

DISSERTATION

CONSENSUS MAKING:

THE STATE OF NATURE AND THE NATURE OF THE STATE

THE CASE OF THE ROCKY MOUNTAIN ARSENAL
NATIONAL WILDLIFE REFUGE

Submitted by

Melissa Lynne Hippard

Department of Sociology

In partial fulfillment of the requirements

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Colorado State University

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PHILOSOPHY.

Committee on Graduate Work

Joni E. Swanson

Barbara L. Lantieri

Robert J. Taylor

Laurel L. Murray

John R. Brundette

Department Head/Director

ABSTRACT OF DISSERTATION

CONSENSUS MAKING:

THE STATE OF NATURE AND THE NATURE OF THE STATE

THE CASE OF THE ROCKY MOUNTAIN ARSENAL

NATIONAL WILDLIFE REFUGE

The early success of the environmental movement in calling for a substantial shift in state management of natural resources resulted in widespread changes in environmental regulation. However, these structural changes, aimed at maintaining consensus in state-society relations, did not result in a state system capable of effectively integrating public involvement in decision making. While much empirical research in the contemporary practice of collaborative resource management focuses on the practice of democracy, little attention has been paid to how the state's role in balancing competing social priorities structures this practice.

The state is a core area of interest in the field of sociology; one important theoretical tradition focuses on how modern, democratic societies rely on the consent of the governed to maintain state legitimacy and power (Weber in Gerth and Mills 1958, Gramsci 1971, Habermas 1976). This qualitative analysis, based on 33 in-depth interviews and extensive document review, was greatly informed by grounded theory (Glaser and Strauss 1967, Strauss and Corbin 1990) and Burawoy's extended case method (1998). The decision-making process at the Rocky Mountain Arsenal

reveals how ecological crisis and economic imperatives intersected to create the conditions for a change in the terms of consensus.

The roots of contemporary collaborative decision making are found in the case of the Arsenal. In the early 1980s, public trust in the state's ability to respond effectively to environmental crises was low, resulting in a demand for greater involvement in the policy process. Because of the overwhelming uncertainty regarding the level of risk posed by the cleanup and future use of the Arsenal, the traditional command-and-control approach was no longer tenable. Consensus now required alliance building, and social and technical knowledge became the key variables for determining how effective any party to the process could be. Hybrid organizations such as the Restoration Advisory Board, which combine diverse public and state stakeholders, emerged as the means to create positive public perception and supportable policy outcomes.

Melissa Lynne Hippard
Department of Sociology
Colorado State University
Fort Collins, CO 80523
Fall 2007

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I dedicate this dissertation to my daughter, Maia Heidi Hippard-Roff. She inspires me to achieve things that I would not have otherwise had the interest or drive to accomplish. The future is a place she will inhabit, and I take seriously my responsibility to do my best to keep it blue, green and alive.

I want to acknowledge that I could not have completed this project without the ongoing support and commitment of my advisor, Doug Murray. His belief in my ability to contribute something useful to the field of sociology as well as the larger arena of environmental policy making pushed me to grow as an intellectual. For that, I am truly grateful.

The story of the Rocky Mountain Arsenal National Wildlife Refuge could not have been told without the trust and time of the many people who spoke with me. Their individual commitments to working for a safe and beneficial outcome to the demilitarization of this toxic waste site are inspiring. The result of their efforts is the widespread use of collaboration in natural resource management and environmental policy making. The institutionalization of local knowledge in state management of our natural resources is an important step in the creation of a sustainable society.

Finally, I would like to thank my parents for their continued support and belief in my ability to finish this project. A number of other people have been important in bringing the dissertation to closure. I would like to acknowledge David Coale, Nina Roberts, Aimee Shreck, Matt Aronson, my Fort Collins “family” and my colleagues in the Department of Sociology at Colorado State University. To all my friends, I want

you to know that it truly takes a community to foster the growth and success of an individual. Thank you.

PREFACE

When I started the process to get a doctorate in sociology, I was interested in the issue of whether public involvement in environmental policy making mattered. I admit I came to the question with a lot of cynicism. I have a long history of grassroots activism based in holding the state accountable, and the fact that I had endless opportunities to do this suggested to me that the system was biased against justice, equity and ecological well-being. Still, I had hope and a belief in change.

Sociology offered the best means for me to explore the nature of state-society relations and the particular dynamics of social change. When I commenced the program at Colorado State University I had a very strong attachment to the notion that the state, while complex, is fundamentally under the control of economically dominant interests and that this situation is immutable. At the same time I had a very deeply held commitment to direct democracy that formed the basis of my personal and professional decision making. Holding these two ideas together in the formulation of my research project made it a very challenging undertaking: I was looking for proof of the latter while holding tightly to a deep distrust of the state. Finding my way through and past this place filled the majority of these last five years.

My research project couldn't have been a better means to move my thinking to a more complex and fruitful place. The Rocky Mountain Arsenal is a Superfund site and a national wildlife refuge. I interviewed over 30 people about their experiences during the process in which this former chemical weapons installation became a publicly accessible open space in a rapidly urbanizing area. One of the most surprising

and enlightening moments I had in the process of analyzing the data I collected was the realization that grassroots activists were not seeking to “smash the state.” Rather, they were acting on their belief that the state exists to ensure their well-being and that they have the right and obligation to step in when it is not serving the public interest. Their engagement in the decision-making process at the Rocky Mountain Arsenal largely explains how the Army came to have a democratically informed public-involvement program and the creation of a unique social organization: the hybrid organization.

Hybrid organizations are now found throughout the legal-institutional terrain of land use and natural resource management. Commonly referred to as “collaborative decision-making,” the diverse forms the hybrid organization takes reflect a new structural solution to managing the tension between bureaucratic management and democratic practice. The emergence of the hybrid organization at the Rocky Mountain Arsenal (the Restoration Advisory Board and the Site Specific Advisory Board) is evidence that public involvement does matter. These organizations are evidence that conditions of ambiguity and conjuncture more accurately represent the social world than Weber’s Iron Cage. Furthermore, the widespread adoption of collaborative decision making suggests that the practice of democracy is a critical aspect of the modern process of social change.

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CHAPTER 1:

Crisis and Consensus: State-Society Relations in the Age of Ecology

The modern state system is a paradox. On one hand it is a means to channel human talent and energy toward increasing our standard of living. On the other hand this very organization has facilitated the destruction of the environment such that it puts the very future of humanity at risk. Furthermore, its fundamental role as manager of the complex activities of society has caused it to grow significantly reaching into every aspect of the life-world. The modern state remains an imperfect solution for addressing social problems. It appears that the individual freedoms promised by democracy and capitalism have come at a very high cost as the consequences of our political-economic system have led to the edge of ecological collapse.

Since the Industrial Revolution, concern about the environment has been a feature of society's response to the ecological destruction wrought by economic development (McCormick 1989). The Progressive Movement in the United States at the turn of the 19th century railed against the evils of monopoly capitalism, resulting in a moderately politically effective challenge to corporate power in the first two decades of the 20th century. Forty years later the first Earth Day symbolized society's demand that the post-WWII industrial state take greater responsibility for the toxic legacy of militarism and industrial production. As we enter the 21st century, widespread recognition of the limits of state management and the complex challenge

of sustaining the earth as human habitat has resulted in what appears to be an evolutionary step in the structure of state-society relations: “network governance”¹ a collaborative management method in which the distinctions between the public and private are blurred and citizen stewards are called on to help meet the challenges of equity, intransigence, and fear.

The decade of the 1980s was a turning point in which citizens across the United States. became personally aware of the extensive contamination at federal defense and energy facilities and private industrial sites. In 1985 when the residents of Commerce City, Colorado discovered that their water was contaminated with chemicals from the Rocky Mountain Arsenal their casual awareness of the Army’s plans to demilitarize the former chemical weapons site rapidly shifted to active engagement. The lack of disclosure about this public health threat by the U.S. Army as well as the local and state health departments shook residents’ faith in their state institutions and became a call to duty. Local citizen groups stood up to the U.S. military and successfully changed the terms under which the decision-making process about the future of the Rocky Mountain Arsenal would be made. The power struggles for control over the future of the Arsenal became the crucible in which a new model of state-society relations emerged.

¹ Lynn Scarlett, Deputy Secretary, U.S. Department of the Interior addressing Bay Area Open Space Council at its annual conference, June 13, 2007, The Presidio, San Francisco, CA.

The modern democratic state is presumed to constitute a distinct form of public power that ensures the continuity of liberalism.² However, each dimension of the environmental crisis, from species extinction to toxic waste sites, reflects problems that obviate any distinction between state and civil actions. Most significantly the state's inability to protect the public and the environment has led to legitimation problems for the state. One response that has emerged in the past two decades has been the pursuit of collaborative decision-making initiatives between the state and popular organizations in the form of hybrid organizations. This model has been employed widely to address natural resource management issues and has been hailed as an indication of the decentralization of state power.

The widespread adoption of the collaborative decision-making model raises important questions for social scientists interested in the evolution of the state and democratic processes, and for policy makers interested in sustaining both the economy and the planet. The pervasiveness of hybrid organizations does reflect a change in state procedure, but do they result in more just, equitable and environmentally favorable outcomes? They appear to provide access to the state structure for well-organized interests who otherwise do not have access to state power. However, it is unclear whether the state has relinquished sufficient control, allowing hybrid

² Liberalism is a controversial concept whose meaning has changed historically (Held 1983). It is used here to signify the attempt to define a private sphere, independent of the state, freeing civil society from political interference, and the simultaneous delineation of the state's authority.

organizations to generate policy outcomes that do not fundamentally reinforce the existing power structure.

The case of the Rocky Mountain Arsenal (Arsenal) is an intriguing vehicle for exploring these questions. For most of its existence, the Arsenal had been an accepted part of the social, political and economic landscape of Colorado, providing work, recreation and a sense of security in a threatening world. The site was purchased by the Department of Defense in 1942 to manufacture chemical weapons during World War II. Post-war changes in geopolitics led the U.S. Army to lease the facility to pesticide manufacturers in the 1950s. By the late 1970s, further changes in U.S. defense policy, and the impending exit of long-term lessee Shell Oil Company, led the Army to focus on identifying a non-military future for the site. While the growing cities of Denver and Commerce City saw an opportunity for development, the State of Colorado saw a financial liability. Shell Oil was doing their best to ensure they would not be held responsible for cleanup costs. The Army was focused on on-site containment and cleanup and on fighting a legal battle with Shell Oil to force them to contribute to the cleanup costs.

Located northeast of Denver, the 27-acre site³ is mostly open space, with abundant wildlife and only about 4 acres of highly contaminated production and storage facilities. Long aware of the unique toxic brew created at the Arsenal, the Army pursued containment strategies, paying little attention to off-site impacts. These

³ See map, Appendix B.

efforts, underway since the 1960s, had caused occasional flareups of public concern. However, it was the 1985 public disclosure of chemical contamination in the Commerce City water supply that triggered a series of actions and reactions between the local community and the state agencies that ultimately resulted in a change in the way government operates.

Contamination, Community Concern and State Response at the Arsenal

Pollutants in off-site drinking water were discovered by the state health department in 1974, leading the agency to issue an order to the Army and Shell Oil to stop polluting the ground and surface waters north of the Arsenal with DIMP⁴ and DCPD.⁵ The Army subsequently claimed to have made the prevention of additional off-site chemical migration a top priority. Yet, in the early 1980s the Tri-County Health department alerted the local water department that trichloroethylene (TCE)⁶ had been found in some of the Commerce City wells. Local- and state-agency response to this

⁴ Diisopropyl Methylphosphonate: DIMP is an abbreviation for the chemical diisopropyl methylphosphonate and is a by-product of the Sarin nerve agent (also called GB) manufacturing process. Sarin was produced at Rocky Mountain Arsenal as a deterrent during World War II and the Cold War era.

<http://www.rma.army.mil/cleanup/facts/dimp.html>

⁵ dicyclopentadiene: gastrointestinal or liver toxicant.

http://www.scorecard.org/chemical-profiles/summary.tcl?edf_substance_id=77-73-6

⁶ In its 9th Report on Carcinogens, the National Toxicology Program (NTP) determined that trichloroethylene is “reasonably anticipated to be a human carcinogen.” The International Agency for Research on Cancer (IARC) has determined that trichloroethylene is “probably carcinogenic to humans.”

<http://www.atsdr.cdc.gov/tfacts19.html>

discovery was to monitor the situation. These bureaucratic entities were hesitant to publicly divulge the pollution in the water, as there was no immediately identifiable source and the local water system was part of a special district with limited funding. Lacking a clear responsible party and no public awareness of the problem, they chose a wait-and-see approach. This strategy would soon backfire.

When the news broke in the Denver Post in 1985 that water wells in Commerce City were contaminated with TCE, a known carcinogen, the public was outraged. The local agencies scrambled to respond to demands that the chemicals be cleaned up and the water supply made safe. Immediately shutting down the wells, the agencies turned to the Army as the most likely responsible party. The Army denied responsibility and pointed to the multitude of chemical production facilities in Commerce City,⁷ the lack of evidence supporting claims that the groundwater flow moved from the Arsenal toward the city, and the lack of a record of TCE use on-site. In addition, cleanup efforts had been ongoing since the 1960s and it was the Army's policy to contain contamination on-site. From their perspective, they were not responsible, and certainly they wanted to avoid the substantial costs associated with ensuring a safe water supply for Commerce City and other communities in South Adams County.

Popular concern about water contamination and lack of effective response on the part of responsible agencies (e.g., Colorado Department of Public Health, Tri-

⁷ Commerce City, CO is home to at dozens of Superfund sites in various stages of cleanup.

County Health and the South Adams County Water District) led to the founding of *Citizens Against Contamination*, an organization of residents already active in local school issues. This emergent citizen's organization was composed of a wide range of people from throughout the area who focused their efforts on getting information out to the public and holding the agencies and elected officials accountable. The increasing public awareness of the health threat contributed to a rising sense of crisis in the community, resulting in large citizen turnouts and greater press coverage of events. The public forums held by the *Citizens Against Contamination*, attended by hundreds of people, pushed the state health department and the Environmental Protection Agency to respond by providing bottled water and beginning plans to filter the local water supply.

While the Army's initial response was resistance, their continued participation in the public-driven process held them in the spotlight of responsibility. The local water district saw an opportunity in the citizen-based efforts to press harder on the Army and stepped up their efforts with trips to Washington, D.C., to lobby the Assistant Secretary of the Army and federal representatives. Local leaders called on the Army to provide the means to restore Commerce City's image. The state health department and the EPA also leveraged citizen outrage to bring the Army to greater account. Ultimately the Army acknowledged the use of TCE at the Arsenal and agreed to fund water treatment.

The Army (and Department of Defense), until the 1980s, was relatively insulated from the sweeping changes that gave birth to the Environmental Protection Agency and the Superfund. Until the turning point in the mid-1980s, the EPA had

some influence at the Arsenal under the authority of the Resource Conservation and Recovery Act,⁸ but it was limited by the Army's ability to follow the minimum expectation of public notification. When the public became aware of the off-site consequences of chemical production on the Arsenal, the Army was no longer so insulated, and the State of Colorado and the EPA became emboldened to engage more aggressively with the Army.

Popular outrage at bureaucratic intransigence generated sufficient power to move local, state and federal agencies to adopt policies and take actions that would not have occurred otherwise. It also produced a cadre of citizens who became deeply involved in the official process for cleaning up the Arsenal. *Citizens Against Contamination* provided the organizational structure to focus citizen engagement with the state system. This grassroots group became the source of public leadership in the long and complicated process ahead.

Reconstructing Barriers into Opportunities: Wildlife on the Refuge

The discovery of a bald eagle roost on Arsenal grounds in 1987 appeared at first as a further complication in the Army's ability to move forward on completing a cleanup plan and future use for the site. Triggering the Endangered Species Act⁹ and requiring the involvement of the U.S. Fish and Wildlife Service, decision making at the Arsenal

⁸ 42 U.S.C. s/s 6901 et seq. (1976).

⁹ 1973, 16 U.S.C.A. §§ 1531-1544 (1985 & Supp. 2000).

now not only involved public concern about the human health consequences of the contamination, but also focused on the need to ensure the health of wildlife and its habitat while proceeding with interim cleanup actions. While initially discouraged by the bald eagles, the Army came to see their presence as an opportunity. Their existence caught the attention of the local chapter of the Audubon Society and the National Wildlife Federation and excited birders and wildlife enthusiasts, thus engaging a new set of public stakeholders who were eager to work with the Army to build public support for creating a national wildlife refuge on the Arsenal. While the presence of endangered species offered a new constituency supportive of the Army's goal to keep the Arsenal a federal facility, it also raised concerns about how protective of human health the final cleanup remedy would be.

Citizens who had been actively working to pressure the Army to pursue a full cleanup of the contamination saw the refuge concept as the Army's strategy to limit their responsibility to achieve a cleanup level that protected human health. Their involvement in the refuge-designation process focused on ensuring that legislation establishing the wildlife refuge contained clear language regarding the level of cleanup. The central issue that emerged in the late 1980s was "how clean is clean?" and became a point of tension between environmentalists focused on the contamination and record of decision process¹⁰ and those focused on achieving the creation of the Rocky Mountain Arsenal National Wildlife Refuge.

¹⁰ The Record of Decision (ROD) is a public document that explains which cleanup alternatives will be used to clean up a Superfund site. The ROD for sites listed

Integrating Popular Concern into Policy Making

The period of the late 1980s into the early 1990s at the Arsenal was the crucible for the simultaneous national discussion on how best to proceed with environmental restoration at contaminated federal facilities. At the center of this discussion was the question of how to engage the public in such a way that the decisions made “reflect the priorities and concerns of all stakeholders.”¹¹ It was widely acknowledged that two primary concerns should be immediately addressed: limited funding and lack of public trust in the responsible state agencies. In response to the direction of the national policy discussion¹² and their experience at the Arsenal with the difficulty in controlling popular participation, the Army changed the Technical Review Committee (TRC) into a Restoration Advisory Board (RAB). TRC membership had been limited to formal appointments by the Army, which, given the Army’s ability to control membership, made it impossible for the TRC to be open to any and all affected parties. Through their participation in the FFERDC process, the Army adopted the RAB as the means to demonstrate their commitment to wider citizen representation and participation. This new model of citizen participation created a hybrid organization. Intended to create forums for meaningful participation, hybrid organizations are composed of state agencies and public representatives and provide a forum where

on the NPL (NPL Site Listing Process) is created from information generated during the Remedial Investigation/Feasibility Study (RI/FS).

¹¹ Final Report of the Federal Facilities Restoration Dialogue Committee (FFERDC) April 1996 US Environmental Protection Agency.

¹² Here I am referring specifically to the FFERDC.

information is shared and all issues are given a fair hearing. Presumably no one member has more power, within the framework of the committee, than any other.

Shortly after the Restoration Advisory Board was created, some former *Citizens Against Contamination* members and newer participants felt it was too controlled by the Army and left the RAB. They organized themselves into *We the People* and, with the support of the State of Colorado, petitioned the EPA to form an alternative to the RAB as provided by the recommendations of the FFERDC. The Site Specific Advisory Board (SSAB) was established in the same year as the RAB. In contrast, its membership structure made the Army and other agencies *ex officio* rather than voting members. Since that time, public membership has been divided between the RAB and SSAB, with those most skeptical of the Army's commitment to a full cleanup tending toward SSAB participation. The existence of two citizen advisory boards at the Arsenal is unique. Their existence at the Arsenal reflects the difficulties encountered in the late 1980s and early 1990s in creating an organizational solution for public involvement in complex and long-term environmental policy issues.

The Research Project in Brief

This research project examines the link between organizational change and public policy decision making in a particular place — the Rocky Mountain Arsenal, a Superfund site and national wildlife refuge, located in the Denver metropolitan area. This case study conceptualizes the policy decision process between 1980 and 1996 as a bounded and integrated system defined by time, a regulatory and legal framework, and constituent participants. To examine how public involvement interacts with

organizational decision making, analytical attention is focused on how behavior is patterned by the regulatory/legal framework, organizational membership, and ideological orientation toward democratic planning. Furthermore, given the level of social, political and economic conflict that defines public land management, it is useful to evaluate how productive that conflict is for achieving meaningful social change. The potential implications of this research to public land management in other settings and over the long term are also considered.

CHAPTER 2:

Environmental Crisis and the Administrative State: Reasserting the Hegemonic Agenda through Hybrid Organizations

Studies of public participation in natural resource management either implicitly or explicitly evaluate the tension between democratic ideals and bureaucratic performance. The basic assumption informing analysis since the emergence of the environmental movement in the 1960s is that we are faced with threats arising from our own actions, and environmental problems are as much technical challenges as democratic dilemmas (Press 1994). As Weber (in Gerth and Mills 1946) astutely observed, there are technical advantages to bureaucratic organization. The increasing complexity of environmental problems requires optimizing the precision and speed with which technical knowledge can be employed in problem solving. Yet, bureaucracy also has a great capacity to centralize power and limit democratic practice.

Ironically, the result of the populist-driven environmental movement has been an expansion of state authority (Paehkle 1989, McCormick 1989, Hurrell and Kingsbury 1992, Kraft 2000). Administrative restructuring in the face of demands for greater transparency, enlarged participation and valuing local knowledge has resulted in the creation of hybrid organizations — state-sanctioned formal organizations that share membership between state authorities and local citizens. Their purpose is to provide an arena to process information aimed at guiding decision making. However,

given the continuing level of popular resistance¹³ to state environmental policies, it is important to look closely at how these entities function in balancing the technical and democratic (political/social) aspects of environmental problems. Their design to bridge democratic impulses with bureaucratic efficiency embody one of the more challenging contradictions of modern life. Under these conditions, are hybrid organizations indicative of a fundamental change in the distribution of power in society, or are they simply symptomatic of the efforts of the status quo to maintain control?

Understanding the Potential of Public Involvement in Environmental Policy

The broad goal of this research project is to achieve a deeper understanding of the relationship between public involvement and bureaucratic decision making. Since the 1960s, when the public was first alerted to the ecological consequences of modern industrialization, there has been steady pressure for decision making regarding environmental management to be a more transparent process (McCormick 1989, Steelman and Ascher 1997, Moote, McClaran and Chickering 1997). The passage of

¹³ Greenpeace, PETA and EarthFirst continue their efforts to change state policy outside of administrative spaces. Other organizations such as the Natural Resources Defense Council, Environmental Defense Fund and Center for Biological Diversity focus their efforts in the legal system. In addition, organizations such as the Planning and Conservation League in California focus on the state legislature. Together these organized efforts to change environmental policy suggest that hybrid organizations offer only a limited solution.

the National Environmental Policy Act¹⁴ in 1969 established a framework in which this decision-making process is to take place (McCormick 1989, Clarke and McCool 1996). This framework, however, has evolved substantially over time as bureaucratic agencies¹⁵ have responded to changing social conditions. Bureaucratic control over decision making is therefore bound by a diverse set of interests that interact under competitive conditions, suggesting that agencies struggle for self-preservation as much as (or perhaps more than) they do to meet their respective missions.

What exactly are the socio-political and organizational factors that act as sources of power? Are hybrid organizations indicative of a fundamental change in the structure of governance? This work begins with Max Weber's (1970 [1957]) characterization of the practically unshatterable power relationship in which both the bureaucrat and the community are integrated by their common interest in the continuing function of the bureaucratic organization. This traditionally "managerialist" approach to organization studies emphasizes the goal orientation of state agencies and a consensus among public-agency¹⁶ representatives and the public sectors with which

¹⁴ The National Environmental Policy Act of 1969, as amended (Pub. L. 91-190, 42 U.S.C. 4321-4347, January 1, 1970, as amended by Pub. L. 94-52, July 3, 1975, Pub. L. 94-83, August 9, 1975, and Pub. L. 97-258, § 4(b), Sept. 13, 1982.

¹⁵ Todd LaPorte (1994) rejects the epithet "bureaucracy" to describe public organizations. In this work I choose to use bureaucracy to emphasize the effect of bureaucratic structures on public organizations and their perceived successes and failures.

¹⁶ Public agency and state bureaucracy will be used interchangeably throughout the dissertation.

they interact based on their shared socio-cultural context.¹⁷ However, a critical theory approach to this relationship focuses on how it is embedded in an organizational framework that seeks control, not efficiency, and therefore its primary function is to use its power to reinforce the status quo (Pfeffer 1997, see also West 1994).

Governance structures in natural resource management have evolved in a dialectical relationship with various active interest groups of society (see, for example, Chase 1995, Walton 1992, Weber 2000, Gorz 1980, and McCormick 1989). Analysis of the case of the Arsenal identifies an important phase in this evolving process and suggests where to look in state-public relations for opportunities to influence outcomes.

The work of Antonio Gramsci (1971) is especially relevant for understanding the complex processes at play in state-society relations and ascertaining the likelihood of a fundamental shift in the ideological underpinnings of the state system. Unlike a strict Marxist view that power is a structural relationship that exists separately from the will of individuals, Gramsci insisted on the independence of politics and ideology from economic determination. In this view the contemporary state manages a complex set of institutions that structure social action through the political system and the process of accumulation. The widespread social acceptance of this system has resulted in the ongoing domination of bourgeois interests as they have successfully articulated

¹⁷ As Beierle (1998) notes, a *managerialist* perspective entrusts elected representatives and their appointed administrators with identifying and pursuing the common good. In this theoretical tradition the relationship between the state and society is seen as an inter-organizational relationship (Alford and Friedland 1990) based on a belief in a legitimate order (Giddens 1971).

their claims in a popular-democratic fashion (Held and Krieger 1983, Gill 1993).

Gramsci conceptualized this power structure in terms of an historical hegemonic bloc, a particular combination of hegemony in civil society and dominance in the economy, whose existence is premised on the maintenance of consent and the state's unique role in this process. The contemporary hegemonic bloc is defined by how the economically dominant class forges alliances with other classes and social forces.

The most important aspect of the notion of hegemony is that of consent. In order to gain hegemony, the economically dominant class must forge alliances through compromise with other classes and social forces, so that it may gain political and ideological leadership. Gramsci expands on Marxist theories of state by using hegemony not only to suggest strategies for the proletarian revolution, but also to explain the maintenance of capitalist society.

Hegemony creates a far more complex relation between the two fundamentally opposed classes. The alliances a hegemonic class will form, and the compromises it makes with other classes, ensure that it gains the "active consent" of society. Gramsci uses the term "active consent" to show that the individual person or group is not passive in the creation and maintenance of hegemony (Burawoy 2003). Furthermore, alliances require a "national-popular" aspect of the hegemony of the dominant class. Only by appealing to the widest common denominator can a class gain the consent of an entire nation. This takes into account the popular and democratic views of the people and, therefore, reflects any other issues significant to that particular society, such as the environment.

To a large extent, then, it is the tension between democratic values and economic development within a capitalist democracy such as the United States that forces the state to change its processes. With expanding notions of civil rights the state must simultaneously respond to the needs of the economically dominant interests in society and groups seeking greater access to power (Press 1997, O'Connor 1997, Nash 1989). The political system provides both support and challenge to the goals of the economy, as elected representatives must, like the state, serve two "masters."

Habermas (1975) identified four crisis tendencies in late capitalist societies that are consequences of the fundamental contradiction of social production versus private appropriation. Most significant for the democratic state are the crises that reflect problems in the political system; rationality and legitimation crises result in a loss of faith in our system, and the burden falls heavily on the state and its representatives to repair the damage. The concept of hegemony is thus critical because it explicitly focuses attention on the tension between structure and identity (Burawoy 2003, Cox 1994, Urbinati 1998). This approach to understanding the state-public relationship suggests a different set of tactics for those seeking to change the current power structure. To supplant the existing hegemony, they must engage in a war of position (Gramsci 1971), where class alliances are forged and broken, so a suitable alliance united by a common ideology is found. Ideology is the key, as it is the cement that binds together an historical bloc, by giving common ground to its members. This is a very gradual process, as well as being difficult and hazardous, because to forge new ideological alliances, leaders must act within the already existing alliances of the hegemonic bloc.

The Multidimensional State: Administrator of the Hegemonic Agenda

The scope of modern environmental problems has resulted in a widespread perception of crisis threatening the very basis of society: the democratic political institutions and economic systems upon which they rely (Press 1994). Socio-political analysis of stability and crisis direct an assessment of this claim to the nature of the state in society. The state is a significant social institution in modern society, and the *managerialist* perspective emphasizes how it has expanded to manage the economy, subsidize science and technology, and create a conscious social policy (Dahrendorf 1959, Miliband 1970). This is attributed to the inexorable process of rationalization wherein state response to social, economic and environmental crises is management. However, Weber's account of the rationalization process and the concentration of power within the bureaucracy neglect the ways in which those in subordinate positions or outside the bureaucracy may increase their power (Held 1983). Furthermore, the *managerialist* perspective diminishes the important ways in which the mode of production in a given society shapes state-society relations (Alford & Friedland 1992).

Class-based accounts of the state emphasize how individual actions and organizational interests must be understood in terms of contradictions emanating from the capitalist process of accumulation. The Marxist tradition has centralized material conditions as the motor force of social change, resulting in a limited analysis of normative forces in society (Mullins 1998). Gramsci's (1971) insight into the role of ideology in ensuring economically powerful class domination through the construction of consent synthesizes Marxian and Weberian accounts of the state, creating a more powerful explanatory framework (Burawoy 2003). A Gramscian account of the state

focuses attention on how it functions for both material and ideological purposes: to disseminate a hegemonic ideology through which the general population comes to see its interests as identical to those of the dominant economic class.

Domestic and global development continues to increase pressure on the earth's capacity to provide resources and absorb waste. The environmental effects of capital accumulation have a direct relationship with the state: legislation, regulation and citizen activism are powerful forces that can mitigate the effects of environmental pollution and improve environmental quality (Merchant 1992). All of these factors are components of the structure of social relations or what Gramsci (1971) calls an "historic bloc," the organic link between the state and civil society. A successful bloc is politically organized around a set of hegemonic ideas that are used by the dominant economic class as concepts of control that legitimize state leadership in society. When the state is called upon to respond to demands emanating from populations struggling with toxic waste, disease or economic dislocations due to resource exploitation or depletion, hegemonic leadership is challenged to provide solutions that do not undermine the basic hegemonic relationship.

This is evident in how the ongoing environmental crisis mobilizes sectors of civil society into counter-hegemonic efforts by those seeking to re-establish security for those most damaged by the markets. In the late 1970s the issue of environmental racism galvanized action across racial and class lines and brought a new lens to evaluating the central questions of mainstream environmentalism. The question of equity, previously associated with social justice, became linked with environmental concerns, resulting in a broadening of the environmental movement's agenda (Melosi

2000). Environmental justice focuses our attention on distributive justice, offering a set of principals for moving the state and society toward a practice of voluntary cooperation, closing the gap between social rights and environmental rights (Wenz 1988). However, while the principles of environmental justice have been widely acknowledged (from the federal government¹⁸ to the Sierra Club¹⁹), it remains to be seen whether this is adequate to produce the desired results.

Ultimately, it is the cycles of increasing and relaxing federal regulation that express the essential role of the state: it must maintain the accumulation process²⁰ without undermining the belief in the market as a fair distributor of scarce resources (Held and Krieger 1983). Furthermore, hegemony is never complete, as it relies on an

¹⁸ In 1994, President Clinton signed Executive Order 12898, “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations.” Executive Order 12898 requires each federal agency to “make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies and activities on minority populations and low-income populations in the United States and its territories and possessions....” This Executive Order reinforces the mandate of the Civil Rights Act of 1964, which prohibits discriminatory practices in programs that receive federal funds.

¹⁹ “The Board of Directors of the Sierra Club recognizes that to achieve our mission of environmental protection and a sustainable future for the planet, we must attain social justice and human rights at home and around the globe. The Board calls on all parts of the Club to discuss and explore the linkages between environmental quality and social justice, and to promote dialogue, increased understanding and appropriate action. Adopted Board of Directors — September 18 – 19, 1993” (<http://www.sierraclub.org/policy/conservation/justice.asp>).

²⁰ The state is the unifying element in capitalism, ensuring the ongoing process of accumulation. It functions to ensure the long-term interests of the dominant class while simultaneously being relatively autonomous from particular interests among the fragmented classes that result from the operation of the capitalist economy (Poulantzas 1973).

inter-subjectively constituted reality in which there is always some opposition provoked by the hegemonic order (Cox 1994). In liberal democracies such as the United States, structural forms of power are premised on consent and therefore rely greatly on the state's administrative structure to create and maintain the hegemonic "context" in which social, political and economic action take place.

Analysis of the administrative state in the context of environmental crises thus illuminates a central issue in social theory — the relationship between structure and agency (Giddens 1986, Simmel (1900) 1978, Berger and Luckmann 1967). In the United States, the structure is defined by a particular liberal-capitalist political economy, and agency is defined by the complex social forces that originate from the sphere of production relations (Overbeek 1993, FitzSimmons et al. 1994). The state functions as both a normative and material structure, defining appropriate action for environmental policy. The hegemonic bloc can be characterized in terms of the military-industrial complex,²¹ an institutional system supported by the nexus of capitalism, liberal democracy and the administrative state (Dryzek 1994). This system is now confronted by ecological problems so widespread that they constitute an "acid test" for all actual and proposed political and economic arrangements, and for all

²¹ The phrase *military-industrial complex* (MIC) was widely used to describe the power structure upon which hegemonic forces focused their efforts between approximately 1970 and 1990. The period on which this research effort focuses overlaps with and exemplifies the crisis created by and for the hegemonic agenda of the MIC. Public awareness of the extensive contamination on military and private industrial sites throughout the U.S. resulted in a widespread challenge to the very basis of the hegemonic agenda.

processes of institutional reconstruction. The environmental crisis is thus a key source for counter-hegemonic efforts that face a daunting challenge — to create a new, homogeneous politico-economic historical bloc capable of either taming capitalism or replacing it.

In the United States, ecological problems, by and large, have been institutionally addressed with new forms of regulation and public involvement. The effort here is not to answer macro questions regarding the process of social change, but to answer more mid-level questions related to how the dialectic of agency and structure in dominant institutions embodies the contradictions discussed above and creates space for alternatives. An organizational analysis of the administrative state and its relationship to civil society in terms of the political-economic system focuses on how the bureaucracy facilitates the manufacturing of ideological uniformities, attempting to shore up hegemonic power. In Gramscian terms, then, the bureaucracy is the location in which the complex, interwoven nature of authority and leadership in state-society relations can be assessed for emancipatory possibilities and limitations.

Hegemonic and Counter-Hegemonic Forces in Thirty Years of U.S. Environmental Policy

Between 1960 and 1990, environmental policy in the United States evolved through three distinct and overlapping eras of policy and politics that demonstrate the hegemonic and counter-hegemonic forces that bind the state and society through the bureaucracy. Energized by the civil rights efforts of the 1960s, the continued ascendancy of popular pressure on the state featured additional demands from the

environmental movement (McCormick 1989). Between 1960 and 1980, the response of the federal government was to implement sweeping regulatory legislation such as the Clean Air and Clean Water Acts,²² the Superfund²³ law and the creation of the Environmental Protection Agency in 1970.²⁴ These actions reflect a negotiated compromise among interests that favored political stability over economic preferences, allowing the state as a political actor to maintain its authority in society.

In 1980, the Reagan Revolution swept into control of the government, premised on the priorities of economic interests, and initiated a series of administrative policy changes throughout the state apparatus. An era of efficiency-based reform and bureaucratic retrenchment commenced that continued well into the 1990s. Reacting to the restraints on business and markets imposed by federal regulation, the Reagan administration used allies in Congress and political appointees to state agencies to reduce the scope of government regulation, shift responsibilities to the states, and rely more on the private sector to address environmental problems (Kraft 2000). This resulted in the successful reframing of how environmental crises should be addressed. An economic model articulating the appropriateness of balancing environmental protection and economic viability replaced the political model of conservation and preservation of the prior era (see Milbrath 1984 and 1990, Paehlke 1989).

²² 42 U.S.C. 7401 and 33 U.S.C. 1251.

²³ Pub. L. 96-510, Dec. 11, 1980, 94 Stat. 2767 (42 U.S.C. 9601 et seq.).

²⁴ The creation of the EPA in 1970 brought together a patchwork of federal programs concerned with various aspects of the environment under the control of a single regulatory agency.

By the 1990s, technocratic control of environmental policy was widespread throughout the state bureaucracy, and the concept of collaboration (Gray 1989, Paulson 1998, Michaels et al. 2001) became the basis for managing public involvement in bureaucratic decision making. The pervasiveness of collaboration appears to demonstrate a successful refinement of the tension of democratic practice and bureaucratic performance supporting the existing dominant ideology. In the United States, the impetus for collaborative approaches comes from state and federal legislation and expanding administrative rule responding to a *consensus* (emphasis mine) that greater public participation enhances “both the substance and process of environmental decision-making” (Michaels et al. 2001: 252). In environmental policy, collaborative approaches have become the new structure in which agency is encouraged and moderated, simultaneously valuing and controlling it, attempting to replace the traditional zero-sum conflict approach with cooperative antagonism (Burawoy 2003).

However, the state’s reliance on consensus to moderate counter-hegemonic efforts creates space for alternative class, or social, alliances (Taylor 1994). In the discussion of overlapping policy phases, it is notable that each is produced through the interaction among a variety of social actors who struggle with their increasing vulnerability to the very interdependencies that make the system work (Freudenburg 1993). From politicians to business interests, and from bureaucrats to the affected publics, there are shared vulnerabilities due to the delicate balance between ideological forces and material interests. The impetus for counter-hegemonic initiative, based on shifting social alliances, is found throughout the system as it

expands to accommodate more of civil society through collaborative processes. A new contradiction is thus introduced into the system: as the public becomes more involved in the decision-making process, the expectation that specialized individuals and institutions can be counted on is called into question. The upshot of this process has been a continuous heightening of the democracy-bureaucracy tension: the science-based model of planning appears to be increasingly at odds with increasing pressures for more intimate participation in decision making demanded by a public that has growing misgivings about the state bureaucracy (McCool and Guthrie 2001).

The Administrative State and Hybrid Organizations

The critical theory approach used here synthesizes Marxian and Weberian accounts of the state to show that while the terms of the debate in a natural resource management decision-making context are set by the state structure, its very need to maintain legitimacy weakens structural integrity in the face of demands made by both other bureaucratic entities and “public” interests. Central to the role of state bureaucracies in society is their command of high levels of technical knowledge. In fact, in an increasingly complex and technology-driven world, the scope of bureaucratic organizations widens; yet, this form of knowledge is based in a particular ideological orientation — a blend of social, political and administrative ideologies. As such, a bureaucracy, like all social actors, is limited by a partial and bounded worldview, which is further constrained (or defined) by particular societal interests upon which it is dependent for support (Stryker 2000).

Knowledge also exists outside the state and bureaucratic structure that shares some of the social and political ideologies but often is at odds with the administrative structure. During the public participation process, multiple forms of knowledge interact, and it is at this point when the structure is at its most vulnerable as representative organizations (e.g., federal resource management agencies) struggle simultaneously to maintain legitimacy, self preservation and goal attainment. While clearly all three of these needs are intimately connected, separating them for analytical purposes focuses on how the internal and external environment of organizations interrelate (Stryker 2000).

The state can be viewed as a structural ensemble of multiple apparatuses defined by both internal and external struggles that preclude consideration of its structure as neutral (Jessop 1983). Internal contradictions within and among agencies relate to, and sometimes mirror, contradictions in the outside environment and thus constitute a focus of political class struggle. In a capitalist society, however, the state is faced with contradictory tasks: sustaining the process of accumulation and private appropriation of resources, and preserving the belief in itself as a neutral arbiter of class interests, thereby legitimating its power (Held and Krieger 1983). The latter task of the state is where the “possibility spaces” for social change in the system exist (Habermas, quoted in Held and Krieger 1983). In democratic societies, participatory administrative planning affects the cultural system by rendering traditional attitudes uncertain, resulting in unsettling and publicizing effects (Habermas 1975). Thus the state arena is a site of strain caused by balancing two contrary motives: asymmetrical class compromise and conservative resistance to planning itself. The more the state

responds to pressures of consensus-formation the greater the opportunity for new ideas, values and information to change the terms of negotiating state legitimacy.

In the 1980s the culmination of social justice and environmental activism presented a unique challenge to the hegemonic bloc, and the administrative state responded through the creation of hybrid organizations. These quasi-state/civil society organizational forms are a direct response to the political mobilization of different social groups previously only marginally involved but who became engaged by the spread of environmental damage (Graham 2000). Hybrid organizations are designed to regain a *consensus* between state organizations and agencies and public and private organizations. However, they are like all aspects of the social world under conditions of hegemony — they are fractured by competing class and social sector interests. At best, they provide a structured context in which the administrative state continues to dominate the use of expertise and information in participatory planning efforts.

State Crisis, Authority and Organizational Change

What is the link between organizational change and public policy? One answer appears to be found in the willingness of an institution to change in order to survive. This is the underlying assumption in Clarke and McCool's (1997) effort to link differentials in agency power to policy outcomes. Their research focused on explaining why some federal agencies were better able to achieve their mandates than others. Beginning with Weber's work stressing the element of expertise as the bureaucracy's primary source of power, they identified two dimensions of agency power: expertise/control of information and political/constituency support (1997: 6).

They found a range in organizational performance, from agencies that muddle through to organizational shooting stars. Their work contributes to the current research effort by demonstrating how different organizational and political conditions produce different types of agencies within the administrative state. However, their analysis does not provide a sufficient conceptualization of power to explain the emergence of hybrid organizations.

Information is a source of power for organizations that is especially important under conditions of legal-rational authority and capital accumulation (Giddens 1971). The relationship between authority and leadership is central to understanding how the administrative state uses control of information to build consensus. In collaborative processes, the role of the expert is central by positing a presumably politically neutral actor in a decision-making context. State bureaucracies have experts on staff and through such administrative processes as community grant programs provide affected communities with some ability to hire outside experts to provide independent analysis and verification of state assessments. The expert thereby functions as an authority in a given arena of environmental policy and provides a type of leadership in decision making. The increasing reliance on a science-based model for environmental policy-making highlights the role of the expert and raises the profile of information as a key variable in consensus making. As Clarke and McCool found in their research, there is great variation among organizations in their ability to acquire and deploy information in a way that ensures their continued power.

Not only do organizations collect and use information to control policy making, they must also negotiate the varying social value placed on different forms

and sources of information. This is the critical link to Clarke and McCool's other key variable, political/constituency support. As mentioned earlier, there is a contradiction between increasing public involvement and maintenance of the state expert as authority. The subjective experience of public participants becomes all the more important in collaborative processes, creating challenges for the goals of bureaucratic efficiency and maintenance of consensus. Under conditions of hegemony, the central task of the administrative state is to control information to achieve and maintain authority. Similarly, the political and social need for constituency support is expressed through leadership; intellectual and moral leadership is critical for the exercise of hegemony (Arrighi 1994).

The emergence of hybrid organizations must be seen in the context of the state's efforts to shore up the hegemonic agenda. While Clark and McCool's work demonstrates the importance of information/expertise and constituency support, it is limited by a strict Weberian analysis of administrative power. Gramsci argued that leadership and authority are the central means through which fractured classes are knit together under a single hegemonic agenda, however tenuous that agenda might be. In the United States, the efforts of the administrative state to respond to environmental activists' demands and the subsequent structural changes in the bureaucracy must be understood in this context. Therefore, this research effort re-conceptualizes Clark and

McCool's key variables using Gramsci's insights into leadership and authority under conditions of hegemony (see Table 2.1).²⁵

Table 2.1. Comparison Between Variables Measuring Power.

	Bureaucratic	Political
Clarke and McCool	Information	Constituency support
Gramsci	Authority	Leadership

Both Clark and McCool and Gramsci emphasize the connection between the state administrative structure and the political system. The state bureaucracy does have a need for survival, and Clark and McCool's work provides insight into how competition among agencies is dependent upon constituency support. Yet there is more to this process than simple survival. A Gramscian view draws attention to another key factor — how well does an agency fit in with the state's larger project to support the hegemonic agenda? The distribution of resources throughout the administrative state (largely determined by Congress and the President through the budget process) is also predicated upon a given agency's role in the hegemonic bloc.

²⁵ Most of the mainstream environmental policy-making and analysis literature provides little in the way of a critical assessment of the economy. Scholars pursuing Ecological-Marxism focus directly on the role the economy plays in creating and sustaining environmental problems. (e.g., James O'Connor 1998, Martin O'Connor 1994 and Margaret Fitzsimmons 1994). While I acknowledge the valuable contribution this work makes to our understanding of environmental problems under modern capitalism, it has the same limits as traditional Marxist work that prioritizes the material conditions of social life discussed earlier.

The extensive contamination at federal facilities throughout the United States. draws attention to the complex intersection between national security and the economy requiring inquiry into how liberal-capitalist ideology functions in environmental policy.

The goal of this research project is to understand the barriers and opportunities of public involvement in environmental policy making. A central assumption guiding this effort is that the process takes place under conditions of a hegemonic agenda maintained by an administrative state with intersecting interests in civil society. Furthermore, the science-based model of environmental policy making and liberal environmentalism, the dominant form of action in the United States, reinforces the central role of the administrative state through reliance on experts who share social status with agency employees.²⁶ The context thus focuses attention on how information is generated and disseminated in public involvement processes. Ultimately, because information is the currency of power, tracking its effect in public involvement processes is crucial to understanding the strengths and weaknesses of the hegemonic project.

²⁶ Here I am referring to the common pool of experts created through university programs and maintained by professional associations. Individuals gain status as expert through their achievement of advanced degrees specializing in areas deemed relevant to environmental policy (e.g., biology or natural resource, recreation and tourism) and association with professional associations. There is a significant amount of migration between state resource agencies and private consultants in the field of environmental policy-making.

State Legitimacy and Hegemonic Crisis

Another aspect in understanding the relationship between organizational change and public policy is the central role of knowledge and information in state legitimacy. Information and its control are at the heart of understanding how opportunity spaces within the state structure appear and are filled and managed by particular interests. This has become especially true under the conditions of conflict in which there must be at least a façade of democratic participation. Knowledge debates in environmental policy and public land management resonate with the Gramscian insight about the role of intellectuals in using an ideological state apparatus to sustain hegemonic forms for the ruling class (Sklair 1997). However, maintenance of hegemonic forms is especially challenging for the state because of the increasing need to have its decisions judged “fair” by the citizenry (Smith and McDonough 2001).

Following Gramsci, the state thus acts to exert a cultural hegemony that artificially unifies class interests protecting the economic system. However, when conditions such as those of perceived environmental crises occur, and we see large numbers of people moving from a state of political passivity to activity, a crisis of authority is underway and this is precisely the crisis of hegemony. The central conflict of liberal state reform is how the extension of rights is always a form of negotiation over power sharing (FitzSimmons, et al. 1994) and the intellectual (or leader) is not a bearer of universal values, rather it is a person occupying a specific position linked to the functioning of an apparatus of truth (Foucault 1980). Under these conditions state bureaucrats and citizens find themselves in a battle for truth, or in Gramscian terms, a war of position in which the organizations that make up civil society are engaged in

competing efforts to control the state, and the state itself is at war with this fractious civil society to maintain itself.

Over the past thirty years, public involvement has become integrated with a greater diversity of environmental issues and policy making leading to an increase in the complexity of stakeholders and the significance of institutional and organizational factors. Overdevest (2000) found that critical political economic perspectives are important considerations for those attempting to make sense of society and natural resource relationships. As the extent of environmental problems widens to affect a broader range of citizens, the state's ability to appear capable of control is undermined. Hegemonic authority (traditional intellectuals in Gramscian terms) is then called upon to engage in a dialogue with a public expressing discontent, disbelief and willingness to challenge the status quo. The state endeavors to maintain the hegemonic bloc through a revised structure in the form of hybrid organizations: a new "common sense" is manufactured and accepted precisely because it builds on existing material and ideological forms.

Reading through the literature on public involvement, there is little attention to how collaborative processes align with the goals of maintaining the hegemonic bloc. There is a consistent theme running throughout proposed evaluative criteria that echoes an ideological commitment to liberal democratic principles — for public involvement processes to be considered legitimate they must be fair, inclusive, and representative; they must foster trust, reduce/manage conflict, and result in an outcome widely perceived to have resulted in all parties giving something up (Smith and McDonough 2001, McCool and Guthrie 2001, Webler and Tuler 2000, Kellert, Mehta,

Ebbin and Lichtenfeld 2000, Paulson 1998, Shindler and Neburka 1997). However, there is little in this literature that tackles harder questions regarding how this ideological orientation works in concert with the administrative state to maintain the hegemonic agenda of militarism and liberal capitalism. Assumptions that democracy will prevail based on the protection of individual rights are not vindicated by the expanding presence of the administrative state. However, an analysis that incorporates Gramsci's insights into the role of leadership and authority and Foucault's excellent work on the surveillance society (1977), we find a significant challenge to those who would argue that the state is a neutral arena or that culturally we are not all potentially carriers and enforcers of the hegemonic project. Understanding how hegemony works, culturally and materially, is a critical step toward making environmental policy that has greater transformative potential.

Decoding the Effect of Institutional Power in Environmental Policy making

Numerous studies, from Selznick's *TVA and the Grass Roots* (1966) onward, have undertaken the task of understanding the complex set of relationships which structure natural resource management decision making. A central question addressed in these studies is to what extent, if at all, are state bureaucratic organizations autonomous from other societal interests, most critically, political and economic interests. Indeed, concerns about the influence of interest groups on public policy have a long history of debate and analysis in the United States (see, for example, Chubb 1983, Walker 1986). Analyzed from an institutional perspective, public bureaucracies are conceptualized as part of the state structure and as such are fully integrated into its larger policy

objectives, making the concept of autonomy difficult to measure. This is demonstrated in Clarke and McCool's (1997) work, where they found the ability of an organization (state agency) to achieve its policy preferences is, to a large extent, determined by its expertise/control of information and political/constituency support. These two dimensions represent the resource base upon which bureaucratic organizational power is founded and link the issue of centralized state control with policy options.

The link between the structure and process is dysfunctional; as Steelman has noted, "(l)egislation mandating public involvement has often been written without much appreciation for preexisting bureaucratic structures. What an organization is culturally and administratively equipped to handle may not match what the public can actually contribute" (1999: 26). Furthermore, Green criticized the U.S. system "because public participation has the potential to shift the incentives of policy makers in inefficient and irrational directions" (1997: 436). More optimistically, West argues against being too structurally deterministic and instead points to the contingent nature of public bureaucracies in the state structure where "strategic implications abound for undermining or countering various forms of domination" (1994: 424). Yet LaPorte (1994), in reporting on the state of the field of public management and bureaucracy, remarked on how public organizations face a daunting array of "environmental conditions" emerging from the socioeconomic environment as well as resulting from administrative ideologies. Not only do these conditions present a tough analytical challenge, they also suggest important normative consequences to those who believe public organizations are crucial for the political and social health of our communities.

Clarke and McCool's work reinforces the notion that organizations exist in an endless competition for resources. However, there may be a cooperative element among otherwise competing organizations, especially under conditions of continued demand for devolution of power and authority to the local level. Wiewel and Hunter (1985) suggested that there is a beneficial effect for organizations that share resources such as money, information and legitimacy. The efficiency-based reform and reaction period of the 1980s into the 1990s was a phase in which public demands for these core resources to be more widely distributed resulted in the creation of the collaborative approach and its attendant organizational forms. Gray similarly argued that collaboration is an emergent inter-organizational process and that the "dynamic, emergent, and mutable character of inter-organizational relationships" should not be underestimated (1989: 227).

Decentralized approaches to land use governance have been a part of a wider trend in environmental management since the 1980s (Steelman 2000). Many models employed by state agencies have attempted to resolve the tension between democratic inclusion and empowerment and bureaucratic efficiency through "who" is invited to participate. The types of individuals and groups who participate in public involvement efforts vary substantially depending on the model used. Models range from the *managerialist* style, such as a traditional public hearing, to the most popular (or participatory) style, such as stakeholder forums or site-specific advisory boards (Steelman and Ascher 1997, FFERDC 1996). Across the board the efforts to create an administered collaboration between the state and society evidences the power of the hegemonic project to incorporate challenges to its dominance.

The devolution of policy and power in environmental policy making is driven by the combination of bureaucratic competition for resources and the opportunities presented for public impact by a changing legal and regulatory environment. Bowersox (2000), for example, assessed the remaking of the Bureau of Reclamation as it evolved from an agency focused on water development to one focused on water management. His research supports Clarke and McCool's assertion about the importance of expertise and constituency support in organizational power and found the Bureau to "exemplify a new model of agency cooperation with local policy initiatives in an era marked by regulatory devolution" (2000: 599). Yet in a critique of state-based resource control, Shannon (unpublished draft) noted the inherent conflict of interest between the state and the community. The emphasis in state-based planning is on definition of interest focused on the individual and not the societal organization encompassing the particular resource issue. This emphasis points to the tendency in state-based planning efforts to limit their process of identifying appropriate participants to established interests represented by formal organizations. State agencies generally do not direct resources to learning of potentially affected parties; rather, they rely on existing knowledge and are more reactive than proactive. There are numerous limiting factors affecting the potential of bureaucratic administration to transition to a more participatory, or decentralized, decision structure.

The *over-towering* power of the bureaucracy (my emphasis, Weber in Gerth and Mills 1946) has provided the means through which knowledge is conformed to maintain state authority to administer democracy. However, the state is not monolithic, and while there is variation among state agencies in terms of their ability

to moderate public involvement, none are immune from the effects of the contradictions inherent in capitalism. Contamination at federal facility sites exposed these contradictions and created an opportunity to push the state, and especially the Department of Defense, to restructure how consensus would be regained. The process is far from over, as new information becomes available, mobilizing additional sectors of civil society demanding that they be allowed to have some power over the decision-making process. Hybrid organizations are the most recent bureaucratic result of the relationship between the administrative state and the hegemonic project. Yet, their very existence exemplifies the mutability of the state and the fractured basis of hegemony.

The Rocky Mountain Arsenal and its attendant decision process exemplify the tensions and contradictions discussed above. As a site of multi-jurisdictional decision making, it contains conflict among multiple public bureaucracies representing a variety of constituencies, each struggling to maintain its power and identity. Knight and Landres (1998), in recognizing the limits created by turf battles among public bureaucracies, call for a change in the way U.S. natural resources are managed. Managers and their respective bureaucratic organizations need to be sensitive to the dynamic nature of human-dominated landscapes. Furthermore, the Arsenal, as a Superfund site and national wildlife refuge, contains the complexities and messiness of balancing human and ecological health under difficult political economic conditions. Therefore, an ecologically grounded sociological perspective on natural resource management that synthesizes West's point about the contingent nature of institutional structures with LaPorte's analysis of the complex socio-economic and

ideological environment provides a flexible framework in which environmental policy and public land management can be analyzed for challenges to institutional power structures. This approach should allow us to evaluate whether a war of position is a sufficient strategy for reforming the state's balance between equity and economy.

CHAPTER 3:

Empirical Study of the Role of Public Involvement in Environmental Policy

The objective of this research project is to understand the impact of public involvement in environmental policy making and its implications as a barrier or benefit for future environmental protection. It begins with the premise that public involvement is both a cause and symptom of social change. However, because social change is an historical process the effort here is modest and seeks only to highlight a particular and critical juncture in the evolution of the modern state system. The intersection of environmental and economic conditions that created the environmental movement in the 1960s had a far-reaching impact on the state system and its ability to facilitate social consensus (for example see Paehlke 1989, Hurrell and Kingsbury 1992; Graham 2000). However, the environmental movement was only one important aspect in a diverse set of circumstances driving public reaction to state policies and hegemonic ideologies. It is therefore necessary to acknowledge the partial nature of this research effort.

Just the act of approaching the universe of activities that are encompassed by the concept of public involvement in environmental policy making is daunting. These activities range across a complex realm of actions by individuals, organizations and institutions. For the purposes of this research project the state is conceived as the pre-eminent organization in society, and the most common means for interacting with the

state is through other organizations. The history of social movements demonstrates the empirical conditions needed for effecting change in bureaucracies: get organized (McAdam 1996, Urbanati 1998).

From a sociological perspective, an organization can be seen as a social system consisting of two or more social systems that are related to each other through shared expectations and goals.²⁷ It is the shared expectations and goals that are of critical interest because they are what motivate and constrain individual action, and it is collective action that gives rise to organizations. Some emerge in response to a specific goal and disperse upon reaching that goal, while others, such as the modern state, exist over long periods of time, addressing a complex mix of social, political and economic issues. A research project focused on public involvement in environmental policy must be considered in light of this complex social system and seek to narrow its focus in a practical way. The choice made for this effort was to focus on a single, rich empirical case through which all the complexity can be seen and analyzed.

Overview of the Research Strategy

Sociological inquiry can be undertaken in many ways, and each project should be consciously designed so the approach is consistent with the goals of the research and respectful of the need to strive for objectivity. The goal of this research effort is to gain a greater understanding of the effect of public involvement in environmental

²⁷ <http://www.webref.org/sociology/o/organization.htm>

policy making within a hegemonic state system. Like Gramsci in his time, this research project seeks to respond to the debate between idealism and positivism, to understand more fully the struggle between autonomy and determinism. The methodological choices are therefore reflective of the view that hegemony “denotes a transformation from within, both of the subject and its environment” (Urbinati 1998: 370). This research project also follows in the tradition of reflexive sociology (John 1984), recognizing there is a relationship between the researcher and the object of their research. From the choice of subject matter, to the strategies chosen to pursue the inquiry, and on through the experience of data gathering and analysis, a very personal relationship forms. Achieving objectivity under these conditions is a challenge best met through a self-conscious approach to the design and implementation of the research project.

As noted above, the central focus of the research is to identify the motivations that drive public participation and its impact on environmental policy making. Bureaucratic involvement results from the state’s unique role as the enforcer of the legal-institutional framework of environmental policy. Public involvement, however, is grounded in the processes of civil society and channeled through the bureaucratic structure.²⁸ The key questions, therefore, are what motivate actors within civil society

²⁸ Giddens (1971) provides a clear, comprehensive and brief discussion of the tension between bureaucracy and democracy in modern states, noting that participation is through formal organizations such as political parties, unions and, more contemporarily, in the U.S. churches. See, especially, the discussion about the spread of secular rationalism, pages 178 through 184.

to engage with the state, and what effect does this have on the legal-institutional framework? A qualitative approach to these questions is appropriate because it allows the researcher to focus on “*how* social experience is created and given meaning” (Denzin and Lincoln 2000: 8). Elucidating the social experience of participants in the process of environmental policy making and evaluating it in relation to specific theoretical concerns thus becomes the central methodological issue.

My interest in public involvement in environmental policy making and federal land management comes from experiences I had as an ad-hoc participant/observer while working with two different federal land management agencies over a period of ten years. I found myself drawn to understanding how the roles of the various actors interacted and either facilitated or limited the decision-making process. These experiences directed how I approached my search for a study subject. My initial exposure to the Rocky Mountain Arsenal was through a prospecting call as I was searching for a national wildlife refuge in which to study its comprehensive conservation management plan process. When I learned that the Arsenal was also a Superfund site, and went through one of the earliest and most extensive public involvement processes in the United States, it was clear to me that I had found my case study.

I began with the case of the Rocky Mountain Arsenal for its intrinsic value, and through the research process came to see its instrumental value (Stake 2000). As the first major federal facility to be addressed by the Superfund, its role in spurring change throughout the state and society, regarding public involvement in environmental policy making, cannot be underestimated. Major conceptual

responsibilities of the qualitative case researcher include conceptualizing the object of study, selecting themes to emphasize, seeking patterns in the data that develop the issues of interest, triangulating key observations, selecting alternative interpretations to pursue and, finally, developing assertions about the case (Stake 2000). In this research project, the case of the Rocky Mountain Arsenal is seen as a bounded system of patterned behavior that is nested within a larger system, which allows this case to be seen both for its unique qualities and how it also contributes to a more general understanding of how hegemonic state systems operate.

The research design was greatly informed by grounded theory (Glaser and Strauss 1967, Strauss and Corbin 1990) and Burawoy's extended case method (1998). Both of these approaches result from, and seek to guide, ethnographic fieldwork and are committed to reflexive science as a means for the researcher to directly engage with the effects of power throughout the research process. The ultimate goal of grounded theory is to generate theory that helps the people in the situation to make sense of their experience and better manage the situation. Both approaches take a case rather than variable perspective, which means that the researcher takes different cases to be wholes in which the variables interact as a unit to produce certain outcomes. Specifically, "the extended case method applies reflexive science to ethnography in order to extract the general from the unique, to move from the micro to the macro, and connect the present to the past in anticipation of the future, all by building on pre-existing theory" (Burawoy 1998: 5).

While the data collection and analysis process approximated the steps outlined for grounded theory, this project is more closely aligned with the extended case

method that sees theory as the precondition of research, not the result (Burawoy 1998: 25). In both methods, the researcher is primarily conceived as a participant observer, which was not the situation in the current project. However, the extended case method addresses how other research techniques (e.g., interviews) can be both rigorous and reflexive.²⁹ The primary data collection method, in-depth interviews, was dialogic, conscious of process, worked with a prior body of theory and sought to work with the concrete case of the Rocky Mountain Arsenal to reconstruct theory (Burawoy 1998). Through the use of the extended case method, this research project achieves an instrumental value exactly because theory is essential and is an “intervention into the world it seeks to comprehend” (Burawoy 1998: 21). Rather than looking for common patterns among diverse cases, it “deploys a different comparative strategy, tracing the source of small difference to external forces” (Burawoy 1998: 19).

Discussion of Data Collection

Two methods of data collection were used in this study: in-depth interviews and document analysis. These methods are appropriate tools for learning from the first-hand experiences of participants in the decision process at the Rocky Mountain

²⁹ In Burawoy’s extended case method and presentation of reflexive science intervention, process, structure and reconstruction are complementary principles to the positive science principles of reactivity, reliability, replicability, and representativeness. He says that these “limitations are no more reason to abandon the extended case methods than context effects are reason to abandon survey research. The goal is to examine those limitations in order to take them into account and perhaps even reduce them” (1998: 22).

Arsenal (Holstein and Gubrium 1995). As Fontana and Frey discuss, both quantitative and qualitative researchers tend to rely on the interview as the basic method of data gathering (2000: 646). Document analysis was used to triangulate the information and descriptions provided in the interview data. This was a necessary step to secure an in-depth understanding of the phenomenon under study and to provide a source for validation of the “facts” of the case. Following in the tradition of interpretive science, I approached the data gathering and analysis as a *bricoleur* (Denzin and Lincoln 2000), piecing together multiple representations of a single subject — the Rocky Mountain Arsenal.

This qualitative investigation was conducted over two years but is grounded in two important preceding experiences of the researcher. The following discussion occurs within the context of my concern for full disclosure and acknowledgement of my commitment to engaging in social science research designed to have relevance and meaning in a concrete policy context. Between 1995 and 1998, I had the opportunity to work in a small regional ocean conservation organization that was intimately involved in the establishment and ongoing management of the Monterey Bay National Marine Sanctuary. During my time with Save Our Shores, I participated in actively recruiting community members to engage in Sanctuary management policy issues, educated community members about the importance and value of protected areas, served on policy guidance committees established by the Sanctuary and, most significant, worked with the Sanctuary’s Water Quality Protection Program (WQPP). The WQPP was my first exposure to a proactive, comprehensive and thoughtful public involvement approach by a federal agency. I was impressed with the thoroughness in

the planning that went into the development of this program and was inspired to learn more about how this approach could be applied in other natural resource management contexts.

The second precursor to the current research that helped form the specific framing of the project was my two-summer stint as a contract researcher with the USGS's Social, Economic and Institutional Analysis Section in Fort Collins, CO. During my tenure with this group of social scientists, I worked on a number of projects related to the development of Comprehensive Conservation Plans at wildlife refuges. This opportunity exposed me to a range of analytical approaches to understanding the social dimensions of natural resource management issues. In addition, I attended numerous planning meetings with the U.S. Fish and Wildlife Service where I learned more about the particular opportunities and obstacles created by bureaucratic structures and agency culture.

These experiences deepened my appreciation of the complex set of factors that affect natural resource management and public participation processes. It also inspired me to focus on wildlife refuges, as they came to represent for me an exemplar of the contradiction between resource use and resource protection. I did not know at the time that my decision to study the Rocky Mountain Arsenal would not only be appropriate, but would push me to look at my questions more deeply and more reflectively than I could ever have imagined.

In-Depth Interviews

Thirty-three in-depth interviews were completed using a semistructured interview schedule (Appendix A). The first question asked of each respondent was, "Please tell me about yourself and your relationship to the Arsenal/wildlife refuge." This question was designed to solicit complex information that would be both concrete and reflective. It also allowed for follow-up questions that I could use to pursue specific areas of interest such as the decision-making process, key institutional and civic players, and evaluative statements regarding the individual's experience. The questions were designed to elicit connections between the respondents' experience in the decision-making process and the structure of the process. Semistructured interviews have the benefit of providing more room for respondents to free-associate among the core topics and allow the interviewer to be more flexible in dealing with variation in respondents and settings. However, there is also greater potential for interviewer effects (Fontana and Frey 2000). One in particular, that I believe had both beneficial and potentially negative consequences, was the result of the fact that as I gained more knowledge about the case and identified key aspects, homing in on the relationship among organizations, I was able to focus on certain issues with later interviewees.

The 33 in-depth interviews were conducted between August of 2001 and September of 2002. Each interview lasted approximately 1.5 to 2 hours and was tape-recorded for later transcription and analysis. All interviews are completely confidential, securing the identity of informants against any response to reading of this dissertation. Informants were identified through a combination of snowball and

purposive sampling methods. This sampling approach is justified by the nature of the process under study. Federal law³⁰ requires that participants in a decision-making process, for such activities as Superfund site cleanup and wildlife refuge management, be recorded in official documents and transcripts of public meetings. Therefore, key participants were readily identifiable. Additional respondents were identified during individual interviews. Potential interviewees were selected based on both their level of participation in the decision process as well as their relationship to either a formal or informal organization involved in the process. These criteria were essential, as the level of analysis of the research is focused on the organizational behavior of the lead agencies and civic organizations.

The selected individuals were approached to participate in this research based on their ability to reflect organizational perspectives. Participants voluntarily cooperated and were not compensated for their time. Each participant signed an informed consent agreement and was free throughout the interview process to decline to answer any particular question and end the interview. Interviews were conducted with open-ended questions allowing the respondent maximum range for self-expression. Additional follow-up questions occurred throughout the interviews in order to clarify or address specific topics not elicited by the formal interview schedule.

³⁰ The relevant regulatory framework is the binding law and policy promulgations of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (42 U.S.C. 9620), Docket No. CERCLA VIII-89-13 and the National Environmental Policy Act.

Respondents represented all regularly active organizations in the decision process, from formal institutions to nongovernmental organizations (see Table 3.1), in the time period under investigation. An attempt was made to interview at least two representatives from each organization to achieve a more balanced expression of organizational interest and behavior. In addition, this allowed for the collection of data which could speak to such questions as “what are the internal divisions within an organization that affect their ability to participate in the decision process?” and “how do internal divisions within an organization reflect larger social conflicts and contractions?”

In addition to the formal depth interviews, an additional four interviews were conducted with individuals intimately involved in the process. One person was a journalist actively covering the case during the period under investigation, one person was actively involved in the formal negotiations leading up to the consent agreement for the cleanup, one person was an active volunteer on-site, and one person held a leadership position in one of the most active NGOs at the time. Other key participants whose contribution to the research would be important were identified. However, after two attempts were made to contact these individuals, efforts ceased out of respect for their wishes not to participate. It is therefore important to recognize that the data used in this research reflect only a portion of the possible range of perspectives of the decision process. However, it is the belief of the researcher that the data collected do encompass the range of organizations that participated in the decision process and provide sufficient information from which to draw reasonable conclusions about organizational behavior.

Table 3.1. Respondent Organizational Affiliation Summary.

Number of respondents (N = 33)	Organization	Status in process
4	Army	Signatory to FFA, Lead Agency for Cleanup, Federal Agency
6	U.S. Fish and Wildlife Service	Signatory to FFA, Lead Agency for Cleanup, Federal Agency
2	Shell Oil Company	Signatory to FFA, Lead Agency for Cleanup, Private Corporation
1	Environmental Protection Agency	Signatory to FFA, Lead Agency for Cleanup, Federal Agency
5	State of Colorado	Consulting agency, refused to sign the FFA, Colorado Dept. of Public Health, Attorney General's Office
3	Local government	South Adams County Water District, Tri-County Health Dept., Commerce City
7	Nongovernmental organizations	Sierra Club, National Wildlife Federation, Audubon Society, Colorado Pesticide Coalition

Note. FFA = Federal Facilities Agreement.

One thing I learned in the process was how challenging it is to use a grounded theory/ethnographic approach to research. While the use of semistructured interviews allowed for greater latitude during the interview, it also made my ability to ensure a higher level of consistency in the application of the research instrument more challenging. The resulting interview transcripts contain expansive dialogue between the researcher and the respondent that ranges over and beyond simple interview questions. The implication of this is that there is variability in meaning among

responses, and the burden is on me to manage this variability in the analysis. Given the diversity of perspectives collected in the data, a rigorous analysis should find significant patterns at a level of confidence for making reasonable generalizations about the implications of the events at the Arsenal to the larger world of environmental policy and the state system.

Document Collection

A wide range of documentation relevant to the decision process was collected. The researcher is grateful for the supported access to the Joint Administrative Record Document Facility (JARDF) at the Arsenal. This archive of information for the Rocky Mountain Arsenal was created by the Army in 1988 for the public to examine administrative records and other relevant documentation associated with the Arsenal's cleanup operations, and subsequently its transition to a national wildlife refuge. Data in the archive range from official administrative records to newspaper articles, correspondence, and meeting agendas and minutes.

In addition to documentation acquired at the JARDF, I was fortunate to acquire personal files from four NGO-related interviewees. These files contain information that duplicates some of the JARDF data and, more important, documents internal to particular organizations. These documents include correspondence, official policy positions, informational flyers, handwritten meeting notes, and other items reflecting a particular organization's interest and participation in the process.

Other documentation of importance for the research includes a range of information regarding CERCLA, the Department of Defense Environmental Response Task Force, Congressional hearings, regulatory guidelines, and legislative directives.

Data Analysis

The primary goal of the analytic exercise is to tell a good story and provide a line of argument that builds on existing theory (Weiss 1995). The events related to the Rocky Mountain Arsenal in the 1980s and early 1990s provide a concrete case of the complexities of environmental policy and state management of social groups. A rigorous and robust structure is absolutely crucial to successful qualitative analysis (Miles and Huberman 1994). While qualitative analysis does not draw on a large, well-established body of formal knowledge from statistics, it is less abstract than quantitative analysis and much closer to the raw data (Neuman 1994); therefore, a coding system was developed and applied to both interview data and document data. In addition, analytic memo writing was used to help develop a clear set of core concepts of interest.

Limitations of Methodological Approach and How These Were Addressed

While the focus of the research was on bureaucratic change as evidence of the effect of public involvement, one limitation to the research was the relatively few interviews with public activists not aligned with formal organizations. Fortunately, many of the key participants in the process still reside in Colorado and were willing to be interviewed for this project. The bureaucratic participants were fairly easy to track

down and contact, as were members of such organizations as the *Sierra Club*, *Audubon Society* and the *National Wildlife Federation*. Attempts to reach additional key participants involved in *Citizens Against Contamination* and the *National Toxics Coalition* were unsuccessful. The use of document analysis, especially meeting transcripts and newspaper accounts, provided additional information that contributed to a more robust description of events between 1984 and 1996.

The primary limitation of this research is the ability to make generalizations from the findings. Quantitative methods have a base in statistical analysis and can identify a level of confidence in the findings. The level of confidence correlates to a strength in generalizability. The qualitative approach used here cannot rely on this method for making generalizations. However, this research was not undertaken within the context of positive science; rather it is based on the positive contribution that reflexive science makes to sociology and understanding our social world. The goal of this research project is to understand a specific social process — public involvement in state policy making. By focusing on situational knowledge garnered through an ethnographic approach to data collection, it becomes possible to aggregate that situational knowledge into social processes (Burawoy 1998). Through a clear elucidation of the local stories of larger social process it becomes possible to say something important about the nature of those social processes.

CHAPTER 4:

Water Contamination and Community Crisis: The Costs of Bureaucratic Intransigence

The story of the Arsenal is complicated, with overlapping and interacting phases created by the formal record of decision process and the mobilization of new constituencies in response to awareness of threats. Events at the Arsenal over nearly 15 years created an *opportunity space* (as discussed in Chapter 2) within the state structure for public involvement to affect the established decision-making process. The key turning point was the public disclosure of chemical contamination in the wells of Commerce City in 1985. This watershed event set into motion a series of citizen-based actions beginning with the efforts of one civic organization. Not only did *Citizens Against Contamination* challenge the Army's approach to "public involvement" at the Arsenal, but also their participation created conditions that made business as usual a difficult and ultimately untenable option.

The bureaucratic infighting that consumed most of the 1980s established a context of bureaucratic intransigence undermining the public trust. This chapter lays out the political-economic conditions that frame how the state (throughout its many levels and agencies) struggles with balancing competing policy directives, resulting in a structure riven with internal conflict. In the drive to reach a settlement among the federal government, the State of Colorado and Shell Oil Company and complete a remediation plan, there was little consideration of the local community. These

conditions allowed an organized group of citizens to have a significant impact on the decision-making process.

Green Target: The Military-Industrial Complex

As discussed in Chapter 2, what appeared to be a counter-hegemonic force emerged in the 1960s that had consequences for how the administrative state functions to maintain social order. Widespread popular discontent regarding the character of advanced industrial society emerged in response to social and environmental conditions of the late 1950s (McCormick 1989). Beginning with the civil rights movement of the 1950s and continuing through the next few decades, the environmental, peace and justice, and women's movements coalesced diverse sectors of society around a common theme — bureaucratic intransigence. The expanding economy that followed state and private investment in WWII created an intolerable contradiction between opportunities and barriers, calling the hegemonic order, and the economic and ideological structures that maintain it, into question (McCormick 1989). The 1960s abounded with mass protests, from the rise of the international anti-nuclear movement to the U.S. student anti-war protests. The environmental and the anti-nuclear movements shared a goal of social reform and recognition of the social and environmental costs of the *affluent society* (Galbraith [1958] 1998).

Hegemony rests on the “active consent” of society, with the state playing a key role in maintaining an alliance between the economically dominant and subordinate classes (Gramsci, 1971). However, the state's role in maintaining this alliance was challenged by an alternative alliance formed around concerns generated by a lack of

democratic participation and environmental crisis. State response during this era of demand for greater popular participation included a range of bureaucratic changes aimed at responding to the challenge (Rosenblum 1976, Rourke 1984, McCormick 1989). From the *Great Society Programs* initiated by President Johnson in 1965 through the passage of the Civil Rights Act and the National Environmental Policy Act, and the establishment of the Environmental Protection Agency, the administrative state and its bureaucratic structure expanded.

In 1961, President Eisenhower warned the country about a critical conjunction between the immense military establishment and a large arms industry. He noted that its “total influence — economic, political, even spiritual — is felt in every city, every State house, every office of the Federal government.”³¹ While President Eisenhower was concerned about the potential of communism as a competitive, and hence threatening, global ideology, he was also concerned about acquisition of unwarranted influence by the military-industrial complex in our own “councils of government” (Clarke and Cortner 2002). Ten years after his farewell speech, the post-war power alliance between industry and the military started to unravel as public awareness of the environmental costs of “business as usual” grew.

Concern about the environment gathered critical mass throughout the 1960s, leading to the first Earth Day in 1970 and the creation of environmental nongovernmental organizations such as Greenpeace and Friends of the Earth. The

³¹ Military-Industrial Complex Speech, Dwight D. Eisenhower, 1961
<http://coursesa.matrix.msu.edu/~hst306/documents/indust.html>

1970s saw an unprecedented effort on the part of the U.S. government and its agencies, such as the Environmental Protection Agency, to gather the data and build the expertise to enable them to develop and implement solutions to problems of environmental pollution (Matthew 2000). However, it wasn't until the late 1970s and early 1980s that the environmental movement focused its attention on one of the most significant environmental threats — the legacy of toxic waste from the development and use of nuclear and chemical weapons. Until that time, public recognition and concern regarding the public health threat posed by these weapons was moderated by the uncertainty of the Cold War and the threat of all-out nuclear war.

The Rocky Mountain Arsenal: Intersection of Change

The Rocky Mountain Arsenal was created in 1942 to manufacture chemical weapons for deterrence purposes in WWII. Since the end of the war, the Arsenal's place in the greater Denver area has evolved from a national defense site veiled in secrecy to a pesticide-manufacturing plant, to a Superfund cleanup site and, ultimately, to a national wildlife refuge. This process encompassed the changing relationship between the Army and the communities surrounding the Arsenal and tells the story of how social forces at the federal, state and local levels forced the Department of Defense into the realm of public participation processes. The Arsenal thus provides an informative and unique case study illuminating the role of social conflict as an historical force.

The Rocky Mountain Arsenal is a relatively undeveloped 27 square acre federal property located just northeast of Denver, Colorado. Between 1942 and 1982,

the site had been home to chemical weapon and pesticide manufacturing that resulted in what one Army general referred to as “the single most polluted square mile on earth.”³² The Army produced chemical weapons on-site until 1946, when “to foster economic growth in the area, offset operational costs and maintain the facilities for national security” it leased its manufacturing plants for pesticide production by private corporations. Shell Oil Company took over all production at the Arsenal in 1952 and continued operations there until 1982. The 40 years of chemical production at the Arsenal resulted in the creation of a vast amount of toxic waste and an incredibly complex chemical stew found nowhere else. While on the surface the Arsenal appeared “pristine” with its abundant wildlife, trouble was brewing below ground in the water table.

The Arsenal is located adjacent to Commerce City, a community that is home to a wide range of chemical production facilities. Off-post problems related to the production of chemicals and toxic waste at the Arsenal were first recognized in the mid-1950s, when it was discovered that contaminated groundwater caused nearby crop damage. In 1956, the Army responded to the need to provide on-site storage of toxic waste by building Basin F, a concrete-lined holding pond. By mid-1959, federal and local government agencies initiated investigations into growing complaints of underground water pollution north of the Arsenal. The Army’s continuing efforts to control the spread of contaminants resulted in small earthquakes felt in the Denver

³² In this section all data is from RMA Fact Sheets and Denver-area newspaper articles.

metro area in the mid-1960s, the result of the Army injecting liquid waste into deep wells on-site. Efforts were suspended as a result of the geomorphic repercussions.

The 1970s saw the ushering in of an international sensibility to the fragility of the environment and human health risks³³ that further shaped public awareness and institutional responsibilities.³⁴ As noted in a special historical issue of *Eagle Watch*, “If the first three decades of the Arsenal’s existence were preoccupied with fulfilling its mission of national defense and space exploration, the 1970s saw the Arsenal’s primary mission as the disposal of chemical warfare materials . . . and the demilitarization of stockpiled munitions and containing off-post migration of contamination became the Arsenal’s most pressing mission.”³⁵ Thus, in 1974, efforts by the Army and Shell Oil to deal with the contamination problems resulted in the establishment of the Army’s Installation Restoration Program and the beginning of interim remediation activities on-site.

Since the Arsenal’s creation, its location in Colorado had always been premised on its role as a national security necessity. However, the massive military infrastructure buildup that occurred during WWII presented an economic burden that the Department of Defense began to address in the 1960s when Secretary of Defense

³³ This is most clearly articulated at the United Nations Conference on the Environment in 1972 and the establishment of the United Nations Environment Program.

³⁴ In the 1970s, ten of the most significant regulatory acts addressing environmental policy were passed, from the Clean Air Act of 1970 to the Resource Conservation and Recovery Act of 1976.

³⁵ Volume 4, Issue 8 August 1992.

Robert McNamara headed an effort to close military bases, and the end of the Vietnam War led to another round of closures in the early 1970s (Spencer 2004). Additionally, changing social, economic and political conditions would soon focus attention on the Arsenal. At the local level multiple interests in the growing Denver metropolitan area proposed alternative uses for the site. From wildlife sanctuary to residential development to a new airport, all possibilities were faced with the same fundamental challenge: significant soil and water contamination from years of chemical production.

The story of the Arsenal's evolution from community threat to community benefit shows how state entities struggle as much with each other as they do with the public. From the federal to the state to the local level, the quest for control over the future of the Arsenal was a complicated and contentious effort. Throughout the 1980s, decision making about the future of the Arsenal was largely under the control of the Army and the federal government. Federal law, budget decisions and legal challenges framed the process with the federal and state governments and their respective agencies, and elected officials and judges and lawyers were primary players in this arena. However, this arena of action is not isolated from the rest of society, and local jurisdictions (cities, counties and special districts), community organizations, and other nongovernmental organizations (NGOs) had an important role to play.

Bureaucratic Struggles for Authority and Control

The relationship between the Army, the State of Colorado, and Shell Oil Company that defined the Arsenal well into the 1970s fell apart in 1980 in the face of the significant economic and political costs the Arsenal represented. The Army's approach

to dealing with the contamination problems at the Arsenal was one of “we’re in control here.” In contrast to the goals of the State of Colorado, the Army was only interested in containing the contamination on-site; the State of Colorado wanted the site cleaned up to a level where 24-hour human occupation would be possible. The Army based their policy on their belief that the Arsenal was never to be released from federal control and hence the investment to achieve cleanup for residential use was unnecessary. Furthermore, they maintained that should any portion of the Arsenal later become available for non-federal use, the “Army and other federal and state regulations [would] adequately provide measures to protect the public.”³⁶

In 1981, the Army was willing to enter into a formal agreement with the EPA and Colorado Department of Health that defined on-site cleanup objectives to work toward. However, the Army and the State of Colorado were far apart on what those objectives should be. This conflict was defined by a struggle over which level of government had primary authority. Statutory law was largely unclear at the time: CERCLA³⁷ gives power to the federal government and the EPA over the cleanup of a federal facility, whereas RCRA³⁸ gives more authority to the state to enforce

³⁶ Army letter to EPA Region VIII administrator dated April 16, 1981.

³⁷ 42 U.S.C. §§ 9601-9675; ELR STAT. CERCLA 007-075 The federal Comprehensive Environmental Response, Compensation, and Liability Act passed by Congress in 1980 also known as CERCLA or Superfund. Owners of the site and those who polluted the site must reimburse the state and federal government for costs the governments have incurred in responding to releases of hazardous substances.

³⁸ 42 U.S.C. §§ 6901-6991; ELR STAT. 44054 The Resource Conservation and Recovery Act also known as RCRA is a law governing the disposal of solid and hazardous waste. Congress passed RCRA on October 21, 1976.

compliance with state standards. In fact, on December 6, 1982, Dr. Frank Traylor, head of the Colorado Department of Health; Anne Gorsuch, head of the Environmental Protection Agency; an Assistant Secretary of the Army; and a Shell Oil Company representative made a formal announcement that outlined joint participation in the Army's decontamination plan by the EPA, the state health department, and Shell Oil. Unfortunately, the accord reached among these groups was short-lived, and they turned to the courts to resolve their differences.³⁹

In addition to fighting with the State of Colorado over the final remedy and authority over the cleanup, the Army was also suing Shell Oil under CERCLA to ensure the oil company would be held accountable for their share of the contamination liability. Shell Oil's initial reaction was to vigorously oppose the Army's claim that they were liable for the sums the Army proposed and, furthermore, asserted that their liability had expired (Shabecoff 1983).

From 1983 to 1989, the Army, Shell Oil and the State of Colorado were locked in a power struggle focused on the core issues of cost and level of cleanup. While the Army, Shell Oil and the State of Colorado were fighting about regulatory and liability claims in the courts, the Armed Services Committee of the U.S. Congress was the center of the national public policy debate over how cleanup and reuse of federal facilities is undertaken. It mirrored the struggle between the federal government and the state as Congressional representatives sought control over budget allocation and

³⁹ Rocky Mountain Arsenal History <http://www.rma.army.mil/>

site priority decisions. Since the late 1970s, the Arsenal had been receiving a significant amount of federal funding to address interim cleanup actions and undertake a remedial investigation. However, with thousands of other sites coming up for consideration, the Arsenal's priority status would likely change in the 1980s. This created significant pressure on the decision makers at the Arsenal and put the chair of the House Armed Services Committee in a unique position.

Representative Pat Schroeder of Colorado, then the Chair of the House Armed Services Committee, shared the State of Colorado's vision of cleanup and also had to work hard within her committee to ensure the Arsenal continued to receive the level of funding needed to achieve this vision. She tried to convince her colleagues there would be a settlement, which was difficult at the time given that all the key players were in court suing each other. Furthermore, the Arsenal was the Army's first environmental restoration effort, which was a relatively new thing in the early 1980s. As noted by one former Congressional staffer, "The Army was just institutionally coming to the conclusion that not only did it have a lot (of hazardous waste) at the Arsenal, but that they have a lot of other RMAs around the country. Superfund was also new. So, how does Superfund and military installations jive? That's the big issue and it's always turf."⁴⁰ Turf wars between the Army and the EPA, at the federal level, over budget allocations and authority in regulatory implementation provided the baseline for debate. The problem was who governed the cleanup — Superfund and

⁴⁰ Participant interview.

EPA or the military? Another important question was does the military supersede Superfund?

Environmental Issues Reframe Bureaucratic Choices: The Army Changes Policy Direction

The discovery of Trichloroethylene (TCE) in the groundwater and in the wells of Commerce City in 1985 fundamentally changed the public perception of the Arsenal and shifted the conditions in which the bureaucracies were operating. The presence of this chemical contaminant resulted in the shutting down of private wells and alarmed the public. Local outrage brought additional pressure to bear on the Army, the State of Colorado and elected officials to respond to this public health threat. Water contamination on the Arsenal site and in the surrounding communities became the focal point for the debate over the scope of the Army's liability and provided fuel for the argument that containment was not an adequate solution. The EPA hosted a public information meeting in 1985 that brought out more than 800 people who, according to one former EPA staff member, "felt betrayed by the Army that they didn't know about this sooner and that this had happened."⁴¹ The Army's initial denial of responsibility left the local community and state worried about where funding would be found to address the widespread problem of water contamination.

At the same time, Shell Oil's contribution to the situation became highly visible as their quest to have their liability covered by insurance turned into a public

⁴¹ Participant interview.

display of their disregard and negligence. In the discovery process, the insurance companies released thousand of pages of documents revealing the history of how Shell Oil operated at the Arsenal and their business arrangement with the Army. There was a “weird lease arrangement,” which meant in some years the Army paid Shell Oil to operate there. It included a litany of environmental abuses, and the trial showed they were well known to the Army and to Shell Oil — yet nothing was ever done about it.⁴²

This public relations crisis enhanced the efforts of the State of Colorado, local jurisdictions, community members and the EPA in putting pressure on the Army. It also confirmed that Shell Oil Company was a principal party responsible for the contamination on the Arsenal. Conditions were coalescing to move the Army to a new policy — cleanup — which raised the key question, “How clean is clean?” From the local and state perspective, clean was removing all sources of contamination, and if that meant digging to bedrock, then that was what should happen. Local leaders made regular visits to Congress and the Department of Defense, demanding protection for their community, creating additional pressure to assure the Arsenal’s future funding and continued Army control. The Army’s containment policy was quickly becoming untenable.

These conditions made the Army acutely aware of the need to build alliances with local interests, who at the time were more aligned with the State of Colorado and its political and legal efforts. This was clearly demonstrated when Colonel Wallace

⁴² Interview with Mark Obamascek, former columnist with the Denver Post.

Quintrel, Arsenal Commander in the early 1980s, stated at a public meeting that if there was any TCE found on the Arsenal, the Army would deal with it.⁴³ Shortly after going on public record, the Army discovered that, in fact, TCE had been used in the motor pool and therefore the Arsenal was a reasonable source for some, if not all, of the TCE found in local water wells. Additionally, DIMP (diisomethyl phosphonate) was a known chemical on the Arsenal, and the plume leading from the Arsenal to another nearby community, Henderson, could not be denied. The Army found itself having to follow through on its commitment to help the community deal with water contamination remediation and ultimately paid for the construction of the Klein Water Treatment Plant, a state-of-the-art carbon-activated filtration system. As a result, the Army garnered support from local political and business leaders.

Open Space and Wildlife: Policy Opening for Bureaucratic Cooperation

Water contamination was not the only environmental issue having an impact on the bureaucratic turf battles at the Arsenal. Open space values and the presence of a diversity of wildlife were well known by locals and environmental NGOs. Testimony before Congress by the *Denver Audubon Society* and *Colorado Land Use Commission* in the early 1980s identified the Arsenal's potential benefit to the local community as a wildlife refuge and indicated a policy direction with great potential for public support. This policy direction was further assisted by the discovery of a bald eagle

⁴³ Community member, participant interview.

roost in 1987. Yet, the Army was initially slow to jump on the bandwagon as they had little policy experience outside of the national security context.

At first they thought, uh-oh, now we have a whole new set of laws, endangered species. Oh shit, how do we merge endangered species and the Superfund into military installations?⁴⁴

While the Army and Shell Oil were in federal court fighting over their respective shares of the liability for the contamination of the Arsenal, they were allies in the fight over authority with the State of Colorado. They were both looking for a solution to the cleanup and reuse questions that would limit their overall liability by ensuring the land would remain in federal hands. Shell Oil's greater experience in public relations provided them with an advantage in assessing constraints and opportunities, much to the benefit of the Army. According to a former government official,

To Shell's credit they figured out quickly "here's an opportunity." They quickly hired a couple of world-renowned wildlife photographers to come and start taking pictures. That started changing the entire focus. It's not only the "how clean is clean" but now it's "here's a light at the end of the tunnel." . . . That was the beginning of the whole "there's an ultimate land use there that we can start to focus on."⁴⁵

Shell Oil was not the only organization that saw a future for the Arsenal as a wildlife habitat and open space. The *Denver Audubon Society* and the Rocky Mountain Chapter of the *Sierra Club* were closely following events at the Arsenal during the early 1980s, when Denver was considering expanding Stapleton Airport onto a portion

⁴⁴ Former congressional staff member, participant interview.

⁴⁵ Participant interview.

of the Arsenal. Both organizations saw the open space potential of the Arsenal and were actively involved in supporting this policy position.

In the early 1980s, the Federal Aviation Administration held scoping meetings regarding the proposed expansion. The *Denver Audubon Society* expressed concern about the local and regional impacts in a letter to the FAA (April 3, 1984). Barr Lake⁴⁶ is “one of the finest spots for bird watching and other aspects of nature study on Colorado’s eastern plains. . . . A second major concern to Denver Audubon is that Stapleton relocation to the Arsenal would preclude developing the Arsenal as a public park. A park might be the best use of the Arsenal.” The Rocky Mountain Chapter of the *Sierra Club*’s Enos Mills Group passed a resolution in 1983 stating their policy position regarding the Arsenal: “Arsenal property will not be released to the City of Denver for the purpose of Stapleton Airport expansion, nor will any further military or civilian development of any kind be conducted on the Arsenal property.”⁴⁷

The vision of the Arsenal as an open space preserve was not initially supported by local business interests. They saw great development opportunity on the site given its proximity to Denver and Stapleton International Airport. However, the revelations of extensive contamination (from the ongoing remedial investigation) not only in the water, but in the soil and holding ponds on the Arsenal, pointed to serious limitations regarding the type of future development possible. Furthermore, cleanup technologies

⁴⁶ Barr Lake is a state park located about five miles northeast of the Arsenal.

⁴⁷ Chapter Resolution November 1983.

at the time were being developed as contamination was identified. There was no magic bullet, no matter the price.

Locking a Vision into Place Through Bureaucratic Agreements

While the Army was struggling with off-post contamination problems and the implications of the presence of abundant wildlife, Congress reauthorized the Superfund Act in 1986 expanding it to include contaminated federal facilities. The Arsenal cleanup became formally regulated by the EPA under Superfund authority. The Arsenal's placement on the National Priorities List in 1987 created additional pressure on the Army to resolve its conflicts with Shell Oil and the State of Colorado, and commence cleanup. In 1988, the Army and Shell Oil settled their litigation, creating a formula for sharing the costs of contamination remediation at the Arsenal. This agreement heavily favored Shell Oil's interests, placing the bulk of the cost on the Army and U.S. taxpayers.⁴⁸

Shell Oil and the Army settled their federal suit by filing a consent decree. Each agreed to pay 50 percent of the first \$500 million in cleanup costs. The United States would pay 65 percent and Shell Oil would pay 35 percent of the next \$200 million spent at the site. The United States would pay 80 percent and Shell Oil would pay 20 percent of any costs above \$700 million. The basis for cost liability had been set; however, the consent decree was not specific on the details of the cleanup. After

⁴⁸ *Available at the CO State Attorney General's office.* Also referred to in a few interviews.

this agreement, it was clearly in the Army and Shell Oil's interest to keep the costs of cleanup to a minimum.

The State of Colorado objected to this consent decree because it felt that this compliance agreement limited its ability to influence the cleanup plan. Although CERCLA provided for governmental involvement (not ultimate control), the State of Colorado preferred reliance on RCRA provisions, which gave the state more power to enforce its own regulations and standards. Ultimately, the State of Colorado (and other states facing similar federal facility hazardous waste site cleanups) wanted more authority than CERCLA gave them. Substantively, the State of Colorado objected to several aspects of the Army-Shell Oil compliance agreement, most important the limitation on future access to the area, which the State claimed would effectively lower cleanup levels and contamination investigations. While the State of Colorado publicly lauded Shell Oil's commitment to the cleanup and the interim actions then being implemented, it still asserted its right to have greater control, arguing over the process of the agreement. Clearly, they felt left out of the decision making regarding the Arsenal.

Environmentally, the dispute over the consent decree focused on use restrictions and human health. The State of Colorado claimed that use restrictions were unacceptable as a substitute for remediation to protect the public's health and the environment. Agricultural and residential use would be prohibited on the site; site groundwater would not be potable; no consumption of fish or game on the site would be allowed; and alterations to surface drainage would be prohibited. The difference in the vision for the future of the Arsenal between the state/local perspective and the

federal perspective was becoming locked into place with formal, binding agreements, though the State of Colorado continued its fight in court to gain authority over the decision-making process.

The consent decree defined roles for all of the parties, set forth the objectives of Arsenal cleanup, described the problems that required attention, and set forth the rules to govern studies and cleanup actions. It also identified who would pay the costs of cleanup and how the costs of the various governmental agencies would be handled. The consent decree stated that all work done at the Arsenal would be in accordance with CERCLA, and one of the amendments to CERCLA in 1986 required Federal agencies to develop a plan for cooperating with other agencies in the cleanup of Federal facilities like RMA, and to formalize this cooperation in the form of a contract called an Interagency Agreement.

In 1989, the Army, Shell Oil, the Department of Justice, the Department of the Interior, the U.S. Agency for Toxic Substances and Disease Registry, and the EPA signed a Federal Facilities Agreement (FFA),⁴⁹ a contract coordinating the efforts of these parties in cleanup efforts. It also established the future of the Arsenal by identifying “that significant portions of the Rocky Mountain Arsenal shall be available for use as open space for the public benefit (including, but not limited to, use as

⁴⁹ The Federal Facilities Agreement (FFA), effective February 17, 1989, set out the process for decision making, the allocation formula for liability, and the future land use of the Arsenal. The state of Colorado refused to sign the Agreement and recognize the authority of the Steering and Policy Committee (SAPC) created by the Remedial Investigation/Feasibility Study process. However, they did participate in SAPC meetings on a regular basis.

wildlife habitat and park).” The State of Colorado refused to sign the agreement in order to maintain its legal standing to continue its quest for authority over the cleanup and recovery of resource damages. The state was accorded a participating status in the FFA, though without voting rights.

The FFA, in describing the work to be done at the Arsenal, makes a distinction between urgent problems that require short-term solutions to alleviate the spread of contamination and problems that do not present an immediate threat and are amenable to long-term solutions. For example, the FFA identified the treatment of Basin F liquid waste as a priority item requiring a short-term solution. It also set forth a list of procedures for finding the solution and for taking into account the comments and concerns of the agencies involved. A detailed dispute-resolution procedure is used when one or more of the involved parties do not agree with the solution or the way in which it is selected. The FFA also provides for community involvement in three ways. The first was through the establishment of a Technical Review Committee with a specified membership.⁵⁰ The FFA, in accordance with CERCLA and National Contingency Plan (NCP) guidance, recognized the need to keep the community informed about the development of remedial action plans. Thus the second approach

⁵⁰ (a) The chairman of the RMA Council, who shall serve as the Army's representative; (b) A representative of EPA (as designated by EPA); (c) A representative of the State (as designated by the State); (d) A representative of Adams County; (e) A representative of the City and County of Denver; (f) A representative of Commerce City; (g) A representative of the South Adams County Water and Sanitation District; (h) A representative of the Tri-County Health Authority; and (i) Three public representatives who shall represent a cross section of civic, educational and other such groups from the local community.

that addressed this need was through the public distribution of decision documents and public meetings. Third was the creation of a Community Relations Program. The FFA required the parties to comply with EPA policy and regulations for community relations programs under CERCLA.

New Bureaucratic Partnerships and a Final Plan for the Arsenal

The signing of the consent decree, and especially the Federal Facilities Agreement, was a key turning point in the process, as these bureaucratic agreements laid out the organizational structure, future use of the site, and a means to get to the record of decision. It created a framework for the bureaucratic entities to work together. At the same time, pressure was building in Congress as budget battles for funding threatened to remove the Arsenal from the head of the line. The State of Colorado continued to remain a reluctant participant going forward.

The era of litigation focused on which bureaucratic entity had authority over the cleanup. The Supreme Court's finding in favor of the federal government allowed the Army to continue to control the process. However, it also locked the Army into the requirements of CERCLA, whose implementing regulations require the cleanup to be protective of reasonably anticipated uses. It is exactly the question of "reasonably anticipated uses" that continued the core issues from the litigation era forward into the regulatory implementation process. The cost factor remained a great concern for the Army, who was on the hook for the lion's share of the cost of cleaning up the Arsenal, and Congress, who was fighting budget wars that threatened to decrease the amount of money available to the Arsenal. More Superfund sites were moving through the

CERCLA process, and across the board the cleanup costs were clearly going to outstrip the fund. Decisions about the conceptual remedy needed to be made, but that was not easy, as the State of Colorado continued its quest for greater authority and demands that the site be evaluated for residential development.

The idea of open space as a “reasonably anticipated use” for the Arsenal had been kicking around since the early 1980s. At the time of the failed Memorandum of Understanding between the Army, Shell Oil and the State of Colorado, representatives of Shell Oil, according to a former consultant for the company, “asserted the view that the land should not be turned into land for unrestricted use.”⁵¹ At the same time, Denver was focused on expanding Stapleton Airport onto the southern tier of the site with a third runway. Groups such as the *Sierra Club* immediately responded by rejecting the idea of expanding the airport onto highly contaminated land. The State of Colorado was firm in their position that the land should be evaluated for residential use. In addition, the discovery of a bald eagle nest on the Arsenal in 1987 highlighted the wildlife values of the site and also engaged another federal bureaucratic player, the U.S. Fish and Wildlife Service, and another set of environmental laws, the Endangered Species Act. The discovery had the effect of both complicating the cleanup process and providing a “reasonably anticipated use” for the Arsenal that all the federal participants and Shell Oil could agree to. The possibility of the Arsenal becoming a national wildlife refuge appeared as the solution to the most challenging of questions.

⁵¹ Participant interview.

The support of local and national environmental organizations helped create public support for the proposed policy direction. Congressional pressure to resolve the litigation at the Arsenal, and ensure continued funding for cleanup, forced the Army and Shell Oil to settle their differences. Conditions finally converged that allowed the warring parties to come to an agreement that would allow the record of decision process to proceed. While the situation appeared to be under control and ready to move forward, albeit with a recalcitrant State of Colorado, other challenges remained before the parties at the Arsenal were able to sign off on a record of decision.

The 1980s were a significant time at the Arsenal and for the United States as the extent of contamination at Federal Facilities became apparent. Bureaucratic turf wars dominated the policy process, and since this type of state activity happens outside of public view, few members of the general public were aware of the gravity of the decisions being made. Established NGOs like the *Audubon Society* and the *Sierra Club* along with local municipal jurisdictions had been involved since at least the early 1980s, as it is in their organizational interest to follow questions of land-use changes closely. While the public disclosure of TCE contamination in the wells of Commerce City alerted the local populace to the risk the Arsenal posed, it wasn't until after the bureaucratic wrangling settled with the Federal Facilities Agreement that citizens of the area found themselves confronted with a policy process well on its way to completion without their consent.

CHAPTER 5:

Contamination, Risk and Uncertainty: Public Intervention in the Policy Process

Residents of Commerce City in Colorado had long been accustomed to the veil of secrecy surrounding the Rocky Mountain Arsenal and with the existence of numerous chemical manufacturing and refining facilities in their community.⁵² At the time there was relatively little awareness of the Army's plan to demilitarize the Arsenal or of the battles between the Army, Shell Oil Company and the State of Colorado over control. On the other hand, there had long been a sense of the danger the Arsenal and other facilities represented; as noted by a county health department employee, "people were concerned about what was going on (and) felt like they were being contaminated all the time."⁵³ However, concerns about contamination were the purview of the state agencies, and because the Arsenal was a highly contaminated site subject to federal regulation, the Army and Shell Oil Company had long been involved in on-site remediation, of which one key issue of concern, according to a former Shell Oil Company consultant, was "activity relating to the treatment of ground water."⁵⁴

⁵² Commerce City, Colorado had 60 superfund sites as of August 1997. Some are remediated. http://www.cqs.com/super_co.htm

⁵³ Participant interview.

⁵⁴ Participant interview.

The expansion of federal regulation in the 1970s and, especially, the creation of the Environmental Protection Agency and the Superfund demonstrated the state's commitment to pursuing the public consensus on environmental quality goals and natural resource policies (Kraft 2000). The efforts of the environmental movement appeared to have been successful in changing the state structure to work more effectively with the grassroots, creating a sense that the state bureaucracy was once again acting in the public interest. This was clear in that environmental organizations such as the *Denver Audubon Society* and the Enos Mills Group of the Rocky Mountain Chapter of the *Sierra Club*, who were concerned about the feasibility of cleanup of the Arsenal, did not focus on organizing within the local community; rather, they emphasized interaction with state and federal officials.

This approach would soon prove inadequate because the Arsenal and what it represented were different. Revelations of uncertainty surrounding chemical contamination accentuated the lack of leadership and expertise on the part of responsible agencies. Unlike the big fights over the protection of natural resources (e.g., air, water and forests) that drove much of the environmental agenda in the 1970s, the contamination on federal facilities and its implications for local communities raised a new set of questions that neither activists nor bureaucrats had ready answers for. With the public disclosure of chemical contamination in the wells of Commerce City in 1985, local residents mobilized and confronted their elected officials and agency personnel, demanding an explanation of how they had allowed this to happen.

Chapter 5 describes how each new threat to public health that emerged at the Arsenal expanded the community of concern⁵⁵ and caused the lead agencies to revise their public outreach actions. Public awareness of the scope of contamination at the Arsenal and the implications any cleanup program had for surrounding communities created a dynamic and interactive process between the state and society. State and national interest groups representing concerns about toxics and wildlife joined local residents in demanding a greater role in deciding the future of the Arsenal. Between 1985 and 1992 events led by the public moved faster than the state could keep up with.

Toxic Water, Citizens Against Contamination and the Klein Water Treatment Plant

In the early 1980s, the Colorado Department of Health found trichloroethylene (TCE) in some residential wells in Commerce City and, according to a former employee, told the local water district, “no problem, just keep an eye on it.”⁵⁶ However, a 1985 Denver Post article on the presence of high levels of TCE contamination in the water in Commerce City broke the news to the community, which reacted with alarm. The lack of public disclosure by the responsible agencies angered residents and put the agencies on the defensive. As one Commerce City resident described the mood at the time, “(the) community was up in arms about the water quality problems. We had

⁵⁵ This term refers to the expanding population who came to see themselves as negatively affected by the toxic waste at the Arsenal.

⁵⁶ Participant interview.

some people who started a movement to practically lynch everybody that was reachable.”⁵⁷

The public disclosure of drinking water contamination quickly shifted the policy context from TCE as a public health concern under agency control to one of crisis. The state health department reacted to the community’s outrage by ordering the local water district to shut down the wells and put residents on bottled water.

Simultaneously, a few Commerce City residents organized themselves into a group called *Citizens Against Contamination* that started investigating the type and source of pollutants and engaging the community in a quest to hold the agencies accountable and secure a safe water supply. Their initial effort to gain transparency and information-sharing from the agencies resulted in what one former Commerce City council member characterized as “the Colorado Department of Health divulging (everything).”⁵⁸

Community concern about the water contamination was not satisfied by the actions being taken by local authorities. In fact, the local water board was accused of knowing information and not passing it on in a timely matter.⁵⁹ In response to this perceived failure on the part of the public agencies to meet their obligation to protect public health, *Citizens Against Contamination* organized several public meetings that brought together local community members with the Army, the local water district, the

⁵⁷ Participant interview.

⁵⁸ Participant interview.

⁵⁹ Former water district board member, participant interview.

state health department and the EPA. Their efforts to bring more information to the public helped raise the level of public knowledge and focused attention on the Arsenal as the likely source of the problem. However, the multiple Superfund sites in Commerce City and the proximity of Stapleton Airport made claims against the Army for TCE problematic. Yet, the potential scope of the problem necessitated finding a responsible party with the resources to provide a permanent solution.

Community demands for accountability became enmeshed in the simultaneous bureaucratic battle occurring as the State of Colorado sought control over the cleanup of the Arsenal. While EPA guidance in the early 1980s directed the Army to mail notices to local residents about interim cleanup actions on the Arsenal grounds, little awareness actually existed outside the fence. In speaking about how the Army had done a very poor job of public relations, a former commander noted that up until the time the installation had closed, they stonewalled everything by saying, “because of national security, we can’t talk about anything, you can’t come on (site).”⁶⁰ The public disclosure of TCE contamination marked the beginning of the struggle between the local communities and the Army over the question of the Army’s responsibility to those living close to the Arsenal. Existing institutional arrangements were found wanting as the public discovered that bureaucratic decision making had put them at risk. With the Army moving forward on cleanup plans, local citizens wanted more information, greater oversight, and ultimately a seat at the table.

⁶⁰ Participant interview.

Linking TCE with Arsenal Operations

During the first few meetings sponsored by the *Citizens Against Contamination*, the Army continued to deny responsibility that the TCE contamination was from the Arsenal. Their position was based on their policy of containment. According to them, there was no way pollutants migrated off-site, as the multiple holding ponds were concrete-lined to prevent such a situation from happening. However, TCE in the wells of Commerce City meant that the direction of groundwater flow under the Arsenal became a central theme of debate between the Army and the local and state agencies. They each hired their own consultants to test well water and verify the direction of flow. Shortly after the board of the South Adams County Water District authorized monitoring of wells along the north boundary of the Arsenal, according to a former employee, they “found several contaminants, though TCE was the big one.”⁶¹

Community meetings continued to draw hundreds of people who now saw the Arsenal as a direct threat to their well-being and demanded a permanent solution. The organizing efforts of *Citizens Against Contamination* directed attention to the public agencies that now had to answer for their earlier decisions. Public pressure began to change the focus of agency analysis and resulted in the identification of new solutions. As one community participant noted, at “one meeting there was 600 – 800 people in attendance and people were angry. That night we convinced the EPA that they needed to do carbon treatment.”⁶² Furthermore, according to a public agency employee deeply

⁶¹ Participant interview.

⁶² Participant interview.

involved at the time, the Arsenal commander said, “if he finds that this contamination is coming from the Arsenal, the Army would take care of it.”⁶³ Not only did the test wells find TCE at the perimeter, the Army shortly discovered that TCE had been used at the motor pool. The Army could not deny these findings and agreed to fund temporary filters, but the community wanted a permanent fix.

Klein Water Treatment Plant Solves Local Water Problem

The South Adams County Water District (SACWD) was especially sensitive to the need to respond to the loss of public trust because most of its employees and board members were local residents. In response to the efforts of *Citizens Against Contamination*, the SACWD board began to act more aggressively and commenced a campaign to hold the Army accountable for the water contamination. They were aware that the State of Colorado, the EPA, the Army and Shell Oil had been trying to get the record of decision process for the Arsenal underway and knew they had to press their case immediately to ensure the water contamination problem would not be sidelined by the other cleanup issues. Recognizing the process and potential future impacts to their community, they decided they needed “to go after the Army for this contamination and future contaminations.”⁶⁴

⁶³ Participant interview.

⁶⁴ Former SACWD employee, participant interview.

The SACWD board response was both a reflection of the community's anger and their fiscal constraints. The board's subsequent trips to Washington, D.C., seeking compensation from the Army became cast in terms of the broader public agenda, as one member put it, because "our people did not harm our water."⁶⁵

The cost and complications of creating a permanent solution to the water contamination problem in Commerce City presented a challenge to everyone. Initially, the water board found the Army just as intransigent as the public did. The Army's first response was to "go the cheap route. But the (water district board) kept saying no, you ruined our image, we want something that will satisfy our people."⁶⁶ Recognizing that they needed to go to the top of the military's organization to get resolution, the water board worked closely with their Congressional delegation to gain access to the Secretary of the Army. Public and official efforts to hold the Army accountable for the water contamination in Commerce City gained momentum. Ultimately the Army "decided as a goodwill gesture more than anything else, to spend \$5 million to build the Klein Water Treatment Plant. That was a good thing. It helped improve relations between the Army and the City."⁶⁷

The masses of people who had been turning out at public meetings receded now that the water contamination crisis was over, a solution had been identified, and a means to achieve it ensured. As an employee of the Colorado Department of Health

⁶⁵ Participant interview.

⁶⁶ Former SACWD employee, participant interview.

⁶⁷ Former Congressional staffer, participant interview.

noted, “. . . when they got their water from South Adams County, we really kind of lost a lot of community interest in Commerce City. They didn’t look at the Arsenal as being a risk to them anymore, so they kind of got out of the equation of having a real public interest in the clean up.”⁶⁸

With the water contamination problem resolved, the next agenda was getting the record of decision in place — a plan for how the cleanup would actually be achieved. It was clear to local leaders that there was going to have to be a concerted effort in the citizenry to get that accomplished, thus they would need to be a party to the settlement — as one former water district employee put it, “they needed a seat at the table.”⁶⁹ However, not unlike the conflict besetting the regulatory agencies, the Army, Shell Oil and State of Colorado divisions within the community leadership needed to be addressed in order to move forward effectively in the formal record of decision process.

Recognizing the need to create a unified voice, a new organization was formed that would “represent a large body of folks, different interests (who could) sit down and give direction to the regulators and to the parties as to what the citizens want, prioritize them so they had something to work from.”⁷⁰ The *Northern Community Coalition* believed that “if the Army and Shell commit to do things for the community

⁶⁸ Participant interview.

⁶⁹ Participant interview.

⁷⁰ Former county health department employee, participant interview.

then the community needs to support what they're doing.”⁷¹ While the record of decision process⁷² requires public involvement, the structure did not include a formal role for ongoing participation by a community group. The agencies were reluctant to create a new role for the public in the process but they were cognizant of the importance of public acceptance of policy decisions. The uproar over the water contamination in Commerce City made clear that engaging with the public must mean inclusion of representatives outside the established bureaucratic system. Therefore, it was imperative that the *Northern Community Coalition* be composed of more than local agency representatives and city officials. The inclusion of the *Citizens Against Contamination* was critical for the *Northern Community Coalition* to be seen as a legitimate representative of broad community interests.

The question of participating in the *Northern Community Coalition* resulted in a split in the *Citizens Against Contamination*. Those opposed to joining the *Coalition* viewed participation as a validation of the process to date and, especially, the Army and Shell Oil's ongoing leadership of the cleanup process. Others felt this was an important opportunity to continue to engage with the agencies and ensure that the community's interests would not be ignored. Ultimately, the *Northern Community Coalition* did achieve formal participation of the *Citizens Against Contamination*.

⁷¹ Former county health department employee, participant interview.

⁷² CERCLA (Superfund) law requires public involvement. Throughout most of the 1980s public involvement meant to notice the public and provide a contact for more information.

However, this resulted in the leadership of *Citizens Against Contamination* splitting, with those remaining skeptical of the Army continuing to participate without formal representation.

Cleanup Activities Widen the Scope of Affected Communities

One of the most significant learning experiences both for the bureaucracies and the public that came out of the Arsenal resulted in the shift in concern from the toxic effects of chemical production to the effects of cleaning up the mess created by that production. Cleanup activities had been occurring on the Arsenal since 1975, when the Army initiated their Installation Restoration Program.⁷³ Between 1975 and 1985, remediation activities on the Arsenal were largely undertaken with minimal public notice and certainly no expectation of direct public involvement. With the creation of

⁷³ The Army Environmental Command traces its roots back to 1972, when the Army created the position of Project Manager for Chemical Demilitarization. The organization's mission then was the destruction of the nation's toxic chemical agents and munitions. In 1975, the organization began managing the newly established Installation Restoration Program, set up to develop an assessment process for evaluating environmental conditions at Army installations. With the new responsibilities came a new name, the Department of the Army Project Manager for Chemical Demilitarization and Installation Restoration. At that point, the agency was reassigned to the Army Materiel Command. By 1978, the Army's environmental responsibilities had expanded and the organization was renamed the U.S. Army Toxic and Hazardous Materials Agency (USATHAMA) to reflect a broader, more long-term mission. By 1980, the agency grew to include several new responsibilities: environmental research, development, test, and evaluation, pollution abatement, and environmental control technology. <http://aec.army.mil/usaec/aboutus01.html>

the EPA in 1980, Army activities at the Arsenal were now monitored by an outside agency, and public notification and involvement were a bit more formalized.⁷⁴

In the early 1980s, regulatory agencies did not have much in the way of formal mechanisms for assessing and responding to potentially affected communities. The TCE contamination in Commerce City water wells resulted in a citizen-based effort to bring attention to the off-post impacts of chemical waste. This problem not only highlighted the issue of affected communities next to hazardous waste sites, it generated a coalition of local interests that became a part of the policy process. When the Arsenal was placed on the National Priorities List in 1987, the EPA required a Preliminary Assessment and Site Inspection, which scores a site according to the danger it may pose. This regulatory step ensured that the Arsenal would be high on the list to receive federal funding but did not trigger a broader evaluation of potential off-post impacts from cleanup activities. Since the TCE revelation, each step in the subsequent cleanup process at the Arsenal generated community concern that challenged the agencies' ability to respond.

Basin F Cleanup Phase I: The Case of the Irondale Trailer Park

The greatest collection of toxic waste at the Arsenal was in Basin F, a 93-acre concrete-lined pool built in 1956 to contain the poisonous by-products of chemical manufacturing. It was believed that leakage from this storage facility into the

⁷⁴ The creation of the Technical Review Committee at the Rocky Mountain Arsenal was the direct result of the EPA's regulatory power.

groundwater led to a toxic plume into the groundwater affecting over 30,000 people in South Adams County.⁷⁵ Consequently, the cleanup of Basin F was the most critical interim remediation activity; not only did the waste represent a continuing threat to groundwater quality, but Basin F was the largest single repository of waste on-site. The Army proposed three plans over four years to clean up the sludge, but state health officials rejected each approach. Ultimately, the state agreed to a plan that would remove the liquid waste from the leaking pond and store it on the Arsenal.

Irondale⁷⁶ residents had been noticing unpleasant odors coming from the Arsenal since at least 1986, but it wasn't until the summer of 1988, when the Army began moving the toxic sludge in Basin F around, that the foul air began to have demonstrable effects such as nausea, rashes, burning and dizziness. Residents felt they were being poisoned, and the phone lines of county, state and federal authorities lit up. Meetings were held and procedures reviewed, but the problems continued. While the Army's initial plan provided on-site air quality monitoring stations, they did not feel compelled to provide the same level of review for off-site impacts. Because neither the Army nor the state had included this possibility in their plans, by the time it was clear it was needed the project was in "full swing and officials were reluctant to stop it."⁷⁷

⁷⁵ Abas (1989: 11) (Westword article).

⁷⁶ Irondale, primarily a trailer park, is located along the northwestern perimeter of the Rocky Mountain Arsenal.

⁷⁷ WESTWORD May 17-23, 1989; page 14.

There were four agencies concerned with the cleanup of Basin F — the Army, EPA, Tri-County Health and the Colorado Department of Health. Irondale residents along the western boundary of the Arsenal were not on the radar of the bureaucracies and were not represented by *Citizens Against Contamination*, who did receive a letter from the State of Colorado warning about the impending interim remediation activity for Basin F. *Citizens Against Contamination*'s earlier involvement with the TCE contamination issue in Commerce City established their place in the policy process; they were seen as providing an important communications link between the lead agencies and the community.⁷⁸ The residents of Irondale suffered not only from the exposure to such toxic chemicals as aldrin⁷⁹ but also from a lack of bureaucratic attention.

Interagency conflicts and lack of a clear advocate within the institutional structure resulted in the residents of Irondale having to struggle to have their experiences with air quality validated and health concerns resolved. According to an extensive investigation by a local newspaper into Irondale's experience with the cleanup of Basin F,

Records of meetings of cleanup officials reveal that in most cases, the residents' complaints were registered as simply about odor. That tended to

⁷⁸ For example, on an October 1989 EPA fact sheet, *Citizens Against Contamination* is listed as a contact for information on citizen involvement.

⁷⁹ Aldrin is an insecticide that was widely used as a pesticide for crops such as corn and cotton until the EPA banned it 1974. Aldrin quickly breaks down to dieldrin in the body and in the environment. Neither substance occurs naturally in the environment, and both cause nervous-system and gastrointestinal effects.

diminish the seriousness of the complaints, because rarely were officials told of the symptoms caused by breathing the foul air.⁸⁰

It was not until well over a year after the initial complaints were made about negative health effects felt in the community, that a comprehensive register of the symptoms was compiled. And that was only as a result of environmentalists and lawyers asking residents to write notarized summaries of their “summer of hell.”⁸¹

While the Irondale experience contributed to public health agencies’ greater appreciation of the impacts of cleanup activities, it did not appreciably affect their approach toward identifying and supporting affected communities. Air quality monitoring stations were not established along the northern perimeter of the Arsenal, causing Irondale residents to turn to the courts to seek relief. They brought suit asking the judge to order an evacuation to initiate federal support for their relocation and health needs. The federal government asked for their suit to be rejected, arguing that the state already represented their interests, and stated that there was no air quality issue. The State of Colorado was still pursuing its suit against the federal government to gain control over the cleanup of the Arsenal and welcomed the participation of the Irondale residents, but they, too, affirmed the belief that evacuation was not necessary. The “summer of hell” passed, the bureaucracies continued to ignore the problems of the Irondale residents, and the cleanup of Basin F moved into its next phase.

⁸⁰ WESTWORD May 17-23, 1989: 14.

⁸¹ WESTWORD May 17-23, 1989: 12.

Basin F Cleanup Phase 2: The Submerged Quench Incinerator

Finding a permanent solution to the toxic wastes in Basin F was a challenge not only because of the limited knowledge of the potential lethality of the mix of chemicals, but also because the solution needed to be found with the active involvement of the EPA, Colorado Department of Health and the surrounding communities. The Irondale experience further expanded public awareness of the air quality implications of Arsenal cleanup operations. It also appeared to have sensitized the local, state and federal agencies concerned with public health to the need for a more expansive public education and involvement effort, though not necessarily an expanded consideration of the geographic scope of potential impact. As the Army prepared for the final treatment of the Basin F waste, they made a greater effort to engage the public through more extensive public outreach and education.

Citizens and community organizations participating in the decision process generally agreed that shipping the waste off-site was not acceptable but were hesitant to support incineration. Everyone agreed that Basin F needed to be dealt with quickly, efficiently and safely. To keep the process moving, and recognizing the importance of information, the Army, in coordination with the EPA, held a series of public education meetings in which they presented data and reports on thermal technology and provided an opportunity for small-group discussion and questions. The public participants included in these meetings were from established stakeholder groups and included members of *Citizens Against Contamination*, the *Northern Community Coalition*, *Sierra Club*, and *Denver Audubon Society*. According to the Arsenal commander at the time, these meetings were incredibly successful in building trust and credibility for

the Army as well as a constituency that could communicate more effectively about the complex technical issues.

. . . the outcome of (those meetings) is that not only did they have the consistency of coming up with our same alternative solutions, but then in subsequent public meetings, we now had a group of people out there who were not necessarily advocates, they understood the decision process we had to go through right away, so that when we started talking about those decision parameters or about the alternatives for a given site, you could see the light go on.⁸²

The central issue was whether to remove the remaining Basin F waste from the Arsenal to a hazardous waste facility elsewhere, or to treat it on-site. The consensus among the parties and the agencies was that moving it off-site was not an option, and, as a former Colorado Department of Health staffer put it, “(it) was important to treat principal threats waste at the Arsenal. Landfill and other material. [Therefore t]hermal was the only effective and reasonable treatment.”⁸³ As the public involvement process proceeded to address this question, the divide in public opinion over trust in state agencies reappeared. The EPA and the Colorado Department of Health generally had been viewed as allies of the public since the resolution to the water contamination problems in Commerce City. However, their position in support of on-site thermal treatment put them at odds with those activists who had not joined the *Northern Community Coalition*. This made building support for thermal treatment difficult. According to an official involved at the time, “that ultimately left us without a real

⁸² Participant interview.

⁸³ Participant interview.

good alternative when it came to the treatment of waste on the Arsenal. Both we and the SSAB⁸⁴ ended up with something less than what we would have liked in that regard, because there wasn't an alternative that fit our respective positions.”⁸⁵

The public participation process appears to have contributed greatly to the ongoing divide among the public stakeholders. As one community participant put it, we “went through a lot of bureaucratic hoops, hearings. One of the problems, the people who were behind it, the Army, Tri County Health, EPA, CDH — a whole panel — the jargon was so dense, you could tell people would get very alienated from this ‘bureaucrat-ese.’ People didn’t like it and they were hostile.”⁸⁶ Further complicating matters was the participation of the *National Toxics Campaign*. This national organization offered information contrary to the assertions of state bureaucrats, and challenged their promises that incineration was a safe solution. Those ready to move forward on a cleanup agreement saw their combative participation as making things more difficult. As one wildlife-organization staff person observed, “they had by law a legitimate seat at the table and I’m not going to take that away from them . . . but the particular brand of people that had that seat at the table . . . it was federal bashing

⁸⁴ The reference to the SSAB is incorrect. It wasn’t established until 1994. The reference undoubtedly refers to community members who led the process to establish the SSAB.

⁸⁵ Participant interview.

⁸⁶ Participant interview.

(and) an opportunity for them to (do this) rather than productively participate in the process.”⁸⁷

While the Army, EPA and the Colorado Department of Health provided a more expansive public engagement process regarding the final solution for the liquid waste in Basin F, they found they still were not able to completely control the arena of involvement. They sponsored workshops that took place over a three-month period that included organizations like the *Sierra Club*, the *Northern Community Coalition* and former members of *Citizens Against Contamination*. The Army thought it had its bases covered and did not anticipate the possibility that other communities could be mobilized to see themselves as affected and left out.

Representatives of *Concrete Facts* (another local toxics-focused organization) met with Montbello⁸⁸ community leaders and told them about the technical assistance grant⁸⁹ that Commerce City (*Citizens Against Contamination*) had gotten to help them understand the complexities of chemicals and cleanup. This information led to the realization among Montbello leaders that they needed to engage with the Arsenal and

⁸⁷ Participant interview.

⁸⁸ Montbello is a neighborhood that is adjacent to the Arsenal to the southwest. Their relative distance from the site of primary contamination meant they were not included in early public communications. This would all change once the Submerged Quench Incinerator came on line.

⁸⁹ Technical Assistance Grants (TAGs) are available from the EPA to community groups involved in Superfund site cleanups. They are designed to provide the resources for the community to get technical assistance from a consultant of their own choosing. This provides them with a means to evaluate the information being provided by the bureaucracy.

the incinerator. Unlike Irondale, Montbello was an organized neighborhood and the leaders of three existing Montbello community organizations met and “formulated the organization, the *Concerned Citizens of Montbello*.”⁹⁰ The leaders quickly organized and demanded a public meeting in Montbello so their community could have a say in the decision making. More than 500 people attended this meeting, expressing great concern about the proposed incinerator. While this meeting included full representation by the lead agencies, it was clear to the community members attending that their community had been neglected. As one Montbello community leader explained,

These people were ready to tar and feather them because none of those explanations were in a sense, very, at all acceptable and suitable. The suspicion arises when, for example, instead of them coming to our community and say this (is) what we intend to do, they had already built the damn thing. And they had already in a sense given \$50,000 in TAG grants to Commerce City in order for them to make their citizenry aware that this is going to be under construction. Whereas they failed to do this. From a Black perspective that doesn't set too well.⁹¹

In addition to the outrage expressed by the citizens of Montbello, the *National Toxics Campaign* was regularly holding small demonstrations outside the main gate of the Arsenal, trying to draw attention to the threat posed by the contamination, and especially the Submerged Quench Incinerator. Their representative regularly came across as “very angry and antagonistic” at the meetings regardless of the quality of his

⁹⁰ Montbello community leader, participant interview.

⁹¹ Participant interview.

information and the audience's ability to engage at a fairly technical level.⁹² *Concrete Facts* and the *National Toxics Campaign* were able to stir up citizen concern and engaged the Montbello community, and most likely other citizens, who responded to their dramatic communication style. However, they were not able to ultimately stop the incinerator project, as local communities were eventually convinced of this option's merit.

From the perspective of the Army, their approach to the Submerged Quench Incinerator (SQI) was a success, and it was only the efforts of outsiders (e.g., *Concrete Facts* and *National Toxics Campaign*) that created a problem. As one civilian Army staff person put it,

We had real strong support when we first started talk about the SQI system. Good communication with the public, they didn't necessarily like what we were doing out here, they understood the need to do it and they wanted us to take safety precautions doing it. One of our lessons learned with respect to that, you go out and you talk to the community and tell them what you are going to do. You come back thinking now we'll just do it. Kind of lost part of our Montbello community during the construction of the SQI system — they saw a steam flume (from a test) — heightened degree, spike in distrust there we needed to go in and deal with. And any time you have one of those little spikes you better not trust your judgment since activists look for those and use them to meet their needs as opposed to meeting the need of the community or the sites. And emotional issues that they can come in and sell their messages.⁹³

It is clear in the case of the SQI that information and communication can have a beneficial effect for both bureaucratic and grassroots agendas. While there wasn't

⁹² Community member, participant interview.

⁹³ Participant interview.

complete agreement about the safety of the SQI, it appears the primary stakeholders, those involved earlier in the process that had a greater opportunity to learn about both the technical complexities of the chemical contamination, and the individuals representing the agencies, were willing to move forward, as it appeared to be the best solution available. Those who, from the Army's perspective, came late to the process and stirred things up again did not have the benefit of the learning experience of the other stakeholders. As the Arsenal commander who came on at the end of the process assessed the situation,

The social dynamics around the site change particularly if you are in an urban area. You probably turn over in a 3 to 4-year period as much as a third of the population that's outside your fence. So the people that were with you when you started a project, and this is what happened with the SQI . . . before I got here they had had all kinds of workshops in the communities, everybody agreed to the incineration — they got quiet and they went and built the plant. And all of a sudden it's here — oh, we had them coming out of the woodwork. Anti-incineration, rainbow coalitions, anti-discrimination — all those issues were starting to come to the forefront.⁹⁴

The experience of the community and environmental organizations at the meetings was a bit different. As one community participant explained, "it was sort of like a whole sham. I would walk out of there, just saying, 'well it's preplanned, there's nothing we can do about it, etc.'"⁹⁵ However, it appears the meetings had achieved the Army's goals; according to the same individual, "I didn't take a strong enough stand and so when it came to *Sierra Club* actually taking a public stand, because we were

⁹⁴ Participant interview.

⁹⁵ Participant interview.

being pushed, I suggested that we say that we did not oppose the Submerge Quench. I did not say we support it, I just said that we wouldn't oppose it. Internally, it was decided that this was a very inappropriate stand."

The Rocky Mountain Arsenal Wildlife Refuge: The New Consensus

By the mid-1980s, the idea of preserving the Arsenal as open space was seen as desirable by a number of interested parties including the Army, Shell Oil, the *Denver Audubon Society* and the *Sierra Club*. Alternatively, the land was attractive to the city of Denver, which was interested in a long-term solution to air traffic congestion in the region. In addition, Commerce City, Brighton and other municipalities in the area had their eye on the site for expansion and future development. Meanwhile, back in Washington, D.C., Congress was getting antsy over the cleanup delays at the Arsenal. Their primary concern was cost, as it was becoming clear there were a lot of "Arsenals" all over the country.

The Superfund was relatively new, and with the 1986 decision to include federal facilities, concerns over its ability to cover the cleanup costs led to greater pressure on the Army to settle with Shell Oil and ensure that they contributed to the cost of the cleanup. Colorado representative Pat Schroeder's efforts on the House Armed Services Committee were aimed at ensuring there would continue to be sufficient funds directed toward the Arsenal. The most relevant question then was, to what health standard should the remediation be designed?

There was a serious tug of war over the remedial investigation/feasibility study (RI/FS) as that process got underway in 1984. This effort was the first formal step in

the record of decision process and would provide the baseline assessment of the contamination and identify the feasibility of current technologies to achieve the desired level of cleanup. Not only were the Army and Shell Oil struggling over liability for the contamination, they also had a distinct interest in the RI/FS as it would essentially establish the estimate of cleanup cost. The EPA's basic starting point for all sites was that they were to be cleaned up for residential use, which in the case of the Arsenal would clearly be very expensive.⁹⁶ The State of Colorado and local residents also supported this goal for the Arsenal cleanup.

The future use of the site was thus a point of contention among all the interested parties, with risk assessment being the central issue. Colorado strongly supported a process that looked at residential uses for the Arsenal, as that would provide the maximum assessment of risk of the site. According to an employee of the Colorado State Attorney General's office, it wasn't "that we wanted to make a case for development, but that we wanted to know what the risks were. As part of the record, as part of posterity, and acknowledging the uncertainties of risk assessment."⁹⁷

⁹⁶ Early estimates were \$700 million to \$2 billion — in 1984 dollars this was an unheard-of amount of money, especially for a single site.

⁹⁷ Participant interview.

The EPA was responsible for regulating Maximum Contamination Levels⁹⁸ (MCLs) to be protective of human health and environment. However, there were many chemicals on the Arsenal without any established MCL, and there was a debate over whether there had been full disclosure of the chemical contamination in the soil and water. Negotiations over the risk assessment were also constrained by limited resources. As one health agency representative put it, “it really harmed the State (of Colorado) and EPA pushing for greater cleanup because the money wasn’t there. They couldn’t get it from Shell; we couldn’t get it from Shell.” It was also difficult to assess and establish MCLs because of a lack of knowledge of the biochemistry of wildlife; there was a “lack of data for a number of these contaminants and what it does to these different creatures, because even though human health has been studied more extensively, you’ve got different weights, different metabolisms, different body systems and all that.”⁹⁹ Ultimately it came down to a big debate about what level of protection is appropriate for species. Should they be protected from getting sick or dying out as a species? This was a new area for everyone involved, raising questions that could not be immediately answered.

⁹⁸ Maximum Contamination Level is the maximum permissible level of a contaminant in water that is delivered to the free-flowing outlet of the ultimate user of a public water system; except in the case of turbidity, where the maximum permissible level is measured at the point of entry to the distribution system. Contaminants added to the water under circumstances controlled by the user, except for those resulting from corrosion of piping and plumbing caused by water quality, are excluded from this definition. U.S. Environmental Protection Agency Title 40 — Protection of Environment, Chapter I — Environmental Protection Agency, Part 142 — National Primary Drinking Water Regulations Implementation (CFR Citation)

⁹⁹ Participant interview.

The Contradictions of Consensus Building

By the late 1980s two state actions in response to public demands resulted in reducing the level of public distrust of the bureaucracies and increasing the state's capacity to engage with a broader public. The Army's commitment to building the Klein Water Treatment Plant greatly repaired its relationship with the community of Commerce City, creating a supportive constituency going forward in the form of the *Northern Community Coalition*. Its further commitment to transforming the Arsenal into a public open space also created allies in the wildlife-oriented NGOs who worked hard to build broad public support for the creation of a national wildlife refuge. The *National Wildlife Federation* sent bilingual volunteers into the surrounding communities to survey the local residents about their interest in wildlife and open space. According to a staff person, this effort was critical because "they (the Army and the U.S. Fish and Wildlife Service) couldn't take on the political task of getting the kind of support we needed to really tackle the tough issue of getting legislation through the U.S. Congress authorizing this thing to be a refuge and readapting cleanup requirements."¹⁰⁰

It appeared that a new consensus on the future of the Arsenal was emerging out of the chaotic series of interactions between the state and social groups, yet the fundamental difficulties associated with the remediation continued to challenge the state's ability to maintain control. Each state action that garnered support

¹⁰⁰ Participant interview.

simultaneously generated a backlash by those interests who felt left out of the decision-making process. This was clearly seen in the cases of Irondale and Montbello, which also demonstrate the importance of existing organizational capacity for effective interaction with the state system. While the state agencies found themselves expanding their processes to accommodate greater public involvement, they had not yet found an adequate response to the claims of those who believed that the state would seek the cheapest solution, leaving the public at risk for the long term.

When the Army began moving forward with their plans to clean up the Arsenal their vision was limited to the 27 square acres of the site, winning the legal battle with the State of Colorado for control over the cleanup, and successfully suing Shell Oil Company to contribute to the costs of cleanup. They had little understanding of, much less interest in, how their actions would impact the local community. The era of litigation consumed a great deal of state agency attention and resources, and the legal-institutional context did not provide impetus for state agencies to look beyond the established boundaries of policy making. At the same time, the policy successes of the environmental movement in 1970s created an expectation within society that the state must be responsive to community concerns and regulatory responsibilities.

Initially the Army saw the TCE problem in Commerce City as separate from the larger decision-making process at the Arsenal. However, the public-involvement activities led by the *Citizens Against Contamination* not only succeeded in getting the Army to fund a permanent solution but also created a new relationship between the state agencies and the local community. Their efforts laid the foundation for additional community based concerns to be brought into the center of the decision-making

process. In addition, actions by other communities near the Arsenal further contributed to expanding the circle of involvement. While the state agencies were revising their public involvement measures, local leaders recognized the need to organize themselves in a way that would interface effectively with the evolving state structure. The *Northern Community Coalition*, with its mix of NGO leaders and local agency representatives, foreshadows the eventual emergence of hybrid organizations as a state-sanctioned forum for public involvement.

CHAPTER 6:

The Rocky Mountain Wildlife Refuge: Converging Interests and Building Consensus

By the late 1980s the lead agencies had established how they would work together on the cleanup of the Arsenal with the signing of the Federal Facilities Agreement. Although the State of Colorado remained a recalcitrant participant, this formal agreement laid out a clear structure of authority and a decision-making process that would allow the record of decision process to proceed. The community-based efforts, initiated by the *Citizens Against Contamination*, challenged the state-centered approach and successfully achieved a change in how the lead agencies involved the community. Public involvement evolved from mailed notification of actions to large forums in which complex information was presented by experts with a goal of making it accessible to the public. Furthermore, the citizen-based efforts recognized the need to evolve their organizational form to more effectively engage with the state.

Decision-making activity at the Arsenal throughout most of the 1980s had been centered on cleaning up contamination and addressing the question of the future use of the site. Citizens were focused on making sure that any future use would not result in a reduction in cleanup goals. Because the Arsenal had long been protected from development there was a diverse suite of species living on the site, and in 1987 a bald eagle nest was discovered during one of the cleanup actions. The question of preserving the Arsenal as open space moved to the forefront of debate, raising alarm

within the community concerned about how this potential future would affect current decision making. What had already been a long, contentious and complicated process became even more so as a new regulatory context and public interest sector were introduced into the mix.

Wildlife and Open Space: A Future Vision for the Arsenal

The discovery of a bald eagle roost on the Arsenal in 1987 increased the level of interest by wildlife organizations in the site and brought the U.S. Fish and Wildlife Service (USFWS) and the Endangered Species Act into the process. It also provided a conceptual end use that was federal in status and would satisfy local interest in open space preservation. The idea of creating a national wildlife refuge on the Arsenal soon became the lynchpin for a federal-led strategy to move the process forward. However, moving this policy from idea to law was complicated by community concerns that the Army and Shell Oil were using it to try to control their costs. This perspective is captured by this comment from a USFWS employee,

I believe Shell and (the) Army looked at it and wondered would it be a little cheaper for us to cleanup to refuge and wildlife standards instead of residential standards. That's where we were contacted. Probably cost Shell and Army more now — pay for restoration as well as cleanup. Looked like a public relations deal — highest, best use for the land.¹⁰¹

While there were concerns about wildlife mortality as a result of the contamination, wildlife organizations emphasized the opportunity the Arsenal presented for

¹⁰¹ Participant interview.

environmental education. Initially, the USFWS involvement at the Arsenal was to evaluate habitat and ensure cleanup efforts would not impact wildlife. However, they were also very supportive of the wildlife refuge designation and were instrumental in helping build public support for the idea.

Initially the Army was not receptive to the USFWS and *Audubon's* interest in holding public tours on the Arsenal. However, a change in Arsenal leadership in 1989 reflected a significant shift in the Army's understanding of the value of positive public relations. The new Arsenal commander brought with him extensive knowledge of public health and environmental engineering, in addition to seeing the positive benefit of public tours for Arsenal.¹⁰² During his first year, he spent about 80% of his time on community and public relations and developed a school program in coordination with USFWS that brought tens of thousands of kids onto the Arsenal each year. He knew he had a "sellable commodity," and one of his primary tasks at the Arsenal was to "get rid of the adversarial relationship with the community."¹⁰³ Now that the Army's policy efforts were consistent with the goals of the USFWS and wildlife organizations, they had a new set of allies to help them in their struggles with the State of Colorado and movement toward the final stages of the record of decision process.

The USFWS worked closely with the *National Wildlife Federation* (NWF) and the *Audubon Society* on public education efforts. The NWF conducted a survey of the

¹⁰² Files from Denver Audubon Society, Army commander interview.

¹⁰³ Former Army commander, participant interview.

local population on the issue of preserving the Arsenal as open space that demonstrated strong support for the concept. *Audubon's* efforts required financing, and since the Army was unable to enter into a direct contract with *Audubon* for public tours, the *National Fish and Wildlife Foundation* furnished a means to provide Shell Oil money to the *Denver Audubon Society*. The *Denver Audubon Society* not only provided guided public tours of the wildlife areas of the Arsenal but also worked hard to build public support for preserving the Arsenal as a wildlife refuge through the sale of attractive wildlife calendars and through letters and statements to local papers and Congress.¹⁰⁴ Another public relations effort was Bald Eagle Days. These were sponsored by the Army and led by USFWS and *Audubon* volunteers and attracted tens of thousands of people onto the Arsenal, creating a strong constituency in support of the proposed refuge concept.

Another important development in the Army's evolving understanding of the importance of alliances with new constituencies was their support of the *Denver Audubon Society's* desire to participate in the Arsenal's Technical Review Committee. The Army sent letters to the EPA, Shell Oil and the Colorado Department of Health soliciting their agreement. The *Denver Audubon Society* became the first and only official public interest organization that joined the Technical Review Committee, in May of 1989. The Army and the USFWS provided extensive support and worked

¹⁰⁴ Denver Audubon Society files.

closely with them to maximize both positive public perception and to fill in resource gaps of the volunteer efforts on the part of *Denver Audubon*.

Additional efforts to lead public opinion in support of open space at the Arsenal came from the Urban Design Forum's (UDF)¹⁰⁵ *Rocky Mountain Arsenal Land Use Conference* held on June 24, 1989. This public panel discussion was designed to open a new study on land use policy and worked in coordination with state and federal elected representatives to present future uses for the Arsenal, all of which emphasized open space. The conference covered the basic issues at the Arsenal — level of cleanup, extent of the wildlife and water contamination. As a public forum, it offered participants an opportunity to access a lot of information, designed to link the critical issues of future use and cleanup costs with a particular policy vision.

The UDF conference reflected both the growing shared perspective of the federal and local agencies and the State of Colorado's continued outsider status, as the speaker panels did not include any representatives from the Colorado Department of Health or State Attorney General's office.¹⁰⁶ In fact, a board member of the UDF (who ran the conference) was also Pat Schroeder's District Representative, and she was the keynote speaker at the conference. The intended outcome of the conference was to develop a new land-use report for the Governor clearly intended to have an impact on

¹⁰⁵ The Urban Design Forum is "a non-profit citizen organization working to improve the quality of life through increasing awareness of good urban design" (The Urban Design Forum No. XXVII August/September 1988).

¹⁰⁶ Conference agenda from Denver Audubon Society files.

his position on the future of the Arsenal. The outcome was to be “a plan which looks at the Arsenal as a whole and consider how to turn this land into a valuable community asset (which) can influence the whole cleanup. Without a clear plan, cleanup limitations could preclude some land use and resource opportunities altogether.”¹⁰⁷

Bald Eagles Make the Difference

The presence of bald eagles on the Arsenal created a challenge for cleanup activities but also provided an opportunity to sway public and policy-maker opinion toward the Army’s preferred outcome that the Arsenal remain in federal hands. Quickly, the eagles had become the mascot for the Arsenal, and the Army invested a significant amount of money in building an eagle observatory and coordinating cleanup activities around their space and lifecycle. While the eagle observatory was initially built for USFWS staff use, it quickly became a public relations opportunity as local, state and federal officials were invited onto the Arsenal for *VIP* eagle viewing.

This strategy was successful in gaining political support for preserving the Arsenal for wildlife. However, wildlife conditions are not something that can be completely controlled, and one year a plague outbreak and subsequent prairie dog die-off challenged the Army’s ability to keep the eagles on site. No food, no eagles. The Army worked with the Colorado Division of Wildlife and the Colorado State Patrol to

¹⁰⁷ UDF newsletter No. XXVI April/May 1989.

have animal carcasses brought onto the Arsenal to feed the eagles. While this effort kept the eagles roosting at the Arsenal, it was not well received by some critics of the Army who saw it as manipulative and as further evidence of their willingness to do anything to build support for their preferred outcome.¹⁰⁸

Federal-Environmental Alliance Leads to Refuge Designation

The year 1989 was significant in settling some of the major conflicts at the Arsenal. The Federal Facilities Agreement (FFA) was signed, establishing the conditions of authority under which the record of decision process would move forward, and it defined future use of the Arsenal. This agreement provided a means for the federal agencies and Shell Oil to work together toward a common goal, allowing for a more cooperative interagency approach. The State of Colorado continued to hold on to their separate legal status but participated within the FFA as an interested party, according to a former Shell Oil consultant, as they had “quite substantial jurisdiction over at least 30 portions of the site, based on a ruling of the 10th Circuit Court of Appeals.”¹⁰⁹ Most significant, the FFA explicitly incorporated public input into the process. This document’s complexity recognized, and attempted to manage, the multi-jurisdictional reality of the Arsenal and the critical importance of public perception. As one key participant and former Shell Oil employee commented about the important role of the

¹⁰⁸ Community members, participant interviews.

¹⁰⁹ Participant interview.

public in the decision-making process, “they didn’t have to like or dislike you, but you do have to listen to them and be respectful. Need to make them more knowledgeable.”¹¹⁰

The federal delegation from Colorado, led by Congresswoman Pat Schroeder, was instrumental in both getting cleanup funds directed to the Arsenal and floating the first draft of legislation designating the Arsenal a national wildlife refuge. Her efforts led to the creation of a unique fund for the Arsenal and a streamlined process for the refuge designation that was passed in 1992. The efforts of Representative Pat Schroeder and Senator Wayne Allard, in conjunction with the wildlife-oriented environmental organizations, greatly facilitated the relatively quick conclusion to achieving the proposed refuge. The financial support from Shell Oil and the public access provided by the Army also significantly contributed to the success of this effort. It appeared that turning the Arsenal into a wildlife refuge was a win-win solution — a solution that was consistent with the Federal Facilities Agreement, the Army’s desire to keep the land in federal hands, and local interests in environmental education and open-space access.

The Establishment of Citizen Advisory Boards and the Conclusion of the Record of Decision Process

From 1989 to 1992, the Army’s Record of Decision (ROD) process and the USFWS’s Comprehensive Conservation Planning Process (CCP)¹¹¹ were parallel public outreach

¹¹⁰ Participant interview.

and education efforts that provided the public and interested organizations critical venues in which to raise issues of wildlife and human health. All Army-sponsored ROD meetings required the presence of USFWS staff to provide information and respond to questions about activities related to the refuge planning process and wildlife issues. All USFWS CCP meetings required Arsenal personnel to respond to inquiries about human health risks in the cleanup process. The overlapping processes addressing different dimensions of the Arsenal's future served to widen the ongoing divide among the public participants as each process demonstrated the extent of unknowns regarding cleanup technologies, site evaluation and wildlife protection. It was clear that each final decision embodied a compromise; however, to some that compromise was inappropriately weighted away from the public well-being.

With the passage of the Rocky Mountain Arsenal National Wildlife Refuge Act¹¹² in 1992, the question of the Arsenal's status was settled. The question of the

¹¹¹ A Comprehensive Management Plan is a document that describes the desired future conditions of a refuge or planning unit and provides long-range guidance and management direction to achieve the purposes of the refuge. They are developed under the guidance of the National Environmental Policy Act (1969, as amended, 42 U.S.C. 4321-4347, and the Council on Environmental Quality's (CEQ) Regulations for Implementing the Procedural Provisions of NEPA, 40 CFR 1500-1508), in addition to authority from the National Wildlife Refuge System Administration Act of 1966 as amended by the National Wildlife Refuge System Improvement Act of 1997, 16 U.S.C. 668dd-668ee (Refuge Administration Act) and the Alaska National Interest Lands Conservation Act of 1980 as amended, 16 U.S.C. 140hh-3233, 43 U.S.C. 1602-1784 (ANILCA).

¹¹² Public Law 102-402-OCT. 9, 1992 106 STAT.1961 Public Law 102-402 102d Congress Oct 9, 1992 [H.R. 1435].

level of cleanup was directly addressed in the language of the act,¹¹³ and attention turned to the need to settle on a conceptual remedy and complete the record of decision process. Yet the passage of the refuge act did not bring an end to the tensions among the public participants or between the State of Colorado and the federal government. At best it settled one key question, the future use of the site. The most significant question remained to be answered — how would the Arsenal be cleaned up?

Federal Guidance on Public Involvement: the Federal Facilities Environmental Restoration Dialogue Committee

More than ten years after the Army first started addressing environmental restoration on the Arsenal, finalizing the ROD at the Arsenal appeared within sight. However, the challenges and changes of the 1980s resulted in national recognition of the extensive problem that contaminated federal facilities represented. The federal government, NGOs and states were tackling how to balance the search for the perfect remedy with the need to get things done in the context of 24,000 contaminated sites on federal facilities with an expected cleanup cost of \$400 billion that would extend well into the next century. It was also abundantly clear to everyone that public involvement in Superfund site cleanup would have to be more transparent and ongoing.

¹¹³ (c) DEGREE OF CLEANUP — Nothing in this Act shall be construed to restrict or lessen the degree of cleanup at the Arsenal required to be carried out under applicable provisions of law.

A new institutional framework was called for, and in response, the Federal Facilities Environmental Restoration Dialogue Committee (FFERDC) was established. To foster the collaboration between federal agencies and citizens, in 1990 the EPA established this forum to provide a blueprint for all stakeholders — the public, regulators and regulated agencies — to develop creative solutions to the challenges associated with environmental pollution at federal facilities. The dialogue set a high standard for public participation and served as a model for all serious environmental dialogues. As noted in the executive summary,

From a technical perspective, these cleanups are likely to be particularly complex and challenging. Equally challenging is the process by which federal facility cleanup decisions are made. From the perspective of many participants, the current process has been unnecessarily hampered by feelings of mistrust and conflict over the appropriate roles, responsibilities, and authorities of regulated and regulating agencies and other affected stakeholders. Reinvigorating the process will require a fundamental change in the way the cleanup process is management. The cornerstone of this change must involved a shift from the decide, announce, and defend mode of public involvement to a new partnership between all of the affected stakeholders.¹¹⁴

Forty representatives of federal agencies, tribal and state governments and associations, and local and national environmental, community and labor organizations gathered together to assess the situation and provide recommendations to the EPA. Their interim report, published in 1993, established a set of guidelines for decision making at federal facilities. The central focus of the report recognized that community involvement in decision making should ensure that communities

¹¹⁴ Interim Report of the Federal Facilities Environmental Restoration Dialogue Committee, EPA 1993, page v.

neighboring federal facilities understood and had the opportunity to influence cleanup activities. Furthermore, it was believed that their engagement would also speed cleanups, reduce costs and increase cleanup effectiveness. Site Specific Advisory Boards were initially presented as the way to “actively involve representatives of the local community and others in the cleanup decision-making process.”¹¹⁵

The Department of Defense (DOD), among many other interested parties, participated in the Committee but did not formally agree to the Committee’s recommendation. Rather, they responded to the concept of a citizens’ advisory board by pointing to the regulatory requirements of the Superfund Amendments and Reauthorization Acts (SARA) of 1986¹¹⁶ that required the creation of Technical Review Committees. They felt that “while the law only requires that other federal agencies meet the community relations requirements that are spelled out in the National Contingency Plan and EPA guidance, DOD must additionally meet the requirements of SARA Section 211.”¹¹⁷ This section required the establishment of a technical review committee to “review and comment on DOD actions and proposed actions.”¹¹⁸ Since the Arsenal already had a Technical Review Committee the Army

¹¹⁵ Interim Report of the Federal Facilities Environmental Restoration Dialogue Committee, EPA 1993, page vi.

¹¹⁶ Public Law 99-499. 42 U.S.C. 9601 et seq.

¹¹⁷ Interim Report of the Federal Facilities Environmental Restoration Dialogue Committee, EPA 1993, page 77.

¹¹⁸ Interim Report of the Federal Facilities Environmental Restoration Dialogue Committee, EPA 1993, page 77.

felt they had met the basic requirements. However, they also recognized that things had changed since the Technical Review Committee was first established.

The Technical Review Committee at the Arsenal, established in the early 1980s as part of the Defense Environmental Restoration Program, was no longer a viable model as a result of the policy shift from containment to cleanup and the Army's appreciation of the importance of community support for their agenda (e.g., the Army's acceptance of a representative from the *Denver Audubon Society* to the membership). As they learned while working with the Congressional delegation to develop an acceptable future land use, getting to the record of decision was going to require greater community support as there was enduring public concern that the refuge designation was a means to decrease the level of cleanup. The Department of Defense's participation in the FFERDC process further cemented their commitment to a more collaborative public engagement process, but they were not willing to sign on to the premises contained in the charter and scope of Site Specific Advisory Boards: their explicit call for principal responsible parties to be *ex officio* to prevent undue influence on the development of advice to regulated and regulating agencies was not acceptable.

Site Specific Advisory Board

The Site Specific Advisory Board for the Rocky Mountain Arsenal was established in 1994 at the behest of citizens who felt frustrated by the Army's stonewalling approach to citizen input. Local citizens who were aware of the findings of the Federal Facilities Restoration Dialogue Committee seized on the opportunity to have what appeared to

be more power in the decision-making process. A number of local people who had been involved in Arsenal issues, either through the water contamination issue or as participants in visitor days on the site, formed an *ad hoc* citizen's group, calling themselves *We the People*. They set about gathering signatures and petitioned the Governor of Colorado to create a Site Specific Advisory Board at the Arsenal. Approaching the Governor was explained by an involved community member; while he was not "necessarily the most appropriate person, (he) was the most accessible. The Governor responded pretty rapidly by saying that this should happen and he went to the EPA and Army."¹¹⁹

This board was particularly attractive because of its organizational structure and location within the record of decision process. Membership would consist of 20 – 30 individuals selected from the general public, and participation was on a community-service basis. All agency representatives would serve on the Board only as *ex-officio* members; only community members had decision-making authority. Board members would be able to provide advice on technical and policy decisions as well as have the "opportunity to influence agency decisions before they are made" (underline in original).¹²⁰ This form of advisory board offered a truly unique opportunity for community input and organizational structure; it reflected a new way of thinking about public involvement in bureaucratic decision making. As one community member

¹¹⁹ Participant interview.

¹²⁰ Colorado Dept. of Health SSAB solicitation letter dated 1/31/94.

explained, “The interesting thing that grew out of it, the FFERDC discussions around the country — we don’t really need a pathway to the decision makers in the government as much as we need connections and networks among the communities.”¹²¹

The Restoration Advisory Board

The Army responded to the creation of the Site Specific Advisory Board by transforming its existing Technical Review Committee into a Restoration Advisory Board.¹²² The Technical Review Committee had been a part of the Arsenal project management process since the mid-1980s and was composed of appointed local-government and business representatives. The meetings were not publicly accessible;¹²³ members were appointed by the Army, and Army employees ran the meetings. The Army’s continued control of information and process at the RAB meetings reinforced the perception that they were not really interested in meaningful public involvement. According to one early public member of the RAB, “They didn’t give them an agenda ahead of time. They get to the meeting, they’d be given a presentation, their comments would be accepted, their questions would be accepted. Then you could call if you had some further questions, but basically, ‘that’s all we

¹²¹ Participant interview.

¹²² RABs were formally included in the final report of the Federal Facilities Environmental Restoration Dialogue Committee.

¹²³ Until *Denver Audubon* was able to get a place on the committee in 1989. The RAB was established in 1994.

want to hear from you is, right now at that meeting.’ And those meetings were not open to the public.”¹²⁴

The new Restoration Advisory Board was an attempt to be consistent with the intent of the FFERDC recommendations, thus satisfying the public-transparency demand, and yet allow the Army to maintain greater control over the decision-making process. When the two citizen advisory boards were recruiting membership, members of *We the People* addressed the philosophical and practical conflict the two boards represented by dividing themselves. About half of their people who thought no one should join the RAB joined the SSAB, and the other half, according to an active community member, who thought “that there were going to be too many political issues going on at the other board,” joined the RAB.¹²⁵

The Breckenridge Breakthrough

By the fall of 1994 it was clear that something significant needed to be done to bring all the boards, affected parties and agencies interested in participating in the on-post conceptual remedy negotiations together. The Steering and Policy Committee (the second-highest level in the decision hierarchy of the Federal Facilities Agreement) decided to organize a weekend-long meeting at the Breckenridge ski resort and invite all interested parties. This decision appeared to indicate a commitment to resolve the

¹²⁴ Participant interview.

¹²⁵ Participant interview.

long-running feud with the State of Colorado and to integrate the multiple concerns of public stakeholders regarding the level of cleanup and future use of the Arsenal into a conceptual remedy that everyone could live with.

Breckenridge was the first in a series of meetings held with a mediator to facilitate the process. These meetings ultimately spanned from October 1994 through February 1995 and included the range of interests that had coalesced into the various groups in the preceding years. Members of the Site Specific Advisory Board, the Restoration Advisory Board, the *Northern Community Coalition*, along with the Army, U.S. Fish and Wildlife Service, EPA, Colorado Department of Health and Attorney General's office all attended these workshops, where presentations on alternatives were presented, discussed and ultimately accepted or rejected.

The first meeting in Breckenridge included more than 150 people, and a series of presentations and small work groups were held to discuss information and report back to the whole. While the alliance issues shaped attitudes coming into the process, the structure did offer a substantial forum for the exchange of ideas and information among all stakeholders. The process began with the established alliances shaping the public view of how the negotiations would proceed. SSAB members believed in the State of Colorado's role as holder of the public trust; after all, as one member put it, they had "fought miraculously hard. It was like David and Goliath. Went to the Supreme Court for state's rights. Made a major national impact on the whole process. Fought like Banshees — clean up, clean up, clean up!"¹²⁶ The RAB and *Northern*

¹²⁶ Participant interview.

Community Coalition members acknowledged the value of the “State hanging tough to help us get what we want”¹²⁷ but they also viewed the State as ultimately of more of a barrier to a final agreement with the Army.

The first meeting of the “conceptual agreement” process was a very inclusive approach to finishing the record of decision process. According to an EPA participant, “on all the other settlements that are done, you almost always brought citizens in after you had your discussions with the parties at the site. This was a closed meeting involving a settlement discussion in a lawsuit between the State and the Federal Government. And the citizens groups were a part of that which is very unusual, very, very unusual.”¹²⁸ Extensive public participation continued throughout the subsequent meetings focused on evaluating information on cleanup technologies. These meetings were aimed at finding a strategy that was mutually acceptable. Given the complex nature of the process, the meetings were facilitated by a retired administrative law judge who helped guide this unique approach to reaching a settlement.

The meetings in the fall of 1994 were largely an education process about technologies and their potential to work and associated risks. The State of Colorado, the EPA and SSAB members pushed for looking at new technologies and ensuring the highest level of cleanup. CERCLA provided basic criteria to work with: implementability, effectiveness, and cost and community protection. These criteria

¹²⁷ Participant interview.

¹²⁸ Participant interview.

framed the discussion. While public involvement tended to focus on issues of effectiveness and community protection, agencies were pressured by the need to find implementable and cost-effective solutions. This dilemma is captured in a comment by one Army participant: “dig it, burn it, put it into the landfill, do you want to spend 2 billion, 4 billion, 12 billion dollars? And at the end of the day you will probably never be able to stand out here and say I got everything.”¹²⁹

The Army knew they had a level of agreement with Shell Oil and the USFWS, but they needed to resolve the dispute with the State of Colorado. According to the same Army commander quoted above, a meeting was held between the Governor of Colorado and the Department of the Army in late 1994 making it clear to him that “budgets are such that we can’t continue to permit these highly expensive efforts (and all the issues have been identified” and that, therefore, it was time to come to closure at the Arsenal.¹³⁰

The Final Agreement: The State of Colorado Folds and the Public is Pushed Out

Governor Romer assigned his Lieutenant Governor, Gale Schoettler, to head the state effort. She replaced the administrative law judge and changed the tone of the state’s participation in the negotiations. This change returned the process to the traditional mode wherein the public was allowed to provide input but not have any significant

¹²⁹ Participant interview.

¹³⁰ Participant interview.

impact on the decision-making process. The last several meetings facilitated by Schoettler “allowed [them] to make their statements and then she finally said thank you very much for your input now it’s time for the decision makers to go off and do their thing.”¹³¹ This angered a lot of people who, up until that point, felt there was actually a meaningful public involvement process going on.

The final authority rested with the state agencies that were signatories to the FFA. The regulatory structure provided space for public involvement, and, ultimately, the amount that took place at the Arsenal was unprecedented. All the public groups were interested in having an impact on the decisions made, although there were differences in their approaches. Those who participated in the conceptual remedy negotiations were most concerned with the level of cleanup issue. There was substantial variation in perception of how this process concluded. Some found the final agreement (ROD) acceptable, while others believed it locked into a place an unacceptably imperfect solution. The ongoing participation of the public through the RAB and SSAB mirrors this remaining mix in feelings of trust in the process, the Army and bureaucratic governance.

The record of decision was signed with great ceremony in June of 1996. This event marked an important transition in the Arsenal story. No longer was the process about interim remediation actions, what the ultimate land use should be, who should have control over the cleanup process, or “how clean is clean?” The ROD provided a

¹³¹ Former Army commander, participant interview.

work plan and the means for transition to national wildlife refuge status. While the conceptual remedy covered most of the problems identified in the remedial investigation report, it was widely accepted that there were still dangers lurking out there. So, while broader public interest died down with the perception that matters were settled, those who were most closely involved throughout the years continued their participation on the two advisory boards, committed to ensuring that the Army and Shell Oil would not be allowed to slip something by.

Structured Opportunities for Change

The transition of the Rocky Mountain Arsenal from the arena of national security to a resource of local value resulted in the entire structure of state-society relations to be called into question. The environmental policy arena at the end of the 1970s had largely been defined by an expansion of state regulation (McCormick 1989, Kraft 2000). This set the stage for the bureaucratic struggles for control that dominated the state arena of action in the 1980s. The disclosure of contamination in 1985 drew public attention to the state disarray and rallied residents in the local community to demand accountability and a scope of participation that had not been envisioned by any of the state or federal agencies. In fact, it was exactly the lack of unanimity among the agencies that created a space in which community action could have an impact.

In the 1980s the state and the local community engaged in series of interactions in response to the lack of a clear conceptualization of how local participation in state-centered decision making should occur. The state was challenged to move the record of decision process forward while simultaneously resolving intra-bureaucratic tensions

and creating new alliances with local constituencies. The complexity of this scenario provided both the state and local organizations with an opportunity to create something new. The resultant hybrid organizations, born from the confusion and consecrated in the process, established a new consensus and form for environmental policy making.

CHAPTER 7:

Perpetual Change: The Role of Consent in State-Society Relations

How do the empirical data fit with the challenge of democracy and bureaucracy posed in Chapter 2? Is the direction of bureaucratic change toward decentralization and power sharing? Does the case of the Rocky Mountain Arsenal tell us something useful about hegemony and state-society relations? The story of the creation of the Restoration Advisory Board and the Site Specific Advisory Board at the Arsenal suggests that the dynamic tension in a hegemonic state system tends to reinvent itself in a manner that retains the tension while altering structural phenomena. Interestingly, the present relative dearth of advisory boards at federal facilities throughout the United States,¹³² and the continued plethora of lawsuits challenging decisions at Superfund sites, points to a lack of consensus among stakeholders.

While the theory and practice of collaboration has been widely adopted throughout the state system, it is unclear whether it reflects a permanent solution for either the dominant power structure or those seeking change. The discussion that

¹³² There are approximately 1,925 contaminated federal facilities in the US belonging primarily to either the Department of Defense (1,769) or to the Department of Energy (137). Contradictory information was found in the search for the current status of SSABs and RABs. The EPA website claims a total of 142 RABs and SSABs in the United States. In looking for a breakdown between RABs and SSABs I found the following information at DOE and DOD websites: 10 SSABs (9 active) at DOE sites and 250 active RABs of 300 initiated since 1994 at DOD sites.

follows seeks to demonstrate how the case of the Arsenal supports the view that the practice of democracy in a bureaucratic state system is fractured by competing sectors whose mutual interests change over time. What is particularly noteworthy is how both power and information act to shape the direction of change in sectoral interests and how the state structure adapts.

Environmental Policy and State Crisis

The case of the Arsenal demonstrates how the state and civil society exist in a contradictory and interdependent relationship. State bureaucracies are the manifestation of the social contract between citizens and their government and reflect this tension; they are the structural field in which the struggle for power over policy making takes place. Furthermore, the power of the democratic state is greatly reliant on the public's perception of its legitimacy (Weber 1956, Gramsci 1971). Its component entities must therefore respond to the demands for public involvement. The decision-making process at the Arsenal reflected the social, political and economic conditions of an era in which ecological crises and economic imperatives intersected, informing the process of change in state-society relations.

In the case of the Arsenal, we see how the state responded to a legitimacy crisis brought on by its struggle to define and contain the impact of a link created between the public's expectation of environmental policy and the toxic legacy of national security. Decisions at the Arsenal in the 1980s were largely framed by events such as the publication of Rachel Carson's *Silent Spring* in 1962, recognition of the harmful effects of defoliants in Southeast Asia during the Vietnam War, as well as the

public health crisis at Love Canal.¹³³ In response to these and other problems, the U.S. Congress acted, making the 1970s the most aggressive environmental policy decade. With the establishment of the National Environmental Policy Act, the Environmental Protection Agency, and the Comprehensive Environmental Response, Compensation, and Liability Act, the federal government signaled its recognition that pollution control must move from the local to the national level.

This policy process had two far-reaching impacts: centralization of authority over pollution control and the institutionalization of environmental security in the Department of Defense (Matthew 2000). In response to public outcry and recognition of the widespread nature of the problem of hazardous waste, the state system acted to consolidate control at the federal level. At the same time the process of base closures brought the condition of federal facilities into the public realm, initiating a new relationship between local and state interests. The toxic legacy of militarism exemplifies the contradictory role of the state as protector. What had been an acceptable land use during the Cold War era became a liability for state legitimacy as the public became aware of the direct threat hazardous waste sites pose to human and economic health.

¹³³ On August 7, 1978, President Jimmy Carter declared a federal emergency at the Love Canal, a former chemical landfill that became a 15-acre neighborhood of the City of Niagara Falls, New York. The Love Canal became the first man-made disaster to receive such a designation based on a variety of environmental and health-related studies. As a result of grassroots interest and media attention, the Love Canal provided an impetus for dramatic interest in and changes to environmental concerns worldwide.

Challenges to Hegemony: Knowledge and Consensus making

The modern democratic state's need to maintain its legitimacy is the driving force for its actions (Weber in Gerth and Mills 1958, Gramsci 1971, Habermas 1976). The case of the Arsenal shows expressly how efforts to protect the state's authority in society reflect the larger struggle to maintain the hegemonic bloc (Gramsci 1971, FitzSimmons et al. 1994). The story of the Arsenal demonstrates how the complicated and competitive relationship between local, state and national agencies undermined the creation of a unified bureaucratic position. The struggle to find agreement occurred as a result of both bureaucratic turf battles and the need to rely on public constituencies to provide support for specific policy choices. Further complicating the state's ability to achieve consensus was the variation in social actors' perspective of their role in democratic practice.

The toxic legacy of national defense policies placed the local community at risk during the cleanup process, and the creation of a national wildlife refuge from a Superfund site posed the ultimate challenge for environmentalism — human versus wildlife health. Not only does the history of the Arsenal mirror the changing social expectations of the state's role in providing security, it also became the touchstone for a sea change in national security and environmental policy. As the Army was negotiating remediation actions with the State of Colorado and the Environmental Protection Agency, local agencies and public members were mobilized into action as information about the consequences of decisions became threats to human health. The turning point created by the publication of the story of the contaminated wells in Commerce City marks the transition from a struggle within the state structure of

authority to a crisis of state legitimacy. The rise in perception of risk that accompanied the news drew wider attention to the Arsenal and changed the terms of consensus. No longer was cleanup of the Arsenal a question of how to distribute burden and benefit among bureaucratic entities; it became the epicenter for a shift in public awareness of the high cost of business as usual.

The role of knowledge in the story of the Arsenal shows how the process of consensus making is complicated and dynamic. There were two general types of knowledge observed that help explain key events at the Arsenal such as the Army's policy shift from containment to cleanup, the decision to turn the site into a national wildlife refuge, and the creation of the Restoration Advisory Board and Site Specific Advisory Board. The concept of *social* knowledge reflects an understanding of relevant law, regulation and institutional processes. Participants in the Arsenal story, from bureaucrats to members of the public, shared an awareness of the legal-institutional structure that framed their interaction. The creation of citizen-based organizations (e.g., *Citizens Against Contamination*, *Northern Community Coalition*, *We the People*) was the result of efforts by people in the local community with preexisting experience in governance and policy making. Their experience gave them the knowledge they needed to take actions that required the bureaucratic entities to respond.

Technical knowledge, which relates to the scientific (or applied) aspects of chemical contamination, hazardous waste remediation, and wildlife biology, on the other hand, was an area of lesser clarity and experience for all parties. While the bureaucratic entities had the resources and responsibility to develop technological

solutions, the era in which the story of the Arsenal takes place was notable for the challenges posed by the scale and complexity of chemical pollution. It is exactly this type of uncertainty that created conditions in which the state's authority came to be questioned.

Clarke and McCool's primary variable, expertise/control of information, emphasizes how "bureaucracies in the modern state are the acknowledged repositories of vast amounts of data and expertise" (1996: 8). Yet when faced with the scope of contamination, limited technical solutions, and demands for greater public involvement, the "vast amount of data and expertise" of the Army proved inadequate in two important ways. They had no experience with public participation, and throughout the remediation process they increasingly turned to outside consultants and Shell Oil to provide solutions such as the Submerged Quench Incinerator.

The mobilization of Commerce City residents and the local water district by the *Citizens Against Contamination* was possible because of the founding leaders' *social* knowledge. These leaders had been actively engaged in local school issues and were experienced with the institutional processes for public involvement and governance. Their efforts to define the problem, and identify the Army as the responsible party, were successful because their *social* knowledge provided them with a means to leverage the Army's inability to effectively respond to and contain public outrage. They also were able to use the fact that the Army and EPA had limited *technical* knowledge to demonstrate to a wider audience the level of risk being taken by bureaucratic authorities. Not only did the Army's policy of containment become untenable in face of the facts that chemicals were migrating off-site, the lack of

oversight by local authorities resulted in a loss of public trust within the community that had a far-reaching affect.

The organizing efforts by the *Citizens Against Contamination* created the impetus for the local agencies (the water district and county health department) to coordinate their efforts to push the Army to move beyond a policy of containment. Early on in the process the Army's lack of experience in public relations and public involvement put them at a disadvantage. *Social* knowledge also incorporates an understanding of the role of constituencies in building alliances. So when the Arsenal commander at the time said, "if he finds that this contamination was coming from the Arsenal, the Army would take care of it . . . [he] pretty much put himself on the hook."¹³⁴ Subsequent commanders were shrewder in their public statements, recognizing the complex social dynamics in the surrounding communities and the benefits of coordination among state agencies.¹³⁵

The case of Irondale Trailer Park demonstrates how knowledge, or the lack thereof, had a significant impact not only on the Army's legitimacy but also for the Colorado Department of Health. This clearly affected community was not on either bureaucracy's radar screen for public involvement regarding potential air quality

¹³⁴ Former SACWD employee, participant interview.

¹³⁵ Between 1989 and 1996 the two site commanders who succeeded Wallace Quintrell were posted to the Arsenal as much for their technical knowledge as for their social knowledge. Holding degrees in such macro policy areas as sociology and public health, these bureaucratic leaders were able to bridge the social and technical knowledge arenas and foster the process of building alliances among agencies and with public constituencies.

issues from the remediation activities at Basin F. This is an example of where an agency's lack of *technical* knowledge drove its *social* knowledge decision making in a problematic direction. The Army, the EPA, and the CDH did not believe at the time that the cleanup activities at Basin F would have a negative impact on the Irondale community; therefore, there was no need to consider what the residents' perspective or experience would be. Furthermore, their experience of public concern was limited to the engagement of Commerce City, especially through the organized efforts of the *Citizens Against Contamination*, over water contamination issues. This situation resulted in an oversight by all state agencies of the magnitude of impact that air quality issues have and how to think about potentially affected community designation.¹³⁶

The limited approach at that time to community involvement reinforced public perception of the bureaucracies' lack of concern for public well-being. As one Arsenal commander recalled about the closing of Basin F, "we did some stupid things there in terms of odor control and not talking to the community, so we got bad press on that."¹³⁷ This scenario also demonstrates how administrative ideologies limit a bureaucracy's ability to engage public involvement. The Army's approach, as

¹³⁶ Community right-to-know initiatives across the United States during the 1980s resulted in the passage of EPCRA — the Emergency Planning & Community Right to Know Act — 42 U.S.C. 11001 et seq. (1986), also known as Title III of SARA. EPCRA was enacted by Congress as the national legislation on community safety. This law was designated to help local communities protect public health, safety, and the environment from chemical hazards. It also recognized the need for state agencies to provide a much wider distribution of information about hazardous waste sites and cleanup processes.

¹³⁷ Participant interview.

experienced by one public participant, was as an “organization that tells people what to do. [So] the idea that they actually allowed themselves to let anybody in and say a few words to them and have a few arguments once in a while, it probably makes them feel like, ‘look what I have done for you.’ Which is why they get upset with us all the time. We don’t appreciate what they have done.”¹³⁸

The story of the Submerged Quench Incinerator reveals both growth and continuing limits in the understanding of constituency support among the bureaucracies. The process for engaging the public in identifying a long-term solution to the Basin F waste was more involved, including multiple public meetings and the opportunity to interact with experts through a technical assistance grant from the EPA to the *Citizens Against Contamination*. While the experience with Commerce City and Irondale had contributed to a shift in the Army’s public outreach approach, apparently neither the Army, the EPA, nor the CDH thought about contacting residents in the Montbello neighborhood about the proposal for on-site thermal treatment of hazardous waste. It was clear that the communication of risk was the least understood aspect of the process and, as a result, when Montbello community leaders learned that the SQI was about to be built they arrived at a public meeting in an adversarial frame of mind. The Arsenal commander at the time recalled how

... all of a sudden it’s here — oh, we had them coming out of the woodwork. Anti-incineration, rainbow coalitions, anti discrimination — all those issues were starting to come to the forefront. One public meeting a group from a

¹³⁸ Participant interview.

Montbello church showed up in a van, the reverend stood up [and said] the guy with the ugly tie is up there lying to us.¹³⁹

There was no administrative concept, much less policy, for identifying potentially affected communities in a proactive way.

The changes by the Army (and other bureaucratic agencies) were purely reactive and built incrementally upon their experience. Public involvement efforts by community members and NGOs led the process of creating change in the formal public involvement process even as the Army sought to maintain control. The use of *social* knowledge on the part of the community led to the increased appreciation on the part of the Army of the value of *social* knowledge for achieving their goals. Similarly, collaborative efforts among the federal and state agencies further highlighted the positive effects of alliance building as a fundamental principle for successful policy making in an arena clearly lacking this understanding at the beginning of the 1980s. The dynamic relationship between the public and the state throughout this period expanded the concept of *social* knowledge to explicitly incorporate *public qua public* involvement. Constituency support thus became a more nuanced element of *social* knowledge that was institutionalized in the state structure through such legislation as the Superfund Amendment and Reauthorization Act of 1986. It was clear by the end of the 1980s that public perception was the key to

¹³⁹ Participant interview.

achieving supportable public policy and such goals as a record of decision for the cleanup of the Arsenal.

The mobilization of new constituencies in the mid-1980s resulted in the public involvement process going through its first important structural change. The Army's collaboration with other state agencies and newly formed *Northern Community Coalition* demonstrated a broader approach to building alliances. It also foreshadowed the creation of the citizen advisory boards under the auspices of the Federal Facilities Dialogue Committee in the early 1990s.

Public Perception and Supportable Policy

In addition to challenging bureaucratic legitimacy and authority, public knowledge of the actual scope of contamination resulted in a new perception of the Arsenal — a public health threat. The change in perception presented a significant challenge for decision makers and parties responsible for the Arsenal: creating a publicly acceptable and supportable vision of the Arsenal. Many competing efforts to frame the image of the Arsenal were underway in the mid-1980s. While *Citizens Against Contamination* was focusing on holding the Army and local health agencies accountable for solving the water contamination problem in Commerce City, regional and federal interests were trying to create a comprehensive, long-term vision such as the one presented at the Urban Design Forum in Denver. The discovery of the bald eagle roost initially complicated matters by involving the Endangered Species Act and the U.S. Fish and Wildlife Service but ultimately gave impetus to the efforts of those seeking to preserve the Arsenal as open space. The Arsenal was the very definition of a messy situation

(McCool and Guthrie 2000) as the range of policy issues and stakeholders widened, further challenging bureaucratic control.

Ultimately, while Clarke and McCool's analysis categorized the FWS as an agency that "muddled through" (1996), it was the work on the part of their core constituency that provided a significant boost to the Arsenal's public perception and facilitated the creation of a supportable vision of the future. *Denver Audubon's* tours, the *National Wildlife Federation's* lobbying and local door-to-door survey, and the *National Fish and Wildlife Foundation's* ability to channel Shell Oil funds to these NGO efforts played an enormous role in using *technical* and *social* knowledge about conditions at the Arsenal to build public support for the creation of the national wildlife refuge.

The debate over "how clean is clean?" was characterized by a general mistrust of the Army and Shell Oil to commit to a full cleanup and a concern they would use the designation of the Arsenal as a wildlife refuge as a means to avoid this. Information played a key role in building constituency support, and the wildlife NGOs played a vital role in supporting the policy goals of the Army, Shell Oil and the USFWS. While the Army and Shell Oil had expertise and resources, they generally lacked much in the way of broad public support. The inclusion of the FWS as a signatory to the Federal Facilities Agreement, a result of the regulatory requirements in the Endangered Species Act, exposed the contradictions in the system as competing policy priorities were brought to the forefront in the decision process at the Arsenal. While the USFWS was the least powerful participant in the bureaucratic ensemble, their very narrow mission of conservation and wildlife protection provided an

alternative framing that served the Army's goal of ensuring the Arsenal would never leave federal control and yet would be perceived as a positive public resource.

Alliance Formation and Structural Reorganization

Two competing policy discourses were underway at the Arsenal by the late 1980s.

One focused on the public health risks associated with the contamination and cleanup efforts. The goal of this discourse or policy stream (Sabatier 1999) was to force the Army to be more forthcoming with information and to provide a forum in which public demands for a higher level of cleanup would have an effect. The other discourse focused on the open space potential of the refuge. Wildlife interests were less skeptical of the Army's intentions because their close relationship with Arsenal management in providing site tours and developing educational materials. Their role in helping build a positive image of the Arsenal as a wildlife preserve engaged them in a closer working relationship with Arsenal leadership. Their goal was to see the site cleaned up and restored for the purposes of wildlife and open space visitation.

Between 1989 and 1992 these two policy streams were constantly intersecting at all public meetings, and in the media, as the debate over "how clean is clean?" continued.

The resulting environmental policy schism created huge challenges for all stakeholders because there was imperfect information about the implications of the contamination for both human health and wildlife health. The effect of *social* knowledge was to initially link the interests and goals of the human-health-risk-focused constituency with those of the State of Colorado. They both saw the Army and Shell Oil as the barriers to maximum site cleanup. Yet, once Commerce City acquired

a permanent solution for a safe water supply their perception of trust shifted. The creation of the *Northern Community Coalition* reflected a realignment of interests among the local community as they prepared to engage in the record of decision process. However, some members of the *Citizens Against Contamination* remained distrustful of the Army and Shell Oil's intentions, even while they continued to participate.

Support of the wildlife NGOs for the Army/Shell Oil policy efforts was based on their interest in building public support in securing the future of Arsenal for its wildlife values. The Army and Shell Oil were primarily motivated by a future use that limited their liability, and the creation of an open space held in federal control was the best means to achieve this. *Denver Audubon* in particular had a long-standing interest in seeing the area preserved for wildlife and welcomed the opportunity to work with the USFWS on the goal of establishing a national wildlife refuge on the site. Their close work with the Army and USFWS on the Arsenal gave them a very different perspective than that of those concerned about the pollution. As one community member who participated noted,

One of the things people who were upset about the refuge designation, some of the neighborhood folks, Sierra Club, National Toxics Campaign, etc. — once they told us that the deer weren't really from there, they were bringing them in from the mountains. So, out of touch with reality, I couldn't believe it. They don't know the first thing about wildlife management. But there was a lot of distrust of the Army and FWS at some basic levels. So we were always working against that.¹⁴⁰

¹⁴⁰ Participant interview.

Technical knowledge was also at the center of the debate as agencies and organizations struggled over site characterization (the extent and implications of the contamination), remediation techniques, and human and wildlife health risks. Trust and alliance building was based on the ability of the lead agencies to provide technical information and opportunities for the public to engage meaningfully with that information and contribute to policy decisions. As the process moved into the early 1990s, all public meetings held either by the Army for the record of decision process or by the USFWS for the refuge concept were required to provide information and expertise on issues of human and wildlife health risks. The complicated nature of the site and proposed uses focused attention on the lack of information in this area, putting agencies in consistently tenuous positions in terms of their legitimacy. This situation also served to create an, at times, adversarial relationship among the public constituencies. This was characterized by a wildlife organization staff member as “kind of an unholy marriage between environmental interests and Army and Shell’s interests.”¹⁴¹ The debate centered on the question of whether cleanup standards were as stringent for wildlife as for humans.

The evolution of *Citizens Against Contamination* into the *Northern Community Coalition*, the transformation of the Technical Review Committee into the Restoration Advisory Board, and the creation of the Site Specific Advisory Board resulted from the alliance-formation process discussed above. The sharing of information and trust

¹⁴¹ Participant interview.

among organizations involved in the policy process at the Arsenal not only resulted in the policy changes of cleanup and permanent status of wildlife refuge, but also led to the structural reorganization of the state to accommodate demands for greater public involvement. As the record of decision process finally got formally underway in 1990, it was clear to everyone that the only way to have input was to have a seat at this “table.”

NGOs, the State of Colorado, the Army, Shell Oil and other federal agencies all were well informed about the range of issues at the Arsenal and the need to improve the public-involvement process. At the local level, this meant pulling together a single organization that would represent a diversity of interests. *Citizens Against Contamination* had been the primary local organization for just this purpose, but conditions had changed with the resolution of the water contamination problem in Commerce City. In determining how to move forward into the ROD process, a split in leadership occurred based on differences in perceptions of how the system worked. Those who still did not trust the Army left the *Citizens Against Contamination* and formed another group, *We the People*, to continue their efforts to push for greater participation and transparency. The *Northern Community Coalition* was formed, officially including the *Citizens Against Contamination* and other local interests such as the water district, county health department and school district. The membership of this organization felt comfortable with the Army’s lead of the ROD process given their commitment to the water for Commerce City and their handling of the SQI/Basin F incineration process. As one *Northern Community Coalition* member put it, “I think it

probably turned a corner for the Army in some respect, as far as their trustworthiness.”¹⁴²

While constituencies at the local level were organizing themselves for involvement in the ROD, national concern over the extent of federal facility contamination nationwide highlighted the need for a national policy. The EPA proposed convening a conference with representatives of federal, state and local interests to hold a national dialogue on priority setting for cleanup processes. Between 1991 and 1992, four meetings were held that resulted in the Interim Report of the Federal Facilities Environmental Restoration Dialogue Committee, Recommendations for Improving the Federal Facilities Environmental Restoration Decision-Making and Priority Setting Processes (FFERDC 1993). The 1993 Interim Report identified mutual distrust as the primary obstacle to improved decision making and provided the guidelines for establishing site-specific advisory boards as the solution. The Department of Defense resisted accepting the level of decentralized power this organizational form represented, and suggested restoration advisory boards as a feasible alternative, as “they are generally consistent with the concepts found in the Interim Report” (FFERDC Final Report 1996: 48). The Committee found this acceptable, and technical review committees at DOD sites around the country were thus changed into restoration advisory boards.

¹⁴² Participant interview.

The national policy discussion sought to create conditions under which *technical* and *social* knowledge could interact in an efficient and effective way. The Arsenal was one of few major test cases driving the discussion and providing the concrete conditions that would have to be addressed as the nation moved forward to clean up thousands of contaminated sites around the country. The convergence of technically complex issues at the Arsenal, and a regulatory environment that required integrated public involvement, demonstrated the challenge of meeting the criteria of efficiency and effectiveness under such complicated conditions. Restoration advisory boards (RAB) are a testament to the DOD's ability to protect their institutional strength within the state system. They are also evidence of the DOD's recognition that the social conditions in which they operate have changed, necessitating engagement with constituencies that had previously been of little or no concern. The RAB sits between the managerialist vision and pluralist vision of stakeholder involvement (Bierele 1998), and explicitly rejects the popular or direct democracy vision. While it provides a wider range of public stakeholders with access to information and involvement in decision making, the Army maintains control over the membership, the agenda and the power positions.

While the Department of Defense was able to get an alternative formulation of the citizen advisory board enshrined in the final report of the FFERDC, the Arsenal's unique place in the history of events resulted in the establishment of both types of boards. Those public members who remained skeptical of the Army and state bureaucracies found the structure of the Arsenal's restoration advisory board not adequate to ensure citizen oversight. One of the former leaders of the *Citizens Against*

Contamination was aware of the FFERDC process and engaged with other citizens who were concerned about the safety of continuing public tours on the Arsenal to form *We the People*. This grassroots organization was able to use the State of Colorado's continuing adversarial relationship with the Army to get them to work with the EPA to sponsor a SSAB. They had the *social* knowledge to request an alternative citizen's advisory board, and the support of the State of Colorado and the EPA to fund it. While the Army had established the RAB it was also required to deal with the SSAB, providing information and receiving feedback at both venues. However, because the Army had control over the RAB and the SSAB was a parallel organization, neither board had a significant impact on big-picture policy decisions. They however did, and continue to, provide an important forum for information exchange.

The goal of the board concept is for the information-exchange context to result in improved relationships and trust building. This goal has been met with mixed results. Those who had consistently perceived the Army's tight control over the process as a problem were drawn to the SSAB and participated in a forum that reinforced their perception that bureaucracies require active citizen oversight as well as the need to decentralize state power. Those on the RAB were generally comfortable with a mixed managerial/pluralist policy environment, evaluating their experience positively as the Army had "come through." The existence of these citizen boards is evidence of a structural decentralization in the decision-making process; however, neither the SSAB nor the RAB demonstrated significant change toward decentralization of power. Rather, they have become an extension of bureaucratic control over organizational agendas as a means to maintain state control. While the

fundamental distribution of power remains unchanged, the decentralized structure and enhanced information exchange does create conditions that create challenges to bureaucratic legitimacy.

The Role of Hybrid Organizations

The RAB and the SSAB are both creations of the state in response to challenges to its legitimacy. Demands at the Arsenal for greater transparency in decision making, and nationwide recognition of “Arsenals” everywhere, resulted in the formation of the Federal Facilities Environmental Restoration Dialogue Committee. The Committee’s recommendations focused on improving dissemination of information, improving stakeholder involvement and improving consultation in funding decisions and priority setting (FFERDC 1993: v). These recommendations reflect the key issues that arose in the Arsenal story and in the theoretical discussion of the challenges of democracy and bureaucracy. Information, involvement and consultation are the central elements in policy making, and the period between 1980 and the early 1990s was seminal in establishing the model of participatory public involvement that is common throughout public-lands management today.

SSABs were designed to affect a decentralization of power by providing the public stakeholders with greater procedural power. While this organizational form does provide for greater empowerment of individual stakeholders, as they are more fully engaged and given a greater stake in the local process, it does not allow local decision making to trump regulatory prescriptions, and ultimately state control. This has left those who continue to participate in the SSAB at the Arsenal a channel of

communication to the Army, as they are required to make monthly reports to the SSAB. However, evaluation of the effectiveness by participants and observers is best summed up in this comment by a Colorado Department of Health employee who was long involved with the Arsenal: “They are just ankle biters in the weeds.”¹⁴³

RABs similarly were designed to “achieve a dialogue . . . two-way communication between government decision-makers and the community” (Szasz and Measure 1997: 218). However, their design does not reflect the level of decentralization in decision making envisioned by the FFERDC for advisory boards. In fact, the Department of Defense’s participation in the FFERDC resulted in two distinct organizational forms for stakeholder involvement as a result of the DOD’s refusal to let go of their procedural power in the meetings. Whereas in SSABs principal responsible parties are *ex-officio* members, in RABs the structure is based on a co-chair design: a military representative chair and a community chair share authority in guiding the RAB deliberations, discussions and decisions.

These stakeholder-involvement organizations address the need to improve communication, enhance involvement and facilitate consultation. Their existence demonstrates the state’s efforts to respond to its legitimacy crisis. In particular, it must be acknowledged that the RAB is a significant improvement in terms of transparency over its predecessor the technical review committee, suggesting the Army (and the DOD as a whole) did change their administrative ideology to embrace a new approach

¹⁴³ Participant interview.

to public relations in an era defined by widespread concern about environmental security. While the RAB and SSAB represent a different approach from the task forces and blue ribbon committees formed from the small pool of economic interests that predominated in the past, it is not clear that they create conditions that allow for a fundamental challenge to the power structure. They emerged as a structural solution that achieves a rebalancing of the bureaucracy-democracy dilemma, but one that retains the tension of consensus making.

Hybrid organizations emerged to solve structural problems in complex (and messy) decision-making environments. They are functional solutions that demonstrate the state's response to maintaining a democratic system and improve diversity of representation. They also acknowledge the limitations of bureaucratic expertise in light of the particularity of local problems. Recognition of the need to "uncover an information base to support decisions" (McCool and Guthrie 2000: 309) is not simply about the ecological scale of environmental problems; it is equally about recognizing the local (and perhaps regional) social context. Each federal facility shares a national context but is also distinct by virtue of where it is located. It is clear from the case of the Arsenal that understanding a site's relationship to the local community, the type and extent of contamination, and the preexisting level of *social* knowledge in a community can assist managers with making supportable decisions.

Hybrid organizations emphasize the need to bring as many stakeholders to the table as possible, thereby gathering *social* and *technical* knowledge that can be shared. The format provides a new level of transparency and inclusiveness, creating the added value of building relationships and encouraging trust among stakeholders. Thus the

state has accomplished a structural solution that appears to moderate the conflicting demands of democratic participation and bureaucratic management. Yet, decentralization itself creates a “dilemma of legitimacy” for bureaucratic authority, as the public can readily see the limits of bureaucratic knowledge/expertise. This contradiction leads to the creation of more “opportunity spaces” in the bureaucratic structure as it changes to build constituency support.

Hybrid Organizations and the War of Position

What does the case tell us about Gramsci’s concepts of hegemony and state-civil society relations? What light is shed on the agency-structure dilemma? Does it support Gramsci’s assertion that the best means for challenging the hegemonic bloc in western liberal democracies is through a war of position? The case of the Rocky Mountain Arsenal does offer evidence of the important role of leaders (Gramscian intellectuals) in terms of the relatively porous line between the state and civil society through the political system. It also demonstrates the complex social processes that inform consent, a key aspect of the power of hegemonic ideology. The three phases that make up the story of the Arsenal demonstrate how the political system is the terrain in which existing and emergent actors engaged in a process that challenged and changed the meaning of consent. At each juncture in the story of the Arsenal, we see how a critical event exposed the weakness of the hegemonic structure, creating a space in which a crisis of legitimacy for the state becomes an opportunity for alternative ideologies to change the criteria of legitimacy and the process of consent.

Beginning with the public disclosure of water contamination in Commerce City, followed by the incineration of the waste in Basin F, and through the establishment of the wildlife refuge, the dilemma posed by balancing economic and environmental goals exposed the weakness of the state structure. Prior to 1985, the decision-making process was under the control of the administrative state, where information and constituency support were limited to negotiations among bureaucratic entities (the Army, State of Colorado and the EPA) and political-economic interests (e.g., Congress, local elected officials, Shell Oil Company). With the public disclosure of TCE, the state's authority and leadership was called into question, and the control of information and constituency support moved into the arena of civil society.

The public disclosure of TCE contamination challenged the reigning ideology that the U.S. military as well as the larger state system acts solely in the public interest. The public health threat that the Arsenal's contamination represented undermined the existing consensus that allowed the community of Commerce City to coexist with the Arsenal. This initial event caused a cascade effect in the public-involvement process, forcing the bureaucratic agencies to scramble in response to the rupture in public trust. The entry of new public participants into the process also challenged the bureaucratic structure. The additional entry of constituencies that were not considered relevant in the mid-1980s because of the SQI and the refuge proposal added further complexity to the state's ability to maintain consensus. Clearly, the burden was on state representatives to repair the damage and seek solutions to regain the public trust.

The breakdown in consensus did not appear to mean that the dominant ideology had come under a fundamental challenge. Rather, the story of the Arsenal demonstrates the flexibility of the dominant ideology in response to challenge and the plastic nature of consensus. The public leaders who drove the process leading to structural change (e.g., early founders of *Citizens Against Contamination*, *We the People*, members of the SSAB), rather than being engaged in a conscious “war of position,” were those most vested in proving that the democratic state does serve “the people.” While there was a consistent suspicion about the Army and Shell’s goals, this group of people did not act to create a new ideology. In fact, their efforts aligned explicitly in facilitating the state’s ability to change its administrative approach to more closely reflect the pluralist idea of democracy. Although their efforts pushed the envelope of change, they were never consciously trying to reinvent the system. The goal of getting a seat at the table is a far different one from throwing out the table.

Consent, the State and Civil Society

The story of the Arsenal and the actions of the stakeholders tell us a great deal about how state-society relations go through periods of crisis and resolution. State agencies — from the Army, to the State of Colorado, to local jurisdictions — found themselves unable to avoid changing their administrative processes to engage a wider range of public participants and spend more time and resources providing these participants with access to technical information. The process of alliance formation shows the power that resides within civil society and the importance of structural capacity for change. It also shows how consent is not a “spontaneous consensus” that holds society

together; rather, it is something that is organized through specific institutions (Burawoy 2003).

The events at the Arsenal suggest that the process of active consent is absolutely required for the maintenance of the state and is the basis of stable state-society relations. The operation of a hegemonic ideology is evident in how the dominant political class as represented by state bureaucracies made economic concessions to facilitate the participation of outside interests. Furthermore, many of the concerns that motivated local leaders were directly tied to their economic interests in the potential benefit of a clean site. Yet, consent is a complex process in which multiple versions of truth compete to gain a foothold within the larger system of hierarchical ideologies (Burawoy 2003).

Alliances were created and broken between public organizations and state entities throughout the process. It is in this area that the function of consent in maintaining the hegemonic ideology is most clearly seen. In 1985, the citizens and officials of Commerce City were distrustful of the Army and greatly concerned about the threat to life and property that the Arsenal represented. However, after the Army committed to build the Klein Water Treatment Plant and secure a secondary supply of water from Denver, the sense of crisis passed, and the Army came to be seen as responsive to community needs. From the perspective of local leaders (citizen and official), whose concerns were grounded in the direct threat that the Arsenal posed, the change in the Army's attitude and approach was sufficient evidence that their demands were being met. Unlike those members of *Citizens Against Contamination* who went on to form *We the People*, the members of the *Northern Community Coalition* do not

appear to carry a fundamental distrust in the system nor in the Army as a part of that system. Rather, they appeared to recognize the contradictions in the system and accept them, as seen in this comment by a local resident and former SACWD board member,

Our people here are blue-collar workers, a lot of retired ones. We couldn't afford to do something about a treatment plant. So we collectively felt that we were owed an obligation by Shell, because the Army had rented part of that space out there to Shell, they made chemicals. I defend them in a way too because if we have bugs somewhere, we wanted something to kill them. And for it to work with one squirt. A demand for something stronger. They disposed of their waste just like the rest of us.¹⁴⁴

All the participants in the case of the Arsenal clearly carried the hegemonic ideology with them in their political activities. Members of *We the People* remained skeptical of the Army's intentions, believing that they would do whatever they could to limit their costs. Their skepticism, however, was based in a basic distrust of the bureaucratic focus on efficiency, not a fundamental belief that the military was an undesirable social institution. These participants, according to an active community member, saw that the "impetus for the federal government was that (it) can save a lot of money on citizen suits and violator suits, just law suits in this country if (it) can involve affected people in the discussions early on."¹⁴⁵ Yet, their very action to engage with the EPA and State of Colorado to get a SSAB established at the Arsenal suggests that they had confidence that the system could provide a solution that addressed their distrust of bureaucracy.

¹⁴⁴ Participant interview.

¹⁴⁵ Participant interview.

The case of the Arsenal also shows how contradictions in state-society relations are the source of change in the system. Furthermore, it demonstrates the role of ideology in both system maintenance and change. The community members who formed *Citizens Against Contamination* used their existing *social* knowledge to leverage political power in the form of a grassroots organization. Their efforts to mobilize the community and call officials to account resonated with a larger social process underway and contributed significantly to the structural changes the state system embraced in order to maintain its power. As one former county health official put it,

When you look back, you could look at every one of these groups and say they all did something important. The pressure from those groups, the pressure from the State (of Colorado) and EPA helped bring us all together. Now, if the pressure hadn't been there we may not have been successful with the Army. So, in one way you can criticize some of these people, the other way you can say it's probably because of their efforts.¹⁴⁶

Beginning with the *Citizens Against Contamination*, through the *Northern Community Coalition* and again with the creation of *We the People*, the actions of citizen leaders (as opposed to elected officials or bureaucratic administrators) demonstrated their capacity for agency and the ability to engage effectively with the existing power structure. The creation of the Site Specific Advisory Board at the Arsenal is not only a testament to the effect of public involvement locally, but the very concept itself points to the impact of the broader cultural trend that was largely

¹⁴⁶ Participant interview.

responsible for the strong environmental legislation in the 1970s. The Federal Facilities Environmental Restoration Dialogue Committee and its recommendations, which have spread throughout the state structure, represented a significant convergence of state-society interests in meeting the challenges of environmental security and shoring up the state as the key social institution for managing the problem.

Security in Hegemony: How the State Ensures Our Future

From the late 1970s and into the early 1980s, elaboration of the broader concepts of security gained attention, from Lester Brown's *Redefining National Security* in 1977, to Richard Ullman's 1983 *Redefining Security*, to Gorbachev's expression of "comprehensive security" (Matthew 2000). By the late 1980s, with the Cold War framing of national security on the wane and the more threatening implications of rapid technological change being established, the explicit link between security and the environment became part of national, and international, policy discourse. The implications of this for the hegemonic project in the United States played out simultaneously as new bureaucracies were formed (e.g., the EPA) and established bureaucracies found themselves having to change to more efficiently and effectively respond to declining public trust.

The two central elements of the "New Environmentalism" were the creation of new administrative agencies and legislation, and the growth in the number of NGOs focusing on political activism and lobbying (McCormick 1989). This larger process encompassed the Arsenal and interacted with it, causing the Army and ultimately the

entire state system to evolve its organizational structure to accommodate a more participatory (Bierele 1998) public input process.

Bureaucracies come into being and exist to serve a socially desirable function such as managing wildlife populations, protecting public health, or ensuring national defense. While all functions are somehow enmeshed in the state machinery, there are important differences in organizational mandates that inform a particular bureaucracy's role in relation to the state's support of the hegemonic agenda. Historically, the military has had a privileged location within the state apparatus that has protected it from the effects of public demands for accountability. Their traditional approach was to keep decision making internal, keeping it insulated from civilian oversight (Szasz and Meuser 1997). However, issues of contamination, waste remediation and land reuse converged at the Arsenal, creating a social crisis followed by a demand for the Army to engage in democratic planning.

While Clarke and McCool (1996) used their variables to assess differentials in agency power within the federal "family," these same factors go a long way in helping understand the conditions under which any public entity struggles to gain and/or maintain legitimacy in society. Legitimacy is the fundamental evaluative criterion for public agencies as they engage in making policy in a democratic society. While there is variation in how to implement public involvement in policy making, there is also a shared belief that "in a democracy all citizens have a right to participate in decisions that affect them" (Bierele 1998: 2). It is precisely the question of implementation beyond this basic agreement that helps explain the difficulty an organization has in operationalizing the two basic facets — information expertise/control and constituency

support — to ensure their legitimacy and, hence, power. The case of the Arsenal demonstrates how differences in opinion on the nature of democracy and organizational capacities for control of information and ensuring constituency support are central factors related to the maintenance of state hegemony.

CHAPTER 8:

Political-Ecology: Environmental Policy for the Future

Over the past three decades the command and control and market-based incentive approaches of U.S. environmental policy have given way to a new policy path that presumably devolves authority from the state to local communities. Furthermore, the pervasive use of community-based collaborative approaches by federal, state and even local land-management agencies promises to create outcomes that are more just, fair and equitable. While this approach is considerably more transparent, with greater opportunity for public involvement, it does not necessarily create conditions for fundamental change in the political-economic system. In fact, the political leadership created through participation in collaborative processes appears to reinforce individual commitment to the dominant ideology and allegiance to the hegemonic agenda.

The environmental movement thus faces two significant challenges as it strives to protect the planet and future generations. One is that advocates must rely on the administrative state to solve problems that emerge from the operation of the economic system. The other is how the ideology of liberalism has interacted with capitalism through the process of industrialization and rationalization to create a life-world dependent on consumer goods and an industrialized food system. Given this complex and contradictory environment in which environmental policy making takes place, it is

imperative to take a critical approach to the question of what “successful public participation” means.

The ostensible movement by the state apparatus to a participatory democracy approach to environmental policy making should lead to public land management agencies doing a better job at meeting their regulatory obligations and increased public support of decisions. However, it appears that while there has been increased public involvement, it is not always in support of state policy decisions. Since the passage of the National Environmental Policy Act, a concurrent growth in environmental litigation organizations emerged that continues to this very day. The history of these organizations¹⁴⁷ points to the important role of experts who cross between the state structure and civil society. This relatively porous line between the state and society is an important source of change and highlights the crucial role that politics plays in consensus. It is the continued existence and growth in both scope and membership of environmental NGOs that signifies the important and necessary role of the public to maintain vigilance over the state’s ability to manage the environment.

¹⁴⁷ The Environmental Defense Fund was founded in 1967 by a group of scientists on Long Island to halt the use of DDT. Established by a former U.S. attorney concerned about the state’s inability to effectively protect the environment, the Natural Resources Defense Council was founded in New York City in 1970. These two organizations were shortly joined by the Sierra Club Legal Defense Fund (1971), which was established to move a political campaign to protect Mineral King in the Sierra Nevada from development to a legal effort that was fought to the Supreme Court. In 1989 the Center for Biological Diversity was founded in response to the continued threat of species extinction. Millions of Americans are current members of these well-funded organizations, which continue to challenge the state’s environmental policy decisions.

Collaboration or Cooptation? State Management of Environmental Policy making

The results of the research discussed in Chapter 7 highlight the importance of knowledge in determining how effective collaboration is for achieving environmental policy goals. Each phase of the process was part of a feedback loop in which the actions of state actors (e.g., Army, EPA, State of Colorado, South Adams County Water District) resulted in a community-based response (e.g., *Citizens Against Contamination, the Northern Community Coalition, Concerned Citizens of Montbello*) that resulted in an expansion of the state's public-involvement program. The analysis further revealed that all respondents shared a similar set of concerns regarding both policy and process. The search for a permanent future use of the Arsenal was ultimately a negotiation between property rights and public benefit, and it is the role of the administrative state to manage this core contradiction of our political-economic system.

It is also clear from the in-depth interviews that respondents always saw themselves as part of a larger system in which the public has the right to participate. In the case of the emergent citizen organizations, decisions to act appear to have been based on assessments of the level of threat posed by the direction the policy process was taking. For example, when it became clear to residents in Commerce City that the toxic waste on the Arsenal was not contained, they used their social knowledge to organize for direct engagement with the system on this particular issue. For existing NGOs (e.g., *Sierra Club* and the *Audubon Society*), engagement in the policy process is one of their core functions on behalf of their membership. Hybrid organizations emerged as the state's solution for accommodating a more sophisticated and complex

public response. They demonstrate the system's capacity to provide a structural means for liberal democratic participation in policy making, reinforcing the political dimension of the hegemonic ideology.

At the same time, the tension between public involvement and bureaucratic efficiency appeared to have caused conflict among public stakeholders, reflecting the difficulty of resolving competing needs for limited resources. The different goals of cleanup advocates and wildlife advocates were an important source of this tension because it was widely believed that cleanup for wildlife would be less stringent and therefore less costly. Furthermore, the legal battle between Shell Oil and the Army over liability early on established a basis for the belief that the lead agencies were operating primarily from a cost-containment perspective rather than a social good/public benefit perspective. Just as important in creating public concern regarding bureaucratic intention was the agencies' reactive, rather than proactive, approach to public involvement. These tensions tend to undermine the process of constituency-building by fracturing social sectors, creating an additional challenge for the state, but leave open the possibility for an alternative framing of choices.

Hybrid organizations and the collaborative approach seek to cast a wider net for public involvement, but their success in achieving diversity of representation is greatly dependent upon agencies using social knowledge to ensure all potential stakeholders are made aware of these opportunities to participate. Equally important, citizens need to develop networks that include contacts in bureaucracies and other NGOs to ensure that they are contacted about issues that are relevant to them. Both of these strategies are difficult to successfully pursue because of the bureaucratic

administrative ideology based in efficiency, and citizens have a multitude of activities and demands competing for their attention. While bureaucracies have adopted the collaborative approach, creating greater opportunities for wider public participation, efficiency (and limited budgets) run counter to more creative and risk-oriented approaches.

Engaging the general public in the often long and sometimes tedious environmental policy-making process is another challenge. Citizens tend to rely on NGOs, the media and elected officials to watch bureaucracies closely, expecting them to alert the public should something be amiss. This was evident in how the residents in the communities surrounding the Arsenal were motivated by information that they received either from the media or organized activists. The only exception was the population of Irondale Trailer Park, who personally felt the consequences of the first phase of cleanup of Basin F. Even those bureaucracies that push the outreach envelope (e.g., the EPA) find it difficult to get much interest from the “average” citizen. Because people are generally motivated only when the threat is local and personal, there is a limit to how effectively a bureaucratic entity can engage the public. Under these circumstances the consensus at any time and in any location is tenuous, at best, and therefore leaves the larger system vulnerable to emergent challenges it cannot be completely prepared for.

While the establishment of the FFERDC and state institutionalization of its recommendations testifies to the overall appreciation on the part of the administrative state of the need to develop an effective means for public involvement, there are clearly many challenges to maintaining consensus. The question that activists must ask

themselves is, has their involvement in the policy process facilitated their acceptance of a policy, or has their involvement ensured a best-case outcome? However, it is very difficult for most public participants to have adequate social and technical knowledge to make this assessment. Too often the result is a blurring of the distinction between state policy preferences and public preferences, which cannot be evaluated for how they measure up to an explicit set of mutually agreed-upon criteria. It is therefore incumbent on the state to provide a process in which this very dilemma is made explicit.

It is exactly the plastic nature of hegemony that creates conditions in which change can and must be accommodated creating solutions out of challenges. Change thus becomes the expectation and the result, providing the state and citizens with evidence of responsiveness. Under conditions of hegemony, public-involvement efforts are a central means to facilitate the ongoing negotiation over the terms of consensus. In light of this, collaborative approaches appear to enshrine the dilemma of state legitimacy by centralizing it within the process. Public participants are engaged in both addressing environmental challenges and shoring up the role of the state as the primary manager of environmental policy. On the positive side, collaborative decision making has moved environmental policy out of the realm of the black box. However, there is room in this arena to create a forum in which the underlying causes of environmental problems are addressed. Collaborative approaches need to seek solutions that build on the dynamics of hegemony, not enshrine the power structure.

Process versus Outcome: How Hegemony is Constantly Contested

This research project took as its primary goal to better understand the affect of public involvement in environmental policy making by focusing on the process as it unfolded at the Rocky Mountain Arsenal over a period of several years. This approach has shed some light on how interacting social forces led to the creation of hybrid organizations and the institutionalization of collaborative approaches in land-use planning. It has also demonstrated how the administrative state functions in support of the hegemonic ideology by facilitating the engagement of new leaders in the existing system and pushing existing leadership to change processes to accommodate new leadership. The focus on process has thus suggested that there is more going on than what research focused on outcomes has found. It therefore supports the value of using a critical theory approach to evaluating public-involvement efforts.

An interesting result in the case of the Arsenal was the decision to turn it into a national wildlife refuge, a choice that many feared would reduce the level of cleanup and limit the potential future value the site. Denver and Commerce City were both interested in development opportunities the Arsenal potentially offered, but their goals were eliminated by the Army's commitment to keeping the Arsenal in federal ownership and by the presence of bald eagles. Also, while the federal government tried to limit their financial liability by maintaining federal control over the property, the cost of cleanup is expected to exceed \$2 billion.¹⁴⁸ Finally, the creation of a

¹⁴⁸ U.S. Department of Defense News Release No. 354-96 June 11, 1996.

national wildlife refuge within the rapidly urbanizing Denver metropolitan area has led to an increase in positive public perception and land values.¹⁴⁹

These outcomes suggest that while the administrative state attempts to achieve a balancing act between politically and economically acceptable policies, it cannot guarantee results that mirror the preferences of economically powerful interests. The relationship between process and outcome is complex. The value of a critical theory approach to explicating this relationship is in its ability to move the literature toward a greater appreciation of how hegemony plays an important role in the process.

Public Involvement in Environmental Policy Making: Challenges Ahead

Most of the research on collaboration assumes that government is a neutral social artifact “promoting civic engagement” (Michaels, et al. 2001) and that public participation in environmental policy making should assure that both the goals of governmental agencies and public expectations are met (Konisky and Beierle 2001). Research has generally found that public-involvement processes have evolved over the past thirty years and offer a range of approaches whose deliberative nature is their key strength (Konisky and Beierle 2001). At the same time there is also recognition of the difficulties public involvement efforts pose for both agencies and the public and there is debate over how far to extend decision-making authority to citizens. Much case study research has focused on specific types of collaborative efforts, seeking to

¹⁴⁹ For an explanation of how “defense facilities may have unexpected values that the citizens may want to retain,” see Rhodes 1998.

evaluate them against a pluralistic model of participation. As has been suggested in the results of this research effort, it is no wonder that achieving the goals of what has often been referred to as community natural resource management (CNRM)¹⁵⁰ has been complicated and organizationally challenging (Kellert et al. 2000).

The goals of CNRM have been expressed in a number of ways, including the “alleviation of rural poverty and the conservation of biological diversity” (Kellert et al. 2000: 706) and “increasing the level of trust and cooperation between federal and state regulators (resulting in benefits) to U.S. environmental programs” (Scheberle 1998). Propst and Bentley (2000) identify a range of possible goals of participation, from achieving governmental or institutional goals to capacity building and empowerment. Given the administrative state’s role in maintaining the hegemonic agenda and the attendant lack of public interest, it is unlikely that empowerment would result in a revolutionary challenge to the established power structure. Furthermore, the debate over what conditions would be appropriate for allocating greater decision-making authority to citizens exemplifies the strong hold that “coercive harmony” (Nader 1997) has on our thinking. While there is an enduring concern about who is making the

¹⁵⁰ Community-based natural resource management is often identified as the earliest collaborative form that appeared in the early 1970s “when many became disenchanted with the results of large-scale, capital-intensive, and centrally planned conservation and development projects” (Kellert et al. 2000: 706). However, as was briefly mentioned earlier, the Tennessee Valley Authority project (Selznick 1966) was an even earlier attempt to balance state-centered planning with local social, political and economic issues.

decision for whom in environmental policy making, the state appears protected by getting locals involved, but this is no guarantee that the environment is protected.¹⁵¹

Yet, the state is not going away, and neither are the environmental problems that arise as a result of our political-economic system. Collaborative approaches have changed the process, and their widespread use throughout land-use planning in the United States offers a plethora of research and evaluation opportunities. The analysis of the preceding chapters lends itself to exploring prescriptions for encouraging participatory environmental policy making that achieves goals of both empowerment and the preservation of biological diversity. A key question, then, is what form of state-based environmental management is best able to facilitate these two goals? Theorists who are willing to entertain the idea that there might be ecological limits to growth and who focus on direct and structural forms of power (e.g., Dryzek 1994, O'Connor 1994, Urbinati 1998, Gimenez 2000) offer a promising direction for answering this question.

A common feature of many of these analyses of policy change and institutional design is their rejection of the dualistic thinking that analytically isolates physical and social phenomena. Specifically, they seek to address how the environmental crisis is not simply the result of "industry" or "population," but "a consequence of the specifically capitalist form of organization of economic life" (Benton 1996). In order

¹⁵¹ One good example of how localism can force less than environmentally preferable outcomes is the continued use of snowmobiles in Yellowstone National Park. This policy outcome is the opposite of the Park Service's recommendation.

to be theoretically adequate to understanding the nature of the phenomena and politically effective in the struggle for social and ecological change, it is absolutely necessary to address how a particular liberal-capitalist political culture acts as a hegemonic force and what the role of the state is in this system. Research that documents and explores the interrelationships between economic activity, politics, culture, human rights, and the environment requires a theoretically rich and firm ground upon which it can offer a possible path to an alternative future.

Going forward, it would be instructive to design research and policy strategies that address the issue of power in a more critical and dynamic way, centralizing how the state and dominant culture use consensus as a hegemonic tool (Nader 1995, Burawoy 2003). This means that research efforts focused on evaluating participatory democracy in public land planning should consider (1) how the problem definition of the environmental issue being addressed came about, (2) how participants and nonparticipants perceive and react to social and technical knowledge, and (3) how rules of inclusion and exclusion are developed and implemented. Table 8.1 illustrates how this analytical approach shifts the perspective in which the research is undertaken.

The first column lists a set of evaluative criteria from Moote et al. (1997) based on their review of the public-participation and participatory-democracy literature. The second column shows an alternative set of evaluative criteria that can be used to more critically assess whether a particular public-involvement process successfully achieves both empowerment and biodiversity protection. Ecological rationality (Dryzek 1987) is another critically missing piece of the research agenda of those focused on applying participatory democracy theory to public land planning and management. It is added to

the evaluative criteria proposed here to ensure the link between social and ecological values is explicit. Evaluating governance structures — and designing new ones — remains an essential research agenda for studying public participation in environmental policy making.

Table 8.1. Critical Comparison of Evaluation Criteria.

	Political economy (from Moote, McClaran and Chickering 1997)	Political ecology
<i>Issue</i>	<i>Evaluative criteria</i>	<i>Revised evaluative criteria</i>
Efficacy	Groups and individuals interested in or affected by public land decisions report that the resultant plan addresses their needs, concerns and values and they will not appeal it.	Groups and individuals interested in or affected by public land decisions report that the resultant plan <i>reflects</i> their needs, concerns and values. <i>They further report that they understand the local is connected to a larger system that efficacy is achieved through sustainability.</i> ^a
Representation and access	Everyone who might be affected by or have an interest in the plan is involved, particularly nonactivist, nonaligned members of the public. Access is provided through information forums that give everyone an opportunity to voice their needs and concerns. Agency representatives strive to make people feel comfortable and respected.	Everyone who might be affected by or have an interest in the plan is involved, particularly nonactivist, nonaligned members of the public. Access is provided through <i>a variety of</i> information forums <i>that reflect the challenges of full and meaningful participation</i> . <i>This means not only do</i> agency representatives strive to make people feel comfortable and respected <i>they actively seek out information from potential participants to learn what steps are necessary to ensure their participation and implement them.</i>

Note. I have italicized word or phrase changes to highlight the differences.

^aSustainability refers to the allocation of resources in the fairest way within the constraints imposed on us by the Earth. That means looking critically at individual consumption of goods and services, and reforming the technologies used to provide them, so that the environmental impact is reduced. It also points out how political efforts centered solely on making life for human beings more secure, more comfortable, and more successful will ultimately fail, resulting in environmental meltdown and more human suffering.

Table 8.1 (Continued).

	Political economy (from Moote, McClaran and Chickering 1997)	Political ecology
<i>Issue</i>	<i>Evaluative criteria</i>	<i>Revised evaluative criteria</i>
Information exchange and learning	All interests are encouraged to discuss their needs, concerns, and values in informal, multidirectional exchanges. Active dialogue improves everyone's understanding of the range of values, interests and concerns. Collective revision and refinement of goals, objectives, and decision-making criteria is encouraged.	<i>Collective revision and refinement of goals, objectives, and decision-making criteria has resulted from clear, uncensored descriptions of needs, concerns and values. Areas of uncertainty are clearly identified and a mutually shared strategy to address these uncertainties is developed and implemented.</i>
Continuity of participation	The public is involved continuously throughout all stages of planning and decision-making.	<i>Changes in the "personnel" of continuous public involvement are investigated as well as whether the public is involved continuously throughout all stages of planning and decision-making.</i>
Decision-making authority	Decision-making authority is explicitly shared among all participants, with agencies holding no exclusive decision-making authority.	<i>The structure of decision-making authority is explicated identifying the linkages among participants and with other social interests. This is particularly important in light of bureaucratic responsibility for regulatory compliance. It is more realistic to evaluate at what levels, to what extent decision making is shared among all participants, and where agencies hold exclusive decision-making authority.</i>
Ecological rationality	<i>Missing</i>	<i>Are the policy options under consideration environmentally sustainable?</i>

Political Ecology and a New Consensus: The Global Challenge Ahead

The 21st century presents society with a challenge unlike any that have come before.

The prospect of global climate change is the unifying crisis that solves the problematic

of local issues launching community action. As discussed above, the public tends to act in response to a local and understandable threat. The environmental movement of the 1970s was largely successful because of the widespread public perception of threats to water and air quality. This research project helps explain how the technical challenges of contamination that dominated the 1980s and 1990s helped create a new structure of public involvement and created greater capacity for meeting these environmental policy dilemmas. It is on this foundation that we must now confront the most fundamental aspect of our reigning ideology — the distinct role of the human in nature. Our capacity to make the environment dangerous to ourselves is evident, now it is overwhelmingly about making it uninhabitable.

Collaborative processes can bring together a wide range of knowledges and create a space in which values can be debated. Multi-stakeholder forums that process information in a public setting provide the means to negotiate our basic assumptions about our place in nature and make policy decisions in the light of full disclosure. As our world shrinks as a result of high-speed communication, increasing population, and economic interdependence, these processes are critical for facilitating a new consensus, one that embraces a larger (or different) definition of state-society relations. The social and environmental challenges in front of us demand that we evaluate our institutional principles very carefully. The plastic nature of hegemony does not guarantee a democratic (or ecologically sane) outcome, but it does appear to provide a system in which fundamental issues can be placed in front of society for their deliberation and action.

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APPENDIX A:

Semistructured Interview Schedule

1. Please tell me about yourself and your relationship to the refuge?
2. What do you think is (are) the purpose(s) of wildlife refuges? Has it or should it change?
 - Species and habitat protection?
 - Multiple Use?
 - other
3. What do you think are the management challenges at the refuge?
4. Can you describe the public involvement process for the CCP/CMP?
 - strategy(ies)
 - team leaders/members
 - resource allocation
 - concerns/barriers
 - primary goals, secondary goals, etc.
 - successful? If so, how would you define success?
 - key players, working groups, task forces
 - critical issues
 - Was it fair to all stakeholders? How do you know?
 - Was it representative of all interests? How do you know?
5. How is the refuge's relationship with the public? Has it changed? Why?
 - local public
 - national public
 - interest groups
 - volunteers
6. How would you describe the approach taken to public involvement? If you could determine the process in the future, what would you do?
 - managerial - traditional expert driven, top-down
 - governance - more inclusive model, participatory democracy
 - relatively autonomous or primarily dictated by higher ups?
 - led to good decisions? or prohibitory of good decisions?
7. How important is public involvement in biodiversity protection?

8. How do you think the 1997 Wildlife Refuge System Improvement Act has effected the refuge?

- benefit to the System?
- burden to the System?

9. How do you think the adoption of Ecosystem Management by the USFWS has effected the System?

10. How do you see the future of the Wildlife Refuge System?

Map of Research Site

