Improved Pollution Control,” *Asbury Park Press* (Asbury Park, N.J.), (8 March 1962), 14; Moran, “The Air Pollution Control Act and its Administration,” 653.

⁶⁸“Council Asks Board to Pass Pollution-Control Law,” *The Record* (Hackensack, N.J.), 24 (first quotation, p. 24); William Mac Neill, “Air Pollution Legislation is Inadequate,” *The Record* (Hackensack, N.J.) (19 May 1964), 30 (second quotation, p. 30); “Rules Sewer Firm Guilty of Pollution,” *Central New Jersey Home News* (New Brunswick, N.J.) (13 November 1959), 3; “City Measure on Pollution is Reversed,” *Daily Record* (Long Branch, N.J.) (27 January 1962), 1; “Firm Faces Air Pollution Charge,” *Central New Jersey Home News* (New Brunswick, N.J.), (16 August 1963), 6; “Piece Dye Works Admits Air Pollution, Is Fined,” *The Record* (Hackensack, N.J.) (21 September 1965), 2.

⁶⁹“East Rutherford Fines Two Chemical Firms on Pollution,” *The Herald-News* (Passaic, N.J.) (12 February 1964), 21; William Mac Neill, “Air Pollution Legislation is Inadequate,” *The Record* (Hackensack, N.J.) (19 May 1964), 30; “Leave Pollution Fight to States, Rice Says,” *The Record* (Hackensack, N.J.) (6 March 1965), 8.

⁷⁰“Borough Chemical Firm Aides Discuss Air-Pollution Charge,” *The Record* (Hackensack, N.J.) (13 June 1961), 27 (quotation on p. 27).

⁷¹“The Revolution Down Wind,” *The Record* (Hackensack, N.J.) (16 August 1956), 48; “Perth Amboy Charged With Air Pollution,” *The Daily Register* (Red Bank, N.J.) (3 September 1959), 2 (quotation on p. 2); “Wall Residents Still Fight Air Pollution,” *Asbury Park Press* (Asbury Park, N.J.) (23 June 1960), 1.

⁷²Donald Bolles, Jr., “Survey of Smog-Bound Sections Provides Data For Legislators,” *The Record* (Hackensack, N.J.) (7 January 1954), 3; “Air Pollution Bill Is Signed,” *Central New Jersey Home News* (New Brunswick, N.J.), (16 September 1954), 1.

⁷³“Jones Says Meyner Ducked Air Problem,” *The Record* (Hackensack, N. J.) (20 September 1957), 1.

⁷⁴“Air Pollution Control Lag Hit by Jones,” *Asbury Park Press* (Asbury Park, N.J.) (2 March 1961), 1; “Jones Urges Voters Shun Electing ‘Question Mark,’” *The Daily Record* (Long Branch, N.J.) (3 March 1961), 1, 8 (quotation on p. 8).

⁷⁵“Air Pollution Check Is Urged by Hughes,” *The Daily Register* (Red Bank, N. J.) (18 July 1961), 9 (first quotation on p. 9); “Hughes Asks Enforcement of Air Code,” *The Record* (Hackensack, N. J.) (18 July 1961), 15; “Pollution Control Urged,” *The Courier-News* (Bridgewater, N.J.) (18 July 1961), 8; “Hughes Asks Better Air-Pollution Laws,” *The Record* (Hackensack, N.J.) (16 August 1961), 15; “Air Pollution Law Overhaul Need Cited,” *Asbury Park Press* (Asbury Park, N.J.) (16 August 1961), 1 (second quotation on p. 1).

by a capable professional administrator with policy established by a cabinet-level board.⁷⁶

Once elected, Hughes did follow up on his campaign promise about improving enforcement when he signed the 1963 amendments to the Air Pollution Control Act, which were designed to streamline the state Department of Health's administrative processes. In particular, the amended law revoked the ban on inspections without the suspected violator's permission and deleted the requirement that the agency engage in conference and conciliation procedures before recommending coercive actions. Moreover, it strengthened the APCA's penalty provision, which authorized the department to assess fines up to \$500 a week for each week its orders were violated, up from \$100 a week.⁷⁷

Even with the 1963 amendments to the APCA, many observers continued to complain about air pollution control in New Jersey. In 1964, the federal government joined the chorus of disapproval about the Air Pollution Control Commission's composition when the U.S. Public Health Service issued a critical report about the agency and concluded that there appeared to be "a somewhat greater possible representation of industry (on the commission) than would be advantageous." The USPHS recommended that state lawmakers drop one of the business-oriented members from this agency, thus making "the commission a bit more responsive to the wishes and needs of the people."⁷⁸ In the wake of this report and calls for the resignation of William R. Bradley and another APCC member (Norman G. White) who was accused of conflicts of interest, Governor Richard J. Hughes replaced these two members after their four year-terms had expired, and the APCC elected Louis A. Winkelman, a representative of the state Chamber of Commerce, to be commission chairman. This change of personnel was but a temporary solution to the staffing problem, for three years later, two APCC members (including Winkelman) were accused of conflicts of interests for working for two companies accused of emitting air pollution. Suffice it to say, state officials — including the governor — increasingly proposed changes to the Air Pollution Control Commission as the 1960s progressed.⁷⁹

Indeed, more significant changes to air pollution policy awaited the outcome of the 1965 state elections where air pollution surfaced once more as a campaign issue. Yet again, political candidates focused on strengthening the APCC and its capacity to address air pollution, particularly regarding auto emissions. When the Republican-led state Senate failed to act on a package of air pollution control measures which had been unanimously passed by the

Democratic Assembly,⁸⁰ Governor Hughes used the Republican Senate's intransigence to distinguish himself from his Republican opponent, Senator Wayne Dumont, Jr., (R-Warren County) during his 1965 re-election campaign. In July, he alleged that Dumont was part of a six-man caucus in the Republican Senate that "sand-bagged air pollution bills, educational progress, and law enforcement proposals, among other things." In fact, Dumont had publicly announced back in April that he was opposed to tailpipe pollution controls because of their cost and the APCC's failure to demonstrate their necessity. At most, Dumont held that the state already maintained stringent air pollution restrictions, and he criticized Governor Hughes for inadequate enforcement.⁸¹

Other Democratic candidates for state government followed Hughes' lead in condemning the Republican Senate's failure to enhance the APCC's capacity to address auto emissions and air pollution.⁸² For example, Samuel S. Sagotsky, a Democratic candidate for the state Assembly from Monmouth County, argued that Hughes needed a cooperative state legislature, for the health of the state "is being sacrificed by an obstructionist Republican Senate and right now as a result we are breathing dangerous irritants." That is not to say that Republican candidates completely ignored the issue of air pollution; like Dumont, they often claimed that the Hughes Administration failed to enforce existing statutes and that state government should focus on ensuring compliance. Some Republican candidates also proposed tax breaks for industries to help them pay for expensive pollution control devices so they could meet state standards.⁸³

On election night, Hughes won re-election by a resounding majority (1,278,568 – 915,996), and the Democratic Party could boast of significant majorities in both the Senate (19 – 10) and the Assembly (41 – 19).⁸⁴ With the Democrats assuming unified control in 1966, Hughes was guaranteed the legislative support necessary to regulate auto emissions and to enhance the APCC's authority. In April of 1966, Hughes signed two measures to address vehicular air pollution, one which authorized the APCC to set standards "for the control of air contaminants" from motor vehicles, and one which required compliance with the standards as "a condition for passing the annual motor vehicle inspection," under

⁸⁰"Stout Blamed by Governor in Pollution," *The Daily Record* (Long Branch, N.J.) (16 May 1965), 4; "Air Pollution Bills Stall in Trenton," *The Herald-News* (Passaic, N.J.) (25 May 1965), 8.

⁸¹"Legislature Passes 200 Bills, Confirms 42 Names," *The Daily Record* (Long Branch, N.J.) (25 May 1965), 4; "Dumont Against Tailpipe Air Pollution Controls," *Asbury Park Press* (Asbury Park, N.J.), 25; Hughes Vows to End GOP Caucus," *Central New Jersey Home News* (New Brunswick, N.J.) (1 July 1965), 8 (first quotation on p. 8); Hughes Hits 'Obstructionist' Acts of Legislature, Dumont," *Asbury Park Press* (Asbury Park, N.J.) (23 September 1965), 19; "State Clean Air Laws Not Enforced: Dumont," *Asbury Park Press* (Asbury Park, N.J.) (22 October 1965), 1.

⁸²Other Democratic candidates who blamed the Republican Senate for impeding the state's progress on air pollution included Jerome Yesko, an Assembly candidate from Bergen County, Alfred W. Kiefer, a Senate candidate from Bergen County, John J. Reilly, a Senate candidate from Ocean County, and Ned J. Parsekian, a Senate candidate from Bergen County.

⁸³"Sagotsky Blasts GOP On Air Pollution Issue," *Asbury Park Press* (Asbury Park, N.J.) (26 August 1965), 22 (quotation on p. 22); "Assembly Candidate Asks For Air Pollution Laws," *The Herald-News* (Passaic, N.J.) (12 July 1965), 17; "G.O.P. Scored For Lack of Air Pollution Law," *The Morning Call* (Paterson, N.J.) (23 August 1965), 22; "G.O.P., Democrats Swap Accusations," *The Record* (Hackensack, N.J.) (5 October 1965), 18; "Air Pollution Plan Moved," *The Courier-News* (Bridgewater, N.J.) (18 October 1965), 14; Al Sullivan, "State Senate Race Goes Down to the Wire," *Asbury Park Press* (Asbury Park, N.J.) (24 October 1965), 49; "Moraites, Democrat Foes Tangle On Lottery, Impure Air," *The Morning Call* (Paterson, N.J.) (26 October 1965), 3.

⁸⁴"Wefing, *Life and Times of Richard Hughes*, chap. 10; "Windup Debate Tonight," *Asbury Park Press* (Asbury Park, N.J.) (18 October 1965), 1-2; "Resolution on Genovese Situation is Adopted," *The Daily Record* (Long Branch, N.J.) (30 October 1965), 12.

⁷⁶"Air Pollution a Good Issue," *Central New Jersey Home News* (New Brunswick, N.J.) (4 June 1961), 22; "We Add to the List," *Asbury Park Press* (Asbury Park, N.J.) (28 July 1961), 18; "Mitchell Adds Pollution," *Asbury Park Press* (Asbury Park, N.J.) (1 August 1961), 14; "Mitchell Proposes Board For Control of Pollution," *The Record* (Hackensack, N.J.) (20 September 1961), 2 (second quotation on p. 2); "Political Arena," *The Daily Register* (Red Bank, N.J.) (29 September 1961), 15 (first quotation on p. 15); "Mitchell Vows Air Pollution Fight in State," *The Record* (Hackensack, N.J.) (29 September 1961), 5. According to Mitchell, the new pollution agency would also have enforced water pollution control measures.

⁷⁷"Hughes Signs Air Pollution Control Bill," *Asbury Park Press* (Asbury Park, N.J.) (9 January 1963), 1; "Air Pollution Control Act is Amended," *The Daily Register* (Red Bank, N.J.) (10 January 1963), 29; "No Excuse Now For Polluted Air," *Asbury Park Press* (Asbury Park, N.J.) (11 January 1963), 14.

⁷⁸"U.S. Air Pollution Report Both Praised, Questioned," *Asbury Park Press* (Asbury Park, N.J.) (20 February 1964), 1, 36 (first quotation on p. 1, third quotation on p. 36); "A Sorry Picture," *Asbury Park Press* (Asbury Park, N.J.) (20 February 1964), 18 (second quotation on p. 18).

⁷⁹"Two Pollution Unit Members Asked to Quit," *Asbury Park Press* (Asbury Park, N.J.) (13 March 1964), 1, 3; "Pollution Control Board Elects Winkelman Head," *Asbury Park Press* (Asbury Park, N.J.) (21 July 1964), 13; "Air Unit Link of 2 Cited," *Asbury Park Press* (Asbury Park, N.J.) (5 January 1967), 1.

threat of fines that ranged from \$25 to \$100.⁸⁵ Significantly, by adopting these measures, New Jersey was following the national government's lead, and thus increased the state's access to federal resources.

Indeed, at the same time New Jersey politicians were weighing measures to regulate auto emissions, the federal government was also proceeding in this direction. In 1965, Congress enacted the Motor Vehicles Air Pollution Control Act, which authorized the National Air Pollution Control Administration (NAPCA) in the Department of Health, Education, and Welfare (HEW) to establish federal auto emission standards for motor vehicles. Hence, in late December 1965, HEW Secretary John W. Gardner announced a set of national standards to curb auto exhaust fumes that would be applied to the 1968 models of cars. According to these rules, all new cars sold in the U.S. had to be equipped with devices to reduce such fumes. However, neither the statute nor the rules pre-empted the states from developing their own standards and approaches to regulating auto emissions. Hence, the New Jersey Health Department applied for a \$388,286 grant from the U.S. Public Health Service in September 1966 to study how motor vehicles contributed to air pollution. While the Department received a lesser amount (\$235,300) than requested, political observers maintained that this grant would produce research that could inform New Jersey's rule-making regarding vehicular fumes.⁸⁶

Ultimately, the late 1960s proved to be the crucial years for environmental policymaking as air pollution control advocates were developing a stronger organizational footprint in New Jersey. They formed new groups like Better Air for Bergen, New Jersey Citizens for Clean Air, (NJCCA) and Hudson County Citizens for Clean Air, while extant civic organizations like the Jaycees, the Kiwanis, the New Jersey State Federation of Women's Clubs, and the League of Women Voters were often on the front lines of demanding stricter limits on air pollution.⁸⁷ In December of 1966, for example, Ruth Ballou of the NJCCA spoke at the Third National Conference on Air Pollution and called for "increased opportunities for participation by the general public in the commissions and other bodies involved" in the New Jersey pollution control program. In terms of public policy, Ballou's group campaigned for more state spending on air pollution control and sought the reorganization of the business-friendly New Jersey Air Pollution Control Commission.⁸⁸

That said, their opponents also mobilized; in Perth Amboy, for instance, the Jaycees developed a display about air and water pollution in 1966 that so angered local officials that City Commissioner Donald Olson ordered the display removed from the windows of a chain store. "These do-gooders are alright," Olson remarked, "but this is an industrial town and we're not going to shut down just for them. It was a one-sided presentation and a detriment to the town."⁸⁹

As pollution control supporters and opponents mobilized, Governor Richard J. Hughes signed into law the 1967 amendments to the APCA which abolished the business-friendly APCC and replaced it with the Division of Clean Air and Water (DCAW) within the state Department of Health. Leading this new agency was Richard Sullivan, a veteran of the APCC who represented the Labor Department's Bureau of Safety and Engineering and who promised a more punitive approach to air pollution control. In replacing the part-time, multi-member commission populated with several industry-nominated members with an agency led by a single individual who served at the pleasure of the governor, the lawmakers created a body that was more in line with the new social regulation of this era. Indeed, as the Joint Legislative Committee on Air and Water Pollution and Public Health noted in its proposal to replace the APCC with the DCAW, "the commission form, by its very nature, is an extremely slow mechanism for decision-making because it requires the formal concurrence of at least a majority of the Commission members and because the Commission is only a part-time body. In the final analysis, hard decisions can best be made by an experienced, well-staffed, competent administrator upon whom responsibility can be clearly focused." Moreover, the APCC was not accountable to the governor or any other public official, something the DCAW would rectify.⁹⁰

Significantly, these amendments further simplified the enforcement process and required new sources of pollution to adopt state-of-the-art pollution controls. Another provision granted the governor the authority to ban industrial activity during an air pollution emergency, and yet another authorized municipalities to draft more stringent air pollution codes, provided they received approval by the Department of Health. Meanwhile, state spending on air pollution control soared. Whereas New Jersey spent a little more than \$100,000 a year to address air pollution in the early 1960s, the 1967-68 budget included an appropriation of \$808,081

⁸⁵"Hughes Signs State's First Vehicle Air Pollution Bills," *Asbury Park Press* (Asbury Park, N.J.) (8 April 1966), 4.

⁸⁶"HEW Sets Standards For Exhaust Control," *Washington Post* (Washington, D.C.) (1 January 1966), A2; "U.S. Writes Tough Rules to Control Auto Fumes," *The Morning Call*, (Paterson, N.J.) (1 January 1966), 2; David P. Currie, "Motor Vehicle Air Pollution: State Authority and Federal Pre-emption," *Michigan Law Review* 68 (1970):1088-1089; Carole Martin, "Aid Sought for Study of Automobile Pollutants," *The Daily Journal* (Vineland, N.J.), (27 September 1966), 10; "Auto Fumes Ban to Start in 1968," *The Courier-Post* (Camden, N. J.) (18 November 1966), 3; "Voice of the Press," *The Record* (Hackensack, N.J.) (15 December 1966), 19.

⁸⁷"Group to Prompt Clean Air Drive," *The Record* (Hackensack, N.J.) (14 October 1965), 5; "Two Aspects of Pollution," *Central New Jersey Home News* (New Brunswick, N.J.) (6 January 1966), 18; "Jaycees Plug Clean Air," *The Morning Call* (Paterson, N.J.) (4 November 1966), 6; "Jersey Garden Show Exhibit On Pollution," *Central New Jersey Home News* (New Brunswick, N.J.) (18 March 1968), 7; "Air Pollution Kiwanis Topic," *Central New Jersey Home News* (New Brunswick, N.J.) (17 June 1968), 17; Rae Downs, "Hudson Clean Air Unit Puts Mayor on Spot," *Jersey Journal* (Jersey City, N.J.) (21 November 1969), 1; "Plan 3 Sessions On Air Pollution," *Madison-Florham Park Eagle* (Madison, N.J.) (12 November 1970), 4.

⁸⁸Dolores Orlowski, "Kandle, Union Leader Vie on Air-Dirt Plans," *The Record* (Hackensack, New Jersey) (8 March 1967), 3; N.J. Lawmaker Urges U.S., States Act," *The Courier-Post* (Camden, N.J.) (3 January 1967), 5; "Howard Asks Strong Action on Air Pollution Control," *Asbury Park Press* (Asbury Park, N.J.) (1 January 1967), 31; "Governor Asks Air, Water Pollution War," *The Daily Journal* (Vineland, N.J.) (10 January 1967), 1;

"Hughes Outlines Pollution Controls," *The Courier-News* (Bridgewater, N.J.), (11 February 1967), 1; "Two Pollution Control Bills Clear Both Houses," *Central New Jersey Home News* (New Brunswick, N.J.) (25 April 1967), 19; George Dawson, "State Urges Local Air Pollution Control Action," *Central New Jersey Home News* (New Brunswick, N.J.) (13 November 1969), 48; "New Jersey Makes Only Token Moves to Stem Air Pollution," *Asbury Park Press* (Asbury Park, N.J.) (6 February 1962), 1, 3; John E. O'Fallon, "Deficiencies in the Air Quality Act of 1967," in *Air Pollution Control*, ed. Clark C. Havighurst, (Dobbs Ferry, N.Y.: Oceana Publications, 1969), 97-100.

⁸⁹"Group to Prompt Clean Air Drive," *The Record* (Hackensack, N.J.) (14 October 1965), 5; "Two Aspects of Pollution," *Central New Jersey Home News* (New Brunswick, N.J.) (6 January 1966), 18 (quotation on p. 18); "Jaycees Plug Clean Air," *The Morning Call* (Paterson, N.J.) (4 November 1966), 6; "Jersey Garden Show Exhibit On Pollution," *Central New Jersey Home News* (New Brunswick, N.J.) (18 March 1968), 7; "Air Pollution Kiwanis Topic," *Central New Jersey Home News* (New Brunswick, N.J.) (17 June 1968), 17; Rae Downs, "Hudson Clean Air Unit Puts Mayor on Spot," *Jersey Journal* (Jersey City, N.J.) (21 November 1969), 1; "Plan 3 Sessions On Air Pollution," *Madison-Florham Park Eagle* (Madison, N.J.) (12 November 1970), 4.

⁹⁰"Two Pollution Control Bills Clear Both Houses," *Central New Jersey Home News* (New Brunswick, N.J.) (25 April 1967), 19; "Enforcer Gets Pollution Job," *The News* (Paterson, New Jersey) (17 February 1967), 2; William A. Caldwell, "How Much Purity Would Be Tolerable?" *The Record* (Hackensack, N.J.) (22 May 1967), 21; Joint Legislative Committee on Air and Water Pollution and Public Health, *Concerning Pending Legislation on Air and Water Pollution and Solid Waste Disposal*, (S.I.: s.n., 1967), 12-17 (quotation on p. 13).

for air pollution control, with funds available for 83 staff members devoted to air sanitation. By 1969, New Jersey was behind only California and New York in total air pollution control expenditures, and by 1971, the state's outlays totaled \$6 million while the staff had grown to about 200.⁹¹

In contrast to the oft-criticized Anti-Pollution Control Commission which issued no penalties for years, the DCAW won immediate praise from pollution opponents in New Jersey. "The state Department of Health and its new Division of Clean Air and Water are to be applauded for their new and aggressive policies against air pollution," the *Asbury Park Press* declared in 1968. The *Press* marveled at the size of the fines imposed by the new agency and concluded that "the weakest air pollution control program in the nation is perhaps the strongest." In November of 1968, New Jersey became the first state in the nation to subject cars, buses, and trucks to tests on the level of particulate matter from exhausts. Meanwhile, the pace of rulemaking picked up. In 1968, the agency issued a new code which regulated the construction of new incinerators and the operation of existing ones. A year later, the DCAW proposed new rules that sought to limit the airplane emissions at the Newark Airport, as well as rules which fleshed out the governor's powers during an air pollution emergency. The agency also sought to expand its geographical reach when it "announced South Jersey will be policed far more vigorously to curb health hazards of air pollution" and would be "subject to the same type of state scrutiny as the more populous regions in New Jersey." In 1969, the new air quality standards adopted by New Jersey were so stringent that they upended the process of developing standards in nearby Pennsylvania, which was leaning toward weaker regulations. "We found ourselves in the embarrassing predicament that New Jersey...came out with some crash numbers that really shook our teeth out," recalled one Pennsylvania pollution commission member about the pressure to adopt more exacting air quality standards.⁹²

Of course, as New Jersey regulators issued more stringent air pollution rules during the late 1960s, industry leaders became more vehemently opposed to their actions. Hence, the DCAW still made accommodations for industry when practicable without sacrificing its goals for reducing pollutants. For example, in 1968, the DCAW adopted a regulation that sought to restrict the

sulfur content of coal and oil used in heating and power generation facilities in order to decrease the release of sulfur dioxide into the atmosphere. However, the agency delayed the implementation of this rule to give manufacturers and public utilities additional time to convert to low sulfur oil.⁹³ In the end, the delay of such rules didn't prevent New Jersey from improving its air quality. An analysis of a long-used measurement of air quality, the coefficient of haze (COH), suggests that the state managed to achieve "major decreases in uncontrolled combustion source emissions, elimination of residential coal burning, and reduction of sulfur in the oil." In fact, "the largest percentage reduction in COH occurred before the implementation" of the 1970 amendments to the federal Clean Air Act.⁹⁴

After Hughes left office in January of 1970, the new governor, William T. Cahill (R) built on his environmental legacy. Cahill, a former U.S. congressman, ran for governor against former governor Robert B. Meyner (D) as an opponent of the development of a new jetport which had caused much consternation for residents who lived near potential sites and who feared that the new jetport would produce noise, air, and water pollution that would alter the character of their exurban communities.⁹⁵ Once in office, Cahill championed legislation which created a cabinet level agency, the New Jersey Department of Environmental Protection (NJDEP), to unite all pollution-related offices and natural resource conservation in one bureau, a measure that received near unanimous approval from the Republican-controlled legislature. As with the Division of Clean Air and Water, this agency would be led by a single, powerful administrator, and it served as a model for other states.⁹⁶

Still, two students of public administration in the early 1970s would have categorized the NJDEP as a "superdepartment" which combined natural resource conservation and pollution control. From the perspective of Elizabeth H. Haskell and Victoria S. Price, such an agency design would be less conducive to the strict enforcement of environmental laws because its commitment to natural resource conservation would encourage the agency to collaborate and compromise with industry stakeholders. That said, a study by JoyAnna Hopper demonstrates that the NJDEP is far more likely to take enforcement actions when an air pollution violation is discovered than Ohio's state agency.⁹⁷

Indeed, due to its sixteen years of state-level air pollution control efforts, few states were as prepared as New Jersey to adapt to the new air quality standards promulgated by the Environmental Protection Agency after 1970. For example, New Jersey had maintained a safety inspection system for cars and trucks since 1937. When the New Jersey Department of Environmental Protection decided to use an automobile idle emissions program to meet the EPA's new auto emissions requirement, the DEP merely had to

⁹¹ N.J. Lawmaker Urges U.S., States Act," *The Courier-Post* (Camden, N.J.) (3 January 1967), 5; "Howard Asks Strong Action on Air Pollution Control," *Asbury Park Press* (Asbury Park, N.J.) (1 January 1967), 31; "Governor Asks Air, Water Pollution War," *The Daily Journal* (Vineland, N.J.) (10 January 1967), 1; "Hughes Outlines Pollution Controls," *The Courier-News* (Bridgewater, N.J.) (11 February 1967), 1; "Enforcer Gets Pollution Job," *The News* (Paterson, New Jersey) (17 February 1967), 2; "Two Pollution Control Bills Clear Both Houses," *Central New Jersey Home News* (New Brunswick, N.J.) (25 April 1967), 19; George Dawson, "State Urges Local Air Pollution Control Action," *Central New Jersey Home News* (New Brunswick, N.J.) (13 November 1969), 48; "New Jersey Makes Only Token Moves to Stem Air Pollution," *Asbury Park Press* (Asbury Park, N.J.) (6 February 1962), 1, 3; John E. O'Fallon, "Deficiencies in the Air Quality Act of 1967," in *Air Pollution Control*, ed. Clark C. Havighurst, (Dobbs Ferry, N.Y.: Oceana Publications, 1969), 97-100; Richard Bragaw, "New Jersey, Illinois Lead Smog Fight," *Dayton Daily News* (Dayton, Ohio) (12 May 1971), 1, 19; Charles O. Jones, *The Policies and Politics of Air Pollution Control*, (Pittsburgh, Penn.: University of Pittsburgh Press, 1975), 116.

⁹² "Toward Cleaner Air," *Asbury Park Press* (Asbury Park, N.J.), (28 October 1968), 14 (quotations on p. 14); "Official Says N.J. Pollution Off by 80%," *Asbury Park Press* (Asbury Park, N.J.) (3 February 1968), 5; "All Autos in State Face Pollution Test," *The Courier-Post* (Camden, N.J.) (18 March 1968), 1; "Incinerator Regulations Take Effect," *The Courier-Post* (Camden, N.J.) (16 August 1968), 7; "Tougher on Polluters," *The Courier-Post* (Camden, N.J.), 10 (quotations on p. 10); "New Air Pollution Rules Are Adopted," *Central New Jersey Home News* (New Brunswick, N.J.) (25 August 1969), 2; "Sewer Cleanup in the Sky," *The Record* (Hackensack, N.J.) (20 October 1969), 16; Jones, *The Policies and Politics of Air Pollution Control*, 168 (quotation on p. 168).

⁹³ "State Initiates Sulphur Air Pollutant Fiat," *Asbury Park Press* (13 January 1968), 1; "State's Noxious Gas Code Is Rapped by Oil Industry," *Central Jersey Home News* (New Brunswick, N.J.), (25 January 1968), 7.

⁹⁴ Lioy and Georgopoulos, "New Jersey," 1352.

⁹⁵ "Cahill Would Veto Jetport," *The Courier-News* (Bridgewater, N.J.), (5 August 1969), 17; Maggie Clampitt, "Cahill Wanted a Jetport Back in 1967...But Not Now," *The Courier-News* (Bridgewater, N.J.), (8 October 1969), 10; "Objects to Sellout," *The Courier-News* (11 April 1967), 18; "Jetport Effect," *Echoes-Sentinel* (Warren Township, N.J.) (29 June 1967), 7.

⁹⁶ "Edward Mullin, 'New Department to Debut Today,'" *The Herald-News* (Passaic, N.J.) (21 April 1970), 41; "State Gets Pollution Weapon," *Central New Jersey Home News* (New Brunswick, N.J.) (23 April 1970), 30; Richard Bragaw, "Jersey, Illinois Lead Smog Fight," *Dayton Daily News* (Dayton, Ohio) (12 May 1971), 1, 19.

⁹⁷ Haskell and Price, *State Environmental Management*, 252-257; Hopper, *Environmental Agencies in the United States*, chaps. 1-3. See Figure 2.1 for the data on enforcement actions.

incorporate this new testing procedure into the pre-existing motor vehicle safety inspection program. In contrast to Ohio, which only adopted an emissions testing program for five counties in 1986, New Jersey began emissions testing in 1968 and maintained a fully operational statewide program from 1974 onward, receiving praise from federal EPA officials for being a pioneer in this area. By 1980, the state Department of Environmental Protection reported that “carbon monoxide in the air had been reduced by more than 40 percent [in the state] despite a large increase in vehicle use” because of this program.⁹⁸

More generally, during a hearing for the 1970 amendments to the Clean Air Act, the director of the National Air Pollution Control Administration, John T. Middleton, named New Jersey and New York as the states with the most meaningful state air pollution control programs at that point and highlighted their capacity to implement air quality standards.⁹⁹ In fact, New Jersey and New York were also the first states to work towards solutions to the problem of interstate pollution, though they did so in fits and starts.¹⁰⁰ Furthermore, due to its tough state laws, New Jersey met four of the national air emissions standards on time. More recently, in 2002, “New Jersey was declared in compliance with the carbon dioxide standard, and in 2012 it petitioned the federal Environmental Protection Agency...to declare that it met the soot standard.”¹⁰¹

In the end, air pollution control did not constitute the most salient issue in New Jersey during the years 1954 – 1970. In fact, the gubernatorial campaigns of this period focused more on the best way to raise revenue in New Jersey, with the Democrat Hughes opting for an income tax proposal and the Republican Dumont supporting a state sales tax in 1965.¹⁰² However, many state lawmakers and gubernatorial candidates believed that New Jersey had a responsibility to abate air pollution and embraced the issue. To achieve that goal, they initially created a state air pollution control agency which lacked independence from the private interests it was supposed to regulate and garnered criticism in the ensuing years. Still, policymakers found it relatively easy to displace the New Jersey Air Pollution Control Commission because the leaders of this agency were volunteers who did not view themselves as public employees or committed to the agency’s broader mission. Hence, the APCC’s structure decreased the “costs of exit” for policymakers who were interested in replacing the commission with a different agency model altogether.¹⁰³

With the creation of the DCAW and then the NJDEP, New Jersey state policymakers were again “starting from scratch.” As

with the creation of the APCC, the Newark Bureau of Industrial Hygiene and Air Pollution Control (later the Newark Air Pollution Control Agency) played no role in these administrative developments and instead focused on enforcing local air pollution regulations “so long as such action is in complete accordance with the laws and regulations regarding the same as promulgated and enforced by the State Department of Environmental Protection.”¹⁰⁴ Meanwhile, the state maintained three regional air pollution control agencies which addressed complaints about violations of municipal ordinances but they were small agencies with fewer than 15 employees each. Thus, the NJDEP faced no competition within the state for the establishment of strict air pollution control measures that would help the state achieve the targets set by the EPA.¹⁰⁵

5. Ohio: urban problem, urban solutions

Like New Jersey, Ohio at mid-century was a mix of densely populated counties and counties that were more rural in nature. However, whereas the bulk of New Jersey’s pollution was in the heavily-developed northern part of the state, the densest counties were scattered across the Ohio landscape in 1960 and included Cuyahoga County (home of Cleveland), Hamilton County (home of Cincinnati), Lucas County (home of Toledo), Summit County (home of Akron), Franklin County (home of Columbus), and Montgomery County (home of Dayton). While it is difficult to find systematic data on air pollution in Ohio during the 1950s, the National Air Pollution Control Administration compiled statistics from across the nation on three pollutants (sulfur oxides, particulates, and carbon monoxide) when it was establishing air pollution control regions during the late 1960s. This data illustrates that industrial activity, power plants, and autos in Cleveland, Cincinnati, Toledo, Akron, Dayton, Canton, and Steubenville contributed substantial amounts of pollution to their respective regions. (For the most part, this paper will focus primarily on the largest metropolitan areas in Ohio, namely, those situated around Cincinnati, Cleveland, Columbus, Akron, and Dayton.)¹⁰⁶

5.1. The triumph of municipal air pollution control programs, 1950-1965

In 1960, four Ohio cities (Cincinnati, Cleveland, Columbus, and Toledo) maintained air pollution control programs that were the

⁹⁸“First in Nation: All Autos in State Face Pollution Test,” *The Courier-Post* (Camden, N.J.) (18 March 1968), 1; Thomas Suddes, “Auto Emissions Testing for 5 Counties is Law,” *Cleveland Plain Dealer* (Cleveland Ohio) (7 May 1986), 21; “They Like Us to Get Tough, Says EPA About Drivers,” *The News of Cumberland County* (Bridgeton, N.J.) (9 October 1980), 31 (quotation on p. 31); “Auto Emissions Test Lauded, But...,” *The Herald News* (Passaic, N.J.), (18 November 1978), 5.

⁹⁹A *Legislative History of the Clean Air Amendments of 1970*, Prepared by the Environmental Policy Division of the Congressional Research Service of the Library of Congress for the Committee on Public Works, U.S. Senate, Vol. 2, (Washington, D.C.: U.S. Government Printing Office, 1974), 1272-1275.

¹⁰⁰Dewey, *Don’t Breathe the Air*, chap. 8.

¹⁰¹Lioy and Georgopoulos, “New Jersey,” 1352; Dennis Palmini and Daniel Rossi, “What Price Air Quality? The Cost of New Jersey’s Inspection/Maintenance Program,” *Journal of the Air Pollution Control Association* 30 (October 1980): 1082; Salmore and Salmore, *New Jersey Politics and Government*, 337 (quotation on p. 337).

¹⁰²John B. Wefing, *The Life and Times of Richard J. Hughes: The Politics of Civility*, (New Brunswick, N.J.: Rivergate Books, 2009), chaps. 5 and 10; Alvin S. Felzenberg, “The Making of a Governor: The Early Career of Richard J. Hughes,” *New Jersey History* 101 (1983): 16-25.

¹⁰³Paul Pierson, “Increasing Returns, Path Dependence, and the Study of Politics,” *American Political Science Review* 94 (June 2000): 252.

¹⁰⁴“An Ordinance to Amend Title 3, Chapter 1 of the Revised Ordinance of the City of Newark, New Jersey,” *The Star-Ledger* (Newark, N.J.) (24 June 1974), 13 (quotation on p. 13).

¹⁰⁵The regional air pollution control agencies were heavily dependent on the NJDEP for technical assistance, and their fines were capped at \$500, much lower than the state fines. See Mary Jo Patterson, “Nosing Around State for Smelly Polluters,” *The Star-Ledger* (Newark, N.J.) (2 October 1977), 1, 24.

¹⁰⁶*Ohio Population: Growth and Distribution*, (Columbus, Ohio: F. J. Heer Printing Co., 1960), 11-16; National Air Pollution Control Administration, *Report for Consultation on the Cincinnati Interstate Air Quality Control Region*, (Washington, D.C.: n.p., 1969), 25-46; National Air Pollution Control Administration, *Report for Consultation on the Greater Metropolitan Cleveland Interstate Air Quality Control Region*, (Washington, D.C.: n.p., 1969), 12-28; National Air Pollution Control Administration, *Report for Consultation on the Metropolitan Toledo Interstate Air Quality Control Region, Ohio, Michigan*, (Washington, D.C.: n.p., 1969), 25-48; National Air Pollution Control Administration, *Report for Consultation on the Metropolitan Dayton Intrastate Air Quality Control Region*, (Washington, D.C.: n.p., 1969), 13-37; National Air Pollution Control Administration, *Report for Consultation on the Steubenville-Weirton-Wheeling Air Quality Control Region, Ohio, West Virginia*, (Washington, D.C.: n.p., 1969), 23-32.

product of the anti-smoke movement of the Progressive Era.¹⁰⁷ Akron established its air pollution control program in 1947; Youngstown followed in 1950. Meanwhile, Dayton sought to develop a similar program in 1948 and appointed a city smoke engineer in 1949. However, the city struggled to enact an ordinance authorizing the engineer to eliminate smoke and smog in Dayton, only adopting such a measure in April 1952.¹⁰⁸ As was the case elsewhere, most Ohio cities updated their municipal ordinances to address airborne dust, gases, and fumes, in addition to coal smoke during the 1950s. Of these cities, though, only Cincinnati regulated the consumption of high-volatile coal, an approach that had led to significant decreases of air pollution in St. Louis and Pittsburgh. This failure on the part of most Ohio cities reflected the influence of the Coal Producers Committee for Smoke Abatement (CPCSA), a Cincinnati-based group representing several high volatile coal operators and coal-bearing railroads that opposed fuel-restricting ordinances. The power of this committee was considerable as eastern Ohio was home to several coal mines which were in the process of ramping up production through surface mining. Still, as elsewhere, regional railroads replaced coal with diesel fuel, and Ohio manufacturers increasingly relied on oil and natural gas after 1950. As a result, coal mining became less important to the state's economy and coal smoke became less of a problem, regardless of the political machinations of the Coal Producers Committee for Smoke Abatement.¹⁰⁹ In fact, by 1963, whereas Ohio's per capita value added by manufacturing was \$1522.14, the state's per capita value added by mining was only \$22.43.¹¹⁰

While the CPCSA failed to expand the use of coal in Ohio in the long run, the coal industry continued to supply the state's power plants and steel mills through the 1970s.¹¹¹ Moreover, the committee's approach to air pollution control had an enduring impact on the municipal agencies tasked with regulating smoke, fumes, and particulates. Following the position advocated by coal producers and other businesses, many of these agencies embraced "pseudocorporatism" and emphasized cooperation with companies that fouled the air rather than on fines or other coercive mechanisms. For example, in an article from 1953 entitled, "Are You Breathing Danger?" Beatrice Schapper rated the agency of Dayton as "Poor."¹¹² In response, the Chief Building Inspection

Superintendent of Dayton, Harold Nielson, acknowledged that Dayton's ordinance lacked teeth and did not address incinerators, open fires, or secure much support from civic groups. However, he rejected the "poor rating," and contended that his department had reduced significant amounts of air pollution through cooperation with local polluters (e.g., foundries) and the Dayton Chamber of Commerce.¹¹³ In a similar fashion, even though Cleveland's agency was rewarded with a "Good" rating from Schapper, a 1954 study by Los Angeles County of the Cleveland Air Pollution Commission found that it was focused on persuading industry to voluntarily reduce air pollution while ignoring the fact that its own power plants, institutions, and dumps were some of the main sources of pollution. Furthermore, the study concluded that the agency eschewed "stringent" or "forced compliance," and pointed out that the Cleveland ordinance did not "specifically fix maximum pollution allowances."¹¹⁴

Meanwhile, in terms of state legislation, urban politicians and air pollution control agencies showed no interest in lobbying for a state agency that would create anti-pollution codes applicable to all polluters in Ohio. Instead, city officials and urban representatives in the Ohio legislature sought to expand the reach of the urban agencies beyond their corporation limits. As a strong advocate for water and air pollution control, Senator William H. Deddens (R-Cincinnati) supported this approach because while Cincinnati "has an anti-air pollution ordinance, there is none in [nearby] Norwood. Smoke from Norwood blows into Cincinnati and makes our law of little value in some areas." From 1949 to 1953, Deddens regularly introduced legislation at the beginning of the legislative session to extend city control over air pollution beyond city limits. In Deddens' proposal, urban air pollution control agencies would have been authorized to regulate air pollution three miles outside the city boundaries and could have entered into pacts with nearby cities to develop joint air pollution abatement policies. While the Senate passed his sponsored legislation twice, the House rejected it in both instances, a result Deddens blamed on railroad influence.¹¹⁵ At most, then, Cincinnati developed a Metropolitan Air Pollution Control Program in 1957, a voluntary arrangement in which seven out of the fifteen invited suburban municipalities agreed to be served by an air pollution control officer employed by the Cincinnati Bureau of Air Pollution Control. This officer was to help enforce the municipalities' pollution control policies and was paid for by their tax dollars. Furthermore, the Cincinnati Bureau head, Charles W. Gruber, drew up a model air

¹⁰⁷Stradling, *Smokestacks and Progressives*, 52-55, 103,154; Bureau of Municipal Research (New York, N.Y.), *Columbus, Ohio: Report on a Survey of the City Government*, (Columbus: Stoneman Press, 1916), 208-209; Toledo (Ohio), *The Toledo Code of 1919 Passed by Council September 22, 1919, Approved by Mayor Cornell Schreiber, September 29, 1919*, (Toledo: n.p. 1920), 340-343; U.S. Public Health Service, *State and Local Programs in Air Pollution Control*, 8.

¹⁰⁸"Smoke Abatement Week Recalls Work of Bruce," *Akron Beacon Journal* (Akron, Ohio) (24 October 1950), 48; "Dustfall' Akron Air Problem," *Akron Beacon Journal* (Akron, Ohio) (11 May 1958), 90; "Approve Smoke Control," *The Salem News* (Salem, Ohio) (26 April 1950), 5; Andrew J. Drysdale, "OK of Levy Will Insure Cleaner City," *Journal Herald* (Dayton, Ohio) (19 October 1948), 3; "Beginning With The Facts," *Dayton Daily News* (Dayton, Ohio) (1 November 1949), 18; "Dayton Smoke Ordinance in Final Stage," *Journal Herald* (Dayton, Ohio) (6 December 1949), 16; "Air Pollution Fight Lacks Legal Help," *Journal Herald* (Dayton, Ohio) (16 January 1952) 1; "Cost High To Curb Smoke," *Dayton Daily News* (Dayton, Ohio) 2 February 1953), 5.

¹⁰⁹University of Pittsburgh, *Digest of Municipal Air Pollution Ordinances*, (Washington, D.C.: U.S. Department of Health, Education, and Welfare, 1962), 349-397; Douglas L. Crowell, *History of the Coal-Mining Industry in Ohio*, (Columbus: Ohio Department of Natural Resources, Division of Geological Survey, 1995), 6-10; Stradling, *Smokestacks and Progressives*, 172-180.

¹¹⁰U.S. Bureau of the Census, *Census of Mineral Industries, 1963, Vol. 1, Summary and Industry Statistics*, (Washington, D.C.: U.S. Government Printing Office, 1967), 5.

¹¹¹Crowell, *History of the Coal-Mining Industry in Ohio*, 10-12.

¹¹²Beatrice Schapper, "Are You Breathing Danger?" *Woman's Home Companion* 80 (October 1953): 42-43, 84-87, 89. In addition to her "Poor" rating for Dayton, Schapper

rated the agencies of Cleveland, Columbus, and Cincinnati as "Good," the agency of Akron as "Fair," and the agency of Canton as "Poor." Her evaluation was based on whether or not the agencies in question had taken measures to curb incinerators; efforts to control gases, fumes and dust; a ban on open fires; the amount of "teeth" in local anti-smoke laws; and interest displayed by citizens groups. It is best, then, to consider Schapper's analysis as one which rewarded those municipal air pollution regimes that had updated their ordinances to tackle some sources of air pollution like incinerators and the open burning of trash and yard waste that had recently been highlighted.

¹¹³"Air Pollution Criticism Declared Untrue Picture," *Dayton Daily News* (Dayton, Ohio) (17 September 1953), 12.

¹¹⁴Schapper, "Are You Breathing Danger?" 43; Los Angeles County, *Air Pollution Control in the County of Los Angeles and Six Other Metropolitan Areas*, 15, 39 (quotations on p. 15).

¹¹⁵"Women Lend Support To Deddens Measure On Control Of Smoke," *Cincinnati Enquirer* (Cincinnati, Ohio) (5 May 1949), 16; Brady Black, "Subversives," *Cincinnati Enquirer* (Cincinnati, Ohio) (5 January 1951), 1; "Would Extend Smoke Law Authority," *Cincinnati Enquirer* (Cincinnati, Ohio) (18 January 1951), 6 (quotation p. 6); "Deddens Reintroduces Bill To Further Smoke Abatement," *Cincinnati Enquirer* (Cincinnati, Ohio) (12 March 1953), 5.

pollution control ordinance and encouraged the seven localities to adopt it.¹¹⁶

During the 1960s, this idea of expanding the reach of municipal air pollution control agencies gained momentum in Ohio. While the state legislature only sought to explicitly authorize contracts between counties and city air pollution control agencies in 1963, some metropolitan areas had already participated in the development of such partnerships earlier in the decade. For example, in 1960, Dayton City Service Director, Whitney Shartzter, proposed that Dayton join forces with Montgomery County to achieve “countywide control” of air pollution. He feared that any attempt by the city to strictly regulate Dayton’s air pollution would encourage industries to relocate outside of the city’s boundaries. To that end, Montgomery County developed a contract with the Dayton Bureau of Combustion Control whereby it compensated the city for costs when its officials engaged in air pollution control activities outside of city limits.¹¹⁷ Likewise, Lucas County authorized the Toledo Department of Air and Water Pollution Control to police the unincorporated parts of the county, and Toledo forged a similar agreement with a nearby municipality.¹¹⁸ Akron, however, was somewhat less successful. Its 1964 attempt to develop a countywide air pollution control program with Summit County went nowhere, though the city did forge a partnership with nearby Barberton that was advanced by the U.S. Department of Public Health. By promising more generous grants to inter-community anti-pollution programs than to their municipal counterparts, the federal government provided strong encouragement for both Akron and Barberton to join forces.¹¹⁹

Prior to 1965, then, the politics of air pollution in Ohio focused on city governments like that of Cleveland. In 1960–1961, the Cleveland City Council labored (and failed) to adopt an ordinance which would have required steelmakers to install antipollution equipment before converting their open hearths to an oxygen process, a development which would have reduced the companies’ production costs and helped them remain competitive. While the council and Mayor Anthony Celebrezze deliberated about this policy, Jones and Laughlin Steel Corporation was already using the oxygen process and the city had exempted Republic Steel

Corporation from addressing the pollution produced by the oxygen process until December 31, 1961.¹²⁰ As red smoke and dust poured into the atmosphere after the plants began to use the oxygen process, four neighborhood civic associations joined together to create the Cleveland Federated Council for Clean Air in an effort to halt the use of this process. Likewise, seventy-six citizens sued Cleveland, arguing that city officials could not “license the creation of conditions hazardous to the public safety, the public property and the public health.”¹²¹ Indeed, the 1961 Republican mayoral candidate, Albina Cermak, sought to capitalize on Mayor Celebrezze’s failure to adequately address air pollution in 1960–1961. She argued that the city fell short “in everything that it takes to do the job — trained personnel, sufficient budget, community education and cooperation with civic and industrial leaders.”¹²² While Cermak’s views on air pollution resonated with some voters,¹²³ Cleveland was a largely Democratic city and Mayor Celebrezze easily won re-election with 73.8 percent of the vote.¹²⁴

Of course, each metropolitan area experienced its own air pollution crises depending on local conditions. In 1962 and 1965, Cleveland continued to debate the aptness of setting a deadline for steel producers to abate the red dust produced by the oxygen process.¹²⁵ Meanwhile, in Columbus, public officials struggled to trace the sources of nauseating odors that periodically plagued the city.¹²⁶ In Dayton, hundreds of East Side residents petitioned the mayor and air pollution officials in 1964 to demand action against the local industries that sullied their neighborhoods with fly-ash.¹²⁷

Central to these efforts to improve air pollution control in Ohio were the state’s well-established municipal air pollution control agencies and their leaders. In fact, a few of these officials — like Charles W. Gruber, head of the Cincinnati Bureau of Air Pollution Control and Albert W. Lucuoco, Cleveland Air Pollution Commissioner — had reputations as national experts about air pollution, though it should be noted that these reputations were the product of the business-friendly Air Pollution Control Association

¹¹⁶Gilbert Sands, “Harrell Proposes Community Agreements To Set Up Air Pollution Control Services,” *Cincinnati Enquirer* (Cincinnati, Ohio) (20 February 1957), 11; “Clean Air For Cincinnati Area,” *Cincinnati Enquirer* (Cincinnati, Ohio) (17 March 1957), 42; Gilbert Sands, “Nearby Cities Invited to Join In Cincinnati’s War on Smoke,” *Cincinnati Enquirer* (Cincinnati, Ohio) (11 May 1957), 20; Margaret Josten, “City Urged As Clearing House For Air Pollution Control Job,” *Cincinnati Enquirer* (Cincinnati, Ohio) (29 October 1957), 40; Uekoetter, *Age of Smoke*, 152.

¹¹⁷Howard Thompson, “Senate Plans Action on Bill to Speed Traffic Penalties,” *Columbus Dispatch* (Columbus, Ohio) (26 June 1963), 1, 4; Doug Walker, “Air Pollution Fight Might Be Expanded To Blanket County,” *Journal Herald* (Dayton, Ohio) (24 March 1960), 3; “City Seeks Area Air Pollution Plan,” *Dayton Daily News* (Dayton, Ohio) (30 March 1960), 25; “County Approval Expected Today On Air Pollution Program,” *Dayton Daily News* (Dayton, Ohio) (21 June 1960), 19; Robert Daley, “Action Is Deferred On Clean Air Plan,” *Journal Herald* (Dayton, Ohio) (22 June 1960), 16; “City, County Find Flexible Approach,” *Dayton Daily News* (Dayton, Ohio) (23 June 1960), 30; Robert Daley, “County Approves Surplus Request Of Hospital To Meet Drug Costs,” *Journal Herald* (Dayton, Ohio) (2 November 1960), 4.

¹¹⁸Jean J. Schueneman, “A Roll Call for the Communities: Where Do We Stand in Local or Regional Air Pollution Control?” *Proceedings, Third National Conference on Air Pollution*, Washington, D.C., December 12–14, 1966, (Washington, D.C.: U.S. Government Printing Office, 1966), 395.

¹¹⁹“Seek Joint Air Pollution Program,” *Akron Beacon Journal* (Akron, Ohio) (28 November 1964), 33; “Barberton Tackles Air Pollution,” *Akron Beacon Journal* (Akron, Ohio) (2 December 1964), 117; “More Federal Aid To Result,” *Akron Beacon Journal* (Akron, Ohio) (8 December 1964), 79; Tony May, “Outline Barberton Pollution Role,” *Akron Beacon Journal* (Akron, Ohio) (16 December 1964), 72; “Barberton To Vote On Pollution Funds,” *Akron Beacon Journal* (Akron, Ohio) (29 December 1964), 65.

¹²⁰Sanford Watzman, “‘Open Hearth’ Veto Skipped Vital Issues,” *Cleveland Plain Dealer* (Cleveland, Ohio) (24 December 1960), 13; “City Issues Permits for Republic Job,” *Cleveland Plain Dealer* (Cleveland, Ohio) (6 January 1961), 1–2; Sanford Watzman, “J & L Operation Is Called Illegal,” *Cleveland Plain Dealer* (Cleveland, Ohio) (10 January 1961), 1, 16; Sanford Watzman, “Air Pollution Veto Upheld,” *Cleveland Plain Dealer* (Cleveland, Ohio) (24 January 1961), 1, 9; “Drive for Air Pollution Law Looms Again,” *Cleveland Plain Dealer* (Cleveland, Ohio) (30 January 1961), 5; “Steel Smoke Is Now Within Law, Says City Expert,” *Cleveland Plain Dealer* (Cleveland, Ohio) (4 January 1962), 6.

¹²¹“Four Civic Groups Unite in Battle on Air Pollution,” *Cleveland Plain Dealer* (Cleveland, Ohio) (18 February 1961), 10; “City Is Sued Over Oxygen Furnace Feud,” *Cleveland Plain Dealer* (Cleveland, Ohio) (11 March 1961), 3 (quotation on p. 3).

¹²²“Miss Cermak Pledges Fight for Pure Air,” *Cleveland Plain Dealer* (Cleveland, Ohio) (27 June 1961), 1, 8; “Auto Exhaust Controls Studied by Miss Cermak,” *Cleveland Plain Dealer* (Cleveland, Ohio) (6 September 1961), 2; “Miss Cermak Hits at Air Pollution,” *Cleveland Plain Dealer* (Cleveland, Ohio) (8 September 1961), 10; “Pollution Action,” *Columbus Dispatch* (Columbus, Ohio) (19 October 1961), 47.

¹²³“Air Pollution,” *Cleveland Plain Dealer* (Cleveland, Ohio) (19 July 1961), 14.

¹²⁴“Mayor Buries Miss Cermak for 5th Term,” *Cleveland Plain Dealer* (Cleveland, Ohio) (8 Wednesday 1961), 1; Ray Dorsey, “Mayor Won All but Six Vote Places,” *Cleveland Plain Dealer* (Cleveland, Ohio) (22 November 1961), 17.

¹²⁵“Council Aims to Reduce Air Pollution Deadline,” *Cleveland Plain Dealer* (Cleveland, Ohio) (8 June 1965), 4; “Air Pollution Stays,” *Cleveland Plain Dealer* (Cleveland, Ohio) (13 June 1965), 35; “Smut Sale Crackdown Demanded,” *Cleveland Plain Dealer* (Cleveland, Ohio) (21 September 1965), 8.

¹²⁶“Smell Engulfs City; Officials Hunt Cause,” *Columbus Dispatch* (Columbus, Ohio) (9 December 1965), 1, 16; “County Allows Offenders 6 Months to Abate Odors,” *Columbus Dispatch* (Columbus, Ohio) (28 December 1965), 25.

¹²⁷“Akron Air Pollution Fight in Wind Again,” *Akron Beacon Journal* (Akron, Ohio) (11 September 1964), 25; “Tired of Cleaning Dirt,” *Akron Beacon Journal* (Akron, Ohio) (17 September 1964), 6.

(APCA).¹²⁸ Furthermore, these agencies often received national recognition, as was the case when three Ohio air pollution control programs (Cincinnati, Columbus, and Dayton) won awards from the APCA for “education work to clean up air pollution” in 1961.¹²⁹ In retrospect, these agencies probably did not deserve so much acclamation; in 1972–1973, state and federal environmental officials held that some of these agencies, most notably that of Columbus, were understaffed, underequipped, and lacked adequate training. In the case of Columbus, the Air Control Division had failed to apply for federal matching funds after 1963, thereby forgoing thousands of dollars that could have helped the city fight air pollution.¹³⁰

While municipalities dominated air pollution control in Ohio, the state legislature was not entirely absent from this policy arena prior to 1965. In 1957, lawmakers authorized the Ohio Department of Health to undertake air pollution research and to provide assistance to Ohio communities that experienced air pollution problems.¹³¹ However, even though the state established a laboratory to implement this law, major cities typically consulted their own air control experts or even federal authorities rather than appeal to the state for assistance. For example, during the oxygen process imbroglio, Cleveland officials sought the advice of local experts and an expert from the U.S. Public Health Service, and only considered requesting assistance from the Ohio Board of Health after state Representative Michael J. Crosser (D-Cleveland) insisted on it. In fact, the Cleveland Air Pollution Commissioner, Albert W. Lucuoco, dismissed the state laboratory as nothing more than “a secretary and one air pollution man.”¹³²

The controversy over the oxygen process produced a more important legislative proposal in 1961, though it never came close to passing during that session. A district representative for the United Steelworkers (A.F.L./C.I.O.), Senator James Carney (D-Youngstown), introduced legislation that would empower the state government to enforce air pollution regulations. Carney’s hometown, Youngstown, had also been roiled by the oxygen process controversy and he was well-aware of possible economic consequences of requiring steel producers to abate the emissions resulting from this process. As Carney watched Cleveland debate regulations on steel mills that used the oxygen process, he contended that air pollution could not “be controlled according to city or county borders. If one city puts on controls and another doesn’t, the second city has a competitive advantage over the first city.”¹³³ Meanwhile,

beginning in 1961, state lawmakers considered granting tax breaks to encourage corporations to build and use air and water pollution control facilities, a policy favored by industry. Some public officials opposed this legislation because they feared the loss of revenue; other critics argued that this policy rewarded industrialists for failing to abide by pollution control regulations by taking corrective action. Adopted in 1963, this measure exempted factories and plants from paying real and personal property taxes, the sales tax, and the corporation franchise tax on income used to purchase and install air pollution control equipment.¹³⁴

In a few cities like Cleveland, which maintained a strong mayor-council system of government, mayoral candidates raised the issue of air pollution in their election campaigns during the mid-1960s. For example, Cleveland Mayor Ralph S. Locher (D) boasted of his record on air pollution in 1965 while his Democratic primary opponent, Mark McElroy, called him a “tool of big business” for delaying legislation designed to end air pollution by steel companies in the city (among other things).¹³⁵ However, this issue never emerged as a concern that helped define candidates or party image in Ohio state elections before 1966. Instead, the major themes of state elections during the 1950s and early 1960s were job creation and maintaining a positive business climate.¹³⁶

In other words, during the 1950s and early 1960s, gubernatorial candidates and governors did not raise air pollution as an issue of

¹³⁴“House OK’s Tax Relief to Cut Pollution,” *Cleveland Plain Dealer* (Cleveland, Ohio) (7 June 1961), 11; “Pollution Curb ‘Tax Break’ Asked,” *Cleveland Plain Dealer* (Cleveland, Ohio) (12 June 1963), 4; “Sunday Closing Bill Kept Alive for Action in July,” *Cleveland Plain Dealer* (Cleveland, Ohio) (29 June 1963), 1; “Says Devices To Clean Air Tax Exempt,” *Columbus Dispatch* (Columbus, Ohio), (3 October 1963), 23.

¹³⁵William C. Barnard, “Locher Outlines Fight on Air Filth,” *Cleveland Plain Dealer* (Cleveland, Ohio) (17 September 1965), 42; James M. Naughton, “Locher Called Business Tool,” *Cleveland Plain Dealer* (Cleveland, Ohio) (18 September 1965), 20.

¹³⁶For example, the 1958 gubernatorial campaign featured a contest between the incumbent Republican governor, C. William O’Neill, and his Democratic challenger, Mike DiSalle, a former mayor of Toledo. A major point of contention between these two candidates was the power of labor unions in the state, as signified by O’Neill’s embrace of an amendment to the Ohio Constitution that would have made Ohio a “right-to-work” state. See “O’Neill’s Reasons for Supporting Right to Work ‘Amaze’ DiSalle,” *Cleveland Plain Dealer* (Cleveland, Ohio) (23 September 1958), 9; Murray Seegar, “DiSalle Raps O’Neill Over RTW,” *Cleveland Plain Dealer* (Cleveland, Ohio) (22 October 1958), 4; “Cleveland Hears Top Republican Pair,” *Cleveland Plain Dealer* (Cleveland, Ohio) (23 October 1958), 1, 5; Carl DeBloom, “DiSalle Hits Mental Treatment,” *Cleveland Plain Dealer* (Cleveland, Ohio) (23 October 1958), 1, 5; Murray Seegar, “DiSalle Girds to Face O’Neill,” *Cleveland Plain Dealer* (Cleveland, Ohio) (25 October 1958), 13; “DiSalle Raps Spending by O’Neill Forces,” *Canton Repository* (Canton, Ohio) (30 October 1958), 2; “O’Neill Charges Labor Chiefs of Michigan Plan to Run Ohio,” *Cleveland Plain Dealer* (Cleveland, Ohio) (30 October 1958), 9; “DiSalle Calls Claims by O’Neill ‘Effrontery,’” *Cleveland Plain Dealer* (Cleveland, Ohio) (30 October 1958), 9; Carl DeBloom, “DiSalle Is Elected Governor; Young Defeats Bricker,” *Columbus Dispatch* (Columbus, Ohio) (5 November 1958), 1, 6; “RTW Issue Rejected in Ohio,” *Columbus Dispatch* (Columbus, Ohio) (5 November 1958), 1, 6; Tom Diemer, et al., *James A. Rhodes: Ohio Colossus*, (Kent, Ohio: Kent University Press, 2014), 26. Meanwhile, in the 1962 gubernatorial campaign, Republican state auditor James A. Rhodes challenged the then-incumbent Democrat, Mike DiSalle. As Rhodes attacked DiSalle for his administration’s lack of job creation, tax increases (“Tax Hike Mike”), and the state’s economic stagnation, DiSalle defended his record and alleged that Rhodes was guilty of corruption in the Department of Auditing and had misused campaign funds. See “DiSalle Jabs at Rhodes’ Job Proposal,” *Cleveland Plain Dealer* (Cleveland, Ohio) (8 August 1962), 5; “Rhodes Advances Plan for 200,000 Jobs,” *Columbus Dispatch* (Columbus, Ohio) (9 August 1962), 34; “Rhodes Sees State Lacking Programs,” *Cleveland Plain Dealer* (Cleveland, Ohio), 7; “Rhodes Cites Ohio Industry Loss,” *Cleveland Plain Dealer* (Cleveland, Ohio) (26 September 1962), 7; “DiSalle Says Rhodes Runs on Gimmicks,” *Cleveland Plain Dealer* (Cleveland, Ohio), 7; Howard Thompson, “DiSalle Admits Knowledge Of Rhodes Investigation,” *Columbus Dispatch* (Columbus, Ohio) (8 October 1962), 5; “Rhodes OKs Audit Of His Office,” *Columbus Dispatch* (Columbus, Ohio) (26 October 1962), 16; Howard Thompson, “Rhodes Pledges to ‘Focus’ State’s Financial Picture,” *Columbus Dispatch* (Columbus, Ohio) (1 November 1962), 4; Ned Stout, “DiSalle Says He Has Proof Against Rhodes’ Practices,” *Columbus Dispatch* (Columbus, Ohio) (1 November 1962), 4; Diemer, et al., *James A. Rhodes*, chap. 3.

¹²⁸Joe Hall, “LA Man Says Car Makers Offer No Smog Control Plan,” *Sacramento Bee* (Sacramento, California) (19 November 1958), 18; Ben Cole, “Arizona Smog Law Lauded At Meet,” *Arizona Republic* (Phoenix, Arizona) (12 December 1962), 1, 7; “3 Ohioans Elected To Air Pollution Panel,” *Circleville Herald* (Circleville, Ohio) (25 June 1964), 9; “Pollution Check Is Described,” *Pittsburgh Press* (Pittsburgh, Pennsylvania) (23 March 1966), 2; “Pollution Control Parley Set,” *Journal and Courier* (Lafayette, Indiana) (13 October 1966), 10.

¹²⁹“Seven Cities To Receive Award,” *Telegraph-Forum* (Bucyrus, Ohio) (2 February 1962), 3; “City Air Medal Can Be Brighter,” *Dayton Daily News* (Dayton, Ohio) (5 February 1962), 16.

¹³⁰“Pollution Probe Due Soon,” *Columbus Dispatch* (Columbus, Ohio) (14 November 1972), 27; Robert Ruth, “Pollution Control Unit Hit,” *Columbus Dispatch* (Columbus, Ohio) (3 January 1973), 1; “Official Told To Respond to Criticism,” *Columbus Dispatch* (Columbus, Ohio) (4 January 1973), 9.

¹³¹“House Revives Federation Government Bill In New Form,” *Cincinnati Enquirer* (Cincinnati, Ohio) (23 May 1957), 9.

¹³²“City Calls in State Experts for Studies on Air Pollution,” *Cleveland Plain Dealer* (Cleveland, Ohio) (15 January 1961), 53; Stanford Waltzman, “Council Defers Republic Action,” *Cleveland Plain Dealer* (Cleveland, Ohio) (17 January 1961), 24.

¹³³“Bill Calls for State Air Pollution Control,” *Cleveland Plain Dealer* (Cleveland, Ohio) (24 January 1961), 9 (quotation on p. 9).

concern to Ohio governance. At most, they acknowledged that it was a problem best addressed by municipal governments. In 1961, for example, Gordon Rawlinson, president of the Buhner Area (Cleveland) Air Pollution and Civic Association and an opponent of the oxygen process, wrote to Governor DiSalle and “requested statewide regulation of air pollution.” In response, DiSalle maintained that state air pollution control standards could not account for variations in topography, meteorology, and urban and rural air quality. “Fortunately,” he wrote, “the Ohio Constitution and (sections of the Ohio code) allow each municipality to individually make a decision as to the extent of air pollution it will permit.” In a similar fashion, Governor Rhodes’ only contribution to air pollution control during his first term was his support for exempting industries from taxation when they installed air pollution abatement equipment, a policy that Rhodes would later cite as evidence of his green bona fides during his unsuccessful race for the 1970 Republican nomination to the U.S. Senate against Robert Taft, Jr.¹³⁷ At the same time, however, municipal air pollution control agencies increasingly released reports which showed that air pollution was worsening in their areas, thus challenging the narrative that local control was best.¹³⁸

5.2. The development of air pollution control as a state responsibility, 1965-1972

While Governor James Rhodes was enjoying a fairly-successful first term as governor, the out-party Democrats began to raise the profile of pollution as an issue during the mid-1960s. In September 1964, the Ohio Democratic Party included a plank in its platform which promised a “program to eliminate water and air pollution,” and the party reiterated that promise in more detail two years later.¹³⁹ In keeping with the platform, the 1966 Democratic gubernatorial candidate, Frazier Reams, Jr., a state senator from Toledo, delivered a series of speeches which argued that the Rhodes Administration “has done little or nothing about pollution.” Citing the small sums allocated by the state to fighting pollution, Reams “recommended a state pollution agency, individual river-basin water control authorities, and state aid to local authorities fighting water and air pollution.”¹⁴⁰

Democratic politicians weren’t the only ones to find the Rhodes Administration wanting with respect to air pollution control. In August 1966, an air pollution expert, Dr. David Gilbert, testified in front of a state legislative study committee that, under Rhodes’

leadership, Ohio had one of “the lowest state budgets for air pollution in the country. It’s below \$100,000, and for a state of 10 million people this is small.” In response to that testimony and other input, the Legislative Service Commission issued a report which recommended the creation of a state air pollution board and noted that only eight local air pollution control programs in Ohio had at least minimal budgetary and staff support. Meanwhile, Jean Schueneman, an air pollution official from the U.S. Public Health Service office in Cincinnati, contended that Ohio was “behind most other heavily industrialized states” in terms of adopting air pollution control legislation, and another USPHS official called Akron’s air among the most polluted in the nation.¹⁴¹

These critiques from Reams and others succeeded in compelling Governor James Rhodes to discuss air pollution control during his re-election campaign. In October 1966, Rhodes acknowledged at a campaign stop that “[a]ir pollution control needs more help from the state government.” However, Rhodes lacked a detailed plan, and merely acknowledged that the state “is going to have to bridge the gap with assistance to the counties” and that “this may involve additional appropriations.” Such vague promises were apparently enough for Ohioans, for Rhodes was re-elected to a second term “by an astounding and record-setting margin of more than seven hundred thousand votes out of about 2.9 million cast.”¹⁴²

Once re-elected, Rhodes did back legislation in 1967 to establish a state air pollution control board. However, his proposal was not exceptional; state lawmakers had already introduced four similar bills by April 1967. Why was there a sudden burst of interest in air pollution control in the 1967 session of the Ohio Legislature? In part, these legislative proposals were a response to the recommendations of the Legislative Service Commission, which had proposed such a board in 1966. However, the single greatest impetus for state action was the fact that Congress was debating the Air Quality Act, a measure that seemed likely to authorize federal authorities to impose ambient air quality standards on the states if they failed to develop their own. As George Eagle, Chief Engineer for the Ohio Health Department, noted, this flurry of air pollution legislation in Ohio was a “defensive mechanism.” “We’d rather run [the state air pollution control program] than have Washington run it,” Eagle asserted. In the end, Ohio lawmakers developed an agency that was modeled after the state’s Water Pollution Control Board and situated in the Ohio Department of Health. While this board was empowered to adopt air quality standards for various parts of the state, its actions would not supersede the authority of “any public subdivision of the State...to adopt and enforce ordinances or regulations relative to the prevention, control, and abatement of air pollution.” Hence, the Ohio Air Pollution Control Board (OAPCB) was not designed to displace the urban agencies that had traditionally addressed air pollution.¹⁴³

¹³⁷“DiSalle Puts Pollution Problem Up to Cities,” *Cleveland Plain Dealer* (Cleveland, Ohio) (26 February 1961), 243 (quotations on p. 243); “Red Speech Law Is Signed by Rhodes,” *Cleveland Plain Dealer* (Cleveland, Ohio) (16 July 1963), 18; “Rhodes Assails Taft for Inconsistent Record on Pollution,” *Columbus Dispatch* (Columbus, Ohio) (20 March 1970), 6.

¹³⁸“Air Pollution Up In City in 1962,” *Cincinnati Enquirer* (Cincinnati, Ohio) (26 February 1963), 12; “Air Pollution Rises Again,” *Cincinnati Enquirer* (Cincinnati, Ohio) (8 March 1964), 87; “Air Pollution Up Because of I-71 Work,” *Cleveland Plain Dealer* (Cleveland, Ohio) (12 July 1966), 23; “U.S. Official Says Akron Air In ‘Most Polluted’ Category,” *Akron Beacon Journal* (Akron, Ohio) (19 October 1966), 45. It should be noted that some of these agency reports relied on simplistic measures of air pollution, such as the amount of dust, fly-ash, and soot that accumulated in jars that were placed around the city.

¹³⁹Howard Thompson, “State Demos Adopt Reapportion Plank,” *Columbus Dispatch* (Columbus, Ohio) (20 September 1964), 2 (quotation on p. 2); Howard Thompson, “Democratic Platform Made Up of 11 Planks,” *Columbus Dispatch* (Columbus, Ohio) (28 August 1966), 1, 3.

¹⁴⁰“Rhodes Rapped,” *Cleveland Plain Dealer* (Cleveland, Ohio) (19 July 1966), 8; “Reams Pledges Cleaner Water,” *Cleveland Plain Dealer* (Cleveland, Ohio) (8 September 1966), 28 (quotation on p. 28); “Reams Announces I-71 Press Parley Monday,” *Columbus Dispatch* (Columbus, Ohio) (29 October 1966), 12.

¹⁴¹Lawrence K. Pomeroy, “Clevelanders Face ‘Smoking Hazard’ From Birth,” *Cleveland Plain Dealer* (Cleveland, Ohio), 1, 12 (first quotation on p. 12); “Dirt In the Air,” *Akron Beacon Journal* (Akron, Ohio) (16 September 1966), 6 (second quotation on p. 6); “U.S. Official Says Akron Air In ‘Most Polluted’ Category,” *Akron Beacon Journal* (Akron, Ohio) (19 October 1966), 45; Tom LaRochelle, “‘Super Agency’ Proposed To Direct State’s Fight On Water Pollution,” *Akron Beacon Journal* (Akron, Ohio) (29 October 1966), 34.

¹⁴²Alma Kaufman, “Rhodes: Pure Air Needs State Help,” *Cleveland Plain Dealer* (Cleveland, Ohio) (25 October 1966), 17; Haskell Short, “Ohio Politics,” *Lancaster Eagle-Gazette* (Lancaster, Ohio) (12 September 1966), 6; Diemer, et al., *James A. Rhodes*, 47 (quotation on p. 47).

¹⁴³Jesse Schaffer, “Ohio’s Assembly Convenes Today...To Sit Long Time,” *Cincinnati Enquirer* (Cincinnati, Ohio) (2 January 1967), 66; John Nichols, “Mystery Industries: Who Are Ohio’s Polluters?” *Dayton Daily News* (Dayton, Ohio) (9 April 1967), 6 (quotation on p. 6); William V. Merriman, “Bill Urges Retirement Commission for Ohio,” *Marion Star*

As it turned out, the Air Pollution Control Board was a poor vehicle for policy development and implementation. Like the New Jersey APCC, the first air pollution control agency in Ohio was staffed by unpaid volunteers including the Director of Health, the Director of Development, and representatives of municipal corporations, industry, and agriculture, none of whom were required to demonstrate technical competence with respect to air pollution control. Furthermore, the board met but once a month to make decisions and lacked the power to directly order violators to abate pollution. Instead, this body could only recommend that the attorney general bring suits against polluters. The OAPCB also struggled to complete basic tasks like meeting deadlines set by the federal government for recommending air quality standards for air pollution control regions. From the perspective of those who favored stringent air pollution regulations, the board initially proposed weak air quality standards and gave industry more opportunities to participate in its hearings than members of civic organizations and the general public. Not surprisingly, the extant urban air pollution control agencies seemed robust by comparison.¹⁴⁴

By 1970, both candidates for governor, Roger Cloud (R-Logan County) and John J. Gilligan (D-Cincinnati), supported stricter environmental policies and were featured speakers for Environmental Crisis Week (the week that included Earth Day) during April 1970. Whereas Cloud released detailed policy proposals for waste management and air pollution, Gilligan focused on a proposal for reducing auto emissions, the development of state air pollution standards, and the enforcement of existing laws. "We need prompt, strict enforcement of our anti-pollution laws," Gilligan argued.¹⁴⁵ Significantly, their primary opponents and other state politicians also supported getting tougher on polluters. For example, James L. Baumann (D-Columbus) charged the Republican-dominated legislature with making "no real effort" to abate air pollution in his successful quest to represent the 60th district in the state House of Representatives.¹⁴⁶

(Marion, Ohio) (7 July 1967), 10; John Harvey Weis, "Your Representative's Report On Assembly," *Lancaster Eagle-Gazette* (Lancaster, Ohio) (15 July 1967), 10; National Center for Air Pollution Control, *A Digest of State Pollution Laws, 1967 Edition*, (Washington, D.C.: U.S. Government Printing Office, 1967), 379-387 (quotation on p. 384).

¹⁴⁴Columbus Smith, "Public Has To Cool Heels At Air Pollution Hearing," *Dayton Daily News* (Dayton, Ohio) (18 December 1969), 2, 16; Richard Lightner, "Inside The Statehouse," *News-Journal* (Mansfield, Ohio) (21 December 1969, 71; "Work Load Delays Clean Air Proposals," *Akron Beacon Journal* (Akron, Ohio) (15 February 1970), 20; "Cleanup Chief Has High Hopes," *Cleveland Plain Dealer* (Cleveland, Ohio) (31 August 1972), 14; National Center for Air Pollution Control, *A Digest of State Pollution Laws, 1967 Edition*, 379; George Pattison, "Legal Aspects of Air Pollution Control in Ohio 1971: Critique and Proposals," *University of Cincinnati Law Review* 40 (1971): 511-533.

¹⁴⁵"Metzenbaum Gets Caucus Backing," *Columbus Dispatch* (Columbus, Ohio) (9 April 1970), 5; "Curbing of Juvenile Delinquency Cited as Need for Buckeye State," *Columbus Dispatch* (Columbus, Ohio) (21 April 1970), 19; Advertisement for Environmental Crisis Week, *Cleveland Plain Dealer* (Cleveland, Ohio) (21 April 1970), 15; "Gilligan Plans to Fight Pollution," *News Herald* (Port Clinton, Ohio) (23 July 1970), 1; "Gilligan Calls For More State Aid To Education," *Newark Advocate* (Newark, Ohio), 1; "Metzenbaum Says Negotiators Should Insist That Viet Cong Release Names Of Prisoners," *Greenville Daily Advocate* (Greenville, Ohio) (22 September 1970), 2; "Cloud, Gilligan Condemn Pollution As Last Month of Campaign Opens," *Columbus Dispatch* (Columbus, Ohio) (5 October 1970), 20; "Federal Regulation of Auto Insurance Recommended Today by Metzenbaum," *Chillicothe Gazette* (Chillicothe, Ohio) (15 October 1970), 6.

¹⁴⁶In a similar fashion, the Republican candidate for Attorney General, John Herbert (R-Cincinnati) maintained that "pollution and pollution control in the next 10 years is and will be Ohio's main problem." For position-taking by Ohio politicians on air pollution, see "Income Tax Credit Program," *Piqua Daily Call* (Piqua, Ohio) (7 April 1970), 19; "McElroy Proposes Citizens Sue Polluters," *Columbus Dispatch* (Columbus, Ohio) (25 April 1970), 20; "Candidates Hit Weak Antipollution Efforts," *Cleveland Plain Dealer* (Cleveland, Ohio) (2

Though Gilligan assumed the governorship in 1971 with a Republican-controlled state legislature, he pursued an aggressive agenda which included the creation of a cabinet-level agency devoted to pollution control. To that end, Gilligan had the support of the "Breathers' Lobby," a coalition formed in 1969 that included the Ohio AFL-CIO, the Ohio Tuberculosis and Respiratory Disease Association, the Ohio Council of Churches, and "several Ohio conservation groups."¹⁴⁷ Other groups that actively opposed air pollution at this time included the Ohio League of Women Voters, the Air Conservation Committee, the Ohio Conservation Association, the Ohio Environmental Council, the Air Pollution League of Greater Cincinnati, the Citizens Clean Air Association (Miami Valley), and Citizens for Clean Air and Water. These groups were well-aware of Ohio's failure to develop an effective air pollution control program and were ready to prod the Gilligan Administration if necessary.¹⁴⁸

With Ohio anti-pollution advocates clamoring for action, Gilligan established a Citizen's Task Force on Environmental Protection, which issued a report in June 1971 that urged the "consolidation of all current and future environmental protection, conservation, development, and management activities into a single state department for environmental protection." According to the report, the new department would be responsible for developing limits on the discharge of pollutants, enforcing those limits, and initiating auto emissions and recycling programs. As it turned out, though, Gilligan's proposal wasn't the only plan out there; state lawmakers had their own ideas about the development of a new cabinet-level department of environmental protection, and his bill joined five others already circulating in the state legislature. Gilligan also sought to acquire additional funds from the federal government and the Ohio legislature to pay for improving the state's air pollution control program.¹⁴⁹

While the "Breathers' Lobby" favored the version of the legislation proposed by Representative George V. Voinovich (R-Cleveland), state lawmakers approved of a measure originally introduced by Senator Ralph Regula (R-Navarre) on July 7, 1972. Signed into law shortly thereafter by Governor Gilligan, this statute created the Ohio Environmental Protection Agency (OEPA) which combined the efforts of the Air Pollution Control Board, the Water Pollution Control Board, established a three-member review board

May 1970), 35; "Dem Candidate Attacks Johnson, Peck," *Columbus Dispatch* (Columbus, Ohio) (27 September 1970), 5.

¹⁴⁷"Breathers' Aiming at Pollution," *Columbus Dispatch* (Columbus, Ohio) (14 December 1969), 37; David L. Hopcraft, "Breathers' Lobby Charges 'Gagging' at Pollution Talks," *Cleveland Plain Dealer* (Cleveland, Ohio) (20 December 1969), 42; William R. Diem, "Life Threat: Public to Be Heard on Clean-Air Standards Here," *Cleveland Plain Dealer* (Cleveland, Ohio) (11 January 1970), 1, 11; William D. McCann, "Clean-Air Objective Could Doom Autos," *Cleveland Plain Dealer* (Cleveland, Ohio) (14 November 1970), 23 (quotation on p. 23); "Breathers' Lobby Technicians Analyzing State Clean-Air Plan," *Cleveland Plain Dealer* (Cleveland, Ohio) (24 December 1971), 25; William D. McCann, "State's Clean-Air Plan Draws More Criticism at Session Here," *Cleveland Plain Dealer* (Cleveland, Ohio) (7 January 1972), 6.

¹⁴⁸William D. McCann, "Governmental Lethargy Alleged as Air Pollution Here Grows," *Cleveland Plain Dealer* (Cleveland, Ohio) (12 November 1970), 1, 6; "Environment Bill Under Attack," *Cleveland Plain Dealer* (Cleveland, Ohio) (25 April 1972), 18.

¹⁴⁹"Panel to Confer On Environment," *Columbus Dispatch* (Columbus, Ohio) (27 February 1971), 21; Chan Cochran, "Task Force Requests Environmental Unit," *Columbus Dispatch* (Columbus, Ohio) (22 June 1971), 1, 6 (quotation on p. 1); "Environmental Agency Urged," *Cleveland Plain Dealer* (Cleveland, Ohio) (2 August 1971), 53; "Ohio Peps Up Clean-Air Fight," *Cleveland Plain Dealer* (Cleveland, Ohio) (4 February 1972), 3; "Ecology Measures Share Spotlight with Tax Legislation," *Columbus Dispatch* (Columbus, Ohio) (2 April 1972), 38.

to hear appeals of OEPA decisions, and set up a siting commission which would determine the location of major utilities.¹⁵⁰ To help implement the law, the OEPA formed contracts with twelve local air pollution control agencies, including those of Dayton, Cleveland, Cincinnati, and Columbus, which measured air pollution and used abatement action to meet federal, state, and local air quality standards. In other words, the new state air pollution control system was layered on top of the old municipal air pollution control agencies, though they often had new names and broader jurisdictions which reflected the federal government's regional approach to air pollution control after 1967. In the process, the OEPA was relying on many of the same pollution control personnel that had pursued a conciliatory approach toward polluters, including E. D. Ermenc of Cincinnati, Louis E. Bunts of Akron and Paul D. Findlay of Toledo.¹⁵¹

Though the development of this agency was a significant development, environmentalists and civic groups were often critical of the resulting regulatory regime. Even while it was pending in the Ohio legislature, they faulted it for not including language that authorized citizen suits which could be directed at either polluters or the OEPA, a provision that would have resembled a feature of the 1970 amendments to the federal Clean Air Act. "...[T]he bill contains severe restrictions on citizen rights, access to courts and participation in decision-making," complained Mrs. Rodger Mitchell of the Ohio League of Women Voters. Furthermore, clean air advocates strenuously opposed the agency's decision to delay its deadline from 1975 to 1977 for reductions in sulfur dioxide emissions.¹⁵² Of course, the OEPA's conservative critics portrayed the agency as too aggressive and unrealistic about the possibility of pollution control. While the opposition of industry was expected, the conservative *Columbus Dispatch* (Columbus, Ohio) — a close ally of Republican governor James A. Rhodes — ridiculed it for being naïve and brash. Populated with secretaries in "tight blue jeans and bare midriffs" and employees with "long hair and beards," the OEPA "was as unpredictable and exasperating as royal toddler who suddenly inherits the power of the throne."¹⁵³

In any case, the establishment of a cabinet-level environmental protection agency did not guarantee that air quality would improve in Ohio. The entire state and cities like Cleveland and Cincinnati were subject to several air pollution alerts during the 1970s, and, in 1977, David Kee, the enforcement chief of Division V of the federal EPA, called Ohio "a black mark in our environmental program in the Midwest." He added, "Our compliance in Ohio is very low. It's the worst of our states [that included Illinois, Wisconsin, Minnesota, and Indiana]." Furthermore, in 1979, Ohio was the only state in the nation without a federally-approved program to reduce sulfur dioxide pollutants. National EPA administrators faulted industry for this situation, noting that the largest industries and utilities plagued "the local, state and federal enforcement agencies with a flood of lawsuits, appeals and other foot-dragging tactics." Meanwhile, Republic Steel was still battling with Cleveland air pollution control authorities over its emissions in 1980, and Ohio only adopted a broad-based auto emissions testing program in 1986 after the EPA had threatened to withhold federal highway funds.¹⁵⁴ Interestingly, several studies of state environmental agencies categorize the OEPA as a mini-EPA, which imitated the federal Environmental Protection Agency in its structure. Such a structure should have encouraged stricter enforcement of environmental laws in Ohio because the agency could focus entirely on achieving one goal: pollution control. However, as previously discussed, that did not prove to be the case.¹⁵⁵

In a way, Ohio and New Jersey adopted similarly-structured air pollution agencies in their first attempts to develop state-level air pollution control agencies. The New Jersey Air Pollution Control Commission and the Ohio Air Pollution Control Board both employed part-time, uncompensated officials who often represented the very industries the agencies were supposed to regulate. However, whereas the NJAPCC and its stronger successor, the Division of Clean Air and Water, had the authority to establish regulations for the entire state, the OAPCB's power was limited by the existence of the urban air pollution control agencies, which retained primacy over their areas. As Ohio and New Jersey then sought to create cabinet-level environmental protection agencies, the states repeated the same pattern. In the Ohio Environmental Protection Agency, the OAPCB became the Division of Air Pollution Control while most of the cities retained their own pollution control boards, albeit often with responsibility for nearby counties.¹⁵⁶ Of the 560 public officials from Ohio listed in the Air Pollution Control Association's 1974-1975 Directory,

¹⁵⁰"Breathers' Back Voinovich Bill," *Cleveland Plain Dealer* (Cleveland, Ohio) (24 June 1971), 20; David Lore, "Gilligan Asks For Passage Of EPA Bill," *Columbus Dispatch* (Columbus, Ohio) (27 April 1972), 49; "Ohio Senate Group Approves EPA Bill," *Columbus Dispatch* (Columbus, Ohio) (10 May 1972), 10; Chan Cochrane, "Environment Agency Receives Senate OK," *Columbus Dispatch* (Columbus, Ohio) (18 May 1972), 23; Chan Cochrane, "Environment Agency OKd," *Columbus Dispatch* (Columbus, Ohio) (7 July 1972), 28; "\$4,000 Exemption for Retirees OKd," *Cincinnati Enquirer* (Cincinnati, Ohio) (7 July 1972), 137; "Whitman to Direct Environment Unit," *Columbus Dispatch* (Columbus, Ohio) (24 July 1972), 1, 4; Barry H. Smith, "Development of Environmental Law through the Administrative Process," *Capital University Law Review* 4 (1975): 203-226.

¹⁵¹William D. McCann, "Air Pollution Division Depends on City Pact to Oversee County," *Cleveland Plain Dealer* (Cleveland, Ohio) (31 January 1973), 11; "Old Smokey," *Cincinnati Enquirer* (Cincinnati, Ohio) (2 February 1973), 15; "EPA: Federal Pollution Funds Indispensable," *Chillicothe Gazette* (Chillicothe, Ohio) (27 February 1974), 28; "The Greening of Piqua," *Piqua Daily Call* (Piqua, Ohio) (4 April 1975), 41. For continuity in personnel, see Air Pollution Control Association, *1970 Directory of Governmental Air Pollution Agencies*, (Pittsburgh: Air Pollution Control Association, 1970) and Air Pollution Control Association, *1974-1975 Directory of Governmental Air Pollution Agencies*, (Pittsburgh: Air Pollution Control Association, 1974).

¹⁵²"Environment Bill Under Attack," *Cleveland Plain Dealer* (Cleveland, Ohio) (25 April 1972), 18; "Ohio Pollution Bill Weakened," *Cleveland Plain Dealer* (Cleveland, Ohio) (29 April 1972), 10 (quotation on p. 10); "Attack on EPA Likely at Air-Sulfur Hearing," *Cleveland Plain Dealer* (Cleveland, Ohio) (4 November 1973), 42; "EPA Urged to Keep 1975 Controls Deadline," *Cleveland Plain Dealer* (Cleveland, Ohio) (7 November 1973), 67.

¹⁵³William D. McCann, "Power Plants Given '75 Cleanup Deadline," *Cleveland Plain Dealer* (Cleveland, Ohio) (16 March 1973), 5; David Lore, "Ohio's 'Green' EPA Grows Up — Painfully," *Columbus Dispatch* (Columbus, Ohio) (26 August 1973), 14 (quotations on p. 14).

¹⁵⁴"Area Under Air Pollution Alert; Young and Elderly May Suffer," *Cleveland Plain Dealer* (Cleveland, Ohio) (4 April 1973), 2; "Air Pollution Alert Still In Effect Over Area," *Cincinnati Enquirer* (Cincinnati, Ohio) "Air Pollution Alert Issued," *Marysville Journal-Tribune* (Marysville, Ohio) (21 April 1976), 5; "Air Pollution Alert Remains Across State," *Cincinnati Enquirer* (Cincinnati, Ohio) (11 June 1976), 2; "38 Firms Asked to Cut Smoke in Pollution Alert," *Cleveland Plain Dealer* (Cleveland, Ohio) (24 June 1976), 15; Jay Gibian, "All of Ohio Under Air Pollution Alert," *The Tribune* (Coshocton, Ohio) (25 August 1976), 2; "Richard C. Widman, cover story [no title], *Sunday Plain Dealer Magazine - Cleveland Plain Dealer* (Cleveland, Ohio) (17 April 1977), 188, 195-197 (quotations on p. 195); "Muggy Weather Brings Air Pollution Alert," *Akron Beacon Journal* (Akron, Ohio) (24 August 1978), 19; Thomas K. Diemer, "A Face-Off On Pollution," *Cleveland Plain Dealer* (Cleveland, Ohio) (29 October 1979), 1, 12; "Republic Steel, EPA, Spar Over Quality of Air," *Cleveland Plain Dealer* (Cleveland, Ohio) (27 July 1980), 30; Thomas Suddes, "Auto Emissions Testing for 5 Counties is Law," *Cleveland Plain Dealer* (Cleveland, Ohio) (7 May 1986), 21.

¹⁵⁵Bedwell, "Applying a Positive Theory of Organizations," chap. 1; Hopper, *Environmental Agencies in the United States*, chaps. 1, 2, 5, and 7.

¹⁵⁶For example, the Dayton air pollution control unit became the Dayton Regional Air Pollution Control Agency and oversaw the regulation of air pollution in six counties: Clark, Darke, Greene, Miami, Montgomery, and Preble.

only 234 of them (or 41.8%) were employees of the state-level program. Meanwhile, in New Jersey, the creation of the New Jersey Department of Environmental Protection centralized its air pollution enforcement activities in the Division of Air Pollution Control. Of the 219 public officials from New Jersey listed in the Air Pollution Control Association's 1974-1975 Directory, 174 of them (or 79.5%) were employees of the state-level program.¹⁵⁷

6. Discussion

In his seminal essay, "The Politics of Bureaucratic Structure," Terry M. Moe contends that "American public bureaucracy is not designed to be effective." For Moe, this was as true for the regulatory agencies created in the 1960s and 1970s as it was for the independent regulatory commissions fostered by the New Deal. Instead, Moe contends that government agencies are inevitably the product of the "politics of structural choice" in which elected officials, interest groups, and bureaucrats compete to secure agency arrangements, procedures, and criteria that will allow them to remain influential players in future policy endeavors. Hence, national political actors often develop unwieldy bureaucracies that were hemmed in by often-conflicting directives from the president, Congress, and the judiciary, each of which had some claim to authority in regulatory policy.¹⁵⁸

Significantly, Moe singled out the Environmental Protection Agency as "the quintessential agency of the new social regulation," and one which was hampered by "a forbidding maze of detailed instructions, procedures, requirements, criteria, and deadlines — all of them tacked onto entrenched institutions inherited from a powerless past." Of course, these institutions included "a complicated, confusing diversity of state and local agencies," such as the Ohio Environmental Protection Agency, its urban-centered agencies, and the New Jersey Department of Environmental Protection. Moreover, those agencies had their own institutional legacies, and state officials in Ohio and New Jersey engaged in their own "politics of structural choice."¹⁵⁹

When New Jersey established the Air Pollution Control Commission in 1954, it created more than just a new state agency. Though originally encumbered in its capacity to impose limits on pollution, the APCC served as a new center of gravity for air pollution control advocates in both state government and civil society. After 1954, state lawmakers, the governor, local officials, newspapers, and citizen groups directed most of their energy toward criticizing and demanding improvements to the APCC and its enforcement arm, the Department of Health, eventually displacing them. In contrast, many Ohioans remained fixated on their urban agencies during the 1950s and 1960s. Established in the Progressive Era, these bureaucracies were headed by often-prominent directors who were well-known for their willingness to cooperate and negotiate with local businesses in reducing air pollution.

Of course, as Congress began to adopt environmental laws during the late 1960s and early 1970s that threatened federal preemption of state and local authority over air pollution control and

other environmental issues, many of the states that lacked state-level agencies felt compelled to quickly establish such agencies. As was the case in Ohio, state officials typically preferred to advance their own air pollution control programs rather than allow federal regulators to assume that authority. Hence, the number of state-level air pollution control agencies grew from nine in 1966 to fifty in 1970, though it should be noted that some of them were tiny and sometimes overshadowed by their county and urban counterparts.¹⁶⁰

In fact, when Ohio did create the Ohio Air Pollution Control Board in 1967, it failed to displace the extant business-friendly urban air pollution control agencies. As a result, proponents of stronger air pollution control lacked a single focus in their advocacy efforts. For example, Dr. Arnold Reitze and the Air Conservation Committee devoted considerable energies to the enactment of a new air pollution code for Cleveland in 1969 while the OAPCB was struggling to develop state policies. Though Air Conservation Committee activists later pressured the state Air Pollution Control Board to adopt tighter standards in 1970, its efforts remained divided between state and local air pollution control agencies during the early 1970s.¹⁶¹ Furthermore, even when the state legislature created the cabinet-level Ohio Environmental Protection Agency in 1972, it merely incorporated these urban programs into the new organization, allowing them to retain some autonomy from the OEPA, their existing personnel, and their conciliatory approach to the companies they were supposed to regulate.

This autonomy meant that the urban agencies could forge their own paths to achieving the requisite air quality standards but it also meant that they sometimes experienced financial instability. As most of the urban programs became regional in character after 1970, they could tap some state and federal money but the cities continued to pay a significant amount of their expenses and they periodically found it necessary to supplement their income with outlays from other communities they served. For example, once the Cincinnati Air Pollution Control Agency became Southwestern Ohio Air Pollution Control (SWOAPC), the agency's director, E. D. Eremec, often had to beg Butler, Clermont, and Warren Counties for contributions or cut services to these areas.¹⁶² Meanwhile, since all of the urban-based agencies received some money from the state, they were often vulnerable to cuts by the Ohio legislature.¹⁶³ In any case, the urban-based pollution agencies did not take advantage of their relative autonomy to strengthen the state's lax

¹⁶⁰ Air Pollution Control Association, 1970 *Directory of Governmental Air Pollution Agencies*; Bedwell, "Applying a Positive Theory of Organizations," 21.

¹⁶¹ William D. McCann, "City Promising to Use Teeth in New Air Pollution Code," *Cleveland Plain Dealer* (Cleveland, Ohio) (29 October 1969), 20; William D. McCann, "Pollution Hearings End in Uproar," *Cleveland Plain Dealer* (Cleveland, Ohio) (21 January 1970), 7; William D. McCann, "J & L Gets 3-Week Stay to Appeal Clean-Air Rule," *Cleveland Plain Dealer* (Cleveland, Ohio) (23 December 1970), 48; William D. McCann, "Clean Air Plan Called Inadequate," *Cleveland Plain Dealer* (Cleveland, Ohio) (6 January 1972), 2; William D. McCann, "Pollution Permit Fee Boost to Be Requested," *Cleveland Plain Dealer* (Cleveland, Ohio) (17 August 1972), 7.

¹⁶² James May, "Pollution Funds Sought," *The Cincinnati Post* (Cincinnati, Ohio) (11 August 1971), 14; "Area Gets Partial Grant of \$109,000 for Air Control," *The Journal News* (Hamilton, Ohio) (7 March 1973), 13; "Division Gets Pollution Grant," *The Cincinnati Enquirer* (Cincinnati, Ohio) (21 April 1973), 17; "Not Enough Funding for Pollution Fight," *The Cincinnati Post* (Cincinnati, Ohio) (28 March 1973), 49; "Short Funds Cause Cuts in Services," *The Cincinnati Enquirer* (Cincinnati, Ohio) (10 October 1977), 30; Ron Liebau, "Air Pollution Agency Wants County to Pay," *The Cincinnati Post* (Cincinnati, Ohio) (10 November 1978), 5. Only the Cleveland agency did not become a regional entity after 1970.

¹⁶³ "Environment Budget Cuts Would Hit Here," *The Cincinnati Post* (Cincinnati, Ohio) (9 June 1975), p. 9; "Ohio EPA Deserves its Full Funding," *Dayton Daily News* (Dayton, Ohio) (26 June 1977), 18.

¹⁵⁷ Air Pollution Control Association, 1974-1975 *Directory of Governmental Air Pollution Agencies*.

¹⁵⁸ Terry M. Moe, "The Politics of Bureaucratic Structure," in *Can the Government Govern?* John E. Chubb and Paul E. Peterson, eds. (Washington, D.C.: Brookings Institution, 1989), 267-329, (first quotation on p. 267, second quotation on p. 268.)

¹⁵⁹ Moe, "The Politics of Bureaucratic Structure," (first quotation on p. 306, second quotation on p. 318).

environmental standards but instead reinforced them. For example, in 1976, they supported the state's claim that federal standards on sulfur dioxide emissions were too stringent and needed to be relaxed for the sake of the state's industries and utilities.¹⁶⁴ Their continued sympathy for business interests was not surprising; they were merely doing things the way they had always done them.

In terms of policy leadership, the New Jersey case revealed that the "politics of structural choice" at the state level was often driven by the ambitions of governors and gubernatorial candidates. Just as President Richard Nixon propelled the development of the EPA at the national level to better position himself for reelection in 1972, governors like Richard J. Hughes (D) and William T. Cahill (R) played a key role in creating pollution control agencies that they could directly manage through their appointment power and executive authority. In that sense, the politics of agency design reflected a well-studied phenomenon: executives, in particular, have more incentives to focus on shaping the administrative performance of agencies under their purview because they will be held accountable for it by their broad electorates.¹⁶⁵ Indeed, gubernatorial candidates could not avoid discussing the effectiveness of the New Jersey Air Pollution Control Commission and its successors because once elected, they would be responsible for ensuring these agencies achieved their missions.

In contrast, until 1966, gubernatorial candidates in Ohio could deflect concerns about air pollution by asserting that it was a local problem that was the responsibility of urban pollution control agencies. Indeed, Ohio politicians like William H. Deddens, who were pollution control advocates, focused on strengthening and increasing the reach of the urban air pollution control agencies. Perhaps, Ohio politicians were wary about challenging the authority of these agencies, as some of them — most notably those of Cincinnati and Cleveland — were headed by nationally-prominent air pollution experts. They may also have been unwilling to pay the costs of exit necessary to uproot existing institutions in favor of an alternative approach to air pollution control.¹⁶⁶ Conversely, in New Jersey, where only Newark maintained a relatively small and insignificant agency in the 1950s, politicians did not hesitate to develop a state agency in 1954 or to increase its authority during the 1960s without consideration for Newark's position.

While New Jerseyans had the opportunity to vote for state candidates who favored air pollution control beginning in the early 1960s, there is no evidence that popular support for this issue was higher in New Jersey than Ohio during the 1960s and early 1970s. To be sure, civic groups entered the fray earlier in New Jersey (mid-1960s) than in Ohio (late 1960s), but I have not found any indications that green groups in New Jersey were significantly larger or more influential than those in Ohio.¹⁶⁷ Most of the organizations in

both states were small and heavily reliant on volunteers. For example, one of the most prominent clean air groups in New Jersey, the New Jersey Citizens for Clean Air, could claim only about 300 members in 1970. "We have no source of income other than our \$2 membership fee from some 300 individuals and a few \$10 group memberships," the group's president, Ruth Ballou, explained. "We all pay our own expenses whenever we travel to Trenton or elsewhere to testify. We beg stationery and other supplies whenever we can, and our headquarters in Orange are rent-free."¹⁶⁸

In the end, Ohio's air pollution regime was the victim of stagnant urban agencies and politicians who lacked the incentives to displace them, an institutional legacy which may have consequences for air quality today. Indeed, to this day, the urban-led agencies still exist as the Southwest Ohio Air Pollution Control Agency (Cincinnati), the Regional Air Pollution Control Agency (Dayton), Toledo Air Pollution Control, Akron Air Pollution Control, and the Cleveland Department of Public Health, Division of Air Quality.¹⁶⁹ Despite decades of government action devoted to air pollution control, Ohio's air quality index is 48.2 in 2025 and it maintained the second-worst air quality in the nation (tied with Georgia). That is not to say that the air in New Jersey is pristine; in 2025, the state ranks 30th in the nation with an air pollution quality index of 44.1.¹⁷⁰ Nevertheless, from 2010 – 2017, the New Jersey Department of Environmental Protection has led the nation in number of enforcement actions taken per number of air pollution violations discovered (11.82) while Ohio lags behind with 3.77 enforcement actions per violations discovered. Furthermore, the NJDEP's annual penalty assignment per number of polluting facilities (\$929.24) was higher than that of the OEPA (\$552.63) for air pollution, and it spent more per capita (\$16.25) than the latter (\$7.95) on air pollution control during the years 2011 – 2013.¹⁷¹

One should not assume, however, that the two states' management of other environmental issues (e.g., water pollution and natural resources conservation) necessarily followed the same pattern as air pollution control. For example, some attempts to rank water quality maintain that Ohio's drinking water is far cleaner than that of New Jersey.¹⁷² Such findings would not undermine the claim that institutional legacies shaped air pollution control in New Jersey and Ohio as water pollution had previously been managed by specialized agencies with their own histories and cultures. In fact, what is striking about the debate about mini-EPAs, "superdepartments," and pollution control agencies ensconced in health departments is that the participants in this debate often focus more on how public officials respond to the challenges posed

¹⁶⁸ Helen C. Smith, "This Jersey Woman is Just Like a Breath of Fresh Air," *Newark Star-Ledger* (Newark, New Jersey) (21 May 1970), 53.

¹⁶⁹ For a map of Ohio's current state and regional air pollution agencies see <https://epa.ohio.gov/divisions-and-offices/air-pollution-control/permitting/ohio-epa-district-offices-and-local-air-pollution-control-agencies>, accessed on March 22, 2025. Of the original urban agencies, only that of Columbus has merged with the Ohio EPA.

¹⁷⁰ "Air Quality by State," <https://worldpopulationreview.com/state-rankings/air-quality-by-state>, accessed on March 22, 2025; Pasch, Adam N., et al., "Meteorological Characteristics Associated with PM_{2.5} Air Pollution in Cleveland, Ohio, during the 2009–2010 Cleveland Multiple Air Pollutants Study," *Atmospheric Environment* 45 (December 2011): 7026–7035.

¹⁷¹ Hopper, *Environmental Agencies in the United States*, 23–24; JoyAnna S. Hopper, "The Regulation that Comes from Combination: Combining Multiple Policy Areas within a Single Environmental Protection Agency," (unpublished Ph.D. dissertation, University of Missouri-Columbia, 2016), 6–7.

¹⁷² See, e.g., Pandora Dewan, "Map Shows Best US States for Drinking Water Safety," *Newsweek* (13 June 2024), available at <https://www.newsweek.com/map-best-us-states-drinking-water-safety-1911457>.

¹⁶⁴ Jim Babcock, "Ohio Sulfur Control Talks Open," *The Journal Herald* (Dayton, Ohio) (16 December 1976), 50; Bruce Larrick, "Air Pollution Chief: Sulfur Proposal 'Overkill,'" *The Akron Beacon Journal* (Akron, Ohio) (14 January 1976), 39.

¹⁶⁵ Moe, "The Politics of Bureaucratic Structure," 306–323; David E. Lewis and Terry M. Moe, "The President and Bureaucracy," in *The Presidency and the Political System*, 12th Ed., ed. Michael Nelson, (Thousand Oaks, Cal.: CQ Press, 2021), 453–489.

¹⁶⁶ Pierson, "Increasing Returns, Path Dependence, and the Study of Politics," 252.

¹⁶⁷ It was the case that Ohio pollution control supporters claimed the backing of the Ohio A.F.L.-C.I.O. at a time when over 35% of the workforce in the state was unionized. See Barry T. Hirsch, et al., "Union Density Estimates by State, 1964–2015," (Atlanta: Georgia State University, 2016), Unionstats.com, accessed on 3/8/2021. However, union leaders were often more supportive of the environmental cause than their rank-and-file members. See Timothy J. Minchin, "An Ardent Conservationist: Walter Reuther and Environmentalism in the United Auto Workers in the United States," *International Review of Environmental History* 10 (2024): 49–78.

by their agency structure and less on how they acquired their own approach to policymaking in the first place.¹⁷³ By tracing institutional legacies over time, one can better understand why a public official like E.D. Ermenc of the Southwestern Ohio Air Pollution Control Agency was still closely consulting with business interests about air pollution regulations in 1980 just as he had back in 1969 when he had served as Director of the Cincinnati Bureau of Air Pollution Control.¹⁷⁴ Ohio may have adopted the mini-EPA model for pollution control, but this model does not appear to have altered the urban agencies' historical practices. Indeed, this study demonstrates that state building without the displacement of entrenched bureaucracies often just preserves the status quo.

Finally, this study suggests that bureaucratic autonomy is not always a source of innovation. In *The Forging Bureaucratic Autonomy*, Daniel Carpenter depicts entrepreneurial bureaucrats as creative forces who led their agencies in new directions. For them, bureaucratic autonomy was key to forging these new paths.¹⁷⁵ However, in Ohio's urban air pollution regimes, agency heads were supporters of the existing pro-business status quo, and their agencies reflected that. Their autonomy allowed them to operate with impunity as lawmakers, governors, and mayors deferred to their expertise. Later, the new air pollution regime headed by the Ohio Environmental Protection Agency, continued to grant them autonomy, perhaps to the detriment of clean air in the state.

¹⁷³See Hopper, *Environmental Agencies in the United States*, chaps. 3-5.

¹⁷⁴Dr. N. Baumslag, "Would Rather Fight Than Choke," *Cincinnati Post* (Cincinnati, Ohio) (25 December 1969), 37; "Ermenc Wants No Industry Monitoring," *Cincinnati Post* (Cincinnati, Ohio) (23 September 1980), 1.

¹⁷⁵Daniel Carpenter, *The Forging of Bureaucratic Autonomy: Reputations, Networks, and Policy Innovation in Executive Agencies, 1862-1928*, (Princeton, N.J.: Princeton University Press, 2001).