# The Intersection of Environmental Planning and Social Justice: Denver's Platte River Greenway

by

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## ABSTRACT

Environmental justice activists and researchers in the last several decades have drawn public attention to the disproportionate exposure to environmental risk (primarily toxicity) that low-income communities and communities of color experience. The environmental justice movement has devoted much less attention to the broader array of environmental issues that affect the welfare of low-income and minority communities. These include risk from natural hazards (like flooding), access to open space, recreational opportunities, and livability. Environmental planning affects and can enhance justice by reducing risks and providing benefits (including benefits not traditionally associated with the environment, such as employment opportunities). I consider planning process issues, community building, use of space, economic issues, safety, livability, and cultural issues to understand the full range of justice implications of environmental planning.

This thesis examines the planning and development of the Platte River Greenway in Denver to understand how environmental planning practice relates to justice. Initially planned and developed in the mid- to late-1970s, the Platte River Greenway is a 10.5-mile stretch of trails and pocket parks along an urban river that runs near many low-income and minority communities. The Platte River Greenway contributed to social justice in a number of ways. The planning process, however, did not explicitly engage justice as a goal. The one point early in the process when justice received explicit attention illustrates how such consideration can lead to greater parity in environmental benefits for disadvantaged communities. Based on this case, the thesis argues that justice should be a more explicit goal in environmental planning practice. The thesis offers recommendations for how environmental planners can actively frame and manage environmental planning processes to advance social justice.

Thesis Supervisor: Anne Whiston Spirn
Title: Professor of Landscape Architecture and Planning

# Preface

I decided to write this thesis because of my interest in the social implications of environmental planning. I think that environmentalists and environmental planners often do not fully consider how their work affects social justice. In my view, this is a mistake for two reasons. First, I do not think it is ethical to pursue environmental measures that push costs onto disadvantaged groups. Second, environmental planners may miss important opportunities to form strategic alliances with social justice advocates.

Cooperation between environmentalists and social justice advocates is especially important as we come to more highly value environmental quality in cities. Making cities livable places with high-quality natural landscapes is necessary to curb urban sprawl; otherwise, people will continue to flock to the greener suburbs. Social justice also demands better environmental quality for disadvantaged urban neighborhoods. Improving natural systems and landscapes in urban areas confronts environmentalists with unfamiliar social issues, however. Environmentalists must work with social justice advocates to effectively tackle this problem. I hope in this thesis to bring the worlds of social justice advocates and environmentalists a bit closer together by showing how environmental projects can advance social justice.

Studying justice in the case of the Platte River Greenway engaged me in an interesting set of research issues that I would like to mention. First, I found myself becoming personally involved in my research when I heard complaints about perceived injustices. I became a participant-observer in the greenway story after a neighborhood leader complained to me about the City's neglect of his neighborhood by discussing these

concerns with a city official, who then promised to look into these issues. In this way, my research moved away from the traditional "detached observer" ideal.

Next, the process of studying justice engaged me in a broad set of social issues. Justice is related to many different social, economic, cultural, and physical factors and processes. I found that I could not meaningfully study justice in the greenway without addressing some of the other issues affecting neighborhoods, such as land uses, the transportation system, and environmental contamination in other locations. However, time constraints forced me to focus on the greenway.

Finally, conducting interviews related to justice was challenging. Interviewees involved in justice-related decisions may have falsely attributed actions to justice concerns in order to improve their image or because of a subconsciously selective memory. Some interviewees seemed sensitive about answering justice-related questions, maybe because they worried that I would pass judgment on them. Several people I interviewed about the greenway suggested that I was asking certain questions in order to prove that injustices took place, which was not my intention. Some interviewees who were responsible for greenway planning were quite defensive about their contributions to justice/injustice, and did not answer questions in the sort of nuanced manner that would have shed the most light on my inquiry. These experiences led me to conclude that it is sometimes necessary to phrase questions in a somewhat oblique manner and to disguise the real aims of research. However, taken too far, misleading the interviewee about the purpose of research may be unethical. Despite these difficulties, I found the process of studying justice to be rewarding because it let me study the heart of what planning should be about.

I would like to thank my advisor, Anne Whiston Spirn, and my two readers, David Laws and Raul Lejano, for their guidance on this project. I am also very appreciative of the people I interviewed about the greenway story for their generosity with their time. I particularly want to thank Andrew Wallach, Jeff Shoemaker, and Bob Searns for their help. Finally, I would like to acknowledge the support of the MIT "green thesis group": Jonna Anderson, Trisha Miller, Shanna Wasserman, Adam Varat, Jen Uncapher, Ambika Prokop, and Noah Maslan.

# Introduction

The last several decades have witnessed the rise of the environmental justice movement. In contrast to traditional environmentalism, environmental justice activists and researchers have drawn public attention to the disproportionate level of environmental risk (primarily related to toxicity) in low-income communities and communities of color. My thesis argues that a wider range of environmental issues, including risk from natural hazards, open space provision, recreational opportunities, and livability, are also environmental justice issues.

My research is designed to examine the relationship between environmental planning and justice in disadvantaged communities. To examine this relationship, I analyze the planning and development of the Platte River Greenway in Denver, Colorado. The South Platte River, which passed through a number of low-income and minority communities, had become a squalid industrial and transportation corridor by the 1970s. The river's pattern of severe flooding threatened neighboring communities. In 1974, Denver Mayor William McNichols launched the Platte River Development Committee, headed by an influential state senator, Joe Shoemaker. The committee, which later became a foundation, worked to create a greenway along the length of the river, including a biking/hiking trail, pocket parks, and boating facilities. The current mayor, Wellington Webb, has significantly enhanced the greenway since his election in 1991.

In examining the Platte River Greenway, I consider environmental risk, environmental benefits, and other social justice issues that environmental planning can affect. I identify procedural and substantive justice implications related to the planning

process, community building, use of space, economic issues, safety, livability, and cultural issues. I find that the Platte River Greenway was largely, but not entirely, successful in advancing justice in neighboring communities. It is significant that planners generally did not adopt justice as an explicit goal or subject of discussion in the greenway planning process. However, the discussion of fairness during one critical decision-making phase did contribute greatly to the advancement of justice in the outcome.

I argue that justice should be a clear goal of environmental planning. There are many reasons for omitting justice from planning discourse: environmental planners may not be aware of all the justice implications of their work, explicitly discussing justice can lead to time delays and political complications, and there is no established framework for discussing justice in planning. However, adopting justice as an explicit goal of environmental planning will lead to more fair outcomes.

Chapter 1 of the thesis introduces the environmental justice movement, the theory of justice on which I base the thesis, my research question, and the case study methodology. In Chapter 2, I provide background information on river planning, the greenway model, and the South Platte River, with a focus on justice-related issues. I also briefly discuss the major players in the greenway story. Chapter 3 provides a justice-focused account of the Platte River Greenway story. Chapter 4 presents my conclusions about the relationship between the greenway and justice, the correlation between discussion of justice and justice outcomes, and implications for environmental planning practice.

# Chapter 1: Literature Review and Methodology

This chapter begins with an overview of the environmental justice movement. I suggest that this movement has not given due attention to certain environmental issues affecting low-income and minority people, including vulnerability to natural hazards and environmental benefits. I argue that both environmental protection and environmental benefits fit into a theory of justice. Next, I introduce my research question about the relationship between environmental planning and justice. I offer a framework for thinking about the justice implications of environmental planning that includes issues of environmental risk, environmental benefits, and other social justice issues. The chapter closes with introducing the methodology for my case study of the Platte River Greenway.

## *Environmental Justice and Community Planning*

### *The Environmental Justice Movement*

The environmental justice movement started with local activism oriented towards addressing "hazardous ecological circumstances" in low-income and minority communities. (Harvey, 1997: 88) Bullard cites a 1982 struggle in Warren County, North Carolina as the initiation of the environmental justice movement. (1994) Protestors in Warren County, a mostly African American area, challenged the selection of the county as a burial site for highly toxic PCBs. The environmental justice movement fused together aims of the civil rights movement and the traditional environmental movement, which had developed separately. (Foreman, 1998)

The environmental justice movement represents a break from traditional environmentalism. Minorities and the poor generally have not participated in the overwhelmingly white and middle-class traditional environmental movement, or the earlier conservation movement. (Foreman) The commonly held perception (among environmental justice activists) that the foremost national environmental organizations have failed to "integrate issues of race and class in their political discourses and actions" helps to explain this lack of participation. (Peña and Mondragon-Valdéz, 1998: 312) Environmental justice activists have criticized mainstream environmental organizations for their top-down organizational structures and a lack of racial and ethnic diversity on executive boards, staff, and among their constituency. (Peña and Mondragon-Valdéz) According to critics, this homogeneity has led to a focus on issues primarily of concern to the white middle class, such as global warming, conservation, and overpopulation, rather than issues of concern to the poor and minorities related to poverty and inequity. (Peña and Mondragon-Valdéz)

The environmental justice movement's "core claim" is that "a variety of environmental burdens have fallen disproportionately on low-income persons and communities of color." (Foreman, 1998: 2-3) Environmental burdens include toxic waste sites, polluted air and water, dirty jobs, and transportation inequities. Environmental justice activists and researchers have focused attention on disproportionate exposure to pollution and toxicity. Proponents of environmental justice argue that underenforcement of environmental protection laws in low-income and minority communities causes and perpetuates these inequities. (Bullard)

## *An Expanded Understanding of Environmental Justice*

### *Substantive Justice*

"Environmental justice" activism and research have not devoted significant attention to a number of environmental issues that disproportionately affect people of color and low-income people. (Swanston) These issues include risk of flooding and other natural hazards, recreational opportunities, access to natural landscapes, the aesthetic quality of landscapes, and livability in low-income and minority communities. (While people in low-income and minority communities may have organized around these issues, this activism is not generally labeled "environmental justice.")

Low-income and minority people who live in flood-prone areas, on land vulnerable to erosion, or in non-durable housing experience particular risk of such natural hazards as flooding, mudslides, and hurricanes. The historical pattern of poor people living in permanent or temporary housing along rivers contributes to this danger. An example of the infrequently recognized risk of natural hazards to disadvantaged communities is the pattern of neglect and arson on low-lying, buried floodplain areas in the Dudley Street neighborhood in Boston. (Spirn, 1998) A variation of the natural hazards problem is subsidence caused by poor hydrological planning, such as in the West Philadelphia neighborhood of Mill Creek, which was built on top of a buried floodplain. (Spirn, 1998)

Low-income and minority communities have suffered from a shortage of parks and open space. "Most of the public funds and semipublic philanthropic efforts devoted to open-space preservation [in the 1960s through mid-1970s] benefited the well-off who

lived [outside urban areas]. Very little of the newly acquired open-space land appeared in the inner city or older suburbs, despite a light sprinkling of vest-pocket parks here and there. The charge of elitism was leveled at the land-savers, and, in hindsight, perhaps accurately so." (Little, 1990:32) The fact that people involved in open space acquisition efforts in the 1960s "tended to be white, middle class, and suburban" helps to explain why land acquisition benefits largely flowed to the middle and upper classes. (Little: 33) In turn, the inequitable flow of benefits may have led to a sense of resignation on the part of low-income and minority people, and thus may have discouraged disadvantaged communities from joining and shaping the open space acquisition drive.

The lack of open space in low-income and minority areas means that it has been difficult for poor people and minorities to take part in a number of recreational activities, such as walking, bicycling, fishing, and sports requiring playing fields. (Swanston) This is significant because recreational opportunities are a predictor of community satisfaction and quality of life. (Tarrant and Cordell, 1999) Moreover, lack of open space and poor maintenance of open space in low-income and minority communities mean that these communities have had fewer opportunities to enjoy natural landscapes of high aesthetic quality. Disadvantaged communities' lack of access to natural areas may negatively affect public health. (Kaplan and Kaplan, 1973) Evidence that there have been disproportionately few access points to water resources and lower water quality goals in some low-income and minority communities is particularly relevant to this thesis. (Swanston)

The environmental justice issues of livability and aesthetic quality of communities are closely linked to this discussion of natural hazards, open space, and recreation. Many

low-income and minority communities suffer from environments that are not livable. Abandoned buildings and properties, trash, devastation caused by natural hazards, poor maintenance of public areas, lack of open space, excessive noise, odor problems, and infrastructure of a non-human scale, among other problems, contribute to non-livable, even squalid, conditions in some low-income and minority communities. Such conditions can undermine community pride and activism.

*Procedural Justice*

A central issue of the environmental justice movement is that low-income and minority communities often do not participate meaningfully in environmental planning processes. Planning literature recognizes that many planning processes, especially in low-income and minority communities, have featured one-way dialogues that do not empower residents to affect the planning process. Arnstein's classic work on public involvement in planning notes the "critical difference between going through the empty ritual of participation and having the real power needed to affect the outcome of the process." According to Arnstein, the least meaningful forms of participation are manipulation and therapy, which are designed "not to enable people to participate in planning or conducting programs, but to enable powerholders to 'educate' or 'cure' the participants." When planners simply inform and consult affected communities, citizens can be heard but "they lack the power to insure that their views will be *heeded* by the powerful." Informing and consultation, as well as placation, simply represent varying levels of tokenism. Meaningful citizen participation involving real decision-making "clout" takes

place when affected citizens can form partnerships with planners and when planners delegate power and even control to citizens.

Cultural and communication issues are particularly relevant for understanding the lack of meaningful citizen involvement in environmental planning in low-income and minority communities. Briggs notes that cultural differences in communication styles may impede understanding between planners and affected citizens. Tauxe shows that planners may privilege bureaucratic forms of expression over other forms of expression that many local residents may use. If planners do not overcome this disconnect, they may fail to adequately understand or integrate community knowledge and concerns into plans. Moreover, such a disconnect may lead community members to view planners as arrogant, patronizing, or untrustworthy; these sentiments may limit the productivity of future interactions between a community and planners. To advance environmental justice in disadvantaged communities, affected citizens and planners must engage in clear communication and citizen voices must carry the power to influence decisions.

*An Integrated Approach*

My thesis argues for a broad theoretical understanding of environmental justice that includes the dimensions of toxicity risks, natural hazards risks, open space, recreational opportunities, and livability, as well as political power. The Native American conception of environmental justice, which "includes nature and land, land use and management, environmental benefits which flow from proper land management, and of course, sovereignty," lends support to this broader understanding. (Swanston: 545) We can also find support for this view of environmental justice in ecofeminist theories

that call for a comprehensive analytical approach to understanding planning issues. Such an understanding of environmental justice fits with a broadened understanding of the environment itself, which includes factors such as quality of life, self-identity, and autonomy. Jane Jacobs' argument about the importance of considering local community context when designing open space is an example of a broad understanding of "environment." (1961: 98)

Considering environmental benefits as part of environmental justice also is a step for the research community towards equitable consideration of low-income and minority communities. Conducting research on environmental benefits in disadvantaged communities acknowledges the importance of these issues to disadvantaged communities and helps to correct the historical imbalance of environmental amenity research focused on communities of higher socioeconomic levels.

### *An Understanding of Justice*

Justice relates to what Rawls calls "primary goods": things that everyone wants and that are central to people's abilities to lead fulfilling lives. Rawls argues that rights and liberties, powers and opportunities, income and wealth, self-respect, and health are primary goods. (1971) These goods are important because they are essential to people's ability to develop and follow a plan for their lives. Primary goods can be distinguished from other kinds of goods because people can agree that everyone is entitled to primary goods. The deprivation of primary goods to certain groups of people is a problem that is unfair and demands public attention.

The question of justice is relevant to environmental planning processes because these processes govern primary goods. The environmental justice movement has provided a useful starting point for thinking about how justice relates to environmental planning. Environmental justice advocates and many others argue that the ability to live in a safe environment is a primary good. An example is the argument that it is unfair to force the African American residents of Warren County to live with PCBs. Safety from natural hazards is a less frequently recognized variation of this kind of primary good. The environmental justice movement draws attention to the fact that low-income and minority communities have suffered from an inequitable level of environmental protection.

My thesis argues for an extension of this conception of environmental primary goods to what are commonly called "environmental benefits." The ability to live in a non-squalid environment, to enjoy recreational opportunities, and to access natural landscapes should not be reserved for certain segments of society, because these "benefits" are central to many people's ability to lead fulfilled lives. Low-income and minority communities, in addition to bearing a disproportionate burden of environmental risk, have suffered from a scarcity of environmental benefits.

Justice issues related to environmental protection and benefits exist on substantive and procedural levels. An example of substantive justice is safety from flooding. Procedural justice means that communities should have opportunities for meaningful participation in environmental planning processes that relate to primary goods. The right to political participation is a primary good both because political participation is a human

right and because political processes lead to the determination of substantive justice outcomes.

In this thesis, I also discuss social justice issues that are separate from, but related to, environmental justice. For example, I discuss how environmental planning processes can lead to decisions to create new economic development opportunities. Many economic, cultural, and community building implications of environmental planning processes are justice issues, but not specifically "environmental justice" issues.

## *Research Question*

The core question of my thesis is how justice can and should be incorporated into environmental planning processes. My literature review suggests that environmental planning generally is based on an incomplete vision of the environment and environmental justice. While environmental justice has focused on environmental risk, a number of environmental benefits are also central to justice in communities. Another important component of my research relates to other justice effects of environmental planning, such as economic effects.

To guide my analysis of the relationship between environmental planning and justice, I offer an outline of how synergies and sources of tension between local environmental planning and justice in neighboring communities may play out in practice. These synergies and sources of tension can be classified generally, though not neatly, into the following categories: the planning process, community building, use of space, economic issues, safety, livability, and cultural issues. These categories are intended to cover issues of environmental risk, environmental benefits, and other justice-related

effects of environmental planning. (The table below presents the information in a concise manner.)

| | Synergies | Sources of Tension |
|---|---|---|
| Planning Process | • meaningful participation in planning processes | • non-inclusive or manipulative planning processes |
| Community Building | • development of community political leadership and networks<br>• interaction between different socioeconomic and ethnic groups<br>• community gathering spaces<br>• educational opportunities | • deflection of attention from other neighborhood issues<br>• use of funds that could support other programs important to neighborhoods |
| Use of Space | • public access to natural landscapes<br>• recreational opportunities | • elimination of abandoned or unplanned spaces that serve as refuges and playgrounds<br>• restrictions on use of land<br>• recreational opportunities that do not benefit disadvantaged communities |
| Economic Issues | • economic development and new jobs<br>• transportation improvements, including access to jobs<br>• construction/ maintenance work for minority- or women-owned firms or local youth | • gentrification<br>• elimination of jobs by forcing or encouraging local industry to close |
| Safety | • reduction of flood risk and damage<br>• improved public health because of reduced pollution<br>• reduced crime because of social monitoring | • dangerous conditions because of poor maintenance or unsafe remediation or construction activities<br>• increased risk of flooding |
| Livability | • aesthetic benefits<br>• reduction in noise/odor problems<br>• general better perceptions of neighborhood and community pride | • perceived aesthetic problems<br>• noisy or disruptive remediation/construction<br>• potentially bothersome wildlife<br>• increased parking and traffic from visitors to area |
| Cultural Issues | • design that reflects and generates awareness of local culture and history<br>• opportunities for artistic expression | • intrusion of the public into a formerly semi-private realm<br>• design that does not reflect and respect the culture/history of nearby communities<br>• unwelcoming public spaces |

## *Possible Synergies*

### *Planning Process*

Meaningful participation in environmental planning processes is a component of procedural justice that enables people to advance their interests in primary goods. Participation can politically empower residents of disadvantaged communities by building political leadership, enabling the formation of political networks, and enabling citizens to build relationships with planners and politicians.

### *Community Building*

Environmental planning processes can promote social interaction and understanding between members of different socioeconomic and ethnic groups. Environmental projects also can create community gathering places where residents can meet for social, recreational, or political activities that build relationships. The development of social relationships within and outside a community can build a foundation for communities to better advance their interests. Residents also can learn about local history, culture, and environmental processes through participation in planning and construction activities.

### *Use of Space*

Environmental planning can lead to greater public access to natural landscapes, rectifying the historical imbalance of access in disadvantaged urban neighborhoods.

Environmental projects can enable residents to participate in a wide array of recreational activities, including hiking, biking, boating, fishing, and team sports.

*Economic Issues*

Environmental projects that attract new firms to an area can provide jobs to local residents and generate tax revenue for a community. Environmental projects can provide new transportation options (often bike routes) for residents, and thus provide greater access to jobs, stores, services, and amenities. Locally owned, minority-owned, or women-owned firms may be awarded contracts to complete remediation or construction work for environmental projects. These economic benefits advance the primary goods of income and wealth in disadvantaged communities.

*Safety*

Environmental planning can reduce neighborhoods' risk of natural hazards, including flooding, mud slides, subsidence, or hurricanes. Where planning lowers levels of air, soil, or water pollution, communities may benefit from decreased public health problems. Formal or informal social monitoring of newly planned spaces can reduce crime.

*Livability*

Environmental projects that clean up polluted areas or implement new designs may lead neighboring residents to consider spaces to be more aesthetically attractive. Projects that lead to decreased noise levels (through earth berms separating homes from

roadways, for example) or decreased odor levels (through reduced pollution, for example) enhance the livability of neighborhoods. Livability contributes to better community perceptions of neighborhoods and community pride; without a minimum standard of livability, residents are not likely to feel a sense of pride in their neighborhood.

### *Cultural Issues*

Projects that pay tribute to neighborhoods' culture and history can generate awareness of and respect for neighborhoods and their residents. Public art in environmental projects can provide opportunities for artistic expression to local residents. Cultural, historical, and artistic projects advance the primary good of self-respect in communities.

## *Possible Sources of Tension*

### *Planning Process*

Environmental planning processes can weaken or simply fail to strengthen community political power by not meaningfully including community members in discussion and decision-making. Planning processes that co-opt community leaders may impede communities' abilities to advance their interests.

### *Community Building*

A variation of the potential problem of co-opting local leaders is intentionally or unintentionally deflecting attention or financial resources from other important

neighborhood issues. Advancing an environmental planning goal while detracting from a neighborhood's ability to address other priorities may be unjust.

*Use of Space*

Environmental planning may eliminate abandoned or unplanned spaces that some community members value. Such spaces may serve as temporary homes or as playgrounds. Another unwelcome change may be restrictions on use of space, possibly for ecological restoration purposes. It may not be fair to use space and resources in disadvantaged communities to create recreational amenities that local residents cannot enjoy because of financial constraints.

*Economic Issues*

Environmental projects can lead to gentrification, which imposes unfair costs on disadvantaged communities. Environmental planning that forces or encourages local industry or commercial uses to close may discourage local economic development or eliminate jobs.

*Safety*

Environmental projects involving remediation or construction can endanger the health of residents in a variety of ways, including raising contaminated dust or creating temporary unsafe conditions for children to play. Poor maintenance can also lead to hazardous conditions, such as places for people to fall while hiking or biking, or

increased vegetation that can increase flood risks. Other measures intended to "beautify" or increase recreational opportunities on waterways can increase flood hazards.

*Livability*

A number of environmental planning measures may lead neighboring residents to perceive their neighborhood as less livable. Residents may not like aesthetic aspects of some projects, such as wet meadows. Noise or disruption during remediation or construction activities may bother neighbors. Wildlife, such as raccoons, may represent unwelcome additions to a neighborhood. Finally, new visitors to the area may bring more traffic and parking problems to neighborhoods.

*Cultural Issues*

New environmental amenities may bring visitors to neighborhoods that would prefer to maintain a degree of cultural separation. The design of spaces may fail to recognize communities' history and culture. Finally, planners may deliberately or unintentionally design public spaces that do not welcome neighboring residents.

## *Methodology*

To investigate my research question, my thesis examines the Platte River Greenway in Denver, Colorado as a case of environmental planning practice. This case is particularly interesting for a study of social justice because it fits into the growing greenways movement, which purports to represent environmental goals *and* social goals. As one of the earliest greenways in the United States, the Platte River is viewed as a

model for the approximately 80 other greenways in Colorado and for other greenways around the country. (MacDonald; Searns) For this reason, an examination of the success of the greenway in serving needs of disadvantaged communities may lead to insights into other greenway projects, as well as insights into environmental practice in general.

The Platte River Greenway is particularly appropriate for a social justice examination because it runs in Denver through low-income and minority neighborhoods that have historically suffered from an inequitable level of environmental protection and benefits. Studying the Platte River is appropriate for my exploration of a broad range of justice issues, because toxicity, flooding, open space, recreation, and livability issues figure prominently in the greenway.

My research is based on interviews with planners and community residents, as well as written documentation of greenway planning and personal observation. I observed the greenway and conducted interviews in person during a site visit between January 22, 2001 and January 26, 2001. Other interviews were conducted over the telephone or by email between the period of December 15, 2000 and May 7, 2001. I chose interviewees who were or who represented major players in the greenway development, as well as leaders of neighborhoods affected by the greenway development and detached observers of the process.

I structured interviews of planners around the issues of the history of the process, the planners' goals, the role of affected neighborhoods in the planning process, strengths and shortcomings of the process, support and opposition for the project, conflicts during the project, and the project's effects. I asked neighborhood members about the history of the process, the neighborhood's role in the planning process, how the greenway has

served or conflicted with local interests, strengths and shortcomings of the process, and benefits and problems of the greenway. I asked detached observers about issues drawn from both pools of questions, depending on the particular observer's role and expertise. I also allocated portions of the interviews for random observations, reminiscing, and reflection by the interviewee.

I organized my field notes into the following categories: factual historical information, goals and methods of greenway planners, goals and methods of neighborhood residents, substantive justice outcomes, and procedural justice outcomes. I then analyzed interviews qualitatively by classifying statements under these themes. Focusing on justice aspects of the greenway process and project, I integrated interview material with personal observations and written documentation to analyze the case.

# Chapter 2: Context and History of the Platte River Greenway

This chapter explains the context within which the Platte River greenway project has unfolded. First, an overview of the recent history of urban rivers and their flood control describes the national patterns into which the South Platte falls. Next, I examine the history, strategies, and goals of the greenway model. The chapter then turns to the history and conditions of the Platte River and its adjoining Denver neighborhoods. The chapter concludes with an outline of the major players in the greenway story.

## *Planning and Justice on Urban Rivers*

### *Environmental and Social Conditions*

The history of American urban rivers shows a strong link between environmental conditions and social justice. For most of the last century, urban rivers have served as commercial and transportation arteries, lined with highways, railroads, and heavy industry. These land uses along urban rivers cut neighborhoods off from the rivers. Little argues that "river corridors became a kind of no-man's land, dividing cities, economically and socially, rather than uniting them – the poor on one side, the rich on the other." (1990: 91)

Given the land uses lining rivers, it is not surprising that urban rivers became very contaminated by the mid-1900s. Sewage, waste from nearby industries, and run-off pollution flowed through rivers. The four- to five-story-tall spontaneous fire on Ohio's Cuyahoga River in 1969 represents the severity of environmental conditions on rivers.

(Salvesen, 1997) For many of the disadvantaged communities along river corridors, dirty rivers posed public health threats and contributed to general squalor.

The growing environmental problems of many urban rivers created an incentive for cities and industries to turn elsewhere for economic and open space development opportunities. Industries began to leave the fouled riverbanks for more pastoral, uncontaminated settings along suburban roadways. (Salvesen) The exodus of industry to outlying areas further contributed to the distressed social conditions in many river-abutting neighborhoods by shifting jobs to areas difficult to access for urban residents, many of whom do not own vehicles. Many industrial landscapes along rivers were left abandoned and contaminated, further contributing to squalid conditions in adjacent neighborhoods.

In recent decades, many cities, including Portland, Oregon, Chicago, Providence, and Hartford, have made attempts to reclaim their rivers. (Salvesen) River reclamation often has been a first step towards urban renewal and economic development. Concurrently, rivers have begun to serve as symbols of their cities. A noteworthy example of urban river reclamation is San Antonio's River Walk, which served as a model for the Platte River Greenway. River reclamation represents an opportunity for revitalization of disadvantaged neighborhoods that have borne the brunt of distressed conditions in river corridors; however, river reclamation has not generally been framed in social justice terms.

*Flood Control*

Flood control projects on urban rivers have been a major determinant of the character and safety of river-abutting neighborhoods. Because flood control decisions govern the primary goods of health and wealth in disadvantaged river-abutting neighborhoods, flood control is clearly tied to social justice. Strategies for flood control have served social goals to varying degrees of success. Frederick Law Olmsted's 1880s plan for Boston's Back Bay Fens established wetlands and created open space along the Muddy River, serving sanitation, flood control, and recreational purposes. (Spirn, 1984) The plan's orientation towards serving multiple objectives recognized the numerous ways in which river design affects neighboring communities and contributes to the livability of these communities.

However, most flood control projects of the 1900s did not reflect Olmsted's principles. Especially during the 1950s and 1960s, the "standard practice ... for reducing flood damage was to construct costly and environmentally damaging reservoirs and stream channels that carried more water at a higher velocity than could be carried by the natural channels." (Riley, 1994: 217) These local flood control projects used concrete and hydraulic engineering that was "rectilinear and non-ecological." (Riley: 219) Critics of these projects argued that although the nation had spent billions of dollars on dams, levees, and channels for flood control, economic loss from floods continued to escalate. (Wright and Taggart, 1976) According to these arguments, standard flood control projects of this period negatively affected river-abutting neighborhoods by degrading the natural landscapes available to these communities while failing to protect people from flood risks.

Critics of the standard flood control practices have argued for multi-objective flood control planning in Olmsted's model, noting that in many cases it costs less money to buy land than to build structural controls. (Wright and Taggart) Advocates of flood control through land preservation have argued that non-structural flood plain management could "help achieve many diverse urban objectives such as clean water in streams, open space, parks, sewage treatment, bike and pedestrian paths, aquifer recharge, water-based recreation and educational facilities." (Wright and Taggart, 1976: 64) Many of these urban objectives could directly benefit disadvantaged river-abutting neighborhoods by contributing to access to natural landscapes, recreational opportunities, and cleanliness, in addition to protection from floods. An early example of non-structural flood control was the Natural Valleys Storage Project in Massachusetts. This Army Corps of Engineers project reduced the threat of the Charles River flooding Boston by purchasing and preserving upstream wetlands starting in 1977. (Spirn, 1984) By 1980, "the nation's approach to its flooding problem [was] changing – the trend being away from reliance on structural protection and towards efforts to influence flood plain use." (Royer, 1980: 2)

## *The Greenway Model*

Greenways are a growing trend in environmental planning practice. Greenways are linear open spaces, usually established along natural corridors, converted railroads, scenic roads, or waterways. They may be natural or landscaped, but usually provide a course for pedestrian or bicycle passage. Greenways often connect parks, nature preserves, cultural features, or historic sites with each other and with populated areas.

The landscape architect Frederick Law Olmsted invented greenways in the late 1800s, although William H. Whyte is credited with coining the term in the mid-1900s. (Little, 1990) Greenways are central elements in a number of Olmsted's plans, including in Brooklyn, Buffalo, Riverside (Illinois), and the Emerald Necklace in Boston. (Little) In the twentieth century, New York planner Robert Moses further promoted the greenway concept in the creation of numerous parkways. (Little) (However, Moses' top-down method of greenway planning resulted in many unpopular greenways that arguably contributed to social *in*justice.)

Greenways have become especially popular in the past several decades. Forming connections between existing open spaces and making use of undeveloped strips of land has become increasingly important as open space has dwindled in metropolitan areas. Greenways have the advantage of serving both social and ecological purposes. Their high proportion of edge to interior space and their linkage function means that they serve the twin purposes particularly efficiently. (Little)

There are six basic ecological functions of greenways: habitat, conduit, barrier, filter, source, and sink. (Smith and Hellmund, 1993) Explained more fully, greenways can serve as aquatic, riparian, or upland habitat for wildlife, supply clean water, counteract heat buildup in cities, filter out particulate matter from air, interact with adjacent lands to a particularly high degree, provide for animal and plant movement, help biotic communities adjust to global warming, and filter sediments and pollutants from water. (Smith and Hellmund)

Greenways can serve multiple social functions, which may vary depending on their design. They may connect places and people, provide recreational opportunities,

and add aesthetic appeal to places. In addition to these somewhat obvious functions, greenways may encourage informal environmental and social monitoring of areas and contribute to the formation of an environmental ethic. (Leopold, 1949) Public involvement in greenway development is indicative of social benefits stretching across urban/suburban locations and race and class. (Little) "Civic leaders of all kinds representing many interests have become attracted to the greenway movement, in contrast to the [open space activists] of the 1960s who tended to be white, middle class, and suburban." (Little: 33)

Existing literature suggests that, for the most part, local fears about noise, litter, vandalism, traffic, and crime associated with nearby recreational trail use are short-lived and unwarranted. (Tarrant and Cordell) Furthermore, research has suggested that most homeowners have favorable attitudes towards living near a trail, and prefer to live near trails that have been converted from unused railroad lines than near unimproved, unused rail lines. (Tarrant and Cordell)

Little has identified five major types of greenways:

- "Urban riverside greenways, usually created as part of (or instead of) a redevelopment program along neglected, often run-down city waterfronts." The industrial history and significant amount of vacant, low-cost land in these areas has made this type of greenway possible.
- "Recreational greenways, featuring paths and trails of various kinds, often of relatively long distance, based on natural corridors as well as canals, abandoned railbeds..., and other public rights-of-way."

- "Ecologically significant natural corridors, usually along rivers and streams and (less often) ridgelines, to provide for wildlife migration and 'species interchange,' nature study, and hiking."
- "Scenic and historic routes, usually along a road or highway (or, less often, a waterway)."
- "Comprehensive greenway systems or networks, usually based on natural landforms such as valleys and ridges but sometimes simply an opportunistic assemblage of greenways and open spaces of various kinds to create an alternative municipal or regional green infrastructure." (4-5)

The Platte River Greenway primarily falls into the first category of urban riverside greenways, although it also has become part of a comprehensive network of greenways on a metropolitan, and even regional, scale. Urban riverside greenways clearly have numerous social justice implications. They often pass through disadvantaged communities that have suffered from dangerous and dirty environmental conditions and distressed social conditions. Greenways affect neighboring communities in many ways that relate to primary goods, including access to natural landscapes, recreation, and public health. Despite these clear and significant social impacts, greenways are not usually discussed in social justice terms. Rather, they generally are framed in ecological, recreational, and aesthetic terms.

## *History and Conditions of the South Platte River*

### *Social and Environmental Conditions*

As in the case of many urban rivers, environmental and social justice issues have historically converged on the South Platte. Settlers coming west for gold founded Denver in 1858 at the confluence of Cherry Creek and the South Platte River, near current-day downtown Denver. (See Figure 1) Since Denver's early history, the Platte River corridor has been home to ethnic minorities and poor people, including transients. Some river-abutting communities were densely populated working class neighborhoods, while some featured more abject living conditions. (Dorset) "From the late 1870s until the early twentieth century, destitute people were found living along the river in tents and hastily made shanties with little or no heat, suffering continually from malnutrition and [diseases]." (Dorset: 94-95) During the early history of Denver, Italians, Japanese, and Hispanics were the main ethnic minorities living along the Platte. Neighborhoods were interspersed with industrial development from the river's early days, including factories, warehouses, and railroad yards.

The disadvantaged communities along the river have historically suffered from three principal river-related conditions: flooding, environmental contamination, and general squalid conditions. To first address flooding, the South Platte generally has a light flow of approximately 300 cubic feet of water per second; however, during floods, flow per second can increase up to 150,000 cubic feet per second. (Little) Major floods have occurred numerous times since Denver's founding. In 1864, unsuspecting Denver residents were awakened in the night by a "ferocious torrent" which swept over the banks of the South Platte and Cherry Creek, inundating many areas, including disadvantaged

communities. (Dorset, 1977) The flood destroyed many buildings, killed eight people, and spread disease. (Dorset) Major floods in 1875, 1878, and 1935 continued to harm river-abutting neighborhoods. The flood of 1965 was the most devastating in Denver's history and is classified as a 500-year flood. (Little) The flood caused $450 million in damage, wiping out numerous buildings and bridges, and resulting in 12 casualties. (See Figure 2) (Muntz and Wuth; Schwarz, 1993) The South Platte flooded again in 1973, but caused less damage than in 1965. (Searns, 1980) Little flooding has occurred since 1973, in part due to flood control measures.

Meanwhile, river-abutting neighborhoods have borne the brunt of poor environmental conditions on the South Platte. (See Figure 2) The factories and stockyards contributed to pollution of the river since their creation. The river has served as a dump for such materials as "rubber tires, waste oil, stoves, refrigerators, and, in one particularly nasty section, rejected chicken feathers from a bedding factory." (See Figure 2) (Little: 172) At least 250 drains carried pollution, including sanitary sewage, into the river prior to greenway planning efforts. (Joe Shoemaker) Even city agencies contributed to the environmental problems, which indicates the lack of concern for the river. During his tenure as Denver's Manager of Public Works, Joe Shoemaker "went along with the policy that the South Platte was the place when we had something to dump." (Shoemaker, 1981: 41) Public Works dumped salt-laden snow and street sweepings into the river and allowed raw sewage to flow into the river when excess stormwater flooded the sewage treatment system. (Shoemaker, 1981)

The industrial and neglected nature of the river built on the problems of flooding and pollution to create squalid conditions for the disadvantaged communities abutting the

river. This is significant for justice because the river was an important part of the life of neighboring residents, who used the area for recreation and fishing until conditions deteriorated to an unacceptable extent in the 1940s. (Zapien) By the 1970s, the South Platte in Denver became a "right-of-way for highways, industry, and utility lines." (Searns: 382) Indeed, the river was "all but lost amid aging industrial facades, piles of broken concrete, billboards, and viaducts." (Searns: 382) Although the South Platte was the only "natural" resource available to neighboring communities, the worsening conditions led the communities to think that "the river was not a friend." (Zapien) Overall, Zapien considered the river-abutting neighborhood of Globeville "the armpit of Denver."

The socioeconomic composition of the river-abutting neighborhoods today shows that social justice is still a relevant framework for considering river conditions. Fourteen of Denver's 79 neighborhoods abut the South Platte: Globeville, Elyria Swansea, Highland, Five Points, Jefferson Park, Union Station, Sun Valley, Auraria-Lincoln Park, Valverde, Baker, Athmar Park, Ruby Hill, South Platte, and Overland. River-abutting neighborhoods have a lower socioeconomic status than Denver as a whole, with the exception of Union Station. (See Figure 3) Household income in these neighborhoods is relatively low and the neighborhoods have high percentages of children enrolled in free school lunch programs. Several of the neighborhoods have particularly high concentrations of subsidized housing. Composition of schools indicates that there is a particularly high concentration of Hispanic people in river-abutting neighborhoods.

*1965-1973 Flood Control and River Improvement Efforts*

The 1965 flood unleashed an outpouring of support for improving the river to make it more flood-safe, attractive, and environmentally sound. The 1965 flood gave rise to two measures to prevent further flooding: the construction of the upstream Chatfield Reservoir in 1973 and the creation of the Urban Drainage and Flood Control District. (See below.) Denver Mayor Tom Currigan responded to the flood by conducting a study with HUD money. (Shoemaker, 1981) The Denver Urban Renewal Authority carried out the study in cooperation with four consulting firms, under the guidance of five advisory committees and 26 local, state, and federal agencies. (Shoemaker, 1981) The resulting $680,000, 84-page Platte River redevelopment plan, entitled "In Response to a Flood," proposed "massive new apartment buildings and a huge park flanking a completely reorganized riverway" at a cost of $630 million. (Little: 174) The South Platte Area Redevelopment Committee (SPARC) was formed for the implementation of the project, but the commission soon fell apart. (Little) This top-down study process and recommendations geared towards downtown revitalization were not oriented towards reversing the squalor and disproportionate risks in disadvantaged communities.

A controversy over a railroad company proposal to create a 10,000 unit "new town" for the Central Platte River Valley (an area of the river near downtown) led to the formation of another group in 1973 called PARC. (Searns; Bendelow) PARC included several members from SPARC, including chairman Ted Bendelow, a state legislator whose district included the Central Platte River Valley (and who was later to work on greenway planning), as well as a number of civic activists from around the city. (Bendelow) PARC did not include many members of the low-income and minority

communities near the river, which may be partly due to the fact that the piece of land in question was not particularly near any neighborhoods. (Bendelow) PARC applied significant legal and media pressure to the railroad and the City to press for the creation of a huge park on the land instead of the proposed development, "á la Central Park in New York City." (Bendelow) PARC's activism and goals, like that of the City of Denver study, did not give explicit attention to justice issues.

## *Introduction to the Greenway Story*

The following section gives a brief overview of the major greenway players and their actions to provide context for the following account of the greenway story. (See Figure 4 for a map of the greenway.)

### *The Denver Mayor's Office*

Mayor William McNichols created the Platte River Development Commission and initiated improvements to the river shortly after his election in 1974. The next mayor, Federico Peña, did not take great interest in river improvements. Mayor Wellington Webb took office in 1991 and established the Platte River as one of his priorities. Mayor Webb has led an effort of heavy investing in the river since that time.

### *The Platte River Development Commission*

The Platte River Development Commission was formed by Mayor William McNichols in 1974 to work on improving the Platte River. McNichols selected Joe Shoemaker, a powerful state senator, to chair the commission. McNichols and

Shoemaker appointed nine members to the commission representing a broad range of interests and backgrounds. The commission started its work on improving the river with $1.9 million in funding secured by the mayor. Several city staff members, including planners, assisted the commission in its work. The commission became defunct in 1976, when it was reconstituted as the Greenway Foundation.

### *The Greenway Foundation*

The Platte River Development Commission decided in 1976 to establish a non-governmental, tax-exempt foundation called the Greenway Foundation to receive donations and continue implementation work for the Platte River. The commission members became the members of the foundation's board. The foundation maintained quasi-official links with the City of Denver. The foundation is still working on greenway funding and activities.

### *The Urban Drainage and Flood Control District (UDFCD)*

UDFCD was established in 1969 by state law to provide drainage and flood control services for the South Platte River and its tributaries. (Shoemaker, 1981) This regional district was created because of a need for coordination of multijurisdictional flood control issues among the 34 units of local government in the Denver metro area. (Tucker and DeGroot, 1976) The enabling legislation for the district required that UDFCD help local government with recreational and park facilities in its drainageways (including the Platte). (Shoemaker, 1981) UDFCD has five main activities: master planning, floodplain management, design and construction, maintenance, and the South

Platte program. (Kohlenberg) UDFCD, the Greenway Foundation, and other greenway supporters have many of the same interests. UDFCD has favored the creation of trails along the river because this facilitates flood control-related river maintenance. (Kohlenberg)

# Chapter 3: The Story of the Platte River Greenway

This chapter presents the story of Denver's Platte River Greenway. The story starts with the creation of the Platte River Development Committee in 1974 and traces planning and implementation through 1999. (The thesis does not analyze planning after April 1999 because a change in leadership in the mayor's office took place at that time and it is too soon to meaningfully analyze the implications of the leadership change.) The first section of the chapter focuses on greenway planning and development between 1974 and 1990; the second part of the chapter analyzes planning after 1991. The account focuses on social justice implications of the planning and implementation activities. The analysis shows that justice was not generally an explicit concern of the planning process, but that neighboring communities nevertheless largely benefited from the process. (Chapter 4 presents a more structured analysis of the relationship between environmental planning and social justice in the greenway story.)

## *Greenway Planning from 1974 to 1990*

### *Creation of the Platte River Development Committee*

The story of the Platte River Greenway begins with an unexpected visit paid to Democratic Mayor William McNichols by Republican State Senator Joe Shoemaker in June, 1974. At the time of the 1974 visit, Shoemaker served in the powerful position of chair of the legislative Joint Economic Committee. (Little) Shoemaker wished to discuss the possibility of improving the South Platte River with the mayor. He had recently returned from a trip to San Antonio, where he had been "impressed by how the San

Antonio River had been restored and magnificently blended into the city life and business. [He] came back to Denver thinking that [they] should be doing the same thing with the South Platte." (Shoemaker: 29) Shoemaker was particularly well acquainted with the South Platte because he had served as Denver Manager of Public Works from 1960 to 1962. (Shoemaker, 1981)

Unbeknownst to Shoemaker, McNichols also had been thinking about undertaking river improvements, in significant part due to the pressure applied to the City by those opposing the Burlington and Northern Railroad's development proposal. (Bendelow) The City wanted to identify an alternative to PARC's proposal for a huge river-fronting park. The 1973 flood also had heightened the level of interest in making improvements to the river in Denver. (Spirn, 1984) McNichols had decided to launch a Platte River Development Committee and had secured $1.9 million in federal revenue sharing funds for river improvements. (Shoemaker, 1981) (The fact that PARC's park proposal would have cost over $300 million shows that the mayor's sum of money was a small start.) (Schwarz)

Mayor McNichols offered Shoemaker the chairmanship of the new committee. The mayor told Shoemaker the names of two citizens he wanted to serve as members of the committee and asked Shoemaker to select the other seven members of the nine-member citizen committee. McNichols pledged the support of city departments to the committee's work. (Shoemaker, 1981) He also agreed to support the committee by lending the services of two city planners, Rick Lamoreaux and Jay Geiger (later replaced by Robert Searns).

*Representation on the Platte River Development Committee*

McNichols and Shoemaker appointed a diverse group of people to the Platte River Development Committee; some members had worked in or with government before, while others were activists who had criticized the City. Shoemaker's description of his perspective on choosing the committee members indicates that he had a pragmatic, rather than equity or justice-based, view of the benefits of diversity.

> "The most effective committees usually make a lot of noise because they are arguing out divergent points of view. With a mixture of ideas a group can truly grapple with all sides of an issue and if possible reach a solution accommodating the various viewpoints. Silent committees populated with people of like thoughts risk making lopsided decisions that may not work because of missing viewpoints...A group that's all white, well-to-do, make, middle-aged, etc.,etc., may be inclined to see today's complex world as if through a mailing tube, when actually the broad perspective of a fisheye is needed...A river committee had to reflect the diversity of the people along the river." (Shoemaker: 31)

McNichols' and Shoemaker's selections for the committee did indeed represent a diverse range of citizens. In addition to two members that fit the somewhat traditional profile of white male businessmen, the committee included women, minority leaders of low-income communities, and a vocal critic of the mayor's river policy. The following profiles describe the committee members' backgrounds.

- Marjorie Hornbein (one of Mayor McNichols' two choices for the committee) was a native Denverite who had extensive historical knowledge of Denver. She had served on the Denver Planning Board and the Community Education Council.

- Harold Berglund (McNichols' other choice) owned a wood products business that was located next to the river. The loss of his inventory in the 1965 flood convinced him to become active in planning for the redevelopment of the river. Berglund had served on a previous committee on river planning.

- Ted Bendelow was the former chairman of PARC (but resigned his chairmanship upon joining the Platte River Development Committee). Bendelow was an attorney and had served as a Democratic house representative. The choice of Bendelow for the committee signified Shoemaker's pragmatic view of including potential adversaries rather than having them "beating at us from the outside." (Shoemaker: 31)

- Daniel Trujillo was a Hispanic man who had been raised near the Platte. Trujillo was the head of a community organization that provided counseling and community organizing for low-income residents of West Denver. Shoemaker recognized that Trujillo was adept at communicating with the media on behalf of his neighborhood.

- Hiawatha Davis, Jr. was another native Denverite who represented a disadvantaged community. Davis was black and was the head of the Eastside Action Movement, a service center for a low-income neighborhood.

- John Zapien was a Mexican-American resident of the low-income Globeville neighborhood. According to Shoemaker, Zapien was a neighborhood activist who recognized that the Platte greatly influenced Globeville's wellbeing, particularly with regard to flooding.

- Philip Milstein represented downtown business interests. Milstein was a businessman who also had served on the City Council, as Chair of the Denver Planning Board, and as Chair of the Board of the Auraria Higher Education Center.

- Dana Crawford had led a successful push to restore a run-down area of downtown into a tourist attraction with shops and restaurants. Crawford worked as a consultant and served in historic preservation organizations.

The Platte River Development Committee held its first meeting on June 14, 1974. In addition to the committee members, a small group of city officials who would serve as the committee's advisory board attended, as well as the two staff planners from the City. Operating rules were established: "anyone can bring up whatever he wants; meetings always open to the public; proceedings tape recorded; and Roberts rules." (Shoemaker: 48) These operating rules signify an open and accountable process. However, using Roberts rules of order may have created an impediment to participation of low-income and minority citizens not familiar with the rules.

Overall, while anyone was welcome to attend committee meetings, the first phase of greenway planning was not designed to encourage public participation. The committee and planners did not reach out to the community to encourage participation in committee meetings. The two city planners went to talk to community groups about the planning "occasionally," "but there were no public meetings *per se*." (Searns) Rather, public participation in the planning process was "representational." (Searns) Committee representatives of affected low-income and minority communities, as well as other interests, could "go out and round up the community if they were unhappy." (Searns)

John Zapien notes that he reported back to the Globeville neighborhood about the greenway development, and that the neighborhood trusted him to represent their interests; however, there were not formal communication and input processes established between him and the neighborhood. Globeville residents were not initially involved in the issue because they perceived that the City "had never done anything for the neighborhood," and they didn't quite believe that the greenway process would result in any benefits for Globeville. (Zapien) Zapien did occupy a position as a neighborhood activist and member of the Globeville Civic Association to "round up the community if [he] was unhappy," as Searns argues.

This representational style of participation should lead us to ask about the ability of three individuals to represent all the low-income and minority communities along the river. Assuming that three individuals can fulfill such a large responsibility does not recognize the diversity of opinions within low-income and minority communities, and rather makes the common mistake of viewing such communities as monoliths. This assumption also does not account for the possibility that the three individuals might not

adequately represent their community for a variety of reasons, including busy schedules, personal conflicts within communities, or poor communication skills. For these reasons, a representational style of participation does not seem to accord disadvantaged communities a sufficiently comprehensive or strong means to raise social justice concerns in the planning process. Overall, then, the first phase of the greenway planning process provided opportunities for representatives of disadvantaged communities to raise justice issues but did not particularly encourage this.

### *Initial Greenway Plans*

At the committee's first meeting, Shoemaker suggested that the committee not conduct studies but rather "come up with something that the largest number of people can benefit from, at the earliest possible time within a financial framework that we can hack." (Shoemaker: 49) Shoemaker advanced his own vision for river improvements: "I think we ought to take one section of the river and develop it. Show 'em what we can do. I'm for starting on the area right down closest to where the most people are." (Shoemaker: 48) Shoemaker suggested focusing on the area of the confluence of the South Platte and Cherry Creek, a location which was close to downtown and somewhat separated from residential neighborhoods.

As Shoemaker recounts the story, John Zapien interrupted Shoemaker's comments to argue that improvement efforts should start near Globeville (a particularly disadvantaged neighborhood): "Needs it much worse than down here." (Shoemaker: 48) Zapien's comment was very significant for the future of the greenway. By openly raising the issue of disproportionate need in a disadvantaged community, Zapien interjected the

subject of *justice* into the planning discourse. His comments confronted the other committee members and the City representatives with a claim that was hard to ignore. Zapien continued to push strongly for extending benefits to his disadvantaged community. He "kept harping on the north end" of the river, and did do some "table banging and screaming and hollering," in his words.

After a tour of the river and further discussion, the committee moved away from Shoemaker's idea of concentrating efforts on the confluence area and agreed to begin river improvement efforts in four areas spaced along the river, including the Globeville neighborhood. (Shoemaker: 50) The different segments of the river would be linked with a trail along the 10.5-mile length of the river from the city's southern border to northern border. This agreement represented a more equitable treatment of disadvantaged neighborhoods than did Shoemaker's proposal, because it meant that river improvements, open space access, and recreational opportunities would take place directly adjacent to these neighborhoods.

The need to produce a plan that the whole committee could support and that could gain the support of a multiplicity of interests (including the neighborhoods) drove this compromise, Zapien argues. Zapien's status as a neighborhood leader meant that the committee knew they could expect a fight from the neighborhood if they were not sensitive to the justice claims Zapien raised. The fact that the distribution of river improvements across various segments of the river would make implementation of the Burlington and Northern Railroad plan (which Bendelow, Shoemaker, and other committee members opposed) more difficult to implement also contributed to this decision.

There was virtually no community opposition to the decision to create a greenway. (Zapien) The only public opposition to the plan came from PARC, which argued that City support for the Platte River Development Committee's recommendations would eliminate all hope of the large Central Valley park. (Shoemaker, 64) The lack of public opposition to the greenway represents a number of factors: the lack of general public awareness of the planning process, satisfaction of those residents aware of the plan, and the inchoate state of community involvement in environmental planning issues.

Once the committee had agreed on the spatial distribution of river improvements, Shoemaker assigned two committee members to each area, and allocated $200,000 for planning to each group, except the Globeville stretch, which received $250,000 because of its extra length. Allocation of funds maintained the pattern of equitable treatment of neighborhoods established with the decision to focus on four segments. Shoemaker asked each subcommittee to develop preliminary plans for its respective section in cooperation with engineering/design firms. The fact that committee members took a lead role in designing plans for the greenway meant that there was representational community participation in this more technical and detail-oriented phase of planning, as well. Zapien, for example, was able to exert a great influence on larger design issues and design/engineering details on the Globeville stretch of the river, and could communicate progress on plans to the Globeville neighborhood.

The committee developed guidelines that would be applied to all river improvement efforts. "They called for making the river and its immediate environs (1) boatable, (2) hikable and bikable, (3) capable of handling floods, and (4) accessible to other Denver public facilities as well as providing places to picnic or just to sit and

relax." (Shoemaker: 54) The committee also decided on the more specific standards of using a warm tone of concrete to blend with the natural environment, providing handicapped accessibility, replacing broken concrete rubble with natural Colorado stone where possible, preserving existing vegetation where possible, and soliciting volunteer help for new plantings. (Shoemaker: 62-63) These guiding principles and specific standards generally framed the greenway development in recreation, accessibility, and aesthetic terms. The principles and standards were to be applied equally to all sections of the river, which helped to ensure equitable treatment of all areas; however, principles did not explicitly refer to advancing justice in underserved communities.

The plan for the southernmost section of the river, developed by Berglund and Milstein, included trail development (including a spur), replacement of a dam, a 3.3 acre park at a quarry site, seven smaller recreational facilities, closure of parts of a road, and two boat landing sites. Davis's and Trujillo's design for the south-central segment, which was near the Sun Valley public housing developments, included more trails, including two spurs into adjoining neighborhoods, a boat dock, a boating chute over a dam, two connected recreational areas (one built on a junkyard site), and plantings of native grasses, shrubs, and trees. For the northernmost section of the river in Globeville, Hornbein and Zapien proposed a trail with extensive reshaping, landscape greening, a seven-acre park, a boat launch, and a landing. The plans created an equal level of park amenities for the different neighborhoods along the river. (See Figure 5) (Grimes)

These plans enhanced opportunities and livability in the neighboring disadvantaged communities. In particular, the development of means for access to the greenway from the adjacent neighborhoods served these neighborhoods' needs. A

number of measures, including trail spurs, signage, and pedestrian access improvements, facilitated access. (See Figure 6) The creation of numerous green spaces, particularly the park on a former junkyard, represented significant livability improvements from the formerly squalid conditions that were a prominent symbol and reinforcing element of the communities' disadvantaged status.

The plan for the north-central area near the confluence of the Platte River and Cherry Creek had a different character. Confluence Park was to be the public focal point for the river, due to its proximity to downtown. Crawford and Bendelow proposed an amphitheater built on rubble lining the river, a brick plaza leading down to the river across from the amphitheater (and adjacent to a transportation museum), a pedestrian bridge, and a dam and bypass that would enable boats to pass a small set of falls. (See Figure 7) The plaza was designed with multilevel concrete and brick terraces that are passive to high flows; by using different terraces, people can be next to the water regardless of the water level. The confluence area plan does not confer a higher level of benefits on the downtown area than the disadvantaged neighborhoods; rather, the confluence plan attracts the general public to the river while the other sections' designs are more tailored to the recreational and livability needs of local populations and hikers/bikers.

In November, 1974, the committee decided to accept the designs created by the subcommittees for the four sections of the river. The mayor directed the relevant city agencies to review and approve these plans on an expedited basis. Taken together, the plans called for the development of 450 acres of open space stretching over 15 miles. (Searns, 386)

It is significant for procedural justice that the Platte River Development Committee did not create a plan for river improvement efforts based on these recommendations until construction had started. (Little) Shoemaker's reluctance to create and stick to a plan reflects his idea that the committee would have more power if it was not officially limited by a set of plans. However, the lack of a plan meant that there was no finalized set of recommendations to which members of affected communities could react. Without a plan that the public can view or that is presented to the public, interested citizens have to take more initiative to find out the status of planning, which may be particularly difficult for members of disadvantaged communities who are not accustomed to interacting with planners and politicians.

In January, 1975, the bids for the construction of the four segments came in at $2.0 million, significantly above the City's $1.3 million estimate. (Shoemaker, 64) With the available funds, the committee could only start work on two sections. The committee decided to start work on the north and north-central (downtown area) sections, and put the southern sections on hold. The committee's decision represents a balancing of the desire expressed by Shoemaker to make improvements in the most visible places and the concern expressed by Zapien that the places in the most need should be the first priority.

### *Implementation of Plans*

The Platte River Development Committee moved toward construction of the greenway by determining ownership of all parcels of land abutting the river. This is an example of the kind of environmental planning activity that is not strongly related to justice but which demands significant time and attention from planners. It is easy to

imagine how planners can lose sight of larger justice issues when they become occupied with more mundane details of planning. The committee gained rights to develop on City-owned land relatively easily. Securing easements from railroad companies was important because the railroad companies were by far the largest landowners along the Platte. (Shoemaker, 85) Shoemaker convinced the railroad companies to grant easements in part by using his discovery that they had not paid taxes on the land. (Joe Shoemaker) Where it was unclear who owned the right of way along the river, the greenway committee simply proceeded with trail development plans, and no injunctions came to stop the committee. (Bendelow) Shoemaker also pressured the mayor not to allow the Burlington and Northern Railroad to expand a railroad line in a place where it would conflict with the greenway, in addition to pressuring the railroad company directly. The company decided not to convert the track and permitted the greenway committee to build a trail in the small space between the railroad tracks and the river.

Shoemaker cites interactions with railroad companies as an example of the pressure that the committee could bring to bear on landowners with its "semi-official but undefined jurisdiction over the Denver section of the Platte." (Shoemaker: 85) This kind of jurisdiction, though arguably pragmatic for planning and implementing a project within a short period of time, also is insulated from the public. Citizens did not have the same means of recourse available as they would with elected officials or a committee with specific responsibilities that was beholden to elected officials. Indeed, Shoemaker himself points out that the committee's insulation meant that it had the benefit of being able to make plans without having public opposition slow down their plans; for example, he did not have to take the time to respond to environmentalists' concerns about

"endangered species and blah, blah, blah." (Joe Shoemaker) The committee's insulation from the public is significant for justice because the committee's work had a particular effect on disadvantaged communities and because there are particular barriers in disadvantaged communities (such as language differences and lack of familiarity with the political system) to political and planning participation.

The groundbreaking ceremony for the Platte River was held in February, 1975. The first priority was the completion of the projects at Confluence Park, which Shoemaker believed would "become our big public foot in the door for the clean up of the South Platte." (Shoemaker: 67-68) Over one thousand volunteers participated in the restoration work in the confluence area. (Shoemaker, 69) Volunteer efforts set the stage for later public appreciation and use of the river because they familiarized people with the new greenway.

Meanwhile, plans moved ahead for construction on the northernmost segment of the river; a new minority-owned firm in Denver was the lowest bidder and was awarded the contract for the work. By May, 1975, construction of this segment had begun. Only a month after a public celebration was held at the new Confluence Park on Labor Day of 1975, construction started on the third segment. Progress began on the southernmost section in 1978. According to Shoemaker, the committee members who worked on this plan, Berglund and Milstein, recognized that "in view of the social-economic patterns along the river, the downstream sections, which had suffered the most from the long-term degradation of the Platte, should have first call on improvements." (Shoemaker: 94) By 1984, the greenway was completed and stretched from city limit to city limit.

In 1976, as river restoration work was continuing, the Platte River Development Committee decided to incorporate itself into a non-governmental, tax-exempt foundation in order to solicit and use private funds for improvement work. The committee established the Greenway Foundation, whose board of directors consisted of the members of the Platte River Development Committee. The foundation maintained a quasi-official association with the City of Denver. Partly due to fundraising work, funds continued to roll in for the Greenway Foundation, both from private sources and local, state, and federal government. The Greenway Foundation remains active in promoting greenway enhancements, maintenance, and activities. However, the City has taken on many greenway planning responsibilities, especially since the 1991 election of Mayor Wellington Webb. (See below.)

*Water Quality*

An important part of river restoration was addressing the issue of river pollution. The work on the confluence area partially addressed this problem by cleaning up dumped materials and using concrete rubble as a foundation for a new park. However, problems such as illegal dumping of toxic substances and sewage outflows continued to threaten water quality. Water pollution was significant for justice because it had changed the neighboring communities' relationship to the river and made recreation and fishing in the river unsafe. Committee members recognized that improving the cleanliness of the river was essential for the greenway's success as a recreational amenity. Further, the committee recognized the justice relevance of water quality for the Vietnamese families in the Weir Gulch neighborhood (and perhaps others) who depended on carp and catfish

caught in the river for food. (Shoemaker: 80) The committee set a goal of upgrading the South Platte from its State Water Quality Commission "B" rating (the river could be used for 'secondary contact recreation,' such as fishing and boating, but not swimming) to an "A" rating. (Shoemaker: 78)

The committee learned that the Denver Environmental Health Division had inadequate resources to carry out water pollution control; the division knew that there were approximately 500 discharges into the Platte in Denver, but could sample only 200 of them on a regular basis. (Shoemaker: 77) In late 1974, the committee raised $86,000 in state funds for an expanded monitoring program for the South Platte, which was led by the Environmental Health Division. (Shoemaker: 78) In one eighteen month period of the expanded monitoring program, three dozen private water pollution sources, including vehicle washing activities, a restaurant grease trap, waste runoffs from construction jobs, a battery cleaning operation, faulty wastewater connections from private homes, and a boiler cleaning service, were identified and eliminated. (Shoemaker: 78)

Monitoring of private discharges only solved part of the river pollution problem, however. The City of Denver and upstream municipalities were contributing significantly to the pollution in the Platte. Feasible solutions to these problems were not forthcoming. However, the development of the greenway did lead to greater informal public monitoring of dumping, because more people spent time along the river and therefore noticed and reported dumping. As Ken Wright puts it, the river developed a new constituency. Overall, although the greenway development led to pollution improvements, the Platte River is still somewhat polluted.

Another water-related issue that the committee addressed was the amount of water flowing in the river. The committee recognized that the existing level of flow was inadequate to serve the boating facilities planned for the river. The committee explored a variety of options for increasing the flow of the river, some of which had potentially detrimental environmental effects, such as drilling water from wells upstream to augment the flow. The committee discovered a better solution, which was to make use of the flexibility in releasing water from the upstream Chatfield reservoir at times when recreational users of the river could enjoy the extra water the most.

*Community Integration of the Greenway*

The greenway committee, Greenway Foundation, City, and other parties took activities to introduce the greenway to the public. The committee sponsored volunteer clean-ups, as mentioned above. Another example is a school program developed by the Colorado Education Association and the Denver Classroom Teachers' Association. Under this program, thousands of students raised money to buy plants and trees and did the planting work. The committee and Greenway Foundation also sponsored events, such as races, that brought the public to the river. These activities were important because they introduced people from diverse backgrounds and neighborhoods. This initiated the process of generating awareness of disadvantaged neighborhoods among other residents of the region; this is significant for social justice because awareness of conditions of disadvantaged areas is a necessary precursor to people advocating for changes in those conditions.

The completion of six murals that recognized and honored the cultural setting of the river also helped to integrate the greenway into its community setting and provided opportunities for artistic expression. (See Figure 8) For example, members of the public painted tiles that were compiled into a mural collage on the abutment wall of the 15th Street bridge. A resident of the Sun Valley public housing development was commissioned to paint another mural on the side of a warehouse; the mural, which children helped to paint, depicted Mexican culture. These murals served adjoining neighborhoods by celebrating their culture; the decision to commission the Sun Valley mural is an indication of the committee's awareness of the diverse character of the area for which they were planning.

*Maintenance*

Maintenance of the greenway is clearly a justice issue. While any resident of the Denver region could choose to partake of greenway benefits, the neighboring disadvantaged communities would not be able to avoid suffering from poor maintenance. No matter how good the original design and implementation of environmental planning, poor maintenance can lead to a host of environmental injustices, including aesthetic problems, pollution, dangerous conditions where children play, and illicit activities. The committee originally planned for maintenance by cooperating with the Parks and Recreation Department to maintain the greenway with federal funds. However, the City was not able to fully maintain the greenway, and within a short period of time the greenway "didn't look so great anymore." (Grimes)

In 1979 the committee decided to create a maintenance team more oriented towards tackling special river problems. State funding was provided for the maintenance program through the Urban Drainage and Flood Control District. The committee created the Greenway Trail Rangers program to maintain the greenway. Young trail maintenance patrollers, wearing brightly colored T-shirts, bicycled up and down the greenway with tools to fix maintenance problems. When necessary, the patrollers removed debris from the river or fixed special structures. These patrollers not only maintained the greenway; they also served as general monitors of the greenway activities and acted as liaisons between community members using the greenway and the Platte River Development Committee/Greenway Foundation.

*Ecological and Flood Control Measures*

Many of the design elements of the greenway simultaneously served ecological purposes and flood hazard mitigation purposes. The flood safety measures of the greenway, like maintenance, are a justice issue because they particularly affect the neighboring communities. The UDFCD has ensured that projects have not increased the risk of flooding (although there was concern within UDFCD that the Punt the Creek boating facilities would increase the flood hazard in that particular area, which does not adjoin disadvantaged neighborhoods). The hiking/biking trail serves as a maintenance trail for UDFCD to minimize conditions that could exacerbate flooding. (For this reason, UDFCD has funded 35-40% of greenway trails.) (Jeff Shoemaker) Removal of obstacles to boats on the river has served flood control purposes because these obstacles can also act as dams in the case of a flood. (Jeff Shoemaker) Removal of actual dams and bridges

that were flood hazards also expanded access to the river, contributed to a human scale, and made the river boatable.

The preservation and enhancement of open space also provides places for floodwaters to infiltrate. According to Ken Wright, a water engineer for the greenway, "park development was an integral aspect of flood control and vice versa." Efforts to stabilize riverbanks, including planting trees and ground cover and placing boulders, enhanced the attractiveness of the river both in an absolute manner and relative to other bank stabilization measures that involve artificial materials. (Jeff Shoemaker) Many of these flood control improvements were undertaken on tributaries to the Platte as well as the Platte itself. (See Figure 6) It is significant that many of these measures served multiple goals for the neighboring communities, including improving public access, aesthetic/livability improvements, and flood safety.

*Linking the Greenway*

After Mayor Peña took over from the McNichols administration, City support for greenway development and enhancement decreased. During Peña's tenure as mayor, from 1983 to 1991, the Greenway Foundation concentrated on extending greenway connections.

The Platte River greenway has been linked to urban and suburban communities in two main ways. First, trails were developed along the major tributary creeks and gulches of the Platte. (See Figure 6) (Searns: 384) Developing these connections with neighborhoods was the phase of greenway development that came "right on the heels" of the initial four segment improvements. (Grimes) One example is the development (at

significant cost) of the northside trail, which overcame the barrier of a freeway between the Northside neighborhood and the greenway. (Grimes) Another example is the West Harvard Gulch connector, which the neighboring community strongly supported. The completion of this connection is significant because it required tunneling under an active railroad line. (MacDonald) Creating connections between the greenway and Denver's neighborhoods has been crucial to the success of the greenway because in many places the river is separated from neighborhoods by industrial land uses. The creation of connections to adjoining communities advances social justice by ensuring public access to the amenity for disadvantaged neighborhoods; these measures indicate that greenway planners were not exclusively concerned with creating an amenity for visitors accessing the river from downtown.

Second, the Denver greenways project has formed part of a regional greenway system. (See Figure 4) The Greenway Foundation in the 1980s extended the greenway into the counties to the north and south of Denver, and connected the greenway to four state parks. (Joe Shoemaker) Moreover, the Denver greenway spurred other county improvement and protection programs of the South Platte. For example, Adams County, to Denver's north, developed a $4 million plan to buy development rights on river-fronting properties. (Roos) The Platte River Greenway is now part of an integrated greenway system with approximately 200 miles of trails. The regional extension of the greenway has provided more opportunities for residents of river-abutting neighborhoods to access natural landscapes outside the city, and has enabled more people from outside the city to gain familiarity with the neighborhoods abutting the Platte within Denver.

## *Greenway Planning from 1990 to 1999*

### *Goals and Process Design*

Mayor Wellington Webb has initiated many improvements to the South Platte since taking office in 1991. Webb has led a City effort to invest $40 million on physical improvements to the river, and declared 1996 "Year of the South Platte River." In 1995, Webb brought together a "Mayor's Commission" on the South Platte, led by Andrew Wallach. The goals of the commission were to further restore the environment, promote economic development, including in low-income communities abutting the river, by improving river as amenity, create educational opportunities, employ youth, and enhance recreational opportunities. (Wallach) As in the case of the Platte River Development Committee, we see that justice is not an explicit goal; however, the goals of economic development in low-income river-abutting communities and youth employment, in particular, show a recognition of the possibility of advancing social justice through river improvements.

Mayor Webb has adopted a collaborative approach to decision-making about the river, and brings together neighborhood activists with business leaders, environmentalists, and large property owners. According to Wallach, this model has "set a standard for expectations for what neighborhood groups could and should expect in the way of participation in planning and zoning and investment planning for the city." This model of participation in planning built on that used by Joe Shoemaker to more directly involve residents in decision-making. It continued and expanded on the trend set by the first model of developing neighborhood activists' links to City Hall and opportunities for forming political networks.

The mayor has largely framed river improvements as a means to help revitalize downtown Denver (which had a particularly high office vacancy rate when Webb took office). (Wallach) Planning efforts for downtown centered on the need for 24-hour activity, which could be provided by a residential population in downtown. (Wallach) The City has worked to attract a "diversity of income strata" to the river, which previously did not have middle or upper income housing. (Wallach) Mayor Webb's administration launched development of the large Commons Park between downtown and the river to attract residential development to downtown.

Commons Park and other downtown river improvements have encouraged development and encouraged a more public role for the confluence area. Attention has been focused on the Central Platte Valley, where city leaders plan an extension of downtown including new parks, upscale housing developments, light rail, offices, and retail. Several major attractions have moved to this area, including an amusement park, an aquarium, an outdoors clothing and equipment flagship store, and a children's museum.

River improvements that attract development clearly raise the social justice issue of gentrification. Improvements that drive up housing costs and result in low-income residents having to move to other areas may have wrenching economic and cultural effects on disadvantaged communities. In the case of the confluence area and Commons Park, river improvements and new development is taking place in an area separated from disadvantaged neighborhoods. These improvements raise justice issues related to gentrification because they may initiate a trend that will later affect the neighborhoods, but for now the improvements do not seem to be unjust. Also, planning for Commons

Park has recognized the potential justice contribution of forming a physical connection between downtown and the western part of the city, which tends to be low-income and minority, by replacing existing railroads with the park. (Wallach)

During Webb's tenure, much discussion of the river has been framed in ecological terms, and the City has devoted considerable attention to ecological aspects of river improvement. For example, the City studied streamflow and rock jetty construction measures to improve habitat for fish and wildlife and worked with the Denver Audubon Society to complete an inventory of vegetation along the river. Projects have increased the use of native vegetation and created new wildlife refuges. Some environmentalists involved in river planning have questioned the ecological implications of allowing public access and recreational activities on the river. This center of this discourse has shifted away from justice, especially in the case of considering keeping neighboring residents from using the resource.

Continuing a precedent set early in the greenway story, the City has helped to involve local youth in the river. The City has sponsored a number of programs, including after-school environmental education, hiring city youth to serve as historical and environmental river guides and river rafting guides during summertime, and involving local youth in maintenance and construction activities. These programs have addressed the disproportionate need for employment and education in disadvantaged communities.

### *The Overland Planning Process*

The City recently led active community planning efforts in two communities abutting the river, Globeville and Overland, which I will analyze in detail. In Overland,

many community members were unsatisfied with how a road cut off Grant Frontier Park (which abuts the river) from the neighborhood. When the neighborhood found out that an expansion of the greenway was planned to stop just north of Overland, community members approached the mayor's office to ask them to include Grant Frontier park in the expansion. (Sandy) Overland community members saw an opportunity to de-emphasize the commercial and transportation uses of river corridor and better integrate the river into the neighborhood. (Wallach) However, some business owners along the road who worried about losing business put up a fight to keep the road. The City agreed to fund the removal of the road if the neighborhood decided that it wanted the road to be removed.

After a steering committee, which included a number of Overland residents, formed to address the problem, the plan to remove the road finally won out in the community. According to Catherine Sandy, the former president of the Overland Neighborhood Association, the mayor's office was quite willing to implement the community's decision. Since that time, the City has extended the park to the river, reconstructed trails, rebuilt a bridge in a more user-friendly design, and enhanced wildlife habitat. This park extension, as well as other greenway elements, has increased the variety of wildlife along the Overland stretch of the Platte, including beaver, deer, fox, weasels, amphibians, salamanders, heron, and geese. (Unruh) The great diversity of wildlife in Overland means that this urban neighborhood can enjoy wildlife just as suburban and rural residents.

The greenway planning initiative in the Overland neighborhood has been somewhat overshadowed by the specter of the nearby Shattuck Superfund site. (Unruh) At this former radium industry site, the EPA allowed the property owner to do onsite

waste disposal, even though the community felt that this was unjust and wanted the waste to leave the community. (Unruh) However, the community used a technical assistance grant to convince the EPA that the chosen remediation methods were unsafe and won a promise that the hazardous waste will be removed in a community-approved method. (Sandy) As Jack Unruh, current president of the neighborhood association, describes the irony of the situation: "on the one hand there is the nice amenity of the greenway coming in, and on the other hand this site is a glob of spit lowering property values" (and posing health risks). The issue of the Superfund site is significant for justice in the greenway project because it shows how a neighborhood's larger context may include problems of a magnitude that overshadow a particular planning project. Adopting a narrow focus on a particular project and failing to adequately consider outside issues related to primary goods may cause bitterness in the community (as Unruh's comment indicates).

### *The Globeville Planning Process*

The City-led planning process in Globeville centered on a 70-acre area along the river that was dominated by an abandoned City-owned wastewater treatment plant, the Northside Treatment Plant. The community perceived the treatment plant as a blighting influence; according to a community member, the plant was "trashed" and was so unattractive that it was used on the set of a horror movie. (Hirsch) The plant included concrete cylindrical tanks with 50-foot diameters. The abandoned plant clearly was a justice issue because it detracted from the livability of the area and from community members' ability to feel pride in their neighborhood.

The City led a community-based design project to reclaim this area, which included a committee with community members. The City conducted over a dozen community meetings in Globeville between 1995 and 1998 to plan for river improvements. (Wallach) In the planning process, local residents expressed a desire for a trail link so that they could be better connected to the river and to the rest of Denver as well as more park and recreational space. (Wallach) Community members also wanted to promote economic development, since the area's large employment base built around mineral extraction had declined. (Wallach) The environmental contamination caused by the mineral smelting industry exacerbated the decline in jobs by discouraging new economic activity in the area. (Wallach) Residents were concerned about environmental contamination from substances used in wastewater treatment for health reasons, as well. (Hirsch) Finally, the community viewed flooding as a significant concern, in part because a local day care center had been destroyed by floodwaters within the last decade. (Hirsch)

According to local community leader Paulette Hirsch, the City was quite committed to involving the community in the design process: "Every time it came to a major step they would have a community meeting in the neighborhood to which everyone could come and which were publicized well." Hirsch notes that the City did some research on community ideas like creating a fish farm and constructing a RV park. Suggestions that the area be used for a new correctional facility circulated, but the mayor acknowledged that this would not be the best decision for the community. (Hirsch) The willingness on the part of City staff to consider community-generated ideas represents a solid level of respect for the community, and the mayor's decision not to place a

correctional facility in the community indicates a recognition of the injustice of placing another unwanted project in an area that has historically suffered from unwanted land uses.

The planning process led to a plan for a park on the former treatment plant land. The park design included artifacts of the former treatment plant, such as holding tanks reborn as benches. The park was designed to reduce the flood hazard to the community through measures such as naturally landscaped berms and a dam replacement. These measures have reduced the flood hazard enough to take Globeville out of the 100-year floodplain. The floodplain designation is significant not only for safety but also because of reduced insurance restrictions of buying property. Hirsch notes that the former floodplain designation meant that people could not build basements and that people had to purchase flood insurance; she thinks that taking the area out of the floodplain has paved the way for new construction of low-income housing. The changed requirement to purchase flood insurance may be a double-edged sword, however, because it may reduce public awareness of and preparation for flood threats.

Some of the former treatment plant land was set aside for economic development purposes. The City received an economic development grant to generate new light manufacturing development. Also, the City worked with the Colorado National Guard to build a new armory, which the Guard mostly uses as a classroom, on another part of this land. This 10-acre armory serves the community's interests by "dressing up the neighborhood" and providing space to be used as a community meeting center. (Wallach) Hirsch notes that in addition to serving as a community center, the armory is a "good

match for the neighborhood" because it is a place where people can get GED training or where they can work.

Adjacent to the Northside Treatment Plant project, the City worked on the North Denver River Restoration Project on 1.3 miles of the river. The City worked with the adjoining county to the north to plan for a Superfund site on the city border. The two governments acquired the adjoining 25 acres of industrial land around this site to use as open space around a pond. The project included creating a wildlife refuge that is now home to a wide range of species. The Globeville community has generally been happy with this project. (Hirsch)

Despite the general satisfaction within Globeville about recent river improvements, there are problems separate from the river that limit the community's ability to enjoy the greenway and related improvements. The Denver Coliseum and its parking lot, as well as nearby roads and road construction, create barriers to the river. Hirsch views these problems as "givens." However, Michael Maes, a community leader from Elyria Swansea, thinks that the City has a responsibility to address these problems. According to Maes, the presence of the greenway does not benefit his neighborhood because "there is a lot of construction work that makes it virtually impossible to get to the river, but even before[construction] people had to go so far out of their way to get to access to the river." Community groups in Elyria Swansea drive kids with bikes to the river in *vans* because access to the river is so dangerous. (Maes) Maes is also concerned about the polluting industries that still line the riverbanks near his neighborhood, including a metal recycling plant and a rendering plant where animal carcasses are processed.

Maes' concerns about access bring up the larger issue of the context of environmental projects. Problems such as the Shattuck Superfund site, the Denver Coliseum, general road problems, and polluting industries seem to limit the greenway's success. Physical context may be particularly relevant to greenways, because greenways have a high proportion of edge to interior space and because greenways link different places to one another; for this reason, greenways may be particularly vulnerable to problems outside their boundaries. Other social and economic contextual influences, such as rates of crime, may also affect the greenway. Circumscribing geographical boundaries of an environmental project, while perhaps sensible for a variety of reasons, limits planners' ability to influence justice outcomes of a project. Justice issues often traverse planning boundaries, and communities may legitimately feel that it is unfair for planners not to address transboundary issues simply because they do not fit within the somewhat arbitrary physical limits set by planners.

Access issues also relate to the process of interest formation around new community resources. The greenway development caused the Elyria Swansea community to develop a new interest in access to the river. Interests may change and expand as communities use new developments, learn about issues, and interact with other groups in environmental planning processes. Moreover, communities' level of expectations about environmental projects may increase as they see change occurring; planning processes should leave room for this increase in expectations, particularly in disadvantaged neighborhoods where expectations may have been too low. Communities' dynamic process of interest formation may mean that planners cannot always anticipate or plan around community interests, which may form after initial planning and

development. The dynamic nature of interest formation in environmental planning may be particularly striking in disadvantaged communities where communities may not have participated previously in environmental planning processes.

# Chapter 4: Conclusions

This chapter reexamines the Platte River Greenway's synergies and sources of tension with social justice in the framework outlined in Chapter 1. This examination permits me to draw general conclusions about how the greenway affected and enhanced justice. Next, I analyze why justice concerns were advanced and elided in greenway planning and try to correlate discussion of justice with outcomes. This leads me to an evaluation of theoretical implications and recommendations for environmental planning practice. I close with a brief summary of findings.

## *Reevaluation of Platte River Greenway Synergies with Justice*

### *Planning Process*

The involvement of representatives of low-income and minority river-abutting neighborhoods in the planning process helped to advance justice by reshaping these neighborhoods' relationship with City Hall. Before the greenway process, neighborhood members had challenged the City on issues such as industrial pollution and odor problems from an adversarial position with little success. The greenway process was the first time that neighborhood representatives worked with the City in a collaborative fashion. By working together, the City came to learn from the neighborhood representatives about the neighborhoods' interests. "The City people began to see us as not just a rabble rousing bunch that was always opposing and telling the City, 'Look, you're not doing this,' but began to see that we could do something positive that could benefit the administration and the neighborhood... the City became accessible." (Zapien)

In short, disadvantaged communities gained greater political power to advance social justice through the greenway process.

*Community Building*

Both phases of the greenway planning process engaged representatives of disadvantaged neighborhoods in alliances and networks with other political actors in the city. These processes gave members of disadvantaged communities opportunities to learn about common interests with other activists and vice versa. The greenway has facilitated social interaction not only in the planning processes but also through physically "bringing people through parts of town they hadn't thought to travel before." (Davenhill)

River-abutting communities have become more involved in pressing for change in the last decades. Neighborhood residents' comments suggest that the greenway development raised communities' expectations about the quality of their surroundings. Catherine Sandy argues that when the neighborhood residents "come away with positive results and see the power of their dreams and desires agreed with and supported it does make for a more cohesive neighborhood." Furthermore, "people are now more confident to become involved in other neighborhood issues – they have learned out how to talk with, negotiate, and deal with City officials." (Sandy)

Moreover, the greenway and related projects have provided new places for the community to gather. This is evident in the Ruby Hill park that used to serve as a city dump; now the Hispanic population of the neighborhood uses the park for "lots of parties, big extended family events, and young people and working people doing after work

recreation." (Unruh) The new armory on the northern section of the river also serves as a community gathering space, and community meetings have been held in the recently improved Grant Frontier Park in the Overland neighborhood. (Wallach; Sandy) New opportunities for community gathering facilitates community organizing and the development of general social connections that improve quality of life.

Finally, the greenway development has led to many educational opportunities that help to correct educational disparities in disadvantaged neighborhoods. These opportunities include general volunteering, historical and environmental education programs in the Denver public schools system (Unruh), and community service programs for at-risk youth (Davenhill).

*Use of Space*

Greenway development has served justice by providing public access to a natural resource. Before greenway development, adjoining neighborhoods thought of the filthy river as a liability, rather than a resource. Even if neighboring communities had considered the river a resource, however, it was not easily accessible because of infrastructure barriers, piles of rubble, and a lack of trails. An alternative to the greenway, the Burlington and Northern Railroad expansion plan, would have further cut off access to the river. It is important to note that public access to natural resources is not a given in many communities. Indeed, in neighboring Arapahoe County, there is "higher-end residential development" along the Platte River which cuts off public access to those who do not reside next to the river. (Unruh) The greenway committee planned every trail

to be wheelchair-accessible, which means that people with disabilities gained river access opportunities. (Jeff Shoemaker)

Providing public access to the Platte has enabled people in neighboring communities to enjoy natural landscapes. This is significant because few disadvantaged urban neighborhoods have this opportunity, which can be central to people's happiness. While some neighboring residents may not be able to take advantage of boating opportunities on the Platte because they do not have the financial ability to own or rent boats, they are able to use the trail for walking and biking, and can use the parks for a range of activities, including team sports.

*Economic Issues*

The greenway has helped to provide jobs, and thus advance the primary goods of income and wealth, for disadvantaged river-abutting communities. The greenway has helped to attract development to the Central Platte Valley, including new museums, stores, residential development, and an amusement park, which can provide jobs to local residents that are more accessible than suburban jobs. One of the goals of the Northside Treatment Plant redevelopment is the creation of light manufacturing jobs for local residents (this phase has not been completed yet). In at least once instance (during the original phase of improvement efforts), a local minority-owned firm was awarded a contract to carry out greenway development. (Shoemaker, 1981) Local youth also have been employed in the Greenway Trail Rangers Program. Finally, people from neighboring communities (in addition to more affluent suburban residents) have used the greenway trail to bicycle to jobs.

*Safety*

The construction of the Chatfield Dam and other measures reduced the danger of flooding in Denver prior to greenway development, but the greenway further reduced risk to disadvantaged communities in three principal ways. First, the greenway preserved and enhanced existing open space in a way that allowed for greater infiltration of floodwaters. Second, a number of measures were taken specifically to reduce flood hazards, including earth berms and bridges designed to float from tethers in the case of floods. Finally, the creation of the greenway heightened awareness of flood hazard issues. (Wright) Many of these measures tied in to other open space, recreation, and economic benefits for communities, unlike the flood control model based on creating concrete-lined channels.

Reduction of pollution on the Platte also has reduced health threats to neighboring communities. The greenway committee identified and eliminated many illegal sources of pollution. (Joe Shoemaker) The creation of the greenway also led to an increased "standard of care" for the river (Davenhill), which has resulted in a decrease in polluting by anonymous dumpers and city agencies. Along the same lines, the new users of the river have played an environmental monitoring function.

Informal social monitoring of the river by users has led neighboring communities to feel safer. (Lewis) While the initial creation of trails attracted more gangs and drug activity to the river, these activities largely left the river after more people started using the river. (Grimes) The river is not completely safe now, but it is safer. Improved access to the river in some places (especially Grant Frontier Park) makes it safer for children to play. (Sandy)

*Livability*

Greenway development clearly has provided aesthetic benefits to neighboring residents, who describe the greenway in glowing terms. (Sandy; Fox) In addition to health benefits, reduction of pollution has led to odor improvements. Residents' comments about livability and aesthetic improvements suggest a direct link to increased pride on the part of neighboring communities. (Davenhill; Sandy) The livable character of communities and community pride are elements of self-respect, which Rawls views as an integral element of justice.

*Cultural Issues*

While cultural benefits do not seem to be a primary benefit of the greenway, there have been attempts to tie greenway design to the community. Community representatives on the greenway committee were highly involved with the original design of the greenway, and the greenway was designed to be accessible and welcoming to adjoining neighborhoods. Several initiatives, including six murals and a park in the Globeville area which preserves elements of the previous structure, pay respect to the communities' culture and civic history.

## *Reevaluation of Greenway Sources of Tension with Justice*

*Planning Process*

Procedural justice demands political rights and opportunities. While the Platte River Development Committee included representatives of affected communities, little

attention was given to encouraging broader community participation in planning. The heavy skepticism in some neighborhoods about the likelihood of the City contributing real benefits to disadvantaged areas partly accounts for the lack of broader participation; however, the committee could have taken some steps to try to overcome this distrust. Another reason for the lack of community participation during this phase was that the river did not have a constituency -- few people saw the river as a resource whose future was important to secure. Neighboring communities discovered a new range of interests in the river after greenway development started. Planning processes conducted under Mayor Webb's administration have been more inclusive.

Community members (and planners) have not suggested that the greenway process was designed or managed to placate the river-abutting neighborhoods or deflect attention from other important neighborhood issues. One of the City's goals in launching the greenway planning process was neutralizing PARC, but the constituency and goals of PARC did not strongly represent disadvantaged neighborhoods.

*Community Building*

There were not explicit conflicts about whether to allocate funds to the greenway or to other neighborhood programs. It is logical to assume that some of the funding for greenway development, particularly local and state funding, would have supported other programs that could advance justice in the communities. However, much of the funding, especially federal funding and private donations, probably would not have directly supported the South Platte River-abutting communities.

*Use of Space*

Prior to greenway development, there were major homeless camps with 20-25 people each along the river. (Grimes) Once the Platte River became a planned space, more attention was devoted to keeping homeless people from living near the river, especially near downtown. (Unruh) City-led efforts to move homeless people away from the downtown area of the river do constitute a source of social justice tension.

Residents' comments suggest that neighborhood residents did not use the riverbanks much before greenway development because of the squalid conditions, so creation of planned space probably did not greatly limit informal play or other community activities. No neighboring residents have mentioned restrictions on use of space. While not all neighboring residents may be able to afford to participate in boating activities, virtually all residents can benefit from the hike/bike path, parks, and playing fields.

*Economic Issues*

The Platte River Greenway's contribution to the gentrification that is occurring along the river is unclear. The greenway, as an environmental improvement project, is just one of many forces that can lead to gentrification, including land use policy, market conditions, and redevelopment plans. The fact that property values have increased for some homes abutting new greenway open space suggests that the greenway does bear some responsibility for gentrification. Evidence that the greenway has contributed to gentrification raises justice concerns, because it is not fair to uproot disadvantaged communities. Some local industry, including stockyards, closed down since greenway

development, but evidence suggests that the greenway was not the direct cause of these changes.

*Safety*

I have not found evidence that remediation, construction, or poor maintenance led to community safety problems. Rather, the greenway stands out as an example of good maintenance. Overall, the greenway has led to flood safety improvements.

*Livability*

Residents clearly think that the greenway has created aesthetic benefits, rather than aesthetic problems. I have not found evidence that residents were bothered by noise or disruption during remediation or construction activities, although some disruption probably took place. Residents have not voiced concerns about wildlife problems. There have been increased numbers of visitors to the greenway, some of whom bring cars to the neighboring roads, but I have not found evidence of resident displeasure with increased numbers of vehicles.

*Cultural*

The neighboring communities do not seem to feel that outsiders have intruded into their environment. (Zapien) Greenway design reflects its cultural and historical milieu, and design does not signal to neighboring residents that they are unwelcome. However, use of environmental amenities by low-income and minority people may be affected by larger cultural issues relating to appreciation of nature. The historical

segregation of low-income and minority people in urban areas without natural landscapes and other cultural factors may limit some low-income and minority communities' valuation of natural landscapes. It is possible that these factors may result in a lower level of engagement and identity relating to environmental projects than in other neighborhoods. Also, constraints on leisure time and disposable income may limit residents' ability to enjoy the greenway.

### *Overall Assessment of Justice Consideration and Outcomes*

The analysis above shows that the Platte River Greenway largely advanced social justice. The greenway provided a means for political involvement to disadvantaged communities (to a certain extent), increased public access to the river, created new recreational opportunities, and made neighboring communities safer and more livable. In several ways, however, the greenway represented a source of tension with social justice; in particular, the planning process was not very inclusive during its first phase and the greenway probably has contributed to gentrification. Of course, as key players, neighborhoods, and other contextual factors change in the future, the greenway may come to more or less successfully advance social justice (for example, if maintenance activities are discontinued, the greenway may become a safety and aesthetic liability for neighbors).

Although many of the procedural and substantive justice-related outcomes of the project were positive for the neighboring minority and low-income communities, justice was not an explicit goal of the greenway planning process. The planners' language and goals seemed to focus on environmental, recreational, and aesthetic/symbolic

improvements. Focusing on these goals shaped a dialogue that made it difficult to explicitly discuss social justice. A discussion that is focused on methods of ecological restoration, for example, narrows discussion to a point that excludes arguments of the nature that planners should primarily devote attention to reversing the historical squalor in disadvantaged communities rather than to ecological restoration. The positive justice outcomes of the greenway can be attributed partly to the points in the planning process when justice was explicitly considered, to public participation in planning, to the planners' sensitivity to social justice, to goals adopted by the planners, and to a certain degree of luck.

Justice was explicitly raised at one significant point in the planning process: after Joe Shoemaker proposed focusing river improvement efforts on the creation of a park in the confluence area. John Zapien's reaction framed the decision about where to devote attention and resources as a justice issue. His comment that the impoverished Globeville area "*needs it much worse than down here*" emphasized the existing inequitable distribution of risks and benefits in his low-income and minority neighborhood. Zapien's framing of the physical distribution of river improvement efforts as a justice issue led to the decision to distribute benefits fairly equitably along four segments of the river and to connect these segments with a greenway.

The decision to create a greenway lining low-income and minority neighborhoods, rather than some other kind of project for just one part of the river, increased the likelihood of synergies between the environmental initiative and social justice in neighboring communities. The selection of a linear open space design was significant because it meant that many communities would abut the open space and reap

benefits. Many of these benefits are particularly appropriate for disadvantaged neighborhoods, including creating connections between neighborhoods, allowing people to enjoy open space through the inexpensive activities of walking and bicycling, creating a transportation corridor, and facilitating monitoring of social and environmental problems. While most greenway planners' primary goals for the greenway may not have been social justice-related, the decision to create a greenway that ran primarily through low-income and minority communities demonstrated a basic respect for these communities and their needs.

Zapien's justice claim is an example of the importance both of explicitly discussing justice and of public participation. Public participation during the first phase of greenway planning was limited but still helped to remind planners of equity concerns. During Mayor Webb's administration, participation in planning has led to significant social justice advancements. For example, the Overland community won improvements to Grant Frontier Park by directly asking the mayor's office for an extension of river improvement efforts.

Many planners of the greenway, while not explicitly discussing justice as a goal, were aware of the social justice implications of greenway planning measures. For example, water pollution improvement efforts were based partly on a recognition by Joe Shoemaker and the Platte River Development Committee that Vietnamese families depended on fish caught in the river for food. The decision to design the greenway to be wheelchair-accessible (before legally required) is another indication of how planners' awareness of and sensitivity towards equity issues helped advance social justice. This sensitivity was particularly important during the first phase of greenway planning, when

the neighborhoods were not very aware of the planning process and when planners were making decisions in quick succession. However, the comment of the current Executive Director of the Greenway Foundation, Jeff Shoemaker, that there are no physical, social, or economic barriers that prevent any groups from using the river suggests that some planners and decision-makers could cultivate a greater degree of awareness about justice issues.

Related to planners' social justice sensitivity was their decision to adopt a multi-objective and long-term approach to greenway development. Rather than simply setting out to make aesthetic improvements, the greenway planners considered flood hazard issues and pollution issues with an eye to making the neighboring communities safer. The greenway planners considered the long-term viability of the greenway, including maintenance issues, funding, and the flood safety of bridges in the event of severe floods. This is significant for social justice because while all people in the region are free to enjoy benefits of a successful greenway, it is the neighboring residents who would bear a disproportionate burden of a greenway's failures. Planners helped to promote the long-term success of the greenway by encouraging people to learn and care about the greenway through volunteering, educational programs, and special events. Many of these programs have been particularly geared toward residents of neighboring disadvantaged communities, such as education programs for urban children and service programs for at-risk youth.

*Implications for Theory and Practice*

The central question of this thesis outlined in Chapter 1 relates to how justice can and should be incorporated into environmental planning practice. My examination of the justice implications of the Platte River Greenway corroborates the claim I presented in Chapter 1 based on my literature review that planners have viewed the "environment" too narrowly. Because environmental planning affects social justice through the planning process, community building, use of space, economic issues, safety, livability, and cultural issues, planners should adopt and use a broader understanding of environmental justice. This also means that environmental justice researchers should devote more attention to the non-risk-based elements of justice. I have developed recommendations for addressing justice in environmental planning practice based on the Platte River Greenway case. These recommendations are not peculiar to greenway planning, but rather apply to environmental planning in general.

I submit that justice should be an explicit goal of environmental planning processes, particularly where low-income and minority communities are affected. Making justice an explicit goal is a break from traditional practice. There are many explanations for why planning generally has not explicitly adopted justice as a goal. First, some planners may not have a clear understanding about the connection between their practice and justice; planners' orientation and training may not include such considerations. Next, time pressures may cause politicians or planners to design processes that can proceed quickly. The possibility of raising past injustices or other political liabilities also may cause planners to not explicitly discuss justice. Finally, there is no clear understanding among planners or the public of the meaning of the term justice,

and there are no established procedures or fora for discussing justice. However, I argue that planners who wish to advance social justice should recognize the importance of framing planning in terms of justice, for reasons associated with planners' inherent framing power, political reasons, and for successfully advancing social justice.

As Forester points out, planners constantly shape and frame power relationships, and therefore justice, in their everyday actions. The fact that planners frame and shape power relationships whether they intend to or not means that it is important for planners to recognize and thoughtfully manage their actions relating to justice. To meaningfully advance social justice, planners should devote considerable attention to shaping perceptions, bringing up issues, raising certain perspectives, including the affected public, and designing and managing processes in a manner sensitive to justice.

Explicitly framing planning issues as justice issues is politically significant in two main ways. First, raising justice issues can engage disadvantaged communities and build political support for projects. The simple use of the term "justice" on the part of planners can build trust in communities because residents will understand that planners are interested in the communities' true concerns. Second, on a larger scale, justice is a foundation of democracy; democratic processes cannot be sustained in the face of great social injustice. As Rawls puts it, "justice is the first virtue of social institutions." (1971: 3) Processes with superficial discourse that elide issues about which communities care most are not just.

As we have seen in the case of the Platte River Greenway, explicitly discussion of justice can lead to significant justice gains. Including members of affected communities in the discussion of justice is essential to the meaningfulness and success of this strategy.

Raising justice issues in the Platte River Development Committee was a powerful way for John Zapien, as a representative of a disadvantaged community, to exert influence on city politics and planning. Participation in such fora gives opportunities for members of disadvantaged communities to directly confront others on justice issues and to argue for distribution of resources to underserved communities. We can expect that direct participation in these processes will lead to greater success than demanding resources from a position outside a planning process. In the case of the Platte River Greenway, explicit consideration of justice led to a more sustainable and successful outcome. It is logical to assume that in many cases, developing a plan sensitive to justice issues will result in a project that affected communities appreciate and care for.

Bringing justice into environmental planning processes also may allow planners and public participants to achieve significant progress on planning objectives beyond environmental objectives. This is partly because environmental issues span boundaries and media. The fact that river pollution travels and affects many different areas with varying socioeconomic conditions means that a variety groups may come together to address their joint interest in remedying the problem. In some cases, environmental problems may bring groups together that otherwise would not interact, and this may lead to the discovery of other mutual interests and new alliances. In the Platte River Greenway case, members of the neighborhood near the Northside Treatment Plant achieved a number of economic and social goals with a grant to generate light manufacturing and the construction of the new armory. The use of the word "justice" can be a powerful tool for engaging communities in discussion around a variety of deep concerns that can be addressed through environmental planning.

The Platte River Greenway case suggests that the following strategies are useful practices for shaping socially just environmental planning processes:

- Planners should adopt a comprehensive understanding of environmental justice, including toxicity and natural hazards risks, access to natural landscapes, recreational opportunities, livability, and planning participation factors. Fully considering the planning process, community building, use of space, economic issues, safety, livability, and cultural issues I discuss can help environmental planners advance justice to the greatest degree possible.

- Planners should meaningfully involve affected neighborhoods in the planning process. Involving affected neighborhoods may mean including communities that would not generally be recognized as "affected." Meaningful involvement entails integrating community knowledge and concerns into decisions, not simply listening to community members. Neutralizing or co-opting neighborhood leaders impedes social justice by reducing neighborhoods' ability to advance their interests. To most successfully include affected communities, planners should recognize the validity and importance of various styles of communication. These styles may differ from planners' own form of communication and may include individualistic, moralistic, non-English, and non-bureaucratic forms of communication. Planning processes that facilitate the development of community political skills, awareness, and networks are most useful for advancing justice in future processes.

- Planners should not shy away from undertaking environmental planning processes in areas that seem to present many physical barriers to achieving success, such as lack of space, a large number of industries, or physical infrastructure that blocks access. A process that carefully incorporates the concerns and needs of affected communities can help identify creative solutions to overcome barriers and create community assets, as in the case of the Platte River Greenway. Incremental enhancement of disadvantaged communities' environments may be the only feasible means to advance social justice in the short term, but this lays the foundation for larger future improvements.

- Decision-makers should recruit leaders/planners who are sensitive to the concerns of low-income and minority communities. This sensitivity can help to partially overcome difficulties in involving local residents, but cannot serve as a full substitute for meaningful involvement of affected communities. Sensitivity entails questioning basic assumptions about the effects of a project on various groups and these groups' ability to benefit.

- Planners should consider long-term issues related to social justice, such as maintenance and gentrification, from the beginning of the process.

- Planners should consider the larger neighborhood context. Justice problems are not usually limited by the physical boundaries that planners may identify as the limits of a particular project. Other physical, social, or economic issues may limit the viability of

an environmental project, or they may overshadow the project in question because they may have a stronger effect on primary goods in disadvantaged communities. Planners also should recognize the effects of environmental planning on other areas; for example, increased social monitoring of newly planned spaces may push crime to other areas.

- Planners should consider ways in which multiple objectives can be achieved through a single measure; for example, simultaneously providing recreational opportunities and reducing flood risks by preserving and enhancing open space.

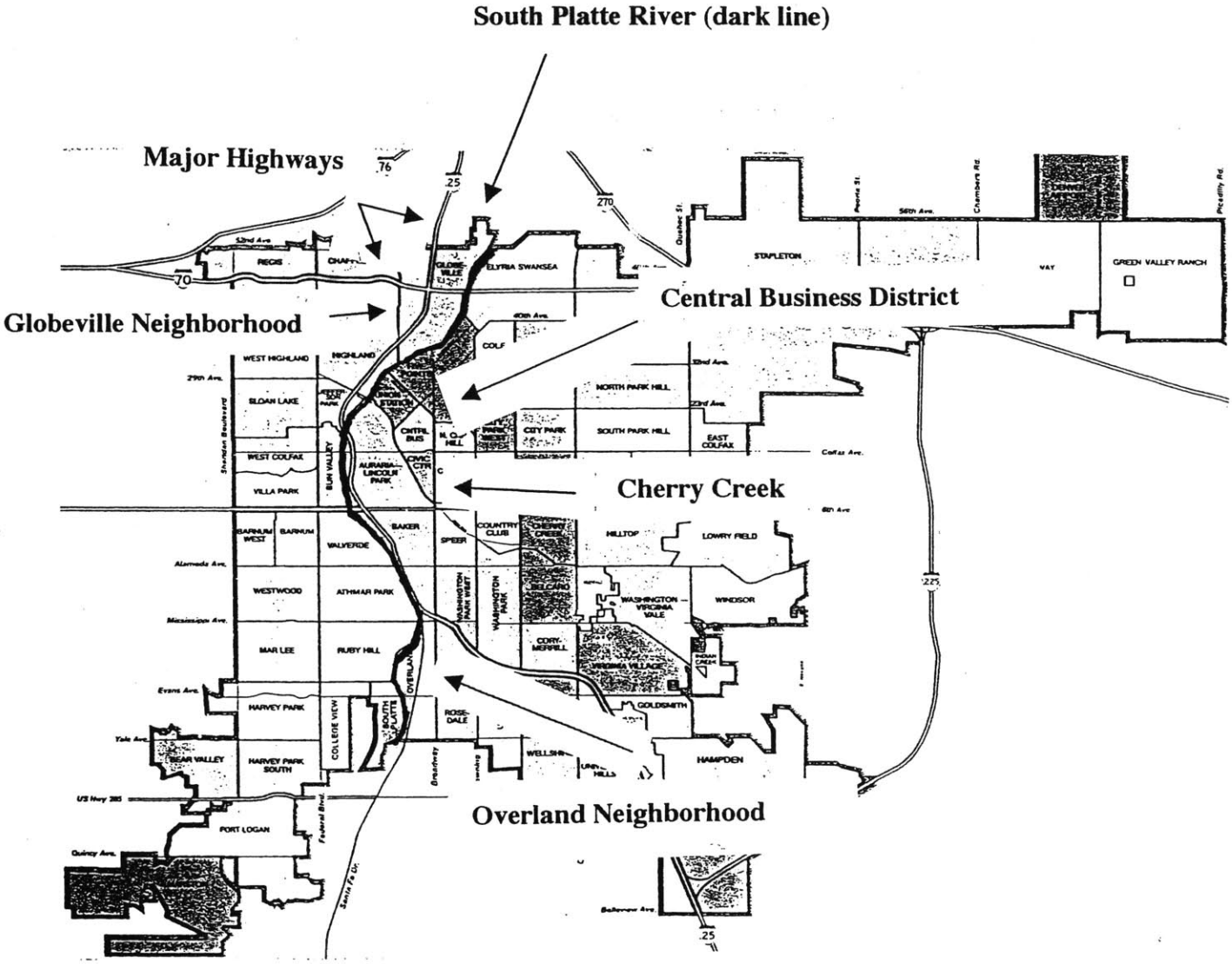
- Planners should revisit decisions and projects through an iterative method in order to recognize the dynamic process of interest formation, particularly in low-income and minority communities that have not previously been engaged in environmental planning processes.

## *Summary of Findings*

This thesis shows that environmental justice encompasses issues of environmental benefits, in addition to environmental risk. Environmental planning leads to many significant justice outcomes relating to environmental risk, environmental benefits, and other social justice issues; however, environmental planners often do not explicitly frame processes in a way that draws attention to justice implications. Explicit discussion of justice in environmental planning processes can lead to significant advancements in social justice in neighboring communities.

# Appendix

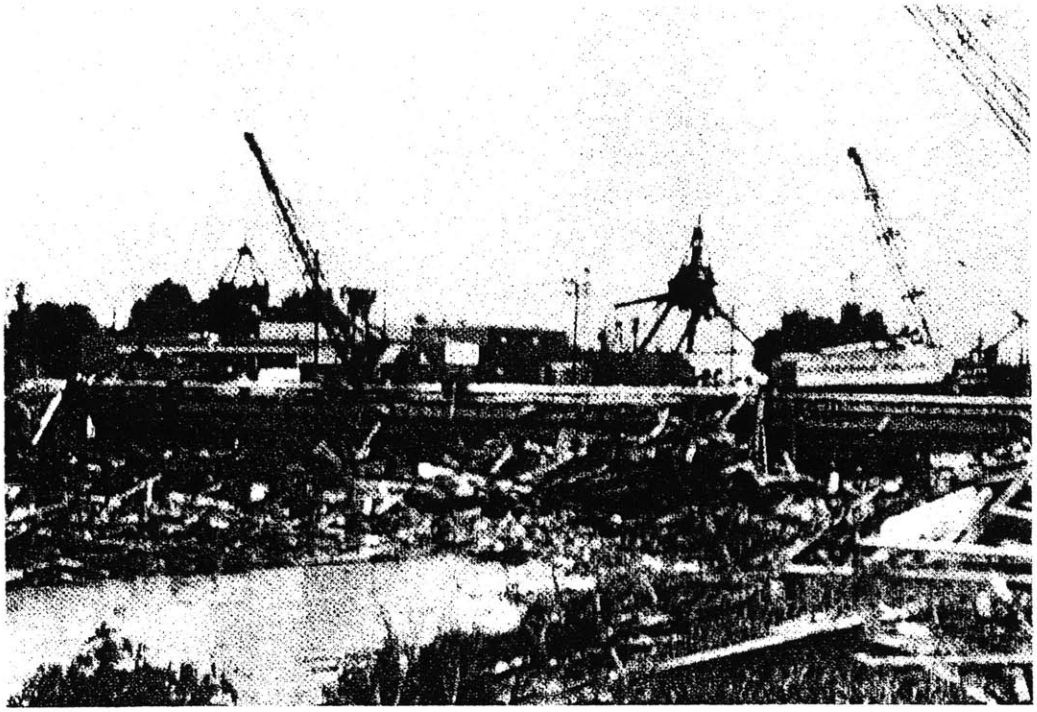
Figure 1: Map of Denver, the South Platte, and Neighborhoods



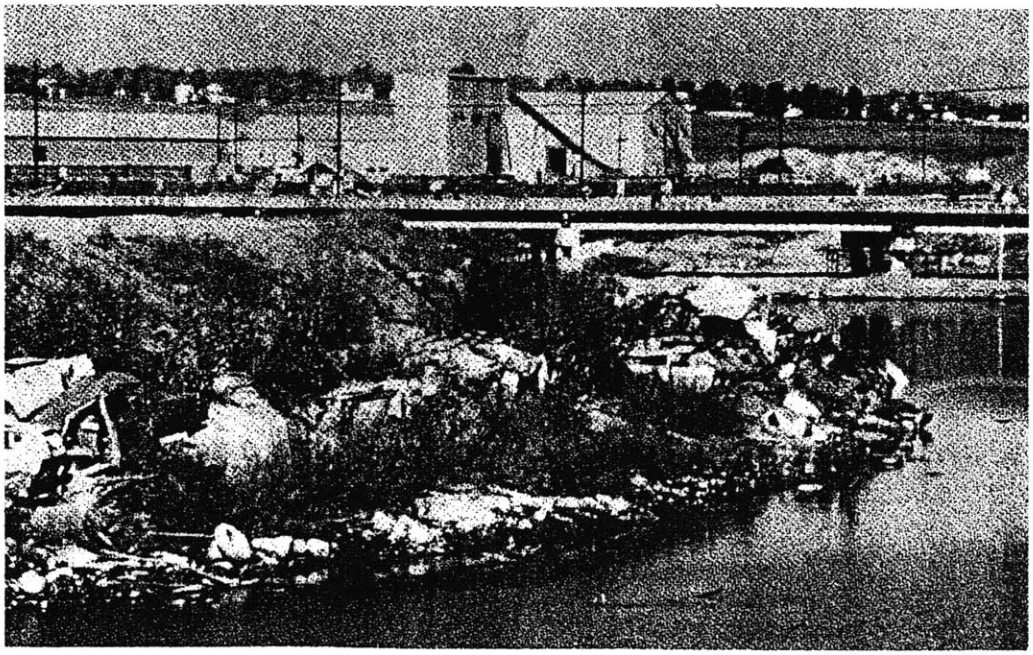

The South Platte runs from Denver's southern border to its northern border, lined for much of its route by a major highway. The Cherry Creek meets the South Platte just west of downtown Denver.

Figure 2: The South Platte Prior to Greenway Development

(2a) Damage from the Platte River's 1965 flood.



(2b) Conditions on the Platte River before greenway development.



Automobiles, tires, broken concrete, and other forms of rubble lined the Platte River before greenway development. The conditions contributed to squalor in adjoining communities and physically cut off access to the river.

Figure 3: Table of Socio-Economic Conditions in River-Abutting Neighborhoods

**Selected Measures of Well-Being for River-Abutting Neighborhoods and Denver as a Whole**

| | 1995 Average Household Income | 1998 % Free School Lunch Participation | 1999 Subsidized Housing as % of All Housing | 1998/1999 % Latino Students | 1998/1999 % African American Students | 1998/1999 % White Students |
|---|---|---|---|---|---|---|
| Athmar Park | $36,151 | 58.3 | 3.3 | 76.9 | 0.9 | 17.7 |
| Auraria-Lincoln Park | $23,570 | 87.5 | 33.6 | 75.6 | 10.2 | 6.0 |
| Baker | $26,272 | 83.5 | 13.7 | 82.8 | 4.0 | 10.8 |
| Elyria Swansea | $25,762 | 79.9 | 5.4 | 57.9 | 6.9 | 4.5 |
| Five Points | $19,670 | 86.2 | 33.3 | 49.6 | 42.0 | 6.8 |
| Globeville | $25,210 | 78.6 | 2.5 | 88.2 | 2.9 | 7.0 |
| Highland | $24,885 | 78.2 | 6.5 | 89.2 | 1.8 | 7.3 |
| Jefferson Park | $26,727 | 88.5 | 6.8 | 89.2 | 1.8 | 6.0 |
| Overland | $28,275 | 60.0 | 2.3 | 56.0 | * | 37.5 |
| Ruby Hill | $30,580 | 59.3 | 21.7 | 69.8 | 3.1 | 17.2 |
| South Platte | $34,593 | 52.3 | NA | 68.2 | 11.4 | 11.4 |
| Sun Valley | $13,879 | 95.4 | 93.9 | 53.7 | 21.9 | 5.9 |
| Union Station | $48,760 | 74.1 | 34.2 | * | * | * |
| Valverde | $29,638 | 76.4 | 24.8 | 76.3 | 5.1 | 12.3 |
| **Denver** | **$42,426** | **56.5** | **6.6** | **49.4** | **21.3** | **24.5** |

* Data not provided if fewer than 3 events.
Source: The Piton Foundation, 1999: 22-27

The table above indicates that the fourteen river-abutting neighborhoods have a lower socioeconomic status than Denver as a whole, with the exception of Union Station. Average household income in these neighborhoods is relatively low and the neighborhoods have high percentages of children enrolled in free school lunch programs. Several of the neighborhoods have particularly high concentrations of subsidized housing. White students in public schools are a minority in Denver as a whole, but there are particularly small numbers of white students in the river-abutting neighborhoods. There are also few African American students. Latino children make up the majority of schoolchildren in the river-abutting neighborhoods.

Figure 4: Map of the Platte River Greenway and Regional Greenway System

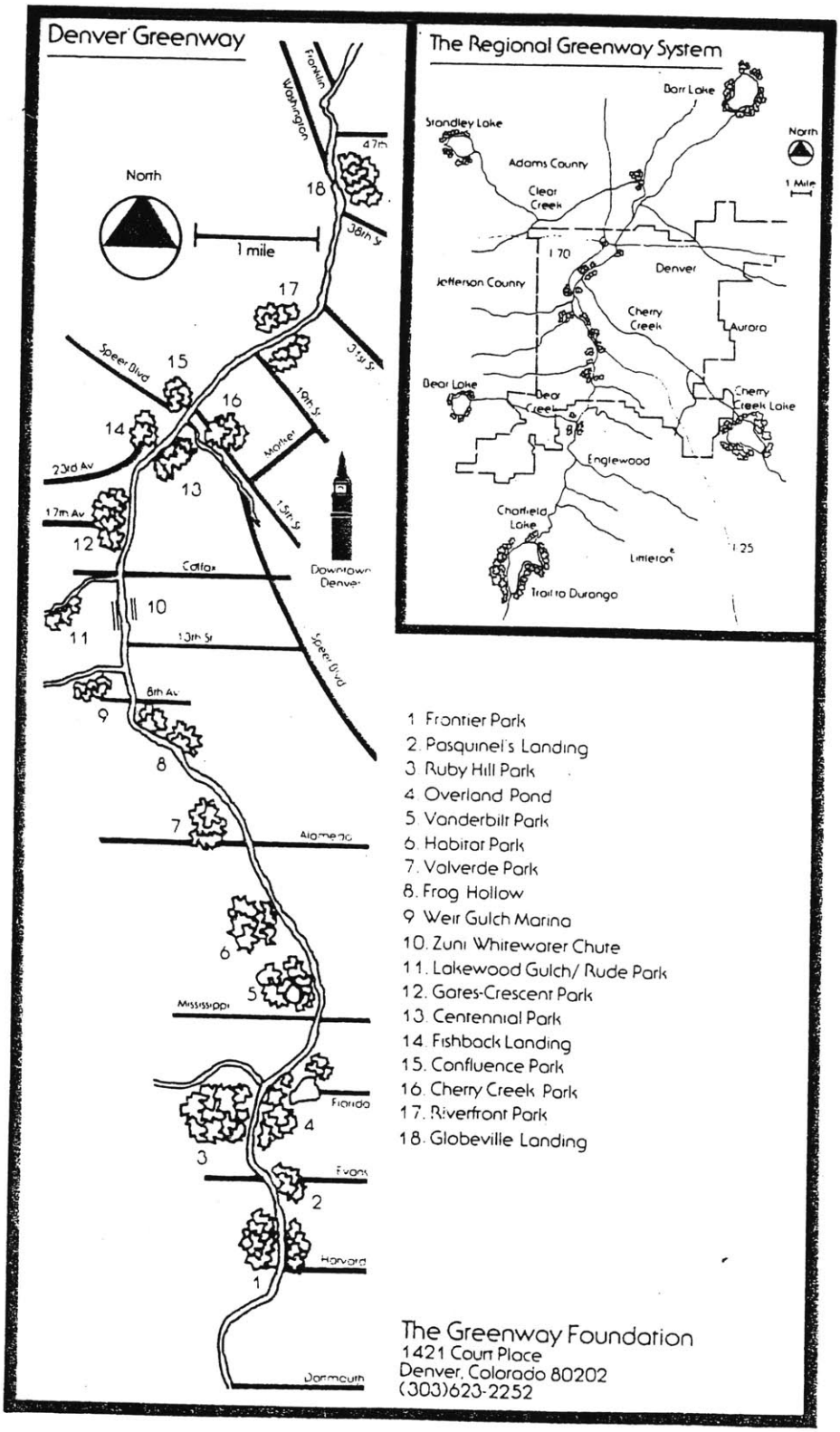
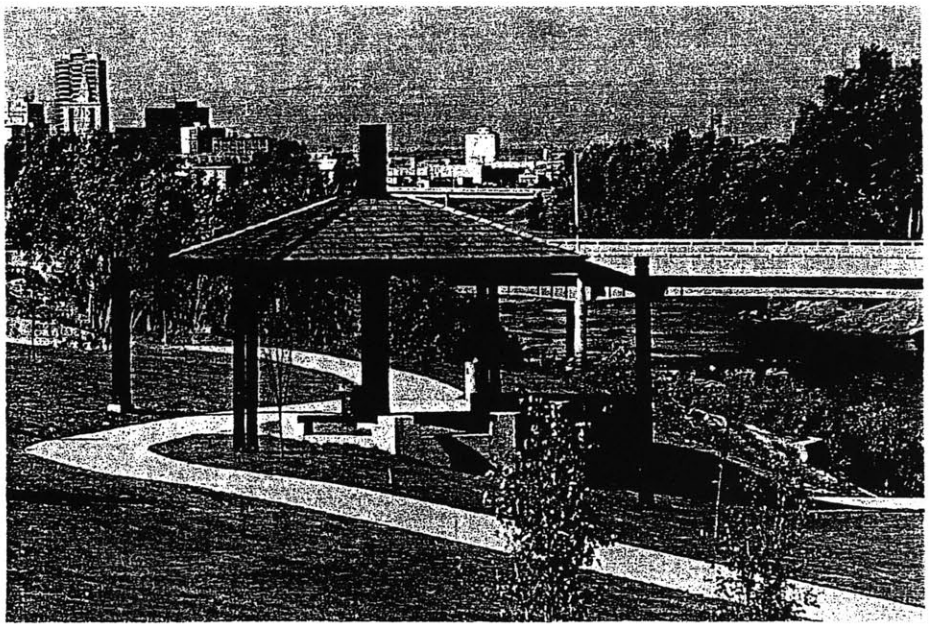


Figure 5: Greenway Development

(5a) Typical stretch of the greenway

A typical stretch of the greenway has an 8-foot wide hiking/biking trail that runs close to the river, lined with vegetation.

(5b) Globeville Landing



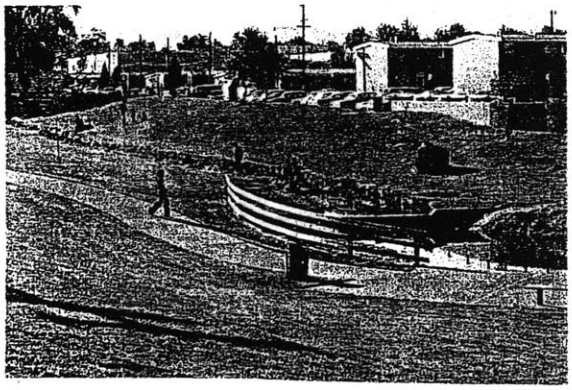
Globeville Landing features a gazebo, picnic tables, trees, and grassy areas in the midst of an industrial area. The riverbanks in this area were formerly littered with chicken feathers from a factory.

Figure 6: Trail Development on Tributaries to the Platte

(6a) Weir Gulch before improvements

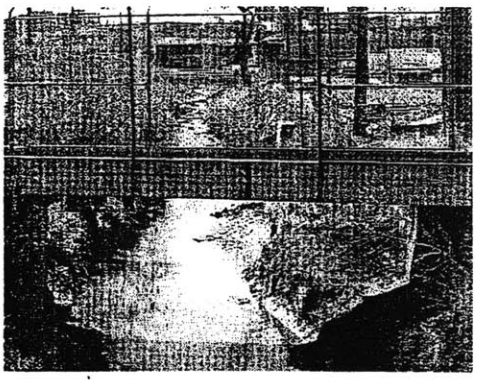
Before improvements to Weir Gulch, fences, steep banks, and brush prevented residents of the adjacent public housing development from using the waterway as an amenity.

(6b) Weir Gulch after improvements



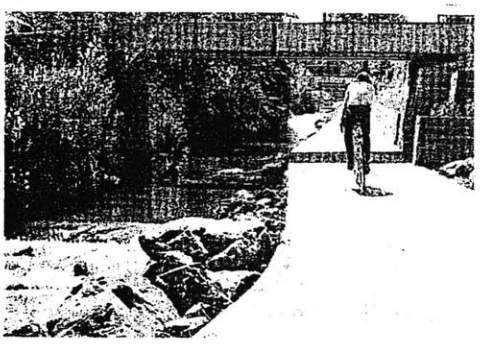
Creation of the Weir Gulch trail spur created open space, provided access to the gulch and to the larger greenway system, and contributed to flood safety for residents of the public housing development and the larger area.

(6c) Lakewood Gulch before improvements



Before improvements, it was not possible to walk or bicycle along Lakewood Gulch.

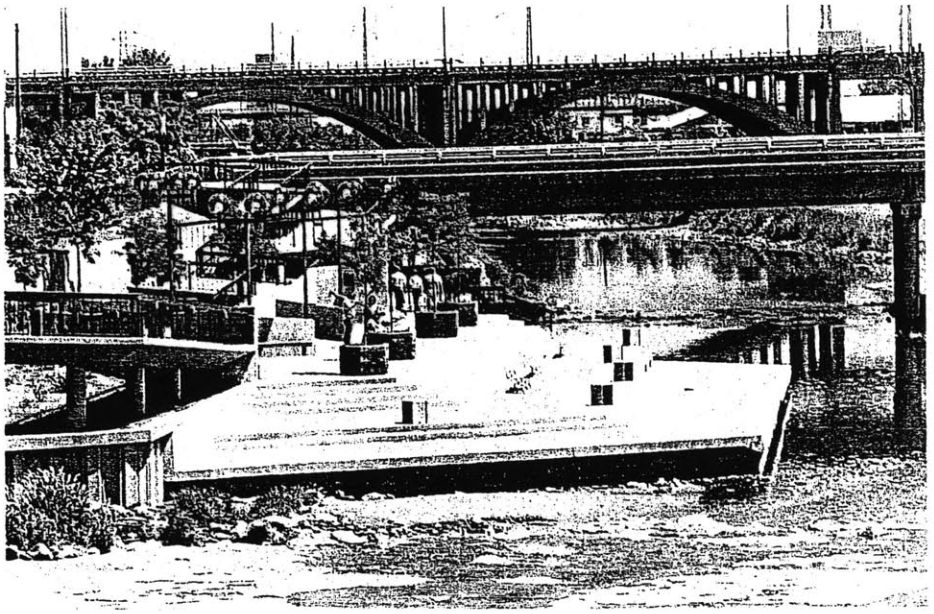
(6d) Lakewood Gulch after improvements



The Lakewood Gulch trail spur created new access to the waterway and flood-resistant infrastructure.

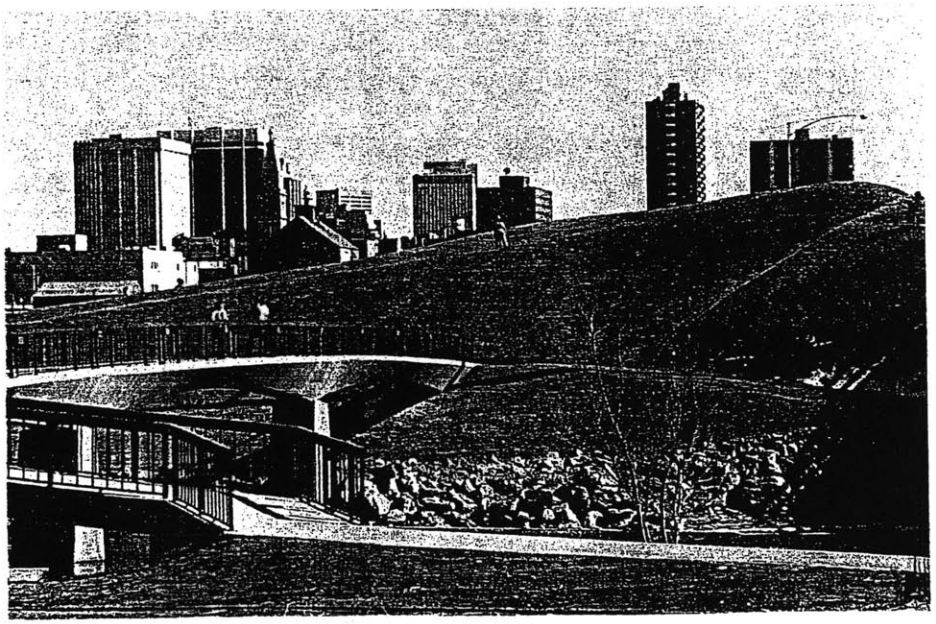
Figure 7: Confluence Park

(7a) Confluence Park plaza



The Confluence Park plaza features different terraced levels, benches, and plantings.

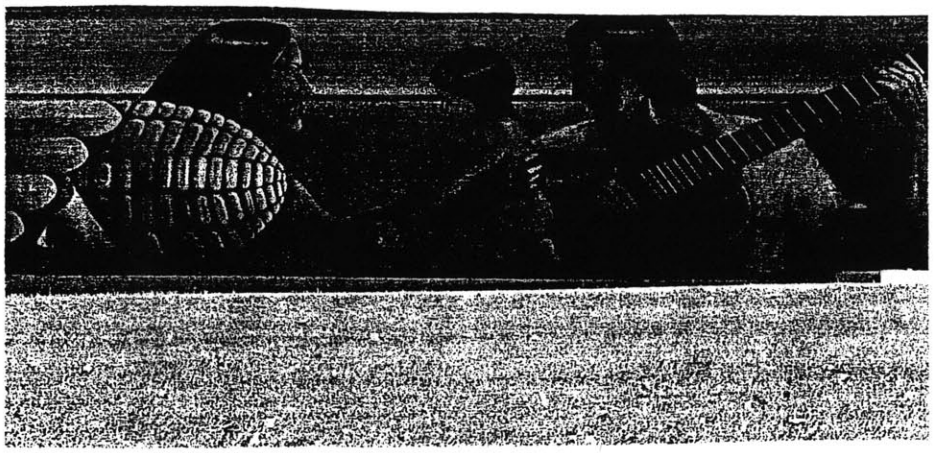
(7b) Confluence Park amphitheater



The Confluence Park amphitheater lies across the river from the plaza. A footbridge connects the plaza and amphitheater. Downtown Denver appears beyond the hill.

Figure 8: Murals

(8a) Weir Gulch mural



The Weir Gulch mural was painted on a 125 by 20-foot section of an industrial building, and represents Mexican culture.

(8b) Neighborhood children helping to paint the Weir Gulch mural

(8c) Gazebo and mural at Globeville Landing

Greenway users can view a mural painted on the side of an industrial building from the gazebo at Globeville Landing.

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