

**CONTESTING POLITICAL VERSUS ENVIRONMENTAL SCALE:
A CONTROVERSY OVER THE EDISON GORGE DAM**

By

UJJAINI DAS

(Under the Direction of Hilda Kurtz)

ABSTRACT

The study attempts to understand how stakeholders define the scale of environmental consequences and how negotiations are made to adjust scale of environmental understanding within established politically scaled boundaries, with a case study of the Edison Gorge Dam on the Cuyahoga River, Ohio. The study also explores how power, knowledge and authority are acquired, deployed and sustained, along with scale, by the stakeholders involved in the controversy.

INDEX WORDS: Environmental conflicts over water use, Decommissioning of small dams, Ohio, Politics of scale, Power.

**CONTESTING POLITICAL VERSUS ENVIRONMENTAL SCALE:
A CONTROVERSY OVER THE EDISON GORGE DAM**

By

UJJAINI DAS

FORB, University of Calcutta, India, 2001

FORM, University of Calcutta, India, 2003

FORM, University of Delhi, India, 2007

**A Thesis Submitted to the Graduate Faculty of the University of Georgia in
Partial Fulfillment of the Requirements for the Degree**

MASTER OF ARTS

ATHENS, GEORGIA

2008

© 2008

Ujjaini Das

All Rights Reserved

**CONTESTING POLITICAL VERSUS ENVIRONMENTAL SCALE:
A CONTROVERSY OVER THE EDISON GORGE DAM**

By

UJJAINI DAS

Major Professor: Hilda Kurtz

**Committee: Fausto Sarmento
Elgene Box**

Electronic Version Approved:

**Maureen Grasso
Dean of the Graduate School
The University of Georgia
December 2008**

ACKNOWLEDGEMENTS

I have no words to express my heartfelt gratitude to Dr. Hilda Kurtz, my advisor. She had not only been my advisor but a true friend. She enriched my life intellectually and spiritually by walking me through all the stages of my research and also through the twist and turns of life. My thesis would not have been complete without her endless support. I also extend my reverence to Dr. Fausto Sarmiento and Dr. Elgene Box, my committee members for their valuable comments and advise. They have been an inspiration for me in my entire research process. I would like to thank the entire Department of Geography, especially Dr. George Brook, Head of the Department and Dr. David Leigh, the Graduate Coordinator for their support. I also extend my heartfelt thanks to Audrey Hawkins and Emily Duggar who helped in all possible ways as and when needed.

The project would not have been possible without the cooperation of majority of the stakeholders involved in the Edison Gorge Dam controversy. Especially I would like to thank Steve Tuckerman, in-charge of the Division of Surface Water, Ohio EPA who provided me with valuable documents and reports and insight into the empirical intricacies of the conflict. I am also indebted to Elaine Marsh, President of Friend's of Crooked River, David Hill, President of Keel Hauler's Canoe Club for providing me with valuable information.

Finally, I am indebted to my friend's in Athens, my husband and my parents for their constant support and encouragement.

TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS.....	iv
LIST OF TABLES.....	vii
LIST OF FIGURES.....	viii
CHAPTER	
I. INTRODUCTION.....	1
Organization of the thesis.....	3
II. BACKGROUND.....	5
Dam removal in United States.....	5
Dam removal on Cuyahoga River.....	7
History of the Edison Gorge Dam and rise of controversy.....	11
Conclusion.....	21
III. LITERATURE REVIEW.....	22
Politics of Scale.....	22
Power.....	30
Conclusion.....	35
IV. RESEARCH DESIGN AND METHODOLOGY.....	36
Research questions.....	36
Data Collection.....	37
Data Analysis.....	45
Conclusion.....	50

V. FLUIDITY OF SCALE AND POWER IN DECIDING THE	
CUYAHOGA RIVER’S FUTURE USE.....	52
Defining the Environmental Scale.....	53
Creation of Scale(s) - Rescaling.....	60
Role of Power.....	67
Conclusion.....	83
VI. CONCLUSION.....	86
REFERENCES.....	92
APPENDICES	
A. INTERVIEW SCHEDULE.....	102
B. CONCENT FORM FOR PARTICIPANTS.....	107

LIST OF TABLES

TABLE	Page
Table 4.1: Stakeholders involved in the Edison Gorge Dam Controversy.....	41
Table 4.2: Coding Data into Categories and Subcategories	48
Table 5.1: List of Tier 1 and Tier 2 Stakeholders.....	55

LIST OF FIGURES

Figure	Page
Figure 2.1: Dams on the Cuyahoga River.....	8
Figure 2.2: Demonstration hydroelectric facility at the Gorge dam site by Universal Electric Power.....	13
Figure 2.3: Metro Park’s effort in gaining public support against the project.....	20

CHAPTER I

INTRODUCTION

There exists a long-standing debate between development and environmental conservation. Any sort of developmental activity bears some environmental costs, and in the view of many, development and environmental conservation are antithetical to each other. Striking the balance between the benefits of development and environmental costs is difficult. The construction and decommissioning of dams have served as a lightning rod for debate over the merits of development versus environmental conservation. Dam building has long signaled development that promised to provide electricity and water for domestic, industrial, and agricultural purposes. Dams have also produced many and varied environmental repercussions. Disruption of the healthy functioning of rivers, loss of flora and fauna, increase of floods and displacement of people has been caused by both small and large dams. In the United States dam building reached at its zenith after the Second World War. Recently, the general public, the scientists and the management organizations have become aware of the adverse affects caused by the aging of dams (Doyle et al., 2003). Dams removed so far in the United States and elsewhere consist mainly of small, privately owned dams (Doyle et al., 2000). Decommissioning of small dams has thus become a major area of concern for the scientific community (Doyle et al., 2003).

The issue of decommissioning of dams emerged as a reaction to the adverse environmental impacts of the existing dams. However, the idea of decommissioning has been a matter of heated controversy since multiple stakeholders have different ways of viewing the

same environmental consequences of a dam. The environmental consequences of a developmental activity undertake a shape of its own, but the stakeholders who participate in decision making process perceive and understand the physical effects of the problem in different ways (Meadowcroft, 2002). Existing political form significantly molds the perceptions of the stakeholders (Lebel, 2004; Lebel et al., 2005) and in framing controversy over the decommissioning of dams.

A very apt example of such controversy has concerned disagreement over the possible removal of the Edison Gorge Dam from the Cuyahoga River in Ohio. Politics prevail at different scales among various stakeholders who are involved in the conflict. This study focuses on how politics shapes different stakeholders understandings of the spatial extent of the environmental consequences of the Edison Gorge Dam and the ways in which stakeholders work to define particular environmental consequences in relation to their own organizational or jurisdictional boundaries. My Research questions are as follows:

- 1). How do the different stakeholders in the dam controversy negotiate between their understanding of the extent (scale) of the environmental problems at issue, their scale of institutional operation, and the political scale(s) at which the decision will ultimately be made?
- 2). How do stakeholders (discursively) frame their political agendas and actions and (materially) enact one or more scale strategies?
- 3). Do multiple scale strategies employed by stakeholders empower them and affect redistribution of influence over the use of the river? If so, how?

Geographic scholarship on politics of scale provides the lens through which to comprehend the ways in which environmental problems related to the dam are perceived and how different actors discursively and materially frame and enact strategies to forward their interests based on their perceptions of the extent of the problem. The literature on the politics

of scale does not fully explicate a perspective on power, and for that reason, the study draws on additional perspectives on power, knowledge and authority to better understand the dynamics of the Edison Gorge Dam controversy.

Organization of the thesis

Chapter Two provides a brief history of dam removal in the United States, followed by an account of the dam removal on the Cuyahoga River. Further, it examines a detailed chronological development of the Edison Gorge Dam controversy.

Chapter Three investigates the existing scholarship on politics of scale to understand firstly, how the stakeholders define the environmental consequences of the Edison Gorge Dam that fit into their scalar boundary and secondly, to comprehend the ways by which the stakeholders create scales and operate on multiple scales in a process of rescaling. The second section of the chapter focuses on the literature on power in the form of knowledge/expertise and authority, in order to understand better the means by which different stakeholders attempt to gain advantage in the conflict.

Chapter Four discussed the research design and methodology applied in this study. It states the research questions along with a detailed account of different data sources for the thesis. Data was analyzed using a form of discourse analysis that begins with categorizing data into broad data coding categories and subcategories.

Chapter Five depicts the analysis for the thesis. The entire chapter is divided into two broad sections. The first section tries to comprehend how the stakeholders use scales of operation to define the environmental consequence of the dam and then frame and enact strategies to perform tasks on multiple scales. This section uses the lens of scalar politics to focus on the tensions between human and environmental processes and the scale scholarship that

focus on the processes of rescaling. The second section of the chapter examines the ways by which the stakeholders deploy, attain and sustain power in the form of knowledge/expertise, authority, regulatory power versus the power of the NGOs. Finally, I narrowly focus on the ways by which money motivates the stakeholders in recovering lost expenses, in pursuing future projects and forgo expenses for dam removal to gain advantage in the controversy.

Chapter Six provides a summary of the research findings. In this chapter, I explain the relevance of the study, its limitations, and suggest future possibilities for research in the field of small-dam removal in the United States.

CHAPTER II

BACKGROUND

This chapter begins with a brief account of dam decommissioning in the United States. The chapter then provides a history of dam removal on the Cuyahoga River followed by a detailed chronological development of the controversy over the removal of the Edison Gorge Dam on the Cuyahoga River.

Dam removal in United States

The United States has over 76,000 large dams (Heinz Center, 2002). In addition, the United States has an estimated 2 million smaller (low head) dams (Graf, 1993 in Heinz Center, 2002). Dams play significant roles in providing nearly 10 % of the electricity supply in the United States. Further, dams function to control flooding; provide water supply; and support recreation and navigation (Heinz Center, 2002).

In the United States a large number of small dams have been removed or have been considered for removal (Doyle et al., 2000). The economic, social, and environmental costs of dams made economic sense decades ago in the United States. However, due to the aging of dams, they currently pose serious economic and ecological problems (Doyle et al., 2003). Within the past few decades, more than 500 dams have been decommissioned in the United States, while less than 10 have been decommissioned in the rest of the world during the same period (WCD, 2001; IRN, 2002 as referred by Stanley and Doyle, 2003). Most of all US dams decommissioned have been small dams (Doyle et al., 2000). The removal of dams in the United States has accelerated from about 20 dams/decade in the 1960s-70s, to about 100 dams during the 1980s, to about 160 dams in the 1990s (Doyle et al., 2002; Poff and Hart, 2002 as referred by Stanley and

Doyle, 2003) and during 2002 alone, 63 dams were removed (American Rivers, 2002 as stated by Stanley and Doyle, 2003).

Small dam removals and the subsequent effects have thus become a major concern for the scientific community (Doyle et al., 2003). At the same time they are often the subject of prolonged public debate and controversy. Reasons for removing dams include issues, such as “structural obsolescence, safety considerations, legal and financial liability, dam site restoration, ecosystem and watershed restoration, restoration of habitat for riparian or aquatic species” (Heinz Center, 2002: 4). Each of these issues can give rise to controversy. Majority of dams in the United States have exceeded or are close to their 50-year life expectancy of use as determined by FEMA (1999). Enormous expenses incurred in dredging reservoirs and in accomplishing structural repairs have become a cause of concern to the dam owners. Cost benefit analyses have shown that 1.7 times more cost would be incurred to restore than to decommission the Edwards Dam on the Kennebec River, Maine (Heinz Center, 2002; Doyle et al., 2003). Hence controversy over dam removal can be expected to continue.

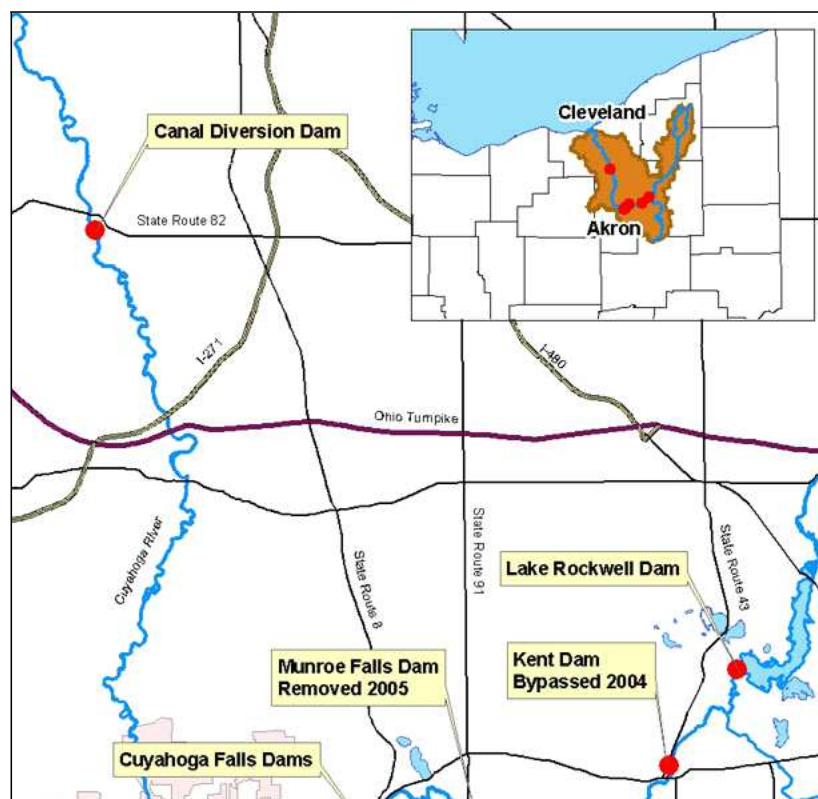
Ecosystem restoration arguments are likely to be the source of the most highly debatable reasons for dam removal. There exists difference of opinion about the impacts of dam removal on the functioning of the river ecosystem (Heinz Center, 2002). Over time, dams have altered “stream flows, water quality, sediment loads, species diversity and abundance for aquatic and riparian terrestrial ecosystems” (Heinz Center, 2002: 20). The controversy over the Edison Gorge Dam removal on the Cuyahoga River is related to restoring the ecosystem of the river. The presence of the Edison Gorge Dam on the Cuyahoga River has disrupted water quality especially behind the dam and disturbed the aquatic life of the river. The dam currently is non-functional, so concerned government and non-government agencies such as Ohio EPA, City of

Cuyahoga Falls, Cuyahoga RAP, and Friends of Crooked River among others would like to see the dam removed. An electric company (Metro Hydroelectric Company) and the dam owner (currently First Energy) want to generate hydropower at the dam site in order to keep the dam in place. Attempts to restore the river's ecosystem by concerned stakeholders and, on the other hand, attempts to retain the dam for power generation by the electric company and dam owner have provoked controversy in the case of the Edison Gorge Dam.

Dam removal on Cuyahoga River

Originating in north-east Ohio in Geauga County, the Cuyahoga River, traverses for 100 miles and flows through the center of Cleveland prior to entering into Lake Erie. The Cuyahoga River, which is one of fourteen American Heritage Rivers¹, follows a horseshoe pathway (The Plain Dealer, June 1999), and depicts a striking example of a river that has been greatly reworked by dams and other structures for almost two hundred years.

¹ American Heritage Rivers are designated by the United States Environmental Protection Agency (EPA), with the goal of “fostering community empowerment, while providing focused attention and resources to help river communities restore their environment, revitalize their economy, renew their culture and preserve their history” (USEPA official website).



Source: http://www.wcpn.org/specials/7th_generation/dams.html

Fig 2.1: Dams on the Cuyahoga River

Since the mid 1800's, a series of dams were constructed that have harnessed the power of the Falls² region of the river. The power generated was used for running mills, turbines and in cooling pools (Friends of Crooked River interviewee). Besides power generation, the Cuyahoga River has been used for navigation and recreational purposes. Dams on the Cuyahoga River have served the purpose of generating power and supplying water for domestic and industrial purposes. Heavy manipulation of the river by dams has led to its degradation by “cultural eutrophication (nutrients) toxic substances (PCBs, heavy metals) bacterial contamination, habitat modification and sedimentation. Sources of these contaminants include municipal and industrial discharges, bank erosion, commercial and residential development, atmospheric

² The Ohio EPA divided the Cuyahoga River into the upper, middle and the lower section. The Falls region lies in the middle section of the Cuyahoga River.

deposition, hazardous waste disposal sites, urban storm water runoff, combined sewage overflows (CSOs) and wastewater treatment bypasses”

(<http://www.epa.gov/glnpo/aoc/cuyahoga.html>).

Indeed, by the 1960s pollution levels on the Cuyahoga became so high that the river caught fire several times. During the late 1960s large, black oil slicks present in the river disrupted aquatic life and lowered water quality. On 22 June 1969, the Cuyahoga River caught fire; the mishap created generations of Cleveland jokes while the river remained as a site for uncontrolled waste disposal (The Plain Dealer, June 1999). The fire began when oil and debris present in the river ignited, most likely, from a spark that originated from a train moving on a trestle. Witnesses noted that the flames rose up to five stories. The river caught fire in 1936 and twice in the 1950s; however, those incidents attracted only scant attention. The 1969 fire on the river did attract the attention of the public. It soon emerged as a driving force for the environmental movements in the United States. Subsequent efforts to clean the river were fruitful. In 1972, the Clean Water Act was passed by the U.S. Congress that prohibited disposal of industrial wastes in the national waterways. The Clean Water Act along with the construction of waste water treatment plants and a decrease in the polluting industries in the subsequent time periods assisted in the rehabilitation of the Cuyahoga River (The Plain Dealer, June 1999).

More recently, environmentalists have argued for the decommissioning of dams that have hindered the flow of the Cuyahoga River. Dams have caused water stagnation behind the dam leading to the growth of algae and other pollutants that adversely affects the health of the river's aquatic life. More specifically, the middle part of the Cuyahoga River has been unsuccessful in satisfying the Federal Clean Water Act's prescribed water quality standards. To accelerate flow rates and to prevent water stagnation behind the dam, the Ohio EPA

(Environmental Protection Agency) recommended to decrease the height of the Munroe Falls Dam and to modify the Kent Dam (Fig: 2.1) (The Plain Dealer, June 1999, January 2006). However, deciding on the fate of these dams had been a subject of controversy. After considerable debate, the Kent Dam and the Munroe Falls Dam were decommissioned in 2004 and 2005 respectively (www.dnr.state.oh.us/water/dsafety/lowhead_dams).

The decommissioning of the Munroe Falls dam was expected to allow the portion of the Cuyahoga River “from Lake Rockwell, north of the city of Kent, to the Cuyahoga Falls near Akron” (The Plain Dealer, Sept 2005) to flow without interruption. The removal of the dam would enhance fish habitat, fish migration, increase oxygen concentration; and increase the availability of fish food. It has been argued that if the dam were in place, the city of Kent and Summit County would have to incur significant expenses to upgrade their sewage treatment plants (The Plain Dealer, Sept 2005). However, those arguing against decommissioning considered that the Namesake Falls and the historic grist mill would be lost in case the dam is removed. The 12 foot Munroe Falls Dam was constructed in 1818 to power the grist mill. The dam had been a symbol of pride for the local residents for years. A paper recycling business flourished because it was able to draw 100,000 gallons water from the dam (www.munroefalls.com).

According to the Kent Environment Council the removal of the Kent Dam was a subject of controversy as well because the purpose of this dam was to re-direct water that previously flowed through a canal where an old lock existed. However, the people of Kent were so habituated to the presence of the dam that it became an icon for the city of Kent. Public support for decommissioning of part of the dam structure came only after a time consuming process.

The Cuyahoga Falls Dam on the Cuyahoga Falls and the Canal Diversion Dam at

Berksville were among the other dams that were being considered for decommissioning (fig:2.1). By early 2006, the Cuyahoga (Remedial Action Plan) RAP, the Ohio EPA, and the Cuyahoga Valley National Park authorities discussed about the possibilities of freeing the river at Berksville. It would enable the river to flow without interruption for 45 miles between Akron and Cleveland that would enable the fish population to migrate and breed in the cleaner parts of the river. The 8 foot high and 160 foot long dam at Berksville served the Ohio and the Erie Canal. The Ohio and the Erie Canal traverses through the Cuyahoga Valley National Park that were build during the 1820s. The part of the canal that flows through the park contains water and enables the park rangers to describe one of its oldest locks. On the other hand, about 10 miles of water quality is disrupted upstream into the canal because of the dam. The use of pumps instead of the dam to direct the river's water into the canal has been proposed (The Plain Dealer, January 2006). Thus the existence of the Berksville Dam, as does the presence of other dams disrupts the aquatic life of the river in several ways.

History of the Edison Gorge Dam and rise of controversy

Currently, there exists controversy in determining the future of the Edison Gorge Dam. The 60 foot high dam, built in 1912, is located in Akron near the boundary between Akron and Cuyahoga Falls. The dam was constructed by the Northern Ohio Traction & Light Company (NOPL) in order to produce hydropower for electric lights and trolleys. The other purpose of the dam was to produce cooling water for a thermal plant (Pre Application Document, 2005; interview with MHC). In 1929, the NOPL deeded 144.47 acres of land surrounding the dam to the Akron Metropolitan Park District. NOPL retained the right to use the Cuyahoga River and its embankment. The Akron Metropolitan Park District later formed the Metro Parks Serving Summit County. Metro Parks manages the 144.47 acres of land along

with adjoining ten more acres (www.Fallsnewspress.com; FERC Order Denying Rehearing, Oct 2007). The NOPL later formed the Ohio Edison Company by combining with other companies. In 1958, the hydropower operation was stopped; and in 1991 the thermal power plant was removed. Ohio Edison Company discontinued hydropower operation because water flow was intermittent and low electricity was being produced; consequently, the plant and pen stock were dismantled (Metro Parks Motion to Intervene, 2008; interview with MHC). To make the dam structure stable, in the beginning of 1980s, the Ohio Edison added concrete to the base of the dam that was previously hollow at a cost of \$ 3.4 million (Akron Beacon Journal, August 1988). Ohio Edison through an easement conferred the right to use the dam; its waters, and embankments to First Energy, the exact time of which is unknown (Pre Application Document, 2005; interview with MHC). Thus presently the right to use the Edison Gorge Dam rests with First Energy.

Several entities wanted the Edison Gorge Dam to remain in place. They wanted to regenerate hydroelectric power at the dam site. In the 1980s, Akron Associates and Cuyahoga Falls Hydro Associates each filed for preliminary permits³ to produce hydropower with the Federal Energy Regulatory Commission; each company was refused. In 1998 a permit applicant named Universal Electric Power constructed a hydroelectric generator on the dam site (Time Line of Significant Events: Proposed Hydro facility in Gorge Metro Park; interview with Keel Haulers Canoe Club). The existing non-operational generator (fig 2.2) is regarded as aesthetically displeasing by the park visitors. The state of Ohio issued a “Cease and Desist order” in October 2000. The order referred to many occasions in which Universal Electric Power made incorrect claims to investors. In late 2003, Universal Electric Power finally went

³ The Federal Energy Regulatory Commission issues the preliminary permit for a period of three years. During this time the “permittee conducts investigations and secures data necessary to determine the feasibility of the proposed project” (Order Issuing Preliminary Permit, March 2005)

out of business (Time Line of Significant Events: Proposed Hydro facility in Gorge Metro Park).



Source: Photo taken during field work, summer, 2008

**Fig 2.2: Demonstration hydroelectric facility at the dam site by
Universal Electric Power**

Metro Hydroelectric Company (MHC a subsidiary of Advanced Hydro Solutions located in Fairlawn) submitted a preliminary application to the Federal Energy Regulatory Commission (FERC) in 2003. The purpose of the application was to obtain a preliminary permit in order to build new infrastructure for producing hydroelectricity (Great Lakes Aquatic Habitat Newsletter, 2005). Proposed new project facilities include a “new power house, new turbines, new penstock, extended access roads and new transmission lines” (Pre Application Document, 2005: 2-1). The expected power to be generated ranged between 10,000 and 12,000 MW hours (www.fallsnews.com; Pre Application Document, 2005: 2-3).

The easement reserved NOPL and its successor’s right to produce and transmit electricity. In September 2004, First Energy transferred the easement to the Metro Hydroelectric

Company (MHC) to “develop, construct, operate and maintain” hydroelectric power facility at the dam site (Appendix E Pre Application Document, 2005: 3). An agreement between First Energy and MHC “Non-Exclusive Easement for the Investigation and Potential Development of Property to Produce Hydroelectric Power”, (Appendix E Pre Application Document, 2005: 1 filed by MHC to Federal Energy Regulatory Commission), granted MHC the right to “investigate the feasibility of generating hydroelectric power on the waterway located on such property, and if feasible, to develop, construct, operate and maintain the necessary power facilities needed to generate and sell such hydroelectric power” (Appendix E Pre Application Document, 2005: 1). First Energy later signed a contract with MHC in which First Energy agreed to buy power from MHC for 20 years (interview with MHC).

After MHC filed the Pre Application Document⁴, the FERC issued a preliminary permit. During the three year period, MHC was expected to perform studies to determine the consequences of power generation on the river and the park ecosystem. On March 15, 2005 the Federal Energy Regulatory Commission (FERC) issued the preliminary permit to MHC to investigate whether the project was feasible. On May 5, 2005, MHC started an Integrated Licensing Process⁵ to conduct the necessary studies. To that end, MHC submitted a “Notice of Intent” and a “Pre-Application Document” with the FERC (FERC Order Denying Rehearing, Oct 2007). The Pre Application Document required MHC to provide the list of studies that they would conduct to decide how far the project was workable and also they were required to provide a schedule of their proposed study plans.

⁴ A potential applicant files a Pre Application Document with the FERC. The document “serves as the foundation for issue identification, study plan development, and the Commission’s environmental analysis”. It also “sets forth the applicant’s proposed schedule for completing application preparation and filing the application with the commission” (Handbook for Hydroelectric Project Licensing, FERC website, April 2004).

⁵ Integrated Licensing Process starts when a potential applicant “files its NOI and Pre Application Document” with the FERC. The process involves a three year period. The Notice of Intent (NOI) contains information about the applicant’s intent, name, address, project number, location, type of objects licensed and installed capacity of the facility. (Handbook for Hydroelectric Project Licensing, FERC website, April 2004)

Metro Parks opposed MHC's proposed project. They filed study requests to the FERC. In a letter to FERC in August 2005, Metro Parks restated their objections and criticized the standard of the Pre Application Document. They officially submitted study requests to FERC. Metro Parks filed letters with the FERC in June 2006 objecting the proposed project to be against their mission statement. They opposed the project since it will lead to adverse impact on the park land's environment, aesthetics and its recreational values. In return, the project would generate a very small amount of power. Metro Parks' officials claimed that MHC 2004 easement was invalid because it was based on a deed agreement that was unused for nearly 50 years. The 1929 deed allowed the Ohio Edison's prior to 1958 functioning power facility to function and provided them the right to use the river. However, in 1958 the hydropower generation was stopped (Motion to Intervene of Metro Parks, April 2008). According to Metro Parks' authority, a law allows one to possess land that they have used with the knowledge of the property owner without any step taken against it for 21 years or longer (Cuyahoga Falls News-Press, August, 2006). In a letter to FERC (Dec, 2005) and in their study requests, Metro Parks wanted MHC to perform a full inventory of the Gorge Metro Park and the Cascade Valley National Park for the purpose of knowing the species diversity of the park ecosystem. However, MHC rejected Metro Park's study requests and regarded them as irrelevant to the study (Letter to FERC by MHC, Dec 2005).

Taking into account the suggestions on study plan by concerned stakeholders along with Metro Park's study requests, on October 13, 2005 and later revised on February 8, 2006, MHC filed its proposed list of studies to the FERC. These studies were required for the purpose of securing license from FERC. FERC reviewed MHC's list of studies and issued a "Study Plan Determination" on March 9, 2006. FERC accepted MHC's revised plan but recommended some

changes (FERC Order Denying Rehearing, Oct 2007). The approved plan of February 2006 identified eight study areas: “1) aesthetic (visual, noise, odors) impacts; 2) recreational and socioeconomics; 3) protected plants and wetlands; 4) grading, geotechnical, slope stability and erosion evaluation; 5) cultural resources; 6) Indiana Bat/Bald Eagle; 7) aquatic life/use attainment, water quality and minimum flows; and 8) combined sewer overflow impacts” (FERC Order Denying Rehearing, Oct 2007). All the studies included a timeline for collecting data and finishing the study and had to adhere to stipulated time periods.

The “Final Study Plan Determination” issued by FERC disregarded Metro Park’s study requests as a result on March 23rd 2006, Metro Parks submitted “a formal filing of a dispute” of the study plan. Metro Parks’ NEPA process did not grant them legal authority hence FERC refused the filing of the dispute. Since MHC did not contain study requests made by Metro Parks in their “Final Study Plan” on May 1st 2006, park commissioners passed a resolution disregarding the easement and prohibited MHC’s entry to the park property (Letter to FERC by Metro Parks, May 2006).

The firm step taken by Metro Parks in denying access to MHC to the park land to conduct the necessary studies instigated MHC to file a lawsuit in Federal District Court in Akron against the Metro Parks on July 24, 2006. They filed the case in order to move ahead with their study plans. MHC’s allegation demanded for a “declaratory judgment” from the court that they had “valid property rights to the property based on the rights reserved to the grantor in the 1929 Deed, and the assignment of those rights in the 2004 Non-Exclusive Easement Agreement between Ohio Edison and the MHC” (Study Plan Progress Report by MHC, March 2007). Besides, MHC wanted to move forward with their study plans since they were already preparing to undertake the feasibility studies i.e. (the environmental,

socioeconomic and recreational studies) necessary to initiate the project (Cuyahoga Falls News-press, August, 2006).

The court allowed MHC to execute studies in the park temporarily. The Federal Court granted a “temporary restraining order” on August 14, 2006 to MHC to conduct the required studies on park property. Metro Parks did not allow MHC to enter into their land after the ten days “temporary restraining order” was over. A hearing took place on “MHC’s Motion for Preliminary Injunction”. The court directed Metro Parks and MHC to arrive at a consensus regarding entry to the park. However, no common ground was arrived. The park continued to prohibit MHC from entering the property. On September 25, 2006 the park filed “a Motion to Dismiss MHC’s Complaint” with the FERC (Study Plan Progress Report by MHC, March 2007). On October 5, 2006 Metro Parks in the United States District Court filed an “Opposition To Amended Motion For Preliminary Injunction”. MHC did not agree on the “Motion to Dismiss”. On February 20, 2007 the “court overruled the motion” by “Memorandum Opinion” (Study Plan Progress Report by MHC, March 2007). The court on February 21, 2007 issued a “Preliminary Injunction Order” that gave MHC the right to enter into the park and conduct the necessary studies. However, the court did not allow MHC to conduct the geothermal studies since according to the court it would damage many trees and destroy soil stability. Based on the court’s “Preliminary Injunction Order” on March 2, 2007, Metro Parks filed a “Notice of Appeal” (Study Plan Progress Report by MHC, March 2007). However on May 25, 2007 the US Court of Appeals disagreed with the attempts of MHC to obtain a “Preliminary Injunction” to enter into the property (FERC letter to MHC, June, 2007).

MHC’s failure to carry out the necessary studies within stipulated time period lead FERC to terminate the “Integrated Licensing Process (ILP)” on June 14, 2007 without

prejudice. MHC could file a “Notice of Intent” and “Pre Application Document” if MHC were successful in gaining access to the park and carry out the necessary studies and proceed with the filing of a fresh ILP (FERC letter to MHC Terminating IPL, June 2007). Metro Parks objected to the request of MHC for “reconsideration of the Letter Order” filed on June 28, 2007 (Letter to FERC by MHC, August 2007). On February 29, 2008 the three year preliminary Permit expired. Since then MHC has not filed a new license application with the FERC (interview with MHC).

Currently, MHC lack any entry to the park and the three year preliminary permit period has ended. The court will determine whether MHC has right to use of the dam site. The court battles fought between Metro Parks and MHC has been over the issues of property rights, and reservation of rights in the easement to Metro Parks.

Presently Metro Parks have successfully denied access to the MHC to perform FERC required studies in their property. Park authorities argue that the federal court lacks jurisdiction to decide on property right issues. Federal Jurisdiction for hydro power licensing does not encompass property rights. Besides, in the 1929 Deeds, rights were conferred to the Metro Parks (Metro Parks Brief In Support Of Motion To Dismiss Complaint, September 2006). According to MHC interviewee, Metro Parks took the matter to the circuit court to find out whether federal court has jurisdiction. Currently, Metro Parks and MHC are waiting for the circuit court to decide on the “Preliminary Injunction”. If the circuit court determines that the federal court lacks jurisdiction over property right issues then the state court will deal with the issue. The state court will have to determine on whether MHC be granted access to the park. If MHC can enter into the park property then MHC will have to begin the licensing process afresh.

In July 2004, FERC organized meeting that was attended by approximately 400 people and most of them were against the proposed project (Great lakes Aquatic Habitat News, 2005; Friends of Crooked River Letter to FERC, February 2006). The attendees opined that it is important to determine the feasibility of decommissioning the Edison Gorge Dam in order to recover a portion of the Cuyahoga River. The attendees regarded that it is not possible to restore the river without removing the rest of the dams. First Energy wanted to shirk away from any environmental and financial liabilities by pursuing the license. The proposed plant is considered to produce power that is less than 2.5 Megawatts that can provide electricity to only a thousand homes (www.wcpn.org; Metro Parks' interviewee). Many organizations have raised their voice against the plant's effect on the river.

NGOs like the Keel Haulers Canoe Club argue that decommissioning of the dam would enhance white water tourism. On the other hand, if the project moves forward the dam will remain for another fifty years. Since the Clean Water Act, billions of dollars have been used in restoring the river by public treatment works and private companies. According to the Keel Haulers Canoe Club' letter to FERC, Jan 2006, a stretch of 800 feet of the river will be dewatered by the facility. It would profoundly aggravate combined sewer overflow (CSO) pollution and would be detrimental to human and aquatic life. During the time of constructing the facility soil erosion and siltation into to river will magnify. Those who were against the project concurred that the generation of minimal amount of power in exchange of loss of public benefit by a profit driven company working on public land was unsustainable.



Source: Photo taken during Field work, summer 2008

Fig 2.3: Metro Park’s effort in gaining public support against the project

Government organizations and NGOs such as the Ohio EPA, Friends of the Crooked River, Keel Haulers Canoe Club, and Kent Environment Council were in favor of dam removal. It has been argued by stakeholders who are in favor of dam removal that decommissioning of the Edison Gorge Dam and other two dams on Cuyahoga Falls would allow the Cuyahoga River to meet water quality standards and to fulfill the purposes of the Clean Water Act for 4-5 miles. Other stakeholders including MHC and First Energy claim that dam removal will cost \$5–10 million (Great Lakes Aquatic Habitat Newsletter 2005).

In the controversy over the Edison Gorge Dam, as in innumerable similar cases, there exists a complex interplay of vested interests of different stakeholders. In the case of Edison Gorge Dam the stakeholders are both Federal and State agencies, the hydroelectric company, dam owner and non-government organizations. Politics prevail at different scales among various stakeholders who are involved in the conflict. Each stakeholder has their own agenda

which is largely shaped by the way they perceive the scale of the environmental problem with respect to the existence or removal of the Edison Gorge Dam and they frame and enact strategies to accomplish their goal accordingly. In the process the political scale of the stakeholders gets reshaped and rescaled and power embedded in specific scales becomes effective in forwarding interests.

Conclusion

This chapter depicted an account of dam removals in the United States. The account focused on dams that have been removed or are being considered for removal on the Cuyahoga River with emphasis on the conflict over the future of the Edison Gorge Dam. The following chapter reviews the scholarship on the politics of scale as well as work on the nature of power, in order to establish the conceptual lens through which to examine the empirical controversy over the survival of the Edison Gorge Dam.

CHAPTER III

LITERATURE REVIEW

The purpose of my study is to understand how the stakeholders in the Edison Gorge Dam controversy define the environmental consequences created due to the presence of the dam. They define the problem in a manner that fits within their respective scale of operation. The stakeholders frame and enact strategies to forward their interests accordingly. I also explore how power in different facets play out as the controversy is woven by the stakeholders. The literature on scale and power provides the conceptual lens through which to understand the complexities of the debate. The literature on scale particularly the concepts dealing with the tensions between human and environmental processes and rescaling provide insight into the ways in which the stakeholders define the geographical scale of the environmental consequences of the problem and also on the processes of rescaling. The literature on power aids in my understanding of the ways by which power exists and is created along with scale in the controversy.

Politics of Scale

Within the discipline of geography, Marston (2000) argues that scale has been a major focus of research. However, the concept of scale has been applied in different ways. “*The dictionary of human geography*” (Johnston et al., 1994 quoted in Marston, 2000: 220) defines scale as a “level of representation”. According to Howitt (1998 as stated by Marston, 2000: 220-221) scale is comprised of three aspects: “size, level and relation” in which “size” includes “(census tract, province, continent)”, “level” represents “(local, regional, national)” and

“relational element” represents “space, place and environment”.

Scale has been referred to as the “physical dimension of observed entities and phenomena” by ecologists (O’Neill and King in Paterson and Parker, 1998: 7). The “conceptual difference between scale (as a measurable physical quantity) and level (the category of a thing)” has been recognized by ecologists (Allen, 1998 as referred by Sneddon, 2003: 2233). Social theorists such as Swyngedouw (1997 quoted in Marston, 2000: 221) considers scaled places to be “the embodiment of social relations of empowerment and disempowerment and the arena through and in which they operate”. Others like Adams (1996 as referred by Marston, 2000: 223) argue that politics influences the manner in which stakeholders “construct their own ideas and ideologies about scale”.

Brenner (1997) states that globalization of capital over approximately thirty years have lead to “reconfiguration of the spatial form of the nation state [...], embodied above all in the transformation of the spatial scale on which state power is deployed” (275). During 1970s and 1980s, studies were conducted on “the sociospatial *content* of particular scales [...] as sites for specific kinds of political – economic and sociocultural activities” (Brenner, 2001: 603). But recent scholarship on scalar politics emphasizes on “explore[ing] their changing positionalities in relation to other geographical scales and scaling processes” (603). This new focus has enabled scholars to examine the “processes of rescaling” (Brenner, 2001: 603).

The politics of scale literature has been used to analyze issues as the “uneven development of capital and the geography of industrial location”; “the changing geographies of state power, political regulation and sociopolitical identity”; “the organizational structures and strategies of labor unions, political parties and social movements” (Bernner, 2001: 592). In the course of this work, several concepts have been developed to further explicate the scaling

process. Among these, this study focuses on the concept of rescaling and tensions between human and environmental processes / scales in order to understand scalar politics over water management and hydropower generation on the Edison Gorge Dam.

Rescaling

Rescaling refers to the process “in which social actors in a sense “relocate” their operations from one scale to another” (Herod and Wright, 2002: 10). Scale theorists were engaged in conceptualizing issues such as “scale jumping” (Herod and Wright, 2002: 10); changing “socio-spatial relations” (Swyngedouw, 1997: 145), until Brenner (2000) drew emphatic focus on the “processes of rescaling” (362). Brenner (2000) argues how in the “period of global restructuring” “social production” of scale has emerged as important to “critical urban theory” (361-362). Brenner (2001) discusses the emphasis of new scale thesis that focuses on the “processes of rescaling” (603). Brenner (2001) avers that thorough “sociopolitical struggles” continuously produce “entrenched scalar configurations” through the “processes of rescaling” (592, 603) and hypothesizes that the “establishment and reorganization of scalar hierarchies creates geographies [...] of inclusion/exclusion and domination/subordination” (607-608) which privileges some stakeholders over the other. He calls for the need to consider “scalar configurations [as] socially produced and politically contested through human social struggle rather than being pre-given or fixed” (Brenner, 2001: 604). Negotiation “through different scales” and operating “on multiple scales at the same time” is a way in which “social actors produce new scales” (Herod and Wright, 2002: 10). Swyngedouw (1997) explains how globalization has led to rescaling from “the national scale both upward to supranational [...] scales and downward to the scale of individual body, the local, the urban, or regional configurations” (156). Similarly Herod and Wright (2002: 10) concurs that rescaling requires “scale

jumping” from a specific scale to several others. “Scale jumping” therefore leads to rescaling of a process that involves a shift in levels (Smith, 1993; 1995; Swyngedouw, 1997; Herod and Wright, 2002). Swyngedouw (1997: 172) explains how globalization brings about “rescaling of the state” that has been attained through the emergence of “new elite coalitions” as well as involves “exclusion or further disempowerment of social groups” (Swyngedouw, 1997: 172).

Rescaling has been used as strategies by stakeholders interested in the Edison Gorge Dam as they dispute the future of the dam. In the following section I explore concepts of power as knowledge, authority and the role of state that have received considerable attention by scale theorists (regulatory power) with respect to the power held by the NGOs.

Scale and Environmental processes

In the scale literature the notion of environmental scales or NGOs as notable stakeholders in the production of scale has received less emphasis (McCarthy, 2005). McCarthy (2005) argues that the origin of the literature on scalar politics have been in “political geography” and “branches of Marxist theory” where the major thrust is “on labor, the state, and the urban” (735) and as a result of which nature and other important areas of research have been ignored. McCarthy (2005: 735) believes that “the contested production of socionatures is inseparable form the contested production of scaled social spatialities”. McCarthy (2005) implies that simple “empirical appending of environmental NGOs to the list of labor unions and political parties already investigated as actors in scalar politics” (735) is not enough to know what roles are performed by the players of environmental politics in the production of scales. McCarthy (2005) recognizes the need to understand that “scalar constructions often rely on the successful mobilization and manipulation of myriad non-human actors and processes” (735). However, McCarthy (2005) does not attempt to conceptualize the role of non-human actors in

her paper but analyzes the role “of two environmental NGOs, the Canadian-based International Institute for Sustainable Development (IISD) and the US-based Earthjustice” (738). The NGOs were involved in conflicts over “multilateral trade” and in the “nationalization of production” (738). Through the exploration of the two environmental NGO’s involvement in the political construction of scale, the prominence of environmental NGOs and movements in “constructing and contesting scales” (738) has been highlighted.

Among those who concur with McCarthy, Purcell and Brown (2005: 280) argue that “scales should be seen not as things in themselves with inherent qualities, but rather as *strategies* that are pursued by and benefit social groups with particular social and environmental agendas”. Lebel et al. (2005: 17) notes that “scales are a joint product of social and biological processes”; and Meadowcroft (2002; 169) demonstrates that “environmental problems do not respect political boundaries [but] cut across established jurisdictions”. In order to highlight what meaning “scale complexities” (169) hold for future governance, Meadowcroft (2002) analyzes how current government strategies in the developed world have changed in handling environmental problems. In the words of Meadowcroft (2002),

“The scale of environmental problems can be conceptualized in various ways. In the first place, there is the scale of the *physical impacts* of a given activity on natural processes- the effects of a particular disturbance, and how these are distributed in space and time. Impacts may be confined to a relatively small area or widely dispersed. They may be of short duration or persistent. As time passes, additional consequences of an original impact may emerge, the spatial distribution of effects may alter, or a gradually accumulating burden may provoke an abrupt change in environmental state.” (172)

“Thus it is impossible-on an a priori basis- to determine in advance just which social scales will be relevant as an environmental problem takes physical form: for the scales will be partly determined by the understandings of the actors themselves, and by their interactions as they construct the problem and delimit the possible solution space.” (174)

Meadowcroft (2002: 176) avers that “the tendency for governments to draw social patterns

(including business and NGOs) into dialogue to develop agreed responses to environmental challenges” calls for “a partial opening of previously closed policy networks, and a widening of the range of social actors whose input is considered significant for the social management of environmental problems.”

Similarly, Lebel (2004) and Lebel et al. (2005) emphasizes that conflicts over defining the scale of environmental concerns, determined by the nature of political systems, produce scalar politics. Lebel et al. (2005) examines this aspect with studies from water management in the Mekong region. Due to the intricate nature of human interference in ecosystems it is difficult to determine the exact scales of water management (Sneddon et al., 2002 as referred by Lebel et al., 2005). Molle (2007: 358) argues that water is in a state of “flux” since water continuously changes in “quantity and timing”.

Molle (2007) considers that diverse actors defined by “different political, decision-making, and discursive power and varied access to resources” give rise to “costs, benefits and risks that are distributed unequally” (358). Molle (2007) further argues that interventions into water management affect people elsewhere that make controversies over water use to be more prevalent and hence mutual reliance among water users becomes important.

Sneddon et al. (2002: 666) emphasizes that it is necessary to take note of the interaction between the “physical and ecological processes operating at certain scales and, [...] social processes that may be constructed according to an entirely different scalar logic.” Sneddon et al. (2002) regards that it is implicit in social sciences that conflicts originate and gets solved only within the social realm and therefore the importance of “physical and ecological processes” (667) in impacting controversies have been ignored. Sneddon et al. (2002) believes that studies that analyze water-centered debates should dig deep into how

water as a “socially defined “resource” is embedded within and linked to a complex mosaic of ecological and physical relationships” (668) that are active participants in water-related conflicts. Sneddon (2003) examines this in the case of the Khong-Chi-Mun inter-basin transfer project in northeast Thailand to investigate scalar politics with respect to the role of the state in river basins management.

According to Sneddon et al. (2002), scale plays a crucial role in research relating to “human-environment relations” (665). For ecologists (Levin, 1992; Peterson and Parker, 1998 as referred Sneddon et al., 2002) scale is an important area of focus and at the same time scale emerges as central concept for social theorists (Swyngedouw, 1997 as stated by Sneddon et al., 2002). Besides, water-related conflicts have been on the rise at varied scales in different parts of the globe (Ohlsson 1995; Donahue and Johnston, 1998 as stated by Sneddon et al., 2002). Sneddon (2003) asserts that both ecological and social processes create spatial scales however; human geographers have neglected the role of ecological processes in scalar production. Sneddon (2003: 2235) observes that ecologists as Allen (1998), regards that ““scale becomes meaningful with regard to things only when it is operationalized in its use in a measure in the act of observation” and is thus “tied... tightly to the act of observing””. Therefore, ecologists identify the importance of the observer’s role in determining the scale at which research will be conducted (Sneddon, 2003). Thus it can be gleaned from the work on politics of scale by scale theorists as Meadowcroft (2002) and Sneddon (2002, 2003) that stakeholder’s social and political scale influence their understanding and perception of the scale of environmental consequences and simultaneously the stakeholder’s scale gets shaped by ecological processes. In the “inter-basin transfer project in northeast Thailand” examined by Sneddon (2003: 2229, 2245), “the importance of the claims regarding the forest’s negative impacts” was brought to

the notice of the non-local stakeholders as a result of the “degradation of ecological networks represented by the forest” that “helped mobilize the collection of information on human interactions with and dependence on various forest entities.”

This set of insights from Lebel et al. (2005) and Lebel (2004), Meadowcroft (2002), Arts (2004), McCarthy (2005), Sneddon et al. (2002) and Sneddon (2003) among others has helped me to conceptualize the complex nature of struggles over the fate of the Edison Gorge Dam. However, in my study I do not attempt to directly understand the role of “physical and ecological processes” in impacting environmental conflicts as argued by Sneddon et al. (2002: 667). Rather, I investigate the ways by which stakeholders perceive and define the environmental scale of the problem with respect to the existence of the Edison Gorge Dam. Following Meadowcroft (2002) and McCarthy (2005) I have tried to examine the role of environmental stakeholders in the production of scale who function in political spaces that do not match with traditional jurisdictions.

Lebel et al. (2005) argues that dams play a crucial role in rescaling the benefits of water resources. Dams often provide water resources to different consumers in a disproportionate way whereby areas that gain and those that get adversely affected are different (Beekman, 2002 as stated by Lebel et al., 2005). This is likely to be the problem with respect to Edison Gorge dam if Metro Hydroelectric Company is permitted to generate hydroelectricity and sell power to distant localities. Here too, I have tried to comprehend how the stakeholders in the Edison Gorge Dam controversy connect with others operating at both upward and downward levels following the work of scale theorists as Herod and Wright (2002); Swyngedouw (1997) and Arts (2003) among others. I focus on exploring how the stakeholders partially rescale the politics of the environmental consequences of the Edison Gorge Dam in order to make their

impact felt in the decision-making process. In this study, understanding connections across scales has helped to unravel as to how well the stakeholders are making use of other scales.

Power

My study is shaped by an amalgam of different perspectives on power, which include knowledge/expertise, authority and regulatory power versus power possessed by NGOs. As I interviewed the stakeholders the role of some stakeholders as gatekeepers appeared as an interesting feature. Knowledge and expertise over a field of interest has been influential in enabling certain stakeholders to take a lead role in the conflict. This particular aspect of the conflict instigated me to delve into the theories of power as knowledge and expertise. In that process, I wanted to distinguish between power and authority drawing on the concept of authority from the works of Barnes (in Law, 1986). I was also interested in understanding ways by which the two major groups of stakeholders - state agencies with regulatory power and NGOs lacking regulatory power attained, deployed and sustained power. It instigated me to explore the works of state theorists as well as the works of theorists who narrowly delved with power as possessed by NGOs in environmental controversies.

Sneddon (2003) regards that in environmental controversies scale and power are closely connected. Sneddon (2003) highlights on Latour's (1986) notion of power. Sneddon argues that for Latour (1986 in Sneddon, 2003: 2232), "the key to understanding power relationships is that an 'act' of power is far more contingent on the 'actions of others' than on the individual or group who is typically seen as 'having' power." Sneddon states (2003: 2232) that based "on Latour, Murdoch and Marsden (1995, 372) aver that

"Power is a 'composition' made by many people but attributed to one of them. The amount of power exercised is not related to how much someone 'has' but to the number of actors involved in its composition. So power is an outcome of collective action. Therefore, to 'explain' power (and trace power geometry) we need to examine

how collective action comes about, or how actors become associated, and how they work in unison”

Sneddon (2003: 2241) argues that power is not “some innate quality of specific people or groups” which according to Latour (1986 quoted in Sneddon, 2003: 2241) “over something or someone is a *composition* made by many people” and for Sneddon (2003: 2241) “this composition is made visible in part by its effects on other sets of actors networks.” According to Tuan (1984 quoted in Sneddon, 2003: 2244) “[t]he effects of the exercise of power are everywhere and appear at different scales. In large and complex societies, perhaps the most striking effect is the transformation of nature.” Following Sneddon (2003) it becomes imperative to understand how power and scale operate in environmental politics. However, Sneddon (2003) opines that the role of non-humans has not been brought into the discussions of power. Sneddon (2003) notes that neither does Sharpe et al (2002) contribute much toward understanding of how power operates within the non-human and human spheres when examined together; nor does Foucault engage significantly with the non-human realm. Hence, Sneddon (2003) states that it is necessary to take into account the role of the non-human entities in comprehending how power operates in environmental controversies. To that end, Sneddon (2003) deploys actor network theory to examine how exercise of power create “power effects” (2245) on non-human actors.

Knowledge/Expertise

A formal conception on power has not been developed by scale theorists. However, the politics of scale thesis have been influenced by the works of Michel Foucault, and this study follows suit to some degree. Foucault’s diverse notions of power are connected to particular temporal, spatial and institutional advancements (Sneddon, 2003) which Ball (1992 as described by Sneddon, 2003: 2232) identifies as a “deconstructionist understanding of power”. Dowding (1996: 62) emphasizes on the significance of the proverb “knowledge is power” and argues

that information is a powerful tool in the hands of the actors. Information enables actors to understand their own intentions as well as allows them to trade with it. Dowding (1996) further argues that “[t]he information and expertise that groups have are important. Many groups, because of specialist knowledge, can claim to speak authoritatively on certain issues” (62-63). For Dowding (1996) both information and secrecy help stakeholders to attain power. Ability of stakeholders to keep important information secret from others enable them to attain power. According to Dowding (1996) authority is attained through expert knowledge that enable actors “to speak with authority” (64). “Their spokespersons will be asked to comment in the media, will be sought out for advice and can be important allies for others in policy battles.” (64) This authority acquired through expert knowledge is what Ball (1992 as referred by Sneddon, 2003: 2231) identifies as the idea of “communicative [power] (the ability to persuade)”. I draw on the understandings of Dowding (1996) in my study where in I focus in knowing how knowledge and expertise on various environmental aspects by different stakeholders helped them to gain authority over others.

Authority

Barnes (in Law, 1986: 181) argues that the literature on power do not engage with “the basic nature of power in society”. Barnes (in Law, 1986) claims that research on power have focused on analyzing its definition, presence, measurements, and materials effects. However, almost no account of power exists that interrogates its very essence. Barnes (in Law, 1986) notes that:

“power is often thought of as the capacity to enforce one’s will, to get things done, to press through a sequence of actions, even against opposition. But what is the capacity? What does it consist in? How does an agent (or a role perhaps) with power, differ from one lacking it? It is at this point that most of the literature goes silent.” (181)

In this case study, I draw a distinction between authority as possessed by the stakeholders and power following the ideas of Barnes (in Law, 1986). For Barnes (in Law, 1986: 182) “there are agents with *discretion* in directing routines, who act not in response to predetermined external signs but on the basis of their own judgment and decision”. These, according to Barnes (in Law, 1986: 182), “are the [agents with] powers in the society”. Hence for Barnes (in Law, 1986: 182) “the routine controlled may be made the basis for a threat against others. Thus, as discretion over routines is extended, power is extended and as discretion over routine is lost, power is lost”. Therefore, according to Barnes (in Law, 1986: 182):

“a power directs a routine with discretion, [and] an authority directs it without discretion. All those who direct routines routinely and automatically are thus thought of as authorities. Like powers they switch routines on and off, point them this way and that, combine them together or separate them off. But they do so in response to external indications; the basic pattern of their actions is entirely the product of external constraint. Authority then, power minus discretion.”

The way power and authorities operate should exhibit a “*distribution of knowledge*” that constitutes “a set of instructions or rules according to which the authority is required to act” (Barnes in Law, 1986: 185). Therefore having the authority makes one as an authority on something (Barnes in Law, 1986).

Regulatory Power/Power of NGOs

I focus on knowing how regulatory power exists among state actors which they deploy with discretion in the process of achieving their interests. State scholars (Brenner, 1997, 2000, 2001; Delaney and Leitner 1997) have focused on the role of the state in understanding scalar politics. State theorists have analyzed state structures and the functioning of its agencies in fostering economic growth. Brenner (1997: 276) insists that the state’s spatial scale is a result of a specific “historical geographical configuration of capitalist development”. The “globalization of capitalism” (279) has resulted into considerable rescaling of “state territorial organization”

(Brenner, 1997: 280). However, Leitner and Delaney (1997: 94) emphasize that “politics” is not restricted to “state actions”; “politics” plays out in the power dynamics of both “non-state as well as state actors”. In this case study, state actors include the various state agencies, the city and county level councils and the Federal Energy Regulatory Commission. Each state actor has their stake in the controversy and they possess regulatory power as they engage in framing strategies from their established jurisdiction.

In contrast, I explore the ways by which the NGOs gain power. McCarthy (2005) contends that the role of environmental NGOs in scalar production have remained largely unnoticed by scale theorists. Scholars like Arts (2004: 502) highlights that NGOs have been instrumental in “linking-up of scales” and in “re-articulating scales” in “international politics”. However, there is lack of research that focuses on unfolding ways in which NGOs gain and exercise power with “discretion” (Barnes in Law, 1986: 182-183) in local environmental conflicts. I do not problematize state power (Brenner, 2000; Brenner, 2001) in this dispute although I do attend to the geographical scales at which it is leveraged. I focus in contrast on the ways by which NGOs create, deploy and sustain power with discretion in the course of the conflict over the Edison Gorge Dam.

In a nutshell the above discussion on scale and power, hints at two major gaps in the literature. Firstly, the role of politics in influencing scales over environmental consequences has been neglected and secondly, the ways by which power is gained by some stakeholders in environmental conflicts has not been dealt with by scale theorists. This study focuses on understanding how politics determine the scale at which environmental problem is defined and how negotiations are made to adjust scale of environmental perception within established politically-scaled boundaries. This process follows investigations into the ways in which

stakeholders frame political agendas and enact strategies. Finally the research explores the means by which stakeholders gain power over another in contestation over the use of the river. The project examines how stakeholders work from positions in/at different scales and the degree to which they work across scales in ways that allow them to exercise power or that facilitate their denial of power to others.

Conclusion

The scholarship on scale and power thus has helped me to identify some major themes in the literature that I examine further within the dynamics of the Edison Gorge Dam Controversy. These issues include the scale scholarship on the tensions between human and environmental scales and the concepts of rescaling. Further, within the literature on power as understood by theorists examining environmental conflicts and also as theorized by sociologists, I analyze the concepts of power as knowledge, authority and role of state having regulatory power as opposed to the power held by the NGOs.

CHAPTER IV

RESEARCH DESIGN AND METHODOLOGY

This is a single case study research project. The case is the controversy over the Edison Gorge Dam. A case study “investigates a contemporary phenomenon within its real world context, especially when the boundaries between phenomenon and context are not clearly evident” (Yin, 1994: 13). This study aims at understanding how the different stakeholders perceived and responded to the environmental scale of the problems that would be aggravated with the construction of hydroelectric facility at the Gorge Dam site, how they framed the environmental problem with respect to the political scale of their operation and how stakeholder’s scalar strategies influenced the distribution of power and authority over the use of the river.

In case study research, data collection techniques and ways of analyzing data are varied (Hartley in Cassell & Symon, 2004). This study proceeds with collection of data from multiple sources. The sources of primary data include existing archival records, as well as texts created from conducting semi-structured interviews of stakeholder’s in the dispute. Discourse Analysis was used to analyze the texts which involved the creation of categories and subcategories as discussed in the following sections of the chapter. Here, I provide a list of research questions.

Research questions

- 1). How do the different stakeholders in the dam controversy negotiate between their understanding of the extent (scale) of the environmental problems at issue, their scale of

- institutional operation, and the political scale(s) at which the decision will ultimately be made?
- 2). How do stakeholders (discursively) frame their political agendas and actions and (materially) enact one or more scale strategies?
- 3). Do multiple scale strategies employed by stakeholders empower them and affect redistribution of influence over the use of the river? If so, how?

Data Collection

The sources of data include semi-structured interviews and the archival record of the decision-making process over hydropower generation at the site of the Edison Gorge Dam. This archive includes numerous letters written by different government agencies, non-governmental organizations (NGOs) and the hydroelectric company to the Federal Energy Regulatory Commission, as well as court proceedings and reports conducted on various aspects of the environmental impact of the dam by different stakeholders. All data including court proceedings are in the public record and were obtained from the Federal Energy Regulatory Commission Online (FERC) e-library; docket no p-12484. The lists of data that I used in my analysis are as follows:

- “Pre Application Document” on “Ohio Edison Gorge Dam, Metro Hydroelectric Project, Akron, Ohio 44310. Prepared by Metro Hydro Electric Company, LLC 150 North Miller Road, Suite 450 C, Fairlawn, Ohio 44333”. May 2005. *It describes the location of the project, facilities and operations, the current status of the environment, primary topics and description of studies that MHC intent to conduct.*
- “The Initial Study Plan” “prepared by Metro Hydro Electric Company, LLC, 150 North Miller Road, Suite 450C, Fairlawn, Ohio 44333”. October 2005. *It describes the location of the project, regulatory information, description and scope and timeline of*

required studies, and list of studies not included by MHC.

- “Summary of Study Plan Comments and Responses to Comments” by MHC. Initial Study Plan Meeting (11/12/2005).
- “Study Plan Progress Report” by MHC, 03/09/2007. *Report presented to the FREC after the “Final Plan Determination”.*
- Letter to FERC by MHC dated 10/10/2004. *It provides a description of concerns raised during comment period by stakeholders.*
- Letter to FERC by MHC dated 04/14/2006. *“Notice of Site Consultation for the access road and Boring locations” on April 24, 2006.*
- Letter to FERC by MHC dated 03/03/2005. *“Notice of Intent” submitted by MHC to file an “application for an original license for the proposed Metro Hydroelectric project”.*
- Letter to Metro Park by MHC dated 12/15/2005. It describes the *“Responses to comments from Metro Parks Serving Summit County”.*
- “Order Issuing Preliminary Permit” by FERC to MHC issued 03/15/2005.
- “Scoping of environmental issues for the proposed Metro Hydroelectric Project” by FERC issued 07/01/2005.
- Letter by FERC to MHC with *“Additional Study Request”* dated 08/30/2005.
- Letter to FERC by Metro Parks as a *“formal filing of a dispute regarding the proposed study plans” for the proposed project* dated 03/23/2006.
- Letter to FERC by Metro Parks as *“a formal objection” to the project* dated 08/24/2005.
- Letter to FERC by Metro Parks as *“formal requests for studies related to the proposed construction of hydroelectric facility in the Gorge Metro Park”*

dated 08/30/2005.

- Letter to FREC by Metro Parks “*as a formal objection*” to the project dated 06/20/2006.
- “Interoffice Memorandum” by Ohio EPA *on fish and sediment data on the Cuyahoga River near the Gorge Dam*, dated 06/17/2005.
- Letter to FERC by Ohio EPA dated 04/18/2007 “*Comments on Metro Hydroelectric’s Study Progress Report*”.
- Ohio Department of Natural Resources’ “*Comments to FERC*” on Metro Hydroelectric project” dated 08/31/2005.
- Letter to Metro Park by Summit Soil and Water Conservation District on “*Erosion and Sediment Control Review for the Metro Hydroelectric Project*” dated 11/1/2005.
- Comments on “Pre Application Document” by American Whitewater and Keel Hauler’s Canoe Club dated 05/02/2005.
- Letter to FERC by Friends of Crooked River dated 08/29/2005 comments on “*Pre Application Document*”.

In addition, several court proceedings shaped the dynamics of the controversy in important ways. The list of court proceedings is as follows:

- “Motion of Plaintiff” MHC for “Temporary Restraining Order and Preliminary Injunction” in the United States District Court Northern District of Ohio dated 07/24/2006.
- “Brief in Support of Motion to Dismiss Complaint” in the United States District Court for the Northern District of Ohio dated 09/25/2006.
- “Opposition to amended motion for preliminary injunction” in the United States District

Court for the Northern District of Ohio dated 10/05/2006.

- “Reply Brief in Support of Motion to Dismiss Complaint” in the United States District Court for the Northeastern District of Ohio dated 11/06/1006.
- “Opposition to Leave to File Surreply Against Motion to Dismiss Complaint” in the United States District Court for the Northern District of Ohio dated 11/15/2006.
- “Transcript of Preliminary Injunction Hearing” before the United States District Court Northeastern District of Ohio dated 09/08/2006.
- Transcript of scoping meeting with respect to the project held at Sheraton Suites Akron/Cuyahoga Falls dated 07/27/2005.

Semi-structured interviews

One of the primary sources of data for this study constitutes semi-structured interviews. A structured interview offers “very little flexibility in the way in which questions are asked or answered” (Denzin and Lincoln, 2005: 702) On the other hand, a semi-structured interview being flexible and open-ended allow “actually [to] co-construct a mutual understanding by sharing experiences and meanings” (Denzin & Lincoln, 2005: 126).

I carried out semi-structured interviews with the respondents during the period from April-July 2008. I conducted semi-structured interviews with a broad framework that facilitated the scope for both-way communication and conversation. The interviews were carried on for approximately forty-five minutes. The interview was conducted in the offices of the agencies and twice I was asked to conduct the interviews at the residence of the respondent. I conducted 21 person-to-person interviews and 4 informal telephonic interviews. Besides I carried out interviews with staff members and employees of 6 relevant government agencies, 6 non-

government organizations, the hydroelectric company, dam owner and the Federal Energy Regulatory Commission.

Table 4.1: Stakeholders involved in the Edison Gorge Dam Controversy

Stakeholder		Location	Organizational Level
Government Agencies	Ohio EPA	Ohio	State
	Ohio Department of Natural Resources	Ohio	State
	Metro Parks Serving Summit County	Summit	County
	Summit Soil & Water Conservation District	Summit	County
	City of Cuyahoga Falls	Cuyahoga Falls	City
	Cuyahoga Rapid Action Plan	Lower Section of Cuyahoga River from Edison Gorge to Lake Erie	Local
NGOs	American Whitewater	United States	National
	River's Unlimited	Ohio	State
	Ohio Environmental Council	Ohio	State
	Kent Environment Council	Kent	City
	Keel Hauler's Canoe Club	Cuyahoga River	Local
	Friend's of Crooked River	Cuyahoga River	Local
Licensing Agency	Federal Energy Regulatory Commission	United States	National
Dam Owner	First Energy	Ohio	State
Hydroelectric Company	Metro Hydroelectric Company	Fairlawn Akron	Local

I framed questions based on the following major themes. A detailed questionnaire for each of the stakeholders is provided in Appendix A. These themes are as follows:

- What were the role of each stakeholder and the nature of their stake over the existence of the Edison Gorge Dam?
- How did the stakeholders understand and define the nature and extent of the

environmental problem?

- How did the stakeholders gain power over the control of the use of the river?

I located individuals belonging to NGOs, government agencies, hydroelectric company and the Federal Energy Regulatory Commission through target sampling. Initially I used newspaper articles, searched online resources on the Cuyahoga River in general and Edison Dam in particular and also referred to government documents. These sources contained names of the staff members of the organizations and companies involved directly and indirectly in the Edison Gorge Dam controversy. I contacted some of the members of these agencies prior to conducting interview and made a pilot survey of the dam site in fall 2007.

Interview participants were selected by applying the “snowball sampling” method that “take[s] advantage of the social networks of identified respondents to provide a researcher with an ever-expanding set of potential contacts” (Thomson, 1997 quoted in Atkinson and Flint, 2001). As Vogt (1999 quoted in Atkinson and Flint, 2001) argues that a research participant informs the researcher of another participant, in a similar fashion in my research too, one research participant recommended the name of another and helped to expand my contacts.

With regard to the Government agencies, I interviewed two members of the Metro Parks Serving Summit County who have been very active since the time the park learnt from a newspaper article called ‘Green’ about the Metro Hydroelectric Company’s efforts to seek license from FREC. Currently Metro Parks is involved in a lawsuit with Metro Hydroelectric Company. However, both the members refused to be recorded. The Cuyahoga (Rapid Action Plan) RAP was created by the Ohio EPA in 1988 in order to rehabilitate the lower part of the Cuyahoga River that lies between the Gorge Dam to the mouth of Lake Erie. However, Ohio EPA is particularly concerned with restoring the water quality of the river. I interviewed two

members of each agency but one among both has taken the lead role since the beginning of the conflict. I interviewed one member of the Soil Summit and Water Conservation District. The agency has been mostly involved in raising concerns about the effects of the Gorge Dam on soil erosion and slope stability issues. The two members of the Department of Natural resources, Division of Wildlife focused on their concern in protecting the wild life of the affected region. On the other hand, the City of Cuyahoga Falls was not directly involved with the project since the dam is situated in Akron and that lies beyond their jurisdiction. I interviewed two members of the council and had a telephonic interview with one of them.

Among the NGOs, Kent Environment Council was not directly involved with the Gorge Dam controversy. They are concerned with broad environmental issues with a major focus on the city of Kent and the Portage County. I interviewed two members among which one was a telephonic interview. Similarly, Rivers Unlimited had general concerns in restoring the rivers of Ohio that have been dammed. American Whitewater, being a national level organization had general concerns about the project. I interviewed one member of each of these organizations. Two members of the Ohio Environmental Council were interviewed and they had opposed the project and helped the Metro Parks and Friends of Crooked River with attorneys from their law clinic when the litigation began. Keel Haulers Canoe Club and Friend's of Crooked River were the most active of the NGOs and they were involved in promoting white water recreation and Clean Water Act issues on that section of the Cuyahoga River respectively. One among the two members that I interviewed of the Keel Haulers Canoe Club have been playing a lead role similarly the only member I interviewed from the Friends of Crooked River have been active since the organization was formed.

I also interviewed two members of First Energy, the dam owner, one of which was a

telephonic interview. I conducted a telephonic interview with one member of the Federal Energy Regulatory Commission. Besides I interviewed two members of the Metro Hydroelectric Company who were the sole partners that ran the company. Twenty-three interviews were recorded in a Microcassette Recorder, and I transcribed them in a Panasonic Microcassette Transcriber. Two of the interview participants chose not to be recorded and instead I took notes during the interview. During each interview I took notes that were useful in keeping track of the major issues that were to be discussed during the interviews. Prior to conducting interviews, the respondents had to complete a consent form (Appendix B) that needed their signature and name. Telephonic interview was conducted with four interviewees either because they were located in far of places or they were could not provide time for a face to face interview.

Archival records

The numerous letters written by different government agencies and non-governmental organizations, Metro Hydroelectric Company to the Federal Energy Regulatory Commission are also a source of primary data source. Several letters have been written by each of the stakeholders to the Federal Energy Regulatory Commission since the Metro Hydroelectric Company filed applications to the FERC. The letters written by different stakeholders expressed their opinion with regard the issuance of license to the Metro Hydroelectric Company by FERC. They also made study requests to the Metro Hydroelectric Company when the company got the preliminary permit from the FERC to conduct studies to assess the viability of the project at the Gorge Dam site. For example, the Metro Parks wanted MHC to conduct an inventory of the entire Gorge Park including the Cascade Valley National Park. The letters written by FERC to the stakeholders are contained in the e-library along with copies of applications filed by the

Metro Hydroelectric Company.

In addition, the stakeholders have provided reports of their study on the dam along with their letters. For example the Ohio Environmental Protection Agency has conducted a detailed study of Total Maximum Daily Load (TMDL) behind the Edison Gorge Dam and in the lower reaches of Cuyahoga River to compare between pollution level behind and below the dam. The data gathered by Ohio EPA was helpful in understanding how the EPA makes their arguments about the physical impact of the Edison Gorge Dam.

Several court proceedings contain transcriptions of court hearings. For example, one proceeding contains “Transcript of Preliminary Injunction Hearing” between MHC and Metro Parks before the United States Northern Ohio District judge, dated Sept 8, 2006. Court transcripts such as this were useful in analyzing arguments and counter arguments framed by Metro Hydroelectric Company and the Metro Parks in forwarding their stake over the Edison Gorge Dam.

In addition to these publicly available documents, several interviewees also provided me with reports and important documents that were not all in the public records while I was conducting interview. Discourse Analysis was used to analyze all the data that were collected from various sources.

Data Analysis

After transcribing the interviews, I used Discourse Analysis to analyze the data which included transcribed interviews, letters, reports, court proceedings in order to situate the dynamics of debate over the Edison Gorge Dam within the debate over development and environmental conservation.

A “[d]iscourse is a particular way of representing certain parts or aspects of the

(physical, social, psychological) world; for instance, there are different political discourses (liberal, conservative, social-democratic, etc.) which represent social groups and relations between social groups [...] in a society in different ways” (Fairclough, 2005: 925). Tonkiss (in Seale, 2004: 373) refers to discourse as “a systematic ordering of language involving certain rules, terminology and conversations.” Tonkiss (in Seale 2004: 373) argues that Michel Foucault’s emphasis was on understanding “how discourses help to produce the very categories, facts and objects that they claim to describe.” “ ‘Discourse Analysis’ is generally taken to be the analysis of ‘texts’ in a broad sense – written texts, spoken interaction, the multimedia texts of television and the Internet, etc” (Fairclough, 2005: 916). According to Fairclough (2005: 916) “‘discourses’ in a Foucaultian sense are [...] elements of social practices. ‘Discourse analysis’ correspondingly has a doubly relational character: it analyses relations between [...] linguistic/semiotic elements of social events and linguistic/semiotic facets of social structures and social practices”.

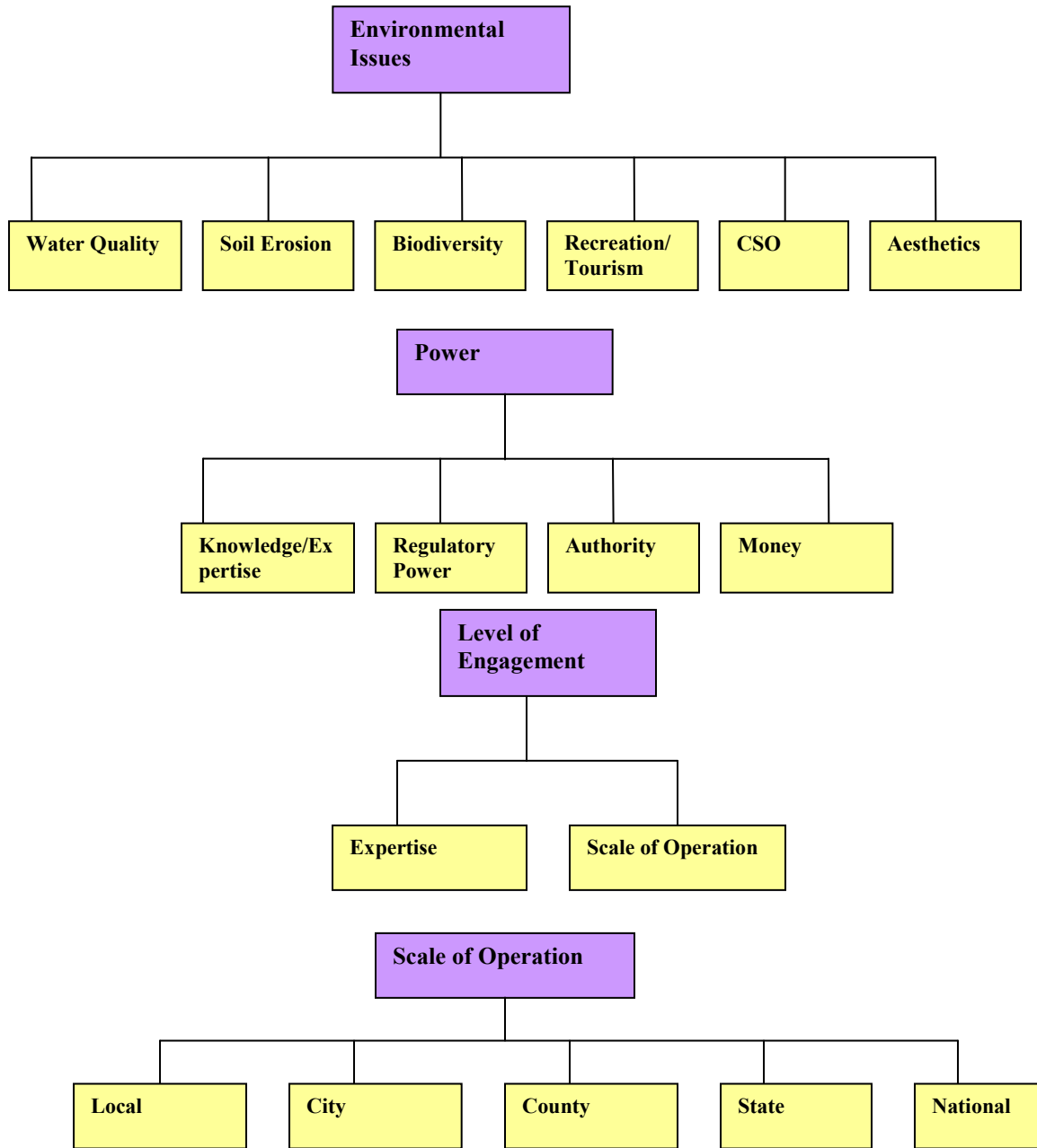
Therefore “Tests” constitute the central element of discourse analysis. Tonkiss (in Seale 2004: 373) considers that in Discourse Analysis “texts” constitute “sites in which social meanings are formed and reproduced, social identities are shaped, and social facts are secured.” In this case study, “texts” include transcribed interviews, individual letters written by various stakeholders, court transcripts and reports. Tonkiss (in Seale, 2004) argues that in discourse analysis data is coded into categories of themes and recurring themes are identified for further analysis. This involves creation of categories and sub-categories.

After transcription I read the transcriptions several times which made me well versed with the contents of each interview. I used N-VIVO, qualitative data analysis software, to code my data. I first created nodes and named them after which I selected text that according to my

judgment fell into the category of a particular node.

Thus text selected was coded to the selected node. For example, if I selected 'power' to be a node then I had to select text from the transcription that was related to 'power'. After selecting several of them from the entire set of transcription, they were coded under the node titled 'power'. The use of N-VIVO software helped me to speed up the process of data coding and its categorization.

Table 4.2: Coding Data into Categories and Sub-categories



The categories based on which subcategories were created included environmental issues, power, level of engagement, and scale of operation. These major categories were further divided into subcategories. The major categories that I identified were issues that significantly influenced the nature of the dispute. For example, environmental issues were important cause of concern for a group of environmentally conscious stakeholders while such issues were viewed in a different way by other stakeholders as MHC and First Energy. These stakeholders perceived that no damage had been done to the environment so far due to the presence of the dam. On the other hand, environmentally concerned stakeholders as Friend's of Crooked River, among others wanted the dam to be removed in order to protect the environment from further damage. Environmental issues were an important cause that instigated the controversy. Similarly the other issues identified played out in the controversy in a certain way.

The subcategories explain the broader issues in further details. For example, I used 'level of engagement' as a category to distinguish the stakeholders that were directly involved with the conflict from those who were not. Once I had gathered a certain amount of data under that heading, I could focus on it more closely, and discerned two factors that seemed to be affecting stakeholders' 'level of engagement'. Hence, I created two subcategories, 'expertise' and 'scale of operation' and viewed them as factors influencing the 'level of engagement' of the actors. In the case of the 'scale of operation', the pattern discussed in the following chapter emerged relatively quickly. It was seen that the stakeholders who had smaller scales of operation were directly involved. American Whitewater was less directly involved than Keel Hauler's Canoe Club though both share the same objective of promoting white water tourism since American Whitewater is a national level organization while Keel Hauler's Canoe Club is a

local level organization. However, this was not the same for all the other agencies. Ohio EPA being a state level organization had more involvement than a city level organization as the Kent Environment Council, primarily because Ohio EPA has environmental expertise related to the Edison Gorge Dam that the Kent Environmental Council did not.

In the case of ‘expertise’, then, the data relating ‘expertise’ to ‘level of engagement’ drew me into thinking about expertise and authority, and hence led to the creation of more subcategories under the category of ‘power’. In this sense, the term category is perhaps not entirely correct. In each category the data is not completely homogenous, nor are the categories absolutely discrete. Rather, the data assigned to some categories overlaps with that in others. Many N-VIVO users refer to these units as nodes, but for my own purposes and sense of clarity, I prefer the term category. Data analysis proceeded through an interactive creation of categories and subcategories that enabled me to highlight the key issues of the controversy and acted as framework by which to delve deeper into the intricacies of the dispute.

Conclusion

This chapter discussed the research design and methodology used in the study. It provides a detailed account of the ways in which data was collected and how data were analyzed using a form of discourse analysis. Discourse analysis helped to examine how the stakeholders framed the debate over the future of the Edison Gorge Dam on the Cuyahoga River. Based on the coding of the data, I analyze in the following chapter the ways by which the stakeholders weave the controversy. It emphasizes on understanding how stakeholders deploy scale in defining the environmental scale of the problem and how they framed strategies to forward their interests. In this process I examine how the process of rescaling takes place as the stakeholders frame and enact multiple strategies. Finally, I analyze how different forms of power operate and are

created as the controversy takes shape.

CHAPTER V

FLUIDITY OF SCALE AND POWER

IN DECIDING THE CUYAHOGA RIVER'S FUTURE USE

The controversy over the Edison Gorge Dam encompasses a wide array of actors having different scales of operation and varied stakes. The physical dimension of the environmental consequences created as a result of the presence of the dam is expected to expand if the dam site is used to generate hydro power. The environmental consequences that already exist have their own physical dimension when undefined by any stakeholder. The stakeholders engage in understanding this problem from their respective institutional scale where they operate. Politics of scale arise from the attempt of the stakeholders to perceive the environmental scale of the problem to fit them into their respective scalar operation. It is seen in this study that the stakeholders only perceive a partial extent of the problem that they define as the environmental scale. The environmental scales so defined by the different stakeholders sometimes overlap to a certain extent while in others they barely overlap. Here, I analyze the ways by which the stakeholders define the environmental scale of the problem and processes by which rescaling occurs through the theoretical lens of scale. I devote the second half of the chapter in understanding how different forms of power namely knowledge/expertise, authority and regulatory power of state agencies versus the power of the NGOs work out among stakeholders in this controversy.

First, I explore the ways in which tensions between political and environmental scales play out in the environmental conflicts over the Edison Gorge Dam. It has been opined by scholars that environmental problems disregard established administrative jurisdictions and

scalar conflicts emerge from defining such problems (Lebel 2004; Meadowcraft 2002; Sneddon 2002, 2003; McCarthy 2005). I focus on this understanding in examining the ways by which politics determine the stakeholder's definition of the scale of environmental consequences and how negotiations are made to adjust scale of environmental consequences as defined by the stakeholders within their established politically scaled boundaries.

Second, I examine how the stakeholders perceive the environmental scale of the problem as well as how they fit their understanding of the problem within their respective scales of operation. The process by which stakeholders create scales by changing their present scale to other scales denotes the concept of rescaling (Brenner 1997; Herod and Wright 2002; Swyngedouw 1997). I draw on this emphasis on the process to explore how scales at which the stakeholders are operating are rescaled as they engaged in discursively framing and materially enacting one or more scalar strategies in forwarding their interests.

Third, I explore the allocations of different forms of power among stakeholders in this controversy, with attention to knowledge/expertise, authority and to trace the creation of power(s) at different geographical scales as the controversy takes shape. I also explore how different forms of power are created and deployed by both state and non-state agencies. Various scholars have attempted to define power and its various facets; in this study I draw specifically on the works of Latour (1986 as stated by Sneddon, 2003), Dowdling (1996), Barnes (in Law, 1986) and Leitner and Delaney (1997) to trace the workings of power throughout the Edison Gorge controversy.

Defining the environmental scale

In this section I categorize two sets of stakeholders and explore how the institutional scale of operation and expertise of the stakeholders shaped their characteristics. Both scale of

operation and level of expertise have shaped the ways by which the stakeholders perceive the environmental scale of the problem.

I classify the stakeholders into two tiers on the basis of the nature of their involvement with the conflict. In table 5.1 tier 1 stakeholders have been differentiated from tier 2 on the grounds that tier 1 stakeholders were directly engaged with the controversy while tier 2 stakeholders had general concerns about the project either because they had jurisdiction outside the purview of the project or they operated on a broader or higher scale. On the other hand, tier 1 stakeholders were directly engaged either because their scale of operation was small or Edison Gorge Dam was within their area of concern and had acquired expertise over it. I discuss the characteristics of the stakeholders in each tier in further detail below.

Table 5.1: List of Tier 1 and Tier 2 Stakeholders

TIER 1 STAKEHOLDERS		TIER 2 STAKEHOLDERS	
NAME	SCALE OF OPERATION	NAME	SCALE OF OPERATION
Ohio EPA (Govt. agency)	State	American Whitewater (NGO)	National
ODNR (Division of Wild Life) (Govt. agency)	State	Ohio Environmental Council (NGO)	State
Summit Soil and Water Conservation District (Govt. agency)	County	River's Unlimited (NGO)	State
Metro Parks (Govt. agency)	County	Kent Environment Council (NGO)	City
Cuyahoga RAP (Govt. agency)	Local	City of Cuyahoga Falls (Govt. agency)	City
Friend's of Crooked River (NGO)	Local		
Keel Hauler's Canoe Club (NGO)	Local		

Table 5.1 indicates that the number of government agencies outweighed the number of NGOs in tier 1. Tier 1 stakeholders were very active in framing strategies and made efforts in enforcing them materially through formal means. Many of the NGOs seen in tier 2 did not actively participate in the conflict. Tier 2 government agencies had general concerns about the project, but were less directly involved than those in tier 1. They either had jurisdictions outside the purview of the project or they had a jurisdiction or geographical area of interest that encompassed a much broader area. In other words, they operated at a higher formal level or broader geographical scale. For instance, the City of Cuyahoga Falls was a city level organization and mainly focused on the activities of the City of Cuyahoga Falls while the

Edison Gorge Dam lies within the jurisdiction of the city of Akron. Similarly, Kent Environment Council was concerned with environmental issues revolving around the city of Kent and the Portage County. American Whitewater, as a national level organization, had concerns about river conservation of the entire nation. The Edison Gorge Dam was not outside their purview but it was too small a project to pay as much attention to as did the other concerned agencies. David Hill, the conservation chairman of the Keel Hauler's Canoe Club argued:

“The Keel Haulers is just a local club. American Whitewater is a national organization. A lot of times American Whitewater looks to the local paddling clubs and different organizations out there to provide information back up the chain so that they can come and get involved. When we look at the Edison Dam project, they may pick that up from the data bases that they periodically would review or you know if the dam licensing proposal came up, I can't speak to that level. Looking at these on a periodic basis and then kind of rely on the local groups to keep them aware of what's going on” (Hill, 2008).

Thus it is seen that the higher the scale of operation or the institutional scale of a stakeholder, the less direct was their involvement. The involvement of the number of state level agencies was deeper than the national level agencies in tier 1. The degree of involvement with the conflict was intense for county and local level organizations as Metro Parks, Summit Soil and water Conservation District, Cuyahoga RAP (Remedial Action Plan), Friend's of Crooked River and Keel Hauler's Canoe Club in tier 1. These organizations have been directly engaged since their scale of operation is small and the Edison Gorge Dam lies within their area of concern. It appears that smaller the institutional scale of operation of a stakeholder, greater is the intensity of concern for the project.

In addition to the scale of operation as an important factor in determining the degree of involvement with the controversy, the nature and extent of stakeholders' expertise also shaped

the nature and degree of involvement. For example, the state level agencies in tier 1, Ohio EPA and Ohio Department of Natural resources (ODNR - Division of Wildlife) have been actively engaged in the debate since the initiation of the project, while the Ohio Environmental Council (tier 2), a state level agency which acts on concerns about general environmental issues only, has not. Ohio EPA had concerns about water quality issues of the project, and conducted TMDL (Total Maximum Daily Load) studies of different parts of the Cuyahoga River to evaluate the effects of the dam's removal. David Hill, the conservation chairman of the Keel Hauler's Canoe Club (KHCC) argued:

“One of the things that we have seen is that Ohio EPA has done a Total Maximum Daily Loading study on the Middle Cuyahoga. The agency is starting to look at it from the water quality aspect, very large stream segments and they divide the Cuyahoga into three sections - the upper, middle and the lower sections. In the middle section they determined that the water quality is improving but there are still some negative impacts and those negative impacts are associated with dam structures on the river, there is less fish migration, there is degrading water quality and so what we have seen is an initiative to remove some of those dams” (Hill, 2008).

Similarly the Summit Soil and Water Conservation District (tier 1) was concerned with the soil and slope stability issues on both banks of the Cuyahoga River that were being affected within the summit county. The Division of Wildlife was concerned to protect the species diversity of the flora and fauna of the region. Cuyahoga RAP, which was formed by Ohio EPA to recover the lower part of the Cuyahoga River, was concerned with the nature of impact the project would have in that section of the river and its implications for restoring. Metro Parks, the park authority, had concerns about restoring and maintaining the health of the park land. Among the NGOs, Keel Hauler's Canoe Club was involved in promoting recreation while Friend's of Crooked River was formed for the sole purpose of implementing Clean Water Act related issues. Elaine Marsh, the president of Friends of Crooked River opined:

“We in our organization have been on existence for about 20 years and our main

interest is the Cuyahoga River. We are particularly interested in the Clean Water Acts. We decided what aspects of water quality we are going to look at and the thing that was missing was the Clean Water Act so for the last 8 years now we have focused exclusively on clean water act issues. In the Cuyahoga River the clean water act issues are enforcement of the NPDES permits, wetland filling and our biggest issue is the combined sewer overflow situation so we looked at particularly water quality” (Marsh, 2008).

My analysis of the data shows that each agency that has been engaged in the project with a considerable level of involvement (tier 1) acted on interests and expertise related to specific facets or effects of the environmental consequence generated due to the presence of the dam. Each stakeholder focused on a different dimension of the environmental consequences generated due to the presence of the dam. In a nutshell, because of the dam the water quality above and below the dam has been impaired. The dam has disrupted aquatic life of the river; lead to acceleration in soil erosion; loss of slope stability along the banks with changes in the river’s course and flow rate. Fluctuations in flow rate have adverse effects on white water recreation. It is opined by stakeholders who favor dam decommissioning that the regeneration of hydro power at the site would deteriorate environmental consequences for at least a period of fifty years since a dam is generally licensed for fifty years. Ohio EPA’s technical expertise on water quality compelled them to delve deep into the effects that the proposed electric facility would have on water quality. Ohio EPA, particularly Division of Surface Water, is concerned only with water quality standard issues in the state of Ohio. Hence, Ohio EPA effectively turned a blind eye to other environmental issues by the proposal. Significantly, tier 1 stakeholders define the relevant aspects of the environmental consequences posed by the dam with respect to their particular expertise.

The conflict encompasses a wide array of actors working at different scales of operation. The scale of operation of the agencies has influenced their degree of involvement

with the problem and at the same time the expertise of the agencies has directed them to explore particular aspects of the environmental problem. That is to say, they have narrowed down their focus into a particular dimension of the controversy based on expertise that is partly a function of their (jurisdictional) scale of operation.

In turn, different dimension of the environmental consequences are understood to have different spatial extents, and these overlap in particular ways with the stakeholder's jurisdiction. As this dynamic plays out in the Edison Gorge controversy, stakeholders' different definitions of the character of the environmental consequences appear so tied to their scale of operation that the definitions overlap with each other only for few agencies. Agencies whose definition of character of the environmental problem overlaps but whose scale does not include Ohio EPA and Cuyahoga RAP. They have similar concerns about water quality issues of the Cuyahoga River, but Ohio EPA as a state level organization focuses on water quality aspects along the entire stretch of the river. Ohio EPA's involvement in the dam controversy included conducting TMDL studies above and below the Gorge Dam. Cuyahoga RAP is a much smaller organization that is primarily concerned with replenishing the lower part of the Cuyahoga between the Gorge Dam to Lake Erie and they do not focus their attention to the stretch of the river above the Gorge Dam.

Lebel (2004: 10) highlights that the definition of environmental problems is "the result of the structure of political systems". Sneddon (2003) argues that the stakeholder's social and political scale largely determines the scales of environmental consequences. My findings support these perspectives. In addition, the findings of this study suggest that stakeholders' definition of the geographic scale of a given environmental problem is informed by the nature of their expertise and by the location of the jurisdictional boundary of their scale of operation with

respect to the site of the environmental controversy.

Creation of scale/s- rescaling

As the stakeholders defined the environmental scale of the problem posed by the dam, they materially enacted strategies to forward their interests. In the process of doing so, some stakeholders operated at multiple scales in relation to the dam controversy, thus effectively rescaling themselves. An enquiry into the activities of both tier 1 and tier 2 agencies helped me to conceptualize how the process of rescaling occurred in the conflict over Edison Gorge Dam. I particularly examine the steps taken by Metro Parks, an important state agency that works at the county level to understand the process by which rescaling takes place. Following a discussion of Metro Parks and its feud with MHC (Metro Hydroelectric Company), I examine the activities of other agencies that lend insight into the process of rescaling. It is seen that collaboration and coalition among stakeholders led to the reorganization of scales as the stakeholders operated in multiple scales. Collaboration has taken place when agencies cooperated through support with respect to mutually agreed interests while coalition was of a more stable nature where agencies cooperated to form a new agency having specific goals and interests.

In a letter to the FERC, June, 2006 Metro Parks' stated that its mission is "to acquire, conserve and manage natural resources and to provide the public with safe, outdoor recreational and educational opportunities through a system of regional, natural-area parks". They have been concerned in managing only the park property that excluded the Edison Dam and the use of the section of the Cuyahoga River that traversed through the park. The perception of the Metro Parks of the scale of the environmental problem has been shaped by their mission, which is to conserve natural resources within the park, since they are the property owners. Their interests

lies in protecting the plant and animal species that exist in the park, the hiking trails and the soil that was being exposed to erosion by the Cuyahoga River.

When the Metro Parks came to know about the new hydroelectric project in 2003, they did not completely deny the project. However, they neither fully approved it. By spring of 2004, Metro Parks had taken a position against the project. On May 24, 2004 the director of Metro Parks, Keith Shy, sent a letter to the FERC that read in part:

“Metro Parks Serving Summit County does not believe that the alleged benefits, as proposed by Metro Hydro, outweigh the environmental, social and aesthetic costs of the proposed project. The Cuyahoga River, a designated Natural Heritage River, has suffered significant environmental insults for the benefit of our society and the small amount of power that may be generated does not warrant the environmental cost the proposed project would impose. Many water quality improvement projects are now taking place along the river and the proposed hydroelectric project would be considered a step backwards in resolving use attainment goals for this segment of the river” (Shy, 2004).

Metro Parks then discursively inserted study requests into MHC’s permitting process with the FERC. The study requests required MHC to collect data on the proposed hydroelectric project’s effects on the park ecosystem. They wanted MHC to undertake a complete study of the Gorge Park and the Cascade Valley Park. The purpose was to generate information about the type of species the park had since no study of the park was done previously. MHC refused to do such study. The FERC also disregarded such study request. Metro Parks also resisted to the fact that Indiana Bat and Northern Monkshood would be disrupted if access roads are constructed to carry heavy equipments to the dam site. This would further damage four acres of their 154 acre forest. Building of access roads would require several trees to be cut down. The Indiana Bat and the Northern Monkshood are regarded as endangered species by the Metro Parks since they are found in the Gorge Metro Park apart from a few other locations in Ohio. In a letter dated December 22, 2005 Metro Parks Chief of Natural Resource Management wrote to the FERC

secretary:

“We again request that FERC require the potential for dam removal be included as a possible scenario in the alternatives analysis for this project” (Michael. Johnson, Chief, Natural Resource Management, 2005).

As both FERC and the MHC refused to include their study requests, in a letter dated March 23, 2006 to the FERC the Metro Park’s director wrote:

“Metro Parks has requested a detailed ecological inventory to Gorge Metro Park and Cascade Valley Metro Park to adequately determine if this proposal is in the public’s best interest and if so, where is the best site to locate the proposed facility. As they are currently proposed, the study plans are not capable of addressing these two fundamental questions. The applicant has already decided where they were going to locate the facility and then designed the study plans around that conclusion. Metro Parks has repeatedly requested an explanation from the applicant as to how they determined the most appropriate location for the proposed facility and why they are not utilizing the already disturbed footprint of the previous hydropower plant. The most significant decisions in this process have been made in the absence of any information or study. The study plans proposed by Metro Parks are sufficient to address basic questions related to the public good and determined to be in the public’s best interest” (Shy, 2006).

Metro Parks also wrote in a letter to the FERC when the study requests by Metro Hydroelectric Company was refused by them on February 22, 2006:

“It had been our understanding that the FERC process includes negotiation and compromise. We fail to see how this process truly allows for negotiation. At every turn, the process seems geared to favor the applicant. The study plan meetings, while referred to as ‘public’, were entirely controlled by Metro Hydroelectric to the extent that they prevented Metro Parks from adequately documenting the process. Every major consideration or request that Metro Parks has offered has summarily been dismissed by the applicant. Metro Parks appeals to the FERC and requests that the study requests be made mandatory part of this proposed project” (Shy, 2006).

Thus Metro Parks made several requests discursively to the FERC in their letters to include their study requests in the study plans. But they were not accepted by MHC and also the FERC disregarded their study requests. Their main objective was to protect the park from any damage that was likely to happen if the project was pursued. They wanted to make sure that the building of the hydroelectric facility would cause minimum harm to the park hence they wanted

MHC to undertake a complete study of the entire park system. They wanted to know the extent to which the park was vulnerable to a foreign intrusion i.e. the construction of the hydro facility in the park land. However, as MHC was not ready to pursue their requests and at the same time MHC was not conducting the FREC approved study plans in accordance with the specified timeframe, Metro Parks materially took legal action against the MHC.

As a state agency with regulatory power, Metro Parks passed a resolution in May 1st 2006 prohibiting MHC from entering into the park. Denying MHC access into their property was a firm strategy enacted materially by the park authority in the entire hydroelectric licensing process. The action taken by Metro Parks instigated the MHC to file a lawsuit against Metro Parks, and brought the licensing process to a halt. The goal of Metro Parks was to defer the process until MHC's preliminary permit became invalid. Thus Metro Parks framed strategies to make their mission to protect the park explicit to the FERC and the MHC and to direct the licensing process according to their guidelines and rules. But when the MHC was not pursuing the process in accordance with their plans, Metro Parks took legal actions to establish their claims by passing a resolution denying MHC's access to the park.

The position of Metro Parks in the controversy is problematic in the sense that Metro Parks by itself operates at multiple scales. It is a state agency but works at the county level (Summit County). It exercises regulatory power as other state agencies do but does so over a much smaller scale. In the process of discursively framing and materially enacting strategies while working on multiple scales by themselves, Metro Parks engaged in interactions with Friends of Crooked River who provided them with constant support. In addition, Metro Parks was supplied by attorneys free of cost by Ohio Environmental Council's law clinic. So Metro Parks collaborated with both Friend's of Crooked River and Ohio Environmental Council.

My findings suggest that the position of Metro Parks is unique in the sense that they underwent multiple processes of rescaling firstly by themselves and secondly through collaboration with Friends of Crooked River and Ohio Environmental Council respectively. Other instances of collaboration are evident as other stakeholders engaged in framing and enacting strategies.

Through support stakeholders such as Kent Environment Council, Friends of Crooked River and Ohio Environmental Council collaborated with each other. Members of each agency discursively framed strategies by attending the meetings held by other agencies and exchanged information among each other. As Edith Chase of Kent Environment Council opined:

“We support the Friends of the Crooked River. We work closely with Ohio Environmental Council they have done a lot of good work on Lake Erie issues. We exchange a lot of information back and forth” (Chase, 2008).

Friends of Crooked River intend to collaborate with First Energy by providing them with money to remove the dam. When I interviewed Elaine Marsh, the president of Friends of Crooked River, she opined:

“ultimately if the dam comes down it would be that the First Energy decides and I have said to them that we would seek to at least help provide funds for if you don’t have to bear the cost of it by yourself, but ultimately they will have to be partners in the whole process. We are hoping that some point in future we will be some kind of partners with them” (Marsh, 2008).

It was seen that mutual support among different agencies led them to collaborate with each other. The Friends of Crooked River was willing to form partnership with First Energy to remove the dam since according to them the ultimate decision rests upon First Energy. It implies that even though the stakeholders had specific interests and expertise they were also willing to collaborate with each other to achieve certain goals. Collaboration led to

reorganization of scales as the agencies operated in multiple scales at the same time.

Agencies also reorganized their activities and rescaled themselves through coalition. The Ohio EPA reorganized activities with other agencies to form the Cuyahoga RAP. Ohio EPA elected thirty-nine stakeholders to function as the RAP coordinating committee. These stakeholders included “community groups, government agencies, businesses and individuals”. The Cuyahoga Remedial Action Plan (RAP) was formed in 1988 with “a mission to plan and promote the restoration of the environmental quality of the lower Cuyahoga River through the remediation of existing conditions, prevention of further pollution and degradation, and protection of the resource for future generations” (www.cuyahogariverrap.org). The Ohio EPA also created the Cuyahoga River community planning organization to function as a financial affiliate. The purpose of the organization was to support some of the planning process financially. The Ohio EPA decided to side with the local stakeholders to create the Cuyahoga RAP and support the RAP coordinator with funding from US EPA (interview with the RAP coordinator).

Though the formation of Cuyahoga RAP predates the emergence of the controversy over the Edison Gorge Dam, however, it was formed for the purpose of rehabilitating the Cuyahoga River. Recent attempts to remove the dam by various agencies, is based on the sole purpose to restore the river. Since the new electric company (MHC) emerged as a prospective applicant Cuyahoga RAP, already operating on multiple scales, actively engaged with all its founding agencies to enforce their mission to restore the river. Even though Cuyahoga RPA did not have a jurisdiction that coincided with institutional boundaries they operated at multiple scales, both locally and state wide. Similarly, Ohio EPA operated simultaneously at their institutional scale of operation and worked for the RAP – state and the local. The agencies

rescaled themselves as they engaged in framing and enforcing strategies. As Herod and Wright (2002: 10) observe, one way in which “social actors [are] producing new scales” is in the negotiation between “different scales” and in “how they operate on multiple scales at the same time”. The current RAP coordinator, Kevin Rogers is simultaneously holding positions with Ohio EPA and Cuyahoga RAP (interview with the RAP coordinator).

In this study, then, rescaling as a process takes place as agencies reconfigure their respective scales of operation by reorganizing activities and collaborating with other stakeholders or forming coalitions through re-allocation of tasks. Ohio EPA with other agencies formed coalition to make the Cuyahoga RAP. Metro Parks appears to be a unique agency that operates on hybrid scales by themselves and undergoes multiple rescaling when it collaborates with other agencies. As opined by scale theorists (Brenner 1997, 2000; Herod and Wright 2002; Swyngedouw 1997), in this research too, rescaling occurs as a process in which stakeholders create scales as they change their present scale to other scales as they engage in framing and enforcing their environmental agendas. In this study rescaling occurs through collaboration and coalition as well as through the actions of the hybrid agency as the Metro Parks.

Thus in the conflict over the Edison Gorge Dam perception of environmental scale of the environmental consequences by stakeholders depends on the degree of their involvement with the conflict which in turn depends on a) their institutional scale of operation, b) the location of the jurisdictional boundary of the scale of operation with respect to the area of conflict and c) the level of expertise of the stakeholders. Comprehension of the environmental scale of the problem played an important role in framing strategies and enforcing them by the agencies. As the stakeholders operate from their institutional scale they engage in either

reorganizing their activities to form collaborations with other stakeholders or they form coalitions. In the process, new scale is created as they operate at multiple scales. In the following section I discuss how power in different facets operated among various stakeholders in the controversy.

Role of Power

Power is an equally important concept that took shape as the controversy was woven by the stakeholders. Sneddon (2003: 2229) argues that both “scale and power are intimately related”. In this part of the chapter, I attempt to understand how three different facets of power (knowledge/expertise, regulatory power/power of NGOs and authority) played out in the debate over the future of the dam and its effects. I draw on the works of Latour (1986 as argued by Sneddon, 2003), Ball (1992), Dowdling (1996), Barnes (in Law, 1986), Leitner and Delaney (1997) to understand power in different forms as it existed among different stakeholders, and to understand how it was acquired as the stakeholders engaged in scalar politics.

First, I explore the ways in which power was attained through knowledge and expertise developed by stakeholders concerning the environmental consequences of the dam. Drawing on Dowdling’s (1996: 63) insight that many groups “because of specialist knowledge, can claim to speak authoritatively on certain issues”, I explore how the stakeholders gained authority as they developed expertise over certain aspects of the environmental consequences of the dam.

Second, I draw on the insights of Barnes (in Law, 1986: 185), to make a distinction between “power” and “authority”, to understand how some stakeholders gained only authority over the others and how authority shifted among stakeholders as the controversy played out.

Third, I try to understand the ways by which regulatory power was exercised by the state agencies as opposed to the power achieved and enforced by the NGOs. I draw on the work of

Brenner (1997), and Leitner and Delaney (1997) to that end. Leitner and Delaney (1997) emphasize that both state and non-state stakeholders engage in scalar politics.

Lastly, I discuss the role of money in shaping the controversy. However, money has not been an important influence in molding the nature of power structure that exists among the stakeholders. It has curved out the controversy because MHC incurred great loss of money in fighting the litigation. MHC fights the lawsuit with the hope of getting back some of the losses that they have incurred. In that regard, I draw on some instances in the entire phase of the controversy where money directed the controversy to follow a certain direction.

Knowledge/expertise

The agencies that have been directly involved in the conflict (tier 1) have a certain level of expertise with respect to a particular area of concern. Ohio EPA, Keel Hauler's Canoe Club, Friend's of Crooked River in (tier 1) had a leader who was active and more knowledgeable than the other members in that organization. When I interviewed Ohio EPA, I learned that Steve Tuckerman, in charge of the division of surface water, has been playing a lead role in the project. When I interviewed Ron Bell, the supervisor of the department of surface water of Ohio EPA, and asked similar questions he refused to answer and referred me to consult with Steve Tuckerman. I asked Ron Bell as to whether there has been water quality study behind the dam, he replied:

“That's another Steve Tuckerman question. He is our expert on Ohio Edison Dam. Steve Tuckerman is more knowledgeable on this issue” (Bell, 2008).

While interviewing the chairman of the Keel Hauler's Canoe Club, I was told that he had taken a lead role in the Edison Gorge Dam controversy since the initiation of the controversy.

David Hill commented:

“I have kind of taken a lead on this one since it is in my backward. So if someone

wants to take that away from you, you would step out and say that ok I am going to take a lead on this one I got involved almost from the beginning when the project started. I have been paddling on that river for probably 2 years prior to that. Do a lot of hiking there. I live a 5 minutes down from the Gorge Park” (Hill, 2008).

Similar comments were made by Elaine Marsh, the conservation chair of the Friend’s of Crooked River:

“I have been part of it from the beginning and I was the president for many years and I said that I only want to work on conservation so I am the conservation chair since the beginning” (Marsh, 2008).

Hence, expertise and knowledge over a particular field of inquiry and long period of engagement with that area of expertise have given them the power to lead their organization.

But it is crucial at this point to understand whether the individual members of different organizations who took a lead role really exercised power. They have been carrying out a routine job which in the words of Barnes in Law (1986: 182-183) is “authority”, not “power”. The individual members of the organization I interviewed, as for instance Steve Tuckerman of Ohio EPA, has been doing routine work as directed by the decision making body of Ohio EPA; this implies that he did not have the discretion to decide which work to undertake and which not. However, performing the same work over time has given him expertise over that particular field of work. I draw more on authority in the following section. However, I concur with Barnes (in Law, 1986) and Dowdling (1996) that knowledge and expertise over a certain topic help to carry out work authoritatively as done by Steve Tuckerman, David Hill and Elaine Marsh from Ohio EPA, Keel Hauler’s Canoe Club and Friend’s of Crooked River respectively.

Authority

In order to understand how authority was acquired by the stakeholders and how they exercised them I particularly draw upon the work of Barnes (in Law, 1986: 182-183) who makes a clear distinction between “power” and “authority”. As discussed in the previous

section, knowledge enabled the stakeholders to exercise authority; in this section I explore other factors that helped the stakeholders to gain authority.

Authority to control the use of the river shifted from one stakeholder to the other since MHC filed application with FERC in 2003. One limitation of this study is that it is not yet known as to whether MHC will succeed in the battle with the Metro Parks. But it is clear that no single agency has sole authority to decide the fate of the dam. The FERC has regulatory power to issue license to an applicant, but since the present dam is not licensed they do not have the discretion to order its removal. MHC's ability to gain authority to use the dam site has been subject to firstly, several conditions as decided by the FERC and Metro Parks and secondly, whether MHC was able to enter the dam site. I discuss here how power that "directs a routine is with discretion", as opposed to "authority" which implies ability to work "without discretion" (Barnes in Law 1986: 182-183), exercised by both FERC and Metro Park shifted the ability of MHC to gain authority over the use of the dam site.

MHC secured a preliminary permit from the FERC on March 15, 2005 that would last for three years. During the three year period MHC had authority over the site. It implied that MHC had to conduct studies during that period, as suggested by the other stakeholders and finally approved by the FERC, to determine how far it was feasible to produce hydropower at the dam site. MHC did not have the discretion to decide on the studies to be undertaken. The permit reserved the site for MHC for three years, subject to conditions enforced by FERC. Restricted by Metro Parks, MHC was unable to conduct their studies within the timelines mentioned in the Pre Application Document. As a result of which the FERC ended the Integrated Licensing Process (ILP) on June 14, 2007. The FERC exercised regulatory power to deny MHC authority to use the dam site for which they obtained a three year permit, because

the applicant had failed to follow the FERC guidelines and regulations. The permit does not provide absolute authority to an applicant on a dam site for three years. The three year period of the permit expired on February 29, 2008. MHC does not have any authority to use the site under the current situation. In the letter dated June 14, 2007 the Officer of Energy Projects, J. Mark Robinson wrote to the MHC:

“On March 9, 2006 the Commission issued its Study Plan Determination for the Metro Project. Access to the proposed project site has been blocked by Metro Parks Serving Summit County since May 1, 2006 preventing the approved studies from being conducted. Your latest effort to acquire a preliminary injunction to access the site was denied by order of the U.S. Court of Appeals on May 25, 2007. The ILP provides discrete time frames for studying a proposed project and developing a license application. As you are unable to follow the prescribed schedule in this proceeding, I am terminating the ILP for the Metro Project without prejudice”.

“If in the future you are able to access the site to conduct the necessary studies and thus can move forward with development of a license application in a new ILP, you may file a Notice of Intent and Pre Application Document. At that time, you may request that certain requirements of the ILP be waived, to the extent that such steps in the ILP have already been satisfactorily completed, your proposal has not changed, and the information has not become stale. However, we may also at that time require additional scoping and modifications to your approved study plan. Also, please remember that the three year term and requirements of your current preliminary permit remains unchanged” (Robinson, 2007).

On the other hand, if MHC was successful in acquiring license it would give them the authority to use the dam site for a maximum period of fifty years. Usually FERC license is issued for a maximum period of fifty years. However, if MHC is unable to maintain the safety of the dam as determined by the FERC guidelines, the FERC can order them to remove it. When I interviewed Thomas Dewitt, the Assistant Director of energy projects, his response was:

“to get a license from FERC to develop generation at the existing dam we can issue licenses of terms of from 30 to 50 years. And yes, for the most part removing that dam would not be possible without the permission from the commission so if something happened some 10 years from now and if the dam became unsafe or something like that then the commission would have to approve that. If we require them to remove the dam and they don't want to, they will have to comply with the order of the commission and if they do not comply then they can be fined up to 10,000 dollars a day until they

do. So that is one of the responsibilities when you get a license that you are the steward of the land you are steward of the diversion structure of the dam, you have the responsibility to maintain the dam in a safe manner and if it gets to a point where it is not safe or the project is no longer economically viable we will order them to remove it. Either remove it or bridge it or do something to bring the land to a safe environmentally acceptable manner. Now we don't do that often but we have" (Dewitt, 2008).

With regard the feud between the Metro Parks and the MHC, access has been an important issue that determined whether MHC would be able to gain authority to use the site. The court case is intended to decide whether MHC has the authority to access the park land which is owned by Metro Parks Serving Summit County. Metro Parks materially enacted their strategies by passed a resolution on May 1, 2006 prohibiting MHC's access to the park property to conduct any of the required studies. According to the "Non-Exclusive Easement" (Pre Application Document, 2005) that was signed between MHC and the First Energy, there was a transfer of easement that provided MHC the authority to use the dam site, generate power and maintain the site. Hence there was a transfer of authority to use the river not property. The deed restrictions described in the easement explain that the transfer from NOPL to MHC was only of authority to use the river. The property including the dam was owned by NOPL. It has been argued by other stakeholders that the easement was non-existent. According to Elaine Marsh:

"So there was an easement that was established so the dam was built by the Northern Tractor and Light Company. Some time in the mid 20s that company became another company like it was Northern Ohio Electric Company and it was like a consolidation of Northern Tractor and Light and a couple other companies and they were getting ready to reconsolidate again and in 1929 they gave the land for 1 dollar to Akron Metropolitan Park District because there was no county park district at that time and when they did that they retained this easement and I think there were 7 different aspects of this easement. Consequently over the years in 1930 Ohio Edison was established and we were not able to find transfer when they were established of this easement but the way this easement is written attorneys told us that there would not have to have a transfer. It was not necessary nor could be find any copies of when Metro Parks Serving Summit County came into being and took over all of the parks that were

previously owned by Akron Metropolitan Park District with the exception of the local pocket parks in the cities. When they took over those parks we can't find any deed of transfer for that easement either. When this applicant brought up this easement the people at Metro Parks Serving Summit County said that they did not even know that an easement existed. They had worked with First Energy and prior to that with Ohio Edison on a number of projects particularly in the 1970s when they did a lot of work on the dam. So they were completely surprised so originally Metro Parks Serving Summit County when they were in the preliminary permit they said that they oppose the project, we are the property owner and that was in May 2004 I think when they opposed the project. In September First Energy without talking to Metro Parks signed over the lease this is what they called it, a non binding lease which gave them they claimed the rights to go on to the property to generate hydro electric. There signed the lease now whether they have the lease or not now there are 4 different legal issues related to that lease which we believe if they took it to common police court where all real estate issues go in the state of Ohio if they went there they would loose" (Marsh, 2008).

Metro Park's attorneys argue that First Energy discontinued power generation in 1958 and since then the site has been used only to provide water to the thermal plant until 1991 when the thermal plant was demolished. So the purpose for which the easement was created and transferred to First Energy from Ohio Edison became non-functional after 1991. For fifty years the dam site has not been in use. Hence according to the Attorneys of Metro Parks, the easement was no longer valid. Furthermore, the transfer of the easement from First Energy to MHC was "an easement upon an easement" and that does not hold validity as argued by Metro Park's attorneys. Metro Parks' attorney in their "Brief in Support of Motion to Dismiss Complaint" in Sept 2006 argued:

"NOPL retained no exclusive occupation of any of the parcel, but only a right of use. With respect to the retention of a right-of-way over the property ... the grantor retains only an easement over the premises conveyed". "No land within the parcel as to which ownership might have been retained was described by metes and bounds. No reverter or similar provision was made for NOPL or its successors to recover ownership of the property at a later time". "The reservations explicitly only creates rights of use". "There is simply nothing in the deed which reserved or created anything but rights of use by NOPL. NOPL and then Ohio Edison retained nothing but an easement. No other recognized property right was reserved or created as a matter of law". "It is moreover a 'limited, non-exclusive easement". "Ohio Edison clearly intended to convey nothing more than a right of use". "Ohio Edison as a mere easement holder cannot grant an easement itself. Without the easement, MHC has no right in Metro

Park's property" (Metro Park's Attorney, 2006).

On the contrary, MHC argued that in the deed granting the property to Metro Parks, the NOPL reserved their rights for power generation at the dam site by including some deed restrictions, reservations and limitations:

- 1) Reserves "the right to forever maintain its present dam, penstock, and appurtenances thereto now located upon said premises, and the right to repair, rebuild, remodel, change or enlarge said dam, penstock and appurtenances, and the right to use so much of the adjacent premises as may be necessary in the maintenance or reconstruction of said dam, pen stock and appurtenances".
- 2) Reserves the "right to use so much of the premises [...] as a means of furnishing egress to or egress from any of grantor's property located adjacent to or surrounded by any of the premises herein conveyed".
- 3) Reserves the "right to deliver water from the said dam [...] to its hydraulic plant".
- 4) Reserves the "right to maintain or relocate all electric transmission lines ... on said premises [...] to construct [...] distribution lines [...] as may be necessary in the construction, maintenance and repair of said electric transmission lines".
- 5) Reserves the "rights which it now possesses for the use and flow of the waters in the Cuyahoga River, running through and along the premises [...] and this conveyance shall not be considered or constructed as conveyance of any of grantor's rights to the use or flow of said water [...] is based".
- 6) Reserves the "right [...] to use so much of the banks along the said river as may be necessary for the full enjoyment by it of the use and flow of said waters in the said river".
- 7) All of the "above, restrictions and conditions are made not only for the benefit of the grantor [...] but for its successors and assigns." (Pre Application Document, 2005)

MHC obtained an easement from First Energy, in which all the rights were granted to MHC.

Hence according to MHC attorneys, as per the easement MHC have valid authority to enter into the dam site to conduct the required studies needed to get the license from FERC.

According to MHC attorney's "Brief in Support of Plaintiff's Motion for Temporary Restraining Order and Preliminary Injunction", September 2006:

"Ohio Edison disassembled the pen stock, but it has at all times maintained and repaired the dam. The pen stock support structures also remain on the property. These facts do not support [Metro Parks] public position that Ohio Edison intentionally abandoned its reserved rights in the property" (MHC's Attorney, 2006).

As the conflict takes shape as to whether MHC has authority to enter the park property,

they will not be able to seek FERC license in future until they are able to gain access to the land and conduct the requisite studies. Thus gaining entry to the park property is crucial for MHC and for that matter any hydroelectric company, to secure FERC license and generate hydroelectricity. In this case thus entry to the park property would determine if MHC will be able to gain authority over the use of the dam by acquiring license from FERC in future.

Authority to use the dam site has formed the basis of the controversy. Whoever (the MHC or the Metro Parks) is determined by the court to have the authority to use the site will win the battle. If the court ruling goes in favor of the Metro Parks, i.e. MHC does not have a valid easement then they fail to secure authority to control the use of that section of the Cuyahoga River.

Regulatory power versus power of NGOs

The state agencies that are involved directly in the conflict (tier 1 in Fig: 5.1) have regulatory power. They have a specific jurisdiction and jurisdictional power over their area of operation. On the contrary, the local NGOs (in tier 1), being local, do not have a specified jurisdiction and they lack the regulatory power that the state/federal governments have. I try to understand how the state agencies exercise regulatory power, to that end I draw on the strategies enacted by Ohio EPA in forwarding their goals. In addition, I attempt to unravel the ways by which the NGOs which lack regulatory power gain power in the process. Attempts to understand how power is acquired by NGOs have not been adequately investigated by scale scholars. It has been argued by Arts (2004: 502) that NGOs engage in “linking-up scales” and in “re-articulating scales” but the ways by which they exercise power has not received much focus. Even McCarthy (2005: 731) contends that politics of scale literature has ignored the role of NGOs “as important actors in scalar politics”. I draw on the understanding of Arts (2004) to

understand how power functions among the NGOs.

One of the documents of Ohio EPA states that a water quality certification is necessary for any hydroelectric company that seeks to obtain a license from FERC. Therefore, obtaining a water quality certification is a prerequisite to apply for a license. On a letter to the FERC dated May 8, 2006 Steve Tuckerman wrote:

“Without accurate flow measurements and water quality sampling, Ohio EPA will not have confidence that the information and stream model results from the applicant’s studies adequately represent the river system. Without this information, it is unlikely that the Director of Ohio EPA will be able to determine whether the project will prevent or interfere with the attainment or maintenance of water quality standards as required by Ohio Administrative Code 3745-32-05 and therefore, would not be able to approve a 401 water quality certification” (Tuckerman, 2006).

In another letter dated August 1, 2006 to the FERC the Ohio EPA wrote:

“OAC Rule 3745-32-02 requires a Clean Water Act section 401 water quality certification in order to obtain, among other things, a section 404 permit from the Army Corps of Engineers, OAC Rule 3745-32-02(A) (2), and “any other federal permit or license to conduct any activity which may result in any discharge to waters of the state” OAC Rule 3742-32-02(A) (4)). Although the U.S. Army Corps of Engineers has issued a Nationwide Permit for Hydropower projects, Ohio has denied certification of this nationwide permit, so a section 401 water quality certification from Ohio EPA is required for this project” (Ohio EPA, 2006).

Thus, Ohio EPA has the regulatory power to decide (discretion), as opined by Barnes (in Law 1986), whether to issue a water quality certification to the applicant or not, which is a prerequisite to get a license. Since they have the regulatory power to issue a water quality certification, they asked MHC in their study requests to conduct a dam removal feasibility study. In the words of Barnes (in Law, 1986: 182) “whereas a power directs a routine with discretion” “the routine controlled may be made the basis for a threat against others.” Ohio EPA used discretionary power to impose a threat on MHC in order to obtain water quality certification. Ohio EPA wanted MHC to conduct a dam removal feasibility study.

Ohio EPA wrote to FERC on August 1, 2006:

“Maintaining the dam in place will prevent attainment of water quality standards. It is true, from a short-term perspective, that not doing the hydroelectric project will not equate with, or guarantee, removal of existing dam. But against a backdrop of several recent, successful dam removal projects in Northeast Ohio, approving the hydroelectric project will accomplish the opposite. Approval of the hydroelectric project will guarantee that the dam is not removed and so will guarantee that the designated WWH use will not be attained for several decades. Thus, a study of the feasibility of removing the dam would seem to be reasonable alternative to examine. Ohio EPA anticipates that, at a minimum, a dam removal feasibility study by the applicant will be required as part of the application for a 401 water quality certification in accordance with the Lower Cuyahoga River Watershed TMDL. Thus, for economy of resources, it makes sense for the commission to require and/or the applicant to agree to a dam removal feasibility study at this stage of the licensing proceeding” (Ohio EPA, 2006).

The FERC responded on May 30, 2006 to the letter sent to them by Ohio EPA:

“As we have stated in the study plan determination letter, because the dam is currently unlicensed, the Commission has no power to require its removal. Therefore, we are not including dam removal as an alternative to be studied, nor are we requiring a dam removal feasibility study” (FERC, 2006).

When I interviewed Thomas Dewitt, the assistant director of energy projects and I enquired as to why the FERC did not agree to the dam removal feasibility study requested by Ohio EPA, he replied that:

“No probably not that is not the type of study that we require in order to determine whether the site is feasible for a development. This permit was for an existing dam so what Ohio EPA is trying to do is that they are trying to get somebody to analyze the removal of dam without having themselves to pay for it. And state do that all time. States try to get applicant or utility companies to do studies to try and get data that would support their preference to have a dam removed. And we don't believe that is required. If you want to know any further like if an application was filed and we found that the cost of generating power or the environmental effects of such a manner we might require the licensee - the applicant to do a study on dam removal but only under the application for license” (Dewitt, 2008).

Thus it is seen that the state agencies such as the Ohio EPA exercised regulatory power to ensure that water quality standards were maintained in the Cuyahoga River by MHC. While exercising such power they imposed conditions (dam removal feasibility study) on MHC to acquire a water quality certification which was one of the preconditions of obtaining license

from FERC. However, as state scholars (Leitner and Delaney, 1997) argue that state and non-state stakeholders execute power in scalar politics, NGOs (in tier 1) were successful in gaining power and executing them in the various stages of the controversy.

Although the NGOs lacked regulatory power they were capable of winning the support of other agencies. Friend's of Crooked River was supported by Ohio Environmental Council, Kent Environment Council, Cuyahoga Remedial Action Plan (RAP) and Metro Parks Serving Summit County. Elaine Marsh explained:

“So when we first learned about this the best thing that happened for all of us were that Metro Parks Serving Summit County opposed the project quite frankly if they had not opposed the project our involvement would not have mattered much but they as property owner and as both stewards of both the river and the park in that section of the river needed a partner an advocate partner because they cant play advocacy in terms of the public aspect of it. They have been advocates for their interests in court. And so they needed a good partner and they had this organization Friends of Metro Parks and they were nice volunteer organization that helped the park raise money for special projects and did special work in the park but they were not the people who were at all practiced in active opposition to a project so there was no one else to do it and we of course wanted to do it and Metro Parks turned out to be very encouraging to us as their partner and we had a very good partnership and still do in terms of the kinds of things that we communicate to each other and how we work together. So we are kind of the lead dog and there was a lot of public” (Marsh, 2008).

With the support of Metro Parks, Friends of Crooked River was able to mobilize the public. Elaine Marsh explained:

“We organized people we hired two different organizers to go out walk the neighborhood talk to people who lived next right to the dam. We got 400 people in the public meetings and I asked the project manager from FERC who we thought very highly of whether he heard about any project he said that he had not heard of any project any where with so many people out on a preliminary. Later in the process people come out but to respond to the original document he said that I don't know that we ever had these many people. So we took advantage of the community response found out where it was strong send out emails, had petitions signed so we had meetings, we put together power point presentations and I would say over the last 4 years I have made 300 presentations on various aspects of this organization. We really did and we tried to do things that brought media attention to the project” (Marsh, 2008).

Support of different organizations has been instrumental in adding strength and power to the effort of Friend's of Crooked River to take a lead role in the conflict with "discretion" (Barnes in Law, 1986: 182-183). They approached the Ohio Environmental Council and they provided with attorneys from their law clinic. In the battle against MHC, Friend's of Crooked River took sides with the Metro Parks and their attorneys supported Metro Parks in the court.

Elaine Marsh was very active and was aware of every move that the conflict took over time. In my conversation with her she said:

"It has been our major focus for 5 years now. I myself probably put in depending on what's going on 10 to 40 hours a week on this issue. We put together power point presentations and I would say over the last 4 years I have made 300 presentations on various aspects of this issue. We really did and we tried to do things that brought media attention to the project. We had as part of our public involvement strategy we tried to meet with as many as public officials as we can" (Marsh, 2008).

Deep involvement with the project turned Elaine Marsh from an employee to an activist and helped her to become very popular not only among the various stakeholders involved but also among the people who resided in that region. Knowledge gained through long and sustained involvement with the conflict helped her to gain power. Similarly, David Hill took a lead role in promoting recreation in the river and fought against the hydroelectric project with strong support from organizations such as the American Whitewater and the people at large. Even though these two agencies lacked regulatory power, perseverance and support of other organizations have helped to empower themselves.

Having won the support of the Metro Parks, Friend's of Crooked River collaborated with them in framing and enacting strategies to fight against the hydroelectric project. Thus they operated at multiple scales as an NGO operating at local level and at the same time working with Metro Parks which is a state government agency operating at the county level. Working across different political scales helped Friend's of Crooked River to gain empowerment through

the process of rescaling.

Role of money in weaving the controversy

Money in this controversy has played the role of firstly, instigating stakeholders in carrying out future projects and forgo expenses for dam removal. Secondly, it has mobilized stakeholders in recouping of expenses incurred. In this case study, money is not a facet of power but it has been deployed as a strategy to gain advantage in the dispute.

The controversy over the future of the Edison Gorge Dam is to determine whether hydro power should be generated at the dam site. It is also over deciding on the possibilities for dam removal. The stakeholders who oppose the hydroelectric project want to see the dam decommissioned in order to set the Cuyahoga River free. On the other hand, those who supported the project wanted to keep the dam in place. It has been argued by several stakeholders whom I interviewed that First Energy framed and enacted strategies in ways that favor them in keeping the dam in place. The notion of forgoing expenses on dam removal and carrying out future projects has been a guiding factor for First Energy to frame strategies to retain the dam. The task of dam removal lies on First Energy which would be costly for them to undertake. In the words of David Hill:

“If this project doesn’t go forward and let’s say MHC pulls out of the picture would somebody else step up there and remove that dam? I don’t think anybody else has the obligation to do that other than the dam owner which is First Energy” (Hill, 2008).

According to Metro Parks authorities, First Energy, in order to avoid large expenses in September 2004 without notifying Metro Parks signed over a non-binding lease with MHC. The lease gave MHC the authority to enter the park to generate hydro power. According to First Energy, the dam cannot be removed until they retain their rights to access the dam for producing electricity. MHC interviewee noted that First Energy also signed a contract with them. When

MHC will have the permit and generate electricity at the dam site, First Energy would purchase electricity from MHC. Jim White (also the Cuyahoga RAP Coordinator) argued:

“The company who are proposing to produce electricity they have sort energy permits for other low head dams around the country for same kind of things and my guess that it’s kind of a scam. I think that they have made it very clear that if they got the permit they would sell it. To keep them from building the dam somebody could buy their permit. You know they are using the regulatory process for their own benefit. They have no altruistic motive they have no intention of producing any power. If you kind of follow the money trail it follows who are the losers and who are the winners” (White, 2008).

In the opinion of Metro Parks authorities, MHC and First Energy were only driven by profit motives and their concern for the environmental impacts is minimal. In my interview with the Director of Business Development of First Energy, Michael Hyrnick opined:

“As far as I know the environment is reasonably stable. So the electricity that they are going to generate is going to house about 2000 homes. The energy generated would be sold to Ohio Edison and in fact the purchase contract that we have tentatively signed really gives the developer the authority to borrow money so we would be buying output of the dam we would be selling it to the residents of Akron and the immediate area” (Hyrnick, 2008).

On the other hand, money was effective in motivating MHC to fight the litigation in order to recover expenses that have been already incurred. The MHC’s consultants disclosed in an excerpt from Metro Park’s “Motion to Intervene”, dated April 9, 2008 as follows:

“MHC contemplates the sale of the FERC license it would receive, rather than development of a hydroelectric generating plant itself. Such a sale may be other than to an intended power generator, such as to persons who wish to halt any hydroelectric project so that the dam may be removed”. “MHC’s statements concerning its openness to selling the FERC license to conservation groups have included the requirement that Ohio Edison would need to be compensated for its lost assets.”

There was also a testimony in open court by an employee of First Energy (Ronald Kovach, September 8, 2006). He was called to testify by MHC. According to him, MHC’s proposed project will produce energy that would provide electricity to only three homes in contrast to what has been represented to the court, FERC and the public. When I interviewed Cliff Philip, who is one among the two members that comprise the MHC opined:

“I have spent 3 years in the project. We have the board of directors. And we have to convince our board that it is in the best interest of our shareholders to move forward this project. Or you take your loses and walk away or do you see if there is some way that we can recover some of our loses and through additional lawsuits. I just don’t know what the outcome is going to be. We will have to wait to see what the judge says if it’s bounced out of federal court we will have to take it to the state court that means that we will have to start this process again. I think they told us that we can take a lot of the discovery and information from the federal court and that will transfer into the state court. But again those are decisions that we have not made at this point.

We are connected with a wealthy individual who financed us and find additional resources into the company. The source of funds for the company is investment. We do consulting work but we do not do enough consulting work that we cover enough and the cost of developing these projects is very expensive and we sold one of our projects this year to another group and that helped us out a little bit and we were actively involved in the FERC process for licensing a hydro facility is extremely exhaustive and very expensive and whether you do a small project like a 2 megawatt Metro project or a 13 mega watt project it takes about the same amount of time and the same amount of dollars. I think what we will have to do is if we move the project forward we will have to re negotiate our power contract; we are going to sell the power to First Energy. Because of all of these actions we have added additional cost to the project and I need to get recovered those cost in some fashion and I probably will seek to reopen ...extraordinary circumstances and look for readjustment in the power price. First Energy has emotionally supported us but there has been no financial support in any way as it relates to this law suit and this law suit has cost a significant amount of money. More 3 and 4 times what our lawyers initially estimated for this case its lots, lots of money.” (Phillip, 2008).

Hence, money has been the governing factor in motivating MHC in pursuing the litigation. They have spent huge amount of money to pursue both the ILP and the litigation for more than three years. So they are still pursuing the court case with the hope that they will be able get some compensation for the amount lost so far. On the other hand, the money that Metro Parks have spent in pursuing the law suit had been in the form of public taxes which is the only source of income that they have. Thus as long as the Metro Parks and MHC will be able to bear the costs of pursuing the litigation the battle will continue. Money has been used as a tool in gaining advantage in the dispute. The party that has money to make efforts to pursue the litigation and obtain court ruling go in their favor will win the battle. Money is the driving factor that has sustained the controversy.

Conclusion

Sneddon (2003) makes an effort through actor network theory to explain how the exercise of power enables non-humans to react. In his study of inter basin water management in northeast Thailand, Sneddon (2003) showed how “non-human entities, including an array of landscapes, waterscapes, aquatic ecosystems, irrigation canals” (2229) have been reconfigured. In this study, I do not examine how the exercise of power by the stakeholders affected non-human actors since firstly, it would require a different approach to the study and secondly, the results of the controversy are yet to be known. However, I briefly focus here on the ways in which the environment was impacted as a result of the use of Edison Gorge Dam over decades to tame the Cuyahoga River. Such effects have a current bearing on the efforts made by several concerned environmental agencies to fight the battle in favor of taking the dam down.

The battle over the future of the dam narrowed down between the Metro Parks and the Metro Hydroelectric Company as the controversy developed over time. The resistance of the Metro Parks came about in response to the misuse of authority that was bestowed upon MHC by FERC once they had gained the preliminary permit to conduct studies at the dam site. MHC wanted to conduct studies that the Metro Parks believed would harm the park and the river ecosystem. The park authorities could sense that the park would be harmed significantly if the project went forward. The use of authority that MHC gained from FERC for a period of three years was likely to pose a serious threat to the ecosystem. Thus the effects of the exercise of authority by MHC would be reflected on the adverse consequences on the park ecosystem. Negative effects were predicted to be likely by all concerned agencies and specially Metro Parks if MHC were allowed to conduct the studies. The construction of access roads to the dam site would have killed many endangered species as the Northern Monkshood that was likely to

be present in the selected site. It has been opined by agencies that were against the project that if the project went forward water quality would deteriorate for another 50 years as the permit is for a maximum period of 50 years.

According to Jim White, the RAP Coordinator:

“It will take water that normally flows over the dam and enters the river and dewater several hundred if not several thousands feet of river to where the penstock would discharge the water back into the river and that’s right in the bottom of the Gorge which is highly unique, very shady, very cool, very pristine section of river and would dewater that section of the river. And create a low fall condition really below at natural base flow of the river in that area and so that would have a big impact on the connectivity of habitat which is the migrant vertebrates and fish and stuff like that. And if you dewater that section of the river and the other thing is that when you have combined sewer overflow you are discharging those combined sewer into a much lower flow setting which means that magnitude will have a much higher level of impact. The other think is that this would be during peak flow of the river when you generally don’t have a peak energy demand. So you are producing electricity for no customers. When you need it like during peak demand periods like summer for air conditioning that’s when the river flow is the lowest they would be in a position in producing any supplemental electricity” (White, 2008).

Metro Park’s notion that allowing MHC to generate electricity would cause the park and the river ecosystem to respond adversely spurred them to exercise regulatory power. They passed a resolution to stop access to the MHC to the dam site. Thus authority acquired by MHC made Metro Parks exercise regulatory power, considering that the effects of exercise of such authority would affect the environment adversely.

If one looks at the entire stretch of the Cuyahoga River, effects of the use of power are reflected in the numerous ways by which the entire river ecosystem has been harmed over time. The effects of use of power to tame the river by various human actors for decades had diverse manifestations. Since the dam was built in 1912 there has been damages to the river ecosystem in significant ways. The sediment load behind the dam has accelerated which has disrupted the aquatic life. Migration and growth of fishes have been impaired. The Edison Gorge Dam

occupies a small section of the entire stretch of the river, but the river has been dammed in different sections which have worsened the situation. Thus attempts to use the river for various purposes created serious repercussions on the river ecosystem that raised the consciousness of concerned agencies and environmentalists and it gave rise to environmental movement in United States.

Environmental conflicts over natural resource use, as in the case of deciding the fate of the Edison Gorge Dam on the Cuyahoga River, involve a complex web of actors who have varying and contrasting interests. Scale in this study was found to be an important tool for understanding the intricacies of the conflict. The institutional scale of operation of the actors played an important role in assisting them to conceive the environmental scale of the problem, and to formulate ways to achieve their interests that fit into their scalar boundary. In that process, scales were created or reconfigured. Similarly, besides scale, power in different forms was an important weapon that was acquired by the actors as the controversy was woven. The stakeholders acquired power in its varied facets as they operated within their scale of operation or even in the process of operating at multiple scales. With the creation of scale, power was also created and the effects of execution of power have varied manifestations on the environmental scale of the problem.

CHAPTER VI

CONCLUSION

The case of the Edison Gorge Dam on the Cuyahoga River suggests that small dam removal in the United States is a matter of controversy. Dam building is a significant way of taming water resources which in my study is the Cuyahoga River. Dams alter the course of the river, its velocity and rates of erosion that has adverse consequences on its ecosystem. Thus ecosystem restoration has emerged as one of the most debatable arguments for dam removal in United States (Heinz Center, 2002). The conflict over deciding the future of the Edison Gorge Dam is a glaring example of ecological arguments that focus on dam removal.

My study of the controversy over the fate of the Edison Gorge Dam examines the ways by which the stakeholders (both directly and indirectly involved in the conflict) weave the conflict through the theoretical lens of politics of scale and concepts of power and authority. I try to comprehend first, how different stakeholders in the dam controversy negotiate between their understanding of the extent (scale) of the environmental problems at issue, their scale of institutional operation, and the political scale(s) at which the decision will ultimately be made. Second, I try to understand how stakeholders discursively frame their political agendas and actions and materially enact one or more scale strategies. Thirdly, I explore how multiple scale strategies employed by stakeholders empower them and affect redistribution of influence over the use of the river.

In the following paragraphs, I address each research question posed in this study.

In response to my first research question – *how do different stakeholders in the dam*

controversy negotiate between their understanding of the extent (scale) of the environmental problems at issue, their scale of institutional operation, and the political scale(s) at which the decision will ultimately be made, I suggest that the conflict encompasses a wide array of actors working at different scales of operation. The scale of operation of the agencies has influenced their degree of involvement with the problem and at the same time expertise of the agencies has directed them to explore particular aspects of the environmental problem. That is to say, they have narrowed down their focus into a particular dimension of the controversy based on expertise that is partly a function of their (jurisdictional) scale of operation. Different dimension of the environmental consequences are understood by the stakeholders to have different spatial extents, and these overlap in particular ways with the stakeholder's jurisdiction. As this dynamic plays out in the Edison Gorge controversy, stakeholders' definitions of the character of the environmental consequences appear so tied to their scale of operation that the definitions overlap with each other only for a few agencies. Thus, I argue that stakeholders' definition of the geographic scale of a given environmental problem is informed by the nature of their expertise and by the location of the jurisdictional boundary of their scale of operation with respect to the site of the environmental controversy.

To understand how do stakeholders discursively framed their political agendas and actions and materially enacted one or more scale strategies, I examined critically the role of Metro Parks. It is seen that Metro Parks made several requests to the FERC in their letters to include their study proposals in the study plans. However, as MHC did not agree to pursue their requests and at the same time as MHC was not conducting proposed study plans as approved by FERC in accordance with the prescribed timelines, Metro Parks materially took legal step against MHC. Metro Parks passed a resolution prohibiting MHC access to the park property. I

also examined the activities of Kent Environment Council, Friend's of Crooked River and the Ohio Environmental Council, which lend insight into the ways by which these agencies framed and enforced their strategies. I found that as the stakeholders were involved in framing and enacting strategies they operated at multiple scales and underwent the processes of rescaling. I examine in further details the process of rescaling by examining the activities of Metro Parks in relation to other organizations. I define the position of Metro Parks as a hybrid organization; it exists on multiple scales by itself as a state level organization operating on county level and then it underwent a second level of rescaling as it collaborates with other agencies. In this study, rescaling as a process takes place as agencies reconfigure their respective scales of operation by reorganizing activities and collaborating with other stakeholders or forming coalitions through re-allocation of tasks.

To fulfill my third research objective – asking *how do multiple scale strategies employed by stakeholders empower them and affect redistribution of influence over the use of the Cuyahoga River* I draw on different concepts of power. I explore how power in the forms of knowledge/expertise, authority and regulatory versus power of NGOs is attained, deployed and sustained by the stakeholders as they frame and enact strategies to gain advantage in the conflict. I also draw narrowly on the role of money as a form of power in the controversy.

Firstly, I draw on concept of knowledge/ expertise as a form of power to understand how the stakeholders attain power through knowledge and expertise over a certain topic. My interview, with key stakeholders revealed that expertise and knowledge over a particular field of inquiry, combined with a long period of engagement with that area of expertise, have given them the ability to speak authoritatively and to lead their organizations.

Secondly, I draw a distinction between power and authority based on the work of Barnes

(in Law, 1986). Authority to control the use of the river shifted from one stakeholder to the other since MHC filed application with FERC in 2003. Metro Hydroelectric Company's ability to gain authority to use the site has been subject to firstly, multiple conditions as imposed by the FERC and Metro Parks and secondly, whether MHC was successful in getting entry to the site. I discuss here how power – the ability to “direct a routine with discretion”, as opposed to authority, which implies ability to “direct it without discretion” (Barnes in Law 1986: 182), was exercised by both FERC and Metro Parks to shift the ability of MHC to gain authority over the use of the dam site.

Thirdly, I try to understand how the state agencies exercise regulatory power, to that end I draw on the strategies enacted by Ohio EPA in forwarding their goals. On the other hand, I attempt to unravel the ways by which the NGOs who lack regulatory power gain power in the process. Even though the NGOs as Friend's of Crooked River and Keel Hauler's Canoe Club lacked regulatory power, perseverance and support of other organizations have helped to empower themselves. Thus they operated at multiple scales and attained empowerment through the process of rescaling.

Lastly, I narrowly draw on the role of money in deciding the course of the controversy. My study suggests that money in this conflict has played the role of firstly, motivating stakeholders in pursuing future projects and forgo expenses for dam removal. Secondly, it has mobilized stakeholders in recouping of expenses incurred. In this case study, money is not a facet of power but it has been deployed as a strategy to gain advantage in the dispute.

One limitation of this study is that the results of the conflict over the fate of the Edison Gorge Dam are yet to be known. My analysis is based on the effects of the debate since its initiation to its current state. The research leaves scope for further analysis as the fate of the

dam is decided in this particular case study. In addition, while the study highlights the complexities and fluidity of scale politics that are associated with water-related environmental controversy, there is room to further deepen the theoretical understandings of environmental politics over water use in order to better understand the play of power through (environmental) politics of scale.

That said, this study makes important empirical and conceptual contributions to scholarship on environmental controversy over dams and to work on the politics of scale. Empirically, this study adds to the body of research already conducted on small-dam removal in United States that so far has been very few. It demonstrates that dam removal is the subject of controversy amongst stakeholders with different degrees of power, authority and involvement. Conceptually, the study contributes to the body of scale literature that explores human/environmental scales/processes. Environmental conflicts and environmental processes have been understudied by scale theorists; this study highlights that environmental processes, and the vested interest of stakeholders to frame environmental processes at particular scales, adds a degree of fluidity to the politics of scale that underscores the importance of both human and environmental processes of rescaling. Furthermore, the study addresses a gap in the literature on the politics of scale by directly conceptualizing the nature and role of power in framing environmental controversies over water use. As the scholarship on scale does not sufficiently focus on the concept of power in different forms, as it exists and plays out in conflicts over dam removal, the analysis borrows concepts of power as theorized by sociologists to understand the environmental conflict over decommissioning of small dams.

This research opens up new arenas to be further explored. One possible way to study similar works is to investigate the role of both social and non-humans in water related

controversies. In my opinion, research of environmental conflicts is not complete without involving the nexus between both human and non-human actors in the study since environmental conflicts do not involve only humans but also revolves around some non-human entity. In conflicts over water use, water itself is an important non-human participant in the conflict. The works of Sneddon (2002, 2003) might serve as a starting point to look deeper into the ways by which the actor network approach might be used to investigate the role of humans and non-humans in weaving environmental conflicts over water use.

REFERENCES

- Adams, P.C. (1996). Protest and the scale politics of telecommunication. *Political Geography*. 15(5): 419-441.
- Arts, B. (2004). The Global-Local Nexus: NGOs and the Articulation of Scale. *Tijdschrift voor Economische en Sociale Geografie*, 95(5) 498-510.
- Akron Beacon Journal, August 1998.
- Atkinson, R. & J. Flint. (2001). *Social Research Update*. Sociology at Surrey. University of Surrey. Issue 33.
- Baxter, R. M. (1977). Environmental Effects of Dams and Impoundments. *Ann. Rev. Ecol. Syst* 8: 255-283.
- Bell, R. (Speaker). (2008) Interview with U. Das (tape recording) Supervisor, Department of Surface Water, Ohio EPA.
- Brenner, N. (2000). The urban question as a scale question: reflections on Henri Lefebvre, urban theory and the politics of scale. *International Journal of Urban and Regional Research*, 24 (2): 361-378.
- Brenner, N. (2001). The limits to scale? Methodological reflections on scalar structuration. *Progress in Human Geography*, 25, 591-614.
- Brenner, N. (1997). State territorial restructuring and the production of spatial scale Urban and regional planning in the Federal Republic of Germany, 1960-1990. *Political Geography*. 16(4) 273-306.
- Brief in Support of Motion to Dismiss Complaint in the United States District Court for the Northern District of Ohio dated 09/25/2006.
- Brief in Support of Plaintiff's Motion for Temporary Restraining Order and Preliminary Injunction. Sept, 2006.
- Castree, N. (2000). Geographic scale and grass-roots internationalism: The Liverpool dock dispute, 1995-1998. *Economic Geography*. 76(3). 13-95.
- Chase, E. (Speaker). (2008) Interview with U. Das (tape recording) Member of Kent Environment Council.
- Cidell, J. (2006). The place of individuals in the politics of scale. *Area*. 38(2) 196-203.

- Comments on Pre Application Document* by American Whitewater and Keel Hauler's Canoe Club dated 05/02/2005.
- Cox, K. (1998). Space of Dependence, Spaces of engagement and the politics of scale, or: looking for local politics. *Political Geography*. 17(1). 1-23.
- Cox, K. (1998). Representation and power in the politics of scale. *Political Geography*. 17(1). 41-44.
- Cuyahoga Falls news-Press, August 2006.
- D'Arcus, B. (2003). Protest, Scale and Publicity: The FBI and the H Rap Brown Act. *Antipode*. 719-741.
- Delaney, D. & Leitner, H. (1997). The political construction of scale. *Political Geography* 16(2): 93-97.
- Denzin, N.K. & Y.S.Lincoln. (2005). *The Sage 'Handbook of Qualitative Research'* Sage Publication Inc. Thousand Oaks California. pp1210.
- Deudney, D. (1981). Hydropower: An Old Technology for a New Era. *Environment*. 23(7): 16-20, 37-45.
- Doherty, J., E. Graham and M. Malek. (1992). *Postmodernism and the Social Sciences*. St. Martin's Press. New York.
- Doyle, M.W. E. H. Stanley, M. A. Luebke, and J M. Harbor. (2000). *Dam Removal: Physical, Biological, and Societal Considerations*. American Society of Civil Engineers Joint Conference on Water Resources Planning and Management, Minneapolis.
- Doyle, M.W., E. H. Stanley, J.H. Harbor and G.S. Grant. (2003). Dam Removal in the United States: Emerging Needs for Science and Policy. *Eos, Transactions, American Geographical Union*. 84 (4): 29-36.
- Dowding, K. (1996). *Power*. University of Minnesota Press. Minneapolis. 98pp.
- Dewitt, T. (Speaker) (2008). Telephonic Interview with U. Das (tape recording) Assistant Director of Energy Projects. Federal Energy Regulatory Commission.
- Fairciough, N. (2005). Peripheral Vision: Discourse Analysis in Organization Studies: The Case for Critical Realism. *Organizational Studies*. 26(6). 915-936.
- FERC *Handbook for Hydroelectric Project Licensing*, April 2004
- Foley, G. (1999). *Learning in social action*. London, UK: Zed Books.

- Ford, R. (1998). The Perception of Power: Dependence and Legitimacy in Conflict. *Social Psychology Quarterly*. 61(1). 16-32.
- Federal Energy Regulatory Commission Order Denying Rehearing. Dated October 18, 2007.
- Goodland, R. (1986). Hydro and the environment: evaluating the tradeoffs. *Water Power & Dam Construction*. 25-33.
- Gough, J. (2004). Changing Scale as changing class relations: variety and contradictions in the politics of scale. *Political Geography*. 23. 185-211.
- Galam, S. & S. Moscovici (1995). Towards a Theory of Collective Phenomena. III: conflicts and forms of power. *European Journal of Social Psychology*. Vol 25. 217-229.
- Gray, L.C. (2002). Environmental policy, land rights and conflict: rethinking community natural resource management programs in Burkina Faso. *Environment and Planning D: Society and Space*. 20. 167-182.
- Great Lakes Aquatic Habitat Newsletter, 2005.
- Harvey, D. (1997). *Justice, Nature and the Geography of Difference*. Blackwell. 480 pps.
- Hartley, J. (2004). Case Study Research. In Catherine Cassell & Gillian Symon (Eds.). *Essential Guide to Qualitative Methods in Organizational Research*. London: Sage. 323-333.
- Hill, D. (Speaker) (2008). Interview with U. Das (tape recording) Conservation Chair. Keel Hauler's Canoe Club.
- Hirsch, P. (1988). Dammed or Damned? Hydropower versus People's Power. *Bulletin of Concerned Asian Scholars*. Vol. 20.
- Herod, A. (1991). The Production of Scale in United States labor relations. *Area*. 23(1). 82-88.
- Herod, A. & M. Wright. (2002). Placing Scale: An Introduction. *Geographies of Power*. Massachusetts. Blackwell Publishing 1-14.
- Howitt, R. (2002). Scale and the other: Levinas and geography. *Geoforum* 33. 299-313.
- Howitt, R. (1998). Scale as relation: musical metaphors of geographical scale. *Area*. 30(1): 49-58.
- Hyrnick, M. (Speaker) (2008). Telephonic Interview with U. Das (tape-recording) Director of Business Development. First Energy.
- Interoffice Memorandum* by Ohio EPA, dated 06/17/2005.
- Interview with Metro Parks Authorities (2008).

- Jones, K. (1998). Scale as epistemology. *Political Geography*. 17(1), 1-23.
- Jones, A. (1994). The scale politics of spatiality. *Environment and Planning D: Society and Space*. 12(3). 257-264.
- King, N.B (2004). The Scale Politics of Emerging Diseases. *The History of Science Society*. 19. 62-76.
- Kendall, G.(2007). What Is Critical Discourse Analysis? *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*. 8(2).
- Kurtz, H.E. (2003). Scale Frames and Counter-scale Frames: Constructing the Problem of Environmental Injustice. *Political Geography*. 22. 887-916.
- Law, J.(ed). (1986). Power, Action and Belief A New Sociology of Knowledge? *Sociological Review Monograph* 32. England. 280pp
- Letter to FERC by MHC dated 10/10/2004. *It enlists the issues raised during comment period by stakeholders*
- Letter to FERC by MHC dated 04/14/2006. *Notice of Site Construction for the access road and boring locations on April 24, 2006*
- Letter to FERC by MHC dated 03/03/2005. *Notice of Intent submitted by MHC to file an application for an original license for the proposed project.*
- Letter to FERC by MHC dated 12/15/2005. *Response to Comments from Metro Parks Serving Summit County.*
- Letter to FERC by MHC dated 08/ 31/ 2007. *Fifth Sixth Month Progress Report.*
- Letter to Metro Parks by MHC dated 12/15/2005. *Responses to Comments from Metro Parks.*
- Letter by FERC to MHC *Requiring Additional Studies* dated 08/30/2005.
- Letter to MHC by FERC dated June 14, 2007. *Terminating IPL.*
- Letter to FERC by Metro Parks as a *formal filing of a dispute regarding the proposed study plans for the proposed project* dated 03/03/2006.
- Letter to FERC by Metro Parks to review their opposition to the project dated 08/24/2005.
- Letter to FERC by Metro Parks as *formal requests for studies to the proposed construction of hydroelectric facility in the Gorge Metro Park* dated 08/30/2005.
- Letter to FERC by Metro Parks as a *formal objection to the project* dated 06/20/2006.

- Letter to FERC by Metro Parks as *a resolution opposing the project* dated 05/3/2006.
- Letter to FERC by Friends of Crooked River dated 08/29/2005 *Responses on Pre Application Document*.
- Letter to FERC by Friends of Crooked River dated 02/27/2006. *Comments on Revised Study Plans*.
- Letter to FERC by Keel Hauler's Canoe Club dated 01/12/2006. *Motion to Intervene*.
- Letter to FERC by Ohio EPA dated 04/18/2007 *Comments on MHC's Study Progress Report*.
- Letter to Metro Park by Summit Soil and Water Conservation District on *erosion and soil control review for the project* dated 11/1/1005.
- Lebel, L., P, Garden and M, Imamura. (2005). The Politics of Scale, Position and Place in the Governance of Water Resources in the Mekong Region. *Ecology and Society*. 10(2)18.
- Lebel, L. (2004). The Politics of scale in the assessment and management of environmental change. *Unit for Social and Environmental Research*. Thailand. 1-18.
- Levin, S. (1992). The Problem of Pattern and Scale in Ecology: The Robert H. MacArthur Award Lecture. *Ecology*. 73(6). 1943-1967.
- Lofland, J & L.H. Lofland. (1995). *Analysing Social Setting A Guide to Qualitative Observation and Analysis*. Wadsworth Publishing Company. U.S.A. 267pp.
- Loftus, A. (2007). Working the Socio-Natural Relations of the Urban Waterscape in South Africa. *International Journal of Urban and Regional Research*. 31(1) 41-59.
- Marsh, E. (Speaker) (2008) Interview with U. Das (tape-recording) President, Friend's of Crooked River.
- Marston, S. (2000). The Social Construction of Scale. *Progress in Human Geography*, 24, 219-242.
- Marston, S., J.P.Jones & K.Woodward.(2005). Human Geography without scale. *Institute of British Geographers*. 30. 416-432.
- Martin, D. (2004). Reconstructing Urban Politics: Neighborhood Activism in Land-Use Change. *Urban Affairs Review*. 39(5). 589-612.
- Martin, D. (1999). Transcending the fixity of jurisdictional scale. *Political Geography*. 18(1), 33-38.

- Marston, S.A. and N. Smith. (2001). States, scales and households: limits to scale thinking? A response to Brenner. *Progress in Human Geography*. 25(4) 615-619.
- Mamadouh, V. (2004). Articulating local and global scales. *Tijdschrift voor Economische en Sociale Geografie*, 95(5), 455-466.
- Mamadouh, V. (2003). Internet, scale and the global grassroots: Geographies of the Indymedia network of interdependent media centres. *Tijdschrift voor Economische en Sociale Geografie*, 95(5). 482-497.
- Mansfield, B. (2005). Beyond Rescaling: reintegrating the 'national' as a dimension of scalar relations. *Progress in Human Geography*. 29(4) 458-473.
- McCarthy, J. (2005). Scale, Sovereignty and Strategy in Environmental Governance. *Antipode*. 731-753.
- McGuirk, P.M. (2003). Producing the Capacity to Govern in Global Sydney: A Multiscaled Account. *Journal of Urban Affairs*. 25(2) 201-223.
- McMaster, R. and E.Sheppard. (2003) Introduction: Scale and Geographic Inquiry. *Scale and Geographic Inquiry: Nature, Society and Method*. Blackwell. Oxford. 1-22.
- Meadowcroft, J. (2002). Politics and Scale: some implications for environmental governance. *Landscape and Urban Planning*. 61, 169-179.
- Messing, M., H.P. Frie sema and D.Morell. (1997). *Centralizing Power the Politic of Scale in Electricity Generation*. Oelgeschlager, Gunn & Hain, Publishers. Cmbridge.
- Mitchell, T. (1990). Everyday Metaphors of Power. *Theory and Society*. 19(5). 545-577.
- Motion of Plaintiff MHC for Temporary Restraining Order and Preliminary Injunction in the United States District Court Northern District of Ohio dated 07/24/2006.*
- Motion to Intervene by Metro Parks, April 9, 2008.*
- Molle, F. (2007). Scales and power in river basin management: the Chao Phraya River in Thailand. *The Geographical Journal*. 173(4): 358-373.
- Metro Parks Brief in Support of Motion to Dismiss Complaint. Dated 09/25/2006.*
- Nielsen, E.H. and K. Simonsen. (2003). Scaling from 'Below': Practices, Strategies and Urban Spaces. *European Planning Studies*. 11(8) 911-927.
- Ohio Department of Natural Resources' *Comments on MHC's Proposed Project* dated 02/22/2006.

- O'Neill R.V. and King A.W., 1998: Homage to St. Michael: Or why are there so many books on scale? In: *Ecological Scale: Theory and Applications*, Peterson D.L. and Parker V.T. (eds.), Columbia University Press, New York, NY, 3–15.
- Opposition to Amended Motion for Preliminary Injunction* in the United States District Court for the Northern District of Ohio dated 10/05/2006.
- Opposition to Leave to File Surreply Against Motion to Dismiss Complaint* in the United States District Court for the Northern District of Ohio dated 11/15/2006.
- Order Issuing Preliminary Permit* by FERC to MHC issued 03/15/2005.
- Paasi, A. (2004). Place and region: looking through the prism of scale. *Progress in Human Geography*, 28(4), 536-546.
- Pearce, F. (1992). *The Dammed: Rivers, Dams and the Coming World Water Crisis*. Bodley Head. London.
- Peterson, D. and V.T. Parker. (1998). *Ecological scale: Theory and Applications*. New York: Columbia University Press. pp 615.
- Phillip, C. (Speaker) (2008) interview with U. Das (tape-recording) Member of Metro Hydroelectric Company.
- Pre Application Document* on Ohio Edison Gorge Dam, Metro Hydroelectric Project, Akron, Ohio 44310. Prepared by Metro Hydro Electric Company, LLC 150 North Miller Road, Suite 450 C, Fairlawn, Ohio 44333. May 2005.
- Purcell, M. and J.C. Brown. (2005). Against the local trap: scale and the study of environment and development. *Progress in Development Studies*. 5(4). 279-297.
- Qing, D. (ed). 1998. *The river dragon has come! : The three gorges dam and the fate of China's Yangtze River and its people*. M.E. Sharpe. N.Y.
- Reply Brief in Support of Motion to Dismiss Complaint* in the United States District Court for the Northeastern District of Ohio dated 11/06/1006.
- Sayre, N. (2005). Ecological and Geographical Scale: Parallels and Potential for Integration. *Progress in Human Geography*. 29 (3), 276-290.
- Schendel, W.V. (2002). Geographies of Knowing, geographies of ignorance: jumping scale in Southeast Asia. *Environment and Planning D: Society and Space*. 20. 647-668.
- Scoping of Environmental Issues* for the proposed project by FERC issued 07/01/2005.

- Slater, D. (2002). Other domains of democratic theory: space, power and the politics of democratization. *Environment and Planning D: Society and Space*. 20. 255-276.
- Smith, N. (1992). Geography, Difference and the Production of Scale. *Postmodernism and the Social Sciences*. Macmillan.
- Smith, N. (1993). Homeless/global: scaling places. In J. Bird, B. Curtis, T. Putnam, G. Robertson and L. Tickner (eds.). *Mapping the futures. Local cultures, global change*. Routledge, New York.
- Sneddon, C. (2003). Reconfiguring scale and power: the Khong-Chi-Mun project in northeast Thailand. *Environment and Planning A*. 35. 2229-2250.
- Sneddon, C. (2002). Water Conflicts and River Basins: The Contradictions of Co-management and Scale in Northeast Thailand. *Society and Natural Resources*. 15. 725-741.
- Sneddon, C. et al. (2002). Contested Waters: Conflict, Scale and Sustainability in Aquatic Socioecological Systems. *Society and Natural Resources*. 15. 663-675.
- Staeheli, L. A. (1999). Globalization and the Scales of Citizenship. *Geography Research Forum*. 19. 60-77.
- Stanley E.H. and M.W. Doyle. (2003). Trading Off: The Ecological Effects of Dam Removal. *Frontiers in Ecology and the Environment*. 1(1): 15-22.
- Study Plan Progress Report* by MHC, 03/09/2007
- Summary of Study Plan Comments and Responses to Comments* by MHC. Minutes of Initial Study Plan Meeting (11/12/2005).
- Swyngedouw, E. (1997). Excluding the other: The Production of Scale and Scaled Politics. *Geographies of Economies*. 167-176.
- Swyngedouw, E. (2004). Scaled Geographies: Nature, Place and the politics of Scale. *Scale and Geographic Inquiry*. Blackwell. Oxford. 129-153.
- Swyngedouw, E. (1997). Neither Global nor Local: "Globalization and the Politics of Scale. *Spaces of Globalization: Reasserting the Power of the Local*. 137-166
- Swyngedouw, E. (2000). Authoritative governance, power and the politics of rescaling. *Environment and Planning D: Society and Space*. 18. 63-76.
- Tew, J. (2002). *Social Theory, Power and Practice*. Palgrave Macmillan. N.Y. pp 226.

- The Initial Study Plan* prepared by Metro Hydro Electric Company, LLC, 150 North Miller Road, Suite 450C, Fairlawn, Ohio 44333. October 2005.
- The H. J. Heinz III Center for Science, Economics and the Environment. (2002). *Dam Removal Science and Decision Making*.
- The Plain Dealer, Cleveland. June 22, 1999.
- The Plain Dealer, Cleveland. June 19, 1999.
- The Plain Dealer, Cleveland. September 29, 2005.
- The Plain Dealer, Cleveland. January 1, 2006.
- Time Line of Significant Events: Proposed Hydro facility in Gorge Metro Park.
- Titunik, R. (2002). Forms of Power by Gianfranco Poggi. *The American Political Science Review*. 96(3). 620-621.
- Tonkiss, F. (2004). Analyzing Text and Speech: Content and Discourse Analysis. In Seale, C. (Eds). *Researching Society and Culture*. Sage. pp.367-382.
- Transcript of Preliminary Injunction Hearing* before the United States District Court Northeastern District of Ohio dated 09/08/2006.
- Transcript of Scoping Meeting in the Matter of the Project* held at Sheraton Suites Akron/Cuyahoga Falls dated 07/27/2005.
- Tuckerman, S. (Speaker) (2008). Interview with U. Das (tape-recording) Charge of Division of Surface Water, Ohio EPA.
- Uitermark, J.(2002). Re-saciling,'scale fragmentation' and the regulation of antagonistic relationships. *Progress in Human Geography*. 26(6). 743-765.
- Unpublished Thesis of Seneca Holland (2007) and Christopher Smith (2002), University of Georgia.
- Williams, P. (1991). The Debate over Large Dams: The Case Against. *Civil Engineer*. 61(8) 42-46.
- Worster, D.(1985).*Rivers of Empire: Water, Aridity and the Growth of the American West*. Oxford University Press. N.Y.
- Wartenberg, T. (1992). *Rethinking Power*. State University of New York Press. N.Y. 353pp

- Wartenberg, T.(1991). The Forms of Power: From Domination to Transformation. *Contemporary Sociology*. 20(2). 244-245.
- White, J. (Speaker) (2008). Interview with U. Das (tape-recording) Cuyahoga Remedial Action Plan Coordinator.
- Wickham, G. (2006). Foucault, Law and Power: A Reassessment. *Journal of Law and Society*. 33(4). 596-614
- Woodhouse, M. & M. Zeitoun. (2008). Hydro-hegemony and international water law: grappling with the gaps of power and law. *Water Policy*. 10(2). 103-119.
- Yin, R. (1994). *Case Study Research Design and Methods*. Sage Publication. London. pp.179.

APPENDIX A: INTERVIEW SCHEDULE

Questions for NGOs

- Give a brief description of your organization's origin, nature of membership, activities and your nature of involvement with the organization?
- What steps have been taken by your organization to restore the Cuyahoga River? Do you think that hydroelectricity should be produced from the existing dam or do you favor dam decommissioning? If so why?
- How have you been associated with the Metro Parks?
- If you are in favor of dam removal, what steps have you taken to forward your interests?
- Have you sought support of other organizations or government agencies or the court to make your voices heard? Could you describe them? Have you written letters to the Federal Energy Regulatory Commission? If so, how many times have you written so far?
- How do you define the extent of the problem or what is the spatial scale to which the problem exists? How has the nature of the problem taken shape over time?
- What has been your organization's nature of interaction with other non government organizations, the government agencies, hydroelectric companies, dam owner and the Federal Energy Regulatory Commission?

Questions for State Government agencies

- What steps have been taken by your organization to restore the Cuyahoga River? Do you think that hydroelectricity should be produced from the existing dam or do you favor dam decommissioning? If so why?
- What has been your nature of relationship with the Metro Parks?
- If you are in favor of dam removal, what steps have been taken to forward your interests?
- What has been your extent of communication with the other stakeholders in the process?
- How have you been involved in the licensing process?
- Have you sought support of other organizations or government agencies or the court to make your voices heard? Could you describe them? Have you written letters to the Federal Energy Regulatory Commission? If so, how many times have you written so far? What as been the consequences of such actions?
- How do you define the extent of the problem or what is the spatial scale to which the problem exists? How has the nature of the problem taken shape over time?

Questions for hydroelectric company (Metro Hydroelectric Company)

- Could you provide a brief account of your company? When it started and where? How many projects have been accomplished so far?
- Why have you been interested in generating hydroelectricity at this site? How much electricity did you propose to generate? And who are the beneficiaries of the project? Or to whom would the energy be sold?
- What steps have you taken to forward your project? What has been the level of communication between you and the state government, Federal, the NGOs, the dam owner and the residents? What has been the reaction of each of these actors with regard the proposed project?
- What have been the reasons for progress or failure of your proposed project?
- In what ways do you think that generation of electricity on the existing dam would affect the functioning of the Cuyahoga River? Do you have any solutions in your agenda to reclaim the damage to the river?
- What kind of obstructions from other actors has been faced by your company in the establishment of the project? How have you confronted with them? Have you resorted to the help of other actors to confront them? if so, who are they and how that has been done?

Questions for dam owner

- Why was the Ohio Edison George Dam built in 1912 by the Northern Ohio Traction & Light Company (NOPL) at this part of the Cuyahoga River? Or in other words why was this particular site selected for the construction of the dam?
- Why did NOPL later merged with several other companies to form the Ohio Edison Co.? Who were the other companies?
- Why was land surrounding the dam deeded in 1929 to the Metro Parks Serving Summit County by NOPL?
- Why the owners of the dam, then Ohio Edison Co. did abandon the site as a hydro electric source in 1958? Later what led the First energy to transfer easement to the Metro Hydroelectric Company (MHC) to license, build and operate a new hydroelectric power plant at the dam site?
- Do you think that currently Advanced Hydro Solutions would be able to acquire license from Federal Energy Regulatory Commission in generating Hydroelectricity?
- In what ways have you promoted the hydroelectric companies in gaining their license? Who are the other actors that you have resorted to in gaining compliance? How far have you been successful?
- How far do you think the existence of the dam would affect the healthy functioning of the Cuyahoga River? What is the spatial scale to which you define the severity of the problem?
- If AHS fail to acquire license, will the dam be decommissioned? Are their any plans other than decommissioning? If so what are they?

Questions for Federal Energy Regulatory Commission

- Why did the Federal Energy Regulatory Commission terminate Advanced Hydro Solutions' application for the Integrated Licensing Permit? What was the time lines set that they could not meet? Why did again the Federal Energy Regulatory Commission allow AHS to re-file if they can conduct the required studies? What required studies were needed?
- Why was Metro Hydroelectric Company denied license to generate electricity? If Federal Jurisdiction for power licensing does not encompass property rights and since in the deeds of 1929 the property rights were granted to the Metro Parks, and MHC was not allowed to enter their property to perform studies required by FERC for the licensing project then the same could happen with the AHS as well. Do you think AHS would be able to acquire license finally?
- There have been several petitions written by different agencies since the two companies proposed to generate electricity at Edison George Dam. What has been your reaction to them? What are the ways in which they have been analyzed?
- How have you been involved in the licensing process?
- Even if AHS conduct required studies do you think that the existence of the dam would disrupt the healthy functioning of the Cuyahoga River or deteriorate the conditions further? If so, how do you define the scale of the existing problem?
- What according to you is the best solution for the problem? And how can that be sought?

APPENDIX B: CONCENT FORM FOR PARTICIPANTS

I, _____, agree to participate in a research study titled “Contesting Political Versus Environmental Scale: A Controversy Over the Edison Gorge Dam”, conducted by Ujjaini Das from the Department of Geography at the University of Georgia (706-542-2388) under the direction of Dr. Hilda Kurtz (706-542-2329), Department of Geography at University of Georgia. I understand that my participation is voluntary. I can refuse to participate or stop taking part without giving any reason, and without penalty or loss of benefits to which I am otherwise entitled. I can ask to have all of the information that can be identified as mine returned to me, removed from the research records, or destroyed.

The reason for this study is to understand how environmental impacts of the Edison Gorge Dam are perceived by environmental actors and how that curves out the controversy over the future of the dam.

I will not benefit materially from this research. This research will help me to learn how to unravel controversy with regard to environmental problems such as dam removal.

If I volunteer to take part in this study, I will participate in a semi-structured interview that will last approximately forty five minutes. This interview will be audiotaped. All audiotapes will be destroyed at the end of this research. Participation in this study does not entail any known risks.

Any information that is obtained in connection with this study and that can be identified with me will remain confidential and will be disclosed only with my written permission.

The researcher will answer any further questions I may have about the research, either now or during the course of the project, and can be reached by telephone at: 706-372-2746
I understand that I am agreeing by my signature on this form to take part in this research project and understand that I will receive a signed copy of this consent form for my records.

_____	_____	
Name of Researcher	Signature	Date
Telephone: _____		
Email: _____		
_____	_____	

_____	_____	
Name of Participant	Signature	Date
Please sign both copies, keep one and return one to the researcher.		

Additional questions or problems regarding my rights as a research participant should be addressed to The Chairperson, Institutional Review Board, University of Georgia, 612 Boyd Graduate Studies Research Center, Athens, Georgia 30602-7411; Telephone (706) 542-3199; E-Mail Address IRB@uga.edu.