From Social Movements to Non-Governmental Organizations: Civil Society and Local Environmental Governance Under Fordism and Neoliberalism

by

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Dedication

To my family

and

The Luke-Pryplesh family

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her. Through Katherine, we met or became closer with a fantastic group of friends from Michigan and beyond.

It is to my family as well as Katherine, her husband Michael, and their fantastic children Nicholas and Ali that I dedicate this dissertation.

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Abstract

In this dissertation I use qualitative methods and comparative historical analysis to explore the emergence of neoliberal environmental governance, which emphasizes harnessing market efficiencies and public-private partnerships with a particular emphasis on non-governmental organizations (NGOs). I draw on my analysis of three decades of remediation activities under the Great Lakes Water Quality Agreement (GLWQA) in the Detroit River and Buffalo River Areas of Concern (AOCs), including 22 interviews with current and past participants, attendance at local meetings and regional conferences, and thousands of pages of government documents and reports, to argue that contemporary forms of governance mark a sharp break from an earlier Fordist industrial era in which the ultimate responsibility for protecting the environment rested with the welfare state and civil society's participation came through the vehicle of social movements. Key to my analysis is the distinction between NGOs, which engage in governance activities and within institution channels, and social movements, which are collective actions for change operating outside of existing institutional channels.

I draw on social movement theory to explore how the social composition of citizen participants shaped the form of civil society's involvement in each AOC. I argue that the framework of grassroots social movements best explains the initial trajectory of citizen participation in Detroit. The racially and economically diverse citizen participants encountered significant opposition from state regulators and industry, which eventually led, in 1996, to the

collapse of this round of **remediation** actions. Initial citizen participation in the Buffalo River AOC followed the logic of professional social movement organizations as middle class professionals worked closely with state employees and industrial representatives in a process notable for its relative harmony. Remedial activities in the Buffalo River AOC, and the Great Lakes Basin as a whole, stalled

In the early 2000s, both AOCs converged on a neoliberal model of governance in which a local NGO became the lead agency responsible for implementing the GLWQA. I conclude that this resulted in a "democratic paradox" as a more formal role for civil society resulted in narrower forms of participation, marginalizing the voices of the working class and people of color.

Chapter One: Introduction

Introduction

This dissertation examines sharp changes in modern environmental governance, from its emergence in the 1960s through the more recent neoliberal turn that began unevenly in the 1980s. Drawing on work in political sociology and environmental sociology, I argue that governance in the earlier era was built on a foundation of faith in economic growth, while contemporary governance ultimately relies on market efficiencies. Environmental governance in the US initially bore the hallmarks of the Fordist mode of regulation (Jessop 1992; Jessop 1995; Jessop 2001b): a belief that centralized, technical, bureaucratic rationality would remedy environmental problems. Beginning in the 1980s and accelerating through the 1990s, neoliberalism transformed, and in many cases dismantled, the Fordist regulatory apparatus (Brenner and Theodore 2003; Harvey 2007; Peck and Tickell 2002). I explore this transition through an analysis of US-Canadian efforts to remediate water pollution issues in the Great Lakes under the auspices of the Great Lakes Water Quality Agreement (GLWQA), first signed in 1972. In the four decades of action under the agreement, the approach has gone from fully centralized, to emphasizing states and provinces with (limited) public participation, to becoming a public-private/federal-local enterprise funded through quasi-market mechanisms. Through an in-depth, comparative historical analysis of two areas of concern (AOCs), the Detroit River in Michigan and the Buffalo River in New York, I

explore the breakdown of the Fordist approach and its subsequent neoliberal dismantling and reconstruction.

Theoretical Introduction

The emergence of neoliberal governance

Modern US environmental governance emerged in an era best understood through dual insights from political and environmental sociology, specifically regulation theory and the treadmill of production model. The regulation approach examines the social arrangements that characterize periods of stability regarding capital accumulation (Aglietta 2001). Fordism focused on mass production and consumption, through large-scale industrial enterprises, routinized wage-labor engaged in narrow collective bargaining, and government support for expanding production and consumption (Jessop 1990; Lipietz 1987a). Economic conflict under Fordism did not revolve around issues of production, as in earlier labor politics.[1] Organized labor primarily focused on distributional outcomes whether through an expanded welfare state or through collective bargaining to bridge the gaps between its vision and legislative/contractual achievements.

The regulation analysis of Fordism is commensurate with the treadmill of production approach, which argues that in the post-World War II period key segments of society, including the state, business, and labor, each came to view economic (especially industrial) expansion as the key to realizing their goals (Gould, Pellow, and Schnaiberg 2004; Gould, Pellow, and Schnaiberg 2008; Gould, Schnaiberg, and Weinberg 1996; Schnaiberg 1980; Schnaiberg and Gould 2000; Weinberg, Pellow, and Schnaiberg 2000).

[1] The focus on labor is not to dismiss the rise of "new social movements" during the Fordist era (Steinmetz 1994).

For the state, economic growth yielded increased revenues and social satisfaction of its citizens. For business, economic growth keyed capital accumulation. For labor, economic growth maintained and expanded the middle-class gains of the post-World War II era. Increasing environmental withdrawals and additions fueled the push for economic growth.[2] As a dynamic process, the treadmill model notes that accelerating economic growth requires accelerating environmental impact simply to maintain the social status quo; hence the treadmill visual of society expending energy (environmental impact) simply to maintain its position on the social treadmill. Furthermore, the general solution to distributional inequalities across race and class was to further accelerate the treadmill; i.e. the smaller piece of a larger pie approach. This is the basis of the treadmill's visual metaphor of expending energy simply to run in place.

Understanding the emergence of Fordist environmental governance first requires an understanding of social-environmental relations, which I will explore by outlining difference forms of environmentalism. Rather than attempting to force historically diverse forms of environmental action into a single category of environmentalism, it makes sense to explore how people come to environmentalism, ways they understand social-environmental relations, and historical waves of environmental action.[3] There are four primary pathways leading to environmental activism. The first, and most dominant, path to environmentalism is through "wilderness/wildlife/recreation" encounters and was initially followed by white middle class men who were joined by white middle class women in the mid-20th century. This pathway is the historical predecessor of the contemporary mainstream environmental movement. A second pathway to

[2] Even when relative gains are made in the environmental efficiency of a given practice, the increased scale demanded by the growth imperative often outpaces them.
[3] These conceptualizations are drawn from Taylor (2000).

environmentalism is urban environmentalism, which was associated with urban progressivism and was an alternate pathway for middle class reformers. A third pathway united white working class and labor activists with middle class allies in actions that led to contemporary ecopopulist actions (Szasz 1994). Finally, people of color generally followed a pathway drawing on social equality, self-determination, and environmental injustices in actions that led to the contemporary environmental justice movements. Along with pathways to environmentalism and corresponding forms of activism, environmental paradigms offer another way to understand social-environmental relations.

Environmental paradigms have often been viewed in almost dialectical terms: the exploitative capitalist paradigm yields the new environmental paradigm which itself gives way to the environmental justice paradigm (Taylor 2000). In each case, environmental and social tensions within a given paradigm yielded a more progressive, humanist ecologically focused paradigm. The exploitative capitalist paradigm was the overriding framework for understanding the environment before the emergence of the early environmental movements. Early preservation and conservation movements drew on the Romantic Environmental Paradigm, which for the first time, valued nature. The new environmental paradigm emerged from a recognition of the environmental consequences of capitalist society; the environmental justice paradigm from a recognition of links between environmental and social issues (Catton and Dunlap 1978; Dunlap and Catton 1979; Taylor 2000). The Fordist era co-existed with the transition from the exploitative capitalist paradigm to the new environmental paradigm. The exploitative capitalist paradigm emphasizes hierarchy, bureaucratic, centralized authority, growth, and believes in technological solutions to environmental problems, whereas, the new environmental paradigm values nature for its intrinsic (non-economic) worth, critiques science and

technology, believes in conservation, and wants to hold corporations responsibility for their pollution (Catton and Dunlap 1978; Taylor 2000). Neither the exploitative capitalist paradigm or the new ecological paradigm fully capture the dynamics of Fordist environmental governance, which contained a utopian belief that environmental problems could be ameliorated through bureaucratic regulation funded by revenues from increased economic growth. Fordist environmental governance resulted from when the exploitative capitalist paradigm recognized and tried to solve its environmental problems.

The cracks that first appeared in the post-war labor accord and its corresponding welfare state in the 1960s became larger and more visible throughout the economically tumultuous 1970s and burst to the forefront with the Reagan-era attack on Fordism. The two-pronged transition from Fordism to neoliberalism involved first dismantling the older bureaucratic and technocratic model before creating a new market-centric form of governance (Peck and Tickell 2002).[4] In line with these two phases are two competing visions of the state's role in society: for the dismantling, anti-statist attackers, the role of the state is generally seen to be pro-capital laissez-faire, in other words to promote business interests and provide security (and even the latter is increasingly being privatized (Scahill 2007)). Adherents to the other approach argue for a new conception of the state: an efficient, lean business-like entity that prioritizes incentives and partnerships over punitive, limiting regulation (Gore 1993). Again, neither the new environmental paradigm nor the alternative environmental justice paradigms do much to help explain neoliberal environmental governance.

Neoliberal environmental governance rests on the premise that traditional "command and control" approaches to environmental regulation have failed. In

[4] Brenner and Theodore (2003) emphasize this path-dependent nature of neoliberalism.

sociology, the clearest example of neoliberal environmental governance is ecological modernization theory. Key tenets of this approach include: economic growth is necessary for environmental improvement, in recent years economic advancements have become decoupled from environmental concerns, social and environmental issues are not inherently related, and that businesses not social movements are the key drivers of environmental sustainability. While most scholarship on ecological modernization looks at contemporary industrial trends, my dissertation examines how neoliberal environmental governance approaches Fordism's environmental legacy.

The challenge for the sociology of environmental governance is how to understand the transition from Fordism to neoliberalism. Although the Fordist era witnessed significant environmental concern, there was often a mainstream belief that environmental concerns were secondary to economic ones and that environmental concerns were easily addressed through minimal modifications of the status quo. The treadmill of production neatly captured the social-environmental dynamics of Fordist society, but the shifts in manufacturing from the global core to the semi-periphery have reduced the centrality of production to core economies.[5] While a general faith in the growth panacea endures, cracks have begun to appear in its façade.[6] Whereas earlier governance models assumed that state revenues, which depended on continuous economic expansion, allowed the state to temper the social and environmental consequences of economic activity, the foundations of governance have now shifted to the market.

[5] This is not an argument that manufacturing has disappeared, but that it has shifted to less developed countries and become less central to core economies.
[6] For example, the Stiglitz-Sen-Fitoussi Commision's critique of GDP as synonymous with social well being (2010).

During the initial wave of academic interest in post-Fordism, many argued the new era would be a postmodern one, marked by time-space compression, depthlessness, a crisis of historicity, and the rise of the cultural (Harvey 1989; Jameson 1991). However, environmental governance today is neoliberal and neopositivist, with emphases on evidence and efficiency, the latter of which is believed to stem from the market. I argue that the key social difference in governance between the two eras is this shift from an emphasis on promoting economic growth (particularly through expansion of industrial manufacturing) to an emphasis on market logic and privatization. In the Fordist/treadmill era, economic growth would produce the social surpluses necessary to address social and environmental externalities; in the neoliberal era, government created market-based efficient practices are seen as key to preventing future social environmental externalities as well as addressing already existing ones. This transition can be clearly seen in the shift in regulation from absolute limits per facility to the creation of markets for pollution credits, one of the exemplary programs of neoliberal environmental governance.

The rise of NGOs and the ideology of de-politicized markets

Citizen political action in the Fordist era, beyond formal participation mechanisms like voting, often took the form of social movement participation. While there is tremendous variation in the realm of social movements, a common form involved citizens mobilizing around a shared goal and exerting pressure on an institution, often governmental or business, in order to achieve a desired aim. Key for my purposes is the idea that participation was generally non-professional. An individual could be an unskilled laborer, a homemaker, a lawyer, etc., but his or her participation was as a

citizen.[7] In contrast to this form of social movement participation, social movements have increasingly become professionalized and membership has turned from active participation to economic support and, at best, occasional involvement in a petition or event.

Rather than grassroots movements or professional social movement organizations, I argue that NGOs have become the dominant way civil society participates in governance. For citizens, involvement is employment, and professional NGOs have moved beyond the external actions of the social movement era and now fulfill many state regulatory functions as a result of privatization. NGOs play a crucial role in the transition from environmental civil society as a site of conflict and protest (as under Fordism) to a site of cooperation and partnership (as under neoliberal environmental governance/ecological modernization) (Demirovic 2000; Kamat 2004).

Unlike postmodernism's critiques of rationality, neoliberalism emphasizes the expansion of market logic to the point that it views itself as beyond politics and ideology and in the realm of logic and evidence. However, the neo-positivist turn towards environmental governance through economic rationality and market efficiencies is itself an ideological stance. Neoliberal environmental governance is characterized by economic logic in all aspects. For civic involvement and citizen action it is not citizens as citizens, but citizens as employees, as workers in NGOs. Involvement today means finding a job with an organization not volunteering with an organization or organizing people. For allocation of funding and state action, rather than having central authorities make top-

[7] The conception of citizen here is not limited to the legal sense of citizenship, because clearly many non-citizens participated in social movements.

down decisions, the government increasingly creates a pool of money that entities compete over.

Theoretical wrap-up

My dissertation addresses two central questions in environmental and political sociology:

- How does neoliberal governance differ from Fordist governance?
    - In other words, what are the practical consequences of the change from an emphasis on growth to one on market efficiencies?
- Can neoliberal environmental governance lead to environmentally sustainable outcomes?
    - A critical assessment of neoliberal effectiveness.

My empirical cases were selected in order to provide insight into Fordist and neoliberal governance as well as the transition between the two.

Empirical Cases

In order to understand how environmental governance has changed during the transition from Fordism to neoliberalism and assess its effectiveness, I examine environmental remediation efforts in the industrial Midwestern United States. The region's economic rise and decline, encapsulated metaphorically as first the "steel belt" and then the "rust belt," sharply transformed the region's environment. The twentieth century left the Great Lakes waterways, which contain one-fifth of the world's surface freshwater, substantially impaired. In response, for the past 40 years, the United States and Canada, through the GLWQA, have attempted to restore impaired beneficial uses in

the region. The GLWQA's duration and transformation provides an excellent foundation for analyzing the Fordist decline and neoliberal emergence. To understand the GLWQA's successes and failures, my dissertation focuses on two of the 43 identified AOCs, the Detroit River and the Buffalo River. Both Detroit and Buffalo rapidly grew and eventually declined over the course of the 20th century. In both regions, economic development - from manufacturing to shipping - profoundly transformed the environment. Examining the GLWQA also shows the importance extending macro-level environmental sociological analysis beyond the realm of the economy and production into questions of governance.

While much of the initial damage to the Great Lakes came from direct discharges from facilities that, at best, minimally treated their effluent, industrial point-source pollution has greatly declined over recent decades.[8] Currently the two largest ongoing challenges to clean waterways are municipal discharges and non-point source pollution. The former primarily involves archaic sewage infrastructure and highly toxic discharges through combined-sewer overflows (CSOs) during wet weather events. The latter takes the form of run-off and includes everything from agricultural and residential pesticides fertilizers to oil residue from roads. These forms of pollution go beyond the economic to the social and geographic. Industrial agriculture and the suburban desire for the "perfect" lawn both yield toxic run-off whenever it rains. Suburbanization spawned highway systems that accumulate oil until it is washed away whenever it rains. In all of these cases, pollution has become an every day part of life in the region. Efforts at cleaning up the

[8] This is not simply a reflection of industrial decline in the region. Because of its emergence from a single identifiable source, from a technical point of view, point-source pollution can be easily regulated and monitored. The GLWQA calls for "zero discharge" and "virtual elimination," but there is a chance that both of these could be dropped in the current renegotiation of the agreement (Jackson 2011).

Great Lakes, then, face the challenges of both point-source and non-point-source pollution.

Under Fordist governance approaches in the mid-1980s and 1990s, primarily top-down, government-led efforts were supplemented with public participation. In the mid-1980s, the International Joint Commission (IJC), which oversees the GLWQA, developed a three-stage approach to remediating the lakes. Each of the 43 identified AOCs were to produce three successive remedial action plans (RAPs). Stage one would fully assess the causes and scope of beneficial use impairments (BUIs) within the AOC. The second stage would describe possible remediation approaches and identify the best courses of action. The stage three document would cover the remediated BUIs as well as future approaches to ensure remediated BUIs are properly monitored to prevent future contamination. While state and provincial governments were in charge of the AOCs, the revised GLWQA also mandated public consultation in RAP generation and implementation.

During this time period, remediation efforts in the Detroit River and Buffalo River AOCs greatly diverged. In the 1990s, tensions between government, businesses, and citizens in the Detroit River AOC eventually led to the full collapse of the public participation structure, while the Buffalo River AOC process resulted in an atmosphere of partnership and consensus. I argue that explanations for the differences between these cases stem from the varied orientation of state regulators, differing role of business in each AOC, and social composition of citizen participants. In the Detroit River AOC, the state acted to promote business interests as part of a larger project aimed at attacking the perceived regulatory straight jacket hindering the state's economy ,[9] businesses were quite involved (and more critical of regulatory constraint), and the composition of citizen

[9] i.e. the first-stage dismantling neoliberalism identified by Peck and Tickell (2002).

participants was in line with ecopopulist (Szasz 1994) and environmental justice (Bryant 1995; Bullard 1994; Čapek 1993; Cole and Foster 2001; Pellow 2000) movements. In the Buffalo River AOC, the state agency was more in line with Fordist environmental governance, business was relatively absent from the process, and citizen participants generally came from the professional environmental middle class (Dowie 1995).

In spite of the sharp divergence in outcomes in these two cases, over the past decade both AOCs have been restructured along broadly similar lines: leadership by a local NGO rooted in the professional middle class, a stronger federal role, and a significantly diminished role for the state. The empirical examination of the two AOCs includes Fordist approaches (early Buffalo), destructionist neoliberalism (early Detroit), and neoliberal convergence.

Organization of the Dissertation

In Chapter Two, I discuss my research methods, including my interest in the GLWQA and my case selection. I provide an overview of my research process, including a discussion of the qualitative and historical methods I used to construct the historical narrative for each case, including semi-structured interviews, document analysis, and participant observation.

In Chapter Three, I delve into how social-environmental relations have changed during the transition from Fordism to neoliberalism. My analysis of neoliberal environmental governance fills an important void in environmental sociology by differentiating neoliberalism from Fordism (technocratic bureaucracies) and neoconservatism (anti-regulation, pro-business action). Instead, neoliberal environmental governance at its core emphasizes a positive government role, but one that makes market

logic and efficiencies its central aim. In this way, neoliberalism casts itself as evidence-based and objective in a post-ideological sense. In this chapter, I also extend macro-level environmental sociological analysis of social-environmental relations beyond the economic realm. To strengthen this discussion, I provide an overview and analysis of more than half a century of U.S. water policy from its emergence as a seminal component of Fordist governmental regulation to contemporary neoliberal approaches. The following two chapters analyze my empirical cases.

Chapter Four looks at the emergence of water pollution in the Detroit River, the harsh conflicts that emerged during the 1980s and 1990s in the BPAC, and the emergence of the NGO-led public-private partnership approach that characterizes the last few years of work in the AOC. Chapter Five examines the Buffalo River and the transition from what was regarded as a successful public participation process to a similar NGO-led approach.

Chapter Six examines the analysis of neoliberal environmental governance in light of the findings in the previous empirical chapters. This chapter includes a critical assessment of neoliberal environmental governance and discussions of avenues for further research.

Chapter Two: Case Background and Research Design

This chapter outlines the methodological approach I used in this dissertation and also provides a brief overview of the Great Lakes Water Quality Agreement (GLWQA) from which I selected my two cases. This dissertation uses qualitative and historical research methods to understand changes in social-environmental relations through a comparative study of two Great Lakes Areas of Concern (AOCs).

In order to explore the historical trajectories of environmental governance in the Detroit River and Buffalo River, I conducted interviews with current and former participants and collected and analyzed hundreds of documents, including government publications, meeting minutes, conference proceedings, media accounts, regional histories, and previous studies of the GLWQA to construct historical narratives of governance in each AOC. In addition to these sources of data, I spent time visiting each AOC. In trips along the Detroit River and a canoe trip down the Buffalo River, I saw first-hand the relationship between each river and its social surroundings. In constructing narratives about each AOC, I take care to identify the structure of public involvement, which segments of society are represented, how decisions are made, and the relationship between social process and environmental outcomes.

Studying Water Pollution

Water pollution makes an excellent focus for the study of local environmental governance, because "water pollution is the daily, ongoing, inevitable consequence of the way we live in our cities, how we grow our food, and how industry produces things we consume. Water pollution is *inscribed* in our way of life" (Szasz 2007, emphasis in original). Addressing water pollution requires responses at the industrial, municipal, and individual levels. While many, particularly those with the economic means to do so, attempt to insulate themselves from environmental problems through defensive practices like inverted quarantines, this dissertation looks at social responses to address water quality issues (Rudel 2013; Szasz 2007).

The rise and decline of the industrial Midwest in the 20th century sharply impacted the region socially and environmentally. By the 1960s, many bodies of water in the region were severely polluted from a combination of municipal and industrial sources. The Great Lakes Water Quality Agreement (GLWQA) between the US and Canada offers a unique means of exploring historical change in environmental governance. In the following section, I provide a brief historical overview of the Great Lakes region and the GLWQA.

Great Lakes and the Cultural Value of Water

The Great Lakes region is an ideal site to study water pollution in the US. The Great Lakes contain 20% of the world's surface fresh water spread across Lakes Superior, Michigan, Huron, Ontario, and Erie as well as numerous rivers. Eight US states - Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania, and Wisconsin - and the Canadian province of Ontario border the lakes, forming the Great Lakes region. In

addition, the province of Quebec is also included in some Great Lakes partnerships because of its position on the St. Lawrence Seaway. Major cities in the lakes' watershed include: in the US, Buffalo, Chicago, Cleveland, Detroit, Gary, Milwaukee, Minneapolis, Rochester, and Toledo; in Canada, Hamilton, London, Sarnia, Thunder Bay, and Toronto. Manufacturing in the region lay at the heart of both countries' economic growth during the Fordist era. The region now faces the dual challenges of Fordism's economic and environmental legacy. Economic changes since the 1970s have hit the region hard, especially during the recessions of the 1980s and 2000s. Unemployment, underemployment, and the toxic legacy of pollution are enduring regional issues.

Regional Governance

There are a number of instances of regional collaboration between the United States and Canada regarding the Great Lakes. The oldest of these, the International Joint Commission (IJC), was established in 1909 to administer the Border Waters treaty between the two countries. The commission's members are evenly divided between appointees from the US and Canadian federal governments. The Border Waters treaty mandates border waters between the two countries remain "free and open for the purposes of commerce" (International Joint Commission 1909).

In 1955, American Great Lakes states created the Great Lakes Basin Compact, which is administered by the Great Lakes Commission, "to promote the orderly, integrated, and comprehensive development, use, and conservation of the water resources of the Great Lakes Basin" (Great Lakes Commission 1955). Canadian representatives from Ontario and Quebec sit on the Commission as associate members. The Great Lakes

Commission currently compiles and serves as a repository for Great Lakes research by hosting the Great Lakes Information Network (GLIN), advocates for federal legislation supporting the Great Lakes, works on issues surrounding invasive species, and is also involved in the Areas of Concern program discussed below. This involvement takes two forms: an annual conference for AOC representatives and more foc

used work targeting Michigan AOCs. The Great Lakes Commission facilitates the Michigan Statewide Public Advisory Council (SPAC), which consists of representatives from each of Michigan's 14 AOCs. The SPAC holds regular meetings and also provides technical assistance and training to local AOCs.

In 1985, US Governors from Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania, and Wisconsin and Canadian Premiers from Ontario and Quebec signed the Great Lakes Charter, in which all agreed to collective governance of Great Lakes water. Under the agreement, if any state or province wishes to divert significant quantities of water, the Charter provides mechanisms for notification and approval. The 1985 Great Lakes Charter and its 2001 Annex serve as the basis for both the Great Lakes-St. Lawrence River Basin Water Resources Council, which involves only US States and the Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement, which has been approved by each of the aforementioned states' legislatures, Congress, and signed by the President as well as put into law by both Ontario and Quebec.

In short, both state/provincial and federal governments have taken numerous steps to protect and manage the Great Lakes basin as a social system and an ecosystem. This collective action shows the recognized importance of water for the region and a desire to avoid the "tragedy of the commons" (Hardin 1968). By far the largest effort at

attempting to clean up environmentally troublesome areas in the Great Lakes began in the 1970s under the IJC's guidance. In 1972, the US and Canada signed the Great Lakes Water Quality Agreement (GLWQA), administered by the IJC, in order to address water pollution in the Great Lakes. The IJC eventually identified 43 Areas of Concern (AOCs) that contain some of the most toxic pollution in the Great Lakes. An AOC is a "geographic area [featuring] impairment of beneficial use or of the area's ability to support aquatic life" (International Joint Commission 1989). The official goal of the program is "to restore and maintain the chemical, physical, and biological integrity of the waters of the Great Lakes Basin Ecosystem" (International Joint Commission 1989). AOCs are classified on the basis of 14 categories of beneficial use impairments (BUIs):

> Restrictions on fish and wildlife consumption
> Tainting of fish and wildlife flavour
> Degradation of fish wildlife populations
> Fish tumors or other deformities
> Bird or animal deformities or reproductive problems
> Degradation of benthos
> Restrictions on dredging activities
> Eutrophication or undesirable algae
> Restrictions on drinking water consumption, or taste and odour problems
> Beach closings
> Degradation of aesthetics
> Added costs to agriculture or industry
> Degradation of phytoplankton and zooplankton populations
> Loss of fish and wildlife habitat (International Joint Commission 1989)

Expectations were for a quick clean up. Indeed, the GLWQA called for a fully implemented solution to pollution from municipal sources by December 31, 1981 and one for industrial pollution by December 31, 1983. This was the first, but far from the last, instance of wildly optimistic timetables associated regarding Great Lakes cleanup.

BUIs come from two basic sources: point source (industrial and municipal discharges, combined sewer overflows, etc.) and nonpoint source pollution (agricultural

runoff, atmospheric deposition). Industrial discharges in AOCs generally fall somewhere along the following spectrum: at one end are cases most often found in rural, single industry areas where a single polluter is responsible for the BUIs. In these types of cases, the polluting facility is/was a primary employer making local governments highly susceptible to "job blackmail" arguments (Gould 1991b; Kazis and Grossman 1982). People and/or organizations that are seen as challenging the facility may also face backlash from their fellow citizens who are either directly or indirectly connected to the company. In rural AOCs, the local populations are often more racially/ethnically homogenous, more impoverished, and less educated than those found in more urban areas.

At the other end of the spectrum are AOCs most often found in metropolitan areas, which often have numerous sources of pollution making it extremely difficult to definitively identify responsible parties. These regions also have more socially diverse populations, histories of social movement involvement, as well as access to colleges and universities, which often have engaged faculties. It is this interplay of social dynamics that I focus on in this dissertation.

Initially, implementation of the GLWQA was an entirely top-down, bureaucratic process that almost entirely excluded citizen voices. Great Lakes United (GLU), a social movement organization using a grassroots/environmental justice approach to the Great Lakes region, challenged this approach. In the early 1980s, GLU held its own public hearings throughout the Great Lakes basin to demonstrate public interest and challenge policy makers to increase public involvement in the GLWQA. This heavy public pressure to open up the clean up process, and the agreement's failure to even partially achieve its

lofty goals, led to a process of amending the GLWQA. In a 1987 protocol, the IJC created the remedial action plan (RAP) program in which each AOC would produce a RAP defining the scope of the problem and detailing a course of action to address the BUIs. The 1987 protocol signaled another change in the approach to cleaning up the Great Lakes: "Remedial Action Plans and Lakewide Management Plans shall embody a systematic and comprehensive ecosystem approach to restoring and protecting beneficial uses in Areas of Concern or in open lake waters" (International Joint Commission 1989). Approaches to ecosystem management share "a remarkable degree of consensus about the broad principles of ecosystem management: . . . systems thinking, deeper understanding of the complexity and dynamism of ecological and social systems, more extensive consideration of different spatial and temporal scales, ecologically derived boundaries, adaptive decision making to deal with uncertainty, and collaborative decision making" (Yaffee 1999). In line with the logic of ecosystem management, the RAP program emphasized local decision-making and public involvement. The 1987 protocol mandates that, "the Parties, in cooperation with State and Provincial Governments, shall ensure that the public is consulted in all actions undertaken pursuant to this Annex" (International Joint Commission 1989). Another wave of optimism left many proponents arguing the Great Lakes would be cleaned up by the end of the century, though subsequent events would soon reinforce the enduring nature of social-environmental conflict in the region.

The 1987 protocol's public involvement mandate was quite vague. Implementation involved answering technical questions about what it meant to "consult" the public. Are they active participants and collaborators in the planning and

implementation of remediation projects? Or is their role to provide advice to public officials who are ultimately in control of the AOC? The lack of clear direction has led to contesting visions of public involvement in the Great Lakes.

The program design and BUI definitions have played a significant role in shaping public involvement and state practice. As many studies of the history of US Environmentalism have shown, health has been a prime motivator of environmental action for both mainstream/reform and grassroots/environmental justice activists (Brulle 2000; Taylor 2000). While a number of BUIs can be linked to issues of human health - tainted fish, restrictions on drinking water, and beach closings - the AOC program de-emphasizes pollution's impact on human health. Furthermore, in practice, there has been little attention paid to assessing potential health impacts. The most prominent exception was a Centers for Disease Control and Prevention (CDC) report "Public Health Implications of Hazardous Substances in the Twenty-Six U.S. Great Lakes Areas of Concern" that was scheduled to be jointly released by the IJC and the CDC's Agency for Toxic Substances and Disease Registry (ATSDR) in 2007. Publication was delayed, but the Center for Public Integrity obtained a copy and published the draft in full, "which warns that more than nine million people who live in the more than two dozen [US] 'areas of concern'—including such major metropolitan areas as Chicago, Cleveland, Detroit, and Milwaukee—may face elevated health risks from being exposed to dioxin, PCBs, pesticides, lead, mercury, or six other hazardous pollutants" (Kaplan 2008). This leak resulted in the ATSDR attacking its own initial report as suffering "several serious deficiencies" (Agency for Toxic Substances and Disease Registry/Office of the Director 2008b). While the leaked draft suggests that the US AOCs include significantly increased

levels of mortality, including infant (21 of 26 AOCs), breast cancer (17/26), colon cancer (16/26), and lung cancer (12/26), the official report concludes that "current data do not allow us to draw firm conclusions about relationships between critical pollutants in the Great Lakes region and potential health effects" (Agency for Toxic Substances and Disease Registry/Office of the Director 2008a). Beyond the debate about the report's merits, there has clearly been little government interest in exploring the health effects of widespread pollution in the AOCs. Publicizing data about increased health risks would only raise pressure on the state to clean up the Great Lakes. Though health issues remain an enduring motivator for environmental concern, the incorporation of public involvement into the GLWQA did not include an additional public health focus.

Following the 1987 protocol, most AOCs formed public advisory councils, though they took different names. By the mid-1990s, many AOCs had developed both Stage 1 and Stage 2 RAPs. At this point, actions by the US and Canadian governments diverged. Of 12 solely Canadian AOCs, three have been completely delisted and one is classified as an area in recovery, which means that remediation has been completed and that it is now an issue of natural recovery.[10] Of the 26 sites located entirely within the US, two have been delisted.[11] The optimism of the 1980s slowly dissipated through the 1990s as it became clear that clean ups would be incredibly expensive and, in the US, that the federal government was unable and/or unwilling to provide adequate funding to the states. In the absence of federal support, the states also "foisted the responsibility on the local sites," in the words of one public employee I spoke with.

[10] The delisted Canadian AOCs are Collingwood Harbour, Severn Sound, and Wheatley Harbour. The area in recovery is Spanish Harbour.
[11] The delisted US AOCs are Presque Isle Bay and Oswego River.

In the early part of the 2000s, US progress in cleaning up AOCs revived, in large part because of two important events. First, and most important, the passage of the Great Lakes Legacy Act of 2002 authorized $270 million in federal funds to clean up contaminated sediments in US and binational AOCs, beginning with $10 million in 2004 and $45 million in 2005. Under the Legacy Act, the federal government provides 2-1 matching funds, leaving the states and local AOCs to find the 35% of a project's costs. Second, fewer than five months after the passage of the Legacy Act, the US General Accounting Office released a report that heavily criticized the EPA's actions regarding the GLWQA (United States General Accounting Office 2003). In addition to highlighting the complex network of agencies and programs operating in the region, the GAO concluded: "To fulfill the need for a monitoring system called for in the GLWQA and to ensure that the limited funds available are optimally spent, we are recommending that the Administrator, EPA, in coordination with Canadian officials and as part of an overarching Great Lakes strategy, (1) develop environmental indicators and a monitoring system for the Great Lakes Basin that can be used to measure overall restoration progress and (2) require that these indicators be used to evaluate, prioritize, and make funding decisions on the merits of alternative restoration projects" (United States General Accounting Office 2003:57). The influx of federal dollars revitalized US AOCs, a process furthered by the passage of the Great Lakes Restoration Initiative in 2009. This legislation includes $475 million for the Great Lakes. As of May 2010, the EPA had 270 finalists for $160 million in grants. Though the EPA has yet to create the system the GAO called for, the GLRI includes money specifically targeted to developing an intra-agency Great Lakes restoration plan.

The current phase of GLWQA action introduced a new method of tracking progress within the AOCs. Rather than the initial 3-stage process under which AOC classification followed a binary model of impaired/remediated, AOCs can now delist individual BUIs. Delisting individual BUIs was introduced by the United States Policy Committee's (2001) report "Restoring United States Areas of Concern: Delisting Principles and Guidelines." The logic behind the change is that delisting individual BUIs would allow AOCs to achieve tangible goals while recognizing that in many AOCs full remediation is a daunting task. Unfortunately, pressure to demonstrate objective progress may encourage AOCs to focus on those BUIs that can be most easily delisted rather than those that pose the greatest threat to human or environmental wellbeing. This risk seems to be present in the cases I examine.

In short, the following are the three broad periods of GLWQA action, from a US perspective:

1. Initial agreement (1972-mid 1980s): Action almost exclusively from governments, little emphasis on local involvement. The most notable form of civil society involvement was external pressure from GLU arguing for a defined role for the public.

2. First RAP phase (1987-2002): Designation of AOCs, introduction of three-stage RAP model, and creation of public advisory councils; state/provincial governments generally in charge of day-to-day operations. Near the end of this phase, US spending on AOCs dried up and many public advisory councils lost members/slowly dissolved.

3. Second RAP phase (2002-present): Begins with the passage of the Legacy Act and the critical GAO report. New funding rules mandating local contribution combined

with state economic crises make progress in US AOCs partly contingent on local fundraising efforts. This phase also included the rise of local ENGOs running RAPs.

In short, the GLWQA is currently in the midst of another period of (perhaps justifiable) optimism, though it is important to emphasize that each phase of the GLWQA began with a proclamation of confidence in achieving full remediation within a few years. Of the 43 AOCs, only six have been either delisted entirely or classified as an area in recovery, in spite of the resources expended in the program since the 1970s. To understand this relative failure, as well as how environmental governance has changed over time, I will examine two AOCs: the Detroit and Buffalo Rivers.

I selected the cases because of their significant divergence during the first RAP phase. In the Detroit River AOC, citizen participants clashed with representatives from industry and the state of Michigan leading to a fractured public advisory process. After citizens staged a mass resignation from the Binational Public Advisory Council (BPAC), efforts within the AOC stalled. In the Buffalo River AOC, citizen participants felt they played a valued role in developing the RAP and, while there were certainly disagreements at times, the state, industry, and civil society were often able to reach consensus on the RAP.

At the onset of the second RAP phase, the Detroit public advisory council no longer existed, while Buffalo's was cited as a model of citizen involvement. In spite of this divergence, both sites are now run by local ENGOs. Close examination of the two cases will help illuminate the emergence of ENGOs in environmental governance. In the following section, I discuss the research methods used in this dissertation.

Data Collection

Qualitative methods are appropriate for research that "delves in depth into complexities and processes . . . seeks to explain where and why policy and local knowledge practice are at odds . . . [or explores] processes in organizations" (Marshall and Rossman 2011: 91).

Interviews

I conducted formal interviews with 22 participants in the Detroit River and Buffalo River Areas of Concern. Participants in the initial phases of RAP activities were identified through lists of public advisory council members contained in the initial RAPs for each AOC. For current members, I obtained contact information from site contacts for each AOC. Interviews were conducted in person, except for where extenuating circumstances (health, distance) made phone interviews the only available alternative. Participants included representatives from civil society as well as local, state, and federal governments. While industrial activity in both AOCs has declined over the past 40 years, there are still active plants in each AOC. I extended multiple interview requests to representatives from industry, none of who agreed to formal interviews, though I had informal conversations with industrial representatives at meetings I attended and over e-mail.

Interview participants had varying degrees of experience in their respective AOCs ranging from a few years to decades. I recorded and transcribed all of the interviews. Interviews were semi-structured and allowed participants to reflect on their experiences and changes in remediation efforts over time. After general introductory questions touching on subjects' backgrounds and experiences with the RAP process, I asked the participants to walk me through the RAP timeline, about their perception of social processes and environmental outcomes, strengths and weaknesses of the progress, lessons

for the future, etc. I asked government representatives about subjects like any constraints or challenges they faced, their relationships with citizen participants and the larger community, and their perception of what kinds of remediation are possible or likely. I asked citizen participants about their relationships with one another, their connection with the site, the roles of government and industry, and whether or not they had connections with citizen participants from other AOCs. Within each AOC, I also asked questions focused on the site's specific history in order to get multiple perspectives on why the RAP process unfolded as it had. Finally, I asked participants if they were familiar with other AOCs and, if so, how their perceptions of their AOC related to other AOCs.

Documents

For my dissertation, I examined numerous government and independent reports. For each AOC, these include formal Stage One and Two Remedial Action Plans[12], annual updates, reports and studies on specific beneficial use impairments (BUIs). I also read annual reports from the International Joint Commission (IJC), the international body charged with implementing the GLWQA, congressional testimony, Environmental Protection Agency (EPA) documents, and US Government Accountability Office (GAO) reports. The NGOs in each site have also issued numerous reports, both popular and technical.

Along with government documents, I searched online news archives for relevant news stories. These publications included, The Detroit Free Press, The Detroit News, The Metro Times (an alternative Detroit newspaper), and The Buffalo News. For each

[12] As I note in the Detroit River chapter, the Stage Two RAP draft produced in the mid 1990s was never fully recognized as constituting a Stage Two document, so is treated as a draft.

search, I looked for terms such as, "area of concern," "great lakes water quality agreement," "area of concern," as well as a general search for Detroit River and Buffalo River. I also searched important events, like the attempt to develop Humbug Marsh, the last undeveloped stretch of the Detroit River. While neither AOC has received a tremendous amount of media coverage, I found approximately 60 articles relevant to the GLWQA or events in the AOC.

Participant Observation

In addition to formal interviews and archival documents, I attended multiple meetings of the Detroit River Public Advisory Council (PAC) as well as numerous other conferences addressing aspects of the Great Lakes, including multiple annual meetings of the Great Lakes Coalition, a conference of Binational AOCs, and several Great Lakes United meetings addressing aspects of citizen involvement. I spent time visiting each river, including a canoe tour of the Buffalo River with representatives from the New York Department of Environmental Conservation.

Data Analysis

I transcribed all of the interviews that I conducted. I drew on the interviews, documents, and participant observations in order to construct detailed narratives of the two cases. My empirical aim was to understand why the cases diverged during the initial phase of RAP actions, but then converged on a similar form of environmental governance during the most recent era. Qualitative methods, which stress "the importance of context, setting, and participants' frames of reference," are the best approach for this analysis

(Marshall and Rossman 2011: 92). The following chapter explores the theoretical framework for this dissertation.

Chapter Three: Theoretical Framework

Introduction

My dissertation explores changes in local environmental governance since the emergence of mainstream reform environmentalism.[13] Through the lens of water policy, I demonstrate how environmental governance was initially a state-led, top-down, bureaucratic process that privileged formal scientific expertise, emphasized remediation over prevention,[14] and viewed environmental concerns as subordinate to economic ones. Businesses were generally hostile to newly created environmental regulations that they saw as state intrusions into the private sector. Civil society played an external role in environmental governance, most often through social movements or alternative lifestyle movements that integrated environmental concerns into their normative critiques of post-World War II society. Over the past few decades, environmental governance has substantially transformed and today is strongly rooted in the logics of market efficiencies and public-private partnerships. Businesses have internalized environmental logics and the dominant form of civil society engagement has been moving away from social movements to non-governmental organizations (NGOs).

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[13] The 1962 publication of Rachel Carson's (2002) Silent Spring is frequently cited as a marker for the beginning of the modern environmental era.

[14] Regulation of environmental pollutants gives discharges the benefit of doubt, because substances are only restricted after being shown to be harmful. Many environmentalists support the precautionary principle, which would place the burden of proof on a given substance to demonstrate that it is not harmful before it is permitted rather than the current system in which discharge is allowed unless its explicitly regulated (Raffensperger and Tickner 1999).

When society addressed emerging environmental concerns in the 1960s and 1970s, it did so within its dominant social, institutional, and ideological framework. Therefore, I argue, understanding the changing forms of environmental governance requires examining the broader transition from the post-World War II Fordist era to the contemporary neoliberal era. Fordist stability depended upon a shared ideological consensus between the state, businesses, and labor unions that expanding the economy - "a rising tide lifts all boats" - was key to meeting their distinct goals. The acceleration of this "treadmill of production" temporarily satisfied social wants, but the rising tide did not lift all boats equally. Increasing economic inequality combined with economic globalization[15] to trigger the breakdown of this arrangement. The post-Fordist era that followed involved two phases: first, a neoconservative attack on the Fordist regulatory structure that articulated strongly laissez-faire principles and, second, a neoliberal reconstruction of governance based around market efficiencies, rather than economic growth, as the key driver of social welfare (Peck and Tickell 2002). In neoliberal environmental governance, businesses internalize environmental concerns, the state pursues privatization and market-based solutions to social issues, and NGOs are at the forefront in terms of representing civil society in governance. I argue that the transition from the Fordist mode of regulation to the neoliberal mode of regulation is behind this shift in governance from a foundation in economic growth to a foundation in market efficiencies.

I begin this chapter by differentiating between social action targeting aspects of the natural environment and the environment and environmentalism as conceptual frames. The former has multiple roots in the 19th century; the latter emerged in the

[15] Because easy access to cheaper labor pools negated employers' need to pay for labor peace.

1960s. Next I sketch a brief overview of Fordism's emergence from an earlier era of welfare capitalism and discuss the state, businesses, and civil society in the Fordist era. This set of institutional arrangements will be used as a lens through which I analyze the emergence of environmental policy, specifically actions addressing water pollution.

The transition from Fordism to neoliberalism transformed environmental governance by emphasizing markets, privatization, and quantitative evidence. This dissertation analyzes these changes through an examination of a decades long effort at cleaning up water pollution in the Great Lakes under the Great Lakes Water Quality Agreement (GLWQA). In addition to changes in how states and business engaged environmental governance, the transition from Fordism to neoliberalism also transformed the role of civil society. To understand how different groupings of citizens participated in cleanup efforts, I draw on social movement theory to detail three logics of civil society participation in governance as shaped by the experiences of three ideal types of social formation: grassroots social movements, professional social movements, and non-governmental organizations. My analysis emphasizes the social composition of citizen participants and how social position shapes groups' framework for political engagement. This analysis is crucial to understanding one of the central contradictions of neoliberal governance: that its emphasis on public involvement and public-private partnerships increases the role of some segments of civil society while often creating an overall narrower form of civic participation.

The Growth Era

The Emergence of Modern Environmentalism

In 1868, 1883, 1887, 1912, 1922, 1930, 1936, 1941, 1948, and 1952, Cleveland's Cuyahoga River caught fire. In the 19th and early 20th centuries, oil refineries along the river operated with complete disregard for the river as anything other than an environmental sink, routinely leaving the river's surface an oily mess. In addition to the refineries, numerous chemical plants, steel mills, and paper mills lined the river. In 1881, Rensselaer R. Herrick, Mayor of Cleveland, described the river as, "an open sewer through the center of the city" (quoted in Adler 2002: 99). Of the regularly occurring fires, the 1952 one was particularly horrific. A leak from Standard Oil's Refinery had left, "a two-inch thick oil slick on the river [which in some places] spanned the width of the river" (Adler 2002). On November 1, 1952, the slick caught fire causing between $500,000 and $1,500,000 in damage; the scope of the damage received significant attention in the local media, but garnered no national attention (Adler 2002: 103). Property damage, not burning water, captured local attention and local property damage on this scale had no national relevance.

On the morning of June 22, 1969, another oil slick on the Cuyahoga River's surface caught fire. This time the blaze lasted just thirty minutes, and caused approximately $50,000 in damage. The Cleveland Plain Dealer's coverage was on page 11-C; in other words, it acknowledged the fire, but because it caused a fraction of the damage of the 1952 fire, it was seen as a relatively insignificant event. Unlike the earlier fire, which the national media ignored, the 1969 fire appeared in numerous national publications: The New York Times, National Geographic, and, most famously, Time magazine all covered it (Adler 2002). Ironically, the 1969 fire was so brief that it burned out before it could be photographed, so Time ran a photograph of the 1952 fire alongside

its story (Adler 2002). The magazine painted a brutal picture of the river and the region's waterways in general:

> No Visible Life. Some river! Chocolate-brown, oily, bubbling with subsurface gases, it oozes rather than flows. "Anyone who falls into the Cuyahoga does not drown," Cleveland's citizens joke grimly. "He decays." The Federal Water Pollution Control Administration dryly notes: "The lower Cuyahoga has no visible life, not even low forms such as leeches and sludge worms that usually thrive on wastes." It is also—literally —a fire hazard. A few weeks ago, the oil-slicked river burst into flames and burned with such intensity that two railroad bridges spanning it were nearly destroyed. "What a terrible reflection on our city," said Cleveland Mayor Carl Stokes sadly.
>
> Cleveland's great industries have lately made efforts to dump fewer noxious effluents into the Cuyahoga. If their record is still not good, the city's has been far worse. Whenever it rains hard, the archaic sanitary storm system floods the sewer mains, sending untreated household wastes into the river. Sometimes the old mains break, as recently happened on the Big Creek interceptor line. Each day for the past month, 25 million gallons of raw sewage have cascaded from a ruptured pipe, spilling a gray-green torrent into the Cuyahoga and thence into Lake Erie (1969).

Why did the 1969 fire grab the national media's attention when by all objective evidence the 1952 fire was both larger and caused more damage? Prior to the 1960s, there was no mainstream concept of environmentalism, although social-environmental actions have deep roots in US history (Brulle 2000; Dowie 1995; Taylor 2009; Taylor 1997; Taylor 2002). It was the widespread diffusion of this generalized conception of the environment, and particularly a threatened environment, that made the fire newsworthy. This emergence of environmental consciousness was linked to the rise of the modern reform environmentalism that emerged during the height of the post-war labor accord and the US welfare state.

Scholars differ in their approaches to, and characterization of, the history of environmental thought and action in the United States. For example, Taylor (2000) emphasizes the role of social location in shaping different individual and group

environmental experiences and actions,[16] Brulle (2000) draws on critical theory to explore the diversity of American environmentalism through the construction of multiple competing discourses, while Dunlap and Mertig (1992), though they acknowledge environmentalism's earlier historical roots, focus on environmentalism as a broadly unified post-1960s social movement. Clearly the diversity of environmentalism's forms and underlying logics extend beyond an identity-based new social movement (Melucci 1980; Offe 1985) associated with the emergence of some forms of deep ecology. What made the post-Silent Spring era significant, though, was not simply social action around environmental issues, which had a long history, but also its ties to a new conception of the environment.

In short, the cultural conception of the environment that emerged in the 1960s stressed a precarious balance between human society and the natural environment that human actions profoundly affected; this framework led to reform environmentalism (Brulle 2000). The 1960s and 1970s witnessed numerous foundational pieces of environmental legislation as well as cultural landmarks like the 1968 Apollo 8 photo of planet earth and Earth Day 1970, which more than 20 million people participated in. While social interest does not automatically led to institutional action, the emergence of this conceptualization of the environment and social awareness of environmental issues were key to the rise of modern mainstream environmentalism. Because mainstream environmentalism emerged in the Fordist era, responses to environmental issues were

[16] She identifies four major pathways of environmentalism: a wilderness path primarily taken by white middle class males, an urban environmental path followed by Progressive era social reformers, a working-class path that linked workplace safety and access to recreation, and an environmental justice pathway followed by people of color that linked social justice with environmental concerns. In addition to these pathways, she categorizes four waves of environmental action and the corresponding paradigms under which they operated.

heavily shaped by Fordist institutional arrangements. The next section details the key contours of Fordism as well as distinguishing it from the earlier era of welfare capitalism.

Precursor: Welfare Capitalism

To understand shifting forms of political economic arrangements, I draw on the regulation approach, which offers a historical method for understanding capitalism that does not rely on teleological, functionalist explanations. Regulation theory argues that capitalism[17] is marked by periods of crisis and stability and theorists seek out the institutional, social, and cultural practices and arrangements that produce moments of relative security and allow for social reproduction in the short and medium-term (Aglietta 2001; Boyer 2001; Brenner and Glick 1991; Jessop 1995; Jessop 2001a; Jessop 2001b; Steinmetz 1994). For regulation theory, the question is not why there are economic crises, but instead, why, in a system of contradictions, there are long periods of time without significant crisis (Lipietz 1987b). At a general level, regulation analysis involves identifying distinct regimes and modes of regulation. A regime of accumulation is "a macroeconomic regime sustaining expanded reproduction" (Jessop 1992: 33). A mode of regulation is "an ensemble of norms, institutions, organizational forms, social networks, and patterns of conduct which sustain and 'guide' . . . the accumulation regime" (Jessop 1992: 34). The Fordist regime of accumulation, the focus of the vast majority of work using the regulation approach, was built on a base of mass production and consumption, with the mode of regulation emphasizing large-scale industrial enterprises, routinized wage-labor

[17] While Regulation theorists often focus on capitalist economies, it is historically clear that all societies vacillate between crisis and normality (or regularization), but capitalism has been exceptionally flexible in overcoming crises.

engaged in narrow collective bargaining,[18] and government support for the expansion of production and consumption: "Fordism involves a virtuous circle of growth based on mass production, rising productivity based on economies of scale, rising incomes linked to productivity, increased mass demand due to rising wages, increased profits based on full utilisation of capacity, and increased investment in improved mass production equipment and techniques" (Jessop and Sum 2006: 59).

The Fordist era emerged from the ashes of welfare capitalism and the Great Depression. To understand the Fordist social order first requires a brief overview of the era of welfare capitalism. In the late 19th century through the 1920s, in order to ward off the perceived threat of the rising labor movement and progressive political reform, corporate leaders pushed what can be called welfare capitalism in which, "the enlightened corporation, not the labor union or the state, would spearhead the creation of a more benign industrial society" (Cohen 1991: 161). Henry Ford captured national attention when, in 1914, he introduced the $5, 8-hour day[19] to combat high turnover and absenteeism, which disrupted the assembly line system.[20] Along with the economic gains of the unprecedented wage, workers ceded almost complete control over their lives not only within the plant, which was ordered along the Taylorist model of routinizing production through scientific management,[21] but outside of it as well. Ford created a Sociological Department to ensure that workers experienced a high quality of life through

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[18] While outside the purview of this dissertation, it is important to acknowledge that in spite of the relative peace between labor unions and employers, white rank-and-file workers frequently engaged in violent "hate strikes" against attempts to racially integrate workplaces.

19 Technically, Ford opened up a form of profit sharing that, for eligible employees, was promoted as working out to five dollars a day.

20 In 1913, the turnover rate was 370 percent and forced Ford to hire 52,000 workers that year to meet the daily average requirement of 13,600 (Zieger 2002).

21 The rapid progress of technology in the twentieth century lead to a strong de-skilling of industrial manufacturing, a process that builds off of the legacies of the assembly line and Taylorist scientific management (Braverman 1998; Noble 1984).

a system of in-depth monitoring and surveillance. This paternalistic capitalism provided definite improvements to the workers' lives,[22] particularly in areas of sanitation, but also enforced rigid rules concerning 'proper' moral behavior.

The Fordist Era

The Great Depression shattered the notion that business alone could guarantee societal wellbeing. Throughout the interregnum of the Great Depression and WWII, the state's role in the US expanded tremendously. While states have inherently played an important role in market society (Polanyi 2001), the logic of Keynesianism that deeply influenced policy from the late New Deal through the early 1970s argued for a robust public sector in addition to the private sector. In this section, I provide a brief overview of the central features of Fordism: the welfare state, mass production and consumption, and narrow collective bargaining.

The emergence of the welfare state as a guarantor of social wellbeing was a key dimension of Fordism. With the New Deal, the state assumed the role of providing social welfare, but did not radically alter its relationship with the general public. The welfare state remained paternalistic, even if not always to the degree of Henry Ford's sociology department's around the clock monitoring of the work force. Esping-Anderson (1990) identified three types of modern welfare states – liberal, social democratic, and corporatist – that differed on how and to what degree the state engaged in decommodification, or protecting individuals from the consequences of the labor market. As a liberal welfare state, the US emphasized the market over social conceptions of citizenship. Although not

22 Because employers restricted the benefits of welfare capitalism to their normative conception of the ideal employee, immigrant, non-white, and female workers did not realize the same benefits that their white, skilled, native-born, male counterparts received. Race, ethnicity, gender, citizenship, and immigration are key aspects of any sociopolitical account of the 20th century United States.

as far-reaching as the social democratic model that prevailed in Scandinavia,[23] the state still significantly expanded its role in providing social services. Thus, when modern environmentalism emerged, the state was positioned to play an active role in addressing environmental problems. Had popular environmental consciousness emerged during the heyday of the welfare capitalist era, the state may not have played as active a role in leading the environmental governance agenda.

From the 1930s through the late 1940s, industrial unions repeatedly pushed for an active voice in production decisions, prerogatives that businesses carefully guarded,[24] even as they were relatively willing to increase wages and benefits. By 1950, the transitory period that followed the collapse of welfare capitalism resolved into Fordism; the "Treaty of Detroit" between the United Auto Workers and General Motors[25] marked the shift in industrial union organizing to the more narrow workplace wages and benefits (Davis 1986). The post-war labor accord depended upon continued economic growth, routinized collective bargaining, and a two-tier welfare state.[26]

The consolidation of the post-war labor accord was key to the next 30 years of economic development. Workers enjoyed stable, lifetime employment (backed up by seniority and cost of living adjustment provisions in their contracts), conflict between

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[23] The historical divergence of Scandinavian and American welfare states will be discussed later in understanding differences in social-environmental relations between the two regions.
[24] With the exception of wartime production models, which businesses tolerated because they were associated with sharp rises in production and profitability.
[25] In exchange for a five-year contract and an acknowledgement that managerial decision-making remained the absolute purview of the company, GM offered substantial wage increases, pensions, a cost-of-living adjustment, and recognition of the union shop. Fortune magazine, which coined the phrase "Treaty of Detroit," noted that, "GM may have paid a billion for peace . . . It got a bargain" (quoted in Davis 1986: 52).
[26] The public welfare state involved the creation of programs like Social Security, Medicare, and Medicaid that offered minimal protections to the impoverished and elderly, while the more robust private welfare systems secured by organized labor included cost-of-living adjustments, robust pensions, and guaranteed life-long access to quality medical care.

labor unions and businesses involved distributional issues, and the state provided a social safety net to alleviate the worst shortcomings of the free market.

As I discussed earlier in the chapter, social understanding of a fragile environment negatively impacted by human activity emerged in the 1960s. The awareness of environmental problems led directly to attempts at understanding why human society had such a negative effect on the world around it. Environmentalists proffered a number of explanations including population growth, technology, and the rise of mass consumer society. The most compelling social scientific explanation of Fordist social-environmental tensions was Allan Schnaiberg's (1980) treadmill of production model.

The Treadmill of Production

The temporary peace of Fordism depended upon continuous economic growth and expansion, which was achieved through extending and intensifying production. Along with the mass production/mass consumption aspect of Fordism, there was also an ideological dimension shared by the state, business, and civil society in the form of organized labor. Whenever social problems arose, consensus on solutions ultimately boiled down to growing the economy. It is this "treadmill of production" at the heart of Fordism that substantially accelerated the scope of social impacts upon the environment. Schnaiberg (1980) developed the treadmill model to understand why, in spite of increasing social concern about and awareness of environmental issues, social action failed to alleviate those problems.

The central premise of the treadmill of production model is that contemporary society has a "dominant ideology of (a) economic growth as the solution to all social problems, and (b) technological investment as the most efficient path to growth"

(Schnaiberg 1980). The latter point represents the post-World War II consensus between capital, the state, and labor that promoted mass production (with significant variation in formal arrangements in North America and Europe).[27] The consolidation of Fordism involved increasing the intensity of energy use, technology, and chemicals in manufacturing while diminishing the role of human labor. For the purposes of my dissertation, I am primarily interested in the "politicization of the treadmill of production" (Pellow, Schnaiberg, and Weinberg 1997). Before turning to treadmill politics, I will first provide a brief overview of the treadmill model; its key aspects include:

- Ideological consensus on the centrality of economic growth and expansion for achieving social and economic aims
- Accelerating the treadmill of production exacerbates social and environmental troubles. The diminished social returns result from capital and technologically intensive rather than labor-intensive production methods. Environmental problems result from increased withdrawals and additions.[28]
- Most recent iterations of the treadmill emphasize the role of easy access to credit in propping up consumption

[27] While there are numerous links between the capitalist economy and the military-industrial complex, the latter operates under its own distinct logic, which has been characterized as a "treadmill of destruction" (Hooks and Smith 2004; Hooks and Smith 2005).

[28] One of the most debated and contentious issues involves the relationship between growth and efficiency. The "Jevons Paradox," drawn from 19th century British economist William Jevons's observation that improvements in steam engine efficiency lead to increased coal consumption, notes that improvements in efficiency often results in increases in resource consumption, not decreases (Clark and Foster 2001). In household goods, even if televisions, computers, and phones are increasingly energy efficient per size/power, their growing size, technical specifications, and especially, number in the household means that their increased efficiency is accompanied by an increased net environmental impact. For example, at the household level, the presence of multiple televisions, computers, smartphones, etc., which are individually more efficient than previous models, but when combined produce a larger environmental impact.

Across the political spectrum, anti-treadmill politics were generally limited and far outside the mainstream. Prior to the Treaty of Detroit, organized labor had unsuccessfully fought for a significant stake in productive decision-making, though had they won such power, they likely would have followed an economic growth-based path.

Some of the most compelling applications of the treadmill model are in analyses of the tensions between pro-environmental "solutions" and economic imperatives, including recycling (Pellow 2002; Weinberg, Pellow, and Schnaiberg 2000) and eco-tourism (Gould 1999). In both of these cases, "increasing the return on investment . . . displaced every other social and environmental goal" (Gould, Pellow, and Schnaiberg 2004: 305). In this dissertation, I will frequently draw on the treadmill model to analyze and understand governance decisions where economic concerns are pitted against environmental ones – and how, in practice, the former often trump the latter, whether through overt conflicts or internalized assumptions about the limits of reform.

Environmental Governance in the Fordist Era

Modern environmental concern emerged at a point when the welfare state had assumed the role of insulating society from the negative consequences of the market. As mainstream environmental awareness emerged in this era, responding to environmental problems fell to the state with little involvement from civil society or active engagement from industry. For many powerful segments of society, accelerating the treadmill was the perceived solution to social and environmental concerns. As an analysis of federal water policy will show, state environmental policy looked to minimize environmental problems while carefully avoiding actions that involved treadmill disruption. In line with the

dominant bureaucratic welfare state approach, when the government addressed environmental concerns, action was top-down and centralized.

Examining US federal legislation regarding water quality demonstrates the relationship between levels of government, business, and civil society as well as contextualizes the action in the Great Lakes region that forms the basis of this dissertation. Though the US had passed legislation addressing the environment prior to the 1960s, the earlier laws' scope was quite limited. Beginning in the 1960s, Congress passed foundational environmental legislation: in addition to clean water legislation discussed below, the Clean Air Act (1963), the National Environmental Policy Act (1970), the Insecticide, Fungicide, and Rodenticide Act (1972), the Endangered Species Act (1973), the Safe Drinking Water Act (1974), and the Resource Conservation and Recovery Act (1976). This legislation shared an underlying premise: that "a society's ability to make possible environmental protection is essentially a function of the nation-state's capacity to enact and implement regulations of private behaviors" (Buttel 2003: 319).

Often dismissively labeled as a "command and control" approach, these broad regulations set discharge limits that were to be enforced through litigation. The most important law addressing water quality is the Federal Water Pollution Control Act, first passed in 1948 and significantly amended in 1961, 1966, 1970, 1972, 1977, and 1987. The initial legislation directed the federal government to work with state and local agencies on creating plans to reduce or eliminate unsanitary conditions in interstate waterways. The 1970 amendment moved water pollution control into the newly created Environmental Protection Agency and set ambitious goals for cleaning up US waterways: by 1983, all waters should be safe for fishing and swimming and by 1985, there would be

no further discharging of pollution into waterways[29] (Ruckelshaus 1972). Though water quality in the US has improved significantly since the passage of the Water Quality Act, it is still far from reaching these ambitious goals, not because of a flaw in a single piece of legislation, but because "water pollution is *inscribed* in our way of life" and the federal legislative process takes a partial, reductionist approach to environmental concerns (Szasz 2007: 116).

In order to illustrate the tensions between environmental, political, and economic concerns, it is useful to briefly examine the history of federal legislation addressing drinking water, one of the fundamental essentials for human survival. To help protect human health from the dangers of tainted water supplies, Congress passed the Safe Drinking Water Act (SDWA) in 1974, which was subsequently amended in 1986 and 1996. The SDWA covers the more than 170,000 public water systems in the United States (United States Environmental Protection Agency 2004). Though the SDWA's goal is to provide clean drinking water at the tap by protecting sources and regulating water treatment, it does not explicitly guarantee clean, safe water. The EPA establishes contaminant standards through a three-step process: first, identification and study of potential contaminants that may impact human health; second, establishment of a maximum contaminant goal, a level at or below which no human health impacts are expected; finally, the EPA sets the enforceable goal, which "are set as close to the goals as feasible" (United States Environmental Protection Agency 2004: 3). The initial legislation, like much of the foundational environmental legislation passed in the 1960s and 1970s, approached environmental issues as technical problems to be solved through regulation-

[29] That water pollution issues remain nearly 30 years later demonstrates the analytical danger of conflating policy aims and goals with actual, tangible achievements.

based standards. This reductionist, positivist view of the environment presumed that environmental problems could be solved with minimal disruption to the larger social order. The addition of a cost-benefit approach, "feasibility," came from the 1996 amendments to the SDWA. Thus, human health and safety are not legally treated as essential; they are only guaranteed to the degree they are cost effective. The explicit addition of cost-benefit analyses to environmental regulations can be seen as a response to the potential treadmill disruption of environmental regulation isolated from economic concerns.[30]

The SDWA's initial distinction between standards required for safety and achievable standards - implicit in the latter is that achieving a standard should not require a fundamental disruption of social practice - and the application of cost-benefit analysis to any potential new standard are fully in line with the treadmill of production theory's argument that environmental protection is generally subordinate to economic concerns. In other words, safe drinking water legislation does not guarantee that tap water is free of any substance that could potentially harm human health. Rather, for the contaminants that are regulated or considered, the legislation seeks to provide Americans relatively clean drinking water to the degree that it does not require substantial social change.

Civil Society and Fordist Environmental Governance

While the New Deal, wartime production measures, the New Frontier, and the Great Society had all expanded the size and scope of government, they had done so

[30] When the initial environmental legislation was passed, cost-benefit analyses were, arguably, implicitly part of enforcement as policy makers and regulators often yielded to economic concerns. The explicit language then would be a reaction to perceptions of regulatory overreach, which is basically regulation that impacts treadmill acceleration.

without substantively transforming the relationship between civil society and the state. Instead, the transition from welfare capitalism to the welfare state involved substituting the paternalism of the state for the paternalism of the corporation.

In the Fordist era, outside of formal elections, citizens engaged in governance primarily through involvement in social movements. Before the emergence of the environmental movement, in the organized labor and civil rights movements, social movement organizations (SMOs) challenged and transformed dominant social institutions, creating and legitimating the role of non-institutional approaches to civic engagement. It was in response to the rise and consolidation of post-war social movements that the study of collective behavior, which includes the sociology of social movements, moved from viewing these actions in terms of psychological strain to the more rational approaches of resource mobilization and political process theories (McAdam 1982; McAdam, McCarthy, and Zald 1996; McCarthy and Zald 1977). I will go into more detail later in this chapter about the changing forms of social movements, but for now I simply want to emphasize that citizen involvement in Fordist governance generally operated through practices external to general institutional processes, like social movements.

Fordist Local Environmental Governance

Local environmental governance followed the general Fordist-treadmill pattern, with an emphasis on the role of local growth coalitions that dominated local governments (Logan and Molotch 1988; Molotch 1976). While government at all levels faces significant pressure from economic interests, the local growth coalitions that dominate city governments disproportionately represent landed business interests and use their

power to further the consensus that a local government's top priority is growth and "political structures are mobilized to intensify land uses for private gain" (Logan and Molotch 1988: 65). Furthermore, local property owners, who dominate local politics, are likely to oppose the perceived encroachment on property rights associated with environmental regulation. Thus local environmental governance faces the generalized challenge of balancing growth and protection with more localized growth coalitions ability to operationalize "job blackmail" claims (Kazis and Grossman 1982).

The Great Lakes Water Quality Agreement (GLWQA), the empirical focus of this dissertation, operated for about a decade and a half before it was revised to formally mandate public involvement in the remediation process. One of the primary motivations for government incorporation of public involvement was external pressure from citizens groups, like Great Lakes United, that pushed for transparency and access. As is shown by the case study of the Detroit River Area of Concern, citizen participants who were not close to centers of economic and political power encountered the barriers of growth coalitions that successfully mobilized to minimize robust citizen engagement.

From Fordism to Neoliberalism

The Fordist regime of accumulation rested on the business-labor peace of the post-war labor accord. Whereas the Fordist regime of accumulation was relatively bound at the nation-state,[31] the neoliberal regime of accumulation is fundamentally global. The labor peace of the post-war labor accord has shattered as manufacturing increasingly shifts to other countries, particularly China, minimizing business motivations for buying

[31] Though all domestic events were tremendously influenced by the geopolitics of the Cold War, as Dudziak (2000) shows in her analysis of how the Cold War shaped the Civil Rights movement.

off labor peace.[32] Factories that remain in the US have increasingly adopted two-tier wage structures, where new employees are paid substantially less than long-time workers. The rise of international financial institutions and multilateral trade agreements accelerated the pace of globalization while minimizing the regulatory capacities of states. For the purposes of this dissertation, a full-scale overview and analysis of neoliberal global transformations is not required. The following points will be sufficient: the acceleration of economic globalization increased intranational stratification, whether global cities that economically benefitted from the transformations (Sassen 2001), areas of the world that became 'structurally irrelevant' to the global economy (Castells 2000), or 'third world cities' (Davis 2006). The mass production of the Fordist era's dependence on homogenized mass consumption left it prone to a crisis of oversupply in the face of shifting and fractured consumer demand.[33] Moving towards "flexible specialization" enabled companies to become more responsive to shifts in demand (Piore and Sabel 1984; Sabel 1989). I will leave behind more nuanced discussions of the political economic structure of post-Fordist and/or neoliberal shifts in production to turn toward neoliberal governance. There are two key dimensions of neoliberal governance that I discuss below. First, changes in state policy towards privatization and the creation of markets. Second, the diminished role of social movements as NGOs rose to increasing prominence, in terms of both raw numbers and influence.

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[32] As recent accounts of manufacturing in China show, through intermediaries and subcontractors, TNCs have assumed near total control over the workplace. In its account of how Apple products are manufactured, the New York Times quotes an unnamed Apple executive explained, "You can either manufacture in comfortable, worker-friendly factories, or you can reinvent the product every year, and make it better and faster and cheaper, which requires factories that seem harsh by American standards . . . And right now, customers care more about a new iPhone than working conditions in China" (Duhigg and Barboza 2012)

[33] The fragmentation of consumption offers an important insight into variations in environmental action as environmentalism becomes increasingly equated with consumption.

The Neoliberal State

Post-Fordist governance unfolded in two waves, first the neoconservative destruction of the Fordist welfare state and, second, the neoliberal reconstruction of governance (Peck and Tickell 2002). Whereas Fordist governance had prioritized government legislation and bureaucratic regulation, neoconservatism represents a partial reconstruction of *laissez-faire* economic principles. Cracks had appeared in the post-war labor accord well before President Reagan took office, but his 1981 decision to fire striking PATCO workers[34] shattered its remnants. While the architects dismantling Fordism often professed sympathy with Grover Norquist's famous line about shrinking government until it is small enough to be drowned in a bathtub, under the neoconservative governments of Presidents Reagan, Bush, and Bush, government growth endured. In introducing an initiative aimed at reinventing government,[35] President Clinton declared, "Our goal is to make the entire Federal Government both less expensive and more efficient, and to change the culture of our national bureaucracy away from complacency and entitlement toward initiative and empowerment. We intend to redesign, to reinvent, to reinvigorate the entire National Government" (Gore 1993: 1). When the second President Bush challenged the "third rail" of politics in his ultimately unsuccessful efforts to privatize social security through the creation of private savings accounts, he demonstrated the neoliberal imperative to extend markets into all aspects of society (Harvey 2007). President Obama's signature policy initiatives are rooted in earlier

[34] Ironically, the Professional Air Traffic Controllers Organization was one of a small number of unions that had broken with the Democratic Party-organizer labor partnership to endorse Reagan in the 1980 election. Within a few months of the mass firing, the union was decertified and defunct.
[35] The initiative did not focus on what the government did, but how it went about doing so.

neoliberal (and Republican) efforts, including health care (The Romney plan in Massachusetts), climate change ("cap and trade" from the first Bush administration), and the economic bailout (TARP began in the second Bush administration). It is also important to note that in spite of the ideological hegemony of market superiority, public and private subversion of the markets when in the interest of corporate power endured, from forbidding Medicare to negotiate drug prices (Pear 2011) to the numerous corporate scandals of the early 21st century.

To show how neoliberal market ideologies have fundamentally transformed governance, I will briefly examine changes in federal educational policy. Over the past decade, two important federal initiatives, the No Child Left Behind (NCLB) Act and the Race to the Top funding initiative, moved educational policy in a neoliberal direction (Hursh 2007; Torres 2005). NCLB heavily emphasizes quantitative metrics (based on an assumption that education is reducible to test scores), school choice, private alternatives, and competition. The logic of the act is that providing educators and schools with a strong material interest in improving student performance as measured through standardized test scores[36] will reverse the enduring problem of achievement gaps.[37] The neoliberal emphasis on quantification centers on a faulty assumption that quantification is inherently objective and true.

The Department of Education created Race to the Top to allocate more than $4 billion in stimulus funds. Rather than relying on department bureaucrats to make decisions about dividing the funding among interested states, the department created a

[36] Through funding mechanisms, the threat of losing students (and thus funds) to other schools, teacher evaluations, etc.

[37] I am using NCLB to highlight the forms of neoliberal governance, rather than evaluate its effectiveness in accomplishing its goals. It is worth noting though that in practice, NCLB "is more likely to harm rather than help most of the students who are the targets of its aspirations" (Darling-Hammond 2004).

competition in which a small number of states would win substantial funds based upon structural reforms. Following the quantitative emphasis of neoliberal governance, the program outlined a scoring rubric that states would be judged on. A total of 500 points could be earned, based on "State Success Factors" (125 points), "Standards and Assessments" (70 points), "Data Systems to Support Instruction" (47 points), "Great Teachers and Leaders" (138 points), "Turning Around the Lowest-Achieving Schools" (50 points), and a "General Selection Criteria" residual category (55 points); an additional 15 bonus points could be earned by emphasizing STEM (Science, Technology, Engineering, Mathematics) (United States Department of Education 2009). The creation and application of this rubric lends the illusion of objective decision-making and obscures the arbitrariness of human choice in the design and relative weights of the categories (Peterson and Rothstein 2010). However, the overall process and the categories themselves reveal the neoliberal imperative: market competition, privatization, quantification, and objectivity. Thus, the neoliberal market panacea is used to reward states that most strongly embrace neoliberal policies. In the following section, I show how neoliberalism transformed US environmental governance.

Neoliberal Environmental Governance

The 1990 reauthorization of the Clean Air Act introduced a national cap-and-trade system for sulfur dioxide; this marked a key moment in the transition from Fordist to neoliberal environmental governance. The original Clean Air Act, passed in 1963 and updated in 1967, 1970, and 1977, created and enforced emissions standards on a facility-by-facility basis. While it initially provided no incentives for exceeding the legally

mandated standards, the seeds of the 1990 market-based approach emerged in the implementation of the 1970 Act. The first iteration of the 1970 Act prohibited states that failed to meet compliance standards from allowing any new sources of pollution – an extremely anti-treadmill policy that in effect would have meant no new facilities could open. In response to strenuous objections from states and industry, the EPA moved to create a "bubble" policy that, in essence, created miniature, local pollution markets (Schnaiberg and Gould 2000). Companies could offset failure to meet emission standards for one form of pollution by exceeding standards for a different pollutant or it could sell its allowance to another facility that wished to locate in the area (Schoenbrod 1983). The initial concept for the bubble policy came from the smelting industry, though its application to that industry was eventually rejected by the courts[38] (Landau 1980; Schnaiberg and Gould 2000).

In order to address the challenge of acid rain, the 1990 Clear Air Act created a cap-and-trade system for sulfur dioxide. Rather than creating uniform discharge regulations or geographically narrow bubbles, the cap-and-trade approach set a nationally allowable limit for total discharge that would be met by 1995. At that point, facilities that had surpassed their emissions target received tradable emissions allowances. Facilities that exceeded their allowable emissions that did not purchase additional allowances were fined and required to submit a plan for achieving the needed reductions. By introducing market pressures into corporate decision-making over discharges, the Clean Air Act created incentives for companies to reduce pollution beyond mandated

[38] The courts' discussions of the bubble were "difficult to reconcile" in their explanations of when and how such an approach might be legal (Glass 1980). Under the 1977 Act, the bubble approach was applied to single facilities to determine when upgrades triggered requirements to adhere to stricter emissions standards. In practice, this reduced the costs to business of complying with standards.

maximum levels; after all, any "unused" pollution could be sold to dirtier facilities. In 2002, The Economist, an enthusiastic proponent of neoliberal governance, called the SO_2 trading policy, "the greatest green success story of the past decade" (2002). The plan's overall target was to reduce emissions to 8.95 million tons by 2010; in fact, the goal was surpassed in 2007, when only 8.9 million tons were discharged, a 43% reduction from 1990 (United States Environmental Protection Agency 2007). However, there are many possible explanations for the change.[39] Shifting production abroad, whether in search of cheaper labor or weaker labor and environmental laws, reduces domestic production. There is also some evidence that sulfur dioxide follows a Kuznets curve[40] (Cole and Neumayer 2004), though there is not consensus about the relationship (Eicher and Begun 2008; Stern and Common 2001).

The Clean Air Act's cap-and-trade approach clearly falls in line with the neoliberal emphasis on market-based solutions to social issues. The transition from Fordism to neoliberalism transformed the underlying motivation of governance from one of growth to one of market efficiency. This has transformed how the state engages in environmental governance and the state's relationship with civil society in environmental governance. Another key dimension of neoliberal ideology, the emphasis on privatization, manifests itself in environmental governance through an increasing adoption of public-private partnerships and outright privatization to NGOs of tasks previously performed by

[39] In evaluating the Clean Air Act's effectiveness it is also important to look at international pollution enforcement. For example, states are less likely to enforce air standards along international borders, where their "environmental free riding" results in air pollution entering other countries, but there is no evidence for this free riding behavior along domestic state borders (Konisky and Woods 2010).

[40] An environmental Kuznets curve is an inverted 'U' shape describing the relationship between pollution and economic development. In this case, a Kuznets curve relationship between wealth and sulfur dioxide would mean that, up to a certain point, increases in wealth are positively associated with sulfur dioxide discharge, but after that point the relationship reverses itself.

public agencies. In the following section, I go into greater detail in defining and analyzing social movements and NGOs.

Social Movements and Non-Governmental Organizations

Despite the currently overwhelming practical, political, and academic interest in the role of non-governmental organizations (NGOs), there is a remarkable lack of academic work focused on defining NGOs as well as differentiating them from social movement organizations (SMOs) and social movements. Part of the difficulty in disentangling social movements and NGOs is that social movement theory never achieved consensus on how to define social movements. For the broadest version of social movement theory, NGOs represent simply another form of SMO, while more focused approaches would clearly view NGOs as entirely separate from social movements. Before discussing the relationship between social movements and NGOs, I briefly walk through the development of contemporary social movement theory. I then outline three ideal types of institutional arrangements: grassroots social movements[41] (GSMs), professional social movement organizations (PMSOs), and NGOs. I use these categories as a heuristic tool to understand different logics of civil society participation in environmental governance shaped by an individual or groups' social setting.

Beginning in the 1970s, theoretical work on social movements focused on when and how populations translated their grievances into action. The central tasks of this approach were to understand social movements' access to resources, relative ability to operationalize those resources, and the political context that enabled or hindered

[41] I use social movements to describe grassroots efforts and social movement organizations to describe professional efforts to emphasize the more formal organizational structures of the latter. GSMs often include GSMOs.

mobilization (McAdam 1982; McAdam, McCarthy, and Zald 1996; McCarthy and Zald 1977). In a classic text, McAdam defines social movements as "organized efforts, on the part of excluded groups, to promote or resist changes in the structure of society that involve recourse to noninstitutional forms of political participation"[42] (McAdam 1982: 25). This is a narrow definition of social movements that emphasizes power and social structure. His insistence that social movements employ 'noninstitutional' forms of participation suggests that social movements would cease being social movements if their approach becomes institutionalized in the normal forms of politics. In another approach built on grassroots social activism, Tarrow (1994) defines social movements as, "collective challenges, based on common purposes and social solidarities, in sustained interaction with elites, opponents, and authorities" (4). The aspects of movements most closely linked in the popular imagination with the term social movement – civil rights, feminism, labor, peace, etc. – align with emphases on noninstitutional action by non-elite participants. This narrow approach holds that not all forms of collective behavior are social movements.

Other scholars offer a broad view of social movements. Garner and Zald (1990) note the, "most inclusive definition of a social movement is any sentiment and activity shared by two or more people oriented toward changes in social relations or the social system" (294). The primary trouble with this approach is that this level of generality retains very little theoretical value. Without an ability to generalize characteristics of movements, there is no space for comparison or differentiation.

[42] Introducing this definition, McAdam notes that it is important to differentiate social movements from interest groups like the Sierra Club.

While I can understand the desire to take a broad umbrella approach to social movements, classifying nearly every form of purposive social action as a social movement strips the term of much of its theoretical strength. For the analysis in this dissertation, my primary objection is that it precludes differentiating between NGOs and social movements.[43] Rather than creating sharp boundaries around what are or are not social movements, I want to differentiate between three ideal types of institutional arrangements: GSMs, PSMOs, and NGOs. These three ideal types are not meant to be an exhaustive overview of possible forms of social organization, but the following characterizations will be a useful heuristic tool in understanding the logics different sections of civil society use in engaging governance and historical transformations of governance. In developing these ideal types, I discuss the following dimensions: basis of participation, demographic trends, role of memberships, forms of participation, and funding sources.

Grassroots Social Movements

The rich body of work on the role of frames in social movements shows how individuals come together to unite around shared grievances and how frames shape and are shaped by participants (Čapek 1993; Snow, Rochford, Worden, and Benford 1986b). In grassroots social movements, participants come together on a voluntary basis.[44] While the decision-making structures and degree of hierarchies vary across grassroots social movements, research about ecopopulist and environmental justice GSMs shows that their leaderships are less male dominated than professional middle class environmental

[43] Let alone social revolutions, which share little in common with the haute cuisine movement.
[44] Because participants are often from poor or working class backgrounds, financial contributions are more difficult than they would be for middle class or elite potential participants.

organizations (Szasz 1994; Taylor 2000). GSMs are more often composed of people of color, women, and poor and working class people than PSMOs, whether because of historical experiences (Taylor 2002) or homophily (McPherson, Smith-Lovin, and Cook 2001) or both. Because GSMs do not have direct access to public and private decision-makers, their logic of action stresses collective power (Offe and Wiesenthal 1980). Now classic elements of GSMs' repertoires of contention (Tarrow 1994) include those that emphasize numerical power like marches, rallies, strikes, boycotts, sit-ins, etc. as well as those that draw on the intensity of commitment of smaller numbers of strongly devoted people like hunger strikes, property destruction, and violence. In addition to frames, composition, and tactics, another important dimension of an SMO is its ability to mobilize resources (McCarthy and Zald 1977). GSMOs operate with relatively small budgets and rely on membership voluntarism for work and material contributions. GSMOs thus influence governance by exerting pressure, often through non-institutional channels, on states and private businesses. Because they are generally excluded from ordinary forms of decision-making, their interactions with powerful social institutions are often confrontational or are backed up by the GSMO's perceived ability to mobilize a challenge.

Professional Social Movement Organizations

Professional social movement organizations (PMSOs) combine elements of GSMs and NGOs. Like GSMOs, PMSOs have members, who they often mobilize in minimally intensive actions like brief coordinated communication campaigns (targeted postcards, letters, e-mails, phone calls, etc). These actions form part of larger campaigns developed and executed by the professional staff. So even though the member involvement may

extend beyond financial donations, the leadership of these organizations generally rests with a fully professional staff.[45] Membership funding generally makes up a large part of PSMOs budgets, but they are more likely than GSMOs to have alternate (government, business, foundation, etc.) sources of financial support. Finally, PSMOs operate through non-institutional channels, but have regular access to power holders through lobbying, consultation, and a general "seat at the table."

Non-Governmental Organizations

Just as it can be difficult to differentiate between GSMs and PSMOs, it can also be challenging to draw the lines between social movements and NGOs. Indeed, unlike debates about how to define social movements, literature on NGOs rarely includes discussion of precisely what characterizes an NGO. Before offering a definition, I first discuss some key differences between social movements and NGOs. In PSMOs, members largely provide financial resources buttressed by the occasional time involvement. Resource mobilization is a challenge for PSMOs and NGOs, though they do so in different ways. While membership or community involvement is inherently part of SMOs, not all NGOs have members. Some NGOs rely exclusively on external funding sources. Like PSMOs, NGOs generally employ managerial and technical professional employees. Rather than simply exerting pressure and influence on decision-makers, many NGOs assume the regulatory, monitoring, and service roles once performed by the state. NGOs assume these roles as part of an increasing implementation of non-profit-based

[45] Because these are ideal types, there are certainly SMOs that combine aspects of GSMOs and PSMOs, perhaps combining professional staff and leadership with significantly engaged members and volunteers. Planned Parenthood springs to mind as an organization that contains significant elements of GSMOs and PSMOs.

privatization. Unlike GSMs and PSMOs, where people become involved on the basis of citizenship or constituency, involvement in NGOs is career-based.

I define NGOs as follows: A non-governmental organization is a formally organized non-profit social actor located within civil society that engages in governance through institutional channels on local, national, or transnational levels. NGOs internalize the "non-ideological" ideology of neoliberalism and are structured around concrete goals, which can be narrow or broad in scope. Although, as their name indicates, NGOs are independent from the state, their work is often closely coordinated with public agencies and often includes the assumption of tasks that previously fell to the welfare state.

My argument is that, somewhat paradoxically, the move to public involvement in the form of environmental NGOs has restricted rather than expanded democratic involvement in environmental governance. While the NGOs themselves play a more substantive role than many social movement organizations did in earlier times, the composition of the NGOs combined with the state's role in defining which organizations legitimately represent the public interest, narrows the range of public involvement even as the public (as "represented" by NGOs) plays a larger role.

Relationship Between Social Movements and NGOs

In order to illustrate the relationship between social movements and NGOs, I present a brief case study of the anti-sweatshop movement that combined classic grassroots social movement elements with NGO-based certification regimes. In his work on private certification/regulation systems, Bartley (2003) identifies two phases of action addressing international concerns: the first included actions taken by movements

targeting individual companies, the second focused on the "international institutional context of neo-liberalism and free trade" (434). The global justice movement was in part a response to the neoliberal emergence of transnational corporations (TNCs), which engage in increasingly global material production practices as well as branding that creates the "core meaning of the modern corporation" (Klein 2002: 5). The perceived decreasing salience of the state combined with the increasing sensitivity of TNCs to their brand identity to create a political opportunity for social movements to directly target TNCs.

The student anti-sweatshop movement of the 1990s shows the potential for partnerships between GSMs, PSMOs, and NGOs. The students drew on classic grassroots tactical repertoires – demonstrations, sit-ins, boycotts, etc. – to draw the linkages between their universities' claimed "brand identities" and the material reality of the production of goods bearing their symbolic logos. It was the sponsorship of an established PSMO,[46] the AFL-CIO, that initially sparked student interest in economic justice. NGOs offered privatized governance: certification and regulatory oversight that assessed corporate practices.

The immediate roots of the US student anti-sweatshop lie in college students' involvement with the organized labor movement in the 1990s (Van Dyke 2007). In 1995, John Sweeney's New Voice campaign won leadership of the AFL-CIO on a platform of transforming the labor movement by re-emphasizing organizing in order to overcome recent decades of defeat and stagnation (Clawson 2003). One of Sweeney's first projects was Union Summer, which paid college students to work in labor union organizing during their summers away from school (Clawson 2003). Union Summer paved the way

[46] The labor movement combines GSM and PSMO elements, but the international AFL-CIO, while critical of the status quo, is very much a PSMO.

for increased student consciousness about union issues (intentionally trying to prevent the schisms that developed in the 1960s between organized labor and the New Left). Other key experiences for students included working closely with the Union of Needletrades, Industrial and Textile Employees (UNITE) and visits to Central American factories where they observed the working conditions first hand (Gourevitch 2001).

During the 1990s, colleges and universities throughout the US increasingly turned to neoliberalism by adopting the organizational logic of corporations (White and Hauck 2000). The new corporate universities, especially large-scale research institutions, "situated [students] at the consumer level of a complex knowledge factory" (Rhoads 2003: 232). Students returning to campus from Union Summer joined with their peers in order to challenge the new corporate-university hybrids in which they lived, studied, and worked (Rhoads 2003). The anti-sweatshop movement grew out of students' recognition that their universities were embedded within a larger political-economic system. On a number of campuses, students challenged the administrations to adopt codes of conduct for potential licensees.

The summer following the first university-based campaigns, student representatives from 30 colleges joined together and founded United Students Against Sweatshops (USAS). The following academic year, anti-sweatshop sit-ins occurred across the country (Clawson 2003). These actions led to the creation of two monitoring agencies: The Fair Labor Association (FLA) and the Worker Rights Consortium (WRC). The FLA grew out of the Apparel Industry Partnership (AIP), a Clinton initiative that brought together representatives of industry along with NGOs. Labor and religious groups, including UNITE and the Interfaith Center on Corporate Responsibility, rejected the AIP's call for voluntary self-regulation. Like its predecessor, the FLA relies upon self-

monitoring and its governing board initially consisted of six industry representatives and five from NGOs (Gourevitch 2001). Critics of the FLA, who believed it too industry friendly, created the WRC. The structure of the WRC starkly contrasts with the FLA. Its board of directors consists of five industry representatives, five international labor union representatives, and five USAS representatives. The WRC differs from the FLA in several other key ways: a stricter code of conduct (including living wage and right to unionize clauses), public release of monitoring results (essential for issues of corporate accountability), and an emphasis on unannounced external monitoring (which maximizes the likelihood of seeing "true" working conditions). Corporate critics of the WRC argue that it is more concerned with "identifying problems and embarrassing firms than on resolving problems" (O'Rourke 2003: 18).

The rise of anti-sweatshop social action and international monitoring agencies shows one way that social movements and NGOs have connected, but it also points out some potential challenges with NGO-based governance. Without formal legislation, the victories of the anti-sweatshop movement are only as durable as the social movements themselves. If/when civil society interest in the issue of sweatshops wanes, will universities still feel compelled to require licensees to submit to the WRC monitoring? Furthermore, the corporate-friendly FLA far outpaces the more critical WRC, creating a veneer of legitimacy for contemporary manufacturing practices.

Professionalization of social movements and the life cycle of social movements are distinct from NGOs, though in practice professionalized social movements and NGOs may resemble one another. The case study of the anti-sweatshop movement shows how GSMs, PSMOs, and NGOs engaged issues of workplace conditions and pay with little to no state involvement. Rather than fighting for legal standards for hours, pay, benefits,

working conditions, etc., the student groups pushed universities to require TNCs to submit to NGO-run monitoring.

NGOs have similarly assumed prominent roles in environmental governance. In the GLWQA, the two Areas of Concern that I study are today formally or de facto run by local NGOs. It is the challenge for environmental sociology to understand these changes in governance. One potential approach is through ecological modernization theory.

Ecological Modernization Theory

Environmental sociological theory emerged during the era of Fordist governance and its foundational political economic approaches to social-environmental relations were fundamentally shaped by that era. Just as the treadmill of production was related to, but not reducible to, the regulation analysis of Fordism, ecological modernization theory is sympathetic to neoliberalism without simply being a neoliberal approach to environmental governance. Ecological modernization theory arose in Europe during the transitional period between Fordism and neoliberalism. In direct contrast to the, at that time, dominant approach in environmental thought which argued that achieving environmental sustainability involved fundamental social reorganization, ecological modernization theory holds that, "environmental problems can be solved in accordance with the workings of the main institutional arrangements of society. Environmental management is seen as a positive-sum game: pollution prevention pays" (Hajer 1995: 3). As I explore below, recent iterations of ecological modernization theory have taken a more nuanced view of the relationship between capitalism and environmental sustainability, but as a whole the field still embraces the premise that environmental

sustainability will be achieved through the social institutions of modernity with minimal disruption to contemporary social-environmental trajectories.

Mol (2003) argues that ecological modernization theory developed in at least three phases. The first phase of ecological modernization theory uncritically celebrated technological solutions to environmental problems and evinced a "perhaps naïve" faith in market actors (Mol 2003: 57). Joseph Huber (1985) exemplified this exuberant celebration when he described how, "The dirty and ugly industrial caterpillar transforms into an ecological butterfly" (translation quoted in Spaargaren and Mol 1992: 334). The aesthetic distinction between the ugly old methods and beautiful new ones is cast in biological terms: as a caterpillar naturally progressed into a butterfly, so will capitalism naturally evolve beautiful, clean manufacturing processes. For early ecological modernizationists, "superindustrialization" marks the transition from modern industrial to ecologically modern industrial (Huber 1982; Huber 1985).[47] One of my central arguments is that the social logic of governance has shifted from an underlying emphasis on economic growth to one of market efficiencies and this transformation is reflected in the distinctions between earlier theories in environmental sociology and ecological modernization.[48] The first phase of ecological modernization theory's emphasis on technology depended upon economic growth to finance the technological innovation and implementation. As the theory has backed away from adding new technologies to existing productive practices, it has moved away from growth and toward market efficiency. While technology still plays a prominent role in ecological modernization arguments, "the conceptualization of

[47] Huber's foundational works have not been published in English; this assertion is based on, among others, Spaargaren and Mol (1992) and Mol (2003).

[48] There is a second key distinction: the treadmill of production model **critiqued** the assumption that growth is good, while ecological modernization is more a **celebration** of efficiency. The point is that each theory focused on the central logic of governance at the time.

technology and technological change has widened considerably" (Mol and Spaargaren 2000: 21).

The second phase of ecological modernization theory, "gave evidence of a more balanced view of state and market dynamics in ecological transformation processes" (Mol 2003: 58). Ecological modernization theory remained rooted in Western Europe and explored how social institutions involved in production incorporated environmental concerns. For example, Mol's (1995) study of the chemical industry argued that corporations responded to ecological considerations independently of economic ones. Indeed the idea of a decoupling of environmental and economic concerns is a cornerstone of ecological modernization thought.

In its third phase, ecological modernization theory expanded from its focus on production and/or its Eurocentric orientation[49] to examine issues like greening consumption (Spaargaren 1997), Thailand's pulp industry (Sonnenfeld 1998), and the role of globalization (Spaargaren, Mol, and Buttel 2000). These works retain ecological modernization's emphasis on market solutions, vision of a narrower role for the state, and separation of social and environmental concerns, while acknowledging that the transition from modern industrial capitalist society to an environmentally sustainable alternative is more complicated than earlier proponents of the theory anticipated.

Though it has undergone significant transformation, ecological modernization theory still holds that the ecological crisis can be, and indeed is being, addressed through already existing social institutions. In assessing ecological modernization theory, it is

[49] As I noted earlier in my discussion of the Fordist welfare state, there were significant differences in the scope of US and Scandinavian welfare states. Similarly, environmental governance in the two areas differs greatly. One of the initial critiques of ecological modernization theory was that it sought to generalize the experiences of Northern Europe to the rest of the world.

important to specify what level of its claims one is analyzing. At a broad, general level of empirical observation, many of these arguments are accurate. Businesses, which once viewed environmental concerns as external to their institutional practice, have increasingly internalized environmental factors (Hoffman 1997). As the historical emergence of neoliberal practice shows, trends in market efficiency based approaches and privatization are in line with ecological modernization theory's claims. However, in spite of the increases of ecological modernization, which are very geographically and sectorally uneven, social-environmental trajectories remain headed in unsustainable directions. An assessment of the social determinants of environmental degradation (York and Rosa 2003; York, Rosa, and Dietz 2003a; York, Rosa, and Dietz 2003b), found that because of, "demonstrated logical, methodological, and empirical inadequacies [with ecological modernization theory],[50] the validity of its claim that continued modernization is the only way out of the environmental crisis (or a way out at all) is suspect" (York and Rosa 2003: 283).

Ecological modernization theory falls directly in line with neoliberal governance. Market-based funding and regulatory regimes, from Race to the Top to cap-and-trade approaches to sulfur dioxide, encourage the innovation celebrated by ecological modernizationists. The rise of NGOs and marginalization of grassroots social movements likewise meshes with the premises of ecological modernization. By their design, markets efficiently allocate goods and services and create inequality. The foundational premise of the welfare state was that the state should insulate society from the vagaries of the market.

[50] These include a failure to show that new institutional forms produce substantive reform and impacts, a methodological question about the representativeness of case studies used in ecological modernization theory, failure to address economy-wide trends, and a failure to distinguish between relative improvements in efficiency and absolute reductions in impact (York and Rosa 2003).

The intersection of markets, other forms of inequality, and the environment lies behind environmental inequality and inspired the rise of the environmental justice movement.[51] At a minimum, this raises a normative concern about ecological modernization theory's insistence on separating social and environmental concerns. More practically, unfettered market-based ecological governance policies will ensure an unequal distribution of environmental benefits and hazards. From the rise of the industrial era, geography, social location, and environmental hazards combined to create historically specific spaces of environmental injustice (Bullard 1990 ; Bullard 1993; Bullard 1994; Cole and Foster 2001; Hurley 1995; Taylor 2009; Taylor 2002). The incorporation of market logics into governance and the rise of green consumption will likely increase inequalities in access to environmental protection. I challenge the ecological modernizationist emphasis on separating social and environmental issues to argue that environmental justice cannot be disentangled from environmental sustainability, because of issues of social conflict and legitimacy.

Ultimately, the challenge of growth and efficiency is the key theoretical and practical distinction in neoliberal social-environmental relations. Even if per-unit production efficiency gains are realized, if they are overcome by growth and expansion, then trajectories shift further away from environmental sustainability. While there are fundamental problems with ecological modernization, particularly its insistence that modern institutions can and will address environmental problems in spite of the generally

[51] This is **not** a unique feature of the neoliberal era. For example, because housing patterns have been shaped by formal racial segregation and market forces, environmentally inequitable distribution of environmental positives and negatives is an enduring legacy.

negative global trend of social-environmental relations, understanding neoliberalism is central to understanding current forms of environmental governance.[52]

Updating the Treadmill Model for a Neoliberal Era

While ecological modernization theory can illustrate the logic underlying much of contemporary environmental governance, its inability to accurately capture social-environmental relations from a macro-global perspective leaves it unable to assess sustainability concerns. To understand global environmental trajectories, I believe it makes sense to turn to an updated version of the treadmill of production model. One reason often cited in dismissing the treadmill model is that its current application suggests that trends in the social-environmental dialectic are not in the direction of environmental sustainability and that many of the most popular governance approaches will not achieve their intended environmental goals.[53] While it is understandable that dominant social institutions would be attracted to arguments that emphasize their ability to successfully meet environmental challenges, there is significant evidence that global environmental conditions are deteriorating rather than improving, even as society grows increasingly "ecologically modern."

As originally developed, the treadmill approach offered a cogent social-environmental explanation of Fordist society. As the shift from Fordism to neoliberalism transforms US and global political economies and environmental governance, it is worth considering how the treadmill model holds up in the current era. In the Fordist era,

[52] There have yet to be formal attempts to insulate society from the negative social consequences of these neoliberal governance markets; in other words a welfare state for the post-welfare state.
[53] As Gould, et. al., note, "Even within the academy, the treadmill model is more often critiqued as 'depressing' than inaccurate" (2004: 312). For an articulation of this view, see Mol (2003).

economic expansion built on a shift from labor intensive to energy/technology intensive methods of production, which simultaneously diminished the social and environmental efficiencies of a given unit of production. The neoliberal era has witnessed an almost linear[54] acceleration in the shift towards diminished labor costs, particularly due to global shifts in production.

The real change in the neoliberal era is not with the political economic dynamics of treadmill acceleration, it is with the social response to its environmental and social consequences. In the Fordist era, the ubiquitous response to social or environmental issues either emphasized state bureaucracies or economic development. In the neoliberal era, there has been a qualitative shift towards market efficiencies as the solution to the treadmill's negative externalities. In short, the key change to production practices is spatial because of economic globalization, while it is governance that has shifted from growth (treadmill acceleration) to efficiencies.

Civil society's role in environmental governance has also shifted from the "citizen-workers" of the Fordist era (Gould, Schnaiberg, and Weinberg 1996) to NGO-centric privatization approaches. The decrease in labor power numerically and politically diminishes the importance of the hegemonic growth ideology. Instead, I argue that NGOs' middle-class composition and funding reliance on foundations and states makes them predisposed to uncritically accept dominant social-institutional arrangements.

Although I argue that two key aspects of the earlier treadmill model are less certain – growth as the unquestioned solution to social and environmental concerns and the hegemonic ideological dominance of growth as the ultimate governance aim – I

[54] It must be emphasized that the treadmill is <u>not</u> a linear change model, even if the empirical trajectories it analyzes have unfolded in a linear path in recent decades (Gould 2004).

believe that shifting to a global perspective makes clear the continuing explanatory power of the treadmill approach. One of the most central 'truths' of treadmill politics, the conflation of growth and social wellbeing, while still a dominant issue, is being occasionally challenged. A prominent example of this challenge is the Stiglitz-Sen-Fitoussi Commission charged by the French government with moving beyond GDP as a measure of social progress (Stiglitz, Sen, and Fitoussi 2010). This is a developed country recognizing growth's failure to meet its social promises and looking to move beyond growth for its own sake. When it comes to international development, though, growth remains a central goal. While my dissertation emphasizes local environmental governance, it does so by acknowledging that significant spatial variation in social and environmental outcomes exists within a macro-global system that is trending away from sustainability.

Conclusion: Market Efficiencies, Inequality, and Local Governance

The shift from Fordist to neoliberal governance involved a transition from an uncritical emphasis on growth to an equally uncritical faith in market efficiencies. One of the consequences of incorporating market logic into governance is that it reproduces the positive and negative consequences of market-based distribution. My argument is that, without positive intervention to regulate governance market efficiency approaches, they will produce inequality as well as efficiency, heightening rather than diminishing environmental justice concerns.

Through my analysis of the Detroit River and Buffalo River AOCs, I will show how the actions of grassroots social movement type actors (Detroit) and professional social movement type actors (Buffalo) engaged in local Fordist environmental governance, as

well as the importance of the state's orientation and presence of industry. The sharp acrimony and hostility in Detroit grew largely from the conflict between citizen participants and the dual-roles of local growth coalitions and state representatives concerned primarily with treadmill acceleration. In the Buffalo River case, citizen participants were most similar to participants in environmental PSMOs, so it is not surprising that there was more consensus than conflict in Buffalo. In the recent decade, as Great Lakes environmental remediation underwent a neoliberal turn, both AOCs have converged on a public-private model that links the federal government with local NGOs.

Chapter Four: The Detroit River Area of Concern

Introduction

On July 30, 1996, the Detroit River Area of Concern's (AOC) Bi-National Public Advisory Council (BPAC) met to vote on a Stage 2 Remedial Action Plan (RAP) draft, which would detail the scope of environmental problems in the AOC and identify the most effective steps for remediation. The product of five years time and designed with input from citizens, businesses, and local municipalities, the completed document represented a crucial step in the process of restoring the Detroit River. In spite of the countless hours of committee meetings, debates over proposed standards, and reviews of technical documents that went into producing the report, the attempted finalization was anything but celebratory. Instead, when the meeting opened, 12 BPAC members shared a prepared statement, offered their resignation from the committee, and walked out without voting on the final document. Their statement concluded: We "reject this document in that it does more to delay action rather than to further it, and in addition, it fails to fulfill the requirements of [a] Stage 2 [Remedial Action Plan] . . . Because of this . . . We will have nothing further to do with this bureaucratic process" (United States Environmental Protection Agency 1996: 10). After the dramatic walkout, the diminished committee approved the document and shortly afterwards withered away. In spite of pressure from the state of Michigan, federal and provincial authorities from Canada refused to recognize the document as fulfilling Stage Two requirements leading to its

eventual classification as a status update. Following the BPAC's dissolution, the state, provincial and federal governments made little effort to implement the plan and in general it has had virtually no impact on cleanup efforts in the region.

In this chapter, I argue that the initial phase of public involvement in the Detroit River AOC, which began in the mid-1980s and ended with the collapse of the BPAC was heavily shaped by the governance approaches associated with Fordism and the welfare state. Public involvement in the BPAC was in line with grassroots social movement/environmental justice approaches centered on collective action. The BPAC's failure coincided with a general stalling of remediation activities under the Great Lakes Water Quality Agreement (GLWQA). After years of inaction, in the early 2000s, renewed federal support led to a resumption of remediation efforts, though with two primary differences. First, the US and Canada now treat the AOC as two functionally separate areas, though it retains its formal bi-national designation[55]. Second, an environmental non-governmental organization (NGO), the Friends of the Detroit River, took the lead in a newly formed US public advisory council (PAC).

In spite of the general cessation of GLWQA specific actions during the decade that passed between the dissolution of the BPAC and the Friends of the Detroit River taking over the leadership of the PAC, government action made significant progress in the Detroit River. This included a number of remediation projects that addressed spaces of extreme toxicity, an executive order designating the river an American Heritage River, and the creation of the first international wildlife refuge in North America in the downriver region. In general, these projects were financed because of the Michigan congressional delegation's ability to gain earmarks for remediation projects.

[55] My primary focus is on the US side of the AOC.

This chapter includes four sections. First, I present a background of the Detroit River. Over the course of the 20th century, rapid population growth and a dramatic expansion of industrial manufacturing transformed the region socially and ecologically. Because of this rapid social transformation, for much of the 20th century, the Detroit River was an environmental nightmare: heavily polluted in general with extremely toxic pockets, especially along the US shoreline. Second, I provide an overview of the of the process that created the Stage One and failed Stage Two RAPs, explore the tensions between various stakeholders, and analyze the political context in the state of Michigan at the time. Next I turn to the work completed during the interregnum between the end of the BPAC and revival of the PAC under the Friends of the Detroit River. No single force drove remediation efforts during this period, but significant factors included EPA enforcement of the clean water act and the influence of Congressman John Dingell, who appropriated significant funds for regional environmental efforts. Finally, I turn to the newly revitalized Detroit River PAC and the expanded role of Friends of the Detroit River.

In conjunction with broad changes in the design and implementation of the GLWQA, discussed earlier in this dissertation, the two phases of public involvement in the Detroit River Area of Concern help illustrate the dramatic differences between Fordist and neoliberal forms of environmental governance. Under the former, environmental governance emerged in the form of centralized bureaucracies staffed by environmental technocrats. Environmental concerns were generally subordinate to economic growth concerns, though tempered by the state's need to maintain public legitimacy as it became increasingly seen as responsible for environmental protection. Because of sharp dividing lines between the state and civil society, citizen influence came

either through voting or social movements. The first RAP phase of the GLWQA fit squarely within this form of governance. RAP production in the Detroit River AOC also occurred during the state of Michigan's embrace of deregulationary neoliberalism in the 1990s. Peck and Tickell (2002) divide neoliberalism into two phases: "roll-back neoliberalism" and "roll-out neoliberalism." They define roll-back neoliberalism as a "pattern of deregulation and dismantlement," an apt description of Michigan at this time (384). Furthermore, while the environmental accomplishments of the late 1990s and early 2000s were rooted in the earlier Fordist logic, the revived PAC represents "roll-out neoliberalism," "an emergent phase of active state-building and regulatory reform" (Peck and Tickell 2002: 384). The prominent partnership between Friends of the Detroit River, which submits proposals and handles the administrative details of the AOC, and the EPA, which provides funding and some guidance would have been extremely unlikely in an earlier Fordist era. Before examining the history of the GLWQA in the Detroit River, it is first necessary to look at the 20th century relationship between human society and the river.

Detroit River Background

In spite of its name, the Detroit River is not actually a river, but a 32-mile connecting channel that runs between Lake St. Clair and Lake Erie and is bordered by both the US and Canada. The river separates Detroit from Windsor, Ontario. Other US towns and cities on the river include: Grosse Point Park, River Rouge, Ecorse, Wyandotte, Riverview, Trenton, Grosse Ile and Gibraltar. The river is the lowest section of the Upper Great Lakes Connecting Channels and carries water from Lakes Michigan, Superior, and Huron down to Lake Erie (Michigan Department of Natural Resources

1991). The Detroit River AOC includes the river itself as well as 700 square miles of watershed and the city of Detroit's sewer shed (United States Environmental Protection Agency 2009c). It is the only AOC that has another AOC, the Rouge River, as a tributary. Though it is a boundary river, my interest is primarily with US remedial actions.

BJ Widick (1989) captured the essence of Detroit's history in the title of his book, *Detroit: City of Race and Class Violence*, though I might have called it 'Detroit: industrial city of race and class violence,' for it is the rapid advance and eventual decline of industrial production along with sharp racial and class divisions that so thoroughly shaped Detroit's path from the dawn of the 20th century up to the present day. Detroit's transformation over the 20th century is striking. In 1910, African Americans made up only 5,741 of Detroit's 465,766 residents - or 1.2 percent of the population. A century later, in the 2010 census, Detroit's population was 713,777; in 2000, Detroit's population was 951,270 and was 81.6% African American (United States Census Bureau 2011; Wisely and Spangler 2011). At its peak in 1950, Detroit had 1,849,568 residents and was the fifth largest city in the United States. In the 2010 census, Detroit's population had fallen to 713,777,[56] though the Detroit urban area's population was 3,903,377, illustrating how suburbanization transformed the region. Throughout the 20th century, the Detroit metro region contained a wide range of industry, but it was for good reason that Detroit became known as the motor city.

Henry Ford captured national attention when, in 1914, he introduced the $5 day. In order to maintain a more consistent, quality workforce, Ford was willing to pay well above the prevailing wage rate. His move was in line with a popular 1920s ethos, welfare

[56] Almost 100,000 more people have left Detroit than had left New Orleans after Hurricane Katrina.

capitalism, in which "the enlightened corporation, not the labor union or the state, would spearhead the creation of a more benign industrial society" (Cohen 1991: 161). Though forestalling the emerging labor movement was a prime motivation of welfare capitalism, with the onset of the Great Depression, industry was unable to meet the high expectations it had set for its workers; this, along with ethnic ties among the white workers, contributed to the emergence of the militant Congress of Industrial Organizations (CIO) (Cohen 1991). By 1930, the automobile industry represented 13% of the country's manufacturing and the industry became increasingly concentrated in a handful of large firms[57] (Boyle 1995). A series of violent conflicts marked the beginning of the auto industry's resistance to the United Auto Workers (UAW), but by the early 1940s, the big three (General Motors, Ford, and Chrysler) had recognized the union. In the post-World War II era, class conflict became less overtly violent, but large-scale strikes as well as smaller informal actions at the point of production remained an enduring feature of the industrial landscape. The interconnected nature of automobile manufacturing meant that a small disruption at a single point in the supply chain would, in little time, have far-reaching consequences.

Workplace tensions were not limited to the heated conflicts between workers and industry; white workers frequently broke their professed class solidarity in the workplace as well as in the larger community. In the post-World War I era, racial tensions in Detroit lagged behind other industrial cities, mostly because the economy grew so rapidly that African American workers found employment at higher rates in Detroit than in the rest of

[57] The Big Three - General Motors, Ford, and Chrysler - produced 85% of all cars made during the 1930s (Boyle 1995).

the country.[58] However, racial violence soon engulfed the city. In 1924, Charles Bowles, the Ku Klux Klan's candidate, finished third in the mayoral primary, but still conducted a write-in campaign for the general election. Though Bowles captured the most votes, a judge disqualified 15,000 ballots using a strict standard: the candidate's name had to be spelled correctly and entirely legibly.[59] Racial tensions only escalated during World War II as tens of thousands of African Americans moved to Detroit, part of a larger process of what is known as the second great migration. Even as Detroit roared out of the Great Depression as the "Arsenal of Democracy," racial tensions endured. The race riot of 1943 began on Bell Isle, an island in the Detroit River, before spreading throughout the city. Federal troops eventually intervened to end the violence, but not until after three days of heated battles left 34 dead and hundreds more injured. Just 24 years later, the 1967 riot, also known as the rebellion, became the costliest moment of urban upheaval in Detroit's history, with 43 dead and tens of millions of dollars in property damage. Along with these highly visible moments of racial tensions there were countless hate strikes[60] in the work place and rigidly enforced residential segregation (Boyle 1995; Geschwender 1977; Widick 1976; Widick 1989). The social transformations that sparked such upheaval in Detroit also resulted in significant environmental changes.

During the 20th century, shorelines along the Rouge and Detroit Rivers rapidly industrialized, with striking environmental consequences. The US side of the Detroit River AOC and source area of concern (SAOC) is significantly more industrialized than

[58] Though workplace conditions for African American workers were often abysmal and they were usually the last hired and first fired.
[59] Bowles was elected Mayor of Detroit in 1930, but was recalled the same year.
[60] Hate strikes are illegal actions at the point of production in which white workers oppose workplace integration. As Kevin Boyle (1995) notes, the national UAW was extremely progressive on racial issues, but there was a sharp difference between the national and local unions on racial issues.

the Canadian side.[61] In 1961, Michigan Governor John Swainson requested the Department of Health, Education and Welfare's Division of Water Supply and Pollution Control hold a conference on water quality in the Detroit River and Lake Erie. The conference produced a "Report on pollution of the Detroit River, Michigan waters of Lake Erie and their tributaries," which inventoried discharges into the river. Each day 1.6 million gallons of wastewater were discharged into the Detroit River - approximately ⅔ of which came from industrial sources and ⅓ from municipal sources (Vaughan and Harlow 1965). Among the major manufacturers/products produced were Great Lakes Steel (coke, pig iron, sheet steel), Allied Chemical (soda ash), Anaconda-American Brass (copper), Revere Copper and Brass (copper and brass), US Rubber (tires), Chrysler (gears, chemical adhesives, brake linings, soluble oils, engines), Du Pont (sulfuric acid), McClouth Steel (cold rolled steel, stainless steel), Mobile Oil (gasoline, other petroleum products), Monsanto (phosphates and detergents), Pennsalt Chemical (chlorine, acids, organic chemicals) and Wyandotte Chemical (soda ash, lime) (Vaughan and Harlow 1965). Along with its industrial use, the Detroit River also provided a significant source of industrial transportation. In this same report, the authors noted that tonnage shipped through the river during its eight month shipping season was greater than either the Panama or Suez Canals see during an entire year (Vaughan and Harlow 1965).

In addition to the vast routine discharges, there have also been several notable pollution events in the river. Between 1946 and 1948, industry spilled nearly 6,000,000 gallons a year of oil and other petroleum products into the Detroit River (Hartig, Zarull,

[61] At the time of the 1991 Stage One RAP, 10 percent of land use on the US side of the river was industrial, compared with two percent on the Canadian side. Only 30 percent of the US SAOC is agricultural/undeveloped land; in Canada, it is 90 percent (Michigan Department of Natural Resources 1991).

Ciborowski, Gannon, Wilke, Norwood, and Vincent 2007). This pollution had devastating consequences for wildlife. In January 1948, 11,000 ducks died in the Detroit River, dramatically illustrating the problem of pollution. Prior to the 1930s, in winter the entire lower half of the river would freeze. Waterfowl favored this stretch of the river because of its shallow waters and abundant food. Beginning in the 1930s, increasing industrial discharge left pockets of the river unfrozen through winter. Ducks were attracted to the unfrozen water, with tragic results. As with many other extraordinary events, the duck kill sparked public outcry and pressure on the state (Hartig and Stafford 2003). In spite of the increased public concern and interest in water quality, the river remained polluted for decades to come.

Along with the numerous current and historical industrial sources of pollution, municipal pollution sources have also been prominent in the AOC. The most notable source is the city of Detroit's sewage system. Conflict over discharges has added to already significant tensions between the city and surrounding areas.[62] Regional population growth throughout the 20th century led Detroit's sewage system to become both technologically outdated and inadequate for the scale of the population served, leading to routine direct discharges of raw sewage into the river. As I discuss later in this chapter, it is only through EPA enforcement of the Clean Water Act, in spite of urban resistance, that the city's sewage system has improved in recent years.

In short, prior to the GLWQA, the Detroit River was a soupy morass of chemical and biological hazards almost entirely unfit for human contact. The rapid growth of regional population and industrial manufacturing that created the river's environmental

[62] Large-scale white flight created a sharp racial divide between the city proper and the suburbs (Sugrue 1996).

problems also produced and exacerbated the sharp social conflicts in the region. These tensions around class and race formed the undercurrent of troubles that would soon arise with public involvement in cleanup efforts. In the next section, I turn to early efforts to define the scope of environmental concerns as well as to develop policies that could alleviate this environmental ruin.

Precursors to the Detroit River Remedial Action Plan

Research that laid the groundwork for the development of the Detroit River AOC's RAP began in 1983 when the EPA initiated the Upper Great Lakes Connecting Channels Study (The Upper Great Lakes Connecting Channels Study Management Committee 1988a; The Upper Great Lakes Connecting Channels Study Management Committee 1988b). In partnership with Environment Canada, the working group studied the St. Marys, St. Clair, and Detroit Rivers to understand their overall environmental condition, identify contaminants and their ecosystem effects, as well as assess the effectiveness of existing and proposed regulatory interventions. As part of the study, working groups carried out significant field and laboratory research on the three rivers. While the study concluded all three rivers suffered from serious environmental damage, it also found that the scale of pollution in the Detroit River far exceeded that in the other two rivers. In its summary, the report stated:

> The Detroit River has the most severe environmental quality problems of the Upper Connecting Channels. It is the most intensively developed of the upper channels with extensive urban, commercial and industrial complexes, particularly on the US side. However, over the past two decades, improvements have been made in controlling conventional pollutant point sources in the Detroit River especially discharges of oil and grease, and nutrients. Concentrations of other conventional water quality parameters, including chloride, ammonia and phenols have declined substantially (The Upper Great Lakes Connecting Channels Study Management Committee 1988a: 37)

The report highlighted the Detroit Wastewater Treatment Plant's particularly egregious discharge record. In the 1970s, the EPA identified the plant as the single greatest polluter anywhere in the Great Lakes, sparking a $400 million project to bring it into compliance with federal regulations, which was completed in 1984. Even after this renovation, the Connecting Channels Study found it to be the largest source for discharges of PCBs, mercury, and oil and grease of any of the rivers studied.

The disparities in industrial impact covered in the report, as reflected by the number of waste sites on each river, are remarkable. The St. Marys River had five waste sites, the St. Clair River had six, and the Detroit River had 16 (The Upper Great Lakes Connecting Channels Study Management Committee 1988a). The watershed of the St. Marys River, which runs between Lake Superior and Lake Huron, is relatively industrially underdeveloped compared with the other two rivers and also has a smaller population. The watershed of the St. Clair River, which runs between Lake Huron and Lake St. Clair, includes heavily industrialized cities like Sarnia and Port Huron, but also has a smaller overall population than the Detroit River watershed. Clearly, in a region where economic development and inadequate public infrastructure have significantly impacted local waterways, the Detroit River is notable for its degree of pollution.

Developing the Stage One RAP

In 1985, work began on the Stage One RAP for the Detroit River AOC.[63] Because of its binational status, Michigan, Ontario and the US and Canadian governments share responsibility for the AOC. In "The Ontario-Michigan Letter of

[63] As discussed in the last chapter, the GLWQA began in the 1970s, but the three-stage RAP system did not begin until the 1980s

Intent on Shared Areas of Concern," signed by Michigan Governor James Blanchard and Ontario Premier David Peterson, the parties agreed to approach the Detroit River AOC with a joint RAP and that Michigan would take the lead role in its preparation (Michigan Department of Natural Resources 1991). The following agencies composed the RAP team that produced the Stage One Plan: Michigan Department of Natural Resources (Surface Water Quality and Fisheries divisions), US Environmental Protection Agency (Water Division), Ontario Ministry of the Environment (Detroit/St. Clair/St. Marys Rivers Project, Water Resources Branch, Southwestern Region), Ontario Ministry of Natural Resources (Chatham District), Canadian Department of Fisheries and Oceans (Great Lakes Laboratory for Fisheries and Aquatic Sciences) and Environment Canada (Conservation and Protection - Ontario region) (Michigan Department of Natural Resources 1991).

The first stage of the remedial process dealt with identifying the scope and intensity of beneficial use impairments (BUIs). The Detroit River AOC has 11 of a possible 14 BUIs: restrictions on fish and wildlife consumption, tainting of fish and wildlife flavor, restrictions on drinking water consumption or taste and odor, degradation of fish and wildlife populations, beach closings, fish tumors and other deformities, degradation of aesthetics, bird or animal deformities or reproductive problems, degradation of benthos, restrictions on dredging activities and loss of fish and wildlife habitat. The Upper Great Lakes Connecting Channels Study provided a foundation for the survey of pollutant sources discharging into the river. The Stage One RAP chronicles the distribution of point source pollution loads between Michigan and Ontario. According to the report, the US side was responsible for: 95% of phosphorous, 96% of ammonia nitrogen, 88% of suspended solids, 41% of chloride, 91% of cadmium, 84% of

cobalt, 50% of chromium, 89% of copper, 93% of iron, 29% of lead, 95% of mercury, 94% of nickel, 71% of zinc, 94% of cyanide, 76% of phenols, 93% of oil and grease, 89% of PCBs, and 55% of hexachlorobenzene discharges (Michigan Department of Natural Resources 1991: calculated from Table 8-25). In short, for the majority of the discharges, the US side is responsible for most of the pollution.[64]

In addition to pollution from industrial sources, combined sewer overflows (CSOs) are another significant source of contamination in the Detroit River. In a combined sewer system, sanitary sewage and storm water run through a single set of pipes. During wet water events, if storm water run off exceeds the pipe's capacity, then the overflow discharges directly into local a waterway. The Stage One RAP identified 250 CSOs in the Michigan SAOC, including 56 that discharged directly into the river; Windsor had 28 CSOs (Michigan Department of Natural Resources 1991). CSO discharges were responsible for contaminants, including phosphorous, chloride, suspended solids, arsenic, cadmium, chromium, copper, iron, lead, mercury, nickel, silver, zinc, oil, grease, phenols and PCBs (Michigan Department of Natural Resources 1991). While new sewage systems no longer use combined sewers, CSOs are an enduring legacy of an earlier social formation that has alternately been called the Human Exceptionalist Paradigm or the Human Exemptionalist Paradigm (Catton and Dunlap 1978; Dunlap and Catton 1979; Van Liere and Dunlap 1980). The assumption that human society was unaffected by environmental constraints was dominant until the 1960s; only in recent decades have significant segments of society embraced the alternative New Environmental Paradigm (Catton and Dunlap 1978; Dunlap and Catton 1979; Van Liere and Dunlap 1980).

[64] This contradicts a BPAC member (who was highly critical of the citizen participants), who claimed in an interview that, "the biggest polluters on the river are the chemical plants in Sarnia."

During its production of the Stage One RAP, the RAP team charged the Southeast Michigan Council of Governments (SEMCOG) and two Canadian consulting firms with developing and implementing public outreach strategies. They engaged the public in three ways: public meetings, stakeholder workshops, and a binational public advisory council (BPAC). The first public meeting took place in October 1986 in the US. Subsequent meetings were held approximately every nine months and alternated between Canada and the US. Meeting attendance ranged between 30 and 90 citizens. The public meetings included technical reports, progress updates on the RAP, and question-and-answer sessions. In addition to the public meetings, state/provincial representatives also organized small workshops focused on specific stakeholder interest groupings. Four stakeholder workshops were held in 1987; each meeting targeted a specific type of interest: fishing/recreational, business, environmental, and local governmental. In total, 42 people participated in the workshops. Workshop organizers emphasized the need for both Canadian and American involvement (Michigan Department of Natural Resources 1991).

The BPAC began in December 1987 with 40 committee seats, split equally between the two countries. The BPAC's role was defined as:

> The Advisory Council shall advise the RAP Team on key aspects of Remedial Action Plan preparation and adoption. This includes: the goals of the plan, problems to be addressed, planning methodology, technical data, remedial action alternatives, plan recommendations, plan implementation, plan financing, methods of enforcement, and plan adoption. The goal of all concerned should be to arrive at plan recommendation to which both the RAP Team and the Advisory Council agree (Michigan Department of Natural Resources 1991: 19).

Public input into the Stage One RAP was peripheral to the process. The most prominent issue came in 1990, when the city of Detroit temporarily quit the BPAC, according to a representative of the Detroit Water and Sewerage Department, because of a "concern . . .

that [BPAC] meetings had been used primarily as a forum to malign the city as far as discharges" (quoted in Betzold 1990). At the time the city quit the BPAC, it was discharging PCBs at a rate between 5,000 and 15,000 times that proposed by the EPA.[65] The city soon rejoined the council, in time for the completion of the Stage One RAP. Because the Stage One document was mostly technical - its only goal was to outline the state of the river, not choose between remediation options - the RAP team felt that their relationship with the public was not one of equals. Compared with what was to come, aside from Detroit's brief resignation, there were relatively few tensions within the BPAC or between the BPAC and the RAP writing team, because the technical descriptions of BUIs did not directly raise the issues of responsibility and regulation that necessarily accompanied the Stage Two RAP.

While a contemporary observer would probably not have been able to predict the degree of tension that would soon arise, it was already clear that the state/provincial approach assumed and acted upon a narrow form of public participation. Government representatives dominated the RAP team, led by the state of Michigan, the lead agency for the RAP. While four BPAC members were also appointed as members of the RAP team, the official documents make it clear the BPAC functioned in an auxiliary role. Some members of the BPAC embraced this role, as one member told me, "It gave me great comfort to know that there was an IJC [International Joint Commission] and a RAP and people with their heads screwed on straight who were really in charge," though other committee members were "deeply invested in the whole process [and] believed that what they were going to do at that table was going to determine the future of the Detroit

[65] As I will discuss below, there was a lengthy legal battle between the EPA and the city over discharges, which led to a substantial overhaul of the CSO treatment system in the 1990s.

River." In the formal relationship between the RAP team and the BPAC, because the latter was subordinate to the former, citizen efforts to assume a more prominent role in RAP construction met with resistance from business and government members of the BPAC as well as the RAP team.

Developing the Stage Two RAP

In June 1991, the RAP team submitted the Stage One RAP to the IJC. The RAP team, composed of representatives from government agencies along with four members of the BPAC, began work on the Stage Two document. In September 1992, the RAP team developed a work plan, guidelines and key milestones for developing and finalizing the Stage Two document. It was at this point that the RAP was split, first in half, between habitat issues and source issues; it was then further divided into four key areas: point and non-point pollution sources, CSOs, habitat issues and contaminated sediments. For each area, a committee composed of representatives from the RAP team, the BPAC and the technical advisory committee was charged with developing a report meeting all of the Stage Two RAP requirements: a compilation of existing programs, possible alternatives and any additionally needed measures, definition of who would be responsible for implementing each of them, development of a concrete timeline for remediation and the creation of plans for public involvement. Based on the material each working group produced, the RAP team would then compile, edit and write the RAP and submit it to the BPAC for regular input and review (Michigan Department of Environmental Quality 1996).

As the BPAC discussed the technical material and weighed the range of possible remedial plans a number of issues emerged. First, many community participants were

displeased with SEMCOG's role in coordinating the BPAC. Rather than assuming the role of a neutral facilitator, SEMCOG was perceived as, "taking sides. There was mistrust . . . SEMCOG made sure the public had no voice . . . They made sure that whatever was discussed would not end up in the minutes" (United States Environmental Protection Agency 1996: 7-8). Many citizen participants viewed SEMCOG's mission of representing regional governments as the explanation for what they viewed as its alignment with industry. SEMCOG's participation in the BPAC also involved developing the initial list of Michigan public participants in the BPAC. Though many critical citizens voices eventually made their way into the BPAC, there is some evidence that SEMCOG acted in subtle ways to limit outside participation. First, though BPAC meetings were open to the public, they were rarely advertised in advance, so only formal members of the BPAC were made aware of meeting times and places. Second, some citizens complained that SEMCOG was slow to involve them. One citizen said, "I asked SEMCOG to put my name on their mailing list three or four times [but I still] wouldn't receive notice of meetings or minutes" (United States Environmental Protection Agency 1996: 8).

Pluralism, which studies competition between differing interests within a given system that is assumed to be neutral, is a frequently used approach to questions of power. Viewing tensions and conflicts within the BPAC and between the BPAC and the RAP team in pluralistic terms depends upon a narrow view of power that fails to fully appreciate power's multiple roles. To provide an analytically stronger approach, Steven Lukes (2005) developed a three-dimensional view of power. In a pluralist analysis, SEMCOG's role in the BPAC would be understood only in its formal sense: recruiting members for the BPAC and facilitating meetings. Instead, pluralists would focus on the outcome of battles between businesses and citizens. Going beyond this analysis, Lukes'

second dimension of power looks at non-decision making by asking how power operates in agenda setting that precludes conflicts from being openly addressed. From biased minute taking to selective BPAC recruitment, SEMCOG's actions are best understood through the lens of this second dimension of power.

In addition to SEMCOG, a number of citizens expressed significant concern over the DEQ's actions. For example, the Stage One RAP argued that degraded fish and wildlife populations were not a BUI in the Detroit River, but instead were an environmental concern, where remediation "would be best achieved through basinwide efforts" (Michigan Department of Natural Resources 1991: 9). The Stage Two RAP noted that, though "some fish populations in the Detroit River may be impacted through competition with exotic species or through the loss of habitat . . . the fishery is meeting all management goals," so the designation should remain environmental concern, not become a BUI (Michigan Department of Environmental Quality 1996: 66). However, the RAP's habitat working group had voted 10-2 to categorize fish populations as impaired. The two participants challenging the redesignation were both DEQ employees. These two opposition voices were able to overcome "the majority opinion, which included fisheries experts" and keep fish populations from being considered a BUI (United States Environmental Protection Agency 1996: 8). The habitat work group also reached consensus on listing and ranking issues of concern to be included in the final RAP, but when the DEQ presented its draft to the BPAC for review, in the words of a participant, "some of the concerns were not in there, some concerns that were at the bottom of the list were re-ordered and ranked very high in the document. The outcome was whatever the MDEQ wants" (United States Environmental Protection Agency 1996).

The issue of environmental justice also created tension within the BPAC. As a government representative dismissively put it,

> Then just about the time that we kind of had things figured out and we were moving along in some sort of a logical process, someone in their infinite wisdom threw in environmental justice, whatever that is, and all of a sudden there's three new people in the room who we've never seen before representing environmental justice and trying to make sure that anything that's done will not violate the tenets of environmental justice. It's hard . . . They came in in the middle, had not been involved in the process, and that was another monkey wrench that was just thrown into the works.

The finalized Stage Two RAP contains two pages on environmental justice,[66] which open with a vague definition of the concept, before applying it to the AOC. The definition is couched in tentative language and treats environmental justice as something between an opinion and a very tentative hypothesis: "**some perceive** that under these conditions urban residents **may be** disproportionately exposed" to higher environmental burdens (Michigan Department of Environmental Quality 1996: 47, my emphasis). Environmental justice was first introduced in a July, 1994 BPAC meeting and was, "discussed at each of the BPAC meetings held since that time" (Michigan Department of Environmental Quality 1996: 47). Like many official documents, the Stage Two RAP minimizes behind the scenes conflict and presents a general view of consensus. Even by that standard, though, the DEQ's claim that the BPAC wanted the DEQ staff to prepare an environmental justice report for future publication is remarkable. In fact, though the BPAC had voted to include environmental justice in the Stage Two RAP, they had also submitted an environmental justice document, "that included the work of a combination of people, none of which is included in the Stage 2 document. Their work was thrown out . . . [In response to this omission] At one point, I was literally in a fax war with MDEQ. Then communication stopped altogether. It is more of a control issue because the state

[66] Three, counting the chapter's title page.

did this with all the technical work groups" (United States Environmental Protection Agency 1996: 6). This is another illustration of Lukes' second dimension of power.

The environmental justice chapter concludes with three recommendations. First, the four parties implementing the RAP[67] should do so "in a manner which considers environmental justice concerns." Second, an environmental justice chapter should be included in the Stage Two RAP; the two page chapter under discussion fulfills this recommendation. Finally, "the participation of local environmental justice experts will be garnered for the Detroit River RAP" (Michigan Department of Environmental Quality 1996: 48). One of the three recommendations is already considered to be satisfied and the other two are incredibly vague: the concept will be 'considered' and expert participation will be 'garnered' during RAP implementation.

Clearly throughout the Stage Two RAP process, the state exercised considerable control over decision-making processes (SEMCOG's role in creating and facilitating the BPAC) as well as translating BPAC outcomes into a finalized document. The diminution of the environmental justice chapter and the reversal of the working group's recommendation to consider fish population impacts a BUI both show how state authorities circumvented democratic impulses to protect both state authority and business interests. In order to understand the DEQ's role in the RAP team and BPAC, it is necessary to examine Michigan's changing political context during this time period.

Michigan 1990s Political Context

While the RAP team, the BPAC and the Technical Advisory Committee worked on the Stage Two RAP, the political climate in the state of Michigan - the lead party in

[67] The two federal governments, Michigan and Ontario.

the AOC - became increasingly hostile to state involvement in environmental issues. By the close of the 1980s, the anti-environmental, deregulationary backlash the Reagan administration led in Washington had not yet trickled down to Michigan. Though the state certainly felt the economic pinch of declining manufacturing,[68] neither of its Governors - liberal Republican William Milliken and Democrat James Blanchard - turned to Reaganism for solutions. Indeed, for much of the 20th century, Michigan was among the leaders in state environmental protection. Michigan followed the federal lead in creating its own broad environmental legislation: the Michigan Environmental Protection Act (1970), the Sand Dune Protection and Management Act (1976), and the Geomare-Anderson Wetlands Protection Act (1979). Furthermore, when the legislature failed to pass a beverage deposit law, citizen initiative organized a petition drive to place it on the ballot. In November of 1976, voters passed the Michigan Beverage Containers Initiated Law of 1976 by a nearly 2-1 margin in spite of corporate opposition outspending the bill's proponents by an 11-1 margin (Easley 1983).

The state political climate changed in 1990, when John Engler, a Republican, was elected Governor. Hostility to environmental regulation formed part of his general antipathy to the mid 20th century welfare state and regulatory apparatus. Engler's approach viewed government support for citizens and regulation of private industry as barriers to economic growth and development.[69] Key policies Engler implemented included welfare reform, tax cuts and increased pro-business spending. In spite of his apparent hostility to government actions on the environment, Engler devoted significant

[68] Indeed, Michigan's economy was particularly hard hit by the global restructuring of manufacturing.
[69] The pro-free market CATO Institute regularly issues a "Fiscal Policy Report Card on Americas Governors." Engler's most frequent grade was a B - generally only one or two governors received an A ranking, so Engler's fiscal policy was amongst the most conservative, free market oriented in the nation. After leaving the governorship, Engler served six years as the president and CEO of the National Association of Manufacturers and is currently president of the Business Roundtable.

state resources to meet the needs of outdoor sports participants and support pollution clean-up efforts around the state. Understanding the sharp divide between anti-regulation reform and increased spending on invasive species/clean-up efforts requires delving into differences in how people and groups conceptualize the environment as well as the relationship between the environment and the economy.

Engler's complete antagonism to environmental regulation was noteworthy, even in an era of deregulation. In the late 1980s through the mid-1990s, concerns about PCB contaminated fish led the EPA to develop fish consumption guidelines for the Great Lakes. Because young children and pregnant women are particularly sensitive to PCB ingestion - studies showed that children whose mothers ate contaminated fish from the Great Lakes had increased levels of cognitive and developmental problems - the EPA panel recommended pregnant women should eat no more than a meal with salmon from Lake Michigan or Lake Huron every one to two months.[70] In 1992, Michigan eliminated funding to publicize fish advisories and a few years later removed its fish advisories for salmon consumption, arguing that there was not credible scientific evidence linking salmon consumption with health effects. In 1997, when the EPA finally issued its fish consumption advisories for Great Lakes Salmon, Great Lakes states, with the exception of Michigan, followed suit and issued or confirmed already existing warnings. Michigan vociferously attacked the EPA, disputed the science behind the advisory and encouraged other states to reject the warning. In an open letter to his fellow Great Lakes governors, Engler wrote the fish advisory was part of, "a pattern of EPA decision-making with a

[70] Whereas an adult tourist from outside the region (who would presumably have no long term contact with the fish) could eat six meals of salmon in a short period of time (Cushman Jr. 1997). The problem with these types of recommendations is they fail to consider the totality of consumption: while many Great Lakes fish are heavily contaminated, this is also true of many fish around the world. This is generally true of many forms of environmental safety regulation, which fail to explore the totality and variety of exposure in addition to the possibilities of synergistic impacts.

blatant disregard for decisions made by qualified state environmental officials" (Cushman Jr. 1997). Although Engler claimed the EPA's decision was, "based on politics, instead of science," in 1995, the state's environmental science board had endorsed the central components of the consumption standard (Cushman Jr. 1997). When Engler claimed that the members of the board, "without exception, support Michigan's current position," one of the board members said they were never asked to comment on or review Michigan's stance (Cushman Jr. 1997).

The key battle over fish advisories involved perceived economic consequences expected from declined tourism and recreational dollars versus the public health benefits of reductions in contaminated fish consumption.[71] While there is evidence that, "Michigan fish consumption advisories do not adequately communicate the risks according to fish consumer habits and behaviors in the Detroit River," it is reasonable to suggest that the absence of fish advisories may have an even stronger impact (Kalkirtz, Martinez, and Teague 2008: 124). Even though attempting to obfuscate the health consequences of fish consumption harms fishermen by implicitly encouraging them to consume contaminated fish, Engler viewed himself as fighting for the interests of anglers as well as the fish and tourist industry.

During his second term, Engler also transformed the state's environmental regulatory structure by isolating regulatory activities from resource management activities. The state's first unified environmental agency, the Michigan Department of Conservation, was created in 1921. Renamed the Department of Natural Resources in 1968, the agency came under harsh attack in the 1990s. In 1995, Engler split the

[71] It is important to note that subsistence fish consumption is shaped by both race and class, making this a key environmental justice issue as well (West 1992).

Michigan Department of Natural Resources (DNR) into two separate organizations: the new DNR, which focused on fish and wildlife issues, and the DEQ, charged with environmental regulation. Engler hoped to win the support of hunters and anglers who often expressed concern that their license fees were being diverted to environmental regulation (which did not actually happen), while pushing to streamline the permitting process for industry and cut state regulation to spark economic development.

In addition to generally promoting economic growth, Engler also espoused a firm belief in the sacrosanct nature of property rights. The Wise Use movement, discussed below, argued that many forms of environmental regulation constitute "takings" - government encroachments into private property. In many cases, businesses have successfully fought for economic compensation for potential economic losses due to government takings. In 1987, Michigan's director of the DNR prohibited drilling for oil in the Nordhouse sand dunes. Three years earlier, Miller Brothers Oil had leased mineral rights to 4,500 acres in the area and in 1986 had submitted a drilling plan to the DNR. The DNR's ruling was that any drilling would violate multiple environmental laws. In response the company sued for lost income due to this taking. In court, the state "consistently missed opportunities" even when the ruling "Judge also provided the state with an out" (Schneider 1997b: 9). Eventually the Engler administration negotiated a $94 million settlement with the company.

The Miller Brothers Oil case was not the only instance of takings lawsuits in Michigan. In 1996, a Michigan Appellate Court awarded $5.2 million to K&K Construction after the DNR had blocked the company from filling in wetlands to build a bar/restaurant/sports complex on its property in Oakland County, because wetlands regulations constituted a taking of private property (Schneider 1997b). After two lower

courts sided with the company, the Michigan Supreme Court rejected the company's claims, arguing that the company could find an alternate location on its property that would not threaten wetlands (Schneider 1998b).

Unlike the previous two cases which used the contested logic of compensation for takings due to state enforcement of environmental regulations, Michigan Peat, a company that had unsuccessfully applied to the DNR for permits to mine peat in a 1,900 acre area of Minden Bog preemptively threatened a lawsuit if the state rejected a new permit it planned on submitting to the DEQ. Citing concern over possibly losing this $300-$500 million lawsuit, the DEQ approved the permits (Schneider 1997a). The US EPA stepped in and successfully challenged the expansion of operations. In the two takings lawsuits that were finally resolved in court, the takings argument ended up failing. As a reflection of the Engler administration's environmental orientation, though, the concept of takings is extremely relevant even if it proved to be legally unsuccessful.

While Engler was engaged in the bitter battle with the EPA over fish consumption advisories and engineering a $94 million settlement with Miller Brothers Oil, he also committed millions to state fisheries, including one million dollars for, in the words of his press release, a "war on sea lamprey infestation" of the Great Lakes (Truscott 1997). Introducing the funding, Engler cast his view of natural resources management as apolitical: "Needed investments in these facilities should not be a partisan issue; it should be a natural resources priority for all of us. Our objective is simple: maintain fishing diversity, opportunity, and success by way of protecting the resources of this state" (Truscott 1997). In his declaration of war, Engler made his motivation clear: "To protect our fish, anglers, and Michigan's recreational industry, we must stop the lifeblood from literally being sucked out of these fish by sea lampreys" (Truscott 1997). Thus, an

"environmental" action is not framed as such; instead it is an action rooted in concerns about economics and recreation.

Another of the Engler administration's prominent environmental proposals was the "Clean Michigan Initiative," a 1998 ballot referendum supported by more than 63% of voters. The Clean Michigan Initiative authorized the state to issue $675 million in bonds, allocated as follows: $335 million for brownfield redevelopment, $90 million for the clean water fund, $50 million each for local parks, state parks, waterfronts and nonpoint source pollution, $25 million to clean up contaminated sediments, $20 million for pollution prevention and $5 million to address lead poisoning concerns. This initiative shows that, while it was deregulationary, the Engler administration was willing to spend money on environmental programs it approved of. Brownfield redevelopment accounted for almost half of the Clean Michigan Initiative - and more than 13 times the amount proposed for cleaning up contaminated sediments - because brownfield restoration meshed with Engler's ideological orientation. In Engler's initial proposal, the initiative would have only been $500 million, but would have allocated $325 million for brownfield clean up. When environmental organizations objected to the initial allocation, the administration added another $175 million for other environmental programs (Schneider 1998a). These other funds can be thought of as concessions necessary to successfully socialize the responsibility for brownfield clean-ups.

In 1995, Michigan fundamentally restructured property owners' legal responsibility for pollution on their property. Prior to this, Michigan had been in line with federal law, which argues that property owners are responsible for pollution on their land, regardless of whether or not they are responsible for creating the pollution. By drastically reducing the number of potentially liable owners, the state would then assume

responsibility for cleaning up polluted private property. Russell Harding, head of the DEQ under Engler, embraced the shift to increased state funding to restore private land: "They (environmentalists) prefer the strict liability and they said that [our approach] shifts part of the burden to the taxpayers. On that point, they're right" (Nagy 2000). This explains the need for hundreds of millions of dollars in brownfield funds to support the state's socialization of pollution remediation. The prospect of using $335 million of state money to clean up pollution on private property attracted strong business support as represented by an endorsement from the Michigan Chamber of Commerce.

Reconciling the differences in Engler's environmental policy - battling fish consumption warnings while waging war on invasive species, supporting the logic of compensation for taking while pushing the Clean Michigan Initiative - requires understanding various forms of environmental discourse. As Brulle (2000) notes, US environmentalism involves multiple competing, and often contradictory, discourses. The formal ecosystem approach of the GLWQA is squarely in line with what Brulle calls reform environmentalism, the dominant contemporary discourse. Reform environmentalism believes that, "nature is an ecological system, that is, a web of interdependent relationships. Humanity is part of this ecological system. Hence, human health is vulnerable to disturbances in the ecosystem" (Brulle 2000: 173). This does not mean that, in practice, implementing the GLWQA has prioritized the dialectical relationship between human society and the larger environment. However, the GLWQA does share the reform environmentalist emphasis on the rational use of science to shape the social-environmental relationship.

In sharp opposition to this reformist discourse, Engler's approach to regulation combined the principles of "manifest destiny" and "wise use," which emerged in backlash

to the mainstream environmental movement. These countermovements are "elite-driven attempts to rein in an expanding challenging movement" (Brulle 2000: 130). In a 1998 speech to the Detroit Economic Club, Engler made clear his alignment with the wise use movement: "I believe that economic development and environmental stewardship go hand in hand. I believe strongly that a balanced approach can allow for job creation today and the conservation of our precious natural resources for tomorrow" (Engler 1998). This resolves the apparent tension between entrenched resistance to fish consumption advisories and declaring "war" on an invasive predator. Hostility to the citizens on the BPAC grew out of fear of the economic threat they posed. Citizen participants in the BPAC frequently criticized DEQ representatives in particular for being preoccupied with business interests. The sharp dichotomy between absolute antipathy to environmental regulations that could, in any way, impact business in either the short or long term and active support of recreational activities drove Engler to fundamentally transform the state's environmental bureaucracy and regulatory structure.

The End of the BPAC

Tensions came to a head as the Stage Two RAP neared completion. After years of battling business and government obstruction, the citizen members of the BPAC chose to tender their resignations rather than vote on the completed document. A current participant in Detroit River activities, who was not involved during the period of the BPAC, described his impression as, "the techies, the government, and industry got out of control to where those people representing NGOs[72] felt they weren't being listened to." The divisions within the BPAC grew out of differing conceptualizations of the

[72] It is telling that citizen participation is equated with NGOs.

relationship between society, the economy and the environment. The state of Michigan under John Engler clearly viewed the environment as subordinate to business interests and only supported environmental policies that did not involve regulation, had no potential economic impact on business interests or socialized private liability. Other representatives from congressional offices and local municipalities supported the GLWQA to the degree that it did not have a significantly negative economic impact. These BPAC members viewed the citizens as irrational, anti-economic extremists. As one governmental representative described the citizens to me, they believed, "we have to do all this stuff and really crank down and stop all economic activity in the whole region . . . I'm exaggerating, [but they] wanted to adopt regulations that would be so stringent that they would have the effect of severely restricting any kind of economic activity." Other BPAC participants echoed this concern: "The citizens complained and grandstanded about every little thing," "They [citizens] had hidden agendas. They made vicious attacks on public employees," "There was conflict between a small group allegedly representing the public and the others . . . The group was contentious and anti-establishment," and "They [citizens] were determined to make the whole process fail. The group's style was to be disruptive. They were generally abusive to the government representatives when the media was present" are among a host of criticisms levied by government employees and industry[73] (United States Environmental Protection Agency 1996: 9-10). Many saw the citizens as uninterested in any form of progress - as one BPAC member described a particular citizen to me, "He was just there to argue, he wasn't there to engage in any constructive process, as far as I could tell."

[73] The quotes in US EPA (1996) are anonymous, but given the sharp rifts it details, it seems safe to assume comments critical of citizen involvement did not originate from the citizen participants themselves.

Citizen participants clearly viewed the state as being in the pocket of industry. As one BPAC participant described it, "It's a skepticism on the part of the public about the relationship of government agencies with corporations, that government's in the pockets of these corporations. Look at the Food and Drug Administration, for example, setting regulations on chemicals in food and all of the studies are coming from the companies, outside reports from academic institutions aren't utilized sometimes that countermand those studies." On many issues, citizens believed the EPA and the state DEQ were unable to detach themselves from corporate interests, even when issues of responsibility or effectiveness are relatively clear cut. When the BPAC addressed existing hot spots along the river, the citizen participants often felt that the state and business interests were more concerned with minimizing liability than with addressing environmental or social risk.

On August 27, 1996, the Michigan Department of Environmental Quality submitted the Stage Two document to the IJC. The DEQ's press release celebrating the document's completion made no mention of any tension surrounding its creation and adoption: "The document had been previously endorsed by the US members of the RAP Team, the technical work groups and the Binational Public Advisory Council (BPAC) . . . The RAP document was developed over the past four years with strong binational cooperation and the input of many individuals" (Sweet 1996). The citizens who walked out of the BPAC, believing the BPAC had ceased to exist, created a new organization, the Detroit River Remedial Action Council (DRRAC) to try and lead future public involvement in implementing the Stage Two RAP. Though the new organization reached out to the DEQ and the IJC, it met with no cooperation and soon the organization faded away. It was not until the early 2000s that there were again efforts to reconstitute public involvement in the RAP.

Reflections on the BPAC

Following the BPAC's collapse and dissolution, the EPA commissioned a study to identify the underlying reasons for its failure. Based on in-depth interviews with BPAC participants, the study highlighted a number of issues that contributed to the outcome, including: confusion over the BPAC's purpose and goals, the size of the BPAC, proportionate representation in the BPAC's composition, government control over the meetings, accuracy of minutes from meetings, SEMCOG's role as coordinator, confusion about the role of citizen input and factionalization. The report makes for a great read, but, because it fails to consider issues of social power, it fails to capture the degree to which the political economic context restricted opportunities for public involvement.

The discipline of environmental sociology emerged in the 1970s and 1980s during the decline of the Fordist mode of regulation, an era marked by sharp divisions between the state, business, and civil society, mass consumption and production and the welfare state.[74] Though the US never approached the degree of corporatism found in many European countries, until the Reagan-era push for deregulation, there were relatively sharp dividing lines between the state, business and civil society. The social context in the first half of the 1990s tipped strongly in industry's favor, because the strong relationship between the state and industry combined with the Engler administration's push for deregulation to create a climate that was extremely hostile to input from community

[74] In practice, as William Domhoff (2005) has demonstrated, social connections between different segments of the power elite challenges any conception of business and the state as being fully separate. This arrangement certainly shaped policy decisions, but there is still value in understanding Fordist conceptions of the state, market, and civil society.

members who emphasized that broad social changes are necessary to clean-up the environment.

The enduring tensions within the BPAC between citizens advocating strong clean up efforts and the business/government consensus on the primacy of economic concerns confirms the conclusions reached by earlier studies of the GLWQA: public involvement in environmental programs reflects larger social structures (Gould 1991a; Gould 1991b; Gould 1992). Because of capital's power vis-à-vis the working class, working class citizen involvement in AOCs often fails in challenges to the interests of business. Of the three groups often represented in public involvement - citizens, businesses, and the state - the first two generally have clearly defined interests. Citizens who choose to devote significant time and resources to the process are generally motivated by strong environmental concerns.[75] Business involvement in the AOCs emphasizes protecting its own economic interests. The state faces multiple pressures: state legitimacy is most heavily shaped by the economic climate, but since the emergence of mainstream environmentalism, the state is also seen as being responsible for environmental protection. Examining the GLWQA helps illuminate how the tensions between environmental and economic imperatives play out in different historical contexts. In general, the role of the state in the various AOCs involved, "the environmental arms of government seek[ing] to achieve the minimum socially acceptable level of remediation at the least economic cost" (Gould 1994: 237). The pre-Engler status quo in Michigan saw the state balancing its dual roles of promoting economic growth and protecting the natural environment with the latter clearly

[75] While there is theoretically also a possibility that citizen involvement could be motivated by perceived economic threats of environmental policies, I heard nothing suggesting this occurred either at the sites I studied or in other areas of concern.

subordinate to the former. In the 1990s, the dramatic shift in state governance saw the state overwhelmingly shift towards prioritizing the interests of private capital.

Connections Between Social and Environmental Issues

A central debate in environmental sociology involves the strength of the connection between social relations and society's impact on the environment. This is a crucial distinction for understanding and, eventually, remedying environmental problems. A number of approaches, including environmental justice, ecofeminist and treadmill of productions theories, argue that achieving environmental sustainability fundamentally involves addressing social inequalities, particularly questions of class, ethnicity, gender and race. In addition to normative considerations that hold a clean environment to be a human right, there are a few pragmatic arguments for linking social and environmental concerns. Absent positive attention to social inequalities, environmental regulations often further displace negative externalities onto less powerful segments of society. Hierarchy of needs arguments hold that environmental concerns follow social concerns and only emerge once these social concerns are satisfied. This was frequently cited as an explanation for the overwhelmingly white, middle class composition of the mainstream environmental movement. However, Mohai and Bryant (1998) "found few differences between African Americans and whites, even over the nature preservation issues about which African Americans long have been thought to be unconcerned. Where significant differences existed, they were over local environmental problems, with African Americans expressing substantially greater concern than did whites"[76] (475). Clearly the experience

[76] Mohai and Bryant drew their data from the Detroit Area Study (DAS). Issues of class, which are entwined with race, do shape forms for, and opportunities of, action.

of citizen involvement in the BPAC, which drew from constituencies beyond the professional middle class, reflected this broad concern about environmental issues. However, because class, gender and race shape environmental frames, the BPAC's experience shows that failure to account for power differentials between groups operating under different environmental logics makes conflict a more likely outcome.

Although these power differentials accounted for tensions within the BPAC, concluding that mandating public involvement in the absence of formal mechanisms to address larger social inequalities is unlikely to produce positive social outcomes (democratic decision-making or empowering working class communities and/or communities of color) does not mean that democratic decision-making is necessary for government actions to yield environmentally positive results. While many scholars and activists treat social and environmental issues as interconnected, whether for theoretical or pragmatic/strategic reasons, this is by no means a universal view. Indeed, ecological modernization theorists argue for the separation of environmental and social issues. They extend the, "uncoupling of two dichotomies . . . [because] left/radical versus conservative politics and ideologies run no longer parallel to the dichotomy on green and anti-green positions . . . to that of economy, of actual activities of production and consumption. The environment becomes relatively independent (now from the economy), ultimately having as a consequence that a capitalist or rather market-based system of production and consumption does not necessarily contradict significant environmental improvements and reforms in any fundamental way" (Mol and Spaargaren 2000: 36). Because ecological modernization theory primarily focuses on current and future economic developments, rather than looking at state efforts to address already existing environmental problems, the notion of decoupling is not necessarily transferrable. However, the underlying logic of

the solutions ecological modernizationists advocate, like expanding markets, efficiency and technology, are relevant for the most recent phase of GLWQA action in the Detroit River AOC, which I will discuss later in this chapter.

While there are currently significant efforts related to GLWQA focused work in the Detroit River AOC, there was also a long time gap between this revitalization and the BPAC's end. Before turning to recent actions in the AOC, I want to examine environmental progress that took place in the interregnum between the completion of the Stage Two RAP and the emergence of the Friends of the Detroit River's leadership in the AOC. The end result of the battle within the BPAC is that the Stage Two RAP plan had little impact on the next 15 years of clean-up efforts in the AOC. Rather than producing a master plan detailing either the most effective and efficient means to jointly promote industrial development in conjunction with a clean environment, as the state and business participants envisioned, or the community-centered path to social and environmental justice that citizens pushed for, the Stage Two RAP became little more than another public document that was created but never implemented.[77] Around the completion of the Stage Two RAP, state and federal AOC funding diminished and what little remained was directly targeting to implementing the Stage Two RAP proposals. However, the restrictions made effective implementation difficult: "the state and federal would say we're only funding projects that implement something [from the RAP]. They weren't funding the kind of work that goes on behind developing what needs to be implemented. They just assumed we had a stage two plan, we have the list of projects, here, go implement them. The projects were titles, they weren't even concrete" (EPA employee). Even this

[77] Of course, inaction most benefitted business interests who fought to prevent widespread action in the AOC.

restricted funding soon disappeared and formal action through the GLWQA ground to a halt.

The BPAC's failure and ultimate dissolution and the Engler administration's outright hostility to environmental regulations that had any potential economic impact made for seemingly bleak prospects for the US Detroit River AOC. However, over the course of the 1990s and into the 21st century, actions not explicitly taken under the guise of the GLWQA contributed to several notable instances of environmental progress in the river. Clean-ups like Monguagan Creek, Connor Creek and Black Lagoon, the river's designation as an American Heritage River, and the eventual creation of the Detroit River International Wildlife Refuge all contributed to environmental improvements in the Detroit River. In the following section I present an overview of these actions as well as an analysis of the political economic factors shaping these efforts.

Remediation Activities in the Detroit River

Though public involvement in the preparation of the Detroit River Stage 2 RAP yielded conflict and division that eventually led to the end of the BPAC, the 1990s saw a number of remediation events in the Detroit River AOC. Between 1993 and 2006, remediation efforts in the Detroit River watershed and western Lake Erie removed more than 989,000 cubic meters of contaminated sediment (United States Environmental Protection Agency). Sediment removal combined with efforts to reduce further additions to the waterways have resulted in a 50-70% reduction in contaminated fish (United States Environmental Protection Agency 2009a). In this section, I discuss several prominent projects in the Detroit River, and its tributary, the Rouge River, as well as understanding why remedial actions were being taken. There were two main reasons for the progress of

the 1990s and the early 2000s: first, judicial enforcement of federal regulations forced the Detroit Water and Sewerage Department to address combined sewer overflows. Second, federal attention and money flowed into the region, in large part because of earmarks and requests from Congressman John Dingell. As a former government employee involved in the BPAC described it to me, "There was money being appropriated, thanks to Congressman Dingell, in order to facilitate the clean up."

Monguagon Creek

Monguagan Creek is a tributary of the Detroit River; it runs through the city of Riverview, approximately 15 miles southwest of Detroit. The majority of contamination in the creek came from a single industrial source, Elf Atochem North America (formerly Pennwalt Chemical WestPlant, now Arkema), which produced a variety of chemical products, including pesticides and phenols (United States Environmental Protection Agency 2000). The Stage 1 RAP identified the creek as heavily polluted with oil, grease, cadmium, mercury, PCBs, zinc, manganese, phenols, heptachlor and hexachlorobenzene (Michigan Department of Natural Resources 1991). Following a request from Michigan Department of Natural Resources (DNR), Elf Atochem North America took samples from the creek in 1993, some of which were "were black and oily and had a very strong odor of organic chemicals" (Michigan Department of Environmental Quality 1996: 132). In a 1996 voluntary agreement, Elf Atochem agreed to finance a clean-up effort in conjunction with Bridgestone/Firestone, Jones Chemicals, and the Michigan Department of Environmental Quality (DEQ). At a cost of $3,000,000, the project removed 20,000 cubic meters of contaminated sediment; further examination by MDEQ found that the

project removed "the bulk of the contaminated sediment" (United States Environmental Protection Agency 2000: 8).

Following the creation of the Detroit River International Wildlife Refuge - discussed below - local, state, and federal officials turned to further remediate the adjacent Monguagon Creek as part of an effort to create a gateway to the refuge. A coalition including Wayne County, the DEQ, the US Fish and Wildlife Service and the EPA used an EPA brownfield grant to help fund the Monguagon Daylighting and Wetland Restoration Project to recreate wetlands around where the creek runs into the Detroit River. Completed in 2009, the project includes six acres of wetlands and a treatment basin that will collect and naturally filter storm water, furthering environmental restoration in the region.

Conner Creek

The US Clean Water Act of 1972 gave the EPA authority over point source pollution discharges through the creation of the National Pollutant Discharge Elimination System (NPDES); the EPA has also authorized most states to issue NPDES permits.[78] In 1977, the US sued the city of Detroit, its water and sewage department, and the state of Michigan over the city's sewage system's failure to comply with the Clean Water Act. The parties reached a consent decree, which Detroit soon violated, leading to another consent decree a few years later. By the late 1990s, Detroit was again in violation of its NPDES permit and again the parties ended up in court. One of the outcomes of this round of litigation was a plan to dredge contaminated sediment in Conner Creek and then construct a CSO basin to prevent direct discharges into the creek.

[78] Idaho, Massachusetts, New Hampshire, and New Mexico are not authorized to issue NPDES permits.

Contaminated sediment in Connor Creek was among the most toxic in the state. Samples taken by the DEQ in the late 1990s, "found PCB levels at the top layers of sediment that were 15 to 30 times higher than amounts considered to be toxic to aquatic life . . . Samples from deeper layers of sediment found PCB present in amounts that are more than 60 times the level considered to be toxic to aquatic life" (Guyette 1999). The survey also found Connor Creek's levels of heavy metals like cadmium, chromium and lead were the highest measured in either the Detroit River or the Rouge River. The Detroit Wastewater Treatment plant was responsible for 83% of PCB discharges in the river, which accounted for half of all PCB discharges in the Great Lakes (Betzold 1990). The CSO discharges combined with the contaminated sediment made Connor Creek an environmental priority.

The state of Michigan and the Detroit Sewer and Water Department initially wanted to store the sediment from Conner Creek at the Pointe Mouille Confined Disposal Facility. The Army Corps of Engineers runs the facility, which was originally created to handle navigational dredging sediment (i.e. sediment that is not removed because of its toxicity) from dredging project including Conner Creek. The corps, concerned about potential liabilities associated with handling contaminated sediment in a facility initially designed for other sediment storage purposes, rejected the proposal. Following this rejection, the city considered a plan to dewater sections of the creek, so the solid waste could be removed and landfilled. When community objections to this plan made it unworkable, the city returned to the Army Corps with an offer to more securely store the sediment at Pointe Mouille (United States Court of Appeals Sixth Circuit 2003). The two sides neared an agreement, but the Army Corps, concerned about liability, balked at finalizing a deal. Some citizen activists also opposed storing contaminated

sediments at a facility designed to hold sediment from navigation dredging. Citizens Environmental Alliance, a Canadian environmental social movement organization addressing the regional ecosystem, began an unsuccessful letter writing campaign opposing the plan. The alliance's sample letter concluded, "Placing contaminated sediments from one or two sites into a CDF is a short-sighted, unsustainable solution . . . The EPA has spent millions of dollars in identifying, researching and evaluating various methodologies for treating contaminated sediments, yet when real situations arise to address these contaminated sediments, placing this material in landfills or CDFs (the most antiquated 'technology' of all) becomes the preferred method; that decision is simply based on short-term cost" (Hupka 2000). The Army Corps' opposition jeopardized Detroit's funding, so the city sued the Army Corps. Eventually the court ruled that because the facility already took material from Connor Creek it must take the toxic sediment but that there were no further liability concerns for the corps[79] (United States District Court for the Eastern District of Michigan 2000).

In 2003, the Conner Creek project removed 122,300 cubic meters of contaminated sediment and in 2005-06 completed a $187 million, 50-million gallon CSO facility (Detroit Water and Sewerage Department 2007; Hartig et al. 2007). During wet weather events, the overflow station provides, "settling, skimming and disinfection [before] the treated effluent flows into Conner Creek," a vast improvement over the raw sewage that coursed into the river prior to the basin's construction (Detroit Water and Sewerage Department 2007: 7). A current PAC member highly praised the outcome of

[79] The ruling noted that the agreement creating the Pointe Mouille CDF defined it as being, "'for the containment and retention of dredged materials from the channels of the Detroit and Rouge Rivers' (emphasis added). The Agreement does not limit the CDF to acceptance of navigational dredge materials only" and several other variations of this point that explicitly stating its purpose is for navigation sediment does not mean it is solely for those sediments (United States District Court for the Eastern District of Michigan 2000).

the Connor Creek work: "I do firmly believe that the technology's there. We can do almost anything we damn well please if you're willing to spend the money on the technology. The Detroit CSOs are a perfect example. Where they needed to, like Conner Creek, they actually built one hell of a facility. They're not dumping crap in [the river] anymore. However, on the other side of the fence, they're still letting Macomb County develop like crazy and dump into the sewers that are already full. So every time it does rain, we're going to have more problems." This shows that even effective government actions struggle with the challenges posed by growth.

The dredging/CSO basin project in Conner Creek only happened because the EPA challenged the city of Detroit's non-compliance with the Clean Water Act and the city, by judicial order, had to address CSOs. Furthermore, the Conner Creek overflow basin has not eliminated all overflows, merely substantially reduced them. As a PAC participant described the city's response, "The city says basically . . . 'We're doing what the federal government tells us to do with respect to CSOs.' [The city has] gone from 30-40 discharges a year down to two or three and [is] meeting the letter of the law, but [is also] still putting out serious contaminants every time that thing does open. Conner Creek is a beautiful facility and it pulls 95% of whatever comes through there and puts it down to the treatment plant, but those other 5% are still out in the urban environment. You're still getting PCBs, heavy metals, all kinds of toxins. Only God knows where they're coming from, but they're there." Before the overflow basin, four billion to seven billion gallons of untreated sewage overflow were discharged into the river annually; now only 1.2 billion gallons of treated sewage overflow are discharged (Southeast Michigan Council of Governments 2008).

American Heritage Rivers

In the 1997 State of the Union address, President Clinton announced his plan to create an American Heritage Rivers (AHR) initiative, which went into effect in September, when he signed executive order 1306. The program's goal is to engage in "natural resource and environmental protection, economic revitalization, and historic and cultural preservation" (Clinton 1997). Of the 14 American Heritage Rivers, two are also Areas of Concern: the Cuyahoga River and the Detroit River. To accomplish its goals, the AHR initiative promoted communication between relevant agencies, assisted in locating funds, and designated a river navigator who coordinates local, state, and federal efforts. In the Detroit River, John Hartig served as the river navigator from 1999-2004 before leaving to become refuge manager for the Detroit River International Wildlife Refuge (discussed below). Rather than appointing a new river navigator to develop and direct the AHR projects, local leadership on AHR issues passed to the Metropolitan Affairs Coalition (MAC), a public-private organization dedicated to fostering local economic development. The AHR initiative "was only funded for a few years in the hope that it would take hold locally and be self-supporting," but in the Detroit River - and from what I can glean by looking at other AHR's web sites - the designation has become symbolic (personal communication). Since 2004, when the river navigator left to lead the international wildlife refuge, AHR programs have been run through the refuge and are basically refuge programs. The AHR label is kept because it, according to that same official, "had a lot of energy behind it 'in the day' and there still may be some capital in the label" (personal communication). The AHR has, in the words of an official I spoke with, become something that, "still exists, but in name only."

The AHR initiative and the MAC organization both support Molotch's (1976) argument that, "the very essence of a locality is its operation as a growth machine" (310). The primacy of economic growth has very real consequences: "this growth imperative is the most important constraint upon available options for local initiatives in social and economic reform" - and environmental reform (Molotch 1976: 310). These constraints can be seen in what the AHR did and did not accomplish. The AHR initiative contributed to/coordinated several projects, including: shoreline stabilization around Hart Plaza and on Belle Isle, greenway trails, the Detroit RiverWalk that runs from the Belle Isle bridge down to the Joe Louis Arena,[80] habitat restoration work, land acquisition for the international wildlife refuge, and the creation of a fishing pier/boat launch at the refuge gateway. Partners for these projects included federal and state agencies, local municipalities, and a number of private companies, including US Steel (formerly National Steel), DTE Energy, Chrysler (formerly DaimlerChrysler), BASF Corporation, Solutia, General Motors, and Ford. Other than contaminated sediment removal in Black Lagoon, which, as I discuss below, was part of the Great Lakes Legacy Act, most AHR projects had an immediate visual impact. Walkways along the river, fishing piers, interpretive signage, and wildlife refuge expansion all have an aesthetic component. This is not to denigrate or challenge their impact, but again none of the AHR efforts address human health directly[81] or indirectly through CSO work or, outside of Black Lagoon which should be considered a legacy act project, contaminated sediment.

The AHR's accomplishments were the product of the river navigator's efforts to coordinate national, state and local partners, and funding sources. When John Hartig left

[80] The connecting path itself as well as the mixed use development along its length.
[81] The AHR initiative did not target clearly defined beneficial use impairments, so, in theory, could have studied direct exposure, like fish consumption patterns, or lager epidemiological questions, like cancer rates.

to lead the newly created international wildlife refuge, the AHR became more or less defunct. While Hartig deserves credit for his work, his accomplishments depended upon the river being designated as an AHR. Hundreds of communities applied when the AHR program was created and the Detroit River was one of the few to win final approval. While not the only reason behind the river's recognition as an AHR, Representative John Dingell's[82] support and influence was extremely important. In terms of ease of being replicated, this is an example of political power leading to participation in a program dedicated to improving a local ecosystem. It is unclear whether the Detroit River would have been designated an AHR if it were not for Congressman Dingell.

Detroit River International Wildlife Refuge

On December 21, 2001, President George W. Bush signed the Detroit River International Wildlife Refuge Establishment Act, creating the first North American international wildlife refuge on the Detroit River. Representative Dingell pushed the establishment of the refuge, which built off of the Wyandotte National Wildlife Refuge. The Wyandotte refuge had been created in 1961 to provide a safe habitat for migratory birds. At the creation of the international wildlife refuge, the Wyandotte refuge spanned 394 acres, which included Grassy Island, Mamajuda Island, and Mud Island, as well as submerged shoals in the area (United States Fish and Wildlife Service 2001). In its last report before the Wyandotte refuge joined the international refuge, the US Fish & Wildlife Service reported that it "face[s] major challenges in providing for wildlife in the Detroit River—the Refuge land base is contaminated and development has altered most of the natural system . . . We also do not know how safe the island will be for public use

[82] Dingell is the longest currently serving member of Congress, and the third longest in history.

after the contaminants are contained" (United States Fish and Wildlife Service 2001). In addition to incorporating the Wyandotte National Wildlife Refuge, the new international refuge also purchased or received corporate donations of property from US Steel and DTE Energy, Humbug Marsh, the site of a former Ford factory in Monroe and holdings from the Army Corps of engineers. At over 5,000 acres in total, the international refuge is now ten times larger than the Wyandotte refuge had been when the international refuge began.

From Black Lagoon to Ellias Cove

In 2002, President Bush signed the Great Lakes Legacy Act, which authorized $270 million in federal dollars to clean up US and bi-national AOCs, beginning with $10 million in 2004 and $45 million in 2005. Projects funded with legacy act money required a 35% local match. The Detroit River's Black Lagoon in Trenton was the first project using legacy act funding; the Clean Michigan Initiative bond act provided the matching funds from the state of Michigan. The completed project cost $8.7 million; the legacy act provided $5.6 million and the DEQ provided $3.1 million from the Clean Michigan Initiative.[83] The name Black Lagoon was a response to the strikingly visible pollution stemming from the intensive industrial history of the region and the equally intensive disregard for the environment. In aerial pictures of the river taken in 1960s, there was a sharp contrast between the dark plumes of oil/contaminants directly downriver of the McLouth Steel plant and the rest of the river, leading to comparisons with "The Creature From the Black Lagoon," and eventually the name stuck (Lydecker 2007). Decades of

[83] The Clean Michigan Initiative allocated $25 million total for contaminated sediments.

virtually unrestricted effluent had coalesced to create a toxic cesspool of oil, grease, mercury, lead, PCBs, and a host of other contaminants.[84]

Black Lagoon was so polluted that, while it is important to look at the clean-up, it is also worthwhile asking why that clean-up took so long in the first place. Technical documentation of the pollution began in the 1980s with the Upper Great Lakes Connecting Channels Study (1988a; 1988b), which identified sediment in Black Lagoon as being among the most contaminated in the river. The Stage One and Two RAP documents also devoted significant attention to Black Lagoon, which was already acknowledged as a virtual chemical cesspool,[85] but again failed to produce any action. One former BPAC member, expressing frustration over the sustained inability to address downriver pollution, told me, "nobody wants to accept the responsibility to address it, to clean it up . . . [even] when something is as messed up as the Black Lagoon, where we call it the Black Lagoon, and we say it's the most contaminated thing around." In addition to the obvious social visibility of environmental problems in a black, oily stretch of water, by the launch of the clean-up decades of technical documentation confirmed that Black Lagoon was indeed an environmental disaster. This stands as another demonstration of the disconnect between social visibility of an environmental problem and social action (Gould 1993). One of the reasons that Black Lagoon languished for so long is that cleaning up an extremely polluted site is incredibly expensive. In and of itself removing

[84] Sampling of the lagoon found levels of contaminants as high as 11mg/kg of mercury, with an average of 4.24 mg/kg, well above the Consensus-based Sediment Quality Guidelines (CBSQG) probable effect concentrations (PEC) of 1.06 mg/kg. For oil and grease, the highest level found was 30,000 mg/kg with an average of 6,039 mg/kg; the CBSQG is 2,000 mg/kg. For PCBs, the highest level found was 6.5 mg/kg, with an average to 2.6 mg/kg; the CBSQG is .68 mg/kg (Great Lakes National Program Office 2008). The average presence of these contaminants runs between three and four times the recognized safe standard, with individual concentrations running even higher.

[85] A former EPA contractor related the following story: "We always had the line, if you needed to get a negative effect on any biological entity you could probably get it in the Trenton Channel because it was one of the more highly polluted places in the Detroit River."

contaminated sediment is a costly undertaking, but disposing of the toxic material that is removed as a result of environmental dredging is regulated by the Clean Water Act and CERCLA (Superfund) at a significant additional cost.[86]

In 2004, the EPA announced the Black Lagoon remediation project and began preparations for its dredging project. The two primary goals of removing the sediments were to, "reduce relative risk to humans, wildlife, and aquatic life" and to, "restore the aquatic habitat within the Black Lagoon" (Great Lakes National Program Office 2008: 6). The dredging removed 115,000 cubic yards of contaminated sediment from Black Lagoon, including 478,000 pounds of oil, grease, mercury, lead, PCBs, and other toxic materials. The material was treated with a stabilizing agent and shipped downriver to the Pointe Mouille Confined Disposal Facility, which also stores the Conner Creek sediment discussed above (Great Lakes National Program Office 2008).

Significant Developments in the Rouge River

The Rouge River, another Michigan AOC, is also a tributary of the Detroit River. While much of my focus in this chapter is on the Detroit River, there are two relevant, notable developments in the Rouge River: the Rouge River National Wet Weather Demonstration Project and the renovated, "green" Ford Rouge Plant. There are two primary concerns about wet weather's environmental impact. First, combined sewers, which carry raw sewage and storm water often overflow during wet weather. When sewage and storm water exceeds a CSOs capacity, that excess goes directly into the waterway. Chronic CSO discharges routinely result in raw sewage and untreated storm

[86] Dealing with contaminated waste is a recurring challenge for environmental remediation. For example, smokestack scrubbers may reduce source air pollution from a given facility, but the material the scrubbers capture is often incredibly toxic and, if not disposed of properly, can effect soil and/or groundwater.

water flows directly into open waterways. Second, as rain or melting snow travels into waterways, it carries surface toxins with it, including everything from agricultural and residential chemical run-off to pet waste left on the ground. To combat this, the EPA funded the Rouge River National Wet Weather Demonstration Project, which is managed by Wayne County's Department of the Environment. The project began in 1992 with an initial focus on CSOs before expanding to also include storm sewers, implementation of Michigan storm water permits, streambank stabilization, water quality and habitat restoration and public outreach and education (Wayne Country Department of the Environment 2009).

Over the course of its existence, the demonstration project cost approximately $1 billion dollars, including $351 million in direct EPA grants. The federal money that launched the project, like all projects with a Congressional dimension in the Detroit River or Rouge River, originated from Congressman Dingell. As a participant in the demonstration grant described it to me, "Wayne county got a rather large earmark, back in the day when Congressman Dingell could flare the pen and next thing you know [money gesture]." When the project began, participants did not expect it to eventually run for nearly 20 years or account for $1 billion; the same participant said, "we really thought it was going to be a three year grant, the Rouge River Wet Weather Demonstration Project. Nice mouthful. Well it turned out that yeah he [Dingell] got us the first grant and then he got us the second grant, then grants three and four totaled about $160 million to help pay for CSO basins."

What resulted from the enormous time and financial commitments? In its assessment of the demonstration project's work on CSOs, the EPA noted the strong local impact: CSO discharge events were reduced by 80 percent. But the EPA also cautioned

against assuming the demonstration project's widespread applicability: "While we applaud the many successes that have been achieved through the Rouge River Project, we recognize that there were some advantageous factors that increased the possibility of success. First, Congress provided massive direct funding to assist communities in the construction of the expensive CSO projects. Second, the entire project was located within one state's jurisdiction" (Office of Inspector General 2002: 33). Along with contaminated sediments, CSOs are one of the most noxious legacies of 20th century midwestern growth.[87] In the US, there are 772 communities, with a population of roughly 40 million, that use CSOs (United States Environmental Protection Agency 2008). With the overly generous assumption that the demonstration project's CSO work accounted for only half of the total spending, $500 million, and that cleaning up the other CSOs will average a quarter of that,[88] $125 million, then the total cost of eliminating CSOs would be $96.5 billion. President Obama's budget request for the EPA in 2010 was $10.5 billion; the EPA's budget in 2009 was $7 billion. In short, eliminating CSOs - discharges of raw sewage into waterways - requires such enormous expenditures of money as to be relatively impossible in the short to mid-range future.

The other development in the Rouge River AOC was Ford's $1 billion construction of its Dearborn truck plant in the River Rouge factory complex. Ford's efforts to create an environmentally sustainable production facility earned a gold LEED certification. Notable features include a "living" roof, rainwater treatment system and energy efficient lighting. This greening of production is entirely consistent with ecological

[87] While CSOs are not an official BUI, they directly impact a large number of BUIs; contaminated sediment is the enduring, and generally most difficult and expensive to treat, legacy of polluted discharges into regional waterways.

[88] Estimates of remediation costs in large municipalities are much larger. For example, eliminating CSOs in Omaha is estimated to cost $1.5 billion (Holm 2006). Establishing the CSO treatment basin at Conner Creek on the Detroit River cost $187 million.

modernization theory's emphasis on new, environmentally efficient economic practices. However, the plant produces F-150 trucks; the most efficient F-150 is EPA rated for 17 miles per gallon city and 23 miles per gallon highway.[89] Although the plant construction is much more efficient, it is responsible for producing vehicles that have significant negative environmental impacts.

Reflection on Remediation Activities

Following the completion of the Stage Two RAP, government action made significant progress in remediating pollution in the Detroit River AOC as well as balancing 'natural'[90] and industrial land usage within the watershed. A notable feature of these clean-ups was their disjointed nature. Rather than being part of a centralized US or binational plan to remediate the Great Lakes, the actions originated from multiple sources: judicial requirement, congressional appropriation, corporate ecological modernization, etc. As the US GAO notes in its critical analysis of the GLWQA in the 20th century, "There are 148 federal and 51 state programs funding [general] environmental restoration activities in the Great Lakes Basin . . . [In addition,] GAO identified 33 federal Great Lakes specific programs, and states funded 17 additional unique Great Lakes specific programs . . . [However,] These strategies are not coordinated or unified in a fashion comparable to other large restoration projects such as the South Florida Ecosystem" (United States General Accounting Office 2003: np). While no one person was behind all of the activities during this time period, it is clearly the case

[89] This is for the 2011 F-150 4x2 with a 3.7L V6; the 4x4 6.2L V8 is rated 12 miles per gallon city and 16 miles per gallon highway.
[90] Clearly efforts that involve active efforts to shape the environment are not actually natural, but there is a common usage of natural that I am using here.

that much less progress would have been made if it was not for the influence and appropriations power of Congressman Dingell. As the state of Michigan's role declined - due to general anti-regulationary policies as well as Governor Engler's specific push to split and isolate the DEQ - the US government assumed an increasingly important role. Indeed, the current phase of regional action is in many ways a federal-local as well as public-private partnership. A local environmental social movement organization, the Friends of the Detroit River, now plays a central role in coordinating local remediation efforts.

The Campaign to Save Humbug Marsh

In the early part of this century, local and national events combined to revive public involvement in the Detroit River. Locally, in the late 1990s, a real estate development company, Made in Detroit, purchased Humbug Marsh in downriver Trenton and Gibraltar, the last stretch of undeveloped land on the Detroit River. It applied for permits to build housing, a marina, golf course and/or strip mall on the marsh; given the pro-business slant of state government at this time, it is not surprising the developer met with a warm reception from the state. When the potential environmental consequences of development were publicized, in the words of one participant, it "galvanized all the downriver people." In spite of this concern, the state initially approved the development. When a reporter asked Russell Harding, head of the DEQ, about the state's failure to engage this public resistance, he replied, 'We'll actually go to hearings and people will say, 'We want to vote.' Well, fine, but this is not a democracy'" (Dempsey 2002). Public awareness of the state's lack of interest in citizen concerns strengthened

citizen resolve, producing sustained community mobilization against the planned development.

One of the keys to the successful mobilization was the citizen activists' ability to leverage the marsh's social visibility.[91] Since the 1980s, social movement research has frequently emphasized the importance of frames in understanding social movement mobilization as well as historical trends with social movements organizations (SMOs). Frame analysis draws on Goffman's (1986) definition of frames as "'schemata of interpretation' that enable individuals 'to locate, perceive, identify, and label,'" to link individual and SMO actions (Snow, Rochford, Worden, and Benford 1986a: 464: quoted in). Frame alignment occurs when there is a, "linkage of individual and SMO interpretive orientations, such that some set of individual interests, values and beliefs and SMO activities, goals, and ideology are congruent and complementary" (Snow, Rochford, Worden, and Benford 1986a: 464). While the Detroit River shoreline remains incredibly industrialized, most of this industrialization occurred in an era where environmental concerns were not only unquestionably subordinate to economic ones, they were also far outside the mainstream of social thought. Had the development of Humbug Marsh been proposed decades earlier, it probably would not have provoked such broad resistance. However, by the 1990s, protecting the environment had become a broadly embraced social principle and numerous communities had mobilized around environmental issues (Dunlap and Mertig 1992).

A participant in the campaign described local interest in Humbug Marsh: "it was the last 400 acres of virgin shoreline and the people who lived downriver knew it was

[91] While social visibility of environmental issues does not directly produce action, social visibility is something that social movements are able to capitalize on.

there. They'd been by it. They'd go to the island and it's just one of the few places you'd go where you didn't have a sea wall or a marina or something like that." A 1998 hearing on the permit drew more than a thousand opponents as the threat sparked a public campaign to "Save Humbug Marsh." Friends of the Detroit River spearheaded an ultimately successful conservation effort and the campaign led to significant organizational growth. Membership in the Friends spiked to more than a thousand where it currently remains, a significant increase for the organization.

The Friends of the Detroit River began in 1992 and modeled itself upon the Friends of the Rouge River, which was founded in 1986. In the early 1990s, the Rouge group had 600 members and successfully organized river clean-up events that drew thousands to the river, while the Detroit group struggled to draw more than 20 people to its meetings. Before Humbug Marsh emerged to spark public interest in the river and rapid growth in the Friends organization, the group struggled in its efforts to reach out to local community members. A number of factors contributed to the Friends' struggles: almost the entire US Detroit River shore is heavily industrialized, meaning citizens have little contact with the river in their day-to-day lives.[92] Along most of the shoreline, particularly downriver from Detroit, there are industrial 'buffer' areas between residential dwellings and the water. This contrasts with the Rouge River, where just under 40% of the shoreline is in public parks (Williams 1993). Furthermore, the seemingly permanent economic malaise in the region hit the working class downriver area particularly hard. While the environmental justice movement and public opinion polls have both shown that poor communities and communities of color can successfully organize environmental movements, these movements are notable for being people-centric and featuring a holistic

[92] With the exception of places like Belle Isle or Humbug Marsh.

conception of the environment in which people and their surroundings are mutually related (Bryant and Mohai 1992; Bullard 1993; Mohai and Bryant 1998; Pellow and Brulle 2005; Taylor 2000). The Friends of the Detroit River (FDR)'s mission, "is to enhance the environmental, educational, economic, cultural and recreational opportunities associated with the Detroit River watershed through citizen involvement and community action" (Friends of the Detroit River 2011). A few years before Humbug Marsh, one of the Friends' leaders lamented that, "We need an issue" (Williams 1993: quoted in). Saving Humbug Marsh certainly provided them with one, though the organization now faces the challenge of transferring the energy from a specific issue of preventing a single development to the general concern associated with cleaning up the river.

In 2004, the Trust for Public Land acquired Humbug Marsh and it became part of the Detroit River International Wildlife Refuge. John Hartig, manager of the wildlife refuge, called the acquisition, "the most significant" of the "hundreds of unique habitats" in the Detroit River (quoted in (Evers 2004)). In 2010, Humbug Marsh was designated a Wetland of International Importance,[93] one of 27 such sites in the US.

The Revitalized Detroit River AOC and the Friends of the Detroit River

Following the Humbug Marsh campaign, FDR became involved in the AOC. In 2005, the state of Michigan approached the organization to gauge its interest in assuming control of the Detroit River AOC. As one of the organization's key members paraphrased the offer, the state "came to us in 2005 and said somebody has to take the lead, would

[93] Under the Ramsar Convention, nations voluntarily agree to protect wetlands of international importance. There are nearly 2,000 Wetlands of International of Importance around the world.

you please do it? Of course, our first reaction was sure, you got any money? Oh, and we have no money. We'll help you, we'll support you." Under the Engler administration, state interest in the AOCs declined dramatically. In 1995, when the Detroit River RAP team worked to finish its Stage Two document, Michigan had 14 staff working full-time on the 14 AOCs within the state. The one staff person per AOC ratio dwindled over the next few years; by 2003, there was only one staff person who was in charge of all 14 AOCs (Selzer 2006). In 2005, as part of the state's recommitment to cleaning up the AOCs - enabled by the resurgence of federal interest and pressure from the Michigan Statewide Public Advisory Council (SPAC) - the state expanded its AOC staffing to four full-time employees dedicated to the program.

With increasing pressure to show progress on AOC remediation, the state's role in recent years shifted to developing formalized delisting criteria for BUIs. The state's most prominent action in the past decade has been producing, "Guidance for Delisting Michigan's Great Lakes Areas of Concern" (Michigan Department of Environmental Quality 2005). Although the GLWQA has emphasized the importance of public involvement for more than 20 years, in developing the BUI delisting criteria, the state had little contact with citizen representatives. As one PAC member told me, they ended up developing "quite decent" criteria, although they "basically remove the need for any input from the public." Another PAC member, who was involved in developing the delisting criteria, "was one of the few unpaid people in the room." He described the atmosphere as, "the EPA [waking] up one day . . . the General Accounting Office evaluated the Great Lakes National Program office and basically gave it Cs and Ds in all aspects. And one of them was the AOC program; it was not a high priority. I'm glad the reaction has happened, but it's almost been a knee-jerk reaction, rather than a planned

reaction. Everybody, all they talk about, what can we delist? What can we delist? What can we delist?" While renewed emphasis on the AOC program has produced positive outcomes, it has also been accompanied by a strong desire to objectively demonstrate progress.[94] Unfortunately this has included treating all BUIs as equivalents that can be categorized in binary terms: impaired or remediated. While the overall lack of BUI delisting shows the relative failure of the GLWQA so far, by treating all BUIs as somehow equivalent, it would not be at all surprising to see state resources devoted to BUIs that are easiest to delist, rather than those that might have the most ecological or public health impacts.

Throughout the early 1990s, Canada and the US had worked collaboratively to develop the Stage One and Two RAPs. The state of Michigan was the lead agency, but actively partnered with federal and provincial authorities; the BPAC had been evenly divided between Canadian and American representatives. Though the AOC remains binational, the two nations are now acting more independently. As an EPA employee described the current arrangement, "The concept we came up with a couple of years ago is we're doing things domestically, but we're coordinating. As long as we're headed towards the same end, it doesn't matter if Canada does it one way and we do it another as long as we're achieving what we want collectively at the end." Though Michigan remains the lead agency in name, its role has diminished. Instead of the state, the Friends of the Detroit River has assumed control over the AOC.

The more general focus of cleaning up the Detroit River, rather than preventing a single development, has challenged the Friends to develop successful frames: "when we

[94] In the same way the No Child Left Behind legislation led to a hyper-emphasis on test scores, the renewed push in the AOCs has sparked this emphasis on delisting BUIs to show progress.

were fighting to save Humbug Marsh. We had a rally cry. We had people out there. Hundreds. Hundreds and hundreds of people. And we stopped the development . . . So we as an organization wrestle with ok, what's our next rally cry? Save and protect the Detroit River? Gee, that doesn't have as much oomph." Unlike the earlier period, the bi-national AOC has functioned as two separate national AOCs. For example, in 2009, I attended a meeting of public advisory councils from bi-national AOCs sponsored by an NGO that has been involved in the Great Lakes for decades. At this meeting, all of the other bi-national PACs gave a single presentation, except for the Detroit River, which had separate presentations from Detroit and Windsor groups. In the revived Detroit River PAC, public involvement consists of the Friends, with most attendees at the monthly meetings representing different levels of government agencies, elected officials or industry in the AOC.[95] In many ways, for the past five years, the local coordination of the Detroit River RAP in the US has been the work of one person, Charlie Bristol, who serves as the Treasurer of the Friends of the Detroit River. Mr. Bristol is an engineer with project management experience, including working on the Rouge River Wet Weather Demonstration Project, and serves as point of contact for three successful Detroit River AOC grants under the Great Lakes Restoration Initiative (GLRI).

In 2009, President Obama introduced the GLRI to build off of the Legacy Act's efforts to revitalize clean up efforts in the Great Lakes, beginning with $475 million in fiscal year 2010. GLRI funds require a local funding match with a 2:1 federal to local funds ratio. The logic of the GLRI is that competitive bidding will identify effective

[95] There is minimal contact between the US and Canadian public advisory councils. Each Canadian AOC has a paid staffperson responsible for organizing public involvement, whereas most US AOCs do not have this form of paid staff. Canada's paid staff person often attends US PAC meetings, but this has not lead to further collaboration.

projects and that the local funding match requirement shows there is serious local support. The Friends' three successful GLRI grants are: a fishing pier on Belle Isle, restoration of fish habitat in Belle Isle's Blue Heron Lagoon and habitat restoration at US Steel. The city of Detroit is the fiscal partner for the first two projects and US Steel is the sponsor for the latter one.[96] While loss of habitat remains an enduring issue in the Detroit River AOC, it is hard to argue that creating a new fishing pier is more important than addressing remaining contaminated sediments. Furthermore, while many who fish in the Detroit River are aware of potential health issues and eat little or no fish from the river, there are still people regularly subsistence fishing in the river. Fish consumption is heavily stratified by race and class: "Because of cultural, economic, and food security reasons, they [people of color and/or the poor] are forced out of habit to fish the Detroit River, contaminated by point and non-point source pollution. This becomes an environmental injustice issue when the State fails to protect its citizens by relying on ineffective fish advisories or fails to reclaim the river to a more acceptable and healthy resource for multiple use" (Kalkirtz, Martinez, and Teague 2008: 125).

Reflection on the Current State of the Detroit River AOC

The process of creating the Detroit River AOC's Stage One and Two RAPs was state-centric and minimized the influence of citizen participants. Although the BPAC's schism and collapse was notable for the degree of outright hostility it produced, its general story was not atypical. Indeed, the broad trend in that era of GLWQA activism was that, in spite of a formal requirement for public involvement, decision-making processes

[96] The Belle Isle fishing pier grant is for $497, 634, the Blue Heron Lagoon is for $1,428,994 and the US Steel grant is for $1,200,000.

reflected larger social class divisions, rather than being a route to citizen empowerment. (Gould 1991a; Gould 1991b; Gould 1992). The failed Stage Two RAP marked a lengthy cessation of GLWQA related action in the AOC, not the onset of a prompt clean-up, in part because federal interest and funding dwindled as the state political and economic became increasingly unfavorable to the GLWQA.

Following the EPA's push for renewed action in remediating AOCs, the state of Michigan developed formal delisting criteria and reached out to local groups to become involved in leading AOCs. While many believed the earlier phase of public involvement could lead to democratically empowered citizens playing an active role in cleaning up their ecosystem, in reality, attempts to expand the social bases of citizen participation beyond the mainstream environmental norm of white professionals led to tension and conflict. It is noteworthy that neither the EPA nor the state of Michigan had any interest in working with the DRRAC, the organization formed by former BPAC members, which wanted to play a role in coordinating public involvement. While it is undeniable that the Friends of the Detroit River-lead era of AOC action is already producing more positive outcomes than the earlier BPAC era, it would be a mistake to automatically assume this form of quasi-privatized decision-making with market-based funding mechanisms is superior to the idea of the BPAC.

Conclusion

Today the Detroit River is substantially healthier than at any point in the last century,[97] but it is important to understand the underlying reasons for this progress as

[97] It was a 1912 typhoid outbreak that first led the IJC to investigate water quality in the region and conclude that the Detroit River was, "so intensely polluted that it is highly questionable whether by the aid

well as its potential limitations. A little more than 60 years ago, 11,000 ducks died in the oily morass that was the Detroit River at the time and fish kills were a regular occurrence. Given this starting point, it would have been unlikely for the establishment of legislation like the federal Clean Water Act and the Michigan Environmental Protection Act, which ended decades of completely unrestricted industrial and municipal discharges into waterways, to have little environmental impact. Remediating the AOC involves dealing with legacy issues, especially contaminated sediment and loss of fish and wildlife habitat, as well as addressing future additions to the river. One of the fundamental questions facing the US (and other industrialized, polluted nations) is who will be responsible for cleaning up legacy pollution?

I have a number of reasons for studying shifting environmental governance in the Great Lakes: from broadly theoretical interests involving the relationship between contemporary society and the environment to more technical concerns involving policy development and implementation. Initial tensions in the Detroit River AOC between citizens on one side and government and business representatives on the other side eventually led to the BPAC's collapse and dissolution. This conflict was situated within a social context of clear divisions between state, business and citizens, where each group influenced the others. A general overview of these relations can be seen in the following chart:

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of any ordinary purification plant [it] can be made at all suitable for drinking purposes" (International Joint Commission 1918: 18).

Chart: Range of institutional influences

Influenced (across) **Influencer (down)**	**State**	**Business**	**Citizens**
State		Wide range of regulation	From education to incarceration
Business	From lobbying to revolving door between industry and government		Employment, marketing goods
Citizens	From voting to social movements	From consumption to organized boycotts	

Within this context, citizen actions often took the form of social movements targeting the state.[98] During the production of the Stage One and Two RAPs, these clear divisions were reflected in the sharp divides between citizen participants in the BPAC

There is a striking difference between the remediation activities carried out in the 1990s and early 2000s and the projects the Detroit River PAC is currently working on. Significant financial investment in the 1990s and early 2000s funded projects to remove extremely contaminated sediments and address CSOs in the Detroit River and Rouge River. In addition to remediation events and upgrades to sewage infrastructure, federal designation of the river as a National Heritage River and the creation of the Detroit River International Wildlife Refuge help to preserve 'natural' sections of the watershed as well as reclaim and re-naturalize industrialized areas. The current PAC has received GLRI money to work on fish and wildlife habitat issues, construct a new fishing pier and address shoreline reconstruction.

[98] A classic example would be the civil rights movement.

Theorists of collective behavior and social movements have long identified social movement life cycles including tendencies towards bureaucratization and professionalization. I argue that the rapid rise of NGOs should not be seen as a further extension of social movement life cycles. Instead, they represent a new, distinctly neoliberal form of civil society involvement in governance. Unlike social movements, which operate through non-institutional channels, NGOs increasingly assume responsibilities once wielded by the welfare state. These differences are clear in the dual experiences of the Friends of the Detroit River. As an SMO, the Friends successfully mobilized public opposition to developing Humbug Marsh. Now, as the Friends organization is playing the role of the state in coordinating AOC activities, it has moved from noninstitutional actions to assuming a new role that is only made possible by neoliberal governance practices.

The process of creating the Detroit River AOC's Stage One and Two RAPs was state-centric and minimized the influence of citizen participants. Although the BPAC's schism and collapse was notable for the degree of outright hostility it produced, its general story was not atypical. Indeed, the broad trend in that era of GLWQA activism was that, in spite of a formal requirement for public involvement, decision-making processes reflected larger social class divisions, rather than being a route to citizen empowerment. (Gould 1991a; Gould 1991b; Gould 1992). The failure of the Stage Two RAP process marked a lengthy cessation of GLWQA related action in the AOC, not the onset of a prompt cleanup, in part because federal interest and funding dwindled as the state political and economic became increasingly unfavorable to the GLWQA.

Following the federal push for renewed action in remediating AOCs, the state of Michigan developed formal delisting criteria and reached out to local groups to become

involved in leading AOCs. While many believed the earlier phase of public involvement could lead to democratically empowered citizens playing an active role in cleaning up their ecosystem, in reality, attempts to expand the social bases of citizen participation beyond the mainstream environmental norm of white professionals led to tension and conflict. While it is undeniable that the Friends of the Detroit River-led era of AOC action is already producing more positive outcomes than the earlier BPAC era, the Detroit River AOC remains heavily polluted. It would be a mistake to automatically conclude quasi-privatized decision-making with market-based funding mechanisms is superior more robust forms of civil society involvement without considering the earlier role of the neoconservative state government and the dramatic increases in federal funding for remediation activities.

Chapter Five: The Buffalo River Area of Concern

The previous chapter detailed the formation and dissolution of the Detroit River Binational Public Advisory Council (BPAC) and how, in reaction to the stark failure of the initial efforts of public involvement in the Detroit River AOC, the EPA collaborated with a local environmental nongovernmental organization (NGO) to carry out remediation activities in the AOC. Initial public involvement in the Buffalo River AOC featured little of the tension, mistrust, and outright conflict that splintered the BPAC. Instead, public involvement in the Buffalo River AOC achieved a notable level of consensus and partnership (Boyer and McMahon 1992; Kellogg 1993). This is not to suggest that civil society, industry, and the state shared a single, unified vision of how to proceed in the AOC, but instead that the various stakeholders were generally able to work together.

Remediation activities in US AOCs slowed considerably in the late 1990s, but resumed in the early 2000s with an influx of federal resources dedicated specifically to implementing the GLWQA. Given the more than a decade of successful public involvement through the Buffalo River Advisory Committee (RAC), one might have expected the AOC to have easily resumed its successful practices from the 1990s and thrive because of the increase in available federal monies. After all, it was this lack of external resources not internal structures that were the key to the cessation of activities in the late 1990s. Surprisingly, the recent iteration of the GLWQA in the AOC is led by an

NGO, the Friends of the Buffalo River (now Buffalo Niagara Riverkeeper),[99] which was founded by citizen participants in the RAP process.

In 2003, the US EPA selected Riverkeeper to coordinate the Buffalo River AOC. Prior to this change, the AOC followed the practice established in the 1980s in which AOCs were coordinated by the relevant state/provincial environmental authority. The move represented a larger shift in Great Lakes environmental governance from state control to local and federal entities. In this chapter, I explore the general move towards these federal/local, public/private partnerships as well as the specific changes that took place in the Buffalo River AOC. There are parallels with the history of the Detroit River AOC that I covered in the previous chapter. The Friends of the Detroit River now play an increasingly prominent role in the Detroit River AOC, a transition that makes some sense in that case, because of the acrimony and tension that eventually broke the BPAC. Since the public advisory council, state, and industry became adversaries instead of collaborators, the EPA approached a local environmental NGO to take on the roles that the public advisory council and state environmental agencies had failed at.

In Buffalo, the consensus-based RAP model had proven generally successful. In this respect, throughout the 1980s and 1990s, public action in the Buffalo River AOC diverged significantly from that in Detroit. Instead of heated conflict, the creation of the Buffalo RAP was a hallmark of consensus-based public involvement. As national attention to the AOC program waned during the late 1990s and action in the AOCs slowed in general, the Buffalo River AOC continued making limited progress. In spite of this,

[99] In 2005, the organization became Buffalo Niagara Riverkeeper. In the text, I will refer to the organization as the Friends, Riverkeeper or BNR.

Riverkeeper became the first NGO to assume control over an entire AOC.[100] Clearly the move to give Riverkeeper powers that were previously in the realm of the state emerges from larger social changes in environmental governance practices.

This chapter follows the model of the previous chapter on the Detroit River AOC, beginning with a historical overview of the region that highlights broad social trends to contextualize the contamination of the river before moving into the implementation of the GLWQA. Throughout the chapter, I draw explicit comparisons with the Detroit River case in order to identify some of the potential factors that may best help explain the initial divergence of the two sites.

Buffalo River Background[101]

At the dawn of the 20th century, Buffalo was the eighth largest city in the US with a growing dynamic and diversified economy.[102] As a vital transportation hub connecting the Great Lakes with the eastern seaboard, through first the Erie Canal and later extensive railroad systems, Buffalo was connected to most of the US economy, but its dominant sectors included: lumber, grain, steel, and industrial manufacturing. In this section, I briefly sketch out the historical rise and fall of Buffalo's economy as well as provide key points about the social history of the region in order to better understand the contamination of the Buffalo River as well as remediation efforts under the GLWQA.

The completion of the Erie Canal in 1825 made Buffalo the point of intersection

[100] Other citizens groups had taken responsibility for the public advisory portion of AOCs.
[101] This brief history of Buffalo draws on the work of Mark Goldman (1984; 1990; 2007) and Diana Dillaway (2006).
[102] Because of the city's prominence, in 1901 Buffalo hosted a World's Fair, the Pan-American Exposition, which offers an all too simple metaphor for the city's 20th city trajectory. Though the fair opened to modernist triumphalism, a momentous gunshot made the fair's legacy a tragedy as President William McKinley was assassinated by Leon Czolgosz.

between New York harbor and the Great Lakes. The canal laid the groundwork for the city's rise to national economic power. That Buffalo became a vibrant city prior to the industrial era and the rise of the steel belt can be seen in the following 19th century statistics. In the 1830 census, Buffalo's population of 8,668 made it the 27th largest city in the US. Just before the onset of the Civil War, in 1860, Buffalo's population of 81,129 made it the 10th largest city in the US (Census data drawn from Gibson 1998). Buffalo's population has fallen in every census since 1950. In that time the population has nearly been cut in half. Population declines can be partially but not fully explained by suburbanization processes, as since the 1970 census, overall population in the Buffalo-Niagara Falls Metropolitan Area has also fallen in every census, though at slower rates.

Like other US cities, Buffalo has a complicated history of race and class conflict. Buffalo had played a role in the Underground Railroad, which secretly transported fugitive slaves to freedom, but the city has also experienced racial conflict at many points in its history. In 1863, a few weeks before the well-known New York City Civil War draft riots, there were two separate incidents of racial violence in Buffalo in which Irish and Italian immigrants attacked black residents, killing two (Czarnota 2011). At the dawn of the 20th century, Buffalo's African American population was quite small. In 1905, in a city of 400,000, there were only 1,200 African Americans. By the start of World War One, the African American population had grown to 1,600. In 1925, the African American population reached 9,000, but this was still less than one percent of the overall population (Williams 1999). The Great Migration dramatically expanded the African American population: in 1940, there were 18,000 African Americans in Buffalo, which grew to 70,000 by 1960 (Taylor 1996). Rapid growth of the African American population along with "white flight" to the suburbs meant that African American population

increased proportionally as well as numerically. Racial tensions sparked a number of riots in the summer of 1967 (Kraus 2000).

Grain

During its 19th century heyday, Buffalo was the fourth largest port in the world. The city's centrality in shipping helped the region become dominant in grain and timber. Grain flowed from midwestern farms through Buffalo to New York harbor. As throughput escalated, the port's inability to quickly handle grain led to ever increasing back ups and delays. These problems were solved in the 1840s, when Buffalo merchants invented the grain elevator to manage the massive amounts of grain. The technology positioned Buffalo to become the number one flour miller in the US. The ready supply of grain trickled down and, for example, triggered the emergence of a dominant brewing industry. Grain was not the only good moving east.

Lumber

In the latter half of the 19th century, lumber also became a major part of Buffalo's economy. The town of Tonawanda, 10 miles outside of Buffalo, also benefitted from the massive amounts of timber being shipped east and became known as "lumber city," because of its role in the industry. Beginning with the Erie Canal, Metropolitan Buffalo transported and processed lumber from the Great Lakes on its way east. In 1860, 111,000,000 feet of lumber were shipped to Buffalo, all via barges. In 1890, 375,000,000 feet came by rail and 287,000,000 feet by water (Holder 1960). The plentiful supplies of wood gave rise to furniture and shipyard manufacturing. Buffalo stood "at the head, as a general labor market, of all the cities of the Great State of New York, and among the first

of all the United States" (Defebaugh 1907: 445). In the early part of the 20th century, as lumber processing shifted west, Buffalo's dominance waned.

Steel

Major steel manufacturers operating in Buffalo included Bethlehem Steel, Lackawanna Steel, the Republic Steel Corporation, as well as numerous smaller, independent concerns. Lackawanna Steel moved to the region in the early 20th century before being purchased by Bethlehem Steel in 1922. The lack of local ownership minimized the commitment of the businesses to the region and, as facilities aged, they were abandoned rather than modernized, so steel production in Buffalo declined earlier than in the rest of the US.

The above were a few examples of the many industries in which Buffalo became dominant through its role as the transportation hub connecting the Great Lakes and the eastern seaboard. Buffalo's growth mirrored the rise of Chicago as detailed by Cronon's (1991) landmark study Nature's Metropolis as commodity flows between natural resources and urban markets led to the development of both cities. Part of Buffalo's decline rests in the shift of natural resource extraction west, which then flowed to Chicago. The transition of shipping from the canal system to railroads had little impact on Buffalo because goods and materials still flowed through the city. The same is not true of the opening of the St. Lawrence Seaway, a collaboration between the US and Canada through the International Joint Commission (IJC) that allows ocean-class vessels a direct connection between the Atlantic Ocean and the Great Lakes through a series of channels, canals, and locks along the St. Lawrence River.

More than five decades passed between the first proposal for a seaway style

connection between the Atlantic and the Great Lakes and the onset of construction in 1954. From the beginning, Buffalo politicians and industry recognized the economic threat posed by the seaway[103] and lobbied heavily against its creation. Its opening immediately decimated the sectors of the Buffalo economy dependent on its previously dominant role in shipping. While Buffalo grew to economic prominence on the basis of a diverse economy that blended a wide-range of activities shaped by the region's industrial strength and role in shipping, the opening of the seaway was a powerful blow to this diversity and left the industrial sector as the region's remaining economic strength.

Buffalo Industry

Industrial activity in Buffalo greatly benefitted from the steady flow of raw materials through the city's port and the availability of cheap, abundant energy generated at Niagara Falls. Much of Buffalo's industrial manufacturing was located along the Buffalo River, which is located in south Buffalo and empties into Lake Erie from the east.[104] Plants located along the river, for many of the same reasons manufacturers generally prefer waterways: easy access to shipping (in this case both boats and railroads), as well as a disposal system and source of cooling water during manufacturing processes. Directly along the Buffalo River were "lumber, iron and steel, meat processing, oil refining and chemical [plants] . . . These general categories include numerous related industries such as foundries, electroplating, tool and die works, fertilizer, soap, glue, furniture, acid and dye manufacturing" (Rossi 1996: 89).

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[103] Mayor Frank A. Sedita tried to put a positive spin on the seaway, arguing that it recognized Buffalo's position as "the most accessible city on the North American continent," but the worries of Seaway opponents were soon realized (quoted in Goldman 2007: 153).

[104] For a detailed overview of 20th century manufacturing along the river, see Rossi (1996).

When the GLWQA was first signed in 1972, there were five major industrial plants discharging into the river: PVS Chemical, Buffalo Color, Donner-Hanna Coke, Mobil Oil, and Republic Steel (New York State Department of Environmental Conservation 1989). By the time production got underway on the RAP, only the PVS Chemical and Buffalo Color plants were still operational. The PVS Chemical plant began as an Allied Chemical facility producing numerous acids and nitrates. In the 1970s, the plant used 15 million gallons per day of river water for cooling. In 1982 PVS purchased the plant and narrowed the production base to sulfuric acid, sulfur trioxide, and oleum. Buffalo Color also began as an Allied Chemical facility. Buffalo Color bought the plant in 1977. Initially the plant produced 100 different dyes; by 1985, the number of dyes had shrunk to one: indigo. The Donner-Hanna Coke plant produced coke, until it closed in 1982. The Mobil plant refined 43,000 barrels of oil per day until refinery operations stopped in 1981. Finally, until closing in 1981, the Republic Steel Plant made iron and steel (New York State Department of Environmental Conservation 1989).

Buffalo River Environmental Damage

Like most industrial waterways, environmental damage in the Buffalo River came from industrial discharges, CSOs, and non-point source pollution as well as engineering interventions that made the river more amenable to shipping. The above overview of the economic history of Buffalo shows the importance of water-based transportation in the city's growth. The impacts of shipping were most felt where the river meets Lake Erie. This stretch has been repeatedly altered, through channelization and dredging, to facilitate easier access to more and larger boats. To maintain a six to eight meter navigable depth, the river is subject to annual dredging.

Intensive industrial activity and inadequate municipal infrastructure horribly scarred the Buffalo River. By the 1960s, the river was among the top three most polluted rivers in the country (Diggins and Snyder 2003). A 1968 report from the Department of Interior concluded:

> The Buffalo River is a repulsive holding basin for industrial and municipal wastes . . . It is devoid of oxygen and almost sterile. Oils, phenols, color, oxygen-demanding materials, iron, acid, sewage, and exotic organic compounds are present in large amounts. Residents who live along its backwaters have vociferously complained of the odors emanating from the river and of the heavy oil films. In places the river's surface is a boundless mosaic of color and patterns resulting from the mixture of organic dyes, steel mill and oil refinery wastes, raw sewage, and garbage. Thick films of oil are present on the Buffalo River at all times except during flood conditions. (Federal Water Pollution Control Administration 1968: 50)
> That year the Buffalo River caught fire for at least the fourth time (Diggins and Snyder 2003).

A few years earlier, the Buffalo River achieved national attention due to the efforts of Stanley Spisiak,[105] a Buffalo environmentalist. Spisiak had been involved in water conservation efforts in Buffalo since the 1930s and, beginning in the early 1950s, served as chairman of the Water Resources Committee of the New York State Conservation Council for decades. In January 1966, the National Wildlife Foundation named Spisiak its "Water Conservationist of the Year." During the awards ceremony in Washington, DC, Spisiak met with the First Lady, Lady Bird Johnson and invited her and the president to Buffalo to witness the degraded waterways firsthand. On August 25, 1966, a group of prominent political leaders including President Johnson, Lady Bird Johnson, New York Governor Nelson Rockefeller, and New York Senator Robert Kennedy visited

[105] Spisiak's niece, Jill Jedlicka, runs the Riverkeeper's AOC efforts. Spisiak's story is drawn from Boyle (1974) Sanders (2012).

Buffalo for a tour of the Buffalo River. To emphasize how polluted the river was, Spisiak filled a bucket with sludge and presented it to the president. As Spisiak later described the meeting, "President Johnson was my guest for three-and-a-half hours. I showed him a bucket of sludge from the Buffalo River and gave him a big spoon to stir it with . . . [President Johnson responded] 'don't worry, I'll take care of it'" (quoted in Sanders 2012). Johnson called it, "the most foul [river] he had ever had the displeasure of viewing" (quoted in Diggins and Snyder 2003: 652).

Following his visit, President Johnson issued an executive order ending the practice of dumping dredged sediments directly into Lake Erie. Dredging is needed in order to permit the large ships from the Great Lakes into the river. Prior to the executive order, the Army Corps of Engineers was annually dumping 175,000 cubic yards of sediment from the Buffalo River (Boyle 1974). The sediment from the Buffalo River was highly toxic and contributed to contamination of Lake Erie. Following the executive order, the Corps developed confined disposal facilities (CDFs) to house the dredged sediment.

In summers, the river was particularly noxious as still currents and extensive industrial diversion for cooling combined with summer heat to leave the river a brackish, oily mess. For months the placid river accumulated toxins until fall precipitation 'flushed' the polluted waters into the Niagara River with significant impacts on wildlife. To address the problem, the city of Buffalo and companies operating along the Buffalo River shore established the Buffalo River Improvement Corporation in 1967. The corporation

diverted millions of gallons of water from to the Buffalo River.[106]

From its nadir in the 1960s when it was essentially a dead river, the Buffalo River began showing modest improvements in the 1970s. Dissolved oxygen levels – necessary to sustain fish and maintain ecological balance – were less than one milligram per liter in the 1960s; by 1972 they had, at times, surpassed 5 milligrams per liter, though they are frequently below 4 milligrams per liter[107] (Buffalo Niagara Riverkeeper 2013; Hartig 2010). The 1970s and early 1980s were a period of moderate regulation and recovery for the river. In 1972, the river made the front page of local newspapers when a sheepshead was caught, the first fish from Lake Erie caught in the headwaters of the Buffalo River since the 1940s (Hartig 2010). That the presence of a single fish marked improvement in the river shows just how contaminated it had become. By the time work began on the RAP for the AOC, a decade later, there were 24 different species of fish in the river.

Developing the Buffalo River RAP

In the previous chapter I explored the striking evolution of environmental governance in the Detroit River AOC. In Detroit, during the creation of the Stage One and Two RAPs, tensions between citizens and business/state representatives led to the implosion of the Binational Public Advisory Council. For years action through the GLWQA was minimal at best until renewed federal action[108] and a partnership between the Friends of the Detroit River and the US EPA revived progress in the AOC. In the Buffalo River, public involvement also began in the latter half of the 1980s and continued

[106] At its peak, the corporation pumped at least 400 million liters of water a day. By the turn of the century, because of declining industrial use along the river, the daily amount was down to approximately 60 million liters of water a day (Diggins and Snyder 2003).
[107] The state standard for bodies of water like the Buffalo River is a daily average of at least 5 milligrams per liter and no measurements under 4 milligrams per liter (Buffalo Niagara Riverkeeper 2013).
[108] The Great Lakes Legacy Act (2002) and the Great Lakes Restoration Initiative (2009).

throughout the 1990s, though without any of the acrimony that blossomed in the Detroit River. However, like the Detroit River, the Buffalo River AOC still turned to a public-private/federal-local model of environmental governance. That two vastly different types of public involvement in the earlier phase led to similar forms of governance in the more recent era demonstrates that there is more happening than just new approaches for AOCs that experienced failure. As I will discuss in this chapter, even in an AOC frequently cited as an exemplar of public involvement, environmental governance has shifted in the direction of NGOs and away from the state.[109]

In 1987, the IJC officially designated the Buffalo River an AOC. The AOC runs 6.2-miles east from where the river flows into Lake Erie and includes three creeks that supply the river, the Cayuga Creek, Buffalo Creek, and Cazenovia Creek. The Cayuga Creek runs through two villages, Depew and Lancaster. The Buffalo Creek meets the Cayuga Creek eight miles from Lake Erie, marking the beginning of the Buffalo River. The Cazenovia Creek goes through West Seneca. These were all once small towns that have been transformed into densely populated suburbs raising issues of inadequate wastewater systems and increased non-point source pollution runoff (Diggins and Snyder 2003). Under the GLWQA, remediating each AOC is a three-stage process of RAPs. The Stage One RAP defines the scope of the problem based on 14 potential Beneficial Use Impairments (BUIs). The Stage Two RAP details the possible courses of action necessary to remediate applicable BUIs and selects the most feasible approaches. The Stage Three RAP is completed once the BUIs have been remediated and the AOC is set to be delisted. A policy change in 2001 introduced a process for individual BUIs to be delisted as they

[109] In the concrete sense of individual state governments; the federal government plays an increasingly prominent role.

are restored.

New York DEC classifies fresh surface water based on best appropriate uses. These classifications range from Class N, which is water in its "natural" condition that is not impaired to Class D, which is described as best for fishing, though fish may not be able to reproduce themselves in Class D waterways. When work on the RAP began, the Buffalo River was a Class D waterway, though a long-standing goal of the RAP process is to achieve Class A status, which means the water can be used for drinking water.

Issues in the river include, but are not limited to, 45 inactive hazardous waste sites and 33 CSOs (United States Environmental Protection Agency 2009b). There are nine BUIs in the Buffalo River AOC: restrictions on fish and wildlife consumption, tainting of fish and wildlife flavor, degradation of fish and wildlife populations, fish tumors and other deformities, bird or animal deformities or reproductive problems, degradation of benthos, restrictions on dredging, degradation of aesthetics, and loss of fish and wildlife habitat. Industrial contamination in the Buffalo River AOC is almost all legacy, as industrial activity in the region has significantly decreased since the GLWQA. Former industries include Buffalo China, Buffalo Color, Republic Steel, Donner-Hannah Coke, and Exxon Mobil. Along with industrial pollution, sewage discharge through CSOs further degraded the river.

Like many urban areas in the region, CSOs remain an enduring issue in the Buffalo River. As a Buffalo Niagara Riverkeeper staff member explains the extent of CSOs, "[The Buffalo Sewer Authority] know there's a problem. They recognize it, they acknowledge it, but it's also a billion dollar problem." Until 1938, Buffalo sewers directly dumped untreated raw sewage into the Buffalo River. The combined total of industrial waste and raw sewage was 50,000,000 gallons per day (Rossi 1995). Buffalo's sewer

system combines municipal and storm water flows, which means that wet weather events that produce significant amounts of storm water flood the system's capacity. When the sewer's capacity is overwhelmed, it directly discharges into the river. Discharge from the 33 CSOs is not limited to storm water and sewage, but also includes significant amounts of industrial pollutants, including methylene chloride, tetrachloroethene, chromium, copper, lead, mercury, zinc, and cyanide (New York State Department of Environmental Conservation 1989).

Work on the RAP for the Buffalo River AOC began in 1987 with the New York DEC taking the lead. At the end of 1986, community and local government representatives met with the DEC about creating a mechanism for community involvement. In March 1987, the 21 member Buffalo River Citizens' Committee (BRCC) was created to play the public advisory role mandated by the IJC. BRCC members included representatives from local, county and state governments, specifically the Buffalo Planning Department, the Erie County Department of Environmental Protection, and the Niagara Frontier Transportation Authority. Civil society representatives came from local organizations like the Rohr Street Block Club, Presbytery of Western New York, the United Auto Workers Local 774, Great Lakes United, the Audubon Society, the Adirondack Mountain Club, the Walleye Association, and the New York State Conservation Council (New York State Department of Environmental Conservation 1989).

The ten-person Steering Committee in charge of the overall RAP drew its members from the DEC and the BRCC.[110] The Stage One and Two RAP identified two

[110] There have been two committees for public involvement in Buffalo. The BRCC, which began in 1987 and ended with the completion of the Stages 1 and 2 RAP, and the RAC, which emerged from the RAP.

goals for the AOC: first, restoring best uses of the river and second, approaching zero pollution. The RAP followed the general trend of embracing optimistic time frames by targeting full BUI remediation within a "10 to 20 year time period" (New York State Department of Environmental Conservation 1989: 3-1).

The RAP recognized that social use of the Buffalo River was changing. It notes, "there is little likelihood the river will return to heavy industry or the port will again become a major cargo hub. More likely is the increased use of the river for recreation, light industry, and housing" (New York State Department of Environmental Conservation 1989: 1-2). This prediction has been borne out by subsequent events, though there is still limited industrial presence along the river. While the relative absence of industry means that some of the sources of pollution have disappeared, the legacy sediment contamination, CSOs, and non-point sources of pollution remain.

Citizen participants in the BRCC came from local, county, and state governments, community/environmental organizations, and local universities. Participants were mostly well-educated members of the middle class, particularly in leadership positions within the BRCC, with a number of lawyers, engineers, and natural scientists among the participants as well as community organizers and members of organized labor. Sharing a similar social location with the representatives from the state and industry may have helped the BRCC avoid many of the challenges that accompany collaborative work that crosses class lines (Rose 2000). A number of the core participants were associated with universities in Buffalo, either SUNY Buffalo or Buffalo State, which provided them with additional valuable resources. For example, a number of academics have published heavily on scientific and technical issues in the AOC. Connections with the universities have also resulted in large numbers of undergraduate and graduate

students performing research into pressing issues in the AOC. Multiple people I spoke with emphasized the importance of this research and these resources. A government employee I spoke with traced his long-time involvement in the AOC back to field research he performed in the river while in graduate school at a local university.

According to citizens I spoke with who were involved in the BRCC, the public participants were "unhappy with NYDEC," because they initially felt that the government was trying to go it alone. One of the key steps the citizens took was to create their own database of environmental damage in the AOC. Again, this is another example where access to the intellectual and technical resources of local universities benefitted civil society. This is reflected in the finalized RAP, where comments from the BRCC presented highly detailed plans for river sampling and analysis. The social-technical backgrounds of the university participants were instrumental in facilitating this process. As the Buffalo citizens began working with the DEC, they found the state "always did a good job" at what the law required, though "we might have to kick them in the pants for speed." If the citizens tried to push beyond the minimum the DEC was obligated to do, though, "they would laugh at us." Even if the DEC 'laughed' at citizen desires to exceed minimum standards, they were willing to include these concerns in the finalized RAP.

Unlike Detroit, where the citizen participants quit the BPAC, the finalized Buffalo River RAP explicitly acknowledged the value of civil society's opinion. There are sections of the RAP representing citizen perspectives even when the DEC notes that it opposes the recommendations they contain. For example, the introduction to the section on recommended state legislation to enable RAP implementation contained a parenthetical disclaimer from the state agency, "[This section was] prepared by the Buffalo River Citizens' Committee. DEC does not believe that legislative changes are necessary to

implement this RAP" (New York State Department of Environmental Conservation 1989: 7-17). It is instructive to contrast this with the experience of incorporating environmental justice concerns into the Detroit River RAP. Employees of the Michigan Department of Natural Resources (DNR) replaced the work that emerged from the BPAC's environmental justice committee with a few vague pages that completely neutralized any attention on environmental justice in the AOC and no acknowledgement of any alternative work.

The BRCC recommendations also foreshadow future trends within the AOC as well as within environmental governance more generally. For example, the BRCC recommended, "that non-traditional, innovative funding sources, including grants, university based programs and cooperation arrangements with other agencies and private organizations be investigated to augment the [DEC]'s resources" (New York State Department of Environmental Conservation 1989: 7-3,4). In the current era of remediation, led by Riverkeeper, because of inadequate state resources, one of the AOC's strengths is this ability to mobilize resources to fund projects.

Incorporating the BRCC's recommendations as separate sections within the RAP allows for comparing their goals and targets with the consensus aims. For example, the section on inactive hazardous waste sites simply noted that the DEC was undertaking a process of investigating and remediating existing hazardous waste sites. The BRCC opinion was that, "remedial action at inactive sites focus on permanent solutions, e.g. excavation and destruction, not containment" and that the state aggressively work to have concrete timetables for reducing toxic loads of all sites within the river. The RAP's counter-argument to the BRCC's goals was to emphasize cost constraints, which is a classic regulatory component of the treadmill of production.

In discussing how citizens work with businesses and state and federal agencies, a long-time participant in the Buffalo RAP argued success, "really comes down to connecting with people. Not necessarily connecting with the agencies, but finding people you can work with and understanding their perspective, not just being antagonistic about your different beliefs." Common social backgrounds between the BRCC participants and state employees may have contributed to this atmosphere, because "people from different classes or other social groups often lack both the direct relationships and common experiences that are critical for trust" (Rose 2000: 25). Throughout the RAP development process, citizens in the BRCC had collaborated with the DEC, while maintaining an independent position. It is to the DEC's credit that it recognized the value of giving voice to the citizens in the RAP.

The most striking difference between the general RAP text and the BRCC contribution is the final chapter of the RAP on "Land Use" that is entirely written by the BRCC. The chapter opens by rejecting arguments about economic and environmental conflict: "There is growing recognition that economic development and environmental restoration can go hand in hand" (New York State Department of Environmental Conservation 1989: 11-1). The citizens then present a vision of a revitalized Buffalo River that includes public access, green areas, fish habitat, and non-polluting commercial activity. Another measure of their holistic approach to integrating RAP concerns into overall governance of the area is the suggestion that RAP criteria be incorporated into locally relevant environmental impact studies. Although most of these proposals were not realized, they are notable for their presence in the final document and for their rejection of narrow approaches that would view AOC remediation in isolation from other local governance practices. Once the RAP was completed, the citizen participants continued to

collaborate while maintaining independence. Their official collaboration changed, as the BRCC gave way to the RAC, which was about half the size of the BRCC.[111] In order to keep up pressure on the NYSDEC, the citizen participants founded an independent organization to represent their concerns.

Friends of the Buffalo River

When the combined Stage One and Two RAP was finalized in 1989, the citizen participants in the process formed a non-profit organization, the Friends of the Buffalo River, to ensure progress in the AOC would not stall and to engage the community in the river. As a long-time participant described it, "The origins of the organization were primarily two-fold. One was to make sure the DEC was doing what it was supposed to do for the Buffalo River and also to do a lot of community outreach and education and really be the voice and the advocate for the Buffalo River. In some of the early days of this organization a lot of it was just getting people out on the river, to paddle the river, or to know where the Buffalo River was because I'd say probably 90% of the population of Buffalo does not even know where the Buffalo River is or what role its had in the history of our city."

One of the Friends' first goals was convincing the DEC to change the designation of the river from a Class D body of water to Class B. At a hearing with the DEC, a Friends member said, "I've come to put a bee in your bonnet about putting a 'B' in the Buffalo River . . . After all our work and despite testimony by the City of Buffalo and Erie County, we were told by the DEC that it could only consider the department's

[111] In the 1989 Stage 1 and 2 RAP, the BRCC lists 25 members (New York State Department of Environmental Conservation 1989). In the 1991 Status Update, the RAC lists 12 members (New York State Department of Environmental Conservation 1991a).

recommendation to upgrade the river from a 'D' to a 'C' classification -- and we want a 'B'" (quoted in MacClennan 1990). The river was a Class D, meaning its best use was for fishing, but that conditions might not support fish propagation. The best use of Class C waterways is also for fishing, but the waters should be able to support fish and wildlife propagation. The best use of Class B waterways is for "primary and secondary contact recreation and fishing" (New York State Department of Environmental Conservation 1991b). An upgrade to Class B would require maintaining significantly cleaner water to make the river suitable for regular human contact. The strongest opposition to a Class B designation came from the Buffalo Sewer Authority, which would be forced to address CSOs at a cost of millions of dollars. In the end, the river was designated Class C, with the associated standards for contamination, which it remains today.

In the following section, I turn to the state context of RAP development and implementation. In general, the state of New York has been relatively environmentally friendly, though severe economic challenges have placed constraints on the state's capacity to manage the environment. Following the discussion of political context, I turn to RAP activities in the 1990s and the eventual transfer of control over the AOC to the Friends.

New York Political Context

In this section, I examine the state of New York's environmental policies during the 1980s and 1990s. New York has a long legacy of efforts at environmental protection, most notably the Adirondack Park, created in 1885, which has grown from 2 million acres to more than 6 million acres, and is the largest park in the lower 48 states. In 1895, the state created the Fisheries, Game and Forest Commission, which became the

Conservation Department in 1911. These efforts were part of a framework that has been described as the "romantic environmental paradigm," which was "a blend of Romantic/Transcendentalism, pragmatic conservationism, and business environmentalism" (Taylor 2000: 531). On the first Earth Day, April 22, 1970, New York created the Department of Environmental Conservation, which incorporated the earlier Conservation Department as well as a host of new concerns. In short, New York has a long history of environmental governance shaped by conservationism, the romantic environmental paradigm, and, eventually, the new environmental paradigm (Taylor 2000). Development of the RAP in the Buffalo River AOC began during Mario Cuomo's administration and continued under his successor, George Pataki, who was elected in 1994. Though Cuomo was a Democrat and Pataki a Republican, both are generally considered pro-environmental[112] governors.

Cuomo served as governor from 1983 to 1994, which coincides with the development of the Stage 1 and 2 RAPs in the Buffalo River. Important environmental initiatives during the Cuomo administration include the 1986 Environmental Quality Bond Act, which included $1.2 billion for remediating hazardous waste sites and $250 million for land acquisition to expand parks and protect environmentally threatened areas (New York State Department of Environmental Conservation). Through the 1980s, Cuomo signed legislation expanding regulation of natural resource extraction, aggressively pursued solutions to the problem of acid rain,[113] adopted a "bottle bill" for deposits on some recyclable beverage containers, created comprehensive solid waste

[112] This is along the spectrum of governance in practice, not an external examination of issues of actual sustainability impacts.
[113] It is worth pointing out that New York would be expected to be particularly focused on acid rain since there was a large disparity between its role in causing the problem and the effects it suffered.

management practices that included significantly expanded recycling,[114] and adopted strong vehicle emissions standards.

When George Pataki became governor, he also adopted pro-environmental policies. A few notable actions include the 1996 Clean Water/Clean Air Bond Act, which expanded land acquisition and environmental protection. Unlike the Michigan Bond Act discussed in the previous chapter, New York brownfield redevelopment initiatives were not part of a larger project of socializing the costs of environmental remediation. Another policy that distinguished Pataki from deregulationist neoliberalism was the Pesticide Reporting Law, which made New York one of the first states in the US requiring businesses to keep track of what they spray as well as post warning signs to inform the public.

The contrast between Republican governors in New York and Michigan, Pataki and Engler, can also be illustrated in the former's support for dredging the Hudson River. One of the most pressing debates in New York during the 1990s was how to handle the issue of polychlorinated biphenyls[115] (PCBs) in the Hudson River. For 30 years, from 1947 through 1977, General Electric (GE) dumped 1.3 million pounds of PCBs into the Hudson River from two manufacturing plants; much of the discharge was permitted and legal at the time. In 1984, the US EPA designated a 200-mile stretch of the river a Superfund site. For the next 20 years, the state and GE battled over how to best remediate the contamination; the first dredging began in 2009. GE devoted significant

[114] On the gap between the perceived environmental benefits of expanded recycling and the reality of recycling in practice, see the work of Schnaiberg and his collaborators (Pellow 2002; Pellow, Schnaiberg, and Weinberg 1997; Pellow, Schnaiberg, and Weinberg 2000; Weinberg, Pellow, and Schnaiberg 2000).
[115] PCBs are organic chemicals that were banned in the US in 1979. Among PCBs many industrial uses was in transformers and capacitors. Because they are non-flammable, have a high boiling point, and are chemically stable, PCBs do not break down easily. According to the EPA, consuming water or fish contaminated with PCBs can cause cancer (United States Environmental Protection Agency 2013).

resources, including scientific research, public relations, and lobbying, to arguing that dredging would only worsen the contamination by stirring up sediments from the bottom of the river. Governor Pataki sided with the environmental community against GE, one of New York's largest employers, arguing for extensive (and costly) cleanup to be borne by the company. This is a marked contrast from Governor Engler's policies in Michigan, which fought to remove regulatory constraints on industry and socialize the costs of remediation. In the framework of Peck and Tickell (2002), Pataki engaged in roll-out neoliberalism, while Engler pushed roll-back neoliberalism. So in order to understand the divergence of outcomes in the first stage of RAP actions, political context is one key difference between the states of Michigan and New York.

Remediation Activities Through the Late 1990s

This section briefly highlights work done in the Buffalo River AOC from the creation of the Stage One and Two RAP through the late 1990s.[116] The state performed several studies of water quality, including sampling of water flows and computer modeling of dissolved oxygen levels. There were multiple studies related to contaminated sediment issues, from extraction to transport and storage. The state of New York, private contractors, and the Army Corps of Engineers carried out these projects. A few inactive hazardous waste sites were remediated. The Buffalo Sewer Authority used a grant from state Clean Air/Clean Water bonds to fund new storm sewers for part of the river to limit CSO discharges, though 17 CSOs directly discharge into the Buffalo River. In short, the

[116] This section draws on multiple interviews with RAC participants and the detailed summary of action in the RAP annual updates (New York State Department of Environmental Conservation 1991a; New York State Department of Environmental Conservation 1992; New York State Department of Environmental Conservation 1995; New York State Department of Environmental Conservation 1999; New York State Department of Environmental Conservation 2002).

general trend through the late 1990s was a focus on intensive study and modeling, but with a relative lack of action beyond that due to limited resources.

The Friends Assumes Control of the AOC

Following the completion of the combined Stage One and Two RAP, there followed a period of remedial actions in the Buffalo River AOC, though it was mostly dedicated to intensive surveys of the contamination. As a long-time citizen participant described the trajectory, "it seemed for a period of time in the early to mid 1990s, there was a flurry of activity and then towards the late 90s things seemed to kind of slow down a bit. Once again in the early 2000s, things really started to pick up again." Events in Buffalo mirrored larger trends in the Great Lakes. In 2003, the US General Accounting Office (GAO) released its scathing report on stalled progress in implementing the GLWQA (United States General Accounting Office 2003), which sparked renewed federal interest in the agreement. That same year, the EPA approached the Friends to gauge their interesting in assuming control over the AOC from the state DEC. According to a long time member (and employee) of the Friends, "It was almost like DEC had wiped their hands of it for a long time, because they just didn't have the capacity or the money to do anything." Another RAC member explained the state's declining role in the AOC, "The state was caught in a situation of declining budgets . . . and then a number of key people either retired or passed away. With these changes, I think it became difficult for the state to move forward" in implementing the RAP. Since the late 1990s, state budget pressures had significantly affected the DEC; this trend continued after the Friends took

over the AOC.[117] From the mid-1990s through the mid-2000s the DEC cut around 800 jobs. When Eliot Spitzer was elected governor, he created 108 new positions at DEC in the 2007-08 budget. When the economic recession hit New York in 2008, the DEC had 3,775 employees. By 2010, it had cut 16% of its staff, 595 employees, and the state pushed for hundreds more cuts to reach a target of 2,926 staff. Between the 2007-08 and 2010-11 budgets, direct state support to the DEC had been cut roughly in half (Grannis 2010).[118] It was in this context of continuing cuts to DEC budgets and staff, and thus, regulatory capacity, that the Friends assumed control of the AOC.

After the EPA approached the Friends, according to someone involved in the bid, "We took a shot and responded to the grant RFP [request for proposals] and we were awarded the grant on a trial basis for two years. The work plan was very much laid out in the grant. There was some wiggle room there for how we go about implementing it, being creative with the way we implement it. I think just the action of the EPA taking the responsibility from DEC and giving it to somebody else, having that organization be really passionate about it . . . and put new energy into this process, it got people going and really stirred things up, which is probably what they meant to do."

Across the Great Lakes, financial constraints have always been the most pressing factor preventing successful implementation of the GLWQA. As a RAC member during the Friends' management of the AOC explained, "You can be as proactive as you want to be, but if there's no funding available, you're not going to be successful either." As I will discuss below, the Friends has been relatively successful at raising money for the AOC.

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[117] Detailed information about DEC budgets comes from a memo written by a former DEC commissioner (who was fired shortly after the memo leaked) challenging further rounds of cuts (Williams 2010).
[118] Direct state funding only accounts for approximately a quarter of the DEC's budget, with permits and fees and federal funding accounting for the remainder of funding.

When the Friends took control of the AOC, their first task was fully reevaluating BUIs within the AOC and developing detailed delisting criteria. The initial RAP found nine of a possible 14 BUIs were present in the AOC. Based on the new review, the Friends broke these nine down into six impaired and three likely impaired. The six definite BUIs are restrictions on fish and wildlife consumption, fish tumors and other deformities, degradation of benthos, restrictions on dredging, degradation of aesthetics, and loss of fish and wildlife habitat. The three likely impaired classifications are tainting of fish and wildlife flavor, degradation of fish and wildlife populations, and bird or animal deformities or reproductive problems. The reevaluation was needed because individual BUIs can now be delisted.

The other initial change Riverkeeper implemented was growing the RAC. In the final RAP update under DEC control, the RAC had decreased to ten members (New York State Department of Environmental Conservation 2002). Of the eight identifiable affiliations, three members came from local universities, two from Riverkeeper, two from local or county agencies, and one from industry. In the Riverkeeper's first update, the RAC had more than doubled in size, to 22 members. Five members came from local universities, one from industry, five from local or county agencies, six from state or federal agencies, one from the Tonawanda Band of Senecas, and four from Riverkeeper. While the RAC has grown, civil society is mostly represented through university connections and an NGO.

Remediation Actions

In the following sections, I focus on a few notable sites and projects within the AOC that were conducted under the GLWQA. Unlike the Detroit River AOC, where

remediation efforts outside of the GLWQA were greatly helped by links with Congressman John Dingell, most of the environmental work done in the Buffalo River has been officially conducted through the GLWQA.[119] First, I discuss two brownfield redevelopments that illustrate how individual sites have been addressed.

Buffalo Color

The Buffalo Color site is a 70-acre stretch of industrial land along the shore of the Buffalo River. In 1879, a forerunner of the Allied Chemical Corporation[120] began operations producing dyes and organic chemicals. The evolution of what became Allied Chemical illustrates the rise and decline of chemical manufacturing in Buffalo. In the late 1880s two chemical companies, the Schoellkopf Aniline and Chemical Company and Buffalo Chemical Works, began production along the Buffalo River (Rossi 1996). Over the next few decades the companies absorbed other manufactures of chemicals and acids until the two companies merged in 1920, forming the Allied Chemical and Dye Corporation. In 1977, Buffalo Color bought the plant to manufacture dyes, primarily indigo. Indigo dye manufacturing in Buffalo thrived until the 1990s when competition from China left the industry reeling. David Sauer,[121] an environmental engineer with Buffalo Color, represented the company in the AOC during the initial phase of RAP activities. Citizen participants I spoke with described him as an "adversary" who was "reasonable" to work with and "understood the issues," though he "believed the river

[119] There have been occasional redevelopment efforts within the AOC that are outside the GLWQA, but they have had little to no focus on environmental concerns. For example, the current effort to transform the grain elevators into artistic tourist attractions by lighting them up (Sommer 2013).
[120] Allied Chemical purchased Honeywell is 1989 and took its name. Honeywell is still active along the Buffalo River.
[121] Sauer passed away in 2000 at the age of 54, so I rely on second hand accounts for his perception of remediation efforts.

wasn't worth saving." Buffalo Color shut down in 2003 and was liquidated the following year. Allied Chemical eventually became Honeywell, which has played a prominent role in remediating the site. Remediation of the Buffalo Color site is nearly completed and the site will soon be transformed into a regional history museum.[122]

In the early 1990s, Allied Chemical remediated 19 acres of the 74-acre property. In 2005, under the oversight of the DEC, Honeywell voluntary removed 1.5 million pounds of chemicals that were a legacy from Buffalo Color. An active community participant in the current RAC describes Honeywell's willingness to work with Riverkeeper and the state: "Honeywell has been proactive in admitting their liability, they won't say that word, but admitting their responsibility and they are working with us. They've committed almost three million dollars to date with no promise of return on investment, so they've stepped up to take responsibility. They see the Legacy Act as an opportunity to take care of their liability at a much cheaper cost, too, so it makes sense for them business-wise."

The Western Railway Historical Society and the Steel Plant Museum of Western New York acquired part of the Buffalo Color/Honeywell tract in order to open a Heritage Discovery Center. The Honeywell experience represents a positive example of brownfield redevelopment. The corporation responsible for the land (which does not mean that they were responsible for creating the pollution[123]) engaged with the state and civil society throughout the remediation process. The resulting property has been used for a cultural center that is intended to drive tourism and attention to the riverfront, part of a

[122] For detailed information about the site history, remediation, and future plans, see the redevelopment web site (South Buffalo Development).
[123] It is worth remembering that in Michigan, Governor Engler pushed to end the practice of holding property owners accountable for pollution existing on their property, which is a fundamental component of decades of US environmental policy.

larger riverfront development vision that includes incorporating the AOC's historic grain elevators. The current redevelopment of the Buffalo River bears many similarities with the BRCC's vision in the Land Use chapter of the combined Stage One and Two RAP (New York State Department of Environmental Conservation 1989).

The Exxon Mobil site

The inactive site owned by Exxon Mobil was used for refining and storing petroleum from the 1880s until the 1980s. Exxon remediated a portion of the site in 2007 that included removing 5,615 tons of contaminated soil (New York State Department of Environmental Conservation 2013). They have also removed miles of underground piping that connected storage containers. Significant contamination remains and the company is currently negotiating with the DEC about how to proceed. While Honeywell recognized its liability for the Buffalo Color property and was in many ways a model actor, the Exxon Mobil site remains contaminated and, according to an anonymous survey of stakeholders involved in brownfield redevelopment in the area, the company is "not [a] very good corporate partner" (Urban Strategies 2012). An active member of the RAC who had praised their experiences with Honeywell spoke of the challenges of working with Exxon: "Exxon knows it has liability on the river and they want to take care of it. We had several conversations and we thought we were going in the right direction and then they stopped communication. Exxon probably has . . . the more corporate culture where they feel the persecution complex that everybody's after them. For obvious reasons, they damaged the river and major natural resources damages."

Corporate intransigence is not the only reason that might prevent remediating an inactive hazardous waste site, but in the case of the Exxon Mobil site, the corporate

response seems at least a partial explanation for enduring contamination. Along the river more than a dozen inactive hazardous waste sites remain.

Dredging the Buffalo River

In 2005, the BNR signed a cost-sharing agreement with the US Army Corps of Engineers for a $2.1 million feasibility study of dredging contaminated sediment from the river (Buffalo Niagara Riverkeeper 2008). The agreement is frequently referred to as a "312 agreement," because section 312 of the 1996 amendments to the Water Resources Development Act had identified the Buffalo River as one of five priorities waterways for contaminated sediment removal (1996). In 2010, the Riverkeeper and Army Corps began working together on sediment removal. The close collaboration between an environmental NGO and the Army Corps is a particularly notable component of the Buffalo River remediation projects, because of the general tensions that exist between the Army Corps and environmental organizations. As someone involved with Riverkeeper explained the lack of conflict, "they [the Army Corps] have been very proactive in looking at beneficial use of the dredge sediments and looking at the habitat impacts or working with their operations and maintenance folks with the navigation dredging to say just because they get authorization doesn't mean they have to dredge in every spot and steamroll past it . . . They work with us, they're part of our project coordination team. They come to our meetings, they're actively engaged, they're very knowledgeable about all of the dynamics of the river, the health risks. The Corps has a lot to offer if you're able to work productively with them, the institutional knowledge they have. This is different than maybe the Mississippi River, this is just a small little waterway in the scope of things, but they are capable of working outside of the box."

Riverkeeper and the Army Corps along with the EPAs Great Lakes National Program Office (GLNPO), the DEC, and corporate partners have developed a dredging strategy based on this joint study. Riverkeeper leveraged funds from the state of New York, the EPA (through Great Lakes Restoration Initiative Funds), and corporate partners to carry out the dredging. The first phase of dredging began in 2011 with funding from the GLRI. The second phase of dredging will draw on GLLA money.

Current State of the Buffalo River

From its nadir in the 1960s, the Buffalo River has made tremendous progress, though significant problems remain. The New York State DEC considers the river one of its 'ten success stories' over the past 20 years: "Water quality has improved dramatically in the Buffalo River since it was first sampled in 1976. The river has progressed from severely impacted in 1976 to moderately impacted in 1988 to slightly impacted in 1993 and 2000" (New York State Department of Environmental Conservation 2004: 23). The dramatic disappearance of industry along the Buffalo River means that direct industrial discharges into the river are no longer a major source of pollution in the river. In and of itself, this played an important role in the river's improving condition. CSOs and non-point sources of pollution are now the most stubborn sources of damage. In a recent report card for the RAP, Riverkeeper assigned two 'D' grades, one for bacterial contamination (which come from CSOs) and the other for public awareness of non-point sources of pollution; trends for both issues were classified as unchanged (The Friends of the Buffalo Niagara Rivers 2005). It is clear that Riverkeeper has been tremendously successful at cleaning up the river. Everyone I spoke with, whether from state, county or local agencies or civil society, agreed that the past decade has been by far the most fruitful

period in the AOC's existence. A government employee summed up this sentiment well: "As far as Riverkeeper taking over, it's made the whole thing [implementing the RAP] a more worthwhile process."

Taking control of the AOC has also tremendously impacted the Riverkeeper organization. When they first won the leadership on a provisional basis, according to a Riverkeeper staffer, they "had an all-volunteer board and we had one part-time staff member on contract." But as events progressed over the past decade, they "started getting foundation funding, because people knew who we were and they knew what we did. We had other work programs and tasks and so forth. We went from an all-volunteer board with one part-time staff person in roughly 99-2000 to at this point, I just hired another full-time watershed planner. We're bringing in a full-time habitat restoration shoreline person and our full-time paid staff now is about 15 or 16 not to mention all of the volunteers and interns and stuff." In fact, the most recent organizational name change, from Buffalo Riverkeeper to Buffalo Niagara Riverkeeper, stemmed from the organization's taking control over remedial activities in the nearby Niagara River AOC.

Buffalo River: Concluding Thoughts

Like in the Detroit River AOC, the Buffalo River AOC involved public participation, but rather than leading to fractious disputes, this involvement has continued for more than two decades. Research on the Buffalo River AOC – some by direct participants – depicts individuals representing multiple sectors coming together and working to achieve some form of consensus (Boyer and McMahon 1992; Kellogg 1993). My research confirms the lack of acrimony, but also reveals some key differences between the Buffalo River and Detroit River processes. Key factors include: composition of citizen

participation, role of business in the AOC, state political context, and AOC focus.

In short, initially there was significant public involvement in both AOCs. In the Detroit River, this sparked significant conflict between citizen voices from the community until the BPAC split. In Buffalo, BRCC members worked to overcome conflict and differences. While environmental concern transcends boundaries of race and class (Mohai 1990; Mohai and Bryant 1998), identities shape the forms of environmental action (Brulle 2000; Szasz 1994; Taylor 2009). In the Detroit River AOC BPAC, citizen involvement mostly came from downriver communities (working class and/or communities of color). Furthermore, because factors like race and class also shape one's exposure to social power (Offe and Wiesenthal 1980), the social composition of the Detroit River participants combined with the region's preexisting history of social tensions across racial and class divides to make conflict a more likely outcome.

Remediation efforts in the 1990s mostly involved technical studies focused on identifying the scope of contamination in the AOC. Although the Buffalo case has been a more successful model of public involvement, throughout the 1990s and early part of the 2000s, little had been accomplished in terms of remediation. Public involvement in the BRCC and subsequent RAC drew heavily from the professional middle class, lawyers and university professors, with little involvement from working class and/or people of color, though both the BRCC and current RAC have connected with local community organizations. Furthermore, in reports where members were identified by their affiliation, only one industry representative was present. This is a stark contrast to the Detroit River BPAC or current PAC which both contained numerous industrial representatives.

In short, the social composition of public participation in the Buffalo River AOC produced citizen participation reflecting the orientation of white, middle-class

professional environmentalism. Riverkeeper was founded in 1988 and grew out of citizen involvement in the RAP. Throughout the 1990s and early 2000s, BNR continually pushed for the public to play a prominent role in the RAP. As a municipal employee described the organization, "the Riverkeepers have really pushed beyond that where the Buffalo River's concerned. In a lot of ways the DEC is following their leads and what they're doing." The Riverkeeper's actions ultimately led to the organization becoming the first non-state agency to manage an AOC. In the decade since they took the lead in the AOC, the Friends has made substantial progress including fully updating all of the feasibility studies, raising money for multiple dredging projects, holding regular community forums and events, and taking leadership of the Niagara River AOC. In the first round of applications for GLRI funding, the BNR was a finalist for five GLRI grants, more than any other AOC. Part of this success stems from issues of resource mobilization: BNR has received federal funding to maintain and expand a professional staff. One of their GLRI proposals will be for more funding for organizational maintenance.

Throughout the GLWQA era, there has been a greater industrial presence in the Detroit River AOC than in the Buffalo River AOC. As the last chapter discussed, during the creation of the Stage One and Two RAPs for the Detroit River, organized industrial intransigence combined with a vehemently pro-business state government, curtailed public participation. It is this current lack of industry in the region that requires a note of caution in celebrating accomplishments within the Buffalo River AOC. This is not the decoupling of the environment and economy celebrated by ecological modernization theorists, but instead an absence of industry. This lack of economic activity meant an end to industrial discharges and a lack of opposition within the RAC.

Going back to Schnaiberg (1980), environmental sociologists have regularly found

that social visibility of an environmental hazard does not always translate into concern or action. The experience of the Buffalo River confirms this finding. As a member of BNR describes the river, "It's kind of hidden. If you've looked at the aerials of the river, if you see where the river flows, it goes through a predominantly industrial era, so there's very limited connection of people to the environment or people to their river. The only connection that people really did have is in the inner harbor area. Everybody knows the inner harbor. That's where the Erie Canal terminus is, that's where the downtown core really meets the waterfront, but people say inner harbor and they don't realize they're talking about the Buffalo River. There was a lack of knowledge of it, a lack of connection, and a sense of apathy." Although she argues that there is apathy and disinterest, BNR's success, along with the earlier participation of the members of the public advisory council, demonstrate that some members of society were concerned. Under the Friends' leadership, remediation activities have been driven by a holistic vision of a revitalized river that includes expanded community engagement through increased access to the water, green spaces, and cultural opportunities.

Chapter Six: Conclusion

In this dissertation, I examined changes in environmental governance between the Fordist and neoliberal eras through an in-depth study of two Great Lakes Areas of Concern (AOCs), the Detroit River and the Buffalo River. Since the 1970s, the Great Lakes Water Quality Agreement (GLWQA) between the United States and Canada has worked to alleviate the toxic legacy of industrialization in the region. Beginning in the mid 1980s, all AOCs began a three-step process in developing remedial action plans (RAPs): 1. Identifying the scope of the problem, 2. Assessing the available options and selecting the best one,[124] and 3. Implementing the plan identified in stage Two and developing plans for monitoring the remediated area. When an AOC completes its stage Three plan, the International Joint Commission (IJC), which administers the GLWQA, classifies it as either remediated or as an area in recovery, which only requires time to complete the remediation. Part of the development of the RAP model was a formal requirement for public consultation introduced in 1987 amendments to the agreement, though the revisions to the GLWQA did not specify the forms public involvement should take or the degree to which the public should be involved in decision-making.

During the first phase of RAP efforts, my two cases significantly diverged in terms of social composition of citizen participants, their influence in the AOC, and ability to produce Stage One and Two RAPs. In New York, the state Department of

[124] Using the logic of cost-benefit analysis and a remediation standard that emphasizes removing barriers to beneficent uses rather than achieving their earlier, pre-contamination states.

Environmental Conservation (DEC) led the RAP efforts in partnership with the Buffalo River Citizens' Committee (BRCC). Members of the professional middle class (e.g. professors, lawyers, engineers, and environmental scientists) formed the citizen component of the BRCC. Industry played a relatively minor role in the BRCC, because of sharp declines in the presence of industry along the river. While there were some disagreements between the citizen participants and industry representatives, the overall atmosphere within the BRCC was one of partnership rather than opposition. In 1989, the DEC and BRCC completed the combined Stage One and Two RAPs.

Unlike the Buffalo River AOC's story of relative harmonious collaboration, in the Detroit River AOC, sharp conflicts split participants, initially resulting in a failed public participation process. The Detroit River separates the Detroit and Windsor metropolitan areas, making it a binational AOC. During the initial phase of RAP development, public involvement in the Detroit River AOC drew from a broader social base in terms of participants' racial and ethnic identity, social class, and geographic location. Because public participants were equally split between Canada and the US, it might seem as if international differences caused some of the problems that emerged in the AOC. Although the Binational Public Advisory Council (BPAC) imploded because of internal tensions between citizen participants on one side and representatives from the state and industry, the BPAC's failure was not a result of the AOC's binational status. Indeed, there was strong consensus on the best courses of action between the US and Canadian civil society participants. The citizens ultimately rejected the BPAC and left the RAP behind because they felt representatives from state and industry were ignoring their concerns.

By the late 1990s, implementation of the GLWQA in the Buffalo River and the Detroit River had diverged significantly. At this point, state economic crises and

diminished federal interest sparked a period of general inaction in GLWQA activities. In the early 21st century, under the Great Lakes Legacy Act (enacted in 2002) and the Great Lakes Restoration Initiative (begun in 2009), federal attention and resources started a significant new push to fulfill the GLWQA. Although the Buffalo River AOC was a model of public involvement from the late 1980s through the 1990s, in the contemporary era of remediation action, a new stakeholder has assumed a prominent role in the AOC. Indeed, both AOCs have converged on a similar model: collaboration between a federal agency, the Environmental Protection Agency (EPA) and a local NGO. In the Buffalo River AOC, the Buffalo Niagara Riverkeeper (BNR) took on local responsibility and became the first NGO to formally take charge of local remediation under the GLWQA.[125] In the Detroit River AOC, the Friends of the Detroit River (the Friends) have been informally in charge of remediation activities since 2005. In both cases, for political and economic reasons, the role of state agencies has been sharply curtailed as the BNR and the Friends have assumed the responsibilities formerly held by the states of New York and Michigan. This transformation is a form of de facto privatization of public governance, albeit a specific form based around non-profit organizations: NGOization (Lang 2000).

The progression of governance in the Great Lakes mirrors the larger social transformation from Fordism to neoliberalism. The former era was structured around a treadmill of production that focused on economic growth as the central goal of governance. Civil society was largely external to core governance processes and inserted itself through social movements. Neoliberalism first deconstructed the Fordist era before rebuilding an alternative logic of governance structured around market efficiencies, rather

[125] BNR won an EPA bid to replace the state of New York as lead agency in the AOC.

than economic growth (Peck and Tickell 2002). My research makes three significant theoretical contributions. The first concerns how the role of civil society in governance has transformed from a social movement dominated era to one dominated by non-governmental organizations. The second examines a particular form of neoliberalism: the non-profit dominated privatization of the welfare state. Finally, the dissertation offers an update to the treadmill of production model that makes clear the consequences of the transition from emphases on economic growth to contemporary focus on market efficiencies.

From Social Movements to NGOs

In this conclusion, I return to the central question of this dissertation: how has the transition from Fordism to neoliberalism impacted civil society participation in governance processes. This entails formalizing the distinctions between social movements and NGOs and then assessing the consequences of the latter's emergence in the neoliberal era. In my analysis, I used three categories as heuristic tools to understand collective behavior: grassroots social movements (GSMs), Professional Social Movement Organizations (PMSOs), and NGOs. The former two mark out the life cycle of social movements in the Fordist era, while I argue that NGOs are a separate phenomenon from social movements that are endemic to neoliberalism.

GSMs draw their support from people and groups who are excluded from access (both formal and informal) to key social decision-makers and, therefore, operate on the basis of collective power (Offe and Wiesenthal 1980). Effective GSMs draw on a combination of their mass bases and/or strongly committed core memberships. Member contributions to GSMs are often non-financial. This includes participation in everything

from events like rallies and demonstrations to more contentious events including civil disobedience and violence. PSMOs also have membership bases, though unlike GSMs, their memberships are often more passive and serve as a basis of financial support for the organization. PSMO's professional staffs often have closer connections with key decision makers and can draw on their large membership bases in efforts like lobbying and letter writing campaigns.

In taking stock of the consequences of the transition from social movements to NGOs, it is important to not romanticize the Fordist era of social movements, which encompassed both 'old' and 'new' social movements. Participants in the former, exemplified by the organized labor movement, joined together on the basis of shared class position and consciousness with economic issues at the core of their concerns. That is, workers' collective interest was shaped by their location in the class structure as well as sense of identity (Przeworski 1985). New social movements, including the civil rights, women's, gay rights, peace, and environmental movements, focused less on economic issues than questions of identity, lifestyle, and autonomy.[126] Rather than delve into the differences between these forms of movements, I want to highlight the commonality of forms of participation: whether one participates in a local union or an identity-based organization, that participation is formed on the basis of citizenship.[127]

When members of civil society participated in social movements, they acted as citizens external to decision-making processes. The neoliberal era witnessed the emergence of NGOs as the successor to social movements in terms of the dominant form of civil society participation in governance. While social movements were collective

[126] As Calhoun (1993) notes, the dominant characteristics of new social movements have historical precedents.
[127] In a robust, rather than juridical sense.

actions outside of institutional centers of decision-making, NGOs are formal, private organizations that assume governance responsibilities once associated with the state, breaking down Fordist barriers between the state, industry, and civil society. Though many NGOs are membership-based, this is by no means a necessary component of an NGO. The general composition of an NGO is professional staffers who hold advanced professional or scientific degrees. Unlike the Fordist era, where a person joined (or started) an SMO because she or he felt aligned with its particular frame, in the neoliberal era, interest operates within the marketplace as people seek out employment for causes they're committed to. A shorthand characterization would be: participants volunteer in GSMs, members subscribe to PSMOs, and NGOs are for careers.[128]

What are the effects of this change on the structures of civil society participation? First, it sharpens the divisions between participation and non-participation. As McAdam's (1982) landmark study of Freedom Summer demonstrated, an individual's social networks sharply influence his or her participation in mobilization. In the NGO model, where participation is now reduced to employment, there are fewer opportunities for broadening civic participation, as workplace-based connections no longer provide an opportunity for recruitment into a social movement. This is not to suggest that there are no avenues for diffusion, but only that they are reduced because of the narrower social base of NGO workers. The members of the professional middle class who make up the NGO workforce share tight social networks based on factors like common educational

[128] Both GSMs and, to a much larger extent, PSMOs have professional staffs. The distinction between the two, on the one hand, and NGOs is that the latter do not claim to be membership organizations.

experiences, including the often necessary professional or technical degrees, work experiences,[129] and ideologies.

An additional consequence of NGOs' professionalization imperative relates to the impending student loan debt crisis. As opposed to many classic NSMs, where connections with universities facilitated political involvement and deepened commitment to movements, loading students with debts (that cannot be discharged through routine bankruptcy proceedings) is, in and of itself, a conservatizing influence.[130] Debt forces graduates to immediately pursue employment sufficient to cover the costs of loan repayments. Graduates interested in social change are channeled into careers in nonprofit work.

While social movements have a wide range of ideological viewpoints, NGOs often pursue much narrower ends. In order to have a seat at the table, NGOs are expected to play a 'responsible' role in representing the public. Funding sources have a strong influence on NGO practice. Grants from foundations and the state have become incredibly influential in the neoliberal era. Their role in funding NGOs shapes the work of the non-profit sector, a subtle, but important, exercise of power (Lukes 2005).

NGOs have replaced social movements as the characteristic expression of civil society in the neoliberal era, sharply increasing the divide between participation and nonparticipation. Giving civil society representatives a seat at the table by bringing NGOs into the fold has increased the involvement of some sections of civil society while placing further barriers in the way of those segments of civil society that are not strongly involved

[129] Though not a fundamental feature of NGOs, throughout the nonprofit sector, organizations often use the justification of "meaningful" work to explain long hours and less pay than the private sector.
[130] Though student loan debts can be forgiven after ten years of employment with a nonprofit, organized labor unions are explicitly exempted from debt forgiveness programs. This is an example of how the neoliberal era privileges the role of NGOs and other nonprofits vis-à-vis the labor movement and is yet another challenge the latter faces.

in NGOs. The formal involvement of NGOs minimizes SMOs ability to claim to represent civil society and push for a role in decision-making. Not only has the form of civil society involvement altered, but also its role in governance has sharply changed under neoliberalism. In the next section, I consider the impact of this trajectory on the Fordist welfare state.

The Privatization of the Fordist Welfare State

In the welfare capitalist era that preceded Fordism, benevolent industrialists assumed the role of final guarantor of social wellbeing. The onset of the Great Depression marked the collapse of welfare capitalism, as industry proved unable to provide needed employment and/or social services in the face of the global economic collapse (Cohen 1991). The rise of the New Deal created the role of the modern welfare state, which accelerated tremendously through World War II and into the Great Society. While the US welfare state was much more laissez-faire than its European counterparts, in this era the federal government expanded its role in Americans' social and economic lives as it minimized the negative social impacts of the marketplace (Esping-Anderson 1990). The Fordist welfare state was technocratic and relied on economic growth[131] to provide employment as well as revenue to fund itself. In the 1980s, the welfare state came under sharp attack from the Reagan administration, which began dismantling the Great Society. Following the collapse of the Soviet Union and the "end of history," neoliberalism accelerated globally (Fukuyama 1992). In the US, the Clinton administration 'reinvented' government. Along with making market efficiencies central to

[131] The notion of the military-industrial complex reinforces both the corporate-friendly nature of the US welfare state as well as the often under-appreciated influence of the Cold War on domestic policy.

governance and embracing quantitative "data-driven" solutions, neoliberalism strongly pursued privatization. Much of neoliberal privatization involves selling off public goods and outsourcing government responsibilities to private, for profit entities, but it also includes a significantly expanded role for non-profit organizations. That non-profit NGOs would be a driving force in neoliberalism, which holds at its core a belief in the sanctity of privatization and free markets, is a puzzle this dissertation worked to unravel. Along with the economic and political dimensions of neoliberalism, there is also clearly a cultural/ideological component focused on protecting markets from noneconomic and political constraints (Centeno and Cohen 2012).

The argument for expanding the role of nonprofit entities is that they can be 'nimble' and 'efficient', unlike the large-scale bureaucratic institutions of the welfare state. In both New York and Michigan, dramatic cuts to environmental regulatory apparatuses in the 1990s and 2000s significantly curtailed the states' abilities to oversee the GLWQA. The political deregulation imperative that scaled back regulatory abilities created a self-fulfilling prophecy as shrunken agencies proved unable to manage their responsibilities in the Great Lakes. As states recede from their previous lead role in governance, nonprofit institutions step into the void. The second contribution my dissertation makes involves the privatization of the bureaucratic welfare state. Unlike more classic forms of privatization, where public goods and services are either sold or contracted out to private, for profit entities, this form of privatization entails non-profit NGOs assuming responsibilities formerly held by the welfare state. In both cases I examined, former government employees dominated NGO leadership. While there are many examples of dedicated NGOs providing valuable social services, their private nature minimizes public

accountability, so at least some of their supposed efficiency advantages over public institutions can be chalked up to their insulation from democratic accountability.

Quantification, Evidence-Based Policy, and Sustainability

Along with market logics and efficiency, neoliberalism also includes an emphasis on quantification and metrics.[132] This push is found throughout society, as fields from medicine to education seek 'evidence-based' practices. There is an understandable appeal to incorporating quantifiable evidence into decision-making. However, uncritically embracing quantitative evidence and data is problematic. A brief examination of recent federal education policy's landmark legislation, No Child Left Behind, reveals many of the assumptions that accompany this quantitative turn. Beyond the troubling notion that a primary reason for underperforming schools is lowered expectations, the move to make testing a primary mechanism of evaluating learning outcomes assumes that learning can easily be quantified. The rudimentary comparison of testing data also diminishes the roles of social factors other than teaching, as the policy not only assumes that testing realistically measures educational outcomes but also allows for cross-teacher comparisons.[133] Here the quantification push becomes intertwined with efficiency. Qualitative evaluations of teacher performance[134] would potentially provide a richer understanding of teacher performance as well as tailored suggestions for improvement, but at a level of expense that is a political nonstarter. With this in mind, I will first address

[132] In one sense, this is nothing new, since the idea of rationality emerging from the enlightenment and the positivist era, but there is a component of the push for quantifiable evidence that is distinct to the neoliberal era.
[133] This critique is why teachers unions frequently point out that top policy makers send their own children to private schools that explicitly disavow standardized testing as a reliable evaluator of student learning or teacher performance.
[134] External qualitative teacher evaluations would not be trouble free, because of questions of bias, the criteria for evaluation, and who would appoint the evaluators.

the role of quantifiable evidence in the GLWQA before moving to a larger discussion of how neoliberalism conceives of sustainability.

The history of the GLWQA spans four decades of inconsistent efforts at remediating the Great Lakes. The creation of Beneficial Use Impairments (BUIs) as the primary classificatory system for understanding problems within the various AOCs reflects many of the limitations discussed above. First, in terms of scoping, by creating 14 official categories of impairment, the agreement dismisses other potential social or environmental impacts of contamination. Documented impacts on human health are by far the most glaring omission in the BUIs (though there are BUIs covering impacts that could affect human health, like drinking water, beach closings, and contaminated fish). This, coupled with the federal government's suppression of a study linking Great Lakes water quality issues to profound public health issues (Kaplan 2008), suggests a sustained government emphasis on disconnecting social and environmental issues legitimated through creating 14 distinct, binary categories of contamination. The US General Accounting Office (GAO)'s scathing report on the lack of progress under the GLWQA (United States General Accounting Office 2003), sparked renewed remediation efforts. The current focus is on showing progress, rather than achieving progress. According to a local AOC participant, "it's almost been a knee-jerk reaction, rather than a planned reaction. Everybody, all they talk about, what can we delist? What can we delist? What can we delist?" When faced with a decision about priorities, then, leadership within the AOCs based their courses of action on ease of delisting, rather than environmental impact. This shifts priorities away from enduring problems that are expensive and complex, in favor of those that can be delisted. Again, this is an example of a problem that stems partly from the quantification imperative and partly from its implementation,

as a more robust system of metrics that recognized partial successes in terms of each BUI as well as had ways to differentiate between severity of BUIs would only partially overcome these issues.

Since the Bruntland commission's adoption of sustainable development, sustainability has become a core concept in environmental governance (World Commission on Environment and Development 1987). Among the myriad contemporary local and global environmental problems, global warming is currently the most synonymous with sustainability. Clearly there is a significant quantitative, data-driven aspect of global warming, from carbon to methane. Missing within much of the policy and scholarly debates over responses to global warming is the social dimension, 'just sustainability' (Agyeman, Bullard, and Evans 2003). The quintessential neoliberal theory of the environment, ecological modernization theory, argues that there has been a decoupling of the economic and the ecological and that ecological issues should be addressed independently of social concerns. Instead of ecological modernization theory, I argue for reconceptualizing the treadmill of production model. In the following section, I explore the dimensions of the neoliberal treadmill.

The Treadmill of Production in the Neoliberal Era

The treadmill of production model neatly captures the logic of Fordist society as the state, capital, and civil society (in the form of labor) all, for varying reasons, embraced a pro-growth agenda as the most effective means of achieving their goals. Relations between the state and civil society as well as between capital and civil society focused largely on distributional questions: taxes, wages, benefits, etc. Policy makers embraced the growth imperative. Accelerating the treadmill of production (Schnaiberg 1980;

Schnaiberg and Gould 2000) created perceived social benefits and provided the states with the increased revenues needed to address the negative consequences of the market. Economic growth remains the underlying principle of public policy as it retains hegemony over political discourse, but there are some notable exceptions (Stiglitz, Sen, and Fitoussi 2010).

In the neoliberal era, though, the dominant sectors of the state, industry, and civil society (in the form of NGOs) all agree that the key to addressing social issues and improving overall well being is not economic growth, per se, but markets[135] and efficiencies. There are two primary strengths of the treadmill model that I argue are entirely relevant to the neoliberal era. First is the metaphor of the treadmill itself, which involves expending significant energy simply to remain in place against the unending constraints of the treadmill. Second is the insight that achieving treadmill goals creates additional issues that are assumed to be solvable by accelerating the treadmill. In the Fordist era, expanded production created negative social and environmental consequences that then produced further rounds of treadmill acceleration. I want to make it abundantly clear that economic growth remains at the heart of neoliberal society, and production remains a significant part of the economy as well as possessing a certain cultural saliency.[136] But in the neoliberal era, market efficiencies have become the consensus solution to any governance concern.

The Environmental Movement in the Neoliberal Era

[135] Note the increasingly prevalent trend in mainstream discourse of treating markets and freedom as interchangeable concepts.
[136] Witness how the Democratic Party championed the results of the auto bailout in the 2012 election.

The question of the environmental movement's effectiveness is an enduring debate within environmental sociology. The breadth of answers range from Dunlap and Mertig's (1992) assertion that the environmental movement has "been a resounding success . . . [even though] the movement has largely failed in its goal of protecting the quality of the environment" (8) to Gould, Weinberg, and Schnaiberg's (1993) argument that movement successes are "pyrrhic victories." The last decade has witnessed a widely read diagnosis of the "death of environmentalism" (Shellenberger and Nordhaus 2004). The striking lack of consensus on the environmental movement's efficacy stems from the divergence of assumptions of what constitutes success for a movement. Therefore, before assessing the question of environmentalism and the environmental movement in relation to the transition from Fordism to neoliberalism, it is first important to spell out the criteria on which this evaluation should be based.

The broadest division of approaches is between institutional emphases on social movement organizations and outcome-based analyses that focus on environmental quality. The former approach draws heavily on resource mobilization and political opportunity theories in its evaluations of the environmental movement, as reflected in its key criteria: membership numbers/financial support and public opinion data. That is, survival and growth are the central measures of effectiveness for any given social movement. The latter approach includes environmental outcomes in its analysis as it asks why, if the environmental movement is so effective, human society generally has an ever increasing negative impact on the environment. To illustrate the challenges in assessing the efficacy of the environmental movement, I will briefly turn to the issue of global warming.

Global warming is currently the most visible and contentious environmental issue with public awareness sparked by the documentary *An Inconvenient Truth* (Guggenheim 2006) and increasingly prominent extreme weather events (Hulme 2009).[137] One method of evaluating the effectiveness of the environmental movement would be to examine its ability to achieve an agenda to address global warming. Many environmentalists hailed the 2008 election of Barack Obama as president of the United States as a crucial step in implementing aggressive global warming legislation. By 2010, the Waxman-Markey bill,[138] which would have created a cap-and-trade system for carbon emissions, had failed in Congress. With public support for addressing climate change Democratic control of Congress and the White House, why did cap-and-trade fail? Skocpol (2013) rightly points to the mainstream environmental movement's failure to engage in citizen mobilization in conjunction with elite climate denialists' success in supporting the Tea Party movement's challenge to climate change legislation. Mobilized climate denial opposition could be simultaneously good for the environmental movement and bad for the environment. The former, because opposition provides great opportunity for fundraising appeals and membership drives; it is a challenge to environmental improvements, because it makes even marginal improvements politically difficult. Furthermore, addressing global warming involves much more than the United States' relative inability to pass legislation as there are real questions about climate justice between countries historically responsible for global warming emissions and currently developing countries (Roberts and Parks

[137] Although climate and weather are separate phenomena, people often apply their experiences with weather to their understanding of climate. It is worth noting that increasing awareness of global warming is associated with decreased levels of belief in the effectiveness of social responses (Norgaard 2011).
[138] Waxman-Markey perfectly illustrates the challenge in evaluating the environmental movement as numerous scholars and policy analysts argue the bill's failure is a better environmental outcome than its passage would have been. Instead of a cap-and-trade system loaded with offsets that achieve emissions through creative accounting, these critics argue for a system of carbon fees that is more politically challenging but also more environmentally beneficial (Magdoff and Foster 2010; Williams and Zabel 2009).

2007). The emerging dominance of NGOs suggests that, if democratic participation and a strong role for civil society in environmental governance are conducive to just sustainability, then social-environmental relations may improve modestly at best.

Future Directions for Research

This dissertation closely examines historical changes in two AOCs that, in the early 20th century, converged on NGO-led remediation efforts. An immediate direction for further research is to maintain a focus on the GLWQA by expanding the breadth of AOCs to include areas that have completed the Stage Three RAP process as well as cases without strong NGO involvement and leadership. Remediated sites include the US AOC in the Oswego River and Canadian AOCs in Collingswood Harbour, Severn Sound, and Wheatley Harbour. This research would seek to identify the social composition of leadership in these NGOs, the role of civil society and local NGOs and/or social movements, as well as states and provinces. Is there a distinct commonality within these sites that resulted in their successful remediation? The Buffalo and Detroit AOCs have significant professional middle class populations, those most likely to engage in NGO work in environmental governance. In regions without a significant professional middle class presence does civil society have as large a presence in AOC activities? If so, what form does this action take?

Beyond sites that have successfully remediated and those that have made minimal progress, another issue worth exploring is potential differences in environmental governance between the US and Canada. Though the Detroit River is a binational AOC, for more than a decade, US and Canadian remediation efforts have operated relatively independently making it, in practice, two separate AOCs: a US one and a Canadian

one.[139] This dissertation primarily focused on the growing prominence of neoliberalism in US governance, but I also found a quite different relationship between the government and civil society in the Canadian side of the Detroit River AOC. An additional direction for further research would hone in on these differences by asking questions like: are there meaningful differences in the roles of the state, industry, and civil society in environmental governance in the US and Canada? If so, do these differences contribute to Canada's relative success[140] at remediating its AOCs? Do these difference produce more robust democratic outcomes?

In addition to expanding research in the Great Lakes region, future research need not be limited to other sites covered under the GLWQA. Water pollution and water quality issues are at the core of the social-environmental relationship. Moving beyond the "rust belt" region would allow me to examine cases where the local and regional economic bases are not undergoing the same deindustrialization/transformation that has been happening in the Great Lakes region since the 1960s. Manufacturing declines in the Great Lakes affected water remediation efforts in a number of ways. The most obvious is that sharp declines in manufacturing activity led to decreases in discharges. Beyond reductions in pollution, the shrinking manufacturing base reduced potential opposition to environmental regulation and remediation efforts. The history of the Detroit River AOC shows how alignments between a pro-corporate state and industry challenge environmental efforts. At the local level, economic changes led to a reduced industrial presence. Research into water quality issues in other areas could explore the relationship between active, thriving industries and local communities, which could range from job

[139] The other binational AOCs still have, to varying degrees, active binational public advisory councils.
[140] Of the 26 AOCs solely located in the US, one has been remediated as of 2013. In Canada, which has 12 AOCs, three have been remediated.

blackmail (Kazis and Grossman 1982) to successful labor-community coalitions (Estabrook, Siqueira, and Machado 2000; Nissen 2004).

An additional issue raised in the dissertation is that the dominant form of civil society expression in governance has changed from social movements to NGOs. Because I expect the changes in the AOCs reflect a larger change, another possible area of future research would focus on NGOs. Key questions for this research include identifying who works for/belongs to NGOs, the role of funding sources (foundations, public grants, membership, etc.), and which segments of society are included and/or excluded from NGO-led practices. The transition from social movement style citizen participation to NGO-led actions resulted in narrower, less democratic forms of civic participation. Further research will be needed to address the environmental consequences of this process.

Finally, the changes in environmental governance covered in this dissertation represent only part of the larger shift to neoliberalism. In order to understand the profound transformation in governance that accompanied the rise of neoliberalism, a final avenue for further research would be to branch out into other policy arenas. Education would be a logical avenue, with two seminal 21st century federal policies: No Child Left Behind and the Race to the Top. A cursory examination of both reveals the neoliberal emphasis on quantifiable metrics, market efficiencies, and privatization.

Concluding Thoughts

The neoliberal transformation, with its emphasis on market efficiencies and privatization, poses tremendous questions for contemporary society. In the absence of the welfare state, what institutions and/or organizations can act as the agent of last resort to

guarantee social well being? The failures of the welfare capitalist era led to the rise of the Fordist welfare state's centralized bureaucracy. The market backlash to the Fordist welfare state created neoliberal governance

Increasing faith in the market as panacea has impacts spreading far beyond issues of governance. While I argue that NGOs have become a dominant form of civil society participation in neoliberal society, this does not mean that social movements have withered away and disappeared. Instead, they have increasingly turned towards markets as tools to achieve their goals. Market-based approaches range from the anti-sweatshop to the sustainable seafood movements, which both combine ideas of ethical consumption with private production standards and independent monitoring and certification (Armbruster-Sandoval 2005; Konefal 2012). Private regulatory schemes that depend on pressure from civil society easily fade away as civil society actions wanes. While state enforcement of regulations often, in practice, requires sustained citizen mobilization, the key difference is that when the political pressure fades, the laws remain on the books and can be re-mobilized (and are often re-interpreted) by future generations of activists.

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