

**CIVIL SOCIETY STRATEGIES ON URBAN WATERWAYS:
Stewardship, Contention, and Coalition Building**

by

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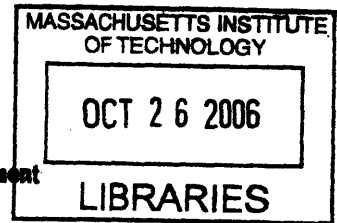
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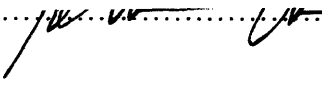
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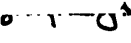
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ABSTRACT

Urban, industrial waterways—with their contamination, environmental injustice, and nebulous development futures given changing economies—present multiple problems that are confronted by environmental civil society organizations. Despite the many problems, these groups view urban waterways as some of the last available open space in the city and as potential public amenities and natural resources that merit revitalization. This work focuses on the means by which citizen groups and nonprofit organizations—which are often in positions of relatively less power and authority vis-à-vis public and private actors—attempt to engage, be heard, and leverage influence over decision-making on and end use of three New York City river resources.

Depending on the situation and the groups involved, strategies rooted in conflict or collaboration rise to the fore. Civil society organizations select from “insider” strategies based on cooperation with government, “outsider” strategies that depend upon advocacy and pressure tactics directed towards either government or the private sector, and “independent” strategies like stewardship, education, and environmental monitoring that engage with the resource, regardless of the political and policy context.

To understand the selection and efficacy of strategies in general and alliance-building in specific, this thesis examines the following questions: 1) how do internal and external factors shape the strategies that civil society actors select as they seek to engage in the protection of urban industrial waterways?; 2) to what extent and for what reasons are civil society actors pursuing collaboration and coalition building as a preferred strategy? and 3) what environmental and social outcomes are achieved as a consequence of different strategic approaches? To address these questions I conducted case studies of the Bronx River, the Newtown Creek, and the Gowanus Canal.

As a comparative study, this thesis reveals that the complex challenges of restoration in the urban environment require equally complex solutions. There is no one single, prescriptive approach that will yield more successful environmental and social outcomes. Strategies are products of resource constraints, political opportunities, community contexts, and deeply embedded group ideologies. While groups have a dominant strategy, they can shift and evolve over time in response to different triggers. For all of the benefits of this pluralism, cooperation is the strategy that can serve to bring the most resources to bear for long term planning and revitalization. Coalition building requires divergent ideologies to be aligned and find common ground, and it is a deliberate process that requires entrepreneurial leadership by both citizens and public servants.

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LIST OF ACRONYMS

BCUE	Brooklyn Center for the Urban Environment
BOA	Brownfield Opportunity Area
BRA	Bronx River Alliance
CDC	community development corporation
COE	U.S. Army Corps of Engineers
CSO	civil society organization
DEC	New York State Department of Environmental Conservation
DEP	New York City Department of Environmental Protection
DOT	New York State Department of Transportation
EDC	New York City Economic Development Corporation
EIS	environmental impact statement
EPA	U.S. Environmental Protection Agency
FROGG	Friends and Residents of Greater Gowanus
GCCDC	Gowanus Canal Community Development Corporation
GMDC	Greenpoint Manufacturing and Design Center
GWAPP	Greenpoint Waterfront Association for Parks and Planning (formerly Greenpoint Williamsburg Against the Power Plant)
MWA	Metropolitan Waterfront Alliance
NCA	Newtown Creek Alliance
NCMC	Newtown Creek Monitoring Committee
NIMBY	Not In My Back Yard
NOAA	National Oceanic and Atmospheric Administration
NPS	National Park Service
PICCED	Pratt Institute Center for Community and Environmental Development
SSB	Sustainable South Bronx
SMO	social movement organization
URP	Urban Resources Partnership
YMPJ	Youth Ministries for Peace and Justice

I. INTRODUCTION

Changes in the global and local economies have led to the retrenchment of water-dependent industry on many urban waterways. Urban areas in the Northeastern United States that were dependent on rivers as their economic lifeblood in the industrial era must reconsider their functions in the post-industrial age. At one time, these waterways played host to diverse industries from chemical manufacturing to oil and gas processing, to smelting—uses which are now rarely found within urban centers (Merchants Association of New York Industrial Bureau [MANY], 1921). New York City was dependent on shipping and water-based transportation until the second half of the 20th century when many of the major bridge, tunnel, and highway projects were completed, trucking became more popular than shipping, and the freight forwarding industry relocated from Brooklyn to New Jersey. In particular, highway infrastructure that was created in the 1950s and 1960s, including the Cross Bronx Expressway (completed in 1963), the Verrazano-Narrows Bridge between Brooklyn and Staten Island (completed in 1964), and the Brooklyn Queens Expressway (completed in 1964) had a major effect on shipping-based industries (Eastern Roads, 2006). It made many firms located on the Gowanus Canal, Newtown Creek and Bronx River less dependent on water-based transport and encouraged them either to switch to using highway based trucking or simply to relocate out of New York City (Dolkart, 1989). The decline of industry was hastened by high real estate, insurance, and labor costs in New York City. Issues of space constraint, real estate uncertainty, and high costs—particularly for liability insurance, employee health benefits, real estate, and utilities—continue to be main concerns of the city’s industrial sector today (NYC Office of the Mayor, 2005).

Over 100 years of industrial activity, along with the existence of a combined sewer system that outfalls directly into rivers if the system is overtaxed during a heavy rain, has created myriad environmental problems for New York City waterways and the humans that live near them. Oil and heavy metal-contaminated water and silt, along with low dissolved oxygen content, eutrophication, and low visibility are common conditions that impair plant and animal life. Similarly, waterfront industrial properties have all the problems of real or perceived brownfields contamination. There are even a number of dedicated Superfund sites within New York City, such as the former Phelps Dodge copper plant on the Newtown Creek. Fallow sites that are often privately held line these rivers, canals, and streams, thereby preventing access to a

public resource. The few remaining industrial sites typically consists of power plants, sewage treatment plants, waste pelletizing plants, incinerators, or transfer stations, hazardous waste storage and other “Not in My Back Yard” (NIMBY) facilities (Sustainable South Bronx [SSB], 2005; Gandy, 2002). These land uses often benefit from water-based transportation and must necessarily be located in close proximity to urban populations, but they have environmental and human health impacts.

The greatest environmental impacts of these contaminated waterways are on aquatic plant and fish life, but there are both direct and indirect impacts on human health due to the conditions of urban waterways. None of the waterways in New York City are considered swimmable, and there are advisories against fishing, although the practice of subsistence fishing is still common among certain low income and immigrant populations. In a study of Greenpoint-Williamsburg subsistence fishers and their families, the US EPA found that their exposure levels exceeded US EPA oral reference doses for all contaminants except cadmium, even for low-end consumption estimates. In particular, exposure to dioxins were high, leading to a lifetime cancer risk for adult anglers of 1 in 10,000 for every exposure scenario, as compared to an acceptable risk set by the EPA of 1 in 1 million (Corburn, 2002). While the aesthetic impact of being exposed to combined sewer overflows and “floatables” is quite large, recreational boaters do not seem to be put at risk from water quality, provided that they do not swim. In terms of air quality, although the underlying causes of asthma may not be completely understood, the patterns of incidence are documented and the environmental triggers are known, with diesel emissions being one major trigger (SSB, 2005). The South Bronx has one of highest rates of childhood asthma in the country; in 2001 in Hunts Point and Mott Haven 339 children were hospitalized for asthma; as of 2005, one out of every three of children in the South Bronx has been diagnosed with asthma (New York City Department of Health and Mental Hygiene [DOH], 2003b; SSB, 2005). Thus, any interventions that involve changing the waterfront industrial patterns should take into account the number of trucks that are taken off or put onto the road. There are also myriad other noise and odor nuisances linked to living in proximity to waste treatment facilities and other industrial sites. The power plants and incinerators located in the Greenpoint-Williamsburg and South Bronx neighborhoods are critiqued for their contribution to the decline in neighborhood air quality.

Not only do these uses and pollutants have negative environmental impacts, but also the distribution of these impacts is inequitable. Since the 1990s, the environmental justice movement has documented the unequal distribution of noxious facilities like hazardous waste storage facilities, with greater concentrations of these sites being located in low income and African American communities (Bullard, 1990). While Robert Bullard's work focuses on the American south, more recent research suggest that the trend holds in New York City. Asthma incidence is one indicator of environmental injustice, as Matthew Gandy (2002) writes, "research has shown that rates of asthma morbidity and mortality in New York City are not only substantially higher than the national average but that there is a higher prevalence in poorer neighborhoods within the city. The incidence of the disease is also disproportionately concentrated among nonwhites, with hospitalization and death rates among blacks and Latinos up to five times higher than those of whites" (p. 200).

This thesis examines three urban industrial waterways in New York City—the Bronx River, the Newtown Creek, and the Gowanus Canal—that are laden with a number of environmental problems including brownfields, NIMBYs, derelict sites, poor water quality, contaminated soils, and lack of public open space. Generally, there are several environmental justice issues related directly to working waterways, with marine waste transfer station siting being one key issue in New York City. Recently, environmental justice advocates have pointed out that Manhattan does not have a functioning waste transfer station while all of the other boroughs have them. A joint editorial published in an online newspaper by three civil society groups describes the problem,

We are members of a citywide coalition of neighborhood groups, the Organization of Waterfront Neighborhoods (OWN), which has been pushing for the city to adopt an environmentally just, marine-based system for handling and minimizing its waste. Our coalition includes representatives of the three New York City neighborhoods that bear the brunt of the city's current waste management system: Greenpoint-Williamsburg, the South Bronx and Southeast Queens.

The current system, cobbled together after the Fresh Kills Landfill was closed, sends over two-thirds of the city's garbage to these three neighborhoods and much of this garbage comes from Manhattan. This system is almost entirely reliant on truck transport and it transfers waste at facilities that are often substandard — lacking sufficient odor, noise and dust control, and lacking space for trucks to queue on site (much less indoors), causing them to idle on city streets. This over-reliance on trucks increases congestion from truck traffic and air pollution throughout all areas of the city. Truck traffic levels are extremely high in those neighborhoods that are home to the majority of waste transfer stations. In these neighborhoods, the substandard transfer stations and the hundreds of

incoming and outgoing trucks per day create constant noise and odor, low air quality and high asthma rates, damaged infrastructure and an overall environment that diminishes quality of life and impedes community development (Brown, Yeampierre & Kairys, 2004).

The populations surrounding the three waterways considered in this thesis are diverse, but include low income, immigrant, and minority populations, such that geographic distribution of NIMBYs has a distinct impact by race and class. Bronx Community Board Two has 45% of adults living in poverty and the majority of the residents are people of color: 21.4% of the population is African American and 75.8% of the population is Hispanic (New York City Department of City Planning [DCP], 2004b; DOH, 2003b). Brooklyn Community Board One, which abuts the Newtown to the south, has 34% of adults living in poverty and the district is 48% white, 5.5% African American, and 37.7% Hispanic, though it should be noted that a significant portion of the white residents in Greenpoint include Polish Americans who are non-native English speakers (DCP, 2004a; DOH, 2003a). Finally, Brooklyn Community Board Six, which surrounds the Gowanus, the district has 20% of adults living in poverty and is 55% white, 13.5% African American, and 23.4% Hispanic (DCP, 2004c; DOH, 2003c).

While much of the scholarship and advocacy related to environmental justice has focused on distribution of noxious environmental facilities and environmental amenities by different population groups, Schlosberg (2003) notes that there are three elements underlying environmental justice: equity, recognition, and participation. He states, “inequitable distribution, a lack of recognition, and limited participation all work to produce injustice, and claims for justice can—some would say *must*—be integrated into a comprehensive political project” (Schlosberg, 2003, p. 87). Using this understanding, civil society actors that cultivate participation and build recognition of local environmental issues are critical responders to environmental injustice. One must be concerned not only with tangible environmental outcomes, but also with the awareness-raising and political participation that these groups seek to cultivate. Adding another layer of complexity, Brett Williams (2002) critiques the traditional environmental justice focus on distribution of outcomes and procedural fairness. His case study of the Anacostia River in Washington, D.C. traces the way in which environmental injustice is embedded in deep, structural inequality along race and class lines. While this thesis does not include the level of historical, anthropological detail that Williams uses, it does attempt to place the rivers in a context of neighborhood history, demographics, and political ecology. It must be

recognized that the resources at the disposal of the civil society groups varies by the communities in which they are embedded. Thus, deliberate organizational strategic choices aside, it is no surprise that the responses to environmental problems vary on the Gowanus Canal, the Newtown Creek, and the Bronx River.

As New York City's economy shifts to one focused on service and retail, waterways are beginning to be looked upon by many as public amenities for recreation and/or potential enhancement of residential real estate value. Just as vacant, abandoned, and brownfield properties present current liabilities, they also present opportunities for redevelopment. Reuse and redevelopment is affected by the changing residential and commercial environments surrounding the waterways. In the cases considered here, the neighborhoods near the Gowanus Canal have undergone a gradual but accelerating trend of gentrification for over 20 years, Greenpoint-Williamsburg has more recently begun to gentrify, and the South Bronx remains relatively sheltered from gentrification. A number of vested interests and legal and policy frameworks contest this redefinition of the function of the waterway, often leading to outright conflict or stalemate. Industrial interests wish to preserve ports, while real estate and development interests pushes for highest and best use. Some public agencies have formal responsibility for environmental monitoring, cleanup, and waterfront planning; others have duties to preserve industrial infrastructure; and others have economic development agendas. There are also civil society organizations (CSOs) that have multiple agendas of restoration, redevelopment, and reuse. In New York City, these differing agendas have created conflict around neighborhood rezoning in Greenpoint-Williamsburg, lawsuits on the Newtown Creek, creation of the Bronx River and South Bronx Greenways, and the vision for the future of the Gowanus Canal.

Research Questions and Significance of the Research

Urban, industrial waterways—with their entrenched private firms, nebulous development futures given changing economies, and environmental injustice—present multiple problems that are confronted by environmental civil society organizations. Despite the many problems, these groups view urban waterways as some of the last available open space in the city and potential public amenities and natural resources that merit revitalization. This work focuses on the means by which citizen groups and nonprofit organizations—which are often in positions of relatively less power and authority vis-à-vis public and private actors—attempt to engage, be heard, and

leverage influence over decision-making on and end use of three inaccessible (yet ultimately public) New York City river resources. While public agencies have budgets and mandates; private firms have land ownership, grandfather status, and often larger resource pools; community groups and nonprofits have generally fewer formal resources, thereby requiring creative strategies and tactics to achieve their desired ends. To understand the selection and efficacy of strategies in general and alliance-building in specific, this thesis examines the following questions within the context of three selected case studies: 1) how do internal and external factors shape the strategies that civil society actors select as they seek to engage in the protection of urban industrial waterways?; 2) to what extent and for what reasons are civil society actors pursuing collaboration and coalition building as a preferred strategy? and 3) what environmental and social outcomes are achieved as a consequence of different strategic approaches?

This research is intended to inform both academic and practitioner audiences. As an academic contribution, it further expands the understanding of civil society, conflict, and cooperation in the post-industrial urban environmental context, which is largely understudied as compared to rural and developing world contexts. By tracing the patterns of strategic interaction through case studies, I generate new knowledge about the ways that urban, post-industrial waterways are redeveloped by multiple actors, and develop insight into organizational and institutional factors shaping strategy development. Furthermore, while contention versus cooperation has been explored in the literature, this project sheds new light on the role of stewardship, monitoring, resource use, and other “independent” tactics. While the existing literature provides a good understanding of how internal and external factors affect individual organizations’ behavior, performance, and outcomes, it has not described how these factors affect whether or not a group will choose to collaborate in a coalition. The various types of alliances and coalitions that are formed are not random, but rather are a product of values, resources, strategic choice, and political opportunities.

These findings are also critical to civil society organizations and government agencies. Many civil society actors lack the resources to conduct in-depth evaluation of their programs. This sort of institutional learning can inform future waterway restoration and redevelopment efforts both in New York and in other cities. Recommendations emerge related to formal, inclusive collaborative processes once the existing organizational conditions and strategies are

diagnosed. As government-initiated collaboration and consensus-building is premised—in part—around a desire to avoid litigation and resolve conflict, careful analysis of groups that use both alliance-building and contentious strategies is necessary to understand more about the internal dynamics of all stakeholders and how best to frame successful processes in light of these dynamics.

Literature Review

Local and urban environmentalism

Scholars have focused on environmental civil society and social movements at the national and global levels. There is a great deal of analysis on how social movement organizations and international NGOs interact with nation-states, intergovernmental entities, and other transnational NGOs (see Dalton, Recchia & Rohrschneider, 2003; Wapner, 1995; Keck & Sikkink, 1998). While these relationships are both critical and interesting, it is no less important to explore the nature and nuances of locally based environmental organizations. Empirically, there are thousands of citizen-led environmental organizations at the local level and they are understudied, particularly those that are located in urban areas. While the quality of the urban environment has been well scrutinized from an environmental justice perspective, and there is a strong literature on grassroots organizing in community development, housing, and even public health, research on urban ecology groups is still emerging.

Local is the scale where abstract environmental principals or values intersect immediate quality of life concerns. There is a vibrant “backyard” environmentalism in the United States that builds from different traditions in environmental justice, environmental stewardship, community development, and planning for sustainability, both in urban and rural areas (Weber, 2000; Grove, Burch & Pickett, 1990; Agyeman & Evans, 2003.). Scholars are beginning to recognize the gap in our understanding about the structure, function, and relationship between these groups and to question whether theories based on national organizations are applicable at the sub-national scale. Edwards and Andrews (2005) investigate environmental organizations in North Carolina, examining “organizational networks and coalitions, issues focus, membership characteristics and participation, financial resources, organizational practices and formality, leadership, and media engagement” (8). This project follows the lead of Edwards and Andrews to investigate local environmentalism around the revitalization of urban industrial waterways. In terms of coalitions, it adds to the dialogue on the role and viability of local scale coalitions,

which Fred Rose (2000) and others have argued hold particular promise for achieving multiple social agendas, such as labor rights and environmental improvement.

Community-based natural resource management is gaining importance as an approach to ecosystem management, particularly in rural areas and developing nations (Singleton, 2002; Howitt, 2001; Lawrence, Higgins & Lockie, 2001). Some of the most visible efforts at collaborative natural resource management occur on high profile land use conflicts in the Western United States. Many forest, rangeland, and coastal managers attempt to achieve stakeholder-inclusive, ecosystem scale management (see, for example, Weber 2000; Wondolleck & Yaffee, 2000; McCreary, Gamman, & Brooks, 2001). However, despite the diversity of citizen-initiated, government-assisted, and government-initiated collaborations in rural areas, the managing agency and authority generally remains clear and centralized (Koontz et al., 2004). In urban areas, where property jurisdictions and resource management authority is most fragmented, and environmental uses are secondary or tertiary to other uses, the challenge of collaborative ecosystem-based management is even greater (Grove et al., 1990). The sheer number and density of potential and active stakeholder groups in an urban area makes collaboration a complex endeavor. The urban ecosystem may present both more challenges and more opportunities for collaboration and community-led management than the rural sphere has provided.

Civil society strategies and tactics

In order to engage with the literature on civil society behavior, it is necessary to first define what is meant by civil society, civil society organizations, strategy, tactic, and coalition. Civil society is the sphere of citizen activity that is not encompassed by the private sector or the public sector. Functionally, it is distinct from the state, the market, and the family. Civil society organizations include all voluntary civic (non state, non business) organizations and institutions interested in the functioning of society, ranging from social movements, to labor unions, to formal non governmental organizations, to informal community groups, and more (see, for example, Rieff & Clough, 1999; Kaldor, 2003; Clark, 2003). While some have construed civil society to include the private sector, I am treating business as a distinct entity in this research. Moreover, this work focuses expressly on formal non-profits as the case study organizations, though actors in their organizational networks include informal groups, individuals, and temporary, issue-specific coalitions. Strategy refers to the overarching approach that an

organization uses to achieve its mission, such as coalition-building or advocacy. Strategy is rooted in deliberate organizational philosophies, is shaped by available organizational resources, and evolves through its interaction with external actors, community and geographic context, and policy frames. Tactic refers to the specific actions that are taken to support that strategy, such as holding public meetings, organizing protests, running a media campaign, and so on. Any one group can use a number of different strategies and tactics, with emphasis changing over time in response to different triggers (Carmin & Balsler, 2004). Kadushin et al (2005) offers a comprehensive set of definitions of coalition from various literatures:

A coalition is defined in economics and political science as a joint action among two or more parties to achieve a common goal (Riker, 1962; Shubik, 1982), or alliances that are temporary and fluid, dissolving or changing as goals or members' self-interest is re-defined (Caplow, 1964)...In the field of community interventions, the term coalition is used more broadly as "an organization of individuals representing diverse organizations, factions, or constituencies who agree to work together in order to achieve a common goal" (Chavis, 1995) (p. 258).

As I do not wish to get further involved in the minor semantic differences evident in the literature, in this work I use the terms coalition, alliance, and cooperation interchangeably to mean a strategy that involves the joint work of two or more groups, either among civil society groups or between civil society and the public sector.

Depending on the situation and the groups involved, strategies rooted in conflict or collaboration emerge. Civil society organizations select from "insider" strategies based on cooperation with government, "outsider" strategies that depend upon advocacy and pressure tactics directed towards either government or the private sector, and "independent" strategies like stewardship, education, and environmental monitoring that engage with the resource, regardless of the political and policy context. The literature on civil society organizational strategies and tactics focuses on lobbying, letter writing, media campaigns, protests, boycotts, sit-ins, and even internet-based tactics—running the range from adversarial to alliance-seeking (Carmin & Balsler, 2004; Coban, 2003). Carmin, Hicks, and Beckmann (2003) identified communication, leveraging, and community development as the three main strategies used by regional environmental NGOs. There is both an ideological and a strategic difference between an approach that uses tactics like litigation, the threat of litigation, or negative press as a means to achieve ends; one that uses participation in public meetings, citizen advisory groups, and even

joint public-private alliances; and one that is based on getting individuals to interact with natural resources in fun or educational ways.

One common strategy in urban environmental restoration is the development of coalitions, alliances, and partnerships. Indeed, in their study of local environmental organizations in North Carolina, Edwards and Andrews (2005) found disruptive strategies to be relatively uncommon, and working with federal and state agencies and/or coalition building are much more common. Collaborative efforts can occur at multiple scales and among a variety of actors: from individual citizens working in concert, to groups of civil society organizations partnering together, to informal or formal public-private partnerships. I would argue that if the group's interest is in changing land use, cleaning up contaminated ecosystems, or affecting development in urban areas, a broad base of community support *as well as* elite alliances are both necessary. These coalitions are a recognition of and a response to both resource constraints and to opportunities for greater public visibility and impact of collective action. Melissa Checker (2001) claims that the concept of the "environment" can provide a broad platform for coalition-building in urban areas. In her case study on environmental justice advocates in Greenpoint-Williamsburg, she notes, "the built environment historically divided activists into competitive groups that were considered mutually exclusive. The intangible environment, however, in its unhealthy state, provided an initial basis upon which activists could find a common ground" (Checker, 2001, pp.136, 144).

Coalition formation is a critical strategy of social movements, with deep traditions in the civil rights, peace, feminist, gay rights, anti-nuclear, and environmental movements (Van Dyke 2003). Presumably, coalitions are used for their track record of successfully achieving outcomes. Research shows that social movement organizations that work in coalition with each other are more likely to achieve success as coalitions encourage more people and resources to be mobilized for a cause (Gamson, 1990; Tilly, 1978). However, Gould, Lewis, and Roberts (2004) note, "While little empirical work has addressed this question, the literature suggests that alliances, in general, contribute to greater chances for achieving political goals from state and/or industry" (p. 101). Kadushin et al. (2005) are similarly skeptical of the success of community coalitions, noting:

There has been an outpouring of the literature recently on community collations that advocates their use and reviews their achievements (Wandersman and Florin, 2003). Community coalitions are widely touted as the solution to a variety of social ills—most

prominently, health problems such as adolescent pregnancy, substance abuse, and tobacco use (Foster-Fishman et al., 2001). Literature advocating community coalitions has not, however, been matched by research evidence documenting the success of coalitions. In fact, in the broadest and most systematic review of community coalitions, Berkowitz (2001) concludes that the evidence is, at best, weak and “inconclusive.” (p. 255)

Coalition is also a strategy used by lobbying or interest groups, though that literature is not considered in depth here. The need that interest groups have to appear as a preeminent expert and to establish their own, distinct issue niches is not—I believe—as much of a concern for groups focused on changing the urban landscape as it is for lobbyists (Hojnacki, 1997). Furthermore, while not referred to as coalition-building, there is an entire literature that explores cooperation amongst public agencies. While this work relies upon analysis of civil society organizations and social movement organizations, it is interesting to note that Weiss (1987) identified several factors that affect public agency cooperation that echo those in the civil society literature. She notes, “The literature...suggest six possible reasons to bear the costs of cooperation: to get more resources, to satisfy norms and values, to obtain political advantage, to solve problems, to reduce uncertainty, and to obey legal mandates” (Weiss, 1987, p. 94).

Changes in attitudes towards environmental management in recent years have complicated and broadened the sphere of decision-making around these waterways. Citizens and groups are increasingly demanding the right to participate in decision-making, both as related to urban planning and to natural resource management—with the restoration of industrial waterways lying at the confluence of these two disciplines (Davidoff, 1965; Brooks, 2002; Singleton, 2002). Participation and collaboration are currently touted as important principles in environmental decision-making, but formal governmental processes for ensuring public participation such as the National Environmental Policy Act have limited parameters for meaningful involvement (Wondolleck & Yaffee, 2000). In many cases, the mechanisms for participation remain at the token level of consultation rather than shared decision-making (Arnstein, 1969). Furthermore, many of the models of collaborative resource management were developed in rural contexts, and will need to be adapted to urban areas, with their fragmented land parcels, jurisdictions, and decision-making structures (Weber, 2000). Federal natural resource management agencies from the National Parks Service to the Forest Service are continuing to redefine their roles in the urbanized and urbanizing environment. Participation is

not formally mandated in the restoration of urban industrial waterways and diverse forms of public-private-civil society interactions have emerged.

Often proceeding or existing in parallel to government-run processes are citizen-initiated collaborative efforts following in the tradition of populist environmental social movements, which has been on the rise in this country since the 1970s (Tamiotti & Finger, 2001; Koontz et al., 2004). These civil society efforts take multiple forms: groups work in coalitions to achieve their goals; groups work directly with citizen constituents in an advocacy role; groups work directly with citizen constituents on stewardship efforts; and groups actively partner with public and private entities. The defining criterion of these citizen-initiated efforts is that they are not formally managed or directed by a government agency; though they certainly involve government in various roles as supporter, funder, facilitator, audience, implementer, or opponent.

Both government and citizen-initiated coalitions are difficult to cultivate, are not without flaws and limitations, and do not represent the only path to environmental and social change. All of the human and financial resources that are expended on building a coalition are resources that do not get directed in the immediate term towards people or natural environments. While certainly one could argue that these resources will benefit people and ecosystems in the long term, stewardship-based strategies represent more of an immediate approach rooted in self-help and direct action. From community gardening efforts to adopt-a-river programs to hiking clubs to bucket brigades doing water quality monitoring, stewardship comes in a variety of forms with emphasis on social interaction, immediate community projects, recreation, and achieving gains with few physical resources but an abundance of social resources. Generally occurring at the small, street corner, or neighborhood scale, the most common level of stewardship—like that of all social movements—can be considered grassroots and “rooted in a geographic locality” (McCarthy & Wolfson, 1996). These groups can nevertheless have links to other stewardship and intermediary groups via a network; this reveals slippage between the tidy strategic categories of stewardship and collaboration. Also, if one considers the tradition of western and rural groups involved in grassroots ecosystem management, one can see that elements of stewardship and collaborative management can coincide in collective efforts (Weber, 2000). But at the scale of an organization, one can still clearly identify a dominant strategic approach of either independent stewardship or public and civil society collaboration.

Contentious or advocacy-based strategies use legal tools as leveraging devices in support of citizen claims against more powerful private or government actors. For several decades legal strategies have proven to be an effective means of representing less powerful actors, because of the power of the court to enforce the rule of law and impose penalties including financial compensation from polluters to affected parties. Just as in the civil rights movement, legal strategies paired with direct action were necessary to fundamentally alter the systems of power, so too has the law been used to make strides in environmental protection and to increase pressure on public land managers. The entire field of environmental law, which evolved since the major environmental legislation of the 1970s is premised on this strategy. Groups implementing this strategy include large national civil society organizations like the Natural Resources Defense Council and regional CSOs like the Conservation Law Foundation and Hudson Riverkeeper, as well as a number of private firms. While the outcomes from these cases can be precedent-setting and critical to righting environmental injustice, they are not without their limitations. Legal environmental strategies are often costly, time consuming, can become mired in the issue of “dueling experts”, and can even create barriers to more innovative public management for fear of lawsuits on process grounds, particularly as related to the creation of Environmental Impact Statements (EISes), compliance with the National Environmental Policy Act, and the use of citizen advisory groups under the auspices of the Federal Advisory Committee Act (Bingham & Langstaff, n.d.; Erhmann & Stinson, 1999; NEPA Modernization Task Force, 2003). Additionally, for the most part legal strategies seem to be reactive to existing problems and do not have the capacity for joint planning and visioning that collaborative strategies have.

Internal organizational factors shape strategy choice and outcomes

Endogenous resources, including budget, staff, volunteers, and in-kind resources have a primary shaping affect on organizational behavior, including strategy choice. Furthermore, where an organization is in its developmental cycle must be considered as a factor in its behavior, necessitating analysis of organization age and functional routines. Leadership, leadership turnover, and staff turnover also inform strategy choice both as a capacity issue but also through the way in which individuals, particularly founders and leaders, imbue an organization with values. Broad organizational philosophies as well as explicit environmental values provide the frames that shape action at the most basic level. All of these factors internal to an organization shape both its independent and coalitional activity.

Resource mobilization theory suggests that organizations with more of these tangible human and capital resources will be better able to achieve their desired ends (McCarthy and Zald, 1987). This makes logical sense, as launching campaigns, conducting outreach, and running programs all require tangible resources. Given their connection to the fields of both community development and environmental protection, urban environmental groups have been affected by the general decline in federal resources available for community development activities since the 1980s and to protection of ecological systems since the mid-1990s (Bratt & Rohe, 2003; Brody, 2004). This decrease in federal funding has led groups to search for more diverse sources of funding and has led to the proliferation of many, smaller-scale, lower capacity groups. In a study of Mothers Against Drunk Driving, a social movement organization, Bob Edwards and John McCarthy (2004) found that local groups with larger revenues and/or access to patronage were more likely to persist. Patronage can occur in the form of financial resources, in-kind resources, or even office space--and can be considered an indicator of social capital, they argue. Overall, when compared to the private or public sector, many civil society organizations have fewer endogenous resources, which necessitates the use of coalition-building strategies or the employment of leveraging strategies such as legal tools. While one might intuitively expect that larger, more formal organizations would naturally trend towards collaborative or traditional strategies rather than outsider or protest-based strategies, the literature does not necessarily support this assumption. Dalton et al. (2003) found that protest activities are correlated with more organized, formal organizations and not just marginal groups, as even unconventional action requires significant resources. Van Dyke (2003), following the work of Staggenborg (1986) and McCarthy and Zald (1987), found that availability of resources positively affects the formation of within-movement coalitions. Competition for scarce resources is a key consideration both for individual organizations and as groups begin to consider coalitions. If groups are of relatively the same size, scope, mission, and geographic area, it is likely that they compete for either members or funds (Gould et al., 2004).

Civil society scholars and practitioners alike are concerned not only about size of budget, but also *sources* of funding, due to the issue of accountability. Wapner (2002) notes there are multiple sources of accountability for civil society organizations, including: members, donors, boards, advisory councils, partners in their network, community affiliation, and even states. Each of these groups and organizations has influence over civil society behavior. Edwards and

Hulme (2002) argue that global non-governmental organizations have two sources of accountability: upward accountability to donors and downward accountability to members. They raise the question of whether increased aid from states and global aid organizations will alter the balance of these two sorts of accountability. Though the scale differs for local groups as opposed to transnational groups that these authors examined, the issue of being donor-driven, or having mission creep that responds to the priorities of funders is a concern for nonprofits from the practitioner perspective. While funding can provide the resources to perform core programs, it can have serious reporting requirements that can be a burden for groups, particularly small and under-resourced groups. Indeed, all resources come with logistical and potentially political “strings” attached.

The number of staff is commonly considered an important indicator of capacity. A certain base level of budget is required to sustain full time staff, who—in return—work consistently towards the mission of the group. Studies of community development corporations have shown that organizational *performance* is linked to staff size, turnover, and capacity, with consistent large staff and effective executive directors being necessary to successful organizations (Rohe & Bratt, 2003). However, there are civil society groups that function with small or nonexistent staff, but with wide volunteer bases. Volunteers can accomplish the work of a staff, but the style in which they work is different—generally consisting of evening, weekend, sporadic, or seasonal work. Work on social movements has shown that different movements build from very different resource bases. In the case of the civil rights movement, the primary resource available was the “infrastructure of solidary associations” whereas in the student movement of the 1960s, there was “access to a vast pool of volunteers with discretionary time” (McCarthy and Wolfson, 1996, p. 1071). McCrea and Markle (1989) argue that the environmental movement is based on access to middle-class professionals, though this claim does not reflect the shifting nature of the environmental movement that now includes environmental justice groups as well as urban ecology groups that rely upon new demographics and volunteer labor.

Organization age is a variable that is often closely linked to endogenous resources, with older, more established groups having more formal resources to achieve their goals. Following Stinchcombe (1965), McCarthy and Wolfson (1996) argue that “older organizations are expected to be better at mobilizing resources because of increased skill levels, increased visibility and

legitimacy, and because of an accumulation of resources” (p. 1072). In their study of nonprofit arts groups, Arnold and Tapp (2003, p. 144) describe some of the research findings about formalization, noting: “Size is directly related to formalization because organizations that increase in size and complexity often find that formal planning procedures are necessary to reduce conflict and ambiguity (March & Simon, 1958) and rationalize and coordinate various activities (Kimberly & Evanisko, 1981; Tapp, 1993)”. In a study on a previously volunteer-run, underground syringe exchange group, Kelley, Lune, and Murphy (2005) found that formalization had the effect of alienating the core volunteer base. While lessons from drug treatment sector may not be directly transferable to urban ecology, this raises one of many potential costs that could come with the visible organizational benefits of formalizing. The positive and negative effects of formalization have been under investigation for as long as organizations have been studied. The process of formalization, including creating bylaws, a board, gaining 501c3 status, and establishing a permanent physical office all can have impacts on how groups interact with citizens, funders, and political representatives.

Organizational philosophies, environmental values, and core beliefs shape the repertoires of action that groups select (Carmin & Balser, 2002). This has been demonstrated in diverse geographic settings from America, to Eastern Europe, to Southeast Asia. Writing about Indonesia, Judith Mayer (1996) notes, “tensions among Indonesian environmental groups’ divergent ways of framing environmental problems, and different styles of action, affect their forms and strategies of organizing” (p. 172). Organizational values can be process-oriented and ends-based, both of which affect strategy choice and alliance formation. Some examples of process oriented values include: preference for shared leadership, consensus-based decision-making, the desire to put resources towards program development rather than personnel expenses and openness to general public involvement. Ends based values are diverse and include everything from pursuing environmental justice, to improving environmental quality, to punishing polluters, to ensuring the continued viability of water-based industry, to preventing gentrification, to promoting education.

Not only do these values shape the paths that groups independently pursue, but they also affect with whom and in what ways groups choose to form alliances. Differences in ideologies—along with limited resources—are one of the two greatest obstacles to coalition formation (Gould et al., 2004). In the case of cross-cultural coalitions, research shows that

coalitions are more likely to form when groups do not have any significant differences in their identities (Lichterman, 1995; DiazVeizades & Chang, 1996). Groups will choose to partner with other organizations whose values at a minimum do not conflict with their own. Perhaps the difference between deep, primary partnerships and more instrumental partnerships can be explained in part by degree of values that are shared. Some organizations can be considered multi-issue organizations and have broader and more flexible ideologies that are more conducive to coalition-formation and ideological pluralism than single issue groups (McCarthy & Zald, 1987) Van Dyke (2003) illustrated the role of ideology in her study of cross-movement coalitions, noting: "...organizational goals and ideology influence action. Research on the relationship between organizational form and strategic action tends to focus on how bureaucratic structure (e.g. formal versus informal) influences tactic selection. However, the finding that cross-movement coalitions are facilitated by the activity of multi-issue movement organizations demonstrates that ideology is a crucial organizational dimension" (p. 245). Although this study does not analyze multi-issue movement organizations specifically, there are certainly groups with broader and more diverse missions than the extremely small, local, informal CSOs, and these groups seem to be critical to brokering a coalition.

Core principles originate from founders, boards, and strategic planning processes, depending upon the formality and scope of the organization. Prior to formalization, civil society groups often consist of just one or a few charismatic leaders that subscribe to a common vision of a problem. The formalization process of creating a board is a chance to consolidate or diversify that vision. Boards can be constructed to offer access to different resources: be they neighborhood networks, financial connections, or political power, to name a few. Values are embedded within the functioning of the organizations through mission statements, objectives, programs, plans, and funding and growth strategies. According to Pfeffer and Salancik (1978), leaders of organizations play symbolic roles, responsive roles, and discretionary roles. As symbols, they embody certain values of an organization; as discretionary agents they make strategic choices about an organization; and as responders they manage relationships between the group and the external environment. Given this, leadership change and staff turnover may present points of transition when priorities and values can shift, which presents an opportunity either for innovation or destabilization (Rohe & Bratt, 2003). In order to form coalitions Gould et al. (2004) argue that individual leaders must serve as "bridge builders" who can understand the

positions and values of multiple groups. This study examines the role of both organizational leaders and coalition leaders, such as the Bronx River coordinator.

External factors shape strategy choice and outcomes

Organizations do not operate in a vacuum; though internal dynamics are certainly crucial to understanding group behavior, the geographic, political, and cultural contexts also bound and drive behavior. Political opportunity theory is particularly relevant, as it poses that coalitions can thrive and be encouraged by the presence of some political opportunity (such as an election or an elite connection) or some political threat (such as the potential siting of a new facility). Each river is embedded in the culture of particular communities, including both legacies of race and class injustices as well as histories of past organizations and campaigns, which shapes the approach that new groups can and should take. The current constellations of organizational networks, including both allies and adversaries affects how, with whom, and when groups chose to collaborate. Finally technical information, coming from both expert knowledge and local knowledge is an important resource that can be used in various ways by different stakeholders. This study explores the link between strategy choice and the following external factors: community history; networks of stakeholders (public, private, citizens, funders) that can often be characterized as allies or adversaries; policy frameworks (legal, regulatory, zoning); and scientific and technical information (both expert and local knowledge).

Even within one city, there are market, cultural, and political differences between neighborhoods that have defining impacts on locally based groups. These differences are noticeable in a city as diverse as New York City, which has five boroughs and 59 community districts, with over eight million people, and thousands of CSOs operating within that area (DCP, 2005). If one begins to examine the South Bronx, South Brooklyn, and Greenpoint, as well as Manhattan, the image of New York City changes quite radically. South Bronx is a predominantly Latino and African American, low income area, with a rather large industrial sector that is centered around the Hunts Point Food Distribution Center and a number of waste processing and energy production facilities. It underwent a pronounced economic decline in the 1970s, and remains one of the poorest congressional districts in the country. Greenpoint is a largely low income and working class, historically Polish neighborhood with an increasing number of Latinos. It, along with neighboring Williamsburg, has the largest number of toxic releases and is the most NIMBY-laden community district in New York City (Corburn, 2002).

At the same time, it is subject to intense gentrification pressures, due to its close proximity to downtown and midtown Manhattan, its excellent train access and spectacular views; the recent Greenpoint-Williamsburg rezoning on the East River has brought a number of these issues to the fore. Finally, the South Brooklyn area surrounding the Gowanus Canal, including the neighborhoods of Carroll Gardens and Park Slope, already underwent a large gentrification throughout the 1980s and 1990s, with a number of young affluent families and subsequent retail and restaurant development on major corridors like Smith Street. The neighborhoods of Gowanus and Red Hook are lower income, with significant African American and Latino populations, particularly in the public housing projects in the area. In terms of residential real estate, South Bronx is a weak market, Greenpoint is a hot and changing market, and Carroll Gardens is an already gentrified market. Savitch and Kantor (2002) theorize that planners or organizers in strong market areas will have greater discretion to use non-market based approaches in their development strategies, because they will have the resources available to pursue equity issues and postmaterialist ends. In the case of environmental conservation, the relationship may be more complex. Strong markets also imply that there is greater competition over physical space, making environmental preservation more of a challenge.

Not only do these communities have very different market conditions, but they also each have a unique history with respect to community organizing. Ryan (1999) notes that all neighborhoods have legacies of prior campaigns and organizations that impact the effectiveness of future coalition formation. He argues the more experience a community has with organizing, the harder it will be to achieve an effective new coalition (Ryan, 1999). Kadushin et al. (2005) expand on the idea of a community's organizing history:

The individuals, groups, and organizations that make up a community are not only acted upon by a social intervention, they are also the actors who carry it out and the arena in which it takes place....These individuals, groups and organizations differ in interests, beliefs, and goals, making collaboration difficult. Moreover, relationships among them may be more or less diffuse, cohesive, or conflicted based on past interactions and the meanings those interactions take on for the various parties....[C]ommunities have histories that include narratives of past interventions, and these narratives affect current intervention efforts....Paradoxically, it appears that history was often as much of an impediment as a resource. The organizational residue of previous coalition has a strong effect on the way contemporary coalitions play out (pp. 261, 264-265).

Entrenched community members will have old alliances that they may continue to draw upon and adversaries that they may avoid, despite a new issue or reframing of an old issue. There is

also a possibility of organizing fatigue in neighborhoods where community members and organizations have engaged in long term advocacy for change, such as the environmental justice organizing in Greenpoint and Williamsburg. I question whether this fatigue can transfer between different issues, such as housing advocacy and later environmental quality, as in the South Bronx. Or, perhaps a reframing of the issue can enliven and reinvigorate public engagement. When considering community history and organizing, it is also important to consider demographic composition and change. Issues of race, class, ethnicity, and age have defining impacts on community coalition building, as Kadushin et al. (2005) note “although a major aim of community coalitions is to bring together organizations of differing power and scope to address common problems, almost all community coalitions are riven by vertical cleavages along ethnic, racial, and class lines” (p. 261).

Scholars suggest that the external political environment has an impact on the behavior of civil society organizations and the formation and success of coalitions. Political opportunity theory posits that civil society will respond differently to closed/repressive, moderately closed, moderately open, and extremely open political regimes (Kitschelt, 1986). I examine political opportunity not at the scale of the regime, but look at more nuanced, locality-specific differences in opportunity. Political opportunity theory also establishes that access to political elites and local level variation in political structures are important variables that affect the ability of civil society organizations to pursue their ends (McAdam, 1998). The literature suggests that coalitions particularly thrive when there is some perceived political threat or political opportunity, rather than status quo conditions (McAdam, 1996; Tarrow, 1996). Gould et al (2004) claim that “finding a common enemy may be the key to successful coalition formation” (p. 98). Van Dyke (2003) notes that local threats inspire within-movement coalitions whereas larger national or global events affect cross-movement coalitions.

Allies, adversaries, and networks fundamentally influence the strategic trajectory of an organization, by shaping how, with whom, where, and in what way projects will be pursued. Edwards and McCarthy (2004) found that a preponderance of weak ties in a community conferred a survival advantage to local social movement organizations (SMOs). In other words, the more heterogeneous, broad, and socially enmeshed the networks were, the more useful they were in sustaining mobilization. They note the inherent links between networks, resources, and outcomes:

A broader range of connections is an important form of social capital because it increases a group's potential avenues of access to resources of all kinds, from new members, to sympathetic local journalists, to potential financial supporters...The greater the social closure in an SMO's networks, the greater its difficulty in overcoming locally specific patterns of resources stratification and the more rapidly it will deplete the resources accessible through its specific social networks. (Edwards and McCarthy, 2004, p. 638)

In all cases, civil society organizations have an immediate circle of other individuals and CSOs with whom they collaborate on core projects on a routine basis. Groups also have a broader circle of groups/individuals with whom they see themselves as allied, from whom they have received funding, or with whom they occasionally exchange information and ideas.

For the cases considered in this thesis, it is worth making the distinction that some groups focused primarily on fostering a network of individual citizens (the Gowanus Dredgers), while others were a mix of individuals and institutions (the Newtown Creek Alliance), and the Bronx River Working Group focused primarily on institutional partnerships. While each of these groups has individual and institutional allies, the different emphasis is one result of deliberate strategic choice. One cannot consider cooperation and alliance-formation without also considering the role of competition and adversarial relationships. Hannan and Freeman (1977) pose that "organizations of different sizes in a population use different strategies and structures and, therefore, large and small organizations, though engaged in similar activities, depend on different mixes of resources. This conjecture implies that organizations compete most intensely with organizations of similar size" (quoted in Baum & Singh, 1994, pp. 347-348). Thus, when groups form coalitions or alliances, they can function at a larger scale and compete at a city or a region-wide level, as opposed to competing with all other neighborhoods groups when they work individually. Adversaries give groups an opponent to push against, either in the form of a political threat or by providing a way for groups to define themselves by what they are "not". Adversaries within civil society represent real challenges and fault lines that affect the ways in which coalitions form.

In the realm of urban environmental management, there is a need for connections both to elected officials with the power to allocate resources or support legislation and agency employees with the authority and programs to collaborate on projects. Judith Mayer (1996), writing about global civil society in Indonesia, in comparison to California and Hungary, writes "one of the more effective means of protecting nature is the combination of political alliances

with an appeal to the legitimacy of local resource regimes” (p. 212). The role of policy entrepreneurs in innovation has been documented and analyzed by John Kingdon (1984). Perkmann summarizes the theory, writing: “Policy entrepreneurs can be defined as organisations that take advantage of windows of opportunity opened by other policy actors, for instance specific policy programmes. They are in constant search for possible problems for which they can offer a solution” (2003, p. 5)

The use and treatment of scientific information is also explored, as there is a growing understanding of the role of science in environmental decision-making (see, for example, Lee, 1993; Ozawa, 1996). Ecosystem management always involves both political and scientific conflicts, with information being a resource that is wielded in different ways by different stakeholders. Depending on their power and capacity, groups will have differential access to technical or expert knowledge. Smaller civil society groups sometimes find it costly to use technical information to make arguments or advance their interests. Thus, there is a role to be played by outside experts and consultants working in partnership with community groups. There is also a role for scientific learning and education as a way for community members and youth to engage with natural resources and to understand the world around them. This is a common strategy used by environmental nonprofits. Finally, it is important to recognize the resource of local or “indigenous” knowledge that originates in lay people’s understanding of a place, as opposed to peer-reviewed, scientific knowledge. Like other tangible resources such as budget or staff, the use of scientific information is shaped by the ideologies, values, and aims of the group.

Finally, because all of these groups are working for physical changes in the use or form of the urban landscape, the laws, policies, zoning, and jurisdictional boundaries of the city empirically have an impact on opportunities for action. Zoning, while being one of the core functions of the planning profession, also presents opportunities for negotiation amongst stakeholders. From the parcel-specific scale of pursuing variances to neighborhood wide rezoning and community planning, zoning is a flexible and contested process. Laws and policies shaping water and waterfront uses, such as federal designation as a navigable waterway, impact current conditions and shape the behavior of key groups that can provide financial resources or technical expertise, like the US Army Corps of Engineers (COE) and the National Oceanographic and Atmospheric Administration (NOAA). More generally, the form of a river as a linear body that runs between multiple jurisdictions and is not under the mandate of solely

one agency or one municipality may present natural opportunities for coalition formation or strategic partnership. This is a common challenge in the realm of ecosystem management (see Wondolleck & Yaffee, 2000; Kirlkin, 1995; Daniels et al., 1996). As Samuel Brody (2003) notes, “While natural systems often intricately connect over broad spatial and temporal scales, land use decision frameworks remain limited to local jurisdictions....Collaboration across jurisdictional lines and among multiple organizations can become imperative if approaches to ecosystem management are to be attained” (519). Jurisdictional boundaries and zoning provide a policy framework that is used, shaped, and critiqued by civil society actors.

Evaluating environmental and social outcomes

The three cases in this thesis are each examined in terms of their environmental and social outcomes. Although environmental outcomes are of primary importance for direct ecosystem restoration, social outcomes in terms of change in public awareness, change in media perception, jobs created, or organizational relationships built are also critical to the functioning of the urban ecosystem. Environmental outcomes that were achieved in these projects include: creation and revitalization of open space, brownfield redevelopment, changes in water quality, stream bank and channel restoration, debris removal, pollution cessation, and native species reintroduction. Since the cases are ongoing and still evolving, interim outcomes and outputs have to be used in many cases, including funding secured for restoration work or volunteers engaged in projects. I rely upon the outcomes that interviewees self-reported, corroborating information with publicly available information available in the press and on websites.

To understand the effects of social outcomes, one must consider them as steps in a process of social change. In an evaluation of the efficacy of sustainability indicators, Brugmann (1997) found that unless indicators were embedded within public institutions and performance measures, they remained solely public educational and awareness raising tools. Further, the authors argue that this awareness-raising is not sufficient to engender actual changes towards sustainability. However, Gahin et al. (2003) argue that this awareness-raising, public discussion, and value shifts are the foundation of later political change. It is a patient route of constituent building with the hopes of creating an informed citizenry that will demand sustainability of political officials. Lessons from this debate can be applied in the case of civil society intervention on urban waterways. Perhaps all of the strategies of independently run stewardship and education, legal approaches, and collaborative management can serve to raise awareness and

educate the public, but only public-private partnerships can create immediate policy and land use changes. Overall, I would argue that in the urban environmental context, changes affecting the social side of the ecosystem are just as significant as those affecting the physical side, for they are fundamentally interconnected and humans are the ultimate drivers of change.

Methodological Approach

Previous scholarship provides a solid starting point for an exploration of civil society interventions into the urban environment, as it shows that there are ample environmental justice and environmental management concerns that are being taken up by the public sector and civil society, working either independently or in cooperation. There are a variety of strategies that groups pursue—cooperative, contentious, and stewardship-based—though there appears to be a trend towards greater government- and citizen-initiated cooperation. Strategies are not simply rational responses to cost benefit analyses, they are products of resource constraints, political opportunities, cultural contexts, and deeply embedded group ideologies. This thesis explores the extent to which theories offered by the civil society and social movement literature in general apply specifically to the issue of urban environmental revitalization. It describes patterns whereby civil society groups have a dominant strategy that relies upon multiple tactics, but also shift and evolve over time in response to different triggers. As a scholarly contribution, it gives texture to the way in which internal and external factors not only shape strategy choice at the organizational level, but also affect coalition-formation at the ecosystem level. Finally, it shows that different strategic approaches yield very different outcomes. It is my hope that this work can assist practitioners interested in pursuing one goal or another to give forethought to the ways in which various strategies can serve as means to diverse ends. An honest appraisal of values, assets, and constraints is one first step in that decision-making process. The cases contained here attempt to do just that, with the benefits of a theoretical framework and a historic perspective.

This is a qualitative study that aims to capture and analyze organizational histories and behaviors in detail in order to answer the following questions: 1) how do internal and external factors shape the strategies that civil society actors select as they seek to engage in the protection of urban industrial waterways?; 2) to what extent and for what reasons are civil society actors pursuing collaboration and coalition building as a preferred strategy? and 3) what environmental and social outcomes are achieved as a consequence of different strategic approaches?

Quantitative analysis would not support the creation of specific, context-dependent narratives

that can reveal the evolving capacities, values, interests, strategies, and networks of civil society organizations. The case study is a technique that has been used throughout the professional and educational history of urban planning; and by doing three case studies, comparison and contrast is enabled. Further, while I hope that this work will be relevant to the field, my goal is not to produce simply a “best practices” case study or a “how to” guidebook for practitioners. It would be overly reductive and undesirable to try and prove which of the many factors in each case led to better or worse outcomes that the groups achieved; as such there is no blueprint that civil society groups should follow in pursuing their goals of restoration of industrial waterways. Rather, I have shown that certain sets of conditions and sets of strategies may lead to very different *types* of coalitions and outcomes.

Case Selection

Though I had primary knowledge of some of the waterways in New York City and a prior awareness of civil society activity on these waterways, I consulted with an online mapping resource for New York City, the Open Accessible Space Information System (www.oasisnyc.net) to ensure that I investigated all possible waterways. I was particularly interested in smaller waterways that penetrate into neighborhoods, rather than the Hudson River and East River that surround Manhattan, so I used the map resource to ensure that I knew of all these waterways. From this list, I conducted internet and local news database searches via Lexis-Nexis for information on activity (partnerships, press releases, public events, lawsuits, large grants received, educational programs) on five waterways in New York City: the Gowanus Canal, Newtown Creek, Coney Island Creek, Harlem River, and the Bronx River. For each of these waterways, I created chronologies based on the last ten years of news coverage to get a sense of the historical context (see Appendix 3).

A baseline criterion for involving a site in this study (creek, stream, river, canal) was that there had to be some civil society involvement that has historically preceded public and private sector involvement and that has been sustained over time. Using these criteria, I selected the Gowanus Canal, Newtown Creek, and the Bronx River as being three sites with early and continual civil society engagement. Within each site, this study purposively selected civil society organizations that demonstrate the range of organizational tactics including stewardship, contention, and cooperation/alliance-building. A minimum of three organizations was needed in order to have one case for each strategy type. Since I examined organizational relationships and

networks, I conducted interviews with selected partners of the central organizations as well. Another categorical division is the distinction between formal nonprofits and informal community groups. Though both are civil society actors, they possess different internal characteristics in terms of staff size, age, and formality of the group that should lead to the use of different tactics and the creation of different outcomes. I chose to focus solely on formal nonprofits (though there is certainly still a wide variety in organizational resources and size that will be discussed later). Initially, I categorized the Bronx River Alliance on the Bronx River as a cooperative strategy; Riverkeeper on the Newtown Creek as a contentious strategy; and the Gowanus Dredgers on the Gowanus Canal as using a stewardship-based strategy.

Data Collection and Analysis

This paper relies upon a review of secondary and primary materials, key informant interviews, and more comprehensive, semi-structured, organizational staff interviews. Based on the literature, I created both a list of factors to be included in the final interview instrument as well as a diagram of my research questions, these factors, and the relationship between them (see Appendix 1). This conceptual map was used as a guideline in creating an interview protocol. The semi-structured interviews focused on understanding organizational values, resources, networks, strategies, tactics towards other actors, strategy change around critical points of transition in waterway restoration and redevelopment, and outcomes. Interviewees were selected for their influential role in civil society organizations. A total of 19 formal interviews that lasted from one to four hours were conducted over the course of summer 2005 and winter 2006. During this time I also attended a number of public meetings and events held by the organizations. Finally, additional newspaper articles, brochures, and reports were used to corroborate and refine interview-based information.

The process of data analysis consisted first of listening to recorded interviews and taking time-logged notes. In addition, I reviewed and typed up my field notes, organizing information by theme to identify patterns in the data. Immediately after conducting each interview, I wrote up summary reflections of what I thought were the main points and surprising findings. Next, I created a series of matrices to visually organize key information that emerged as salient from the field notes. This served to confirm and nuance with actual evidence the initial categorization of strategy type that I used at the time of case selection.

Summary of Cases

The Bronx River case is a collaboration between civil society and government that has employed some confrontational tactics at times. The organizations on the Newtown Creek had previously relied on more confrontational tactics against the private sector, but are now moving into a more collaborative model. And the organizations of the Gowanus Canal have worked independently on either education and stewardship or community and economic development, without having formed a coalition over the course of 30 years. While the organizations may individually display different changes in their strategies and tactics, an interesting trend is observable from looking at the interaction of groups at the level of the waterway itself. It seems that at the scale of the waterway, strategic, ideological, and resource differences serve to promote or inhibit the formation of alliances or coalitions.

I found that these three cases lie along a spectrum with regards to successful coalition formation due to a number of internal and external factors. The Bronx River partners successfully built a coalition of over 65 organizations, comprised largely of small community based groups and nonprofits matched with a local municipal partner—the Parks Department, and several federal agencies, including the National Parks Service. The fertile civil society provided a grassroots base that was coupled with strategic political alliances through the work of policy entrepreneurs. The coalition was cemented by an environmental justice vision for the future of the river with a flexible organizational structure that incorporated ecological science, open space development, education, and stewardship. The Newtown Creek Alliance is a coalition of about 15 core individual members who are representatives of a mix of local community groups, with the support and leadership of a regional environmental nonprofit—Riverkeeper—and the City Council Waterfronts Committee. The current conditions and uses of the Newtown, along with more visible rezoning on the East River, present challenges to grassroots organizing on the working waterfront. Local civil society representatives with scant resource are using the legal expertise of Riverkeeper to gain leverage over local to multinational polluting firms on the creek, but have not yet engaged in much proactive planning for the waterway. Finally, the Gowanus Canal is host to a number of small, independently-working civil society groups each with their own constituency and vision for the waterway. Gentrification and neighborhood economic changes have raised the stakes in the debate over the future of the Gowanus, but stakeholders remain in disagreement. The two groups examined in that case have very different

organizational philosophies, environmental values, and sources of accountability that inhibit collaboration. The variation in the three cases is explained by the ability of diverse groups in the Bronx to agree on an overarching vision for the revitalization of the river, with significant entrepreneurial leadership and later assistance from political allies. This combination of factors exists neither on the Gowanus nor on the Newtown. The former has a similar plurality of groups, skills, and resources, as well as some significant political allies, but lacks a boundary spanning organization or individual that can assist the groups in cooperation. The latter's vision is currently being driven largely by the outside partner, rather than emerging from local priorities. The role of ideological differences and their deliberate alignment will be further explored in the discussion.

In terms of outcomes, the Bronx River collaboration has led to the most sweeping changes in land use and the largest dedication of public resources, along with a high degree of public awareness both in the neighborhood and throughout the city. Riverkeeper and the NCA have successfully pressured a handful of firms to clean up their practices, have increased media visibility, but have not yet generated high citywide awareness of a waterway, as many people still do not know the name of the industrialized river that separates Brooklyn and Queens. The Gowanus Dredgers have exposed thousands of people to the current state of the canal through their on-water recreation programs, while the Gowanus Canal Community Development Corporation has pressured for improved public infrastructure and more public amenities via the private development process. Awareness of the Gowanus Canal is quite high, but a coordinated vision has not been achieved and the space remains contested. It seems that the Gowanus Canal has become a beloved resource in its current state despite a questionable future; the Bronx River is beloved for the resource it could become despite its present condition; and the Newtown Creek is currently largely unseen as a resource but has a core set of supporters dedicated to its public discovery.

II. BRONX RIVER: A TOP-DOWN AND BOTTOM UP COALITION

When Jenny Hoffner first called Majora Carter, another member of the Bronx River Working Group, to ask for her assistance in energizing and activating members of her African-American community, and in finding options for a seed grant of \$10,000 to be spent on Bronx River restoration projects, Carter was intrigued. “Sounds like a great idea,” she said “but I don’t live near the Bronx River.” ...[S]he lived in circumstances similar to Alexie Torres-Fleming’s, and the river had always been obscured from view despite the fact that it flowed less than two blocks from Carter’s childhood home. But fortuitously, she had rescued and adopted a dog she found tied to a fence post one rainy night. Emboldened to follow her down an unexplored dead-end street one day, Carter suddenly found herself at the river’s edge. As she puts it, “It was beautiful in the early morning light. It was inspiring. And suddenly I knew that this forgotten little street end, like the dog that brought me there, was worth saving.” The discovery led her to reconsider Jenny Hoffner’s request of help... (Hopkins, 2005, pp. 157-158).

Written here by author Alix Hopkins, participants in the former Bronx River Working Group frequently tell this story to the press and the public, such that it has become one of the “creation stories” of the Bronx River revitalization. The story represents some of the core, internalized values of the group in that it is a story of a community resident discovering anew the urban environment in her own backyard. It is the story of an African American female leader from the South Bronx who decides to mobilize on the part of the river; it is not the story of a bureaucrat working for the National Park Service in New Jersey thinking that the Bronx River is an important ecological resource. Nor is it the story of 30 years of conservation activism in Westchester, New York. While all of these other stories are a part of the Bronx River as well, it is this story of urban, indigenous leadership finding and embracing her own environment that is compelling. While grassroots leadership and organizing is of vital importance in the Bronx case, it is worth reflecting on why this coherent public narrative of such a complex collaborative has come into existence. The story resonates with the environmental justice-based, grassroots activism that sustains the working group and compels elite political allies to advocate on their behalf. This narrative sustains the group and roots it in the community, even as it manages millions of dollars in public resources, develops hundreds of acres of parkland, undergoes leadership transitions and formalizes as an organization.

* * *

The Bronx River Alliance is widely considered one of the success stories of the New York City greening community and an example of citizen-initiated action coalescing with forward thinking public agencies in a large scale collaboration. Catalyzed by the New York City

Department of Parks and Recreation and National Parks Service Rivers and Trails Program, over 60 grassroots groups (including environmental justice groups and non-environmental community based groups) were brought together, starting in 1996, as the Bronx River Working Group. The Working Group focused on: developing a greenway, restoration ecology, education, and outreach. This inclusive coalition was able to successfully build a united constituency for restoration of the waterway in the South Bronx, and attracted political support at the city, state, and federal levels, including \$33 million in appropriations in one year. The Working Group formalized in 2001 as a nonprofit—the Bronx River Alliance—and shares resources with the Parks Department in a public-private partnership. The organization is now well-resourced, is politically visible, and believes one of its greatest outcomes has been the building of a local constituency for the Bronx River.

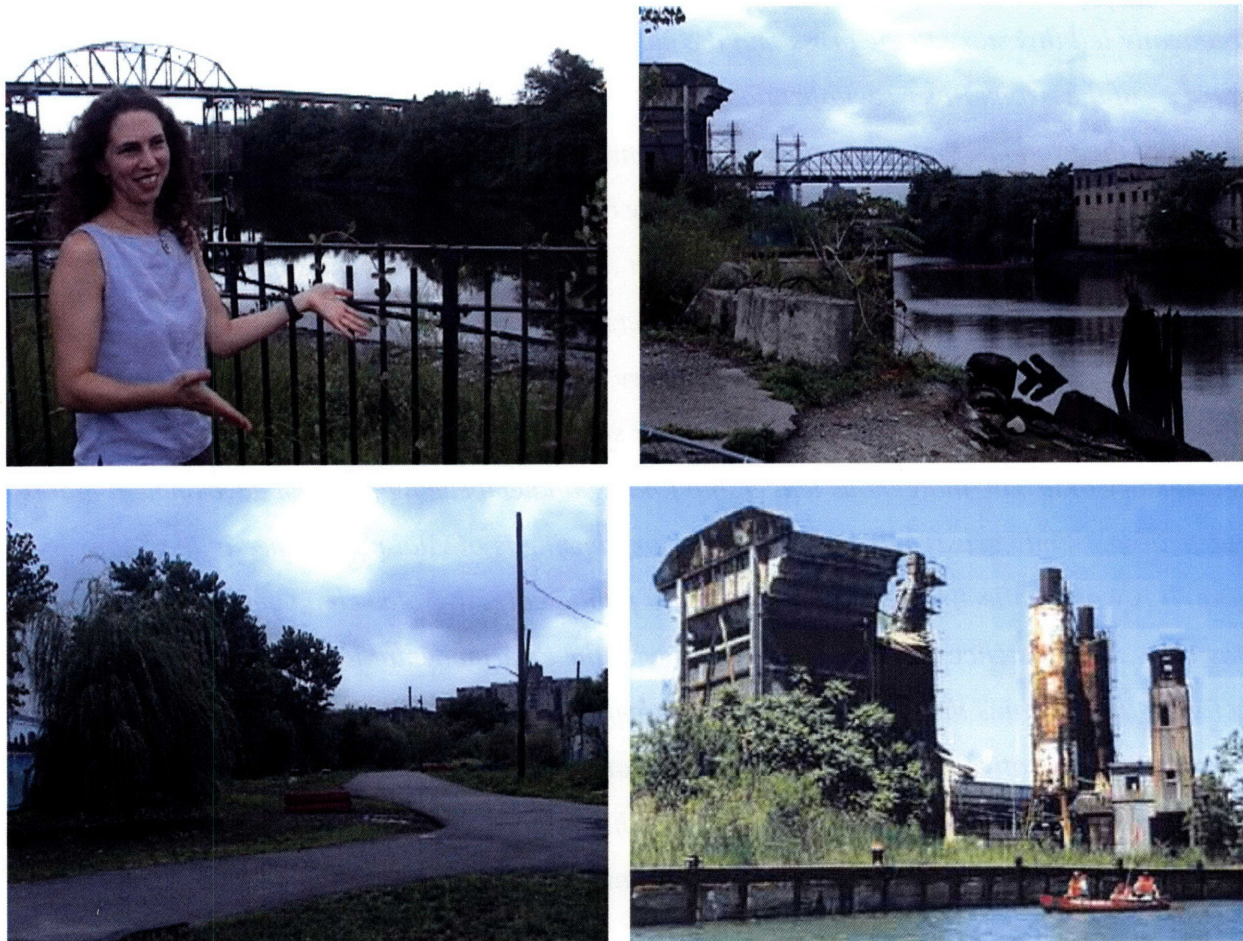


Figure 1 Clockwise from top left: Jenny Hoffner (photo: Erika Svendsen); the Bronx River (photo by author); Cement Plant Park (photo: New York Waterfront Blueprint www.nylcv.org); Hunts Point Riverside Park (photo by author)

Neighborhood Context: Geography, Economic Conditions and Demographics

The Bronx River is the only true freshwater river in New York City with functions that have changed over time in response to the changing economy and landscape surrounding it. The Bronx River Alliance offers a brief history of the river on their website and the excerpt here focuses on colonial and early industrial times,

Called Aquehung or "River of High Bluffs" by the Mohegan Indians who first lived and fished along it, the river attracted European traders in the early 1600s for the sleek, fat beaver that proliferated there. In 1639, a wealthy Swede, Jonas Bronck, purchased 500 acres from the Mohegans, and mills began to sprout up and down "Bronck's River." By the mid-1700s as many as 12 mills were manufacturing paper, flour, pottery, tapestries, barrels and snuff, powered by water from the stream. The River valley remained thickly forested well up into the 1800s. In his 1817 poem "Bronx," Joseph Rodman Drake described "rocks" and "clefts" full of "loose ivy dangling" and "sumach of the liveliest green." The water was considered so "pure and wholesome" that during the 1820s and 1830s the New York City Board of Alderman debated ways to tap into it to supply the growing city with drinking water. In 1898, when all five boroughs were integrated into New York City, the Bronx was chosen for the name of the Borough-after the Bronx River.

The completion of the Kensico Dam in 1915 diverted the upper reaches of the River into the reservoir near New Castle and cut off the River's water supply by one quarter. The construction of the New York Central Railroad in the 1840s turned the valley into an industrial corridor, and by the end of the 19th century the Bronx River had degenerated into what one official commission called an "open sewer." The history of the river since the 1880s has been one of efforts to reclaim and protect it from the escalating forces of urbanization. (Bronx River Alliance [BRA] 2006)

The infrared imagery of the neighborhoods surrounding the river (see Appendix 2) reveals the substantial amount of tree cover, particularly in the northern reaches of the river in the area near the Bronx Zoo and the New York Botanical Garden. Even further north it turns in to a meandering, park lined, habitat corridor. The juxtaposition of the quality of the river in the north, versus its degradation in the south, later proved to be a major rallying point, both for creating an inspiring vision of what is possible and for making claims of environmental injustice. The southern portion of the river shows the massive industrial and warehousing area to the west and the existing parkland to the east, along with the close proximity of several major highways that slice through the adjacent neighborhoods.

The Bronx River is, by its nature, multi-jurisdictional: "the Bronx River runs through two counties, four towns, four cities, three villages, five New York City council districts, seven New York City community boards and four Federal Congressional districts. Eight of its twenty-three

miles are located in New York City and are now under the purview of the Bronx River Alliance” (Grassi, 2005). In many ways, by not being the sole responsibility of any single government entity, the river provides an opportunity for civil society collaboration. Thus, the same jurisdictional fragmentation that sowed the river’s neglect may also provide the opportunity for creative citizen involvement. Potential divisions between upstream/Westchester constituents and downstream/New York City constituents were avoided. Though the Bronx River Alliance focuses on the southern portion of the river that is within the bounds of New York City, Westchester-based groups have given support to and even deferred to the judgments of the downstream coalition (Hoffner, 2005; Cox, 2005).

Although civil society is considered by many to be a “third sector”, its activities need to be placed in the context of market conditions for a number of reasons. First, the strength of the local economy affects the available partnership strategies that civil society can pursue. In particular, it affects the local financial resources that can be brought to bear on problems. An understanding of the composition of the local economy also gives some sense of the vested interests vying for land and influence in the neighborhood. Bronx Community District Two, which includes the communities of Hunts Point and Longwood to the west of the southernmost portion of the Bronx River, has an economic base oriented primarily towards heavy and light industrial uses. Though the river is multi-jurisdictional and reaches beyond these two communities, the economic conditions of this area of the river are of interest because much of the organizing, activism, and recent public planning has centered on Hunts Point. By land area, 18.9% of the district is used for industry, 21.2% for transportation/utilities, and fully 12.7% of the land is vacant (DCP, 2004b). The maps in Appendix 2 reveal a mix of industrial and residential uses, with a significant presence of dedicated park land along the river and the massive Hunts Point Food Distribution Center. The Food Distribution center takes up half of the acreage of the entire Hunts Point peninsula and is the distribution point for food to over 15 million people per day. It is estimated that 10,000 jobs (20,000 if one includes informal sector and seasonal jobs) are provided by the Hunts Point industrial area. Besides the food distribution center, the rest of the peninsula is entirely industrial with a mix of manufacturing, construction, utility, auto-related, and waste-related uses (Hunts Point Task Force [HPTF], 2004). The area has become the recent focus of a Task Force to develop a 20 year vision convened by the Mayor, the New York City Economic Development Corporation, and a number of other city agencies

and community groups (HPTF, 2004). It seems that interested stakeholders have successfully viewed the challenge of the industrial zone as a common issue around which groups can collaborate. Although not the same collaboration as the one surrounding the Bronx River itself, it is an indicator of a climate of cooperation in the neighborhood.

Despite the large industrial sector, there is a history of economic and social turbulence that has afflicted the South Bronx, most famously in the mass arson and housing abandonment of the 1970s. The general fiscal decline of New York City in the 1970s hit the South Bronx particularly hard: “By 1975, the South Bronx was the most devastated urban landscape in the United States. The three community districts that comprise the core of the South Bronx had fallen 57 percent in population from 383,000 in 1970 to 166,000 in 1980, which has to rival the greatest short term population loss in any urban setting” (Demographia, 2001). The decline in population was coupled with degradation and deliberate destruction of the housing stock, according to Robert Worth,

The Bronx began to burn in about 1970. Some of the fires were accidents, the inevitable result of decaying electrical systems. Many were set by landlords who would then collect the insurance money. Often they would sell the building--whether it was still inhabited or not--to "finishers" who would strip out the electrical wiring, plumbing fixtures, and anything else that could be sold for a profit before torching it. "Sometimes there'd be a note delivered telling you the place would burn that night," one man who lived through the period told me. "Sometimes not." People got used to sleeping with their shoes on, so that they could escape if the building began to burn” (Worth, 1999, p. 27).

Following the nadir of the 1970s, local community development corporations and the federal government devoted millions of dollars to the revitalization of the area and the provision of public housing, but the South Bronx remains one of the poorest congressional districts in the country (Worth, 1999). The full story of decline and revitalization is beyond the scope of this thesis, but it is important to note as the historical frame to current river restoration efforts.

Currently, while the industrial food distribution and waste treatment facilities provide jobs to the South Bronx, they carry with them environmental externalities. Hunts Point and Point Morris are host to more than two dozen waste transfer stations, a sewage treatment plant and a sewage sludge pelletizing plant, along with all of the truck traffic associated with these industrial uses. Neighborhood residents believe that the smells and emissions are adversely affecting community health (SSB, 2005). The impacts from these sites are real, according to the Hunts Point Task Force, “impacts from the highways and the local environment continue to raise

health concerns for the community; 25 out of every 1,000 children in the Hunts Point area have been hospitalized for asthma....50 acres on the peninsula are vacant or potentially environmentally contaminated” (HPTF, 2004, p. 5). The areas along the Bronx River have been given almost entirely over to these industrial and NIMBY uses. These challenges are so multi-faceted and over-determined that they surpass the ability of any one individual group to address, and therefore seem to necessitate the sort of broad-based coalition that emerged.

Neighborhood demographics are intrinsically entwined with the activities of civil society organizations that advocate on behalf of and access resources in the name of the community. To understand the coalitions that are forged and the political alliances that are tapped by civil society actors, one needs to have an understanding of the groups that comprise the citizen base in the area. Bronx Community Board Two is an economically depressed but racially and ethnically diverse area of New York City. Fifty-eight percent of the over 46,000 residents of district two were on some sort of income assistance as of 2004; 45% of adults live in poverty; 56% of adults did not graduate from high school; and average household size is 3.11 (DCP, 2004b; DOH, 2003b). Only 9.9% of housing units in the district were owner-occupied in 2000, which is one proxy for household wealth. The majority of the residents are people of color: 21.4% of the population is black/African American and 75.8% of the population is Hispanic (DCP, 2004b). Twenty-five percent of Hunts Point/Mott's Haven residents are foreign-born, with the top three countries of origin being Dominican Republic, Mexico, and Honduras (DOH, 2003b).

According to SSB,

For more than twenty years, the South Bronx has been identified as the poorest Congressional district in the nation....The service area is both overwhelmingly poor and disproportionately young, and the burden of poverty falls disproportionately on the young. More than 30% of the area's residents are under the age of 18; over half of these minors live below the poverty line. The unemployment rate in the South Bronx is 27%, three times higher than the New York City average (SSB, 2005, p. 1).

Given the demographics of the area, it is not surprising that an environmental justice ethic and vision (which will be discussed in subsequent sections) emerged as driving forces of the Bronx River Working Group and that key community leaders and political allies from the Latin American and African American communities took up the cause of the Bronx River.

Intergovernmental Support and Political Alliances

In order for the partnership to succeed, it has required the support of local, state, and federal agencies and politicians. The New York City Parks Department is a critical agency that has responsibility for the river, due to its existing property holdings, including Soundview Park, Lafayette Park, and Bronx Park, and its involvement has been essential to the existence and continuation of first the Working Group and later the Bronx River Alliance (BRA) (New York City Department of Parks and Recreation [DPR], 2005). The current Executive Director of the BRA as well as the first coordinator of the Working Group have both been Parks Department employees. The BRA is a public-private partnership with offices in the Parks Department's Crotona Office building. They share space, staff, and parks equipment with the group. Simply owning property does not explain the level of commitment that the Parks Department brought to this project, for they own 28,000 acres in 1,700 parks throughout the city, many of which lack "Friends of" groups, let alone working groups or formal alliances (DPR, 2005). The level of partnership and commitment is unique to this project and can be explained by a number of different contributing factors. First, some claim the Parks Department had intentions of expanding its parks holdings on the Bronx River in the early 1990s. Second, the creative leadership of Tim Tompkins, former Director of Partnerships for Parks, is credited for seeing the importance of the river. Finally, this sort of more involved partnership model was gaining currency in the department due to the successes of existing organizations like the Prospect Park Alliance and the Central Park Conservancy (Cox, 2005). For a variety of practical and ideological reasons internal to the agency, the Parks Department was *the* crucial early political ally that encouraged the formation of the first collaboration on the river.

Individual bureaucrats who served as policy entrepreneurs were also important to the successful development of the coalition. The National Parks Service, through its Rivers and Trails program, saw the merit in developing an urban greenway in the Bronx (Willis 2005). It was NPS employee Jerry Willis and NYC Parks Department employee Jenny Hoffner who took up the initial coordinating role of the working group. These entrepreneurs were able to reign in subsequent federal agency and programmatic support. One of the group's first efforts was aimed at receiving and redistributing among the partners an Urban Resources Partnership (URP) grant in 1997. No longer in existence in New York City, URP was a federal program of the USDA Forest Service designed to fund community urban ecology projects (Federal Register, 2000).

The parks service formalized Hoffner's role as the Bronx River Coordinator in a match to that first URP grant. A later grant for \$421,000 was obtained from the National Oceanic and Atmospheric Administration to do ecological restoration; this too was re-granted to the Working Group participants. The leadership of the Working Group was able to achieve the delicate balance of accessing federal support without allowing it to overwhelm or co-opt community priorities. At the state level, the best example of this sort of "enlightened bureaucrat" is Roger Weld of the State Department of Transportation (DOT). Weld was responsible for bicycle and pedestrian transportation programs at DOT, and worked closely with the Working Group to advocate for resources for and promote the idea of a Bronx River Greenway. Since his parent agency is not known for being particularly environmentally friendly, Weld capitalized on DOT's desire for a greener image in the promotion of the greenway project. He was able to turn the one mile greenway into a "pet project" of the Governor of New York (Cox, 2005; Willis, 2005). These individuals served as leaders who could help to redefine the traditional roles of their parent agencies, showing that managing the urban environment will require creativity and flexibility on the part of natural resource managers and other types of government agencies.

The BRA depends financially and politically upon the interest and stake of elected officials with jurisdiction over the area, including Bronx-based Congressman Jose E. Serrano, Governor George Pataki, and former Mayor Rudolph Giuliani. In a largely symbolic gesture, Parks Commissioner Henry Stern declared 2000 the Year of the Bronx River and released the Bronx River Action Plan. That same year, Congressman Serrano, who sits on the House or Representatives Appropriations Committee, designated \$11 million for the Bronx River. Not to be outdone, Pataki and Giuliani each subsequently announced their own \$11 million appropriations for the Bronx River. The Working Group's building of a constituency that makes these appropriations, according to Hoffner, a "win-win and a political no brainer" has been one of the critical steps to achieving success. By creating a large and diverse coalition that was literally unopposed, the Working Group made decisions easy for elected officials who want to satisfy their constituents (Hoffner, 2005; Cox, 2005). Furthermore, by attracting cooperative and committed political allies at multiple governmental levels, the need for contentious strategies and pressure-tactics is reduced. These appropriations represent an organizational turning point, whereby the group shifted from grassroots organizing to needing to manage substantial financial resources. This significantly contributed to the shift from the coalitional Working Group to the

more formal public-private partnership of the BRA. By helping the group to “scale up”, the coalition would compete for resources at a new level. The available resources and concurrent rise in media attention shifted the coalition from being a pet project at the neighborhood and borough scale to being visible citywide and even in the national urban environmental arena.

While the Working Group attributes their ability to attract political attention and financial resources to their strong coalition-building activities, one cannot ignore other explanatory variables. Savitch and Kantor note that community based organizations are most successful in places and eras with vibrant political party politics. Previously existing intergovernmental linkages between the Bronx and Albany or the Bronx and Washington, D.C. may have been more important than any specific constituency-building actions taken by the Working Group itself. Carter Craft of the Metropolitan Waterfront Alliance speculated that it is easier for the Bronx than Brooklyn to forge a relationship with the state government because of party politics. The “Bronx Democratic machine” is known for being quite strong and New York State has a track record of focusing more attention on the Bronx and Staten Island than the other boroughs (Craft, 2005). In 2005, there was a federal probe into the Democratic machine, which investigated six nonprofits that employed relatives of elected officials (*New York Post* 2005). The machine was also criticized with respect to its role in selecting judicial candidates, which are supposed to be independently screened but are not in the Bronx (*Daily News* 2003). Many past and present politicians, such as former Bronx borough president and 2005 mayoral candidate Fernando Ferrer, are considered products of this machine.¹ This is important to consider in comparing the Bronx River case to that of Newtown Creek. Even with this tight political party at work, it is possible that resources could have been given over to other needy causes in the Bronx. The Working Group was successful at making the Bronx River rise to the top of that list of political priorities by forming a powerful, inclusive coalition.

Popular Control and Community Alliances

Despite the poverty of the area and the legacy of urban neglect in the 1970s, the South Bronx is also known for its vibrant civic sphere, though it was not oriented to consider

¹ Although there is a clearly present local machine, the borough’s role in national politics is perhaps changing or less coherent. According to Daniel Schulman and Danit Lidor (2004), “in zip codes that include Melrose, Morrisania, Morris Heights, Mott Haven and Hunts Point, the National Republican Congressional Committee was the top recipient of political donations, a departure from past election cycles when the organization was not a major player in these communities, according to election records. In zip code 10455, which covers sections of Mott Haven and Hunts Point, it received \$11,800, or 79 percent, of the \$14,855 donated to political parties. Democrats there received just \$1,450, with the remainder going to PACs that fund both parties”.

environmental issues until more recently. Savitch and Kantor (2002) make note of the role of CDCs in the South Bronx, saying “The most infamous of all streets in the South Bronx, Charlotte Street, was a small revitalization effort run by a neighborhood group taking part in a city-run ‘sweat equity’ project. The success of Charlotte Street prompted other neighborhood organizations to take charge of their streets” (p. 324). The authors simultaneously note the critical role of government support from mayors Ed Koch, Giuliani, and David Dinkins. Groups like The Point CDC, South East Bronx Community Organization, and Hunts Point Economic Development Corporation continue to be local planners, advocates, social service providers, and housing developers (HPTF, 2004). A strong tradition of local arts that began in the 1970s hip hop culture of the South Bronx continues today in street art, galleries, and programs—including at The Point CDC (Siegal, 2000). Arts are seen as a vital part of the area’s culture and revitalization. Also, The Point CDC is a member of the Bronx River Working Group. The existence of these groups indicates that there is a tradition of popular engagement in the area and that the Bronx River Working Group—albeit unique in environmental focus and geographic scope—is not without local precedent. Ryan’s paradox (1999) argues that the more experience a community has with organizing, the harder it will be to achieve an effective new coalition. In this case, the existing civil society groups could have made cooperation with the public sector easier or more difficult—either explanation is plausible. Local government could have grown more accustomed to working with the third sector or it could have developed fault lines or adversarial relationships. I believe that the former is the case, with the capacity and track records of the groups at successful community development setting up the potential for positive environmental revitalization as opposed to solely adversarial advocacy.

The Bronx River Working Group of 65 organizations epitomizes broad popular control, and is the largest coalition of the three cases considered here. When the Working Group was founded in 1996, community involvement centered on the work of local activists, including Majora Carter, formerly of The Point CDC and founder of Sustainable South Bronx (SSB), and Alexie Torres-Fleming, founder of Youth Ministries for Peace and Justice (YMPJ). There were 15-20 groups with some relationship to the river, but their work was in no way coordinated (Hoffner, 2005). All of the organizations in the Working Group had an *interest* in the river, but only the Working Group coordinator (and later the BRA itself) focused solely on the river. Groups were encouraged to come to their involvement with the river on their own terms and

could further focus in on their specific areas of interest via the four teams. An important tactic involved having a separate ecology team that could focus on more scientific and technical restoration issues without bogging down community efforts. The recognition of different working styles, vocabularies, and aims led to the team divisions which in turn supported the thrive of the coalition as a whole (Hoffner, 2005). This tactic is supported by the literature as McCarthy and Wolfson (1996) found in their study of Mothers Against Drunk Driving,

We found that groups with more task committees had (net of controls) more volunteer labor, revenue, and members. We are inclined to interpret these as causal effects of the number of task committees....The two most consistent predictors of the mobilization of both financial and human resources are the number of public appearances made by leaders and the number of task committees fielded by the group.” (pp. 1083, 1085)

Generally, flexibility across focus areas as well as over time remains a critical aspect of the working group, as the leadership acknowledges that not all the same groups that were active in 1997 can stay involved through 2005. The flux in participation is not seen as a problem, as long as the greater coalition remains vibrant.

The coalition model was sustained, supported, and grown by sharing resources and staging inclusive events. The coordinators marshaled groups’ sense of enlightened self interest through the re-granting of the URP and NOAA grants to help get groups interested and involved. The original URP grant was worth \$182,500, \$120,000 of which was re-granted in amounts of \$10,000 or less and approximately \$60,000 that was used to do coordination and programming. The terms of the grant required that recipients meet and work as a network. Thus, it was a funder-driven network that was nurtured and encouraged to grow beyond the terms of the grant (PFP n.d, 2,4, Hoffner 2005). Another early project of the Working Group was the development of a map that illustrated the entire length of the river and the location of various projects and neighborhoods along its banks. This visual tool was used in outreach and communication to help cultivate participation along the entire length of the river. Even the events on the river were designed to allow groups to interact with the river at multiple points and on their own “turf”, a recognition of the challenges of working on an ecosystem that slices through multiple jurisdictions. Two popular annual events are the Golden Ball Event and the Amazing Bronx River Boat Flotilla. The former was conceived of by two artists as a symbolic way to unify the river by floating a golden ball down its length. The latter involves community members and politicians getting out on the river and experiencing it by canoe (Hoffner 2005). Both of these

events sought to raise the profile of the river in the awareness of community members to help build a constituency beyond just the members directly involved in the Working Group, which in turn could help encourage the needed political support.

Organizational Resources

Organizational resources in the Bronx River Alliance are significant as compared to most local environmental groups and are a direct product of being a formal public-private partnership that grew out of a broad-based coalition. These resources allow the BRA to operate at a watershed scale as opposed to a block or street scale and with year-round programming as opposed to seasonal or infrequent events that are organized by many local stewardship groups. In 2004, the BRA had a \$860,000 budget, with \$600,000 coming from government grants and \$200,000 in public support (Department of Treasury, Internal Revenue Service [IRS], 2003a). In comparison, a study of local environmental stewardship groups in six northeastern cities found that the 65% of civil society groups had an average budget of under \$500,000/year (Svendsen and Campbell, pending 2006). Since the beginnings of the Working Group, \$113 million have been raised for education and capital improvement projects (Hoffner, 2005). Fifty percent of the \$100 million raised for the Bronx River Greenway has come from federal sources. Alliance funders also include large and small foundations and private firms: Altman Foundation, Bloomberg, Con Edison, Hugo Neu Corporation, Independence Community Funds, JM Kaplan Fund Inc, JP Morgan Chase Foundation, Lily Auchincloss Foundation, Inc., Merck Family Fund, New York Community Trust, Norcross Wildlife Foundation, New York City Environmental Fund, Prospect Hill Foundation, Sarah K. de Coizart Article TENTH Perpetual Charitable Trust, and Bronx Initiative for Energy and the Environment (BRA, 2005). One of the motivating forces behind the formalization of the BRA itself was the amount of resources and attention that the Working Group was attracting.

The capacity of the group is also a function of its staffing and leadership. The BRA retains 19 full time staff members and conducts year-round programs (BRA, 2005). In comparison, Svendsen and Campbell (pending, 2006) found that 80.7% of civil society stewardship organizations that they studied in New Haven, Boston, New York, Pittsburgh, Washington D.C., and Baltimore had fewer than ten full time employees. One indicator of scale of group operation is in employee salaries; the Executive Director receives \$65,000/year, which is consistent with national averages for all nonprofit organizations in the \$500,000-\$1 million

budget range (IRS, 2003a; Jones, 2005). The team structure (ecological restoration, greenway, education, and outreach) of the Working Group was retained as an organizing principal of the BRA staff, and the heads of each of the teams were appointed to the board. When the Working Group formalized as the BRA, it hired a Bronx-born Executive Director who has an urban planning background and significant professional expertise in the foundation world (Cox, 2005). Overall, the group can be considered well-resourced in terms of budget and staffing as compared to most local, environmental nonprofits, but has nowhere near the financial capacity of public agencies or many private firms.

The board of the BRA includes a number of community and environmental activists, drawn from the participants in the Working Group, and is not just comprised of powerful elites. For example, there are staff members from YMPJ, Rocking the Boat, Bronx Council for Environmental Quality, and the Gaia Institute on the board, all of which are Bronx-based environmental or youth-focused nonprofits. It also includes members from larger, better resourced environmental nonprofits such as the New York Restoration Project and the Wildlife Conservation Society/Bronx Zoo. Other Bronx-based institutions are represented on the board, including Montefiore Medical Center. Finally, there are a number of honorary members, including long time Westchester-based river advocate Ruth Andenberg and ex-officio members including the Parks Department commissioner and a number of city councilors. As Alliance Executive Director Linda Cox noted, “the Alliance is not taking a ‘deep pockets’ approach to comprising its board” (Cox, 2005). Clearly, this decision was an overt ideological and strategic choice of the group to orient itself more towards its base of community power than to specific elites.

Environmental Values and Organizational Philosophy

The Bronx River Alliance is built upon a constituency composed of both environmental and community activists who coalesced around an environmental justice vision. While historically environmental justice has been associated with being an oppositional movement, the Bronx River case shows that it can also be an organizing principle for inclusive and proactive projects that focus on community development through the creation of new environmental amenities. The mission of the group as listed on their website is:

...to serve as a coordinated voice for the river and work in harmonious partnership to protect, improve and restore the Bronx River corridor and greenway so that they can be

healthy ecological, recreational, educational and economic resources for the communities through which the river flows (BRA, 2005).

The BRA's values are codified in its value statement, "the Bronx River Alliance is committed to practicing and upholding the values of inclusion, collaboration, environmental justice, responsiveness, communication, ecological restoration, innovation, respect, integrity and public access" (BRA, 2005). The explicit use of terms like inclusion and collaboration in this value statement are evidence of the continued desire of the formalized organization to work in partnership with the allies of the working group. Additionally, the BRA developed an Environmental Justice Implementation Strategy that addresses economic development and anti-gentrification measures. Despite living in one of the poorest districts in New York City, the group is acutely aware of the danger of gentrification and displacement that comes with making quality parks, providing access to the river, and in general improving quality of life (Hoffner, 2005). While mission statements can sometimes be little more than a public presentation of an organization, it appears that these values are internalized within the membership of the BRA. One indicator of this is that the group holds a twice annual assembly of all the partner groups and it opens with a community board member delivering a liturgy, reading the mission of the group, and facing the river (Cox, 2005). Other indicators include the composition of the board, which includes a number of local nonprofit and community leaders and not just a roster of wealthy elites.

Notably, the early and long term involvement of Torres-Fleming of YMPJ and Carter of SSB—both native residents of the South Bronx and heads of their respective organizations—served to root the efforts of the group in environmental justice, community development, and youth development. The mission of SSB makes these values explicit, "Sustainable South Bronx, founded in 2001 by Majora Carter, is a community organization dedicated to the implementation of sustainable development projects for the South Bronx that are informed by the needs of the community and the values of Environmental Justice..." (SSB, 2005). Moreover, YMPJ brought an infusion of religious values to the Bronx River restoration,

YMPJ also found ways to explicitly weave their faith commitment into their community activities. In the fall of 1998, YMPJ and its RIVER [Reaching & Including youth Voices for Environment Rights] Team enacted a community ritual to mourn and pray for the river. Called a *Taschlich* Ritual, which is of Jewish origin, all the mourners cast bread into the river asking for penance and restoration of the river. During the ceremony, one of the RIVER Team leaders, Anthony Thomas, recited a poem called "Willow Tree,"

recognizing the presence of the only willow tree on the Bronx River and proclaiming the peace that the river brought to his life (YMPJ, n.d., p. 4)

Early on in organizing, the Working Group created a map and a presentation to highlight the disparity in environmental quality between the northern, Westchester reaches of the river and the southern, Bronx portion of the River (YMPJ, n.d.). This tactic did not sever the ties between northern groups like the Bronx River Restoration and the Appalachian Mountain Club, but rather served as a source of productive tension and ensured that the orientation of the Bronx River Working Group would be one of justice and community development, rather than solely ecological restoration (Willis, 2005).

The structure of the teams in the Working Groups allowed for all interested parties to drive the course of the project in their own unique way and made space for diverse sets of actors from local, faith based groups to federal agencies. Scientific experts and those interested solely in ecological restoration could be involved in the ecology team; those interested in park planning could be involved in the greenway team; those interested in youth and community organizing could focus in education or outreach. But also, the potential for cross-pollination between these groups remained vital, for example with active community outreach in advocating for the greenway. Later on, the BRA retained the team structure of the Working Groups, which shows a continuing commitment to the issues framed by the initial working group and allows for the ongoing involvement of partners in the work of the now-formal nonprofit. As mentioned previously, McCarthy and Wolfson (1996) found that the more issue-specific committees a coalition has, the more viable it is. The thematic teams regularize the involvement of a broad and heterogeneous network, capitalizing on the strength of weak ties approach.

Scientific and Technical Information

The team structure put into place and the clever management of the Bronx River Working Group had the effect of productively channeling the inputs of the scientific and technical experts. Given the contaminated state of the river and the involvement of a number of federal and state resource management agencies, the coalition could easily have gone in the direction of a technical, top-down, ecological restoration project. But because the river is embedded in a densely settled, contested urban terrain, its restoration had a greater focus on human engagement with the river and provision and improvement of open space. Natural resources agencies were seen as critical allies in what is centrally an environmental justice and quality of life project,

rather than the other way around. The experts involved spoke in a language that was not necessarily accessible to all of the other interested stakeholders, with an academic focus that “could have sidelined the project”, according to Hoffner (2005). By allowing them to interact with each other in the focused ecology team, this group was able to contribute to the overall project without dominating it. When interacting with the larger group, experts were challenged by community members to convey ideas in plain English and in terms that could be easily understood (Cox, 2005). Another example of the way technical experts were encouraged to partner with community experts was in the structuring of the NOAA grants. While these were originally intended to be a competitive grants program, Hoffner and Willis reworked the management to encourage collaboration between community groups (such as the Gaia Institute) and natural resource experts (such as the Parks Department Natural Resource Group). While this took more upfront work and convincing, they felt that it improved the quality of the projects (Willis, 2005). Though the Alliance has taken the approach of not *leading* with science, it is clear that current scientific knowledge will be brought to bear in restoration and scientific stakeholders remain engaged, as evidenced by the multi-million dollar feasibility study that the COE initiated with the DEP and Westchester County in 2003 (COE, 2003). Additionally, much of the monitoring of water quality and the “bio blitzes” to catalog the biodiversity of the river is done to cultivate awareness and stewardship, rather than to build a database of technical information. Cox (2005) noted that the Alliance practices ecological restoration by rolling up their sleeves and finding out what works. They would like to be able to collect enough good quality data to contribute to agencies and to monitor and evaluate the impacts of changes made on the river. Overall, the group created a structure that can deal with the classic conundrum of the differences between “expert” and “local” knowledge (see, for example, Berkes & Folke, 1998) that has historically plagued collaborative resource management. Thusfar, scientific and technical information has served as a unifier of the coalition rather than as a divisive wedge used by parties who disagree. This may be more of a testament to the strength and inclusiveness of the coalition than a sign of concordance in the science.

Strategy Choice

The Bronx River Working Group was a coalition that was the product of bottom-up community mobilization for environmental justice and top down coordination and investment by the local parks department with the assistance of federal natural resource management agencies

and elected official allies. Since formalization, the BRA continues to pursue a strategy that is highly collaborative with government and other civil society actors, but not with the private sector. Savitch and Kantor (2002) predict that when market forces are constraining, as they are in the South Bronx, political agency will be employed. With scant local financial resources but abundant community engagement and a tradition of civil society-led community development in the South Bronx, the BRA has made its focus building a local constituency that would attract the attention of political allies. The tactics of creating a visually appealing map of the Bronx River, staging inclusive and visible events, and redistributing resources amongst community groups were just three of the ways in which the Working Group sought to build both a base of citizen supporters as well as a formal network of organizations. Only with that base established could supporting the cause of the Bronx River become a “political no-brainer” for crucial public allies like Congressman Seranno—which led directly to the commitment of resources and the increase in capacity of the group. The BRA has multiple targets in the public sector, including both natural resource and science agencies as well as elected officials. They utilize elite alliances in the form of politicians who must be responsive to local constituents and who have an interest in cultivating an environmentally and community-friendly image.² The importance of Congressman Jose E. Serrano and the resources secured from NOAA were emphasized by all interviewees. No less significant is the support of the NYC Parks Department, which had a vested interest in the river as a pre-existing landholder. The Parks Department currently provides physical office space, staffing, vehicles, assistance with outreach and media strategies, and myriad other hard and soft resources.

As noted at the beginning of the case, the founding narrative of the Working Group focuses on the role of indigenous community leadership rallying the support of their elected officials, rather than on the somewhat less glamorous catalyzing role of local, state, and federal officials. In Hopkins’ (2005) analysis of the case, she notes “I learned about the sheer number of

² I can only speculate as to the true motivation of the political figures who have offered support to the Bronx River. The concept of cultivating an environmentally friendly image was mentioned by several of the Alliance members as one possible explanation. Politicians with vested interests might also be trying to make the Bronx competitive in new ways as a residential area, and see the river as an important amenity. The existence of the Hunts Point Task Force and Mayor Mike Bloomberg’s pledging of \$27 million to redevelopment of the area seems to support this explanation (nyc.gov 3/8/05). As Savitch and Kantor (2002) discuss the convergence of cities in policy and form, a reinvestment in the waterfront is not unusual in anyway, albeit a particularly dire and extreme case in the South Bronx. They may simply be expressing values for a clean environment. Finally, they may be simply responding to the pressure of the CSOs as constituents.

people necessary, working together, before they can make even a small difference in urban areas. And, ironically, how those closest to a resources sometimes require a catalyst to spark their interest in preserving it” (p. 146). While the narrative is indicative of the internalized values and ideologies of the group, analysis reveals that both the grassroots leadership and the support of Hoffner, Weld, and Willis were required to develop this sort of coalition. Overall, the most salient factors in the development of the collaborative strategy used here were ideology, leadership, and political allies; only later did resources and scientific information come to play much of a role.

There may be some deliberate avoidance of close collaboration with the private sector due to community resentment of current users on the river or of the types of industrial firms that are sited in the neighborhood, as well as a dearth of local firms with the capacity and interest to get involved in the revitalization effort. Firms on the river include waste-related and utility-related NIMBYs and auto shredding and junkyards. There are few businesses at the borough scale, with the exception of hospitals, that have the capacity to meaningfully partner with the BRA (Hoffner, 2005). Also, one could argue that by being a competent and relatively large nonprofit at the helm of a broad coalition in an area where the population is needy, the BRA is an attractive target for foundation support. It is possible that just the sort of market conditions that drive away the private sector could be those that attract the “third sector”, particularly foundations with an explicit mission to serve the neediest. There is not, however, a total aversion to working with the market. Under the auspices of the prevention of gentrification, YMPJ has begun to seek affordable housing development opportunities surrounding the river (YMPJ, n.d.). This has been a later project of the Bronx River campaign, with initial emphasis focused more on outreach and awareness building. Perhaps partnership with firms like the auto repair shops will represent the next frontier for expanding the collaboration.

While the overarching strategy of the Working Group is one of public-private cooperation, there have been moments when organizations have utilized different, more confrontational tactics, such as demonstrations and critical press. In particular the Southern Bronx Watershed Alliance (consisting of YMPJ, SSB, the Tri-State Transportation Commission, and Pratt Institute Center for Community and Environmental Development) opposed the city’s taking and auction of a cement plant for further industrial use at a site that the group envisioned as a riverside park. They organized large scale community rallies and distributed information to

residents and the press (YMPJ, n.d.). While the entire Working Group opposed the taking, SBWA was able to fracture off temporarily and take a more radical stance than the Working Group as a whole, which had to maintain closer ties and good relations with the local government (Hoffner, 2005). Similarly, members of the Working Group could take a harder stance on advocating for the decommissioning of the Sheridan Expressway than could the Working Group as a whole. The Working Group took a moderate stance of saying decommissioning should be one option considered in an Environmental Impact Statement, while individual organizations advocated more strongly and overtly for a complete community-driven plan for the area (Cox, 2005). This may have been a conscious strategy of the group to allow both for cooperation with public agencies and more overt criticism at the same time. Although political opportunity theory poses that coalitions will shore up in response to outside threats, it appears that threats may also elicit more confrontational strategies.

The strategy of the BRA also includes elements of stewardship. Their mission is pursued through institutionalized educational and outreach programs on the Bronx River, in addition to the previously mentioned annual events (the Flotilla and the Golden Ball). Education programs are undertaken by the BRA itself, other sectors of the Parks Department such as the Natural Resources Group, and civil society partners. The education team of the BRA runs the Bronx River Stewards program, which focuses on volunteer data collection and monitoring of the river (Cox, 2005). The BRA has also created classroom-based curriculum on water quality, macroinvertebrates, plants, watersheds, and environment in the community (BRA, 2006). Independent nonprofits like Rocking the Boat use the river as a recreation and education site, getting youth out on the water in handmade wooden boats that they create (Rocking the Boat 2006). While the Bronx River remains polluted, a constituency of people who are aware of and care about the river has been created and cultivated through these educational and stewardship-based activities.

The loose yet inclusive structure of the Working Group allowed for such diversity of action. Its ability to sustain different opinions and tactics amongst members of the groups without losing sight of the broad vision is a sign of the robustness of the coalition. It also allowed for different groups to focus on their own unique areas of interest, be they ecology, education, or greenway development and built a broad, heterogeneous network of supporters. In terms of the geography of coalition-building, the successful management of potentially divisive

relationships between northern and southern stakeholders was key. The extreme inclusiveness of the early, networked, Working Group model raises the question of the future success and adaptability of the formalized nonprofit in the face of potential future challenges. Organizational diagrams of both the Working Group and the Alliance are presented in Appendix 4. While a working group of 65 organizations *necessarily* represents a constituency, will the single public-private entity continue to carry such political weight, attract resources, or garner media attention? Perhaps the organizational form was as responsible for the group's successes as were the specific actions that they undertook. These remain important considerations for the future of the Bronx River.

Outcomes

The achievements of the Bronx River Alliance and previously the Bronx River Working Group and all of its partners have been both social and environmental. In terms of physical impact, the group achieved the permanent conversion of space, with 40 new acres of parkland being created (Hoffner, 2005; Partnerships for Parks [PFP], n.d). Specifically, the creation of the Hunts Point Riverside Park was a first step that allowed the community to see the potential in the area by creating a view corridor to the water in the midst of a very industrial portion of the river (Craft, 2005). At under an acre, the park was as much a symbol of what the waterfront could be as a functional open space. Also, the creation of Concrete Plant Park was an achievement of the coalition that did not come without difficulty and was a product of community struggle. In a city that is already heavily developed and dense, a conversion of this much space to parkland can be considered a significant environmental outcome. Steps were taken to achieve waterfront and on-water recreation opportunities, with three new canoe/kayak put-ins created on the river (Hoffner, 2005; PFP, n.d). Finally, these parks are not isolated sites, but will be connected via the 23 mile long Bronx River Greenway, 8 miles of which will be in New York City. Once the greenway is complete, it will include 925 acres of parkland (both new and rehabilitated) and will connect to the South Bronx Greenway and to the East Coast Greenway that stretches from Maine to Florida (Cox, 2005; BRA, 2005; East Coast Greenway Association, 2005). It is clear that these physical achievements could not have been accomplished without the close working partnership with the Parks Department. Having the support and resources of a vested local land manager was absolutely critical to achieving these results. Equally as important is that the public agency tendency to plan for the long term was mediated by community pressure for short term results.

The public and civil society sectors worked in tandem to achieve immediate results and develop a coherent structure that could be worked with over time.

While creation of new sites and improvement of existing parks is certainly significant in the South Bronx, biophysical impacts of ecosystem restoration have thus far been somewhat minimal. The ecology team undertook trash removal, stream bank restoration, and some channel modification in isolated sites. They undertook the experimental creation of a salt marsh at the Concrete Plant Park, which was successful. Removal of dozens of cars and tons of other debris made a visual impact, but the river still remains polluted and in need of major restoration (Willis, 2005). The Bronx River Conservation Crew of the BRA is a team of eight employees that works on river restoration full time, five days a week, to carry on this work (BRA, 2005; Cox, 2005). COE has already dedicated \$2-3 million for a reconnaissance feasibility study, though they will likely need to appropriate another \$12 million and spend several more years before any physical changes happen to the river (Willis, 2005). Hoffner claimed that COE might have been more involved, were it not for their preoccupation with war-time activities in the last three years. The volunteer basis of a number of these restoration projects limits their scope and intensity, but embedding them within public management practices such as the BRA's work crew and even federal government projects will bring environmental restoration to a higher level. The lesser emphasis in ecological restoration as compared to open space development is directly traceable to environmental justice approach taken by community stakeholders. As discussed, natural resource agencies were not allowed to dominate the project, but were treated as equal partners. Just as the greenway team focused first on near-term wins in the creation and revitalization of small parks before planning the entire park network, so too did the ecology team focus on a few pilot projects of sea grass planting and debris removal before launching into a multi-million dollar federal remediation study. As the group matures and time passes, it seems likely that ecological projects will scale up in their significance and scope.

Social impacts, always challenging to measure, can be considered via some of the main outputs of the group. Over \$113 million in capital and education funds were raised for the river (Hoffner, 2005; PFP, n.d.). In particular, the watershed year of 1999 was cited by all of the interviewees as a huge achievement and a turning point in organizing on the River. In that year, \$33 million were appropriated to the Bronx River by the Governor, Mayor, and a Congressman. By joining together in coalition, the groups of the Bronx River managed to avoid competing with

each other for small pools of resources that might be targeted locally--as would be predicted by Hannan and Freeman's (1977) theory. Instead they became a citywide, regional, and even national presence that caught the attention of federal agencies and large foundations like the J.M. Kapland Fund and the Robert Wood Johnson Foundation. The successful management of several sources of federal money, including the strategic re-granting of the NOAA resources to members of the Working Group, was also considered a successful output and capacity building step of the group. Further, all of the leaders interviewed cited the creation of the working group, with 65 groups working together, as a positive outcome unto itself (Hoffner, 2005; Willis, 2005; Cox, 2005). Hoffner claimed that the change in awareness and the rise of an environmental consciousness amongst involved groups and residents might even be more important than the environmental impacts so far. Alix Hopkins (2005) considered this change a literal transformation, from residents thinking about their home as a dumping ground to seeing it as a place of potential beauty and enjoyment. The goal of the outreach team was to cultivate just this sort of awareness in order to build the citizen base of support; awareness building and coalition building seem to be strategies that go hand in hand. Another indicator of the success of the project is that participants were not able to cite many shortcomings or failures of the project. Indeed both Willis and Hoffner noted that the crises that the group encountered along the way often only served to galvanize the community more or to lead to the pursuit of creative solutions. Examples of this included the threat of building a truck route through the Concrete Plant Park site followed by the active protesting that emerged on the part of YMPJ and other community partners. There was no challenge that was seen as intractable, no program that was a complete failure; and the political opportunity theory of threats as strengtheners of coalitions is supported by the facts in this case.

The largest open questions for the group are issues of organizational sustainability and the impacts of formalization on the coalition. Although this project is often heralded as a success by the New York City greening community, celebrated in books like Hopkins' *Groundswell*, and featured in the White House 2005 Cooperative Conservation Conference, it has only been going on for a decade. Will this structure remain viable over the course of the years and decades that are needed to develop the South Bronx Greenway, restore the quality of the river, change the functionality of the parks in the area, and improve the quality of life for the residents of the neighborhood? Whether this unique combination of savvy leadership, political alliances,

inclusive environmental justice vision, and strong community backing is replicable in other locations and in other contexts will be further considered in the discussion chapter.

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III. NEWTOWN CREEK: A MAVERICK ENVIRONMENTAL ADVOCACY GROUP SHIFTS TOWARDS COLLABORATION

The Riverkeeper patrol boat is both a functional resource and a symbol of the values of the group. It is the primary tool used by an environmental organization that was founded in the 1960s by Robert F. Kennedy as a pollution watchdog and legal advocate. It allows the group to physically patrol the Hudson River estuary, writing logs of polluters, making reports to the responsible agencies, and taking independent legal action on behalf of citizens. Boat captain John Lipscomb said, "There is a certain amount of awareness amongst polluters if there is someone out there watching...The boat symbolizes that somebody is watching them and you can't measure [the impacts of] that." These notions of being an industrial investigator, taking independent action, pursuing justice, and being engaged in a struggle of "David versus Goliath" pervade the thinking of the staff and the rhetoric of the organization (Forsyth, 2005). The website notes, "Riverkeeper is an independent, member supported environmental organization founded on the premise that citizens themselves must roll up their sleeves to defend our waterways" (Riverkeeper, 2006). Investigator Basil Seggos added, "we get as deep in the trenches as possible." The group clearly believes in the importance of environmental laws and uses these as tools with which to advocate for citizens. Though the group always sees itself as working on behalf of citizens, the shift towards a more formal organizational collaborative represents a new way of doing business for the group, and presents some subsequent challenges.

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The Newtown Creek, which runs between Brooklyn and Queens, is one of the most polluted waterways in the United States, yet an effective coalition to change that status is only just beginning to emerge. The Hudson Riverkeeper is a 30-year-old, well resourced, regional environmental group founded by Robert F. Kennedy Jr. It has earned a reputation as a contentious advocate for the environment that uses all of its tools, including litigation and the media, to pursue polluters of New York City's waterways. Their Newtown Creek campaign employs these tactics on certain polluted sites, most notably in a massive lawsuit against the Exxon Mobile Corporation. They utilize watchdog boat patrols, notices of intent to sue, and media events to raise awareness and promote behavior change amongst polluting firms on the creek. Their targets have typically been in the private sector, with whom they interact in a somewhat adversarial manner. However, in 2002, the campaign demonstrated a shift towards a

more collaborative approach to problem solving creek-wide, working with local businesses, other civil society groups, and municipal partners. Riverkeeper, along with the New York City Council Waterfront Committee and with the strategic assistance of the Metropolitan Waterfront Alliance—a project of the citywide nonprofit the Municipal Arts Society, are founding members of the Newtown Creek Alliance (NCA). The NCA is an informal alliance that is still relatively new and is looking to expand and strengthen its coalition, using aspects of the Bronx River case as a model. The fledgling group is intended to be a forum for multiple stakeholders on the creek and their main programs are still evolving. So far, they have focused on increasing public awareness of pollution problems, seeking a brownfields revitalization planning grant, and advocating for public point-access along the creek. Change is occurring slowly on what is still first and foremost a working waterway.



Figure 2 Clockwise from top left: Basil Seggos (left) of Riverkeeper taking people on Whale Creek; the Pulaski Bridge opening; car shredding on the creek; proximity to Manhattan's midtown (all photos by author)

Neighborhood Context: Geography, Economic Conditions, and Demographics

The Newtown Creek has a history as a piece of infrastructure in service to an industrial sector that has long since waned, leaving a polluted present and an unclear future, as reporter Andy Newman (1999) concisely captured:

At one time, Newtown Creek was a proper stream, draining the uplands of western Long Island. But by the late 1800s, the bulkhead-bordered creek had been walled off from its sources of fresh water and was lined with petrochemical plants (including the first kerosene refinery, opened in 1854), fertilizer and glue factories, sawmills and paint works, and jammed with commercial vessels...the little creek moved more cargo than the lower half of the Mississippi. This brisk commerce—combined with the untreated sewage of hundreds of thousands of New Yorkers—created staggering amounts of smoke, stench, and sludge.

Over the last 50 years, though, as city, state, and federal officials bickered about whose job it was to keep the creek navigable, shipping traffic left for deeper ports. Commercial traffic is down to a couple of dozen boats a day at most—barges of scrap metal, gravel or garbage, or the odd oil tanker. The businesses along its banks now include a plumbing-fixture showroom, the Dry Ice Corporation and what may be the city's only waterfront adult bookstore. Most of the dumping has stopped, too, and while the sewage treatment plant, built in 19767, is primitive, it has been a vast improvement over nothing.

The creek's future, however, is uncertain. Unlike its smaller, quainter cousin, the Gowanus Canal, whose champions predict it may one day become the hub of a sort of Brooklynian Venice, Newtown Creek is an unlikely candidate for gentrification. For one thing, there is much more industry along the creek, which the City Planning Department—notwithstanding the planned sewage-plant promenade—considers “exclusively a working waterfront” of negligible interest to the public. For another, while the Gowanus links the brownstone districts of Park Slope and Carroll Gardens, Newtown Creek is flanked by working-class Greenpoint on the Brooklyn side and industrial Long Island City and West Maspeth in Queens. Partly due to its neighbors' lack of clout and partly because of the area's history as a haven for waste, the creek is home to the highest concentration of trash transfer stations in the city—about a dozen. (p. B1)

The aerial photo and infrared imagery (shown in appendix 2) reveal that the creek truly is a hard border and an industrial zone, with almost zero park land. More so than either the mixed-uses along the Bronx River or the smaller, narrow industrial area in the Gowanus Canal, the Newtown Creek is firmly surrounded by blocks of active and vacant industrial use all along its length, with residential neighborhoods set back a few blocks. The only open space that registers on the infrared image is the massive Calgary Cemetery in Queens. The inaccessibility of the Creek from the neighborhoods presents both an organizing challenge and helps to explain why it had not previously been a focus of community pressure for open space development. The Bronx

River, even at its most industrialized stretches is nowhere near as developed and contaminated as the Newtown.

If the South Bronx is the New York City poster child of economic devastation coupled with civil society activism, then the Brooklyn waterfront is the exemplar of rapid, market-led economic change following decades of environmental devastation. The current Greenpoint-Williamsburg East River rezoning will literally change the shape of the waterfront from an underutilized industrial edge to a luxury high rise development with some hard-won linkages of developer-provided affordable housing. On the Long Island City/Hunters Point side, sweeping rezoning has not taken place, but high profile luxury developments like Queens West (and New York City's failed bid to host the Olympics in 2012 with the athlete's village located in Long Island City) have posed similar challenges and opportunities to the community. Running in between these changing neighborhoods is the 3.8-mile long dedicated industrial zone of the Newtown Creek and its five tributaries of English Kills, East Branch, Maspeth Creek, Dutch Kills, and Whale Creek (see Appendix 2 for maps of the area). It is important to note that the rezoning only affects the very mouth of the creek to the Pulaski Bridge, and the Creek continues roughly three miles inland.

A brief examination of Greenpoint-Williamsburg history reveals that it has long been an area of industrial uses, hazards, and contamination. Currently 36% of land is devoted to industry in close proximity to residential neighborhoods (DCP, 2004a). In the early 20th century, New York City was an industrial center, with Newtown Creek serving as one of the key arteries. It was a site for copper smelting, chemical production, oil and sugar refineries, brick production, and lumber and coal yards. A Merchant Association of New York publication from 1921 promotes the Creek as an ideal site for its proximity to Manhattan, water and rail connections, nearby immigrant workforce, and cheap and available sites. Its statement on which firms should locate at the site is particularly revealing of the land use on the Creek:

The Newtown Creek Industrial District should prove especially attractive to manufacturers who ordinarily believe there is no location near the center of the New York district which will conform to their requirements. This is particularly true of manufacturers of heavy products who must have considerable area in order to provide for one-story or other low types of buildings; who require quantities of storage space; whose processes are noisy, dusty, odorous or in some other way likely to be obnoxious if located in close proximity to residential sections or certain types of high grade manufacturing; who receive raw materials and ship finished products in large quantities so that direct rail and water connections are necessary; and who at the same time cannot be located in an

isolated section far removed from the developed sources of labor supply, the wholesale distributing and retail centers of Manhattan, and the facilities of foreign shipping (MANY 1921, pp. 10-11).

Eventually the cost of real estate, insurance, property tax, and labor began to decrease New York City and Newtown Creek's desirability as an industrial site. The 1960s containerization of shipping and the movement of the commercial uses on the Brooklyn waterfront to New Jersey further exacerbated this process (NYC Office of the Mayor, 2005). Despite the massive economic changes, some active firms still remain, as does the regulatory framework that supports industry. It is a federally navigable waterway under the jurisdiction of the U.S. Coast Guard and the channel must be maintained for shipping purposes. Aside from the rezoned portions, the entire waterfront is zoned M3 for heavy manufacturing and industrial uses (Craft, 2005; New York City Planning Commission, 2005). Thus, for the past century and continuing to today, the Newtown Creek has been treated first as a piece of industrial infrastructure and much less a part of the natural landscape—which poses challenges for community environmental organizing on the creek.

The fiscal instability and decline of the 1970s and 1980s in New York City led to the existing conditions of vacant, underutilized and contaminated sites that are clustered along the Newtown. While just 5.1% of the land in Greenpoint-Williamsburg is vacant, much of that is clustered along the waterfronts, as indicated in the land use maps in Appendix 2 (DCP, 2004a). Current uses include a number of noxious facilities. Jason Corburn describes the environmental injustices as of 2002, with the Greenpoint-Williamsburg neighborhood hosting 30 solid waste transfer stations; a radioactive waste storage facility; 30 facilities that store hazardous wastes; 17 petroleum and natural gas storage tanks; 96 above-ground oil storage tanks; and as of 1987, the largest concentration of industries reporting to the US EPA Toxic Release Inventory. Current uses include bulk oil storage, solid waste handling, and wholesale distribution (New York State Department of Environmental Protection [DEP], 2004). Because of these NIMBYs and the legacy of pollution both in Superfund sites and brownfield sites, Newtown Creek is considered by many to be one of the most contaminated waterways in the country. Though I argued that the overdetermined problems of the Bronx River primed the community for coalition-development, it appears that there may be some sort of a tipping point beyond which multiple problems may inhibit, rather than promote, coalition building. In the case of the Newtown Creek, the waterway

has for so long been considered the domain of industry rather than the domain of the neighborhood that there is a lack of a large constituency for change; few have “rediscovered” the creek as a natural resource. It is just the sort of waterway that is apt for Riverkeeper’s legal advocacy and media attention. Even though the community was not self-organizing a campaign, Riverkeeper has commonly used tactics of patrol, investigation, and lawsuits to pursue industrial polluters independently.

The diverse population of Greenpoint-Williamsburg has a history of environmental justice advocacy and use of strategies in opposition to NIMBY facilities. Though not as low income as the South Bronx, Greenpoint-Williamsburg has a substantial working class and immigrant population, with rapid gentrification particularly in Williamsburg changing the composition of the area. Brooklyn community district one has 46.7% of its population on some sort of income assistance, though the majority of those are Medicaid, not public assistance, recipients (DCP, 2004a). Thirty-four percent of adults live in poverty and 40% did not graduate high school. Average household size is 2.86 (DOH, 2003a). As another indicator of wealth, just 13.6% of units are owner-occupied. The district is 48% white, 5.5% black, and 37.7% Hispanic, though it should be noted that a significant portion of the white residents in Greenpoint include Polish American immigrants (DCP, 2004a). Indeed, 34% of the population of Greenpoint is foreign born, with the top three countries of origin being Poland, the Dominican Republic, and Mexico (DOH, 2003a). Greenpoint has been slower to gentrify than Williamsburg, perhaps because of the entrenched ethnic communities or because it has worse subway access to Manhattan. Over the course of the neighborhood’s history of environmental activism, various sectors of the population have become involved in campaigns, as will be discussed in the community alliances section below. The membership of the NCA includes a number of long-time Polish-American neighborhood advocates, though from observation of meetings in 2005 it does not appear that the Latino community is very engaged yet.

Environmental Values and Organizational Philosophy

Riverkeeper’s mission is “to protect the environmental, recreational and commercial integrity of the Hudson River and its tributaries, and to safeguard New York City’s and Westchester County’s drinking water supply” (Riverkeeper, 2005c). It achieves this mission by focusing in three major areas, listed on their website:

- Restoration of the Hudson River ecosystem, with particular emphasis on minimizing fish kills and water pollution;
- Protection of New York City's drinking water supply; and
- Improving public access to the Hudson River. (Riverkeeper, 2005c)

These explicitly environmental values are embedded in an organization with a long history of working with communities of fisherman who make their livelihood off of area rivers. Indeed, Riverkeeper was founded through a partnership with the Hudson River Fishermen's Association out of a historic fight against Consolidated Edison's 1963 plans to turn Storm King mountain into an enormous pump storage facility to generate hydroelectric power (Cronin and Kennedy, 1997). This historic orientation towards supporting fishermen helps to explain the organization's interest in the Newtown as a working waterfront. They do not view waterways as solely recreational playgrounds, but as functional natural resources that can be managed for multiple ends (Seggos, 2005). Unlike many locally based environmental justice groups, Riverkeeper is concerned with the regional ecology and economy of the Hudson Estuary and can see the role of industrial areas like Newtown Creek in supporting the health and function of the entire region.

Subsequently, the NCA carries forth this primary focus on improving the water quality of the waterway itself, rather than focusing on Creek-side provision of open space or creation of a greenway as one might expect a local coalition to advocate. Though they certainly want more parks, particularly for workers to take lunch breaks in, they are not interested in eliminating or displacing existing industrial uses (Seggos, 2005). This is a clear difference between the goal of the Newtown and Bronx groups. They see the Newtown Creek as continuing to be an important industrial area for New York City, noting that these sorts of facilities, including waste transfer facilities and power plants need to go somewhere. They also argue that having bulk industrial users like concrete manufacturers using barges keeps thousands of trucks off the road, which improves air quality. Finally, they argue that urban neighborhoods should include commercial and industrial uses in order not to become residential, high-income enclaves. Production is an important function that they wish to sustain and encourage, in particular in terms of light manufacturing and handicrafts like woodworking. Having the Greenpoint Manufacturing and Design Center (GMDC)—which is committed to rehabilitating and developing work space for light industry and craft workers in the Greenpoint neighborhood (and is physically located at the mouth of the Newtown)—as one of the founding members of the NCA ensures that the group will keep this pro-industry stance (Parkhill, 2005). So, too, does the City Council Waterfronts

Committee see the area as an important source of high quality industrial jobs that they do not wish to displace (Kronley, 2005). The MWA is also interested in the Newtown as a working waterfront, though they clearly advocate for open space as well. Their view of the creek is informed by their regional perspective more so than the local civil society groups that are most interested in eliminating NIMBYs and creating more open space.

There may be some latent tension between this view and the goals of traditional open space advocates. Whether this moderate stance can engender broad community support and enthusiasm remains an open question, particularly once the maelstrom of the rezoning has passed. Former NCA coordinator and City Council staff person Katie Schmid praised the members of the NCA for their nuanced understanding of land use and economy in the neighborhood. She related an anecdote of NCA members “schooling” greening advocates in the importance of retaining industrial uses in the area as evidence of that understanding (Schmid, 2005). Paul Parkhill (2005) of the GMDC acknowledged the fact that even NIMBY facilities need to be sited somewhere in New York City, and perhaps Newtown Creek is the place for some of them. The group is in an interesting position of being more naturally allied with industrial interests and the City’s Office of Industrial Development than with more typical quality of life advocates that are present in the community. The alliance they are trying to forge between both of these types of interests is a delicate one.

Another important value that shapes Riverkeeper’s strategy is its internal organizational narrative of “going after the big guys” and defending the legal rights of ordinary citizens. Riverkeeper views its role, despite its significant legal and financial resources and elite alliances, as the “David going after the Goliath” of industrial polluters (Forsyth, 2005). Riverkeeper’s head of the Newtown campaign, Basil Seggos (2005) noted, “Riverkeeper is bottom-up as opposed to top-down; we get as deep in the trenches as possible”. This value seems to drive their strategic approach and, in turn, is reinforced by the use of that strategy. Yet, there is an interesting disconnect between their own view of themselves and the way Newtown partners view them—as the outside, technical expert (Hollowacz, 2006). Perhaps Riverkeeper maintains this narrative with a goal of not becoming co-opted by more moderate agendas; it may allow them to remain an outside challenger of existing social structures. Because legal tools are at their disposal, and this is the way that they have addressed problems of environmental contamination before, this is the routinized way that they approach problem solving that is

consistent with their personal narrative. Therefore, any departure from this strategy such as forming an alliance or being interested in stewardship activities, is made that much more significant.

Organizational Resources

Riverkeeper is a regional environmental group with a resource base that is not linked to the fate of the neighborhoods surrounding the Newtown Creek. This makes it less reliant on coalition-building as a strategy to support its own survival, but rather it can view coalition development as a support to the core functions that the group already performs. It had a \$2 million budget in 2004 that came entirely from public support in the form of donations, grants, and revenue from special fundraising events like an annual dinner dance. Specifically, 45% of the budget comes from private foundations, 2% from government drinking water protection grants, and the rest from individual contributions (Riverkeeper, 2005b). Clearly the organization is better resourced than more locally based nonprofits, including all of the other groups considered in the cases here. A number of the employees are highly compensated, including \$135,000/year to the head of the organization, over \$100,000 to the Chief Financial Officer, and \$75,000/year to the boat captain, which is a sign of the scale of operations (IRS, 2002a). Given that “Riverkeeper” (their term for the organization head) Alex Matthiessen recently declared the Newtown Creek to be one of the organization’s top three priorities, and investigator Basil Seggos devotes approximately 80% of his time to the Newtown, it is expected that significant resources will be put towards the effort (Matthiessen, 2005; Seggos, 2005).

In terms of employees, Riverkeeper is similar in size to the Bronx River Alliance, with a full time staff of 16, but the region-wide scope of the group means that the focus of these employees is dispersed. Another critical asset the group has is an institutional relationship between Riverkeeper and the Pace Environmental Law Clinic, which supplies the former with dozens of law student interns each year (Seggos, 2005). These law students do research, write briefs, and function similarly to full fledged lawyers, but at zero cost to the organization. This workforce allows Riverkeeper to function at a capacity that greatly exceeds its budget, offers students a practice-based education, and provides a conduit for employee recruitment. Seggos himself came out of the Pace environmental law program, did some work with the Natural Resources Defense Council, and went on to work with Riverkeeper full time (Seggos, 2005).

Another important contributor to the capacity of the organization is its age. Riverkeeper has over 30 years of experience at environmental advocacy. Moreover, the Hudson Riverkeeper is the original Riverkeeper entity in the United States, but there are now 157 Riverkeepers, Baykeepers, and Soundkeepers throughout the world that interact in a loose confederation known as the Waterkeeper Alliance (Seggos, 2005). Thus the Riverkeeper name and network carries national and in some cases global recognition, which can be useful in outreach and awareness building. In comparison, the NCA has been in existence somewhat sporadically since just January 2003, does not have nonprofit status, and has no employees. The difference in capacity between the formal nonprofit and the informal alliance that they are attempting to spur is notable and may present challenges in cultivating local leadership of the coalition if not managed deliberately. Indeed, at the handful of meetings I attended in 2005, the sessions were always led by the City Council staff person, with heavy guidance from the Riverkeeper staff, and a lesser amount of input from representatives of local groups; local ownership is still being developed.

In contrast to the Bronx model, the Riverkeeper board of directors reads much more like a roster of high powered elites, most notably including founder Robert F. Kennedy Jr. The organization is popular with actors and other celebrities, and the board includes opera star Brenda Boozer and actress Lorraine Bracco (Riverkeeper, 2005c). Movie stars such as Harrison Ford, Glen Close, and Kevin Bacon have made appearances at Riverkeeper fundraising events (Friedman, 2002). These elite connections are used to raise the profile of the organization and to generate revenue through individual and foundation charitable giving. It is a deep-pockets and high-visibility approach to board organizing as opposed to a community-rooted approach, which makes sense given the regional scope of the group, but does not necessarily serve to help the coalition-building efforts of the NCA and its particular site. Of course, if the NCA were to formalize as a nonprofit, its board would look and behave very differently from that of Riverkeeper.

Scientific and Technical Information

The targeted use of scientific information in their legal strategies fits with Riverkeepers' approach as an outside, technical expert. While monitoring water pollution is one of their core, routine activities, more advanced technical information is only gathered and used with the help of consultants in service to a particular court case. Visual inspection is Riverkeeper's first approach to knowing whether a combined sewer overflow or an illegal discharge of one kind or

another is occurring. Using observations and maps, Riverkeeper can generally attribute the pollution to a particular land owner. They record the observations in a database that they monitor for trends over time and notify either the Dockmasters, DEC, or begin to build their own case (Seggos, 2005). In creating press releases or writing advocacy materials, Riverkeeper relies upon data from their own inspections as well as existing information. They noted that a number of technical studies and maps have been created through the Greenpoint-Williamsburg rezoning that are of use to the group (Forsyth, 2005). For information that will stand up credibly in court, Riverkeeper works with technical consultants to collect more advanced water quality and pollution data that reveals the history of contamination and gives clues about origins, at a cost of about \$1,000/sample. Due to this cost, Riverkeeper employees expressed an interest in having engineering or science clinics go out with the patrol boat to collect rigorous data, but there was no operational plan to develop that partnership (Seggos, 2005; Schmid, 2005). Information about the quality of the river, just like legal tools is an expert-managed resource that can be used in the Newtown campaign behalf of citizens. Seggos described the patrol boat, the Pace clinic, and their knowledge of environmental laws as three of the main assets that Riverkeeper can bring to bear on a problem (2005).

Riverkeeper and the NCA do not generally conduct monitoring for the purpose of cultivating local knowledge, nor do they engage in stewardship to build a citizen base. They do participate in the Hudson Basin River Watch, contributing monitoring information along with students and teachers, though they were not assured of the effectiveness or impact of that group (Seggos, 2005). It should be noted that other civil society groups in Greenpoint certainly see monitoring as one of their roles, and use scientific and technical information to support their aims. For example, the Newtown Creek Monitoring Committee is a group that has been in existence since 1997, with the express aim to monitor the sewage treatment plant throughout its use and upgrade. Additionally, technical arguments about public health impacts due to NIMBYs have been leveraged on countless campaigns in the neighborhood, from the effort to stop the location of another power plant to the effort to eliminate the sewage sludge storage tank on the Newtown (Hollowacz, 2005). Overall, Schmidt argued that science is more useful for communicating with stakeholders and the public in marginal situations where the impacts are unclear, but on the Newtown Creek, the environmental degradation is so visually obvious, that it is not difficult to make a claim that there is a problem. Notably, though, the group is not

engaging in the urban ecology technique of monitoring local environmental quality to demonstrate the exiting positive aspects of the creek, such as any aquatic life or biodiversity present. Instead, their focus is primarily in documenting damage and degradation to the system. Schmid felt that the real role science will play on the Newtown will be in creative water and soil remediation schemes that are still a ways off in the future, which similarly reveals an orientation towards expert and agency-driven use of science rather than cultivating local ecological literacy. This may simply be a response to the dire present conditions, but it also is an indicator of the strategic approach of the group.

Intergovernmental Support and Political Alliances

There were a number of government-initiated efforts to clean up portions of the Newtown Creek that predated Riverkeeper's involvement and the existence of the NCA. In the early 1990s, New York State declared that Newtown Creek was not meeting water quality standards for dissolved oxygen and fecal coliform levels under the Clean Water Act. Other noted problems included: nuisance odors, discoloration, sediment mounds, and floatables, including raw sewage (NCA, 2006). The state DEC also came to a consent decree agreement with Exxon Mobile to clean up its 17 million gallon underground, historic oil spill, though the slow response on the part of the firm is what later led Riverkeeper to initiate advocacy against the firm (Seggos, 2005). Similarly, in 1999, cleanup of another massively contaminated site—the former Phelps Dodge copper smelting plant—began. Also starting in 1997, the city made plans to spend billions of dollars in the technical upgrade of the Newtown Creek sewage treatment plant, with some small open space concessions on the waterfront—a process that was encouraged and monitored over time by the citizen group, Newtown Creek Monitoring Committee. It is clear that even prior to Riverkeeper's involvement, the focus of community and public engagement on the creek was on clean-up of the worst contaminated sites and better management of NIMBY facilities. However, each public agency was working in isolation on distinct sites and issues and no single group was considering the entire creek as a body, a trend that the NCA is trying to change (Schmid, 2005). Also, these efforts occurred without a great deal of public awareness at the citywide level, which is something that the Riverkeeper and the NCA set out to change through its media outreach, as will be discussed further in subsequent sections.

Because the entire 150 mile long Hudson River Estuary is under the purview of Riverkeeper, the group necessarily interacts with a number of government agencies, but their

relationship is more one of strategic cooperation or outside advocate than partnership-building. Generally, they engage in a number of letter writing campaigns, lobbying, and citizen pressure towards various political figures. However, Riverkeeper is critical of the New York State Department of Environmental Protection for their lax enforcement of federal policies (Seggos, 2005). Riverkeeper employees acknowledged the instrumental role that environmental agencies have in supporting their work. Specifically, they noted Environmental Protection Agency Region 2 as having a number of responsive line bureaucrats. EPA enforced the Rivers and Harbors act on a polluting concrete plant, which led to a guilty plea and an environmental fund being created, \$150,000 of which was directed to Riverkeeper for continuing its efforts on the Newtown (Riverkeeper, 2005a). Also, as with the Bronx case, National Parks Service Rivers and Trails was named as a critical ally in the development of the NCA. Finally, Riverkeeper routinely interacts with the New York Department of Environmental Conservation (DEC) and the Dockmasters, because these are the organizations whose mandate it is to respond to their patrol calls about combined sewer overflows and broken bulkheads, respectively (Forsyth, 2005). Clearly, there is a complex relationship between Riverkeeper and the environmental agencies upon which it depends but also of which it is critical.

For the most part, Riverkeeper acts autonomously through the citizen suit provisions of the Clean Water Act, with the target of their legal actions generally being individuals and private entities. They engage in routine patrols of the estuary and follows up with investigation and suits where applicable. The ability to initiate these suits has been threatened by George W. Bush administration initiatives such as the Clear Skies Act that relies on corporate self-reporting; elimination of citizen suits would utterly transform Riverkeeper's tactics (Forsyth, 2005). The current environmental legal framework and system of bureaucratic environmental management is what allows Riverkeeper to pursue the strategy that it uses, which offers support for political opportunity theories about the behavior of civil society under various types of political regimes. Kitschelt (1986) argues that under extremely closed regimes, civil society cannot function; indeed, in Riverkeeper's case, institutions like a free media, environmental laws, accountable agencies, and a fair judicial system are vital to their ability to act. Thus, even strategies that appear to be relatively "independent" or "outsider" exist in a complicated relationship with respect to the state.

Despite the group's successful legal action, a number of institutional barriers prevent more active and coordinated public agency involvement. Unlike the Bronx case, the Parks Department has not been heavily engaged in the NCA. The Parks Department has been brought into involvement through community and Economic Development Corporation-led efforts to create small, street end, pocket parks. But they are not an active advocate for the green revitalization Newtown. This may, in part, be due to the lack of existing parks holdings on the Newtown, with almost all of the waterfront currently under private ownership (Kronley, 2005). Additionally, because there is still a significant amount of active industry on the Newtown, it is a federally navigable waterway under the jurisdiction of the Coast Guard. Finally, Long Island City, Greenpoint-Williamsburg, West Maspeth, and North Brooklyn have all been designated Industrial Business Zones by the City (NYC Office of the Mayor, 2005). From the perspective of multiple public agencies, the Creek is first and foremost an industrial corridor. Beyond the involvement of the City Council Waterfronts Committee, there really is no public "champion" for the NCA.

Riverkeeper has taken a different tack from its normal strategies via a more explicit partnership with municipal government in its Newtown Creek campaign. The NCA was catalyzed on a boat tour with Riverkeeper employee Basil Seggos and then-City Council staffer Kate Schmid. While the pair was intending solely to investigate subsistence fishing locales on the East River, they serendipitously decided to take a tour down Newtown Creek, which inspired them to begin formal collaboration.³ Brooklyn-based City Councilmember David Yassky is the key municipal partner in this effort. Yassky has a track record of interest in and involvement with Brooklyn's waterfronts since his election in 2001 and is chair of the City Council Waterfronts Committee, which formed in January 2002 (Kronley, 2005). By all accounts of those I interviewed, Yassky should be considered a crucial catalyst and a policy entrepreneur on this case. He is a committed advocate for waterfront revitalization who has sought out a variety of citywide problems to take on, from the Newtown Creek, to the development of the Brooklyn Bridge park, to the cleanup of Jamaica Bay (Kronley, 2005). His staff praised his inventive use of both traditional legislative approaches as well as more innovative collaborative strategies like

³ Prior to that day, Riverkeeper had not considered the Newtown a part of their sphere of influence. The entire East River area had remained neglected and fallen between the cracks of the three active Riverkeepers in the New York City area: Hudson Riverkeeper, New York/New Jersey Baykeeper, and the Long Island Soundkeeper (Seggos 2005). This illustrates that just as jurisdictional overlap and gaps impact public policy and environmental management, so do formal jurisdictions and informal assumptions about "turf" shape civil society behavior.

incubating the NCA and engaging in active media outreach (Schmid, 2005). Schmid noted that City Councilmembers do not usually “create the fight”, but rather respond to pressing citizen concerns. In the case of the Newtown, however, Schmid noted that Yassky and his staff have undertaken very clear coalition-building. Subsequent to Yassky’s involvement, Queens-based City Councilmember Eric Gioia was brought on board to ensure representation on both sides of the river. Despite this, Brooklyn involvement in the NCA remains stronger. It is possible that this is attributable to the stronger tradition of activism in Greenpoint, or due to the greater physical connectedness of the Brooklyn neighborhoods to the waterfront. On the Queens side, railroads, the Long Island Expressway, and large cemeteries divide the neighborhoods from the Creek (Seggos, 2005). The partnership with the City Council goes beyond just political support to include shared resources; the current and former coordinator of the NCA have been Waterfronts Committee policy analysts (Kronley, 2005)

Riverkeeper has also worked with the District Attorney and others to coordinate efforts in prosecuting polluters on the creek. Riverkeeper has taken on a lawsuit against Exxon Mobile for a 17 million gallon underground oil spill (50% larger than the Exxon Valdez spill) that occurred over the course of the 1940s and 1950s due to underground leaks. Brooklyn Borough President Marty Markowitz, and Councilmembers Gioia and Yassky have joined the suit as co-plaintiffs (Seggos, 2005). Riverkeeper launched another 15-20 investigations and immediately issued another five notices of intent to sue to smaller polluters on the Creek. They coordinated cases with the DA and persuaded him to take up a number of suits on behalf of the city (Seggos, 2005). This division of labor has allowed for a greater number of cases to be tried and has helped to build public institutional awareness of the problems on the Newtown.

Popular Control and Community Alliances

Greenpoint-Williamsburg residents have a history of activism, particularly around the issues of NIMBY facilities siting and neighborhood health, so there is a high level of community capacity and strong social networks are established on issues that are very similar to those being taken up by the NCA. Environmental justice groups include El Puente, which was a youth-oriented group that emerged out of the work in an area magnet high school to do health monitoring and asthma mitigation in the 1990s, and the Watchperson Project, which monitors subsistence fishing practices (Corburn, 2002). Coalitions of Latinos (via the Young Lords and the Toxic Avengers) and Hasidic Jews (via the United Jewish Organization) formed in the 1990s

as the Community Alliance For the Environment around the common goal of fighting waste incinerators and other neighborhood NIMBYs (Gandy, 2002). Greenpoint Williamsburg Against the Power Plant (GWAPP) was a community based group that formed in 2000 to oppose the creation of a 500 megawatt power plant in the neighborhood. As of 1999, there was a primarily Polish-American Newtown Creek Canoe and Kayak Club, later called the Greenpoint Canoe and Kayak Club, though they did not appear to currently be involved with the NCA (Newman, 1999; Craft and Yankowitz, 2002). These are just a few examples of the vibrant civil society that has flourished around environmental concerns, types of groups that could potentially be mobilized over a new threat, and constituencies with whom NCA will need to cultivate a relationship if it is to be successful.

Though the neighborhood is rapidly gentrifying and its composition changing, activists still remain involved in efforts to promote community quality of life. Much of the current activism has been focused on the Greenpoint-Williamsburg rezoning and the fight for affordable housing and open space. Having stopped the plant that they initially opposed, GWAPP reorganized as Greenpoint Waterfront Association for Parks and Planning to be a broader umbrella for 40 different groups committed to planning and advocacy in the community. GWAPP's monthly meetings, special events, and email lists helped to author the Community 197-A plan, an alternative to the Greenpoint-Williamsburg rezoning advanced by the city (GWAPP, 2005). While it is a community hub unto itself, there are two representatives from GWAPP in the NCA. There may be a current opportunity for greater cooperation between the NCA and GWAPP. Conversely, it is possible that the NCA's support for ongoing industrial use and its focus on water quality do not resonate widely with community advocates who are generally more oppositional to all industrial uses (Parkhill, 2005; Craft, 2005). As the NCA grows, this industry / community tension may magnify. Additionally, if Ryan's (1999) paradox holds in this case, the prior history of community organizations may pose more challenges for current coalition building.

A handful of local groups currently send representatives to NCA meetings, but their level of engagement is rather low, as there is a need for tangible projects. An organizational diagram in Appendix 4 details the groups that are currently involved. Previously, there were a number of distinct groups with an interest in the Creek, including the Newtown Creek Monitoring Committee, GWAPP, and Stop the Tunnel, a group organized in Maspeth in opposition to the

Cross-Harbor Tunnel project, but they had not been brought together to focus on the Creek as a whole. These local groups continue to focus on different aspects of the creek, with some interested in on-water recreation, others supportive of developing new neighborhood open space, others devoted to industrial retention and development, and others interested in the quality of the water itself. NCA provides that forum and more generally allows for Brooklyn-based and Queens-based groups to come together (Schmid, 2005; Craft, 2005). The recreation community is primarily represented by the Long Island City Boathouse, an informal kayak club. With just 15 core members on the NCA, its role as a forum is more in its potential future than in its achievements to date.

Strategy Choice

Although the NCA is still fledgling, the members claim some ownership over the legal strategies that it seems Riverkeeper would have pursued anyway, which demonstrates that even legal approaches rooted in contestation can play a role in coalition building. These efforts have been able to demonstrate some immediate near-term wins, through the notices of intent to sue against local polluting firms that led to rapid cleanup. Much like the creation of small parks in the Bronx, these efforts have led to tangible, changes in the quality of the river that encourage interested individuals that more change is possible. However, the changes are not as visible as the revitalization of open space. Cultivating a “culture of stewardship” requires providing access to the waterfront, hosting events, and getting people to think differently about their waterfronts (Craft, 2005). In the longer term, the suit against Exxon Mobile gives citizens traction against a large corporation, where previously they were powerless. The traditional government-initiated strategies of cooperation such as public hearings as well as the completely grassroots approaches to community organizing had not succeeded in changing the current practices of private firms on the creek or in forcing Exxon Mobile to clean up more quickly. Bringing legal expertise to the situation succeeded in shifting the power dynamic. Finally, legal strategies can be a way of fostering public partnerships with previously unengaged public actors, such as the District Attorney. By advocating on behalf of constituents, Riverkeeper gained the trust of City Councilmembers and developed a more powerful alliance interested in the quality of the local urban environment. They also hope, in the future, to encourage the involvement of other regional environmental nonprofits like the Natural Resources Defense Council, which would be a continuation of the current focus on using outside, legal expertise (Seggos, 2005).

Having established a track record of successful litigation that *reacts* to pollution and injustice, the NCA has set sites on more *proactive* planning and development of an environmental ethic on the creek through stewardship and open space development, though it is struggling with this transition. To do so, the NCA applied for a New York State Brownfield Opportunity Area grant to do Creek-wide planning for brownfield redevelopment. The pursuit of the BOA grant represented a major commitment on the part of the NCA and an attempt to ramp up their presence in the area (Forsyth, 2005; Craft, 2005). Parkhill (2005) noted that the BOA would “give the Alliance a real purpose”. They hoped that the BOA would assist in providing core resources, formalizing the group, and providing a programmatic focus. Although they did not receive the grant, the group plans to reapply (Seggos, 2005). The group has also worked to promote the creation of point-access street end parks along the creek. In partnering with the East River Apprenticeship and the Long Island City Boathouse, they have encouraged citizen on-water access to the Creek. They have tried a diverse set of tactics but are still attempting to build momentum. Indeed, the leadership of the group holds the Bronx River Alliance as a model and has met with the former Working Group coordinator to share lessons-learned. They envision that, like the Bronx River Alliance, the NCA will eventually formalize as its own nonprofit to advocate for dredging, wetland restoration, brownfield remediation, job creation, and provision of access to the waterway (Seggos 2005, Kronley 2005).

Despite the marked past success of Riverkeeper’s strategies rooted in contestation, clearly something in the geography, ecology, and/or political context of Newtown Creek created the need for the shift towards collaboration. Strategies respond not only to internal organizational routines and values, but also to external political forces. The challenges of working in the complex political context of Brooklyn and Queens, as opposed to working with a few fisherman upstate, necessitated coalition building. Seggos (2005) noted that this campaign is Riverkeeper’s most significant in terms of severity of the problem and potential impact. Indeed, Riverkeeper staff member Gil Forsyth compared the scope of the project to their past suits against General Electric and in Fort Edwards, which were, according to the book by Riverkeeper founders, groundbreaking cases that defined the organization and set in motion a new era in environmental law (Forsyth, 2005; Cronin and Kennedy, 1997). And despite being young and small, the NCA provides more community involvement and input in the campaign than Riverkeeper is accustomed to having. The NCA is also influenced by the past successes of the Bronx River

Alliance, and members have noted that they are explicitly following the Bronx model. Kronley (2005) stated that the achievements on the Bronx River prove that creative revitalization of waterfronts is possible in New York City. Whether this sort of mimicry represents organizational learning, lack of strategic originality, or both, is worth considering.

While some members of the NCA espouse to be modeling their work after the Bronx River Alliance, their coalition is neither as broad nor as deep. This could be a function of a number of factors including: organization age, leadership, structure, and ideology. First, the Newtown Creek group is younger than the Bronx group, having been founded in 2002 and operating somewhat sporadically over the last four years. It may still require some time to cultivate stronger involvement. Second, it is possible that the leadership of the group is perceived as coming from the “outside”, since a large, regional nonprofit and a city council committee are truly at the helm of the effort. Also, they are making efforts to build a broad base, involvement is definitely stronger from the Brooklyn than the Queens side. And while activism in Greenpoint-Williamsburg is generally strong, perhaps the focus on the rezoning deprives the NCA of citizen advocates. Further, collaboration with government has been constrained largely to municipal elected officials and has failed to attract the attention of federal and state actors. Finally, whether one can adopt a coalition-building model with the moderate vision that the NCA has used is questionable—again emphasizing the importance of ideology. Perhaps part of the success of the Bronx River comes from its ability to tap into people’s basic needs for a clean environment and a safe place to recreate as well as their sense of fairness and justice. The NCA focuses on water quality and encouraging lower-impact industry, which is not the same as a 23-mile long belt of open space.

Outcomes

Most of the outcomes of the Newtown campaign have been cessation of polluting on targeted sites as a direct result of Riverkeeper’s legal advocacy strategy, while the outcomes of the NCA are largely process oriented or involve small shifts in public awareness. Evaluation of legal strategy is clear: one can count the number of investigations and intents to sue issued, the number of cases filed, the number of cases won, and the outcomes. After having initiated 15-20 investigations, Riverkeeper pursued five cases, the District Attorney pursued 6-7 cases in its first pass and later another 13 actions and arrests on the Newtown and the Gowanus, and EPA’s criminal division took on a few cases (Seggos, 2005). The initial Riverkeeper cases were against

local firms such as Quality Concrete, Alloco Recycling, and Marjam Supply Company (Riverkeeper, 2005). Notably, Riverkeeper has yet to lose a case on the Creek (Forsyth, 2005). No one has studied the aggregate impact of this reduction in point source pollution, but Forsyth (2005), who has been on a number of patrols on the Creek noted, “you no longer see a different colored dye in the water every day”. Though the smaller cases on the Creek are significant for achieving near-term wins, the massive Exxon Mobile suit is perhaps the largest achievement of the campaign (Parkhill, 2005; Seggos, 2005; Hollowacz, 2006). After Riverkeeper’s initial work, litigators on the suit now include: the private firm Giardi and Keese—which has won over \$1 billion in prior lawsuits against oil companies, Erin Brokovich—who won an enormous case against PG&E, and Stanley Alpert—who previously served as Assistant US Attorney and Chief of Environmental Litigation for New York’s Eastern District (Talbot, 2006). Just initiating a suit on this historic spill against one of the largest corporations in the world is a significant turning point for the community (Hollowacz, 2006). If they should win the case, residents that live above the underground spill would be compensated for damages and resources would be put into an environmental fund to be spent locally (Seggos, 2005).

Other physical or environmental changes to the Newtown besides pollution reduction include the creation of public access pocket parks on the waterfront, though the responsibility for the creation of these sites cannot wholly be claimed by the NCA. First, the Manhattan Avenue street end park has had the input of NCA members on design and providing kayak access, but the process has been shepherded by the and Department of City Planning and the Parks Department. Moreover, due to a lawsuit by an abutting property holder, the park has been stalled mid-construction (Seggos, 2005). The Economic Development Corporation has been involved in plans for promenades along the Newtown and East River at various locations, which were incorporated into the community plan proposed in the Greenpoint-Williamsburg rezoning, and involved the input of myriad community groups and residents (Greenpoint Williamsburg Waterfront Task Force, 2004). The DEP Newtown Creek Sewage Treatment Plant is constructing a public access walkway called the Naturewalk, though this too is an independent effort that has had some input of NCA members in terms of desired features and design. The Naturewalk is a required public amenity that is being creating in tandem with the upgrade to the facility (Hollowacz, 2006). As of the January 2006 meeting, the NCA is still interested in identifying new potential sites for street end parks and water access points. Members made a

photographic presentation of sites and intended to share the information with the Department of City Planning, though they lacked a formal plan for partnering with the parks department or other methods of implementation. The legal strategies of Riverkeeper have little to do with the development of open space, so making the NCA relevant and effective on the issue of open space will require some time, engagement of new public partners, and securing of new resources.

Riverkeeper and the City Council Waterfronts Committee have been responsible for raising public awareness of the Creek primarily through their creation of the NCA, their physical presence on the water, and through their intensive media campaign. As in the Bronx River case, interviewees considered the creation of the NCA to be an important outcome unto itself. All of the interviewees were acutely aware that the NCA represents just a framework upon which more can be built, and does not represent an end unto itself. Starting in 2002-2003, *the New York Times* began giving coverage to the Newtown Creek largely as a result of their public relations work. Interviewees speculated that perhaps by cleaning up the Creek to a certain degree, this has allowed public awareness to increase and more people to want to be on the river (Parkhill, 2005). Also, from a citywide perspective, there are only a few such intimate, neighborhood waterways, which makes the creek a valuable resource. There seems to be a broad-based resurgence in public interest in the waterfront (Parkhill, 2005; Craft, 2005). Boat captain John Lipscomb mused that Riverkeeper's patrols might even have preventative effects, noting:

We'll get a call from Riverdale because someone saw the boat there. They don't look down and see a person, they look and see an organization. There is a certain amount of awareness amongst polluters if there is someone out there watching....The boat symbolizes that somebody is watching them and you can't measure [the impacts of] that (Lipscomb, 2005).

The NCA sees its ability to apply pressure to NOAA, DEC, and DEP as another successful outcome of forming a coalition. Interviewees reported that DEP became markedly more responsive and involved in its public participation outreach on its Use and Standards Attainment project following the formation of the NCA (Forsyth 2005; Schmid 2005)

There are major qualitative differences between the organizational structure, ideologies, and resource bases of the Bronx River Working Group/Bronx River Alliance and the Newtown Creek Alliance. To evaluate the NCA as a full-fledged coalition—if that is truly what it hopes to become, one must allow it more time to develop and mature. If following the Bronx trajectory, it will need an inspiring vision for the reuse of the creek that can grow community support and

attract the attention of elected officials. The cultivation of greater community leadership is needed, despite the expertise of Riverkeeper and the City Council. It seems that—regardless of growing the level of community interest in the Creek—Riverkeeper’s legal strategy targeted at pollution cessation and citizen compensation for damages will continue. In terms of pursuing environmental justice, the value of legal tools as leveraging devices in under-resourced communities cannot be ignored. For, grassroots organizing alone is not always enough to shift the status quo, particularly in the face of wealthy multi-national corporations. In terms of coalition-building, whether stopping a sewer overflow will be able to catalyze the kind of public engagement, attract resources, and change the shape of the landscape as creating a pocket park was able to on the Bronx River will be an important lesson for urban ecology practitioners as they pick their approaches to problem solving.

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IV. GOWANUS CANAL: STEWARDSHIP AND COMMUNITY DEVELOPMENT THROUGH INDEPENDENT ACTION

While the prior cases each focused on a single organization and its network of allies, this case offers a sort of counterfactual: what happens to urban waterway revitalization efforts when a coalition fails to form? The two groups described in this case have fundamentally different relationships with the canal, and fundamentally different outlooks on how their organizations should function, though both are rooted in individuals' desires to improve the quality of life of the local environment and both have such intertwined histories that it is necessary to examine them together. The Gowanus Canal Community Development Corporation has been a presence in the Carroll Gardens community for over 30 years, and came into existence at a time when the quality of the canal was at its lowest. The GCCDC and its supporters saw the canal as a nuisance to be dealt with; an unpleasant place to avoid in its current state and hopefully someday redevelop—potentially in the image of the San Antonio Riverwalk. Having emerged in the last five years, the Dredgers are experiencing the canal after the repair of the flushing tunnel that significantly improved its water quality. Rather than advocate for long term land use change or engage in deals with the private sector as the GCCDC had done, the Dredgers saw an opportunity in getting people out on the water in its current state. Many of the members celebrate the current liminal state of the river as a physical environment to experience—with some industry, some decay, and some nature beginning to reemerge.

* * *

Though the redevelopment of the Gowanus Canal has been in the public consciousness to some extent for 35 years, a single, coherent coalition of citizens or groups interested in revitalization has not emerged. A number of different civil society organizations including the Gowanus Dredgers Canoe Club (“the Dredgers”) and the Gowanus Canal Community Development Corporation (GCCDC), as well as private development interests, and various public officials have differing visions of what the future of the canal should be. Some hope to revive New York City’s water-dependent industry; others see the waterway as a natural resource and recreation site; and still other see it as a valuable backdrop to new real estate development. Groups work to achieve these visions via strategies ranging from volunteer boating and clean-up, to lobbying elected officials, to encouraging the private sector to green their developments. Whether critiqued as fragmentation or simply considered a preference for independent action,

this case illustrates that a waterway, neighborhood, or issue can have a fertile civil society sector where collaboration is not the norm. The rapidly gentrifying character and burgeoning real estate market of the neighborhoods surrounding the canal may eventually force civil society groups into strategic alliances either with each other or the private sector, or they may risk not having their visions incorporated at all.

The Dredgers are a water recreation and stewardship group founded in 1999 and formalized in 2003 that respond to a waterway planning challenge by using the resource as it is today and changing public opinion about the resource without requiring a great deal of financial support or organizational bureaucracy. Both the explicit organizational philosophy and the current level of capacity of the all-volunteer group prevent it from becoming the leader of a coalition and advocating for broader change in land use. Their intent is to affect the hearts and minds of individual people and to persuade them to develop an interest in stewardship by exposing them in meaningful ways to the resource. In effect, the Dredgers are building a constituency of users and stewards for the canal. The group can thrive under the current uncertain circumstances related to the canal, because they can use it as it is—canoeing and kayaking under the current conditions, regardless of what future development holds. Whether the Dredgers' view of the canal as a natural resource will be incorporated into its future reuse, and whether stewardship can play a lasting role in planning are open questions.

The GCCDC has been involved in community development in the Carroll Gardens neighborhood surrounding the canal since 1978 and has been a vocal advocate for infrastructure that improved the health of the canal, such as the reactivation of the flushing tunnel and the creation of the Red Hook Sewage Treatment Plant. Firmly rooted in the Italian-American community that lived in the neighborhood throughout the decades of polluting industry, the GCCDC has a vision of productive reuse of the canal that is inspired by the San Antonio Riverwalk. Their strategic approach in the neighborhood has been primarily one of housing development and small business support. At times, this vision and approach has come into conflict with that of open space advocates and others who fear over-development of the Canal. In the last year, the group has demonstrated some interest in collaborating with other groups that focus more explicitly on environmental concerns, though it remains to be seen whether this group that has operated independently for so long will be able to successfully foster collaboration.



Figure 3 clockwise from top left: the Gowanus Expressway; uses along the canal; street end park (photos by author); Gowanus Dredgers in action (courtesy of Gowanus Dredgers www.gowanuscanal.org)

Neighborhood Context: Geography, Economic Conditions, and Demographics

Brooklyn Community Board 6 includes the neighborhoods of Cobble Hill, Carroll Gardens, Red Hook, and Gowanus that surround the Gowanus Canal; overall this area is wealthier and less diverse than the other two case study areas. The average household size in 2000 was 2.21 persons and 27.1% of housing units were owner-occupied. Also, of the 104,054 residents in 2000, just 14.4% received any income assistance including Medicaid (DCP, 2004c). As of the 2000 census, the district was 55% white non-Hispanic, 13.5% African American, and 23.4% Hispanic/Latino. That diversity is not distributed evenly throughout the different neighborhoods. West of the canal is the changing neighborhood of Carroll Gardens. Historically, this was a primarily Italian American neighborhood, though there are a number of newcomers to the area. It has been through a gradual but accelerating process of gentrification, particularly

along the Smith Street corridor (now one of Brooklyn's most upscale restaurant districts) and also along Court Street. East of the canal, Park Slope is primarily more affluent, white, a mix of gay, lesbian, and straight households, and is known for being family-friendly. The area immediately around the Gowanus, in Red Hook, and in a number of housing projects including the Gowanus Houses in Boerum Hill and the Red Hook houses in Red Hook became increasingly more African American and Latino populated in the 1950s, 1960s and 1970s (Perez, 2002).

But that Gowanus neighborhood's low income and working residents seem to be disappearing, squeezed out by pressures of gentrification. As early as 1998, real estate broker Angela Vita was quoted in the *New York Times* as saying that property values had risen by more than 40 percent from 1994-1998, with average two family homes selling for \$350,000 (Lewine, 1998). By 2002, a commercial property owner on the canal told the *New York Sun* that someone rang his doorbell seven times per week to ask if any apartments were available in the building (Sweeney, 2002). Real estate agent Jean Austin, who sold homes in Gowanus since 1984, reported to the *Daily News* selling a home for a record-breaking price a block away from the canal in 2002, noting that she expects a boom by 2007-2012 (Perez, 2002). By 2003, a group of artists bought a factory near the canal on Union Street for \$3.1 million and converted it into 16 studios; and there are several other studios in the area as well, with 115 artists participating in the 2005 Gowanus Artists Studio Tour (Berger, 2005). The wealth and gentrification in the area puts more pressure on the canal, as it is situated between potentially valuable waterfront real estate, as opposed to in the Newtown and Bronx cases where the waterway is still largely seen as an area to avoid. It seems altogether fitting that the canal that was created to help support the growth of Brooklyn during the building boom of the 1860s, by bringing building supplies of brownstone and lumber into the heart of Brooklyn (Mahler, 2001), would once again be a compelling agent of real estate development in the 2000--this time as a location-based positional good and a natural resource.

Geographic context is critical to understanding the relationship between the canal and the neighborhoods, which motivates much of the civil society action. By land area, the Community Board is 40% residential, 23.7% transportation/utility related, 14.6% industrial, and just 2.4% vacant (DCP 2004c). The land use map and aerial photo (see Appendix 2) show the mix of industrial and residential uses in close proximity with a narrow, roughly two block industrial

corridor. The canal truly penetrates into the heart of several neighborhoods, rather than acting like a border as the Newtown Creek does or an inaccessible industrial zone like the Bronx River. The infrared view also shows the lack of significant open space in the area, except in Red Hook; the parks and playing fields in Red Hook are cut off from the other neighborhoods by the Brooklyn Queens Expressway, which is elevated here as the Gowanus Expressway. Although the neighborhood of Carroll Gardens is known for its large trees and front yards—which are rare in Brooklyn—there has been demand for more open space and waterfront access in recent years.

The canal's close proximity to residential areas ensures that its pollution and contamination has been a historic and current nuisance to the community. An article in the *Village Voice* offered a concise history of uses and abuses on the canal,

Dug out of a creek in 1867, the Gowanus was America's busiest canal by the 1880s, with refineries, coal and coke plants, chemical firms, and machine shops lining its banks. The canal degenerated into an industrial sewer, so polluted and rank that mothers reportedly brought their asthmatic children to breathe its pungent air in hopes of a cure. Today the 1.8 mile canal—100 feet wide, 12 feet at its deepest—remains tainted with heavy metals, organic materials, hydrocarbons that the Army Corps says may be low level carcinogens, and raw sewage, which runs into the canal during heavy rainfalls. The degradation is obvious: water tests have found cholera, typhus, and live hepatitis virus. Medical waste has been dumped there, and the bodies of suicides and fleeing suspects have been fished out of its waters....swirls of rainbow-colored oil and metallic paint make the canal look like it could be set aflame. From its head to its mouth at Gowanus Bay, the canal emits a wretched odor, the putrid essence of oil, sewage, and funk (Lobbia, 1996, p. 10).

The canal reached this state in part because of its construction as dead end waterway, whereby water does not have a natural tidal flow and pollutants get trapped in the stagnant waters. The Gowanus flushing tunnel pump house, activated in 1911, is located at the canal end at Butler Street and powers a tunnel that goes underground to the Buttermilk Channel in the East River to circulate water and keep the canal relatively fresh. However, the pump was broken from 1962 to 1999, exacerbating the noxious conditions for decades (Cardwell, 2003; Scotto, 2005). Although it was built to be 20 feet deep, in some places it is now as shallow as five feet. This is due to the accumulation of sediment that results from the following process described by John Muir of the Brooklyn Center for the Urban Environment (BCUE): a heavy rainstorm leads to a combined sewer overflow event, which floods the canal with human waste, which creates an algal bloom, which dies and settles to the bottom once the extra food source is consumed (Lewine, 1999). The canal is not only an ecological disaster, but has entered local lore as a mafia dumping-

ground. Quoted in the *Daily News*, Detective Patrick Talbot of the 76th Precinct reported that they see about an average of “two floaters a year” though mostly they are drunks who fall in and drown on their own (Lewine 1999). The legend of the Gowanus is colorfully described by Brooklyn-based author Jonathan Lethem (2000) in his novel *Motherless Brooklyn*, stating that the Gowanus is “the only body of water in the world...that was 90% guns” (p. 56.)

In terms of current conditions, there are only ten remaining active industrial firms on the canal, most of which are located in the mouth of the Gowanus Bay in Red Hook. Only one firm—Bayside Fuel Oil—remains active closer to the Carroll Gardens neighborhood and sends barges all the way to the end of the canal (Mahler, 2001; Kennedy, 1996). Barge use has drastically declined as a function of the lack of industry. In 1906, 26,000 passages were made on the canal, whereas currently only about one or two barges per week pass through the canal (Bahrampour, 2000; Hanlon, 2005). While immediate canal-side industrial use has rapidly declined, the South Brooklyn Industrial Development Corporation noted in 2002 that there are 450 manufacturing and light industrial businesses, from woodworkers to contractors, in the Gowanus/Red Hook area that employ thousands of local residents (Perez, 2002). The environmental conditions, while perhaps not as dire as the Newtown Creek, are not supportive of much biotic life. As of 1997, the BCUE measured the dissolved oxygen content at 2.8ppm (while 5 ppm are needed to support fish life) and found that light could penetrate only two feet (while at least six feet of penetration are needed to support much plant life) (Muir, 1997). The community effort to reactivate the flushing tunnel was long-term and sustained and led to a \$10 million effort by the Department of Environmental Protection (Shelby, 2002). The success in getting it fixed has led to improved—albeit still polluted—conditions that promote greater engagement with the waterway. Combined sewer overflows and pollutants from the few remaining firms continue to be a problem and a target of civil society activism in different forms on the part of the Dredgers and the GCCDC.

Although the Gowanus has been an environmental nuisance to the surrounding neighborhoods essentially since its creation, it took major changes in the economy to occur before clean up of the canal could become a viable option. Clearly, with the decline of industry have come more opportunities for envisioning creative reuse; the Gowanus does have light industrial uses surrounding it, but it is in no way the sort of working waterfront that the Newtown Creek currently is. Demographic changes also shift power dynamics between citizens, civil

society groups, public agencies, and elected officials. Some have argued that the prior community activism fell on deaf ears precisely because of the lack of financial resources or political agency of residents, while the new infusion of wealth and developer interest forces politicians to pay greater attention (Mahler, 2001). I believe that the picture is more complicated than this, as many of the newcomers—such as artists—are interested in preserving low rents, which may in part be due to the negative externalities of the canal. Furthermore, long time residents themselves are divided, with some supportive of industrial retention and others more interested in developing neighborhood amenities and open space. The real effect of gentrification pressures and the skyrocketing real estate market appears to be an increase in the *stakes* over what the future of the canal will hold, but no greater or less effectiveness of divisiveness amongst the *stakeholders*.

Organizational Resources

The organizational model of the Dredgers is an example of what can be done with very few monetary resources. The Dredgers were founded in 1999 and formalized as a 501(c)3 non-profit in 2003. They are an all volunteer organization that operates with zero staff. Their budget is under \$10,000 (\$9,500 in revenues in 2003 and \$3,500 in revenues in 2002) (IRS, 2002b; IRS, 2003c). The group seems to embrace a sort of anti-organizational ethos. They explicitly put 99.9% of all of their resources into direct programs and do not believe in hiring staff that must then fundraise to pay for their own time, beginning a cycle of formalization and growth (Foote, 2005). This group is unique in that it has a broad volunteer base, is technologically savvy, has a well developed web presence, and is supported by a number of middle to upper income young professionals. They are not reliant on government or foundation funding, and are funded entirely through donations and membership fees. This gives them great independence and they are responsive directly to their members rather than to any larger organization or entity—with greater downward accountability than upward accountability. To become an official member, there are various categories of fees that one can donate. Their website notes: "Membership is voluntary, and you do NOT need to be a member to participate in any of our programs, or to volunteer to help. Members receive no exclusive benefits, other than the privilege of voting in our elections. It is just a way of showing your support for the Gowanus Dredgers Canoe Club and its objectives" (Dredgers, 2005). The organization has 15 core volunteers who are the most

actively involved—though this is not an official designation, 50 active volunteers, and 550 less active members (Foote, 2005).

Although Foote is the founder of the organization, he is not the director, which was a deliberate choice by Foote to try and circumvent the challenges faced by community groups that depend solely on a charismatic leader. He is responsible for the Dredgers' website (which is hosted by the Waterfront Museum, another local nonprofit) and is currently the treasurer of the group. He hopes to share the leadership amongst the group, and does not wish to remain a figurehead as he believes that leads to unsustainable organizations. Today, leadership is shared between three rotating captains—a term that was chosen both as a nautical reference and in the spirit of empowering the leadership. Current captains have diverse backgrounds of: boating enthusiast, educational nonprofit employee, and artist. Many of the active members and leaders of the group are relative newcomers to Brooklyn. They are waterfront activists, but not necessarily long-term, entrenched community leaders. The organization also has a board of directors of seven, including current captains Ellie Hanlon and Ray Howell (Foote 2005).

The GCCDC, while small, has more formal resources than the Dredgers and has been in existence for almost 30 years. The GCCDC's operating budget in 2003 was \$330,000, which was garnered from government grants at the state and city level, individual donations, and a fundraising dinner that the group holds that brings in \$30,000-\$50,000 annually (IRS, 2003b; Chardavoyne, 2005). Foote noted that groups like the GCCDC must put a significant portion of their resources into sustaining themselves and was critical of the fact that this well funded group was not as involved in on-water programming or capital improvements as they could be, given their level of resources. Though they do accept donations as a nonprofit, they are not a membership organization; rather they are a CDC focused on neighborhood economic development. Thus, they do not have the degree of downward accountability via membership that the Dredgers have, but they do have a greater degree of upward accountability to funders, as they manage a large pool of grants. The organization currently employs two staff full time—Executive Director Tom Chardavoyne and one other employee who focuses on housing development—and one part time bookkeeper. Their board consists of 12 people, which includes businesspeople and other members of the community (GCCDC, 2002; Scotto, 2005). Another important factor that affects the capacity of the group is the age of the organization and its deep

embeddedness within the Italian American community of Carroll Gardens, which will be discussed in subsequent sections.

As compared to the Bronx case and the Newtown case, both the organizations discussed here have fewer formal resources. There is no public-private partnership akin to that with the Parks Department in the Bronx and there is no regional environmental advocacy group intimately involved in the cause—so available budgets and human resources are smaller. These local, community-based, albeit 501c(3), but still relatively informal groups are operating at a much smaller scale that is more akin to that of the individual Greenpoint and Maspeth groups involved in the Newtown Creek Alliance or the individual members of the Bronx River Working Group. However, one should not discount the importance of resources that may be initially less visible, including: broad membership on the part of the Dredgers and long term embeddedness with one part of the community on the part of the GCCDC. Contrasting organizational resources between the two reveals that these they have very different capacities to bring to bear in the revitalization of the canal. The Dredgers are a young group with no staff, a miniscule budget, a broad membership base, and an even broader pool of program participants. The GCCDC is almost 30 years old, employs two staff, has zero members, and manages thousands of dollars in grant money. Applying Hannan and Freeman's (1977) logic, these groups should not be seen as being in competition with each other precisely because of their dissimilarity in structure and scale. In theory, the organizations have complimentary resources basis and different types of accountability that—if brought together in coalition—could achieve shared goals for the canal. However, both groups have very different ideologies, environmental values, and visions of what the future of the canal should be that seem to currently trump any potential benefits to formal collaboration.

Environmental values and organizational philosophy

The Dredgers believe that access to the natural resource of the estuary is a fundamental right of citizens. Their environmental values are not just rights-based, but also pragmatic. With little remaining land anywhere in New York City, the waterways are the last great remaining open space in the city (Foote, 2005; Craft, 2005). Applying the philosophy that many urban ecology groups adopt, they work to reengage citizens with recreation opportunities that are in their own neighborhoods. In doing so, they hope to lure members, particularly youth and young adults, into becoming the next generation of environmental stewards. They want to use getting

out on the water in a boat as a means to cultivate an environmental ethic and an urban environmental constituency. They view their 550 members and 3,000 participant boaters in the last year as a mass of citizens that are interested in and engaged with the estuary. Rather than participating in direct lobbying or political advocacy activities, the Dredgers state that they want to be *the reason why* a greater portion of federal and state funds are appropriated to New York City (Foote, 2005; Hanlon, 2005). This is a long term strategy of citizen base building rather than an organizational coalition, but it can still be considered a form of collective action through stewardship.

The Dredgers value being on the water more than planning for revitalization of the waterfront. In fact, they go so far as to say that the group has no formal opinion about land use and redevelopment--in terms of whether the canal should remain industrial or be redeveloped more for residential/commercial use. Individual members have their own opinions about land use that encompass the complex range of considerations for the canal, including the need for affordable housing in South Brooklyn, the desire to support manufacturing in New York City, and the desire for public access to the water—but the group has no formal position. In some ways, this focus on water quality and a lack of a sweeping environmental justice vision for the area are similar to the attitudes adopted by the Newtown Creek Alliance, but this position comes from very different origins. The Newtown Creek case is informed first and foremost by the environmental orientation of Riverkeeper and their commitment to pollution cessation; the Dredgers are first and foremost a recreation group. It is possible that this formally a-political stance on land use is a strategic choice on the part of the group to remain under the radar. Or it may be due to their framing of what the issue of key concern is on the Gowanus is. Or it may be influenced by the values of Foote, who used to work with the GCCDC. When he suggested that the GCCDC should be doing more direct work on the water, as opposed to solely planning for the redevelopment of the waterfront, he was ostracized. The GCCDC believes that the waterway is too dangerous and contaminated to encourage recreation on it and they prefer to engage in planning for housing and commercial reuse (Scotto, 2005). Foote splintered off and formed his own group to focus more on direct action through recreation, stewardship, and education. His own background as an architect/planner and his current position with the New York City Planning Department has led him to see the Dredgers' advocating for land use changes as something of a conflict of interest that he wishes to avoid.

In focusing on the water, they hope to see an improvement in water quality, a reduction of combined sewer overflows, and further dredging and restoration of the canal. They note that this will be achieved through a series of local and global actions, from individuals following their advice "don't flush when it rains" to the federal government increasing its financial commitment to the area (Foote, 2005; Hanlon, 2005; Coveleski, 2005). According to their website, their formal mission is as follows:

Our mission is to assemble and educate a diverse group of individuals, businesses and organizations to improve the Gowanus waterfront in Brooklyn and foster awareness of issues affecting New York- New Jersey harbor. The Gowanus Dredgers Canoe Club intends to contribute to transforming a dilapidated, historically significant estuary into a self-sustaining, environmentally friendly and healthy waterfront to be enjoyed and treasured by current and future generations. By encouraging waterfront activity and stewardship of the waterway, we reconnect the community with their shoreline. Renewing this relationship strengthens the desire for remediation of our harbor (Gowanus Dredgers, 2006).

This mission reveals the Dredgers' value for independent action as a stepping stone to more sweeping, neighborhood-scale change. The emphasis on autonomy and independent action may help to explain why the Dredgers are not more actively involved in coalition formation. However, they are not operating a vacuum of being solely a recreation group; they see their impacts as larger than that. But they clearly stop short of any overt advocacy or adversarial strategies. As noted previously, one must be wary when assessing the internalized values of a group via a mission statement, but these beliefs were echoed in all of the interviews that I conducted. Furthermore, the Dredger Oath—also listed on their website—is revealing of the values of the group as well:

We will never bring disgrace to this, our estuary, by any act of dishonesty or cowardice, nor ever our suffering comrade in the ranks.

We will fight for the ideals and sacred things of the waterfront, both alone and with many.

We will revere and obey the waterfront's laws and do our best to include a like respect and reverence in those above us who are prone to annul or set them at naught.

We will strive unceasingly to quicken the public's sense of civic duty.

Thus, in all these ways, we will transmit this estuary, not only less, but greater, better and more beautiful than it was transmitted to us (Gowanus Dredgers, 2006).

The environmental values of the group closely resemble those of western and rural recreation groups; as users of a resource they see themselves as the primary group fit to protect that resource. They are also similar to the values espoused by Rocking the Boat—a relative newcomer to the Bronx River Alliance network, and the Long Island City Boathouse—which was incubated by the Dredgers but operates out of Queens. While these groups do not shy away from the fun of boating, they argue that that enjoyment can be a mechanism for cultivating present and future generations of stewards.

The Dredgers have a number of organizational beliefs that are distinct from their environmental values that frame and shape their strategies in important ways. First, they explicitly do not want to hire staff to do fundraising to pay for staff, in a self-perpetuating cycle of growth. By not having to pay for full time staff, the organization can devote all of its resources directly to programming. Thus they view themselves as something of a temporary, voluntary association without more overt ambitions to grow. There is, however, recognition that as the group naturally grows in size through outreach and by attracting more members, there may be a logistical need for staff. Indeed, the group has used paid educational consultants in the past. The group is currently considering strategic visioning on how to handle the pressure of growth (Hanlon, 2005). Second, Foote (2005) said “if we get put out of business, that's a good thing, because it means either the city or another organization has taken up the cause.” The reason that they do what they do is because there is a gap in what is being provided publicly and by existing civil society groups. They believe that if government provides a service, an organization should not try to duplicate it. Right now, they claim the Parks Department is not doing a good job of retaining the interest of non-athletes in the urban environment. They argue that canoeing and kayaking are broadly accessible and can help re-engage more people with nature. However, they note that they would be delighted if parks were to provide boating equipment, training, and staffing, but that is not likely to happen any time soon, so that remains their role (Foote, 2005). Third, the Dredgers believe that the city is “basically doing a good job” in terms of improving water quality, decreasing combined sewer overflows, and enforcing pollution laws. They argue that the city deserves more resources from the state and federal government, but they are not the ones who are going to advocate for it directly. Rather, they are educating citizens and exposing them to the natural resources so that there will be a reason for

government to provide money in the future. Fourth, the group has an espoused focus on youth, who they see as future environmental citizens and advocates. They reach out to youth through school-based and independent education and recreation opportunities. While targeting youth in their programs, 70-80% of their membership is ages 20-35; it appears that despite an espoused focus on youth, they have not developed a broad youth membership base. The Dredgers believe that it is important to engage these young adults as a constituency for open space in the present day (Hanlon, 2005; Coveleski, 2005; Foote, 2005). All of these values reveal that the Dredgers may have more in common with a community garden than with a community development corporation. They are informal, member-focused, with programs oriented to the public at large, and caring for a portion of the urban environment that is oft-neglected by other groups and the public sector. While they could be valuable members of a coalition, should one form—they are neither in need of a coalition in order to pursue their goals, nor do they have the capacity to lead the formation of one.

To understand the GCCDC's goals for the canal, one must understand their goals for the broader South Brooklyn community, both at the time of their founding and evolving to the present day. The group was founded in a wave of community activism on the part of Italian American residents who had lived in South Brooklyn since the heyday of the shipping industry, starting in the early 20th century (Brooklyn Public Library, 2005). These same residents were interested in maintaining their presence in the community, preventing white flight, and stabilizing locally owned business during the demographic transition of the 1960s and economic decline of the 1970s (Scotto, 2005). Over their decades of involvement, the GCCDC primarily focused on affordable housing development targeted at retaining elderly Italian Americans in the community and small business support primarily along the Court Street corridor. Overall, when asked about successful outcomes of the group, Chardavoyne noted that many residents of the community, both business owners and homeowners, were able to make profits and realize value from their investments in the neighborhood with the help of the GCCDC (Chardavoyne, 2005). GCCDC's mission is as follows on their website:

The Gowanus Canal Community Development Corporation (GCCDC) is a not-for-profit neighborhood preservation company that was formed to revitalize the communities of South Brooklyn, with particular emphasis on the geographic area affected by the Gowanus Canal. GCCDC's neighborhood revitalization efforts are focused in the areas of housing, the environment, and commercial and social development (GCCDC, 2002).

Clearly, the scope of the organization is broader than just the Gowanus Canal and involves focusing on a particular segment of the community. They see themselves as responding to the economic challenges facing several south Brooklyn neighborhoods in the face of dramatic economic change. Indeed, GCCDC founder Buddy Scotto recounted growing up in the neighborhood where everyone was the child of a longshoreman or a stevedore, and everyone's lives were intimately tied to the commerce of Brooklyn's working waterfront. When industry began to leave, and the Brooklyn Queens Expressway and the Gowanus Expressway were built, neighborhoods like Red Hook and even the brownstone-laden Carroll Gardens went into a decline. Along with several other groups also founded by Scotto (including the Carroll Gardens Neighborhood Association, the Independent Neighborhood Democrats, and the South Brooklyn Community Corporation), GCCDC was a home-grown effort to respond to poverty and instability (Scotto, 2005). Thus, many of their closest partners and allies are local residents and small businesses, rather than civil society groups focused specifically on the environment.

Their attention to the Gowanus Canal comes from the vision of Scotto, who believes that the canal could function in a way similar to the San Antonio Riverwalk, with restaurants, a pedestrian promenade, open space, and housing development. Having earned the local monikers "Lavender Lake" due to the sheen of oil pollution and "Perfume Creek" due to the sulfurous smell of sewage, the Gowanus was both visually polluted as well as terrible smelling—particularly in the summer and during combined sewer overflow events. For the long-time residents of the neighborhood, the canal was simply a polluted and unpleasant area to avoid. It is no surprise, therefore, that the first involvement of the GCCDC was not in on-water recreation or environmental stewardship, but in advocating for public officials to take ownership over the waterway and make infrastructure investments, as will be discussed in the section on strategy. Quoted in the *Daily News*, Scotto outlines his approach, "There were times I felt this was never going to happen. First there was the fight for the sewer-treatment plant, then the tunnel. Now we have to convince the city it's time to dredge the canal and get started on the bulkheads" (Farrell, 1999). While able to see the Canal as a site with potential, many of the board members and supporters of the GCCDC still do not consider canoeing on the Canal to be safe, let alone enjoyable (Foote, 2005; Scotto, 2005). Furthermore, given their routinized experience in working with small businesses and housing developers over the last 30 years, it is sensible that

the organization has chosen to partner with private developers and focus on canal-side land use rather than on-water access or solely open space and ecosystem restoration.

As their planning and visioning process for the canal has proceeded, the GCCDC has come to embrace some more explicitly environmental values and has tried to mediate its visions of the future with concessions to industry, all coupled with a pragmatic desire for economic development. First, Chardavoyne said that they would like to see New York City's first dedicated "green zone" that would offer public subsidies and technical support to develop environmentally friendly buildings and retrofit old ones. Second, they are in support of a community recreation center and/or museum located along the canal that would perhaps provide office space to community groups involved on the canal. Most significantly, they spearheaded a multi-year community visioning process to create the Gowanus Canal Comprehensive Community Plan that describes new points of open space, new residential areas, a pedestrian promenade, some industrial retention, and the aforementioned green zone. The plan envisions "two districts": a southern district that largely coincides with an existing Empire Zone and continues to encourage light industrial, commercial, and big box retail uses and a north district that encourages mixed use housing, commercial, and retail that fits with the existing fabric of the neighborhood (GCCDC, 2005). Even with these concessions to industry, a number of groups have criticized the plan for potential gentrification effects. Some neighborhood citizens have resisted prior attempts to bring in big box retail and these same groups might again resist if any of the development ideas in the plan moved into implementation. By having gone through this planning process, GCCDC's vision of the canal has become even more crystallized at the scale of the entire canal, in the form of the two districts, and even down to the site-specific scale. While they attempted to gather community input into the plan, the document was by no means the product of a formal coalition. As such, the plan may become more of a divisive wedge unless it can be used as a starting point for conversation and debate.

Scientific and Technical Information

The Dredgers, rather than focusing on technical information or hard "science", use their understanding of the challenges that the local ecosystem is facing and try to convey that knowledge through fun and play. Foote gave the example that they understand the connections between individual lifestyle choices and the prevalence of combined sewer overflows on the canal, but rather than making a pamphlet about it, he wanted to put the phrase "Don't flush when

it rains” on the back of the Dredgers tee shirt, though the captains did not agree. They see their role as an educational group to be primarily one of exposing people directly to the challenges of the urban environment. As such, the group conducts some informal, visual inspections of the quality of the canal, and they note that groups like Urban Divers are more in the business of collecting data. So while the Dredgers may not measure dissolved oxygen, they can attest to the return of jellyfish or the number of oysters that survived their attempts at seeding (Foote, 2005; Hanlon, 2005). Additionally, the individual captains and tour leaders do have opportunities to bring their own understanding and perspective on the canal to participants. Dredger Alex Coveleski noted that she takes the chance to educate canoeists not only about the combined sewer system, but to ask them if they know who their local elected officials are, and to describe some of the greatest challenges facing the waterfront such as waste transfer and sewage treatment. This information is not centralized or scripted, it is up to each individual Dredger to offer his or her perspective, though of course the group takes no “official stance” on waterfront land uses. Coveleski’s main aim is to spur interest and encourage discussion, leading to a greater awareness of the canal, which is consistent with the aims of the Dredgers as a whole. Overall, they are attempting to build a base of local knowledge about the neighborhoods and the waterway that is an important complement to scientific and expert-led knowledge.

In contrast to the Dredgers, the GCCDC has been eager to get technical experts involved on behalf of the canal. In the past, Scotto partnered with scientists from Brooklyn Technical College to do water quality monitoring. More recently, a representative from Brookhaven National Laboratories has also become interested in the project as Scotto and the GCCDC search for clever technical solutions that might help with the clean up of the canal. Other scientists from Stevens Technical Institute and Rutgers University have also been brought in to discuss treatment of contaminated soils. Finally, they have engaged architecture and design students from Columbia University in 2004 to present their own visions for adaptive reuse of the canal, which included everything from a vertical hydroponic farm to a floating promenade, although there are no plans to implement these designs (Scotto, 2005; Shelby, 2004). They are supportive of the engagement of the COE, which did a feasibility study on the repair of the bulkheads and the potential for ecosystem restoration while maintaining a navigable waterway. The seeking out of expert allies and public agency support for science is consistent with the GCCDC’s approach to advocating for infrastructure and amenities on behalf of neighborhood residents. Following

on the study by the COE, scientific information may begin to play a greater role in remediation efforts, so engaging with this sector is clearly critical.

Popular control and community alliances

The organizational partners of the Dredgers consist primarily of other groups that are committed to accessing, stewarding, and providing education on the estuary. For example, they have cooperated with the Urban Divers, the American Littoral Society, and Shorewalkers, however these relationships are largely event-specific and not sustained partnership-building activities. They have longer-term ties with a few area schoolteachers who participate in programs and the Waterfront Museum, which hosts their website. Notably, they helped to incubate and create the Long Island City Boathouse, which operates out of Queens, acting as their fiscal conduit. Foote expressed a potential interest in working cooperatively with stewardship groups all along the Brooklyn waterfront, sharing access points and equipment, though this vision is far from realization (Foote, 2005). The Dredgers are operating in a confederation, rather than a coalition model. It seems that the Dredgers prefer to function as an autonomous group with a greater emphasis on building its member and participant network. Whether that network could be drawn into involvement in issues beyond recreation and stewardship and into a more political or policy-oriented sphere remains to be seen. It is possible that a future crisis could trigger that activism. But for the meantime, the group is fairly apolitical and is not using its membership base as a source of direct influence.

The Dredgers' strategies and targets are distinct from those of other groups working on industrial waterways. They are reacting to what they see as shortcomings of GCCDC by trying to do more direct involvement and constituency building as opposed to solely networking with and appealing to public officials. Foote noted that the last time the Dredgers collaborated with the GCCDC was in 1999 when the groups worked together on an event to celebrate the reactivation of the flushing tunnel. Since that time, GCCDC has received public resources to do community planning and consensus building, but Foote felt that the Dredgers were not successfully engaged in that process. While Hanlon had attended some of GCCDC's public visioning meetings, she was unclear as to what was done with the public input into those plans. It is clear that the Dredgers and the GCCDC are far from working in partnership. Also, the Dredgers react to potential redundancies in programmatic focus (with BCUE, for example) by carving out a niche for the organization. BCUE and the Dredgers both do education, but BCUE is a fee-for-service

nonprofit that sells pre-packaged curricula products, while the Dredgers offer more informal educational activities. In sum, the Dredgers' behavior is shaped both by the groups with whom they work and by those with whom they do *not* work, an important dynamic that should not be overlooked.

The GCCDC has had a long term presence in the community of South Brooklyn/Carroll Gardens since its founding in 1978 by Scotto. The GCCDC was not the first organizational iteration of Scotto's vision for the community; over the course of the late 1960s and early 1970s he founded the Carroll Gardens Neighborhood Association and the South Brooklyn Community Corporation. This track record and his existing political alliances helped Scotto to access start-up resources for the GCCDC of \$650,000. The long-term continuation of several of these groups, the GCCDC included, is one indicator of their organizational resources and their embeddedness within the community. Chardavoine, who joined the organization in May 2005, grew up in Carroll Gardens and sees Scotto as a lifelong mentor. Chardavoine was a member of the Independent Neighborhood Democrats, a political club that Scotto founded in 1971 that continues to have a strong involvement among Italian Americans and youth. Similarly, the current Executive Director of the Carroll Gardens Neighborhood Association and current GCCDC board member, Manuel Ortiz Arroyo, was also selected by Scotto in an attempt to bridge to the Puerto Rican community in the area. It is clear that the GCCDC has a deep connection to the personal networks and community vision of Scotto.

Despite these connections to a particular segment of the Carroll Gardens community, the GCCDC has not typically pursued alliances with other civil society groups concerned with the canal. Though they did collaborate on the public event commemorating the reactivation of the Flushing Tunnel, the GCCDC and the Dredgers have not had a close working relationship since then. This is not surprising, given that the Dredgers were founded by Foote out of frustration over the types of on-water activities that the GCCDC was *not* undertaking. Also, there may be some latent resentment of the GCCDC as they have been the major group through which government resources related to the canal have been allocated. Though they held some public meetings to gather input for a community vision, some confusion and frustration was voiced by interviewees over the process and outcomes of these meetings. While a large meeting with about 75 people in attendance was held around the issuing of a Request for Proposals, the focus was solely on real estate development. Other meetings average about 15 people per meeting, but tend

to be comprised of various specialists and lack broad community input (Daly, 2005). This points to the difference between token and meaningful participation; in order to foster community consensus or at least to forge alliances, attempts at the latter must be made. Further, the GCCDC has not made any attempts to become the sort of umbrella or bridging organization that the Bronx River Working Group was through its convening of large public meetings, working groups, and re-granting of funds.

Additionally, it seems that some groups have an outright adversarial or at least oppositional relationship with the GCCDC due to differences in visions for the canal. The GCCDC believes that the time for industry in New York City is largely passed and visions of restoring the Gowanus as an industrial hub are unrealistic. In 1999, on a site near the Gowanus, a \$63 million dollar plan to create a 500,000 square foot movie complex, retail center, and sports area failed to go through. In 2001, when the developer Forest City Ratner sought to locate a 300,000 square foot Ikea furniture store on the Gowanus, community opposition mounted--particularly with regards to the amount of traffic it would bring to the area and the environmental contaminants on the site--and the plan did not go through. After environmental remediation, the developer instead chose to sell the land to Lowe's home improvement store in 2002, which eventually was built, along with some concessions in terms of public access to the canal in the form of a walkway. The GCCDC organized community meetings to solicit input on these developments, but former director Jeanne DiLascio and Scotto were both clearly in support of the retail development (Weber, 2002; Waldman, 2001; Farrell, 1999). Other civil society groups like Care About the Slope vigorously opposed these commercial developments. Presently, the GCCDC comprehensive plan does allow for continued industrial uses from 3rd Street and out towards the bay, particularly on the East Bank to 3rd Avenue, but for the most part they are attempting to facilitate residential and retail development along the northern parts of the canal (Scotto, 2005; GCCDC, 2005). The organization Friends and Residents of Greater Gowanus (FROGG) often vocally opposes the GCCDC because of this goal. Despite recent attempts by Chardavoyne to communicate with FROGG, the group remains publicly (in print) and privately oppositional to the GCCDC. This has led Chardavoyne to speculate on the composition of the group; he believes that it is largely supported by private industrial interests, not residents. Other groups that have publicly criticized the GCCDC include the Urban Divers, which expressed

reservation over the plan for the canal that they presented at a Carroll Gardens Neighborhood Association meeting in December 2005.

Finally there are broadly organized interests, particularly manufacturing and shipping unions that, because they are interested in the retention of industrial jobs in Brooklyn, are positioned to oppose the GCCDC's vision of primarily residential/retail-based restoration of the canal. Local democratic politics in Brooklyn is fundamentally entwined with the power dynamics and interests of the unions; "unions are the guts of the Democratic party just like corporations are the guts of the Republican party," Scotto said. Scotto's long history of advocating for change in the neighborhood, notably on the issue of the Red Hook waterfront port redevelopment has placed him at various times in opposition to the unions (Scotto, 2005). And the redevelopment of the Gowanus is no exception. Seeking zoning changes from manufacturing to residential is contentious throughout New York City, as evidenced most clearly in the years-long negotiation over the Greenpoint-Williamsburg waterfront rezoning. While the GCCDC is not interested in developing a complete 197-A plan, they are one of the most vocal advocates for zoning variances and working with the private real estate sector, and thus they are a clear civil society threat to industrial interests.

GCCDC's absence of alliances with canal-oriented groups may be beginning to change. Notably, Dredger Captain Ellie Hanlon was appointed in 2006 to GCCDC's Board of Directors which may provide greater synergies between the groups. Chardavoine has expressed an interest in orienting GCCDC more around the canal, in alliance with the other groups like the Dredgers and the Urban Divers that see the canal as a resource. Also, they intend to relocate from their current Court Street address (three blocks from the canal) to be physically located on the water, with potential for sharing office space with other civil society groups and/or providing community meeting space (Chardavoine, 2006). As Chardavoine has only been with the group for about a year, this changing dynamic may in part be a response to the change in leadership. Or perhaps the Dredgers' tactic of slowly building awareness and community support for on-water activities has permeated back to the very group from which it splintered off. Or perhaps, as suggested before, the "stakes" of the Gowanus revitalization have simply gotten higher as gentrification continues to take place, thereby necessitating more creative action if civil society wishes to have any say in the developer-led transition. This cooperation will need to be monitored over time to determine its true origins and full impact.

Intergovernmental Support and Political Alliances

It is clear that the Dredgers emphasize forging community alliances rather than elite alliances. This is a major difference between their stewardship model and that of the Bronx River. The Dredgers are not using canoe rides as a way to raise publicity and attention and they do not seek to bring politicians out on the water any more than the rest of the interested public. They have partnered with Brooklyn Borough President Marty Markowitz in his "Lighten Up Brooklyn" campaign to increase exercise, but that involvement is the exception to the rule. Their link to public agencies is generally indirect. In 2001, the Parks Department dedicated \$270,000 for the creation of several street end parks as a part of then-commissioner Henry Stern's interest in streetscape-scale mini-parks (*Daily News*, 2001). While the Dredgers were not involved in lobbying for these resources, they do have members that garden and care for these parks and do engage in clean-up days. They use street ends as put-in locations and are therefore some of the rare users of these parks; which gives more evidence for their argument that they want to be the *reason* why public agencies devote resources, rather than the political agent seeking change. The group is for the most part apolitical. The lack of elite alliances is also a difference between the Dredgers and the GCCDC.

Unlike the Dredgers, the GCCDC views lobbying, pressuring, and forging relationships with public officials as an important part of its work. They do significant fundraising and have become the conduit for resources from the state and federal government. Indeed, the GCCDC considers the committing of resources from Governor Pataki and Congresswoman Nydia Velazquez to be one of the major recent turning points in the history of organizing on the canal. Following a visit in 2001, Pataki funded a \$270,000 study of the bulkheads on the canal, an action that required the approval of 17 state agencies and is seen as one of the first steps towards improving the physical conditions on the canal (Munks, 2005; Scotto, 2005). Velazquez, whose 12th Congressional District includes parts of western Brooklyn including the Gowanus area, as well as parts of western Queens, and part of the Lower East Side in Manhattan, secured \$225,000 for the GCCDC to develop a revitalization plan for the community (GovTrack US 2005; Shelby 2002). Some interviewees reported disappointment with the way in which GCCDC managed this public process, which resulted in the Gowanus Canal Community Development Plan in 2005. Community consensus over the future of the canal has still not been reached and the plan remains just that. Finally, in March 2002, Velazquez secured \$5 million for the DEP and the

COE to conduct a “Gowanus Canal and Bay Ecosystem Restoration Study” of the waterway. The COE and DEP’s biologists and geologists studied the Canal as a navigable waterway and are considering the potential for restoration of the bulkheads and the broader ecosystem, including potentially through dredging (Cardwell 2003). This is the first step in what could potentially be a long term involvement of the COE in improving the quality of the canal. Overall, political allies have been engaged in specific restoration efforts on the canal, but there is no existing coalition with whom politicians can work to achieve broader, canal-wide aims.

Strategy choice

The Dredgers use recreation as a way for citizens to engage with the estuary. By providing diverse and accessible opportunities for citizens to canoe, kayak, and bike, they are working to develop a constituency of environmental stewards. Involvement with the Dredgers is open. All someone has to do is show up, learn some strokes, and sign a waiver in order to canoe. Participation and membership are so open that many Dredgers have never met another Dredger (Hanlon, 2005). Dredgers pursue both educational and capital improvement projects. They do educational tours with informal groups as well as school groups, working primarily with neighborhood schools. In terms of hands-on stewardship, they have done canal and canal edge clean-ups, sea grass planting, and oyster farming. Clean ups occur both in organized days and by tour leaders encouraging boaters to clean the canal edge every time they go out. They have also done clean ups of street end parks and community gardens in the area, showing the linkages between water and land based stewardship (Coveleski, 2005; Hanlon, 2005).

To extend their impact, the Dredgers also participate in special events in cooperation with other civil society groups, actively pursue positive media for the Gowanus Canal, and are potentially interested in catalyzing a network of recreation and stewardship based groups on the Brooklyn waterfront . They worked with the GCCDC in developing the celebration of the Flushing Tunnel Reactivation in May 1999. That celebration involved performance, music, and a blessing of the waters. They also participate in the annual Red Hook Surf and Turf parade and the Atlantic Antic street festival (Foote, 2005). The Dredgers also try to convey a positive message via print and web-based press. They look for “small victories” in terms of herons spotted or graffiti removed, and seek publicity for that (Hanlon, 2005). Dredger members observed a change in the tone of *New York Times* and other local media articles around 2002 as the Dredgers formalized as a 501c3 and picked up momentum (Foote, 2005). After that time,

there was much more discussion of the ecology in the area, and not just visions of the Riverwalk; less focus on the negative past and more on the future. Finally a new area of strategic interest for the Dredgers is in incubating recreation groups. Just as they were once a project of the nonprofit Parks Council, they are in turn sponsoring the Long Island City Community Boathouse in Queens. Foote envisions recreation groups along the waterfront in Brooklyn sharing equipment and working together on a “necklace” of sites.

To achieve their vision of the Gowanus, first and foremost the GCCDC sought to improve the physical conditions of the waterway by applying pressure to political leadership. At the same time, they continued their core functions of small business support and affordable housing development, hoping to spur economic growth while at the same time stabilizing the neighborhood for residents that already lived there. Throughout the 1980s and 1990s, the group advanced the cause of reactivation of the Flushing Tunnel, particularly using Scotto’s political capital. Having achieved the Flushing Tunnel reactivation in 1999, as well as the creation of the Red Hook Sewage Treatment Plant in 1986 (located in the Brooklyn Navy Yard but serving a broad South Brooklyn area), the water quality of the Gowanus was greatly improved. Both Scotto and Chardavoyne expressed that they felt the reactivation of the tunnel was a huge success, and in great part a result of the political lobbying of Scotto and continued investment in the community by GCCDC. Since the reactivation of the tunnel, the GCCDC has switched its focus to community planning and cooperation with private developers. The 66-page “Gowanus Canal Community Development Plan” produced in 2005 by GCCDC and several contracted planning and design firms is the major product of this work. The GCCDC has held several meetings to solicit community input to the plan. It describes in detail the mixed use and continued industrial areas in further detail and outlines several mechanisms for producing in-fill housing, additional open space, and encouraging green development through a special “green” zoning district of more than 50 blocks (Gallahue, 2005). The implementation of the plan will be dependent upon both public sector support in the form of granting zoning variances, lack of citizen opposition (which has emerged before in response to prior developments), and private sector cooperation in providing community benefits. Thus far, public sector reception of the plan has been lukewarm, a representative of the Department of City Planning told the *New York Post* that “the administration is committed to sustainability, but we need to see exactly what is proposed.” Perhaps more worrying is the assessment made by Peter Templeton, director of the

US Green Building Council's Leadership in Energy and Environmental Design program, who called the proposal "extremely ambitious" and noted the failure of several similar proposals in other cities, such as Seattle and Boulder (Gallahue, 2005).

Outcomes

All of the Dredger leadership cited the social outcome of the change in perception of the canal as the primary achievement of the Dredgers. They measured this in two ways. First, Foote cited the increasing number of people who are going canoeing with them, which is an organizational output, rather than a direct outcome. He offered the following figures of use:

1st year: 50 people on the water

2nd year: 200 people

3rd year: 800 people

4th year: 2000 people

5th year: 3000 people (4000 including LIC boathouse) (Foote, 2005)

By exposing this many people to NYC's waterways through fun and education, they are creating a mass of people who see the canal as an asset rather than a liability. They also measure outcomes by the changing tone and representation of the canal in popular media, (some of which is evident in the river chronology in Appendix 3 that was based off of searches of local newspaper articles from the last ten years). They believe that their attitude and approach to the media has helped form a subtle and hard to measure identity shift. Foote (2005) noted, "the bottom line is that the canal today is only slight less polluted than it was in say 1980, but the perception is different. We're still canoeing a contaminated waterway, but the perception of that contamination has changed". He attributes this change to the work of the Dredgers along with the changing demographics in the community. Newcomers who do not have as deeply entrenched memories about how terrible the canal was may be more open to getting out on it. It is impossible to prove the causality of this change in media representation, or to isolate the impact of the Dredgers presence and programs on this shift. Overall, by putting all of their efforts into holding regular programs that get people out on the water, the Dredgers are able to expose many people to the natural resource using scant financial or physical resources. They are making the link between citizen-constituents and the natural environment. They may not be able to resolve the different values and opinions that people bring to their divergent visions for the canal, but they will help to ensure that these opinions are informed by direct experience.

In addition, the Dredgers argue that their actions have had the indirect effect of making the case for federal and state monies that have been allocated to the canal. Without an active constituency of interested users and defenders of the canal, that money would have been much less likely to be allocated through the political process. Some of those resources have remained internal to agencies, such as COE's dredging feasibility study. Other funds have been directed to the GCCDC to do things like community visioning. Direct environmental outcomes of Dredger activity at this moment in time have been negligible. While the group has planted sea grass, done clean ups, and planted oysters, the group does not believe that these small actions will change the environmental course of the Gowanus (Hanlon, 2005). Rather, their work in cultivating a new generation of urban environmentalists through direct activity and positive press is the long term approach that they are taking to promoting environmental change.

Many of the outcomes on the canal that the GCCDC celebrates are related to the improvement of infrastructure through the 1986 creation of the Red Hook Sewage Treatment plant and—more directly—the 1999 reactivation of the flushing tunnel. Over \$458 million were spent in the creation of the sewage treatment plant, which handles much of the sewage for South Brooklyn and therefore lessens the frequency of combined sewer overflow events. Another \$10 million was spent on the flushing tunnel reactivation. And several hundreds of thousands of dollars were appropriated at various times through Velazquez, Pataki, DEP, and the Parks department (Scotto, 2005). These victories came after years of advocacy and lobbying on the part of Scotto and the organization and are seen as monumental achievements for the community. Indeed, public agencies have responded to the request for physical resources; what they have not done is been engaged in a true coalition. The impacts on the water quality are tangible and are what make it safe, let alone pleasant, for boaters to be out on the water. Of course, these outcomes cannot solely be claimed as the result of GCCDC's work, but they see their sustained advocacy as a major contribution. Since these turning points, most of the outcomes of the group have been markedly away from the canal, in terms of supporting small business development and creation of affordable housing. It has taken the introduction of a new executive director and the focus on the community plan to return the group physically to the canal. In some ways, now that the reactivation of the tunnel has been achieved, the GCCDC must reevaluate and set its sights on the next phase of revitalization, whether it be supporting expert-led research and dredging work by the COE or negotiating for open space with private

developers, or perhaps even helping to support the fledgling efforts of civil society groups in the same way that they have helped small businesses in the past.

It is clear that the Dredgers and the GCCDC operate in very different realms. The Dredgers focus on the water while the GCCDC focuses on the land; Dredgers attempt to reach thousands of individual citizens while GCCDC targets powerful individuals—both developers and politicians; the Dredgers operate on minimal budgets with zero staff while the GCCDC engage in active fundraising; and the Dredgers enjoy the waterway in its current state while the GCCDC sees it currently as a liability that could be turned into a resource. While the differences are apparent, and the founding of the Dredgers by a former, somewhat estranged member of the GCCDC does reveal some historic tensions between the groups, one could just as easily see the diversity of the groups as a boon to any potential coalition that might emerge. Many organizational differences can be overcome and can even be leveraged in a collaborative process, but fundamentally the groups invested in the Gowanus would have to come to some sort of shared vision over the future of the canal in order to work together towards that end. No single group, person, or entity has emerged to catalyze all of the fragmented interests in the area, and as the neighborhood continues to gentrify it is likely that the divisions will only deepen. Perhaps there is a bridging and facilitating role for an entrepreneurial public servant to play, rather than leaving the interest groups to work in their separate spheres and potentially come to conflict over new development that will surely emerge.

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V. DISCUSSION AND CONCLUSION

The Bronx River case is an example of a successful, large scale, civil society and public sector collaboration. A unique constellation of factors came together in the Bronx to facilitate this success, in particular: elite political alliances including a congressman on the appropriations committee; a vested municipal parks agency with existing land under its jurisdiction on the water body; strong catalyzing leadership from that parks department and the National Parks Service; and a compelling environmental justice vision for a natural resource in an underserved, low income area. For an organizational diagram of the Bronx River Alliance (BRA) and the Bronx River Working Group, see Appendix 4. No single one of these factors can attribute for either the success in building a broad coalition or for the success in achieving social and environmental outcomes. Rather, all of the factors worked together to create a sort of positive interference, building momentum, and scaling the issue up from being the separate concern of several small groups to being in the local environmental spotlight, in the public consciousness, and a priority of the federal government. The group achieved both tangible physical changes in the urban landscape in the creation of new parks and a greenway as well as social changes in awareness and perception of the river and cooperation amongst stakeholders. However, the strategies that led to the successful formation of the Bronx River Working Group are not necessarily the same strategies that will sustain the BRA now that it is a formalized public-private partnership.

The Newtown Creek case shows that even a traditional environmental group, Riverkeeper, that has pursued independent, oppositional strategies rooted in the legal system, perceives advantages of coalition building across civil society and with the public sector. Yet, the Newtown Creek Alliance (NCA) is not as robust or as grounded in the community as was the Bronx River Working Group, because of a number of different factors. The NCA is led primarily by a regional, technical environmental group and shepherded by the city council, neither of which is rooted solely in the community (see Appendix 4 for an organizational diagram of the NCA). In fact, the community has welcomed Riverkeeper and the City Council to assist them via their technical expertise; they are more interested in having some leverage and legal tools to solve decades-old pollution problems than they are interested in being “organized” over yet another issue. Given the recent rezoning of the Williamsburg-Greenpoint waterfront, let alone the two decades of organizing in opposition to environmental injustices, residents and activists may be experiencing organizing fatigue. The dire conditions on the river itself may also

be frustrating to community activism. NCA's vision of revitalization of the waterway is a rather pragmatic one, as they hope to improve the water quality, provide some limited public access to the waterfront, and achieve better management some of the NIMBYs and other industrial uses through the creation of an industrial zone. While perhaps this is sound planning that responds to the constraints of existing use and land jurisdiction, it may not be the sort of inclusive environmental justice or community-based natural resource management ethic that gets citizens or their political allies on board and inspired to pursue broad scale change. In fact, these sorts of ends might better be pursued through different strategies than civil society coalitions. Given that the respondents identified the legal suits as the most successful outcomes of the campaign, the benefits of collaboration in the form of a new organization (the NCA) remain nebulous. It is almost as though Riverkeeper wanted to clean up the Newtown Creek regardless, and they set about creating a constituency or client to stand behind their advocacy.

The Gowanus Canal case is at the other end of the spectrum from the Bronx River case and it illustrates that even with 30 years of dedicated civil society involvement, coalitions do not necessarily emerge organically (see a diagram of the groups working on the Gowanus in Appendix 4). Groups can choose to serve different clientele, can have competing visions for the waterway, can have organizational philosophies or environmental values that clash, or generally can have non-compatible strategies—all of which is the case for the Gowanus Dredgers (the Dredgers) and the Gowanus Canal Community Development Corporation (GCCDC). Although the distinct groups working on the Gowanus have not attempted to form a large scale coalition, have not attracted the sort of large scale resources that the Bronx did, and are not conducting group planning on new open space, they are fulfilling a number of important functions in the revitalization of the waterway. The Dredgers stewardship and education work is operating at the individual level to expose residents to the resource as it is today and to create a constituency for the urban environment in general and the Gowanus in specific. Indeed, a number of projects of the education and outreach team of the BRA do just exactly the sort of projects that the Dredgers do, though the Dredgers operate at a fraction of the cost, utilizing volunteer labor, and bring an order of magnitude more people onto the water every year by running frequent programs. The GCCDC is seeking to work in strategic partnership with the private sector—which will inevitably develop the waterfront as currently underused or derelict parcels change hands—to grasp opportunities for affordable housing and open space provisions when they arise. This sort of

negotiation for community benefits via private development represents both a pragmatic response to the current real estate climate in New York City and a routinized way of doing business for a group that has worked on community development rather than urban natural resource management. In parallel, it appears that YMPJ and the BRA are interested in working more with the private sector in the future, including in developing affordable housing, to deal with the gentrification pressures associated with improving the urban environment. Finally, these groups are beginning to recognize and show signs that collaboration might be necessary on the Gowanus. On the part of the Dredgers, their current consideration of strategic planning may lead to greater cooperation with other recreation, education, or parks-based groups. The GCCDC is consciously trying to reorient itself more towards seeing the canal as a resource by inviting Dredgers and Brooklyn Center for the Urban Environment (BCUE) members to join the board and by considering the creation of a shared community space on the canal.

These three cases illustrate a range of strategies that civil society groups within a single city, focusing on a similar set of concerns, choose to adopt. This research set out to understand the factors that shape strategic choice, the extent to which groups pursue collaboration as a preferred strategy, and how the outcomes achieved by these groups relate to that strategic choice. These questions were selected for what they might reveal about the range of strategies that exist in response to a single problem of urban waterway restoration and to understand how these strategies are formed, how they compare to each other, and what they achieve. Although many factors contribute to strategic choice, I found that ideologies internal to the group have a particularly strong effect. While tangible resources like budget and staff are certainly helpful in pursuing a goal, they do not seem to drive strategic choice in the way that ideologies do. Policy frameworks and scientific information or expertise did not play as much of a driving role in the formation of strategy, but rather were resources marshaled in the pursuit of a strategy that was determined by other internal and external factors. Both the context of the community and presence of elite, political allies play critical roles in strategic choice *and* outcomes.

Infused throughout the organization via leadership, boards, mission statements, and programs, ideology shapes how a group sees itself, what a group sees as appropriate behavior, and how a group defines success. Without the bottom line of profitability that drives the private sector, civil society's bottom line could be considered how well it is achieving the goals formalized in its mission and operationalized through its programs or campaigns. The

organizations interviewed have a consistent awareness of the threat of “mission creep” in response to funding opportunities. But the findings reveal fewer examples of mission creep and loss of organizational identity and a greater preponderance for values to fundamentally drive and constrain action to practices that are aligned with core beliefs. In fact, perhaps the greater challenge for coalition formation lies in groups being willing to compromise and find a middle ground amongst their firmly embedded and diverse interests. Yet, these cases demonstrate that *identical* ideologies are not required to form a coalition. Rather, what is necessary is a flexible and inclusive overarching vision that can provide continuity and simultaneously accommodate differences in individual goals and working styles. In illustration of this point, the groups comprising the Bronx River Working Group and the groups on the Gowanus Canal are similar in diversity, scope, and composition, but only the former have chosen to pursue a collaborative strategy so far. The groups involved in the Bronx River case come from different backgrounds of natural resource management, youth and community development, but they all share a common commitment to improving quality of life in a place and pursuing environmental justice. This vision was crucial to the formation of a broad coalition that inspires local leadership, attracts media attention, and raises visibility of the issue. Also, without the public and financial support of key elected officials and the technical assistance of entrepreneurial bureaucrats, small scale coalitions will not scale up to the sort of high profile presence that is required to make change in the urban landscape. The following discussion focuses on a number of substantive areas that expand upon these core findings.

Duration of civil society engagement and the formation of environmental justice coalitions

I did not find, as one might expect, a direct correlation between age and success at achieving environmental or social outcomes. The NCA began in 2002 and seems to uphold what the theory would suggest, with a number of typical struggles associated with group formation, growth, and formalization. The group is still an informal alliance, though it envisions becoming a 501(c)3; it relies upon volunteer work and employee in-kind work; and it has just begun to pursue funding that would help to further shape the organization. But the critical founding partner of the NCA, Riverkeeper, is a regional nonprofit that was founded in response to a 1963 environmental conflict. The GCCDC has been in existence since 1978 and a number of other community leaders and neighborhood groups have advocated for change on the Gowanus for decades, yet the Gowanus remains a contested space. The Bronx River Working Group was

founded in 1996. In under a decade it has made the transition to a formal nonprofit-public alliance, the BRA, and has achieved a number of financial and physical benchmarks in its pursuit of river restoration and the creation of a continuous greenway. However, some of the individual organizations working on community development in the South Bronx date to the mid-1980s and the upstate-based nonprofit Bronx River Restoration was founded in the 1970s. In trying to examine interventions at the scale of a waterway, one cannot just look at the age of single organizations. Rather, one must attempt to understand the age of the coalition and the timing of major turning points such as acquisition of resources, sharing of staff, or creation of committees, to try and assess how developed that coalition is.

In the Bronx case, although groups were present and active on the river beginning in the late 1970s, they were not successful in attracting resources or achieving environmental outcomes to the extent that the Bronx River Working Group was. There was a clear shift in the organizing vision and approach from the early, conservation-oriented work of the predominantly white, wealthy, Westchester-based Bronx River Restoration and the Appalachian Mountain Club to the environmental justice work of groups rooted in the low income, minority communities of the South Bronx. Yet, in terms of goals, the Bronx River Restoration 1980 Bronx River Master Plan is not dissimilar from the contemporary greenway plan. They envisioned the creative restoration of a string of current parks sites and proposed several future ones (Bronx River Restoration, 1980). One strategic shift came from proposing an ideal solution to rooting action in on the ground results such as the creation of small new parks and the re-granting of federal funds to all involved partners (Cox, 2005). This may have resulted from the change in leadership; from the change over 20 years in how one approaches planning in New York City; or from working in partnership with a local agency. Working towards tangible on the ground projects rather than simply advocacy is an expressed organizational value and approach of Sustainable South Bronx, which was one of the key local partners in the Bronx River Working Group (Van Tassel, 2006). Additionally, the ideological shift was to an environmental justice vision; and the heart of organizing moved to the South Bronx rather than Westchester, although Westchester groups' support and involvement was retained. It is possible that the environmental justice vision was more compelling to elected officials than was the message rooted in conservation. The environmental justice vision also reflected a "unified rhetoric" of community groups and natural

resource management agencies, which Gould et al. (2004) note is an important element in forming successful coalitions.

On the Gowanus, the same core set of individuals in the extended network of Buddy Scotto that was advocating for neighborhood change in the late 1970s is still engaged with the GCCDC in a variety of strategies that promote independent action rather than coalition building, but the recent proliferation of other groups may change that pattern. In the past, the core strategy of the GCCDC was advocating public officials for infrastructure improvements on the canal. While that strategy would benefit from a strong base, that base was cultivated through neighborhood social networks in the Italian-American community rather than through external organizational partners. It was also pursued through the independent and shifting political tactics of Scotto as an individual, which included at various times: running for office himself, supporting candidates, switching parties, participating in political conventions, and joining influential citywide boards (Scotto, 2005). The current core strategy targets the private sector as a partner in small business development and affordable housing provision. That strategy can be pursued largely independently and does not require cooperation or coalition building with other civil society partners. Indeed, although they sought public input into their comprehensive community plan, it continues to be perceived as primarily a GCCDC document; the opportunity to plan was not taken as an opportunity for dialogue or consensus-building.

The next steps related to coalition building or greater cooperation on the canal remain open questions. Inviting Dredger Captain Ellie Hanlon to join the board of the GCCDC is one large step in the direction of forming some sort of cooperation amongst the different groups on the canal. Executive Director Tom Chardavoyne has also begun attending meetings of other groups involved on the canal in an attempt to understand their work and potentially build partnerships. All of these activities seem at the present time to be add-ons to their core work. Going beyond this nominal involvement, GCCDC has expressed interest in developing a community center that could host the Dredgers, the Urban Divers, and GCCDC physically on the canal. As of January 2006, Chardavoyne was also considering incubating a new nonprofit focused solely on open space and conservation, the Gowanus Canal Conservancy, which would represent a major strategic shift and the potential beginnings of an environmental coalition. Finally, Chardavoyne has also reached out to the NCA and groups working on the Coney Island Creek to try to share information and knowledge and build a network at the borough-scale.

Since the Dredgers are a relatively young group, time may be a factor in their lack of interest in more involved cooperation with other groups. Their formalization and capacity-building process is still underway, and they may indeed be building the base that could help support a larger coalition in the future. Or, alternatively, their choice of independent action may be a conscious one. Given that the group was founded out of dissatisfaction with the work of the GCCDC and the lack of on-water opportunities, this explanation should not be discounted. Perhaps most telling of current attitudes towards coalition formation is the fact that the Dredgers did not feel that the Bronx River model was applicable to the Gowanus situation. Hanlon (2005) felt that the scope of the Bronx coalition is so much beyond the capacity of the Gowanus groups that it was difficult for them to take lessons from it. She also emphasized that there truly is no consensus on what the future of the Gowanus should be, which is the first barrier to crafting an inclusive vision around which a coalition could form.

The Greenpoint-Williamsburg neighborhoods were host to over a decade of organizing on environmental justice and public health issues, but the type of engagement may not be conducive to current coalitions with the public sector or Creek-wide planning. Although some of the sites that the organizations were opposed to were located on the East River and Newtown Creek, these battles were not expressly oriented towards the waterfront. Rather, they were organized around opposing NIMBYs, raising awareness over issues like childhood asthma, and the dangers of subsistence fishing on contaminated fish (Corburn, 2002; Gandy, 2002). Carter Craft (2005) of the Metropolitan Waterfront Alliance noted that activists in the neighborhood are more oriented towards *opposing* things than *advocating for* things, and this may present challenges for the nascent NCA. The priorities of the various civil society groups involved with the Newtown, while not necessarily in opposition, are not entirely aligned either (see Appendix 4 for an organizational diagram of the NCA). Some groups are interested in increasing open space, others are interested in on-water recreation, others are interested in improving water quality and monitoring the sewage treatment plant, and others are interested in industrial retention and development. Without an inclusive and inspiring vision for the revitalization of the Creek, these priorities remain disjointed. The current vision of the NCA is a more pragmatic one, focused on improving water quality and providing point access to the creek. Schmid's response to the question of vision is illustrative of this pragmatism: "I will smile and nod to the folks who want to build wetlands on Maspeth Creek" (Schmid, 2005). This practical vision may

present a challenge to coalition building, but perhaps it is also the environment itself that presents the challenge. The industrial uses are so entrenched, the contamination so severe, and the water so inaccessible, that the barriers to community mobilization are great, particularly when residents are fighting over which vision to pursue and Riverkeeper is retaining a leadership role.

I hypothesize that there is a pattern over time that in which civil society is an “early responder” to issues of urban river revitalization, followed later by public and private interest, involvement, and dedication of resources. As in the Gowanus case, community groups and nonprofits begin a long, sustained involvement on waterways through stewardship, education, water quality monitoring, boating, and positive public relations, (or through the use of more oppositional tactics such as protest, lobbying, litigation, and negative press). This early involvement (either through pressure or proactive use of the resource) is mirrored in the Bronx case by the early efforts of the Bronx River Restoration. Civil society groups laid the foundation for entrance of more powerful external actors such as politicians and federal environmental agencies. Groups can then choose either to partner directly with government or continue to work outside of its structures. Only once the public sector has invested significant resources in restoration does the more risk-averse private sector begin to prospect on these waterways as real estate development opportunities. While there are certainly other patterns that can occur (e.g. entirely government-led restoration projects; private-sector led restoration projects), I believe that this is a common role for civil society as an early advocate. It may explain how relatively apolitical groups can still have long term impacts in resource use decisions.

Role of leadership style and locus of control

Despite the purported mimicking of the BRA’s strategic approach by the NCA, there are critical differences in leadership style and where the locus of control of the coalition lies. In the Bronx, local organizations were catalyzed through the Bronx River Working Group coordinator who took an approach of “leading from the side”, and used a critical early strategy of re-granting resources to build a vested base (James & Lahti, 2004). In order to form coalitions, Gould et al. (2004) argue that individual leaders must serve as “bridge builders” who can understand the positions and values of multiple groups. There was certainly evidence of this in the Bronx River Working Group through the position of the Bronx River coordinator. In contrast, on the Newtown, the participants cite the greatest outcomes as being due to Riverkeeper’s legal

campaign. Community members are eager to have the technical assistance and legal expertise of the regional environmental group in order to take on decades-old pollution challenges created by large, wealthy corporations like Exxon Mobile and to have some point of leverage against all the inaccessible private firms along the creek. There is something of a disconnect between the coalition that Riverkeeper and the City Council feel they are starting and the outside expertise that community members believe they are receiving. Though the challenges faced on the Newtown clearly differ from those in the Bronx, there is also a marked difference in leadership style and relationship with the community. Changes in leadership also affect programmatic focus. Tangible shifts in programming were noted by interviewees at Riverkeeper, the Gowanus Canal Community Development Corporation, and the Brooklyn Center for the Urban Environment, all of which have undergone recent leadership changes.

Rather than needing a catalyst or an organizer to activate latent public interest, the Gowanus seems to need some sort of a negotiator or a truly boundary spanning organization to reconcile different interests. The community surrounding the Gowanus has a fertile civil society—with the Dredgers, the GCCDC, FROGG, Proteus Gowanus, BCUE, the Urban Divers, Care About the Slope, and other groups all possessing different visions of the canal. Each of these groups seems to serve a different segment of the population, none of whose visions are completely aligned. Certainly the groups can continue to pursue non-controversial programs within their own small niches, but if broader change is going to happen with any input from the community (rather than being solely developer-driven), then some brokering will need to occur. While GCCDC may claim to be able to play this role, as they have attempted their community planning process, they do not seem to have the kind of broad trust and credibility that would be necessary to manage such a process. Do the early hints of some self-directed cooperation on the part of the GCCDC (appointing Hanlon to the board, meeting with other civil society groups) represent a potential turning point or is it just better public relations? This will remain to be seen.

The role of land jurisdiction and the need for a local public partner

Having the Parks Department land available on the Bronx River provided a point of entry for environmental justice advocates to begin work and supplied a natural public ally; with private holding surrounding much of the Gowanus and the Newtown, a core public partner will need to be secured by other creative means. The situation of privatized waterfronts is a common one to

urban waterways, and while it is not possible to reverse time and allocate land to the public sector, other solutions can be sought. Wherever possible, bringing in the involvement of the local parks department as well as state and federal natural resource management agencies is a way to build a coalition for environmental justice that can translate into physical changes in the landscape. Various means should be used to try and bring in the parks department, such as the creation of street-end parks and gardens, as was done in the Gowanus case. While these small pockets of greenspace will not necessarily translate into immediate larger influence on the waterfront, they represent tangible physical changes that can be important in coalition building. If done in partnership with the community they can also serve to cultivate stewardship and community ownership. Another strategy was used in the creation of the South Bronx Greenway (which connects with the Bronx River Greenway), whereby community advocates including Sustainable South Bronx worked hand in hand with the city's Economic Development Corporation in a task force to study, plan, and implement the greenway—including on private lands (HPTF, 2004). Economic and community development agencies can work as liaisons between the private and civil society sectors. Given that much of the new open space and other community benefits are being created in cities occurs through linkages, clawbacks, and other negotiations with the private sector, this should serve as a crucial strategy (see, for example Williamson, Imbroscio, and Alperovitz, 2002).

The role of policy and zoning

Although organizers on the Newtown Creek were the most conservative or pragmatic about actions that are possible on their highly industrial waterway, all interviewees across the three cases saw existing policies and zoning as points for negotiation rather than hard limits. The Greenpoint-Williamsburg rezoning reveals that neighborhood-scale change is possible, and mechanisms like community 197-A plans provide opportunities for civil society engagement. Other options mentioned were the creation of an industrial development zone on the Newtown and requesting zoning variances on the Gowanus Canal (Chardavoyne, 2005; Hollowacz, 2005). Certainly, the stringency of these rules can vary. For example, the Office of Coastal Zone Management (CZM) has a strict set of limitations in the form of a Designated Port Area on the Chelsea Creek in Boston, to ensure that all uses on the creek remain “water dependent and supporting uses” and to give preference to maritime industry that for the most part no longer thrives in the region (CZM, 1997). This has left activists with few options to confront the bulk

oil terminals and airport parking lots that line the creek. Legal tools and advocacy in concert with a regional nonprofit with legal expertise has become important, as well as—again, a partnership with the parks department and direct stewardship activities (Neighborhood of Affordable Housing, 2006). Many states have brownfields laws that provide further inroads for civil society action. The NCA's application to the Brownfield Opportunity Areas grant program represented an attempt to take advantage of that strategy. Perhaps the more constrained a waterfront is through existing regulations, zoning, and lack of public land, the more important becomes the use of multiple strategies from coalition building to legal tactics. Overall, these challenges may also represent an opportunity for the innovative urban planner who wishes to make an impact on the waterfront.

The role of elite alliances

Elected officials can clearly play a critical role in the successful development of coalitions and the pursuit of urban environmental change. But, the means by which alliances with politicians are cultivated are deeply embedded in a community's history and are not necessarily related to a specific campaign. Federal level politicians have the potential to bring tangible resources to bear on problems by allocating funding or commission large-scale studies by federal agencies. They also can have the intangible, but critical, effect of publicly legitimizing efforts of a group by giving formal endorsements, appearing at events, and serving honorary roles. Congressman Jose E. Serrano on the Bronx River and Congresswoman Nydia Velazquez on the Gowanus both created these effects, albeit to different extents. Rare agency partners were cited as critical catalysts or policy entrepreneurs—such as Roger Weld at the state Department of Transportation in the Bronx River case. Local politicians—such as City Councilmembers David Yassky and Eric Gioia on the Newtown Creek—can potentially have some of the same legitimizing or resource-garnering effects, but they face greater budgetary limitations and their scope for action is more constrained. Moreover, they lack the horizontal connections to federal resource management and science agencies like NPS, COE, and NOAA, which are critical to river restoration. This may present another alternative avenue to securing political allies. Groups that do not already have the ear of congressionals might consider trying to partner with federal agencies to later leverage that relationship. Similarly, federal agencies should continue to find the role that they can play in these urban resource management issues even without the leadership of congressionals; programs like the NPS Rivers and Trails and the

Forest Service's former Urban Resources Partnership were designed to do just that. In the increasingly urbanizing and contaminated world, these largely western-oriented land management agencies should seek to innovate and get involved in urban environmental restoration.

Simply appealing to politicians does not guarantee that they will champion a cause as they must balance many competing interests. They need to perceive that change is demanded by a broad constituent base; this is the argument that was made for why only a coalition could attract the attention and commitment that Serrano brought to the Bronx (Hoffner, 2005; Cox, 2005). This evidence is complicated by the counterexample of Velazquez's interest in the Gowanus despite the lack of an organized coalition. Even without a broader coalition, GCCDC and others have made the case for the Gowanus for 30 years. In both cases, the elected officials supported projects that they believed were likely to succeed in improving quality of life of their constituents, which is both a good outcome unto itself, as well as politically beneficial to the individual. At a minimum, it is likely that elected officials are less willing to get involved in a highly divisive issue than they are to support one that evidently improves quality of life for a wide group of citizens. And as industry continues to shrink in presence and influence, the tradeoffs between supporting industry or other new uses on the waterfront will diminish. While one cannot be certain of the internal motivations of political figures, the positive advocacy generated by civil society groups must have factored into their decision-making calculus. Finally, there are simply some politicians who are more firmly rooted in place rather than solely policymaking, and this variation cannot be controlled for. At the local level, city council staffer Kronley (2005) noted that council members are either district-driven, with aims of "bringing home the bacon" to their district, or policy driven at the citywide level. At the federal level, Serrano is a committed advocate for the Bronx who uses his position on the appropriations committee to obtain resources for his constituents. He is the most senior congressperson of Puerto Rican descent, and his family is highly involved in Bronx politics, with his son Jose M. Serrano having served on the New York City Council and now serving in the New York State senate (New York State Senator, Jose M. Serrano, 28th Senate District 2006; United States Congressman Jose E. Serrano, Representing the 16th District of New York, 2006). Realizing that there are politicians with different sorts of orientations is a first step to determining with whom a civil society actor might wish to partner.

The role of adversaries and crises

Although Gould et al. (2004) claim that “finding a common enemy may be the key to successful coalition formation” (p. 98), the cases considered here do not entirely support that argument. First, the institutions with authority over monitoring, cleanup, and operation of environmental facilities, such as the state Department of Environmental Conservation and the city Department of Environmental Protection, were seen as barriers to change or even adversaries, but they were not generally the reasons why coalitions formed. Second, on the Newtown Creek, Exxon and other major firms do seem to be playing the role of the polluting enemy in the eyes of the community and to be driving the citizens to work in concert with Riverkeeper, but this will not be enough to sustain and grow the coalition. Although Riverkeeper repeatedly expressed the importance of pursuing polluters and righting environmental injustices, they also stressed the willingness of many smaller firms to respond to their threats of intent to sue and work with them to clean up their practices rather than fight legal battles. The NCA seeks to be a forum in which private firms, civil society groups, and citizens can come together to envision the future of the creek. Third, in the Bronx case, it was precisely the *lack* of one single, easy adversary that made coalition necessary. The environmental problems were so manifold and entrenched on the river--with the solutions being costly and long term--that cooperation was required. While there are environmental justice campaigns of civil society groups that specifically target NIMBY facilities on the Bronx River, the main thrust of the Working Group and later the BRA was on proactive development of a greenway, youth education, and ecological restoration--rather than opposition. This supports Checker's (2001) claims about the ability of the natural environment as a diffuse, shared problem to promote coalition formation. Generally, if a group defines itself appositionally, then its work is considered complete when a specific threat is addressed. But if a group self-defines proactively, they can take on various threats and issues within the community.

On the Gowanus, the common cause shared by all groups is, again, in the poor quality of the natural environment. At the level of actors, no common enemy has been identified. For example, should a large, private, commercial development or a new industrial use seek to locate on the Canal, it is likely that these would divide civil society between those interested in preserving industry and those interested in developing commerce. Indeed, in prior situations, Scotto and the GCCDC has come out in support of retail developments. Although not led by the

Dredgers since it predated them, community opposition to such controversial proposals has occurred before on the Gowanus. In 1998, Forest City Ratner proposed to develop a 500,000 square foot multiplex and sports center on the canal. Community members and Rep. Velazquez opposed the development, challenged it on the grounds of the traffic it would bring into the community and accused it of inadequate environmental review, and ultimately the deal fell through in 2001. The community again mobilized to oppose and stop the siting an Ikea on the Gowanus in 2001 and raised concerns and made modifications to the eventual siting of a Lowes. It is clear that there are vested stakeholders that may mobilize in the event of a crisis; it is possible that the Dredgers are serving to introduce more people to the canal and create more vested stakeholders. There does not seem to be any likely common enemy to emerge in the Gowanus. Rather, if change is to occur, a shared vision will have to be crafted. The cases discussed here did not emerge out of any one single crisis or adversarial relationship, though certain environmental injustices and developments were framed and leveraged by community activists as crises. So, although threats may present moments of opportunity from the perspective of political opportunity theory, it is as much the framing of those threats into a strategic program of action that is important for sustained coalition building.

The role of scientific and technical information and expertise

At its core, the challenge of revitalizing these waterways is not a question of scientific or technical disagreement, nor are the solutions being led by scientific or technical expertise. Rather, the way in which these waterways get used and envisioned is largely a function of the interaction of political forces from the public, private, and civil society sectors. Scientific or technical information is just another resource that gets wielded by various actors in pursuit of their interests. Indeed, the Bronx case illustrates the way in which expertise was carefully managed and directed so as not to overwhelm indigenous knowledge and priorities. Certainly, scientific information has been brought in to back the various claims of the different actors, and technical solutions will be needed to address some of the worst contamination, with Riverkeeper being the best example of using science as a resource in support of advocacy. There is also a role for community monitoring in helping to build a stewardship base that is both knowledgeable about and attuned to the issues of the waterway, as the rather informal monitoring of the Dredgers and the more regularized monitoring and curriculum on the Bronx reveals.

Unlike rivers that exist in less human-dominated environments, the science of ecosystem management has not been one of the driving forces of change or conflict. Because these waterways are situated within the most heavily urban context imaginable, their function in service to human/social systems has never been in question. While they also serve ecosystem functions, these are seen as largely secondary to the needs of industry, transportation, housing, commerce, and overall quality of life. Indeed, the river becomes another contested piece of space, as well as a transportation corridor, and a part of the waste infrastructure that is subject to the very human processes of planning, real estate development, and social movement building. Perhaps by looking at these most urban or waterways we can learn to recognize the manifold ways in which human structures are interwoven with the natural environment. This may seem to identify key political forces that are also at play—though perhaps less visible—in less urban contexts as well.

The role of formalization

While many observers have lauded the Bronx River case as a successful coalition, there has not been an opportunity to observe if these successes will be sustained through the formalization of the BRA as an independent nonprofit. By comparing the two figures in Appendix 4, one can see the difference in the relationships of the actors in the working group and the alliance. Efforts were made to sustain the involvement of community leaders through the composition of the board and the structure of the four teams, in an attempt to ensure a broad base and sustained community involvement. Each team has both an internal parks staff coordinator and a community chair. Teams generally meet on a monthly or bi-monthly basis, and there is an annual gathering of the entire Bronx River network (Cox, 2005; BRA, 2005). In addition, key public officials such as Parks Commissioner Adrian Benepe and Congressman Jose E. Serrano are included through ex-officio board positions. Finally, the early contributions of Westchester-based activists are recognized through the honorary board positions of Bronx River Restoration founder Ruth Andenberg and current leader Nancy Wallace (BRA, 2005).

While formalization can bring stability and allow for prudent financial management, it may have some downsides as well. Despite the carefully composed structural links to other groups, it is questionable whether the BRA will continue to attract the sort of political attention and public fanfare that the Working Group attracted. Also, although the heavy involvement of the Parks Department was an empowering and critical piece of the Bronx River Working Group

that structurally sustains the BRA, it is worth considering whether any constraints are placed on action due to this close public-private partnership. The priorities and budgets of the Parks Department are influenced by each mayoral shift. One of the unique aspects of the Working Group was that it allowed for criticism of administration policies by actors internal to the group, such as the YMPJ.

Participation in the coalition may have had the effect of increasing the visibility and capacity of many of the community groups, leaving them more equipped to advocate and act independently. This is not to suggest that these groups lacked independent capacity, but is simply a recognition of the amplifying effects of coalitions. In 1998, Alexie Torres-Fleming, founder of YMPJ, was honored with the Fund for the City of New York's Union Square Award for grassroots activists, which recognized her faith-based organizing strategy and mentioned campaigns on asthma, the Bronx River, and other issues (Fund for the City of New York, 2004). In 2005, Majora Carter, founder of Sustainable South Bronx, was awarded the MacArthur Foundation Fellowship, which expressly mentioned her involvement in the creation of the South Bronx greenway and the creation of Concrete Plant park (MacArthur Foundation 2006). With the coalition formalized into an independent organization, it is questionable whether this amplifying effect and opportunity for creative engagement will remain to the same degree.

NCA members have expressed an interest in eventual formalization of the group as an independent nonprofit, though at these early stages the composition and structure of that group is not clear. Currently, the group is largely driven by the leadership of the staff of Riverkeeper and the staff of the City Council Waterfront Committee. Staff members expressed that a number of the activities undertaken in the organizing of the NCA are outside of the normal scope of work for this legislative body, and it is questionable as to what would be the role of the council after formalization of a nonprofit (Schmid, 2005). Perhaps the council would work to identify the appropriate city agency—say the Parks Department or the Economic Development Corporation—to engage in a sustained public-private partnership with a formalized NCA. Or perhaps the NCA would transition more to being a nonprofit with boards and/or teams drawing upon community participation. To do this, though, it seems a greater level of commitment and leadership on the part of community groups is necessary. This points again to the difference in the locus of control of the Newtown alliance and the Bronx alliance.

Although there is no existing coalition on the Gowanus that could be formalized, one can consider what sorts of formalization might be relevant to the independent groups acting on the canal. While both the Dredgers and the GCCDC are formalized through their 501(c)3 status, other sorts of capacity building could occur, particularly in terms of strategic planning and growing the staff. Indeed, Dredger participants recognized that they do not currently have a strategic plan, but there seems to be an internal tension with respect to the question of formalization. Founder Foote is opposed to growing the organization and hiring staff, and is committed to what can be done on the basis of volunteer effort. He also noted that he believes many of the efforts that they are undertaking could and should be formally incorporated into the activities of the public sector, particularly the parks department, saying “if we get put out of business, that’s a good thing” (Foote, 2005). Yet, there is a recognition that the group is currently little more than “three canoes locked up to a guard rail,” according to Hanlon (2005), and that it would benefit from having a dock, a boathouse, a meeting space, and the strategic planning necessary to support this growth. The leaders noted that the group is coming to a juncture point where it must decide whether it is primarily focused on “recreational activism”, ecological education, or pure recreation, and this decision will drive future strategic developments. This choice would shape the groups with whom the Dredgers would choose to most actively partner, the funding sources it might pursue, and the programs that it would develop (Hanlon, 2005).

The GCCDC has operated at a consistent level of staffing and capacity, with recent increases in funding coming from public resources targeted at the Gowanus area. They seem less conflicted over the organizational choices related to growth and staff than the Dredgers are, given that they already have two staff and an established physical office. Their interest in relocating along the canal and their support for developing a community center on the canal would both likely require major fundraising and a scaling-up of operations. Co-locating civil society groups could be one step towards developing a coalition with a common vision for the canal. The incubation of a separate environmental conservation nonprofit would require a great deal of resources as well, and would represent yet another civil society voice on the canal, unless it could function in more of a bridging/boundary spanning role. Finally, if the GCCDC truly wishes to become the creator of a community plan, they will need to open up their planning process to more input than just public comment, and use the plan as an opportunity to attempt to

build consensus and a common vision. Otherwise, their plan will remain a guiding document for their organization alone and it will be up to them to convince and cajole public agencies and private developers to listen to their demands.

Strategies and Outcomes

In terms of strategy, these cases lie along a spectrum of collaboration—from broad and inclusive, to fledging and limited, to nonexistent, although upon closer examination, exceptions to the dominant strategies of each case are revealed. The Bronx case represents the largest and most comprehensive top-down and bottom-up coalition of local civil society groups interested in youth, community development and environmental justice; citywide environmental nonprofits; local public agencies; elected officials at multiple levels; and federal natural resource management agencies. Contained within that coalition are elements of stewardship and education, in particular through the education and ecology teams, as well as moments of contention, particularly through the protest and media tactics of the South Bronx Watershed Coalition. The Newtown case is an example of an attempted coalition among a regional nonprofit, local elected officials, and a smattering of local civil society groups interested in a variety of concerns from open space to industrial development. Preceding and outpacing the formation of the coalition, Riverkeeper has pursued its contentious legal advocacy strategy against local and multinational firms located on the creek. And certain members of the NCA, most notably the Long Island City Boathouse, remain interested in on-water recreation and stewardship. The Gowanus case has a lack of an inclusive coalition amongst civil society groups or between civil society and the public sector, but each individual group has its own set of community and elite allies, and the groups independently achieve a number of the functions of a broader coalition. Currently, the Dredgers and the GCCDC are working in separate realms, with the former focused on on-water recreation and the latter focused on land-side redevelopment. By raising public awareness of the waterway and engaging in community visioning exercises over the future of the area, it is likely that these two distinct efforts will converge in the not too distant future, particularly if some outside shift or threat occurs.

It must be recognized that there can be myriad explanatory factors besides organizational strategies for why a project achieves the outcomes that it does, including: chance, unique relationships with elites and other actors, or changes in regulatory and legal frameworks. Indeed, my initial conceptual map of this research (shown in the figure in Appendix I) includes an arrow

from external factors direct to outcomes, in recognition of the importance of the external environment, independent of the strategies that civil society groups adopt. It is entirely possible that these factors have more of an influence on outcomes than civil society's deliberate tactical decision-making. For example, in the Gowanus case, one cannot deny the impact of rapid gentrification; on the Newtown, the regulatory and zoning framework that protects the working waterfront also affects the possibilities for change; and in the Bronx, pre-existing political networks supported community action. But in all cases, these factors represent constraints or opportunities that could either be taken on via a broad coalition, could be addressed independently, or could be tackled in an adversarial manner. So it is still worth examining the means by which civil society groups address these external challenges, as there are very divergent paths to doing so.

In terms of evaluating outcomes, this study may raise more questions than it can answer. Because of the research methodology based around three qualitative cases, it is simply not possible to establish the causality of which strategies yield "better" or "worse" environmental outcomes on these waterways. Instead, it reveals that strategies based around stewardship have a main outcome of raising broad public awareness of a natural resource, whereas legal strategies tend to target specific landowners along waterways to address pollution, contamination, and negligence, and only broad collaborations have the capacity to create permanent conversions of land use in the public interest. Each strategy is supported by a very different set of ideologies and resources. Stewardship is often based on an ethic of community self-help, recreation, and enjoyment. This strategy is largely volunteer-led, independent, and can occur with very few financial resources, but flourishes only with strong human resources and social networks. It is largely apolitical, but stewards can potentially become politicized in the event of a threat. Legal strategies require expertise and formal training. It is based on an ideology of pursuing justice and it requires clearly placing someone at "fault", which can create common enemies but can also potentially be divisive. Litigation against large corporations is a long-term approach that is best matched with other more short term gains in order to sustain community support. Finally, collaboration is resource and time-intensive and requires alliance-building among civil society groups and between civil society and the public sector.

I would argue that on almost any contested, urban, industrial waterway, there are likely to be adjacent communities with diverse mixes of assets, from a volunteer labor pool, to preexisting

civil society groups, to politicians or public agencies that potentially have a stake--even if they are not yet actively engaged. It is the gathering and aligning of all of these resources that represents the true work of coalition-building, and it requires entrepreneurial leadership by both citizens and public servants. To be most effective, I believe that formal collaborative efforts must have elements of community coalitions, contentious advocacy, and stewardship nested within them. This will create flexible organizations that can simultaneously accommodate grassroots leadership and impress elected officials, taking on the multiple aspects of problems that urban waterways present.

* * *

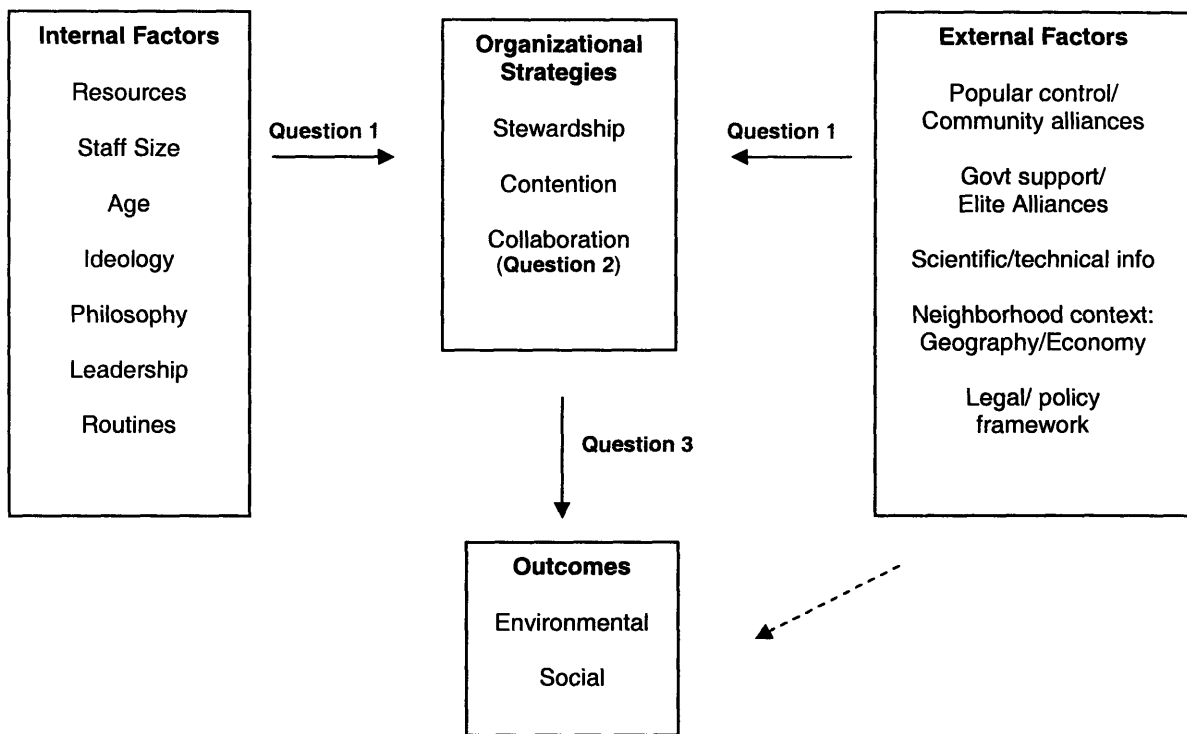
As a comparative study, this thesis reveals that the complex challenges of restoration in the urban environment require equally complex solutions. There is no one single, prescriptive approach that will yield more successful environmental and social outcomes. Rather, it becomes evident that different strategies yield very different ends. In the cases considered here, contention is a reactive strategy that addresses existing problems in the environment; stewardship is an active strategy that involves using and caring for the environment in its current state; and collaboration is a proactive strategy that consists of envisioning and implementing a new future. There is a need for further research to determine if this pattern over time is consistent in other cities and related to other issues. It may provide an insight for interested citizens, civil society practitioners, and public policy entrepreneurs as they attempt to sequence their intervention into the urban environment.

There is “space” for multiple actors to take on different aspects of revitalization problems. Groups operate from different resources bases, within different political contexts, and with different ideological aims, so different strategic approaches are a sensible response. They can work independently, using scant resources; they can work as an outside advocate that challenges public policy or private practice; or they can work cooperatively with government to implement broad scale change. I hope that this work has served in some small way to legitimize these multiple paths. Indeed, the pluralism of views and approaches that exists within civil society is one source of vitality in a democratic regime. Particularly as different approaches compete for public attention, participants, resources, and influence in the civic realm, they help to create an enriched dialogue of ideas and action on how best to revitalize the urban environment. For all of the benefits of this pluralism, it is important for individual organizations

to recognize that they represent just one stakeholder in a given place, and that there will always be other stakeholders with whom they disagree or have differences. Particularly because these groups are making claims over a physical piece of the urban terrain, conflict or compromise will always necessarily emerge. Collaboration, if carefully composed, presents a broad scope for action and real impact on the urban environment. By illuminating the different strategies, the successes and the obstacles incurred in these three cases, practitioners may learn how they might enlarge their vision, consider another's point of view that they had not considered, or even be re-confirmed in their current choices.

APPENDIX 1: DIAGRAM AND CHART

Author's original conceptual framework for research



Summary of Cases

Waterway	Bronx River	Newtown Creek	Gowanus Canal
Case Study Organizations	Bronx River Alliance, Bronx River Working Group	Riverkeeper, Newtown Creek Alliance	Gowanus Dredgers, Gowanus Canal CDC
Other Civil Society Organizations	<ul style="list-style-type: none"> • Youth Ministries for Peace and Justice • Sustainable South Bronx • The Point CDC • Mosholu Preservation Corporation • Rocking the Boat • Gaia Institute • Appalachian Mountain Club • Pratt Center for Community Development • Bronx River Restoration • (and 15 other community groups and 25 other nonprofits not specifically named in the thesis) 	<ul style="list-style-type: none"> • Pace Environmental Law Clinic • Greenpoint Manufacturing and Design Center • Greenpoint Waterfront Association for Parks and Planning • Barge Park Pals • Newtown Creek Monitoring Committee • Long Island City Boathouse • Metropolitan Waterfront Alliance 	<ul style="list-style-type: none"> • Urban Divers • Brooklyn Center for the Urban Environment • Friends and Residents of Greater Gowanus • Carroll Gardens Neighborhood Association • Independent Neighborhood Democrats • Care About the Slope • Proteus Gowanus • Waterfront Museum
Key Public Sector Organizations	<ul style="list-style-type: none"> • NYC Parks Department • Partnerships for Parks (joint project of NYC Parks Dpt and City Parks Foundation) • NYS Dpt of Transportation • National Parks Service • Office of Cong. Serrano • NOAA • US Army Corps of Engineers • Bronx Community Board 2 and others • Department of Environmental Protection • Department of Environmental Conservation 	<ul style="list-style-type: none"> • NYC Council Waterfronts Committee (councilmembers Yassky and Gioia) • Brooklyn Community Board 1 • US Coast Guard • Department of Environmental Protection • Department of Environmental Conservation 	<ul style="list-style-type: none"> • Brooklyn Community Board 6 • US Army Corps of Engineers • Office of Con. Velasquez • Department of Environmental Protection • Department of Environmental Conservation
Alliance	Successful	Forming	Non-Existent
Strategies	Contention, moving towards cooperation	Cooperation, with some contention, stewardship nested within	Stewardship and community development as independent action

APPENDIX 2: MAPS

Created by author using New York City's Open Accessible Space Information System at www.oasisnyc.net (April 2006).

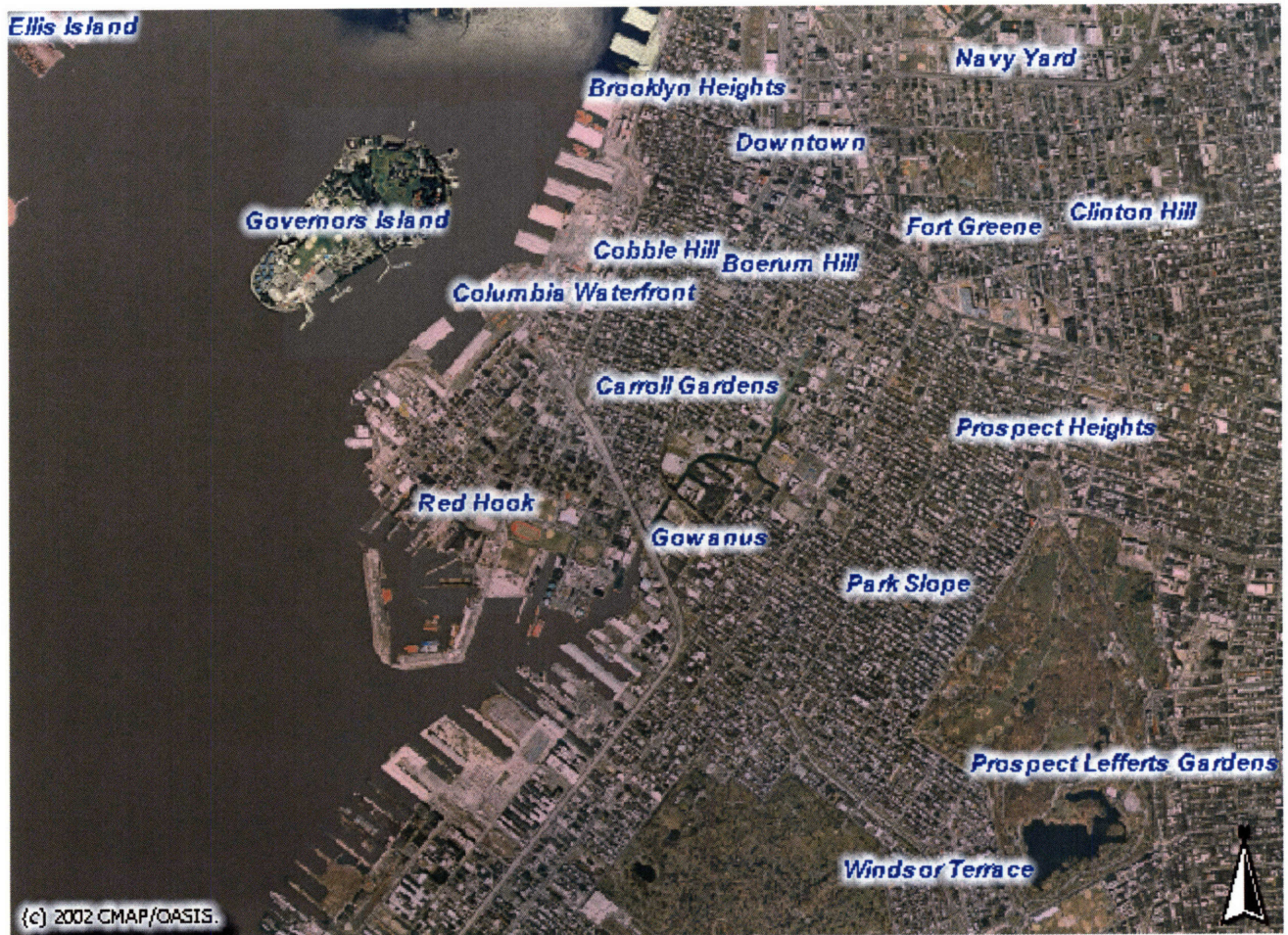
Bronx River Neighborhood Aerial Photo



Newtown Creek Neighborhood Aerial Photo



Gowanus Canal Neighborhood Aerial Photo



Bronx River Land Use Map



- | | | |
|--------------------------|--------------------------|----------------------------|
| Streets | Bridges/Overpasses | Community Gardens |
| NYC Parks | Playgrounds | Green Spaces Along Streets |
| Cemeteries | Piers | 1 & 2 Family Residential |
| Multi-family Residential | Mixed Use | Commercial |
| Institutions | Transportation & Parking | Industrial |
| Vacant Lots | | |

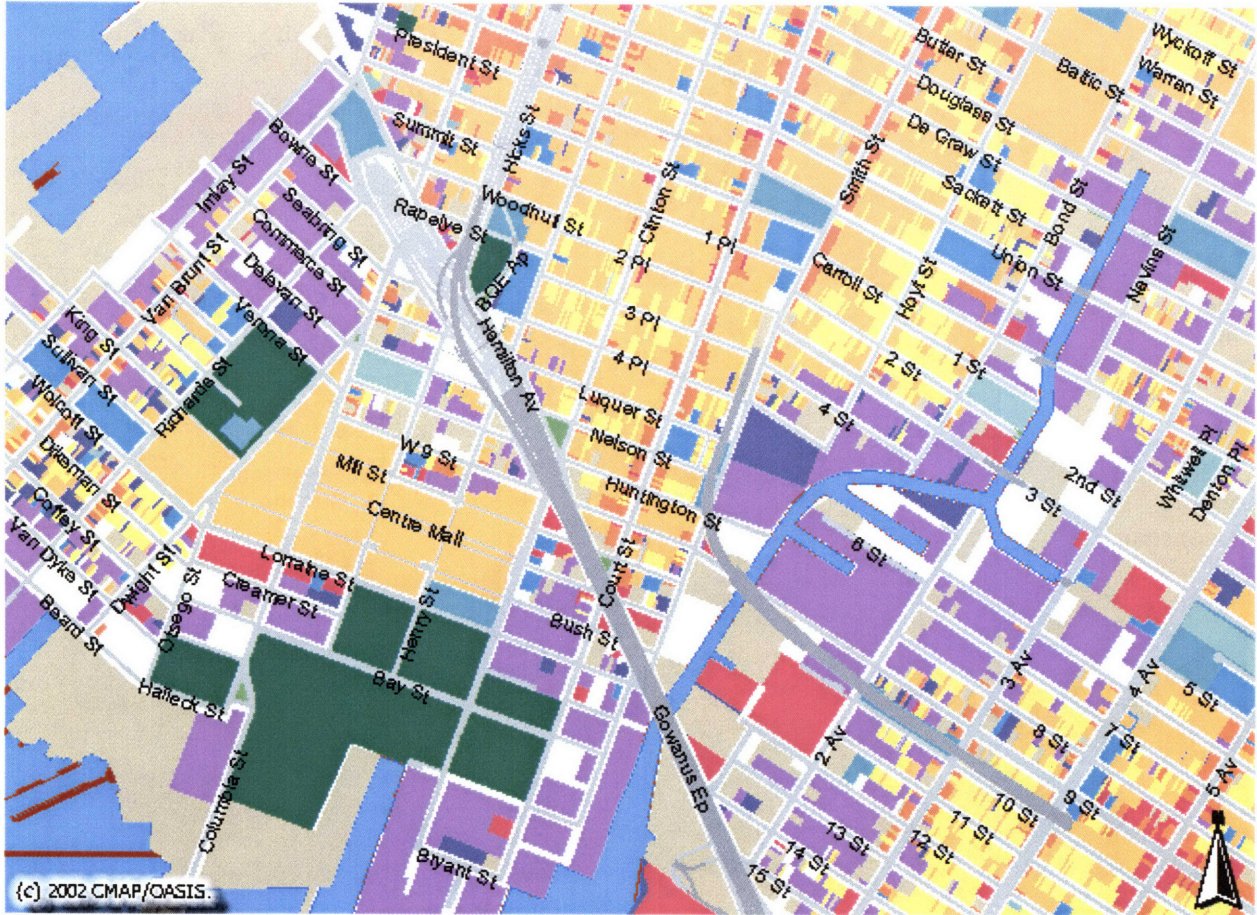
Newtown Creek Land Use Map



(c) 2002 GMAA/OASIS.

- | | | |
|--------------------------|--------------------------|----------------------------|
| Streets | Bridges/Overpasses | Community Gardens |
| NYC Parks | Playgrounds | Green Spaces Along Streets |
| Cemeteries | Piers | 1 & 2 Family Residential |
| Multi-family Residential | Mixed Use | Commercial |
| Institutions | Transportation & Parking | Industrial |
| Vacant Lnts | | |

Gowanus Canal Land Use Map



- | | | |
|--|--|---|
|  Streets |  Bridges/Overpasses |  Community Gardens |
|  NYC Parks |  Playgrounds |  Green Spaces Along Streets |
|  Cemeteries |  Piers |  1 & 2 Family Residential |
|  Multi-family Residential |  Mixed Use |  Commercial |
|  Institutions |  Transportation & Parking |  Industrial |
|  Vacant Lots | | |

Bronx River Infrared Image



Newtown Creek Infrared Image



(c) 2002 CMAP/OASIS.

Gowanus Canal Infrared Image



APPENDIX 3: CHRONOLOGIES

Chronology of Recent Activity on the Bronx River:

- 1925 Bronx River Parkway opens, first limited access parkway in the US and part of Westchester's first county park
- 1971 A reporter and photographer from the New York Times float down the river on a rubber raft, taking pictures and documenting the condition
- 1974 Bronx police commander Anthony Bouza holds meeting about Bronx River, Ruth Andenberg attends and begins her restoration work, founding the Bronx River Restoration Project
- Feb 1979 Scarsdale Audubon Society organizes campaign to protect the Bronx River
- 1983 Nancy Wallace assumes leadership of Bronx River Restoration and commences several decades of restoration projects on the river
- Dec 1992 First purchase of parkland in Westchester in a decade, 7.1 acres on the Bronx River bought at cost of \$3.4 million; joint taskforce on the future of the Bronx River Parkway is formed
- June 1995 Bronx River Parkway is named one of America's 11 most endangered historic places by the National Trust for Historic Preservation
- May 1996 Appalachian Mountain Club and Bronx River Restoration volunteers hold cleanup and canoe day in West Farms as part of National Water Week
- Oct 1996 Parks Commissioner Henry Stern announces Bronx Riverkeeper Alliance between parks department, Consolidated Edison, and Bronx River Restoration, to hold year-long awareness raising activities and cleanups
- 1997 NPS Rivers, Trails, and Conservation Assistance Program meets with Parks Department to brainstorm involvement on the river and begin incubation of the Bronx River Working Group
- April 1997 Phipps CDC gardeners pull 2 tons of garbage from the river
- Mar 1998 State Environmental Bond Act allocates \$850,000 to stabilize stream banks
- Oct 1998 \$100,000 COE study on flooding, erosion
- Oct 1999 First Annual Bronx River Golden Ball event
- Nov 1999 Parks Commissioner Henry Stern declares 2000 the Year of the Bronx River pledges over \$60 million in capital improvement projects on the river (e.g. \$2

million for Starlight Park, \$200,000 for a pedestrian bridge to Soundview Park from Hunts Point)

Con Ed pledges \$50,000 through adopt-a-river

Cong. Serrano raises \$500,000 for intertidal restoration activities

- Dec 1999 DCAS auctions Cement Plant park site, YMPJ, The Point, South Bronx Watershed Alliance, and other groups oppose the sale
- 1999 Cong. Serrano, Gov. Pataki, and Mayor Giuliani each dedicate \$11 million to Bronx River revitalization efforts;
- June 2000 Bette Midler and Secretary of Agriculture Dan Glickman take boat ride down Bronx River
- 350 volunteers (from National Association of Service and Conservation Corps and New York Restoration Project) do cleanup day
- summer 2000 Cement Plant park land transferred to Parks Department
- Aug 2000 Bronx River Restoration gets \$2,000 from Citizens Committee to train volunteers, \$16,500 from state for monitoring, volunteer work, restoration, and outreach; YMPJ gets \$5,000 from Citizens Committee for environmental justice work
- National Guard equipment used to remove 25 cars and 10,000 tires in five days, supported by Gov. Pataki and Parks Commissioner Stern
- Nov 2000 “Outdoor Science Activities in the Bronx River Watershed” involves 50 teachers and many youth in hands on environmental monitoring, hosted by SUNY Maritime College, Con Edison, the Bronx River Working Group, the NYC Environmental Fund, and the Bronx River Restoration Project
- Oct 2000 Cement Plant park site slated to become part of a truck route along Edgewater Road; parks department considers scaling back site to be a greenway, community leaders such as YMPJ oppose the development
- South Bronx River Watershed Alliance calls for Sheridan Expressway decommissioning
- March 2001 Attorney General Eliot Spitzer announces settlement with Bronx Zoo to mitigate 200,000 gallons of polluted run off and animal waste affecting the river; Zoo will pay \$250,000 to river revitalization and construct a \$1 million walkway with public access

- Jan 2002 Attorney General makes settlement with New York Botanical Garden, which agrees to pay \$365,000 for river improvements to compensate for discharging up to 5,000 gallons of water/day contaminated with pesticides, fertilizer, and other pollutants
- 2002 Bronx Borough President Adolfo Carrion convenes the Bronx Waterfront Task Force
- Aug 2002 \$7.25 million in capital improvement is spend on the Bronx River Restoration in Westchester County; county applies to create seventh Bronx River watershed advisory committee
- Oct 2002 Third Annual Bronx River Golden Ball event; Neighborhood Open Space Coalition leads walking tour along the Bronx Rier Greenway
- Sept 2002 Scientists at SUNY's Maritime College and City University's Lehman College say biodiversity s returning to the river, and detected the presence of indicator species like sea anemone
- Dec 2002 State Attorney General Eliot Spitzer initiates lawsuit against City of Yonkers fo discharging thousands of gallons of untreated sewage into the river
- July 2003 Linda Cox, BRA and Parks Department Commissioner Adrian Benepe canoe the river
- \$50,000 in federal funding for 18 sites along the river is procured by Rep. Joe Crowley
- Aug 2003 State DOT releases list of alternatives for improving the Bruckner-Sheridan Interchange (the "road to nowhere" 1/2 mile west of the river), and parks plan championed by members of the Bronx River Working Group is included
- Oct 2003 Partnerships for Parks launches catalyst program in 16 parks in several neighborhoods throughout the cit, inspired by its success with the Bronx River model
- Jan 2004 \$200,000 in state Environmental Protection fund as part of the Local Waterfront Revitalization Program goes to Bronx River watershed to develop a comprehensive management plan; \$20,000 to BRA for study and education about resources and restoration efforts in the Bronx River Forest Area in the New York Botanical Garden
- April 2004 Bronx Zoo opens Mitsubishi Riverwalk, a public pathway in the zoo and along the river; walkway is free to the public

- July 2004 Parks Department, BRA break ground on \$4.2 million project to rehabilitate flood plain
- Oct 2004 Sixth annual Bronx River Golden Ball Festival, sponsored by the Bronx River Alliance; BRA presents first ever Congressman Jose E. Serrano Award for Youth Leadership
- Dec 2004 New York Lawyers for the Public Interest initiates “Adopt a Nonprofit: Pro Bono General Counsel” and firm Winston and Strawn adopts the Bronx River Alliance
- April 2005 State Supreme Court orders City of Yonkers to stop polluting the river and establishes 15 month timetable for officials to identify and repair source of sewage problems
- May 2005 Bronx Expeditionary Learning School students release trout into the river as part of Trout Unlimited and DEC “Trout in the Classroom” program

Chronology of Recent Activity on the Newtown Creek

1988	New York State (for EPA) sued New York City to clean up the creek
1990s	DEC and Exxon Mobile make agreement (consent decree) to clean up largest urban oil spill in history (17 million gallons from refineries along creek)
1997	Newton Creek Monitoring Committee formed (citizens)
1998	City Planning Department makes plan to upgrade sewage plant, clean creek, and create possible greenways along the waterfront
Nov 1999	City to spend \$2 billion to upgrade sewage treatment plant and create waterfront promenades by 2013
	Photographers go on boat cruise of creek
Sept 1999- June 2000	First cleanup of Phelps Dodge site
Dec 2002	DEC hearings on cleanup at Phelps Dodge site, Maspeth community boards wants \$229 million cleanup standard
Feb 2002	DOT wants to close Grand Street swing bridge (would mean no more big ships, end of industrial era)
Mar 2002	Cost of sewage plant upgrades increases to \$2.8 billion due to state and federal requirements
June 2002	Queens City Planning Department gets \$75,000 from the state to improve public access on creek at street ends
July 2003	Brooklyn Waterfront Greenway Task Force bike tour
Oct 2003	Riverkeeper threatens lawsuit vs. Quality Concrete and 4 other businesses for violation of Clean Water Act
	TransGas Power Plant finds Exxon site too contaminated and won't locate there
Dec 2003	Alloco Recycling and Marjam Supply Co. come into federal compliance, still named in Riverkeeper suit that they are trying to avoid
Jan 2004	Riverkeeper initiates lawsuit against Exxon Mobile for being too slow on cleanup
April 2004	Councilmen David Yassky and Eric Gioa join Riverkeeper lawsuit, host boat tour, take water samples

- May 2004 Proposed rail-truck transfer to connect to proposed cross-harbor tunnel on 160 acres in Maspeth, EDC studying it through two-year, \$20 million impact study, construction could begin 2008 to complete in 2025
- Aug 2004 “Who Cares About Newtown Creek?” high school film with Riverkeeper
- Oct 2004 Plan to build pipeline underground to transfer sewage from Newtown Creek to Wards Island, construction would begin 2010 or 2011
- Nov 2004 City Council Waterfront Report
- Jan 2005 District Attorney vs. Quality Concrete on 22 felony counts and 20 misdemeanor counts; Yassky considers running for District Attorney
- Feb 2005 Workers building a park hit underground toxic sludge; 2012 has already identified this as potential site for Olympic village
- March 2005 Yassky and Gioia want creek cleaned up regardless of 2012; 400th meeting of NCMC re: sewage plant cleanup
- July 2005 London gets Olympic Bid for 2012

Chronology of Recent Activity on the Gowanus Canal

- 1960 Verrazano Bridge built, goods can enter Brooklyn by truck
- Pollution and smell were so bad (hydrogen sulfide), that city at one point dumped in truckloads of chlorine to neutralize the smell; hydrogen sulfide is from sewage overflow, sediment sinks to bottom and decomposes and creates bubbles of the smell
- Gowanus Canal Community Development Corporation agitates for the Gowanus for 25 years, and first received pledge from Mayor John Lindsay that he would help; VP Salvatore “Buddy” Scotto (also President of the Carroll Gardens Association and owner of Scotto Funeral Home) sees San Antonio’s riverwalk as its model; Gowanus CDC has converted two factories into housing along the creek
- 1962 Flushing tunnel to Buttermilk Channel stops working, city never fixed
- 1986 New Red Hook sewage treatment plant in Brooklyn Navy Yard improves water quality on the canal
- Dec 1993 City met with prospective bidders on \$5 million project to reactivate canal’s flushing tunnel; city planning official thinks there is merit to Buddy Scotto’s proposals
- July 1996 Barge traffic is very light especially in summer (since there is not demand for oil); just one remaining company at the north end: Bayside Fuel Oil; only 10 total industries on the whole thing
- June 1997 Brooklyn Center for the Urban Environment offers first boat cruise on the canal (executive director John Muir); found dissolved oxygen at just 2.8 ppm and light can penetrate only 2 feet
- 1998 City dredges canal, extracting 2000 tons of contaminated mud
- July 1998 Mayor Giuliani supports Brooklyn Commons plan, with a 500,000 square foot multiplex and sports center (\$65 million) on the canal on 9.4 acre former post office site; Park Slope neighbors wary of traffic, Rep. Nydia Velazquez wants traffic study; site leased for \$500,000/year +environmental cleanup; plans to use “suburban design in the middle of the city”
- Aug 1998 Real estate investor David Lefkowitz buy 1/2-acre plot off Carroll Street bridge, interested in redevelopment; area residents have “love-hate” relationship with canal, nervous about gentrification, like it as an icon, hate the smell

Schools of killifish have been sited; along with occasional shore birds, crabs, and ducks

Real estate agent says property values have risen more than 40% from 1994-1998, and having no problem selling homes near the canal

Tunnel project now to cost \$10 million; DEP says will improve water quality for animal life, also will reduce stench because sewage will dissolve; others say canal must be completely dredged and sewer runoff dealt with

March 1999 Artist Dennis Lynch docks houseboat on the canal at Lefkowitz's property, who wants to open a restaurant on the canal

Film "Lavender Lake: Brooklyn's Gowanus Canal" written, directed produced by Carroll Gardens resident Allison Prete

May 1999 Flushing tunnel completed; Scotto wants to move onto dredging and repairing the bulkheads

Sept 1999 Ninth street drawbridge reopened to traffic after 5 years of repairs (\$35 million)

Oct 1999 Fifth annual Gowanus Canal CDC dinner attended by 300 community residents and interested supporters; director of the Riverwalk in San Antonio invited to speak

Summer 2000 Oyster company plants seedlings

July 2000 Manhattan High School for Environmental Studies examines biodiversity on the canal, cultivated a bed of mollusks, did water quality testing, collected neighborhood oral histories; found crabs, sea robins, flounder, sea bass; monitoring information shared with the DEC for a study on the waterways; one student describes Newtown Creek as "100 times more disgusting than the Gowanus"

Nov 2000 Head of COE and DEP reps tour the canal by boat, announce a \$3 million cost-share study to evaluate cleanup options on the canal; Rep. Nydia Velazquez was the driving force behind getting the federal government involved via their Hudson-Raritan estuary study

Mar 2001 Brooklyn Commons entertainment complex plan goes bust after three years of talk and planning and even after \$3 million invested in site cleanup, but developer Bruce Ratner filed suit in federal court because said Postal Service was already negotiating with Forest City Ratner (with an option to buy the site) when made millennium deal → 2 years of litigation, Millenium pulls out; Scotto very disappointed

Forest City Ratner would be developing the site for an Ikea; community groups like Community Consulting Services are opposed to the project because of traffic, also Care About the Slope is involved—developing vision for what they do want;

April 2001 Governor Pataki announces \$270,000 grant for the Gowanus, part of \$1mil for seven sites in Brooklyn and Queen (also a \$75,000 grant to Newtown Creek)

June 2001 Owen Foote, creek activist, canoes on the creek; concrete is the only active industry on the Creek

Ratner cuts off negotiations with Ikea, in response partially to community upset and opposition—will talk to another potential tenant; Ben Meskin, president of Care About the Slope said it would still go forward with suit against Postal Service and Forest City, saying that environmental review was inadequate

Dec 2001 \$270,000 in capital improvements of plants, trees, shrubs from the Parks Department (Director Henry Stern) are installed in 4 sites on the canal

Jan 2002 Mayor Bloomberg calls for new life on New York’s shoreline, citing “the underused waterfront of Brooklyn’s Gowanus Canal”

Mar 2002 COE and DEP dedicate \$5 million to do a feasibility study for environmental cleanup of the canal

Buddy Scotto notes “so far, the long-term investment in the canal has been mostly unseen. Now, it’s about ready to bloom. We already have a kayak club and a canoe club.”

June 2002 DEP upgrades equipment in the flushing tunnel (spending the equivalent of \$500,000)

Gowanus Canal CDC and Borough President Marty Markowitz receive \$100,000 in state funds to identify locations for habitat restoration and repair of bulkheads

July 2002 Former post office (which once was a coal processing plant) site at 2nd Ave between 9th and 12th Streets being cleaned of environmental contaminants, including benzene; to be redeveloped by Forest City Ratner into a Lowes; Gowanus Canal CDC holds meeting to discuss the project at St. Mary’s Star of the Sea Church

Sept 2002 “Gowanus Canal has attracted hodgepodge use by kayakers”

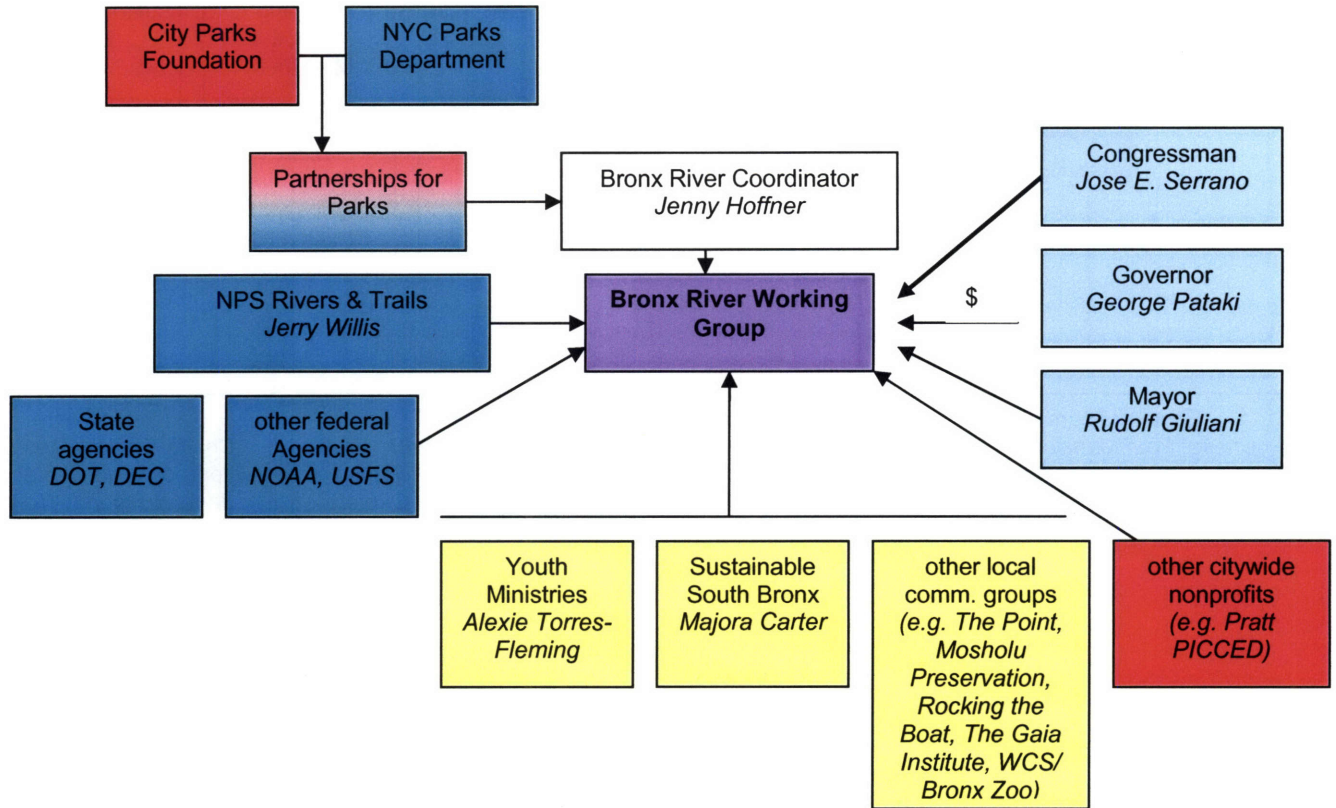
Developers planning the first apartment building son the canal; filed requests to Board of Standards and Appeals to convert manufacturing buildings into rental apartments; Gowanus Canal CDC supports the conversion

- Owner of warehouse on the canal says “at least six to seven times a week someone rings my bell asking if there are apartments available”
- Dec 2002 Lowes makes progress with community negotiations, makes concession to provide waterfront walkway; planning to open Spring 2003
- Mar 2003 KeySpan makes Voluntary Cleanup Agreement with DEP to study contamination at their site at Smith and 5th Streets (a former gas plant); GCCDC hopes the site will become affordable housing after it is cleaned up; current tenant Ferrara Brothers Building Materials hopes to remain
- May 2003 COE and DEP Gowanus Canal and Bay Ecosystem Restoration study underway; team found snails, glass eels, and juvenile shrimp; mentions that oysters have been introduced, jellyfish, bluefish, cormorants, ducks, and egrets have been spotted
- Red Dive, an artist group, performs “Peripheral City: Rediscovering the Gowanus Canal”
- Oct 2003 Gowanus Artists Open Studio Tour VI features more than 70 artists
- Feb 2004 Columbia University Graduate School of Architecture Planning and Preservation students doing plans for the whole canal including vertical hydroponic farm and floating walkways; Buddy Scotto likes the ideas but doesn’t know how to implement or finance them
- There are three new street-end parks on DeGraw and Douglass Streets
- June 2004 “The Gowanus Canal Conference: Perspectives on Environmental Restoration” at Brooklyn College organized by GCCDC, COE, and funded by a grant from Con Edison, features 200 researchers, community leaders, elected officials and environmental advocates
- DEP finalizes plans for \$40 million upgrade to the flushing tunnel, changing from a single to a triple propeller
- Sept 2004 Urban Divers begins making dives in the Gowanus Canal, including in a celebration of National Estuaries Day; and they team up with biologist and neuroscientist to analyze the effect of chemical pollutants on bio organisms in the canal
- Hong and Li LLC secure permits for a five story hotel on Union Street between 3rd and 4th Aves, near a stone crushing plant and a casket maker; Southwest Brooklyn Industrial Development Corporation says this is encroaching on the 400 industrial firms in the area

- Nov 2004 Gowanus Village development of 350 condominiums on three acres between Carroll and 3rd Streets is advertised by Africa Israel Investments Ltd and Boymelgreen developers' website (in the very preliminary stages); developers applied for DEC brownfield cleanup program, but the development would require a zoning change
- March 2005 Alex Figliolia contacts Community Board 6 to find out about buying land behind his property and along the canal; triggering an investigation of the now-filled-in 1st Street Turning Basin; both properties are purchased by Boymelgreen, which begins a debate over the history, ownership, and jurisdiction over the basin
- GCCDC presents comprehensive community plan addressing restoration, development of residential and mixed-use zones, and canal access rights at public meeting at Carroll School; plan requires developers to use green technologies and is "very ambitious"; Department of City Planning is exploring the approach
- April 2005 Urban Divers and Gowanus Dredgers hold Fifth Annual Gowanus Spring Clean-Up

APPENDIX 4: ORGANIZTIONAL CHARTS

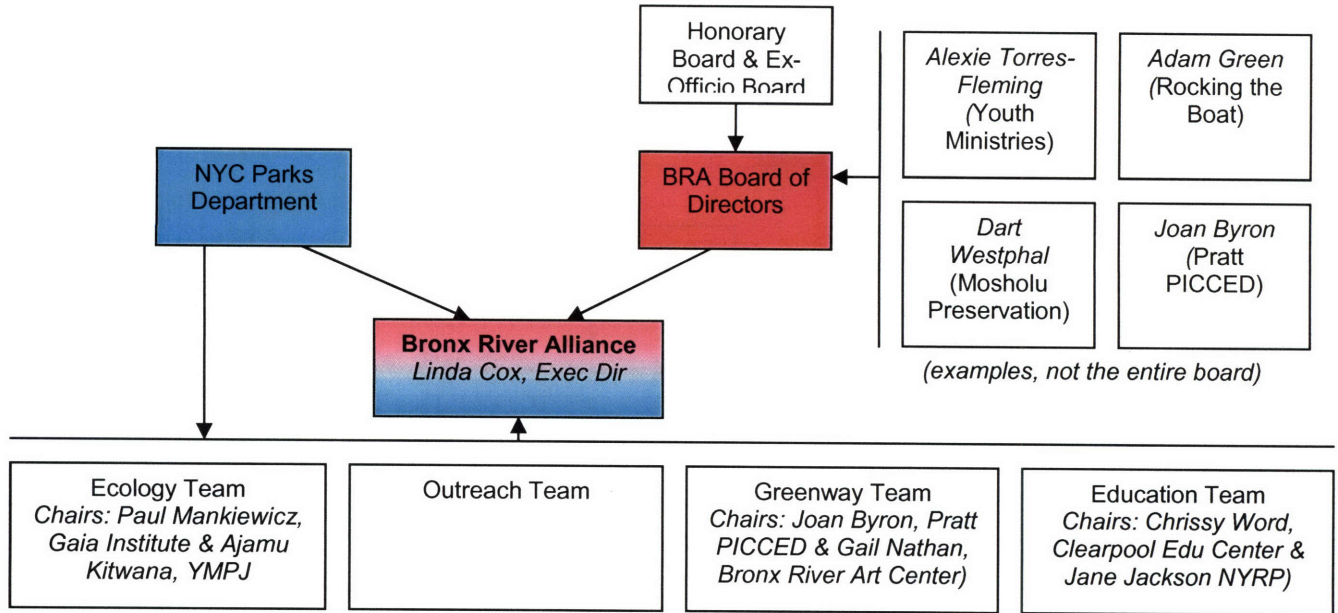
Bronx River Working Group Organizational Chart



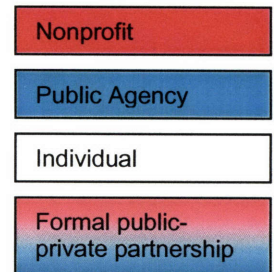
LEGEND



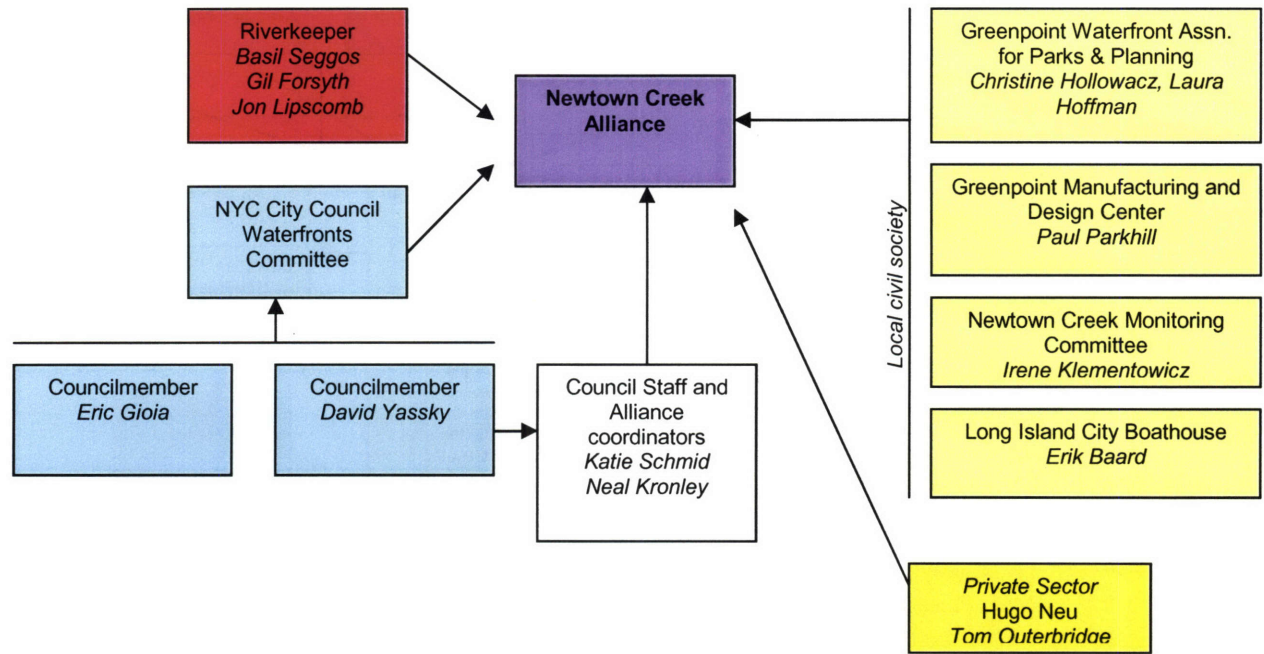
Bronx River Alliance Organizational Chart



LEGEND



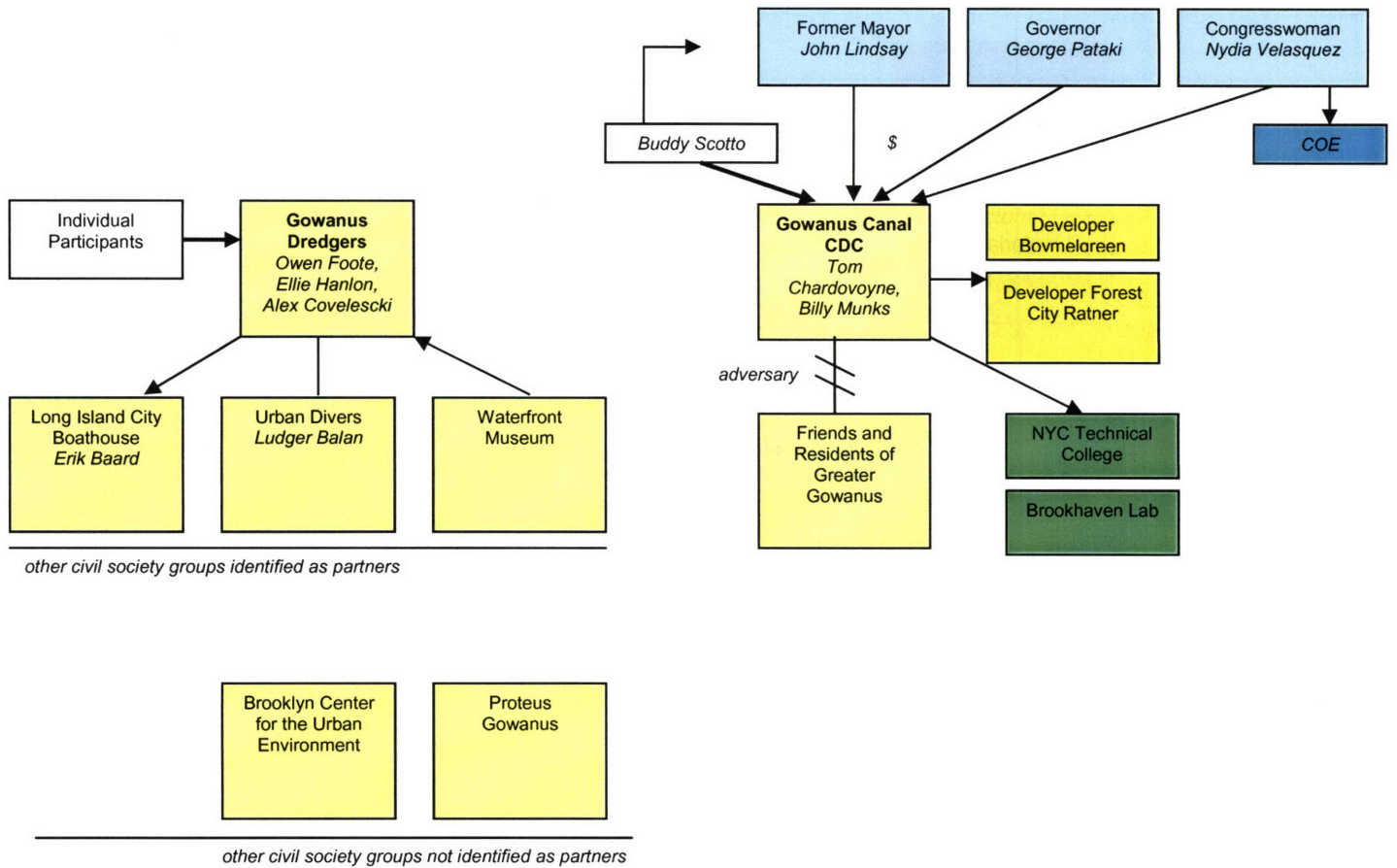
Newtown Creek Alliance Organizational Chart



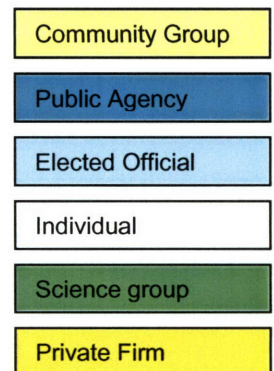
LEGEND

- Citywide Nonprofit
- Community Group
- Elected Official
- Individual
- Informal Alliance
- Private Firm

Gowanus Canal Organizational Chart



LEGEND



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