

December 2022

Common Ground Over Common Water: Defining the Public Interest in the Milwaukee Watershed

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COMMON GROUND OVER COMMON WATER:
DEFINING THE PUBLIC INTEREST IN THE MILWAUKEE WATERSHED

by

Thomas Anthony Gentine

A Dissertation Submitted in
Partial Fulfillment of the
Requirements for the Degree of

Doctoral of Philosophy
in History

at

The University of Wisconsin-Milwaukee

December 2022

ABSTRACT

COMMON GROUND OVER COMMON WATER

by

Thomas Anthony Gentine

The University of Wisconsin-Milwaukee, 2022
Under the Supervision of Professor Amanda I. Seligman

My dissertation examines government and nongovernment entities' attempts to restore and protect the use and health of the Milwaukee River and its watershed from 1960 to 2000. Under Mayor Henry Maier's leadership, Milwaukee worked to reclaim the urban riverway to stimulate economic growth. However, state and federal representatives, after the passage of the 1965 Water Quality Act, demanded that the city government prioritize updating the combined storm and sewer system to lessen pollution in the Milwaukee River. At the same time, other groups worked to save rural areas from unplanned development and further degradation of the waterway. Influential groups included the Riveredge Nature Center members, the Southeastern Wisconsin Regional Planning Commission (SEWRPC), the Milwaukee River Restoration Council, and the Milwaukee River Revitalization Council. As these groups debated the best course of action, they recognized the benefits of a watershed approach to restoring the riverway's health. However, arguments continued as the communities that purported a public interest in the waterway were often identified by boundaries that did not coincide with the watershed's area. My research contributes to historical scholarship by investigating how these groups came to recognize the importance of a watershed approach to addressing water pollution problems and protecting private property from flood damage. However, searching for a shared public interest that reflected urban, suburban, and rural perspectives of the watershed's future was more elusive as economic, social, and historical understandings of the watershed continued to divide people.

Primary source materials were gathered through newspaper articles and archival sources. The Milwaukee Public Library funds the online storage of the *Milwaukee Journal* and *Milwaukee Sentinel*. Archival material was located through the University of Wisconsin-Milwaukee (UWM) Archives Department and the Wisconsin Historical Center. Also, I utilized materials stored by SEWRPC, Riveredge Nature Center, and the River Revitalization Foundation.

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To

Those who shared their passion for learning with me

My family

My peers at Sheboygan North High School

and many, many students

TABLE OF CONTENTS

ABSTRACT *ii*

TABLE OF CONTENTS *vi*

LIST OF FIGURES *viii*

LIST OF ABBREVIATIONS *ix*

ACKNOWLEDGEMENTS *x*

Preface *1*

 Milwaukee River Watershed Map *3*

Introduction *4*

 A Brief Social History of the Milwaukee River *4*

 A Watershed Community *11*

 Sources and Methods *15*

 Historical Perspectives of the Public Interest *16*

 Historiography *23*

 Dissertation Outline *28*

Chapter 1: Defending a City, While Revitalizing a Riverway *37*

 Mayor Henry Mayor’s Administration’s Plan *42*

 A Public Interest of the State and Nation *53*

 Conclusion *69*

Chapter 2: Riveredge Nature Center, From Island to Interconnected Web *71*

 The Vision and Development of a Place Called Riveredge *77*

 Naturalist like Gardener: Fostering a Diverse Habitat *89*

 Welcomed and Unwelcomed Human Intervention *93*

 Bringing the Lessons of Riveredge into People’s Living and Workspaces *98*

 Protecting the Interest of the Watershed *102*

 Conclusion *108*

Chapter 3: Contesting the Flow of the Milwaukee River *110*

 The Milwaukee River: The Unruly Waterway *116*

 Sauville Diversion Channel *119*

The Waubeka Reservoir: A Multi-Purpose Fix to an Imperfect Stream	123
The Environmental Corridor	130
Conclusion	133
Chapter 4: Water Quality, Working towards a Watershed Perspective	136
Milwaukee River Restoration Council: Cleaner Waters Now!.....	139
Continued Pressure on the City of Milwaukee.....	146
The Restoration Council Joins with the State of Illinois.....	153
Struggling to Build a Watershed Solution.....	159
Conclusion	167
Chapter 5: Milwaukee River Revitalization Council.....	171
Formation of the Revitalization Council	175
Addressing NPS Pollution in Rural and Urban Communities.....	180
Green Space	184
North Avenue Dam Removal	186
Conclusion	192
Conclusion: An Interconnected Web.....	194
SELECTED BIBLIOGRAPHY.....	204

LIST OF FIGURES

Map:

Milwaukee Watershed. 3

LIST OF ABBREVIATIONS

CSS	Combined Storm and Sewer System
CCRC	Cedar Creek Restoration Council
DATCP	Department of Agriculture Trade and Consumer Protection
DDT	Dichlorodiphenyltrichloroethane
FWPCA	Federal Water Pollution Control Act
GLCP	Great Lakes Conference on Pollution
IJC	International Joint Commission
IWL	Izaak Walton League
LAWCON	Land and Water Conservation Fund
MAS	Milwaukee Audubon Society
MDCD	Milwaukee Department of City Development
MMSC	Milwaukee Metropolitan Sewerage Commission
MMSD	Milwaukee Metropolitan Sewerage District
MPM	Milwaukee Public Museum
MRPW	Milwaukee River Priority Watershed
MRPWP	Milwaukee River Priority Watershed Program
MRRTF	Milwaukee River Technical Task Force
MRTSC	Milwaukee River Technical Study Committee
MRW	Milwaukee River Watershed
MRWPC	Milwaukee River Watershed Planning Committee
MSC	Milwaukee Sewage Commission
MRTSC	Milwaukee River Technical Study Committee
NLC	National League of Cities
NPS	Nonpoint Source
NPAP	Nonpoint Source Pollution Abatement Program
OCSP	Oak Creek Sewage Plant
ORAP	Outdoor Recreation Act Program
PAC	Performance Arts Center
PRNP	Point Reyes National Seashore
RFI	Riveredge Foundation, Inc
RNC	Riveredge Nature Center
RRF	River Revitalization Foundation
SEWRPC	Southeastern Wisconsin Regional Planning Commission
T-N	Teacher-Naturalists
TTW	Testing the Waters
UWM	University of Wisconsin - Milwaukee
WBGC	Whitefish Bay Garden Club
WBR	Wilderness Bill of Rights
WDNR	Wisconsin Department of Natural Resources
WEPA	Wisconsin's Environmental Policy Act
WPA	Works Progress Administration
WSC	Wisconsin Supreme Court

ACKNOWLEDGEMENTS

Why does one start a history doctoral degree when one is nearly 44 years old? Although the answer may be a little more complex, my peers at Sheboygan North High School and the students in my classes kept me young at heart and fostered my love of learning. Busy thinking about what was best for our students, we often took time to be with each other, sharing our ideas and challenging ourselves to continue to learn. Most fruitful, were not the times when we were mandated to do something, but when we came together to share our interest in a book someone was reading, a new movie we watched, or how we searched for balance in our lives between our work and our families. Together we nurtured our love of learning. Most rewarding were the times I shared with Sylvia Cavanaugh, other National History Day educators, and the students researching for their projects. Their joy in sharing their insights and recognizing their achievements at the end of the semester or at various competitions motivated and maintained my love of learning. My time as an educator at Sheboygan North High School will always be cherished. Once a Raider, always a Raider!

I would also like to thank the many people that have worked to improve the health of the Milwaukee River Watershed. The staff at the Riveredge Nature Center opened their doors to me and helped me connect with others interested in preserving the history of Riveredge, especially the founders' work. Also, a special thank you to the staffs at the River Revitalization Foundation (RRF) and the Washington County Historical Society. Many of the documents held by the Milwaukee River Revitalization Council and RRF are now accessible to the public, as Ray Krueger, an original member of the Revitalization Council, has donated his records to the University of Wisconsin-Milwaukee Archives Department. Without their attention to preserving early documents of their perspective organizations, much of my research would have been unavailable.

I want to recognize the efforts of the University of Wisconsin-Milwaukee Libraries Archives Department staff, especially Abigail Nye, for their assistance with my research. The challenges of

researching in a safe manner during the COVID epidemic would not have been possible without their help. The Milwaukee Watershed map on page 3 was provided by the Southeastern Wisconsin Regional Planning Commission. I asked my friend Rob Merry if they had a digital copy of the watershed that I could insert into my dissertation. His boss happens to be Elizabeth Larsen, the daughter of Andy Larsen (the first naturalist hired at Riveredge). Rather than just give me a standard map, Rob had his team inserted Riveredge and Nichols Creek into the map and highlighted the Milwaukee River Watershed. Thank you, Rob.

Anita Cathey, Ashia Gripentrog, and Barisha Lettermann were helpful working behind the scenes and assisting me through graduate school. Dr. Joe Austin was an important mentor, during his role as the history department's graduate student advisor. My UWM writing buddies, Toni Terese Johns, Dr. Benjamin William Trager, Dr. Anahita Alamoradiqashqai, Katlyn Marie Merkle provided comradery and many words of encouragement to keep writing! Also, Martin Kozon, Dr. Joseph Walzer, and Dr. John Michels shared experiences navigating the dissertation process and helped me to see the project to the end. I am thankful for Marquette History Department. Dr. Steven M. Avella and Dr. Carla H. Hay provided valuable assistance and feedback on my writing, while I earned my master's degree.

My dissertation team included Dr. Amanda Seligman, Dr. Joseph Rodriguez, Dr. Marcus Filippello, and Dr. Nan Kim. I valued their scholarship and attention to make themselves present. Marcus' insights stressed the importance of letting the readers understand the methods and sources. Nan provided suggestions on how to make my writing more accessible to my audience. In addition, her suggestion to revisit Garret Hardin's "Tragedy of the Commons" provided an additional layer to my argument. Joe's Environmental History course was the catalyst to my research. Readings and class discussions elicited the importance of the environment's role in human history. Amanda, not only provided scholarly advice and insights, but also allowed me to write my dissertation based on my own learning style. Her attention to expressing one's argument through the careful written word, while

telling a story and defining an argument helped me to develop my abilities in ways, I did not know I could. Thank you.

Although I have worked as an educator for over twenty years, I have always thought of myself as a “stay-at-home dad” working a second job. My decision to go back to school to earn my doctorate degree was in part a reflection that my kids were becoming more independent, more adult-like. My youngest was 13 years old and since a much younger age often expressed, “I do it by myself.” Now she is twenty. It gives mom and dad great pride and joy seeing our kids grow up and find their passions. However, working on my doctorate degree, it becomes more apparent that as a family we have not become more independent but rather interdependent. Dad’s success in completing his degree was much easier with the love given from Maggie, Emma, Joe, Anne, and Matt. My wife, Mary, has been my life partner for over twenty-nine years. Her support has made this journey, not just possible, but fun! I love being her husband. Thanks, Mary. I Love you!

Preface

As a young child, I remember my aunt Mary bringing me to the Nichols Creek Wildlife Area, located along the North Branch of the Milwaukee River off County Road N, north of Waldo, Wisconsin. Besides the fun of tramping through some mud, the real treat was drinking water from an artesian spring. Of course, I questioned, “Will I get sick?” as drinking water came from a faucet, not a spring emerging from the ground. My aunt assured me I would not get sick and after drinking the first cup, I quickly filled another ground-cooled cup of water. On the day of my dissertation defense, I returned to Nichols Creeks for my “drink of courage,” my cup of artesian water. After successfully defending my dissertation, I called my aunt to celebrate and thank her for that early childhood lesson that has been forgotten or never learned by so many people.

The story of the revitalization of the Milwaukee River Watershed tells the story of many people’s passions, successes, and failures, to improve the quality of its waters from 1960 to 2000, after its waters became so degraded that people could not eat the fish or swim in its waters without the threat of getting sick. It is also a story of people that provide opportunities for people to have access to more spaces to learn how nonhuman life and natural processes can assist in improving people’s standard of living.

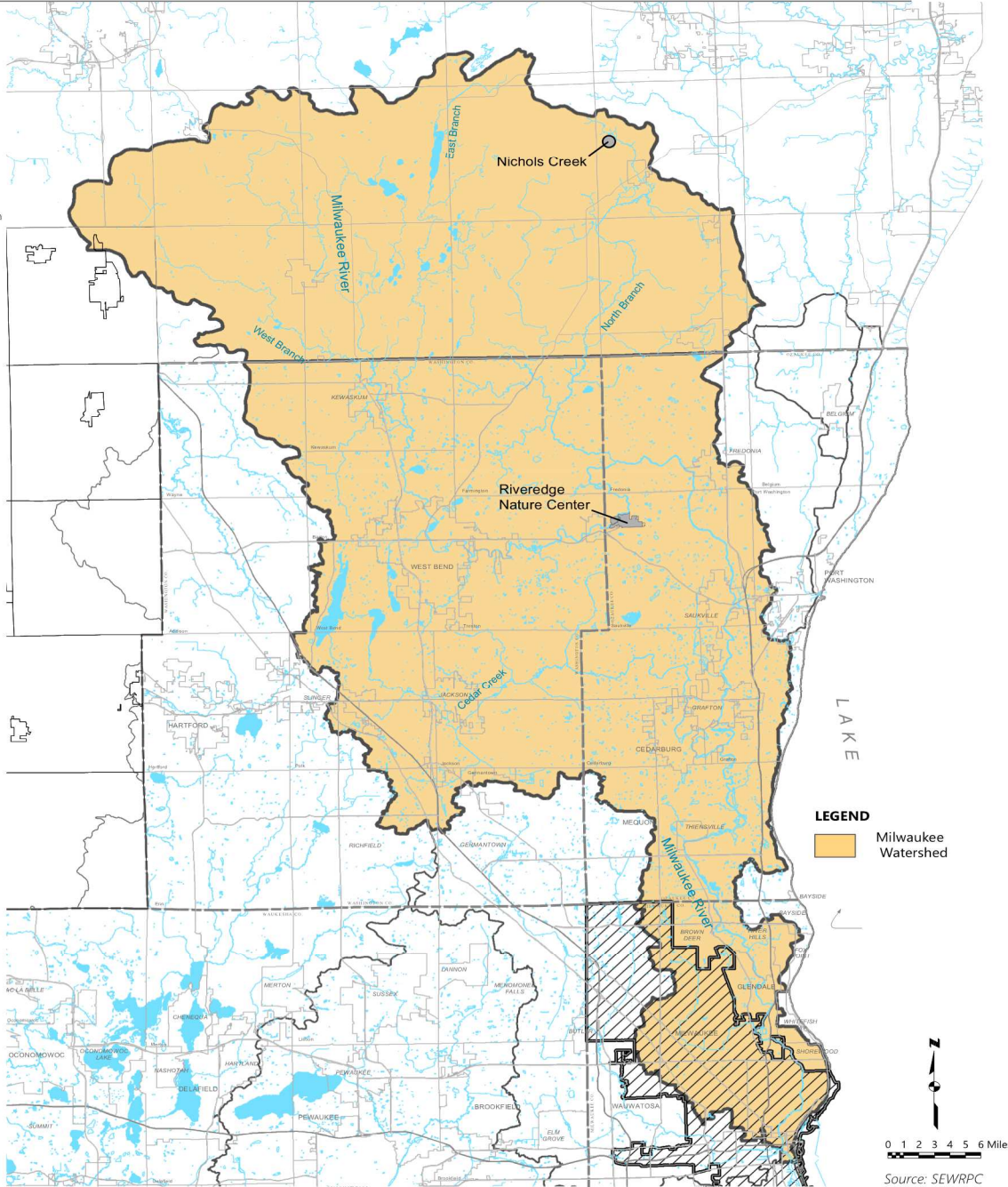
However, my dissertation does not promote a single vision to represent the public interest in the waterway and its watershed. My experiences and the value I find in the waterway come from recreation. The value of the watershed for many others reflects a need to earn a living and protect their property from flood damage. Rather, through the many arguments and debates over the best course to the revitalization of the Milwaukee River Watershed, I hope readers will recognize that there is room to find common ground over our common waters to reflect various people’s remembrances, present needs, and future desires to utilize and sustain the precious resources and life throughout the

watershed. And how people chose to imagine and work towards a place to play... to reside... and to labor... within a healthy and vibrant watershed community.

Thomas Anthony Gentine
Howards Grove, WI, December 1, 2022

Milwaukee River Watershed Map

Map X.X
Milwaukee Watershed



(Map courtesy of Southeastern Wisconsin Regional Planning Commission)

Introduction

Even though humans have interacted with the land and waters of the Milwaukee River Watershed (MRW) for thousands of years, geologic forces associated with the last advance of the Laurentide Ice Sheet remain the most significant influences on the landscape.¹ The MRW is over 900 square miles, stretching from its headwaters in the southern parts of both Fond du Lac and Sheboygan counties to downtown Milwaukee, where it empties into Lake Michigan, 95 miles from its source. The northern area of the flood plain is 521 feet above the average level of Lake Michigan.² The predominantly gravel soils in the northern region filter the water into groundwater reservoirs. In the southern part, the soil becomes more impervious, and the land becomes flatter, making it more prone to flood as the snow melts and spring rains saturate the ground.³

A Brief Social History of the Milwaukee River

After the last retreat of the Laurentide Ice Sheet over 10,000 years ago, humans migrated into the MRW to take advantage of its natural resources. How people have envisioned and used the Milwaukee River to serve their needs and wants has regularly changed since they arrived in the area. Between 500 BCE to 1200 CE, the Mound Builders civilization resided in the Great Lakes region: utilizing the waterways to transport goods; rich soils to cultivate corn, squash, and beans; and lush habitats to hunt wild game and gather various foods. Later, the Potawatomi, Ho-Chunk, and Menominee called the area home. They adapted to and manipulated the environment similar to the Mound Builders. However,

¹ Southeastern Wisconsin Regional Planning Commission, *Milwaukee River Watershed Planning Program Prospectus* (Waukesha, WI, 1966), 7.

² Milwaukee River Technical Study Committee, *The Milwaukee River: An Inventory of Its Problems, an Appraisal of Its Potentials* (Milwaukee, WI: City of Milwaukee, 1968), 35.

³ US Army Engineer, District Chicago, "Preliminary Report: Summary Flood Control Study of the Milwaukee River and Tributaries, Wisconsin" (Chicago, Ill., April 1964), 1, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 83, Folder 20, State Historical Society of Wisconsin; Department of City Development, *Preliminary Report: On the Milwaukee River*, 1963, 7-8.

in the 17th and 18th centuries, they began actively participating in the fur trade with the early French immigrants. Milwaukee remained a small trading post between Indigenous peoples and European immigrants throughout the 1700s, led by Angélique Roy and her husband Jacques Vieau.⁴ Artists represented the efforts of people hunting and gathering the bounty of the land and water's riches. Images depicted European and Indigenous people on water vessels trading goods and early pioneers quickly catching fish and shooting their fill of duck.⁵ Many immigrants and migrants shared these perspectives of this natural landscape in the early nineteenth century as more settlement opportunities were made for people from the east and across the Atlantic Ocean.

European migrants referenced the natural abundance of the watershed and depicted the centrality of Milwaukee's relationship to Lake Michigan and its three rivers, the Milwaukee, Menomonee, and Kinnickinnic. In the 1830s, the Indigenous people ceded their land to the United States government. The federal government then ordered the forced removal of the Potawatomi people. This led to the influx of migrants from the eastern United States and Europe. Solomon Juneau, a migrant arriving from Montreal, Canada, established an outpost for the American Fur Trading Company and later became the first mayor of Milwaukee. Despite these attempts to remove Indigenous people from the area, they remain a vibrant part of Milwaukee's multiethnic community.⁶

A land seen as a place of abundance still required the active hand of human labor. For example, George Pickney wrote a letter to his sister in 1836 describing the Milwaukee River as "the most

⁴ Bryan Rindfleisch, "Native Milwaukee," in *Encyclopedia of Milwaukee*, ed. Amanda I. Seligman and Margo Anderson, 2016, <https://emke.uwm.edu/entry/native-milwaukee/>; Jacob C. Jurss, "Indigenous Milwaukee in the Age of Empire," in *Encyclopedia of Milwaukee*, ed. Amanda I. Seligman and Margo Anderson, 2016, <https://emke.uwm.edu/entry/indigenous-milwaukee-in-the-age-of-empire/>.

⁵ Wisconsin Historical Society, "Wild Rice Threshing Machine: Wisconsin Historical Museum Object - Feature Story," *Wisconsin Historical Society*, 2006, <https://www.wisconsinhistory.org/Records/Article/CS2721>; John Gurda, *Milwaukee: A City Built on Water* (Madison, WI: Wisconsin Historical Society Press, 2018), 7, 12; James S. Buck, *Pioneer History of Milwaukee: From the First American Settlement in 1833 to 1841* (Milwaukee: Swain and Tate, Book and Job Printers, 1890), 54, 111, <https://archive.org/stream/pioneerhistoryof01buck#page/n5/mode/2up>.

⁶ Rindfleisch, "Native Milwaukee"; Bethany Harding, "Solomon Juneau," in *Encyclopedia of Milwaukee*, ed. Amanda I. Seligman and Margo J. Anderson, 2016, <https://emke.uwm.edu/entry/solomon-juneau/>; Jurss, "Indigenous Milwaukee in the Age of Empire."

Goddamned place he ever visited in his life. The town - or what is so called - lies in the middle of a swamp. One cannot go one-half mile in any direction without getting into water. The entire place is a deep morass. The river is a fine thing – as I expected – but when you have to cross it 3 or 4 times daily on a log it ceases to be an enjoyment.”⁷

Developers interested in promoting the value of Milwaukee as a shipping hub understood the role nature played in shaping a place for a commercial port and the potential economic growth of Milwaukee. Increase Lapham, the prominent surveyor and ecologist of Milwaukee, noted that Milwaukee Bay was formed from glacial runoff. First, the water carved the valley 100 feet below the present floor. Then, as the lake level rose, the process slowed, forming multiple layers, eventually forming the upper layer. The top layer of soil consisted of decaying vegetable matter, muck.⁸ Yet developers would not depend on nature’s labor alone. They believed the landscape could be improved by dredging the harbor for commercial needs. In June 1837, the *Milwaukee Sentinel* promoted the development of a port that would be the crown of the Great Lakes. Working to reshape the harbor that the river carved over thousands of years, humans converted the space to provide a safe place for cargo vessels, unloading their shipments in nearby warehouses and connecting the interior of the United States to the Atlantic world.⁹ William Bradford published his emigrant guide, *Notes on the Northwest*, enthusiastically supporting Milwaukee’s standing as a first-class town as it provided a link between eastern markets and the timbered and rich soils of the hinterland.¹⁰ Similar to ports on the Atlantic coast, Milwaukee could be built looking out across Lake Michigan, importing and exporting goods

⁷ “Another Prophecy about Milwaukee: Dear Jane Letter from George Pickney, Dated August 3, 1836,” *Evening Wisconsin*, January 16, 1873, Increase A. Lapham Papers, 1825-1930, Box 20, Folder 11, Wisconsin Historical Society; Gurda, *Milwaukee*, 10.

⁸ Increase Allen Lapham, “Description of the Menomonee Marsh” (1874), Increase A. Lapham Papers, 1825-1930, Box 20, Folder 3, Wisconsin Historical Society.

⁹ Gurda, *Milwaukee*, 16.

¹⁰ Bayrd Still, “The Growth of Milwaukee as Recorded by Contemporaries,” *Wisconsin Magazine of History* 21, no. 3 (March 1938): 271.

around the Atlantic World. Not only was Milwaukee being shaped by local interests, but its landscape was also designed to interact with the world.

In the 1830s, Byron Kilbourn, a land speculator and one of Milwaukee's three founders, envisioned constructing a canal linking the Great Lakes to the Mississippi River. In 1835 the North Avenue Dam and one mile of the canal were built before Kilbourn's canal company failed.¹¹ With the river deepened, a water community thrived upstream of the dam. For example, swimming schools dotted the riverbanks, attracting many residents to the Milwaukee River. Milwaukee's own George Whittaker, the national swimming amateur champion in 1893, trained in the riverway above the North Avenue Dam. Further north in Shorewood, Wonderland Park provided brave thrill seekers the opportunity to ride slides skipping into the river.¹² Also, in the nineteenth century, Milwaukee's famous breweries managed beer gardens along Milwaukee's waterways. For example, Blatz brewery's beer garden, located on the river's east side, was a short boat ride from the North Avenue bridge.¹³

In 1857 the "straight cut" was completed near the mouth of the Milwaukee River, which greatly expanded navigation up the Milwaukee River to the North Avenue Dam. Direct access to the river and the Great Lakes attracted many industries. Although people found value in the Milwaukee River for recreation, the riverway became a back door entrance to the city's tanneries, breweries, coal fields, and other local industries, especially below the North Avenue Dam. By the late 1860s, nine tanning companies operated in the Milwaukee River Basin, manufacturing over \$4.3 million of goods. In the late 1800s, Milwaukee led the world in producing leather, taking advantage of its proximity to water, hides,

¹¹ Thomas J. Jablonsky, "Byron Kilbourn," in *Encyclopedia of Milwaukee*, ed. Amanda I. Seligman and Margo Anderson, 2016, <https://emke.uwm.edu/entry/byron-kilbourn/>; John Gurda, "Water," in *Encyclopedia of Milwaukee*, ed. Amanda I. Seligman and Margo Anderson, 2016, <https://emke.uwm.edu/entry/water/>.

¹² Harry Anderson and Frederick I. Olson, *Milwaukee: At the Gathering of the Waters* (Milwaukee, WI: Milwaukee County Historical Society, 1981), 85–86, 139.

¹³ Henry H. Anderson, "Recreation, Entertainment, and Open Spaces: Park Traditions of Milwaukee County," in *Trading Post to Metropolis: Milwaukee County's First 150 Years* (Milwaukee County Historical Society, 1987), 261; Gurda, *Milwaukee*, 56.

and hemlock bark, all used in the tanning process. Over 30 tanning companies occupied the Menomonee and Milwaukee River valleys.¹⁴ In the 1880s, Milwaukee would be one of the largest wheat shipping ports in the world. For most of the twentieth century, these businesses depended on the waterway to bring their goods to the market and carry their industrial waste into Lake Michigan. Not only was the river used for transportation, but it was also used in the production process. Natural water springs and Lake Michigan provided the water for local breweries. Before refrigeration, Milwaukee breweries cut ice from the Menomonee River and above the North Avenue Dam on the Milwaukee River.¹⁵

Throughout the twentieth century, Milwaukee city leaders considered various proposals to develop downtown along the Milwaukee River and improve its water quality. For example, architect Angelo Clas (in 1909) and his brother Reuben Clas (in 1922) drew up plans to redevelop the riverfront, modeled after European river cities.¹⁶ In 1923, Charles Whitnall drafted plans for Milwaukee County's Park system that provided various opportunities to enjoy the riverine landscape for generations to come. These plans included conservation areas, protection from flood damage, and open spaces for urban residents. Whitnall argued that this was especially important for the inhabitants trapped in one of the United States' most densely populated cities.¹⁷ Whitnall's vision would eventually be reflected in the environmental corridor stretching along the Milwaukee riverbanks from the former North Avenue Dam to Lincoln Park in suburban Glendale.

¹⁴ Anderson and Olson, *Milwaukee*, 25; Gurda, *Milwaukee*, 59–60.

¹⁵ Gurda, *Milwaukee*, 53.

¹⁶ "Plans for Milwaukee Riverfront Beautiful Given Impetus by Decision to Build Walk from Wisconsin to Mason Streets," *Milwaukee Sentinel*, August 3, 1911, Milwaukee Journal Sentinel Historical Newspapers; Bobby Tanzilo, "A Milwaukee River Parkway and Downtown Disney?," *OnMilwaukee*, August 7, 2014, <https://onmilwaukee.com/buzz/articles/1968riverreport.html>.

¹⁷ Lorne A. Platt, "Planning Ideology and Geographic Thought in the Early Twentieth Century: Charles Whitnall's Progressive Era Park Designs for Socialist Milwaukee," *Journal of Urban History* 36, no. 6 (2010): 771–91; John M. McCarthy, "Charles Whitnall," in *Encyclopedia of Milwaukee*, ed. Amanda I. Seligman and Margo Anderson, 2016, <https://emke.uwm.edu/entry/charles-whitnall/>; Anderson, "Recreation, Entertainment, and Open Spaces: Park Traditions of Milwaukee County," 284–85.

Despite plans to green the riverbanks, local industries and human waste from a growing population overburdened the city's sewer system, making the Milwaukee River an open sewer channel. The original sewer system, active in 1869, purposefully directed wastewater to the Milwaukee River. It was seen as the only realistic alternative to the accumulating human, animal, and industrial waste in the city streets.¹⁸ In 1880, the Board of Public Works set out to build 165 miles of intercept sewers, which led waste out to Lake Michigan.¹⁹ This combined storm and sewer system (CSS) could never contain heavy rains and spring melts. Sewage overflowed into the Milwaukee River on average over 50 times a year. In 1921, the Metropolitan Sewage Commission (MSC) was created. Part of its task was to seek ways to minimize the water pollution that entered the streams. However, MSC's decision to utilize a combined storm and sewer system to manage the sewage and rainwater in the same pipes presented many challenges. The CSS regularly overflowed, degrading the water quality and turning the Milwaukee River green.²⁰

Although the CSS helped remove waste from the city streets, the public grew concerned about their polluted waterways. The public interest in better water quality addressed severe health concerns. In 1888 the city's leaders funded the flushing tunnel to maintain a steady flow of water to clean out the slow-moving, polluted waters into Lake Michigan. In the early 1900s, the city had multiple typhoid outbreaks as sewage from the river polluted Lake Michigan's water intake system. To lessen the chances of sewage and waste flowing out of the Milwaukee River, infecting water supplies, city leaders called for a new water intake system extending further into Lake Michigan and the chlorination of the water

¹⁸ Gurda, *Milwaukee*, 138.

¹⁹ Anderson and Olson, *Milwaukee*, 48.

²⁰ Congressman Henry S. Reuss, "An Action Program to Clean Up the Waters of the Milwaukee River Basin," September 1966, City Club of Milwaukee Records, 1909-1975, Box 109, Folder 7, UW-Milwaukee Libraries, Archives; Herbert D. McCullough and Herbert A. Goetsch to Subcommittee on House Natural Resources and Power, September 14, 1966, City Club of Milwaukee Records, 1909-1975, Box 109, Folder 7, UW-Milwaukee Libraries Archives; Gurda, *Milwaukee*, 160.

supply to help to kill disease-causing germs.²¹ Another solution attempted to clean the water rather than simply pushing it out into the lake. In 1925 the city government approved the construction of the Jones Island Treatment facility to clean wastewater and recycle the leftover sludge into Milorganite, a fertilizer for farms.²² Despite these attempts to address water pollution, manufacturing companies disposed of more waste in the riverway during WWII as they supplied the war effort. As the economy grew in the 1950s, waste continued to enter the Milwaukee River. The combined sewer system was bypassed regularly, emptying sewage into the stream 9.4% of the time.²³ Due to water pollution, swimming holes began to close after WWII. Further provoking many people's desires to change their relationship with the waterway, Lincoln Creek, a tributary of the Milwaukee River, caught on fire in 1951. The landscape provided an excellent place to earn profits, but it was a poor environment to live and play.²⁴ However, Milwaukee's strong economy would not last, and the people's relationship with the waterway would soon change.

In 1959 the opening of the St. Lawrence Seaway expanded shipping in the Great Lakes. However, the ocean-going vessels that now entered the Great Lakes could not navigate the Milwaukee River. Thus, industry and shipping moved to the deeper ports in the Menomonee River Valley. Furthermore, industries relied more on rail and the trucking industry, which was greatly expanded after the Federal Highway Act of 1956.²⁵ Recognizing that the river's value for commercial traffic was dwindling, city leaders closed the river to large trading vessels. The newly elected mayor, Henry Maier, and his administration planned to transform the waterway for new economic opportunities and,

²¹ Gurda, *Milwaukee*, 149; Kate Foss-Mollan, *Hard Water: Politics and Water Supply in Milwaukee, 1870-1995* (West Lafayette, IN: Purdue University Press, 2001), 87.

²² Milwaukee Metropolitan Sewerage District, "Historic Documentation of the Jones Island West Plant," April 1982, https://www.mmsd.com/application/files/6114/8416/5340/Jones_Island_History.pdf; Milwaukee Metropolitan Sewerage District, "History of the Milwaukee Metropolitan Sewerage District," n.d., <https://www.mmsd.com/about-us/history>; Gurda, *Milwaukee*, 146-47; Foss-Mollan, *Hard Water*, 98.

²³ Gurda, *Milwaukee*, 172, 175.

²⁴ "Fire, Flood and Wind," *Milwaukee Journal*, December 30, 1951, 6, Milwaukee Journal Sentinel Historical Newspapers.

²⁵ Gurda, *Milwaukee*, 185.

secondarily, address the recreational appeal and improve the health of the Milwaukee River. The Maier Administration saw these plans in the public interest. However, defining the common good or the public interest was challenging, with groups representing different economic, political, ethnic, and environmental interests. The city of Milwaukee was involved in these visions, and so was the state: legally, Wisconsin's legislative branch was the trustee of Wisconsin's waters. Their responsibility to protect the public interest in the waterways was defined in the Public Trust Doctrine.

The Public Trust Doctrine dates to the Northwest Ordinance of 1787, before Wisconsin's statehood in 1848, which outlined future states' responsibilities to defend citizens' rights to access the navigable waters of the Mississippi River and the St. Lawrence waterways. In 1848, the framers of Wisconsin's constitution protected these same rights.²⁶ Although city leaders often defined the public interest in practice, state government leaders have spoken of the public interest from a more comprehensive, regional perspective since the inception of the Public Trust Doctrine. Also, the trustees' duties have been expanded throughout the twentieth century to safeguard water resources for recreation and to maintain pollution-free waters.²⁷ Despite a region rich in water resources, conflicts emerged as competing interests fought over what they believed was in *the best* public interest.

A Watershed Community

Although the Maier Administration worked to redevelop the riverway, other government entities and nongovernment groups had their ideas. What started as a process to revitalize the city's economy in the early 1960s became an endeavor to restore the MRW's ecological health by the end of

²⁶ Rock-Koshkonong Lake District, Rock River- Koshkonong Association, Inc. and Lake Koshkonong Recreational Association, Inc. v. State of Wisconsin Department of Natural Resources, No. 2008AP1523 (Supreme Court of Wisconsin July 16, 2013).

²⁷ Melissa Kwaterski Scanlan, "The Evolution of the Public Trust Doctrine and Degradation of Trust Resources: Courts, Trustees and Political Power in Wisconsin," *Ecology Law Quarterly* 27, no. 1 (2000): 137.

the twentieth century. River histories are often seen in the context of their watersheds.²⁸ The MRW comprises over 900 square miles of urban and rural land. This relatively small area provides an opportunity to examine how various urban and rural interest groups understood the river's value from 1960 to 2000. In addition, the MRW is part of the Great Lakes Basin. Thus, not only was the river seen as an asset to the residents of Southeastern Wisconsin but also by Canadian and other US citizens. Although public interest in a waterway was viewed as a universal right, reflecting human survival needs, various environmental organizations and government entities defined the boundaries in which the public was recognized. For example, elected government officials often referred to their constituents as "the public." However, political leaders speaking of the public interests included or excluded different people's perspectives based on political boundaries. Thus, the public interest in a waterway demarcated by the city limits was not the same group of people representing a watershed community that included multiple political units or a government authority identified by wider political boundaries. As individuals, civic groups, and government agencies searched for common ground over common waters, it was important to address shared needs and recognize the community boundaries in which the public interest was defined.

Using the 1960s as a starting point allows for an investigation of the MRW during a transitional period. In the early twentieth century, the urban river was seen primarily as a transportation hub and a channel for municipal and industrial waste disposal. These economic exploits degraded the river's overall health and limited other waterway activities. In the 1960s, the city's planners focused on the

²⁸ Jennifer L. Bonnell, *Reclaiming the Don: An Environmental History of Toronto's Don River Valley* (Toronto: University of Toronto Press, 2014); Mark Cioc, *The Rhine: An Eco-Biography. 1815-2000* (Seattle, WA: University of Washington Press, 2002); David A. Pietz, *The Yellow River: The Problem of Water in Modern China* (Cambridge: Harvard University Press, 2015); David Owen, *Where the Water Goes: Life and Death along the Colorado River* (New York: Riverhead Books, 2017); Elizabeth Grossman, *Watershed: The Undamming of America* (New York: Counterpoint, 2002); Sudipta Sen, *Ganges: The Many Pasts of an Indian River* (New Haven, CT: Yale University Press, 2018); David Gilmartin, *Blood and Water: The Indus River Basin in Modern History* (Oakland, CA: University of California Press, 2015).

changing economy. The city's leadership worked to reclaim the river and watershed as a recreational asset that could provide economic opportunities while the city coped with aging infrastructure. By contrast, upstream rural lands consisted of small mill towns and family farms. These residents and landowners did not consider closing the Milwaukee River to transportation as an incentive to change how they interacted with the riverway. They defended their existing adaptations to the land and water rather than seeking to change them. Other people living in new communities formed along the river desired to protect property from flood damage and pursue economic opportunities by controlling the river's flow. However, people learned that plans to shape the waterway's course might threaten other people's property value.

Proposed solutions led to conflicts concerning the river's utility. People's visions of how the waterway should be developed and protected reflected urban and rural relationships with nature. Attempting to find a holistic solution to watershed problems, government leaders, environmental group spokespersons, and residents throughout the watershed generally outlined their vision supporting the common good. However, these professed statements included or excluded certain people from their conception of the public. The debates over the use and revitalization of the Milwaukee River often shifted back and forth from a perspective recognizing a particular community to a regional community. For example, environmental and conservation groups often recognized the importance of preserving and protecting the freshwater resource of Lake Michigan and the entire Great Lakes Basin, which challenged urban and rural citizens to examine how the basin's ecological health was impacted by the various ways people used the Milwaukee River. The state of Illinois also sued the city of Milwaukee to address its failing CSS. From this larger perspective, decisions on how to use the riverway needed to consider views from a wider geographic area encompassing more diverse interests.

Examining how decisions to utilize the Milwaukee River took place, how people understood their relationship with the MRW, and the consequences of those decisions will help us better

understand how the state's citizens have succeeded and failed to protect Wisconsin's waters. In 1968 Garrett Hardin wrote "The Tragedy of the Commons." Hardin demonstrated how population growth places added pressures on shared resources, threatening overuse and degradation. In addition, self-interest, if left unregulated, worsened the problems. As a result, communities that shared common spaces were threatened by human self-interest and unchecked population growth.²⁹ Like the metaphorical pasture described in Hardin's essay, the Milwaukee River was a shared common or public space. Unlike other parts of the country and areas of the world, water is plentiful in the Great Lakes basin. However, the debates concerning how to protect and preserve these valuable assets were still contentious. Unlike Hardin's attention to the conflict between self-interest and public interest, my study concerning the revitalization of the Milwaukee River examines the conflict between public interests.

Unlike other river and watershed histories, my historical study of the Milwaukee River and its watershed examines the difficulties of finding a shared understanding of the public interest from the perspective of a watershed community. Although a watershed area can be denoted by the landscape in which the waters drain to a particular river, the communities that purport a public interest in the waterway are often identified by boundaries that do not coincide with the watershed's boundary. Conflicts emerged between representatives of cities representing a smaller body of people, with state and national spokespersons representing much larger territories than the public speaking for a watershed. Furthermore, my historical study recognizes that a watershed community was not self-evident. Thus, I examine how various government and non-government groups came to understand how solutions to multiple problems in the watershed required a new outlook representing the public that lived, worked, and recreated within the MRW. However, this watershed outlook needed to consider the ecological factors and the community's economic, social, and political differences.

²⁹ Garrett Hardin, "The Tragedy of the Commons," *Science* 162, no. 3859 (December 13, 1968): 1243–48.

Sources and Methods

My interest in a historical study of the Milwaukee River originated in an environmental history course I took with Dr. Joseph Rodriguez. The following semester, I researched the failed attempt to construct the Waubeka Reservoir (Chapter 3). The sources involved in this study came from researching individuals and organizations involved in the debate through newspaper articles and archival sources maintained by the University of Wisconsin-Milwaukee (UWM) Archives Department and the Wisconsin Historical Center. In addition, I utilized digitized archives stored by the Southeastern Wisconsin Regional Planning Commission (SEWRPC). Similar materials were examined for Chapters One and Four. Through this research, I uncovered other debates and sources involving the health and use of the Milwaukee River.

Although sources were gathered from the archives and newspapers for the Riveredge Nature Center, I accessed newsletters and meeting notes stored at the Riveredge Nature Center. Although many of these sources were stored in binders in their library, I also had the joy of investigating an attic space, which I shared with furry creatures. Including the story of Riveredge in my study broadened the scope and discussion over how a private organization defined the public interest. In addition, the founders of Riveredge looked at the need to conserve areas along the river rather than seeking to restore spaces along the river. Moreover, Riveredge demonstrates another path toward forming a watershed community from a nongovernment agency.

The Milwaukee River Restoration Council materials were garnered through newspaper accounts and mentioned in letters and meeting notes of other government representatives. Chapter Five examines the efforts of the Milwaukee River Revitalization Council. At first, I was under the assumption that this organization had changed its name from the Milwaukee River Restoration Council to the Milwaukee River Revitalization Council. However, further research taught me that it was a separate organization. Ray Krueger, one of the original members of the Revitalization Council, preserved

documents of the Revitalization Council. I found these documents at the existing location of the River Revitalization Foundation (RRF). After many conversations with Ray Krueger, members of the RRF, and staff at the University of Wisconsin-Milwaukee Archives Department, I am pleased to inform the readers that they have since been donated to the UWM Archives Department. With continued funding of the archives department, these documents will be safely preserved for many years. Utilizing these sources provided my understanding that the course toward a watershed perspective originates from multiple locations. Like the Milwaukee River Watershed with its numerous branches and tributaries that feed into the main stem of the Milwaukee River that winds its way through the city of Milwaukee, so has the idea of a watershed community gathered ideas and perspectives from various government and non-government agencies throughout the watershed.

Historical Perspectives of the Public Interest

Central to the argument over the use and protection of Wisconsin's waters within the MRW was that spokespersons for the waterway purported to represent the "public interest." Ari Kelman, in *A River and Its City*, contends that "*the public* conveys powerful moral authority and a sense of unassailable righteousness. It is a benchmark term against which politicians and politics are measured."³⁰ Despite the frequent use of "the public," a clear definition of its meaning is not easily found. Yet arguments abound over how individuals and communities utilized natural resources and provided access to public spaces.

One of the primary factors over whether resources or lands were considered public involved access rights. For example, Laura Alice Watt, in *The Paradox of Preservation*, notes that one distinguishing factor between public and private spaces was that public spaces implied that people, regardless of status and ownership of property, had equal rights and access to a public space or

³⁰ Ari Kelman, *A River and Its City: The Nature of Landscape in New Orleans* (Berkeley: University of California Press, 2003), 9.

resource. Despite the equitable ideal, Watt notes that regulating public spaces often resulted in some inequality. For example, something as mundane as the hours of the day that Point Reyes National Seashore (PRNS) was open might have been a limiting factor to some people. Contrastingly, owners utilized private spaces and resources for their various self-interests.³¹

Despite inequalities, public areas were often defined as spaces where the public's rights were paramount. The Wisconsin Supreme Court (WSC) ruled in *Muensch v. PSC* (1952) that "navigable waters were defined as public waters and therefore should benefit the public, not simply private interests."³² Thus, public spaces' primary function should be to benefit a diverse group of people and various ways people use the waterways. However, the Wisconsin State Circuit Court in *State v. Village of Lake Delton* (1979) emphasized,

The use of a given space of water to the single use and user which the space can reasonably accommodate at a single time reflects the obvious law of physics that two objects cannot be in the same place at the same time. While from one perspective such a regulation confers a temporary privilege on the user, from another it merely provides a mechanism through which the user may exercise his right, held in common with all citizens, to use public property for a legitimate purpose.³³

In other words, all citizens shared spaces and resources deemed to be within the "public interest." Yet this did not mean some users would not have greater access to resources or spaces. For example, people and businesses that owned land along the Milwaukee River had a connection with and access rights to the river that differed from the public's relationship. Also, in the late 1800s and early 1900s, the Milwaukee River was developed primarily as a transportation hub and sewer channel, severely limiting other waterway uses. Thus, depending on the number of people and the various uses of public space, the opportunity to take advantage of the space for other endeavors would be limited.

³¹ Laura Alice Watt, *The Paradox of Preservation: Wilderness and Working Landscapes at Point Reyes National Seashore* (Oakland, CA: University of California Press, 2017), 49.

³² *Muench v. Public Service Comm*, No. 261 Wis. 492 (Wis. 1952) 53 N.W.2d 514 (Supreme Court of Wisconsin October 7, 1952).

³³ *State v. Village of Lake Delton* (Court of Appeals of Wisconsin November 21, 1979).

Scholars have also investigated how producers and consumers define public interest. For example, Watt argued that environmentalists (consumers) described PRNS as a place of leisure rather than a public place where people worked the land or resided. In other words, the “public interest” was best served by protecting a place for recreation rather than a place where people could earn a living. In some manner, the public interest was protected when human interests were restricted.³⁴ Similarly, Richard White, in “Are You an Environmentalist or Do You Work for a Living?” recognizes how people have defined a public interest through recreational experiences while neglecting laborers’ perspectives.³⁵ Paul Sutter, in *Driven Wild*, contends that conservationists formed the Wilderness Society as a response to modern consumerism’s role in degrading environmental spaces.³⁶ Although these understandings of public interest draw significant distinctions, they do not recognize how rural or urban experiences with the waterway influenced which uses were deemed in the public’s interest. For example, the Henry Maier administration and rural agriculturalists saw their relationship with the waterway’s economic potential. Maier argued for the riverway’s development as a space for people to gather and consume nature. The farm community recognized the waterway as an efficient means to help drain their fields of excess water. Although this understanding could be seen as a conflict between special interests or a particular interest against the public will, I argue that their desires reflected multiple public interests rather than a debate between a public interest and special interests.

Recognizing the perceived value groups and individuals have placed on claiming their interest was in the public’s interest, scholars have noted it was equally important to consider how the public interest came to be defined. For example, some historians contend that something became public if

³⁴ Watt, *The Paradox of Preservation*, 46, 223.

³⁵ Richard White, “Are You an Environmentalist or Do You Work for a Living?: Work and Nature,” in *Uncommon Ground: Rethinking the Human Place in Nature*, ed. William Cronon (New York: W. W. Norton & Company, 1996), 174.

³⁶ Paul S. Sutter, *Driven Wild: How the Fight against Automobiles Launched the Modern Wilderness Movement* (Seattle, WA: University of Washington Press, 2002), 16–17.

there was a sense of control beyond an elite few. However, one may also note that it was not just the number of voices heard but also which were prioritized. For instance, shifting attention to how decisions were made rather than who made them, Karl Jacoby, in *Crimes against Nature*, emphasizes that in the late 19th and early 20th-century national conservation groups disregarded local constituents' previous environmental practices and criminalized them.³⁷

In another example demonstrating how public interests came to be defined, Kelman, in *A River and Its City*, notes that the development of New Orleans has been clothed in the language of “public interest.” However, this often masked the reality that the public was divided and lacked a single vision of how to develop the Mississippi River. Kelman contends that reformers used the language of improvement to meet the needs of business interests.³⁸ Also, Bonnie McCay, in *Oyster Wars and Public Trust*, claims that practical ways of thinking had made their way into law chambers and courts, making it possible for owners of factories to successfully argue for the greater social good and gain without recognition of the costs. Although groups purporting a utilitarian argument argued for a more significant benefit. They often required the acceptance of a lesser harm. In contrast, McCay notes that public interests in waterways for navigation, recreation, and other uses may be considered inalienable rights, which may not coincide with a utilitarian argument.³⁹

Again, these understandings of public interest rest on an acceptance that geographic boundaries defining the public interest were less consequential. I demonstrate how people’s experiences with nature residing within urban and rural landscapes contributed to how they utilized the Milwaukee River’s resources. Similarly, William Cronon in “The Trouble with Wilderness” notes that when concerns over the protection of the wilderness arose, urban residents and rural residents often defined public

³⁷ Karl Jacoby, *Crimes against Nature: Squatters, Poachers, Thieves and the Hidden History of American Conservation* (Berkeley: University of California Press, 2014), xvi, 198.

³⁸ Kelman, *A River and Its City*, 145.

³⁹ Bonnie J. McCay, *Oyster Wars and the Public Trust: Property, Law, and Ecology in New Jersey History*, 2nd ed. (Tucson, AZ: University of Arizona Press, 1998), xxiii.

interests from their particular perspectives rather than considering a public interest, which incorporated a broader perspective.⁴⁰ However, I emphasize that a perspective originating from an urban or a rural lens may reflect a broad perspective, qualifying each to be in the public's interest. For example, in the 1980s, Maier's administration and the Wisconsin government leaders emphasized the importance of a watershed perspective or a "Little TVA" to address water quality issues. However, representatives from upstream communities balked at the idea, assuming the more populous urban voices would drown out their rural perspectives.

The WSC ruling in *Muench v. PSC* (1952) drew attention to local interests versus a state-wide concern. Although not directly defining public interest, the justices highlighted the differences between state-wide and local problems. At issue, in this case, was whether the state or the residents of Washburn County had the power to determine whether a dam on the Namekogen River was built.⁴¹ Alexander von Hoffman, in *Local Attachments*, notes how universal ideas regarding the use of public space conflicted with residents' interests in a Boston neighborhood. As a result, residents protested to protect their local public interests from an overarching universal conception of a public interest.⁴² Ultimately, these conceptions of public interest represented conflicts over whose voice may be prioritized or weighed more heavily than other public voices. Thus, claiming to speak for the "public interest" required recognizing the body of people included and excluded to represent the "public." In 1965 after the passage of both the Federal Water Quality Act and the Wisconsin Water Law, federal and state leaders gained more power over how and when to clean up the Milwaukee River.

The WSC also ruled that the public interest should recognize the long-term consequences of the people's actions. In *Hilton ex rel. Pages Homeowners' Ass'n v. DNR* (2006), the WSC noted that human

⁴⁰ William Cronon, "The Trouble with Wilderness; or, Getting Back to the Wrong Nature," in *Uncommon Ground: Rethinking the Human Place in Nature*, ed. William Cronon (New York: W. W. Norton & Company, 1996), 21.

⁴¹ *Muench v. Public Service Comm.*

⁴² Alexander von Hoffman, *Local Attachments: The Making of an American Urban Neighborhood, 1850-1920* (Baltimore, MD: The John Hopkins University Press, 1994), 89, 117.

activity in a waterway may be regulated and limited when “to a reasonable degree of scientific certainty... further damage to the environment (will impair) the public’s interest in the lakes.” For example, in the case of the MRW, government and non-government agencies would argue that sewage overflows from the CSS needed to be addressed to protect the long-term health of Lake Michigan. Like the WSC in 2006, they claimed the “cumulative impact” must be considered. Further emphasizing the rights of all citizens, the court interjected private riparian rights and the reasonable use of the waterway was “subordinate to public rights” to the waterway.⁴³ Thus, not only should the public interest be defined by the public residing in a territory but also by future generations.

Defining the public interest, one assumes that communities’ actions should provide more benefits than harm. For example, in “Whose Nature?” James Proctor distinguishes between intrinsic and instrumental value by arguing that “Intrinsic value in nature implies that its worth is independent of its utility to humans; instrumental value implies that its worth depends on its ability to serve a human end.”⁴⁴ Although Aldo Leopold did not speak directly on the public interest, his view of the “land ethic” suggests that for people to recognize the public interest, they must understand that all living organisms in a community are interconnected. Leopold saw people’s role not as conquerors, subduing the land to fit human desires, but rather as citizens of the land, committing themselves to care for the land for all living creatures.⁴⁵ Similarly, Heather Hoag, in *Developing the Rivers of East and West Africa*, notes that the Warufiji understood their surrounding waterscape as a beneficial, potentially dangerous, and above all, changing force of nature. They attempted to understand the physical and spiritual aspects of the Rufiji River. Farming, fishing, and religious practices were shaped around the changing identity of the

⁴³ *Hilton ex rel. Pages Homeowners’ Ass’n v. DNR*, 2006 WI 84, No. 2003AP3353 (Supreme Court of Wisconsin July 6, 2006).

⁴⁴ James D. Proctor, “Whose Nature? The Contested Moral Terrain of Ancient Forests,” in *Uncommon Ground: Rethinking the Human Place in Nature*, ed. William Cronon (New York: W. W. Norton & Company, 1996), 281.

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river.⁴⁶ The Warufigi recognized the erratic nature of the Rufigi River and adopted economic and spiritual practices that worked with this nature, as opposed to presenting a common good that shaped the river to conform to human desires. Public interest, in this case, was defined in unison with natural forces.

The importance of recognizing how the public's experience or lack of knowledge was further explored by Jennifer Bonnell, in *Reclaiming the Don*, and Ann Vileisis, in *Discovering the Unknown Landscape*. Bonnell depicts the various ways people interacted with the Don River and how these interactions shaped the values people attached to the river.⁴⁷ Vileisis recognizes that people's lack of experience can also shape the values humans have attributed to wetland spaces. She notes that people's perception of wetlands as part of the public's interest has lessened as wetlands have been drained away.⁴⁸ Similarly, Kelman describes the public's alienation from the Mississippi River. He argues that the development along the Mississippi River changed people's perception of the river. The river lost the Arcadian landscape that travelers and immigrants once recalled and attracted people to the region. In other words, the river, at least in the eyes of most New Orleanians, was not sublime; they looked at it in the same way we might view an interstate highway today.⁴⁹

Bonnell, Vileisis, and Kelman call attention to the difficulty of determining what is in the public's interest. They recognize how people have come to understand our relationship with shared natural resources and how people have forgotten previous ways of interacting with the land, water, and other living creatures within the spaces where people live, work, and play. Although significant engineering feats, like the Deep Tunnel System, improved the water quality of the Milwaukee River, the Riveredge

⁴⁶ Heather J Hoag, *Developing the Rivers of East and West Africa: An Environmental History* (London: Bloomsbury Academic, 2013), 53.

⁴⁷ Bonnell, *Reclaiming the Don*, xix.

⁴⁸ Ann Vileisis, *Discovering the Unknown Landscape: A History of America's Wetlands* (Washington, D.C: Island Press, 1997), 9.

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members and the Milwaukee River Revitalization Council labored to educate the public about how changing people's relationship with the waterway would benefit the watershed community in ways that were forgotten. The challenge for these groups was addressing sustainability questions and "nature's role" within conflicting visions of the common good.

Historiography

Historians have argued whether decisions over water use in the United States have been defined by capitalist interest rather than the public interest. For example, Donald Worster and others contend that an alliance between the government and capitalists has controlled the construction and use of water systems across the country.⁵⁰ Worster maintains that this alliance treated water as a commodity and threatened American democracy.⁵¹ Rather than see environmental debates as a conflict between environmental and economic interests, Matthew Klinge, in *Emerald City*, and Laura Alice Watt, in *Paradox of Preservation*, question the idea of a single ecological or environmental choice. Depicting the environmental transformation of Seattle, Klinge highlights how social class and ethnicity shaped how people understood nature. Investigating the land and water use in the PRNS, Watt contends that the sustainability of natural resources evolved to favor the absence of human activity in PRNS. Yet she claims the value of sustainability might be more productive when human influence and labor are recognized and included within the water- and landscape at PRNS.⁵²

These scholars emphasize how humans' interactions with the environment, or nature, are often shaped by various self-interests. My story of the MRW will examine how people's perspective of the

⁵⁰ Donald Worster, *Rivers of Empire: Water, Aridity, and the Growth of the American West* (Oxford; New York: First Oxford University Paperback Edition, 1992), 64; James Earl Sherow, *Watering the Valley: Development along the High Plains Arkansas River Valley* (Lawrence, KS: University of Kansas Press, 1990).

⁵¹ Worster, *Rivers of Empire*, 331–32.

⁵² Matthew W. Klinge, *Emerald City: An Environmental History of Seattle* (New Haven: Yale University Press, 2007); Watt, *The Paradox of Preservation*.

public interest was reflected in their arguments. However, I will pay closer attention to how geographic places, rural and urban, influence people's conceptions of public interests and the common good. Similarly, Rubin Jasper, in *A Negotiated Landscape*, contends that the San Francisco waterfront is not just a creation of the free hand of capitalist development. Instead, Rubin emphasizes that historians must recognize how local conditions and power contributed to places' creation and recreation.⁵³ Although not ignoring self-interested motives of how humans sought to interact with the MRW, recognizing the conflict between rural and urban perspectives over the utilization of the waterway, which flows through both landscapes, offers insights into how compromises were fostered and divisions became more entrenched. In addition, how these ideas worked to include or exclude forces of nature provides insight into how these conflicting ambitions provided sustainable or unsustainable paths for development. For example, the debates over the Waubeka Reservoir and the Saukville Diversion Channel (Chapter Three) highlighted how the public interest was expressed differently based on the geographic area people represented.

Some historians have examined conflicts over the common good and public interest as a reflection of people's understanding of a particular place. For example, Catherine McNeur, in *Taming Manhattan*, notes how boundaries between the city and the country were defined by activities that were included or excluded in each domain.⁵⁴ Paul Sutter, in *Driven Wild*, notes the efforts of wilderness advocates in the second half of the twentieth century to exclude the automobile from various geographical spaces.⁵⁵ Ari Kelman, in *A River and Its City*, depicts how the Mississippi riverbanks served

⁵³ Jasper Rubin, *A Negotiated Landscape: The Transformation of San Francisco's Waterfront since 1950*, 2nd ed. (Pittsburgh, PA: University of Pittsburgh Press, 2016), 3.

⁵⁴ Catherine McNeur, *Taming Manhattan: Environmental Battles in the Antebellum City* (Cambridge, MA: Harvard University Press, 2014), 235.

⁵⁵ Sutter, *Driven Wild*, 4.

as a public space for recreational, political, cultural, and commercial uses. In addition, he notes how these spaces could be occupied by competing interests simultaneously and shift over time.⁵⁶

Although historical inquiry about a particular section of a river can be valuable, my study investigates how these interests were reflected or projected throughout the MRW. Rather than examining the revitalization of the MRW as a conflict between people residing in a single place, it is essential to recognize the interactions between people representing the public from multiple territories that share an interest in the MRW.

Other historians also argue that the context for historical change is best seen from a regional or watershed perspective. They contend that examining what intertwines various spaces is more important than what separates them. For instance, in *Nature's Metropolis*, William Cronon demonstrates the city of Chicago's connections with the hinterland and that both spaces are better described in relation to one another rather than separated by geographic distance.⁵⁷ Similarly, Richard White, in *Organic Machine*, contends that humans have treated the river like they treat a machine. Its users seek to separate it into different functional parts for other interests. However, he emphasizes that river histories must see the entire waterway as an organic machine to understand it truly.⁵⁸

Similarly, Mark Cioc traces the Rhine River's history through the shared boundaries and negotiated interests, which transformed the river for various uses. However, Cioc contends that these projects, though designed to improve human life, fail because they sought short-term objectives and did not recognize the complexity involved in reaching stated goals to transform the entire river system. One of the flaws related to engineering projects which investigated the river in small parts while disregarding how these projects impacted the entire river's ecosystem. Although the river continued to interact with

⁵⁶ Kelman, *A River and Its City*, 12–13.

⁵⁷ William Cronon, *Nature's Metropolis: Chicago and the Great West* (New York: W. W. Norton, 1991).

⁵⁸ Richard White, *The Organic Machine: The Remaking of the Columbia River* (New York: Hill and Wang, 1996), 110.

human needs; it endlessly worked against the forces that impeded its path. Thus, human labor was necessary to maintain the infrastructure against nature's ability to destroy what humans created.⁵⁹

My study of the MRW, like Cronon, White, and Cioc, seeks to examine the conflicts over waterway use from a regional lens rather than emphasizing only a rural or urban space. However, although various interests may speak of the river in its entirety, their perspectives, shaped by specific geographic relationships with the waterway, reflected rural- or urban-centric paths toward development. Likewise, Sarah Elkind, in *Bay Cities and Water Politics*, notes that the support of regionalism during the Progressive Era was fostered by a desire to improve environmental conditions and public health. However, Elkind notes that "regionalism offered fewer benefits to the rural communities that surrendered their water or land for urban expansion."⁶⁰ Thus, despite attempts to recognize shared resources facilitating cooperation, regionalism appeared to create more conflict between urban and rural interest groups.⁶¹ Thus, the disputes over the use of the Milwaukee waterway may be better understood as conflicts over various public interests conditioned on their situatedness. In other words, although multiple entities spoke of the public interest and public defined by the boundaries of the MRW, they often identified more with a public defined by political or other regional divisions. Even though Maier's administration argued that addressing nonpoint source pollution was in the public interest, this perspective was formed from the city's experience downstream from agricultural landowners.

Historians have examined the conflicts over public interests and rights to water through debates over what was considered a public good for the short term and how a public good may project future aspirations. For example, in *Reclaiming the Don*, Jennifer Bonnell often uses the term "imagined

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⁶⁰ Sarah Elkind, *Bay Cities and Water Politics: The Battles for Resources in Boston and Oakland* (Lawrence, Kansas: University Press of Kansas, 1998), 8.

⁶¹ Elkind, *Bay Cities and Water Politics*, 8.

futures.” She notes that in the 19th and 20th centuries, human development of the landscape was built on an “imagined future” that would alter an unpredictable wilderness and transform it into a productive and efficient garden. In addition, she notes that these imagined futures must also displace or replace earlier visions.⁶²

Carl Smith, in *City Water, City Life*, contends that viewing the infrastructure of a city’s water system not only represented the technological knowledge of the period but also “cultural anticipation” – an expression of the city’s beliefs, values, and aspirations that designed and managed the system. These ideals were heavily contested and often required people to negotiate with one another how to define a public good and what constituted the public interest. Smith demonstrates how discussions over matters of water overlapped with discussions of how political leaders desired to create a certain kind of community. In other words, plans to construct a water system were never just about the water system. They were also about social values.⁶³

The story of “imagined futures” or “cultural anticipation” was complicated in the history of the MRW since 1960 as future conceptions involved watersheds and the Great Lakes Basin areas rather than segregated urban, suburban, and rural interests. However, one must not overlook how regional lenses might reflect these geographically divided interests. Regional approaches that coped with the overall health of the Milwaukee River’s ecosystem and its uses envisioned by the Southeastern Wisconsin Regional Planning Commission, the Wisconsin Department of Natural Resources, and federal regulations since the Water Quality Act of 1965 must also be seen within the context of rural and urban interests and how they envisioned human and river relationships in the future. Moreover, the desire for a regional approach also reflected the statewide interest in recreational opportunities and Great Lake Basin’s interest in its water resources’ overall health and protection. I contend that people’s use of the

62

63

“public interest” in debates centered on revitalizing the Milwaukee River Watershed often reflected a particular geographic interest rather than a regional or watershed perspective.

Dissertation Outline

My dissertation examines the struggles to find an agreeable public interest in the use and health of the Milwaukee River and its watershed. Government and nongovernment agencies often represented a public defined by different territories. Although individuals and groups began to speak about the need to address water-related problems from a watershed perspective, this was a difficult task as people did not see themselves as part of a watershed community. In other words, ecologically speaking, people recognized that a watershed approach was beneficial to address water pollution or concerns of potential flood damage. However, I argue that solutions to these problems were not just ecological solutions. People held various economic, social, and historical concerns about how the waterway and its surrounding lands were utilized. Thus, when various government and nongovernment agencies spoke of the public interest in solving watershed problems, a watershed approach seldom aligned with the multiple public interests, representing a public from sections of the watershed or a public representing a more expansive territory. Also, this study examines the various paths various entities took to understand the importance of a watershed approach and the struggles they endured to recognize the public interest representing a watershed community. For example, when a watershed outlook was taken to address various riverway problems, rural and urban constituents often clashed over what a watershed approach would look like and how perceived improvements would benefit or burden them. Debates over the revitalization of the waterway involved conflicts between urban and rural interests within the watershed that held different beliefs on the value and use of the Milwaukee River. Also, local, state, and national political leaders argued the best course of action from the perspectives of their constituents. Furthermore, people’s understanding of their relationship changed as various groups educated people

about how their actions impacted the waterway's health. Although the water quality has improved since 1960, the maintenance of the MRW's ecological vitality coincides with a public interest reflecting the residents of the watershed community.

To examine the revitalization of the Milwaukee River since 1960, I have divided the dissertation into five chapters. Each chapter investigates how various individuals, groups, and government agencies defined the public interest and the resulting conflicts. Through these conflicts, one begins to recognize how difficult it is to create a sense of community around a watershed. Part of this struggle results from an entrenched belief in the role of political districts that do not match the ecological boundaries which define the watershed. In addition, as the boundaries that defined a public body changed, the interests often conflicted. Chapter One begins with a description of the urban waterway and the economic realities that motivated city leaders to redevelop the downtown along the Milwaukee River. After winning the 1960 Milwaukee mayoral race, Henry Maier and the Milwaukee Department of City Development (MDCD) sought ways to expand the public interest in the riverway and improve the local economy. However, after the passage of state and federal water laws in the mid-1960s, conflicts between a local perspective (city of Milwaukee) and a regional perspective (state and federal) emerged over how best to redevelop the downtown and restore the health of the urban waterway. Although both entities looked to restore the waterway in different manners, they prioritized the cleanliness of the urban waterway more than the entire watershed. Chapters Two, Three, and Four investigate three separate attempts to seek a watershed view to improve the riverway's health and change how people used the natural resources and spaces within the watershed. Chapter Five appraises the efforts to find common ground over common water. Between 1960-2000 the Milwaukee River became cleaner, and public access to these waters expanded. However, a shared public interest in the waterway remains more elusive than realized.

Chapter One explores the disagreements over how the Milwaukee River should be revitalized in the 1960s. I argue that seeing the Milwaukee River revitalization from the perspectives of city leaders' perspectives as opposed to state and national leaders' outlooks was best understood by recognizing how they prioritized the overall well-being of the city of Milwaukee. Both groups understood the degraded health of the Milwaukee River ecosystem. Yet after the Federal Water Quality Act of 1965, local, state, and national interests vied to understand the public interest. Milwaukee Mayor Henry Maier's administration contended that the economic development and overall health of the city of Milwaukee needed to precede water quality concerns. The Maier Administration investigated ways to enhance people's experience and recognize the beauty of the Milwaukee River. Revitalizing the waterway was a city endeavor and seemed like a means to strengthen the economy and increase people's desire to live downtown. If pollution abatement programs were prioritized, the city's well-being would be in jeopardy. These efforts collided with state and national representatives that had a broader perspective of the public interest of the Milwaukee River, which included people who lived outside of the city boundaries. State and federal leaders argued that the public's primary interest required plans to lessen the pollution in the urban waterway. For example, Congressional Representative Henry Reuss, speaking for a broader geographic audience, prioritized the waterway's health. In addition, residents from this larger area viewed urbanization as part of the problem. In other words, the city was the cause of the problem and was responsible for cleaning it up. Created in the early 1960s, the Southeastern Wisconsin Regional Planning Committee (SEWRPC) began recognizing degraded areas throughout the watershed. However, for most of the 1960s, the primary concern of government leaders was the urban waterway rather than the health of the MRW.

Chapter Two explores the creation of the Riveredge Nature Center (RNC) from its founding in 1968 through the duration of G. Andrew Larsen's term as the lead naturalist and later administrator. He was the first hired naturalist at RNC. Suburban women from the Whitefish Bay Garden Club and the

Junior League of Milwaukee were the primary motivators of the RNC. The primary actors were not public officials but were members of a privately run nature center. Although they were a private organization, they worked to attract a broad membership throughout southeastern Wisconsin. To help raise funding, the Riveredge Foundation, Inc. was established in 1968. The foundation's mission was to create and conserve habitats for nonhuman species and human education. The founders looked for a place to develop a refuge or sanctuary away from where they lived and worked. Riveredge would provide a place for people to learn about plants and landscapes absent in their suburban properties. Rather than seek to improve the river corridors within the city of Milwaukee, as the Maier Administration attempted, the RNC founders restored lands along the river corridor that were relatively removed from the urban landscape. Like the Maier Administration in the 1960s, the founders of Riveredge saw their mission as an attempt to develop a particular location along the Milwaukee River. Unlike the Maier administration, they sought to conserve lands from urban development rather than revitalize and develop lands and water to expand the city's economic growth. However, the goals of the RNC would evolve.

Initially portrayed as an island removed from urbanization, members worked to spread what they learned to their communities. Soon the RNC board promoted the image of a place interconnected to rural and urban areas throughout the watershed. The Riveredge community fostered an interest in the Milwaukee River Watershed that united urban and non-urban environmental interests, worked to conserve natural domains and improved people's understanding of nature's role in a watershed community. This demonstrated an evolution of their efforts to serve the public interest. First, the community-led efforts to save lands from urbanization. Then, it evolved into an organization that viewed its relationship to urban and rural lands as interconnected rather than an island removed from the city. Furthermore, the RNC, like the Revitalization Council (Chapter Five), demonstrates the role of education in developing a watershed perspective and searching for a shared public interest.

Chapter Three focuses on the Southeastern Wisconsin Regional Planning Commission's (SEWRPC) efforts to study regional problems and advise local and county governments in the seven counties of southeast Wisconsin of possible future development and conservation of lands. SEWRPC was formed in the early 1960s. It was made up of representatives from the seven counties in southeastern Wisconsin. The commission's purpose was to find solutions to government inefficiencies in Milwaukee County involving problems that crossed political boundaries.⁶⁴ Unlike the Maier Administration and the RNC board, SEWRPC sought a regional perspective. In effect, it represents a public body much more extensive than RNC's membership and the city limits of Milwaukee. SEWRPC was responsible for examining water pollution and flooding within the MRW in the mid-1960s and published its study of the MRW in the early 1970s. SEWRPC defined water problems from a watershed perspective. Wisconsin politicians and real estate planners were concerned over the projected growing population of southeast Wisconsin and the need to maintain, protect, and find new natural recreational opportunities. In addition, suburban dwellers, alarmed over the unpredictable flow of the Milwaukee River, clashed with residents in rural landscapes concerned over how to preserve their property from the encroachment of urban and suburban interests. To address these concerns, SEWRPC studied various proposals to control the water flow of the Milwaukee River and zone lands in the watershed to meet future development and recreation demands. The three most contentious proposals were the Saukville Diversion Channel, Waubesa Reservoir, and the environmental corridor.

In Chapter Three, I argue that the failure to gain a consensus or a holistic solution reflected the inability to find common ground between people's conceptions of nature and people's relationship with natural resources. Although SEWRPC stressed the importance of a watershed approach to address regional concerns, the commission found translating these proposals into a shared public interest

⁶⁴ Richard W. Cutler, *Greater Milwaukee's Growing Pains, 1950-2000* (Milwaukee, WI: Milwaukee County Historical Society, 2001), 33–34.

challenging. A watershed perspective did not reflect a public interest but multiple public interests. These perspectives, urban and rural, also express historical and sociological understandings of a river's value and the imagined futures each region portrayed as the best public interest. As a result, the Saukville Diversion Channel and the Waubeka Reservoir were never constructed, while the environmental corridor would be gradually expanded. Despite struggles to gain a following to support various proposals, SEWRPC emphasized the revitalization of the Milwaukee River Watershed rather than disconnected areas.

Chapter Four examines the second half of the Henry Maier Administration between the early 1970s and the end of Henry Maier's term in 1988. During the 1960s, arguments over how to revitalize Milwaukee River primarily involved representatives of the city, the state of Wisconsin, and the federal government. International representatives and the state of Illinois put forward their demands in the 1970s and 1980s. In addition, representatives of the newly formed Milwaukee River Restoration Council were emboldened to project their pleas for cleaner waterways. The public interest represented by these groups fought for water quality throughout the Great Lakes Basin. The Federal Clean Water Act (1972) and other environmental protection laws of the early 1970s extended the federal and state government's authority to mandate changes. These laws required the city of Milwaukee to comply with new regulations. One of their primary areas of concern was the Milwaukee River. Leading the charge, the state of Illinois sued the city of Milwaukee for its continued neglect to address pollution entering Lake Michigan. Legal opinions also challenged a broader audience, encompassing the Great Lakes Basin, to take responsibility for supporting pollution abatement strategies.

Disagreements also continued between the state of Wisconsin and the city of Milwaukee. However, the formation of the Milwaukee River Restoration Council (Restoration Council) further pressured the city of Milwaukee to prioritize the abatement of water pollution over other environmental health concerns. As regional and local interests argued over the intent and expectations

of the federal and state water laws, the Milwaukee River Restoration Council pushed various entities to stop water pollution on a faster timetable and allied themselves with groups representing a wider geographic area in the name of protecting the public's waters in a local community. In effect, the Restoration Council, located within the MRW, challenged the Henry Maier Administration over its claim to represent the public interest of the MRW's residents.

As these debates evolved, a watershed approach to improving the waterway's health became more prominent. As Milwaukee updated its CSS in response to the public outcry, Mayor Maier pressured Wisconsin lawmakers and the watershed community to hold upstream municipalities and agricultural landowners responsible for the Nonpoint Source (NPS) pollution entering the waterway. Like SEWRPC's efforts to promote a watershed solution to address flood damage, a watershed approach was underscored. As Henry Maier's administration was forced via mandates to address point source pollution, tackling the CSS via the Deep Tunnel System, Maier argued that improving the health of the Milwaukee River was also the responsibility of suburban and rural communities. If NPS pollution was not abated, the riverway would not achieve the "fishable and swimmable" standards being mandated. However, like the divide between rural and suburban perspectives on controlling the river course, so had a fork emerged around a bend on how and when cleaner waters would flow. How the public interest was defined and who was responsible for pollution abatement illustrated the difficulty of finding a shared public interest for the MRW. More prevalent was the rural and urban divide. In addition, those who want a healthier waterway questioned the idyllic nature of the country as something to be conserved and saved from urbanization. Nevertheless, the importance of a watershed perspective became more ingrained. Just as the members of Riveredge evolved to understand their link rather than separation with urban areas, so did the city and farm communities further their connection, despite their divisive stances.

In Chapter Five, the work of the Milwaukee River Revitalization Council is examined. The Revitalization Council worked under the auspices of the WDNR, searching for ways in which the MRW's water quality might improve under the funding of Wisconsin's Priority Watershed Program. Firmly committed to a watershed approach, the state government and WDNR charged the Revitalization Council with the responsibility of building awareness of the interconnectedness of the communities via the Milwaukee River and its tributaries. Also, *Milwaukee Journal* and *Milwaukee Sentinel* writer Don Behm brought attention to the problems in the watershed through his series, *Ill Waters*. Although the introduction of railroads in the 19th and 20th centuries, along with the Highway Act of 1956, moved much transportation to land networks, the link between the city and the hinterland was still intertwined through its waterways. As communities embraced cleaner rivers, they realized the need to share responsibilities for improving the water quality and the benefits of a watershed approach. The Revitalization Council encouraged cities and rural landed interests to address nonpoint source pollution to clean the waterways through voluntary abatement programs to improve the water quality. In addition, the city of Milwaukee's leadership, the WDNR, and the Revitalization Council worked together to construct the Milwaukee Riverwalk in compliance with the Public Trust Doctrine.⁶⁵ In this chapter, I argue that the Revitalization Council acted as an intermediary between rural and urban communities to develop a shared public interest in the value and human use of the Milwaukee River. Working with Mayor John Norquist and his administration, the Revitalization Council helped to expand green space and access to the Milwaukee River through the extension of the Riverwalk. Working with the broader watershed community, the Revitalization Council educated the public on the efforts to address Nonpoint Source (NPS) pollution. The Revitalization Council's efforts helped improve the Milwaukee River's water quality through voluntary programming by demonstrating its effectiveness to residents of

⁶⁵ City of Milwaukee Department of City Development, "Milwaukee Riverlink Guidelines" (Milwaukee, WI), accessed February 9, 2020, <https://city.milwaukee.gov/ImageLibrary/Groups/cityDCD/planning/riverlink/pdfs/Riverlink.pdf>.

the MRW. However, building the idea of a watershed community that shares a particular public interest remained more elusive than realized.

In the conclusion, I revisit themes and note considerations for the future health of the Milwaukee River Watershed and the significance of a watershed approach to address water pollution. However, it is equally important to recognize that multiple watershed approaches can lead to solutions to a healthier ecosystem. Thus, to find common ground over common water, policymakers need to envision a watershed community that considers the public interests expressed by the communities that depend on the Milwaukee River Watershed.

Chapter 1: Defending a City, While Revitalizing a Riverway

In the 1950s, recognizing that the health of the Milwaukee River was in rapid decline, civic and environmental groups focused on how best to restore the riverway. For example, the Milwaukee and La Budde chapters of the Izaak Walton League (IWL) worked throughout the decade, cleaning up the riverway and restoring fish habitats in hopes of reestablishing fish populations and reopening opportunities for swimming and recreational activities. In July 1958, the Milwaukee Sewage Commission (MSC) completed a study regarding sewage disposal in the Milwaukee metropolitan area. This study analyzed the dangers presented by septic tank usage in suburbia, which contributed to effluent in the streams. The main problem was housing developments on clay soils that could not absorb human waste. In 1959 the Milwaukee League of Women Voters published a report examining the issues and opportunities to reinstate the waterway's health. These groups and others also pushed for new legislation to amend degraded waterways and protect water resources from further pollution. Despite their efforts, the overall water quality remained poor. Yet the seeds for change were planted, and the public's interest in revitalizing the riverways grew.¹

Not only was the riverway seen as less attractive to recreationists, but the utility of the Milwaukee River for shipping and manufacturing also decreased. In the late 1950s, the St. Lawrence Seaway was enlarged to accommodate larger ships, and the United States and Canada helped Great

¹ Pearl Pohl and Cyril Kabat, "Concerning the Protection of Milwaukee River Watershed," January 5, 1958, Pearl Pohl Papers, 1928-1981, Box 3, Folder 7, UW-Milwaukee Libraries, Archives; "Letter from Richard F Harris to Pohl," January 9, 1958, Pearl Pohl Papers, 1928-1981, Box 3, Folder 7, UW-Milwaukee Libraries, Archives; Wisconsin Committee to Protect Public Water Rights, "Wisconsin Water Resource Considerations and Recommendations for Legislative Action" (Water Resources Committee of the Legislative Council and the Subcommittee on Water Use Legislation of the Natural Resources Committee of State Agencies, March 1958), Pearl Pohl Papers, 1928-1981, Box 2, Folder 9, UW-Milwaukee Libraries, Archives; "Letter Myron Johansen to Pohl and Petersen," March 12, 1959, Pearl Pohl Papers, 1928-1981, Box 3, Folder 7, UW-Milwaukee Libraries, Archives; League of Women Voters of the Metropolitan Milwaukee Area, "A Study of the Milwaukee River Basin," June 1959, Pearl Pohl Papers, 1928-1981, Box 3, Folder 3, UW-Milwaukee Libraries, Archives.

Lakes harbors compete with ocean ports. Despite the opportunities that the newly opened St. Lawrence Seaway provided to link the Great Lakes to the world trade market, the Milwaukee River's relatively cramped channel could not compete with the ocean harbors. Thus, under the leadership of the Milwaukee Port director Harry Brockel more commercial shipping traffic relocated to Jones Island at the mouth of the Milwaukee River Watershed to make room for larger ships. Furthermore, growing competition in the world trade market and the United States Transportation Act of 1956, which greatly expanded the trucking industry, led to the closing of many facilities along the Milwaukee River. Owen Gutfreund, in *Twentieth Century Sprawl*, argues that the overhauled transportation networks in the mid-twentieth century led to the decentralization of American communities and contributed to the deterioration of many cities, unable to keep up with the fiscal requirements of capital projects. As a result, industries began to leave Milwaukee, and its residents followed. Although Milwaukee's lakeside ports are still utilized today by various industries, in 1959, the Milwaukee River was closed to significant shipping traffic.²

Milwaukee was not the only city that followed this path. Historians David and Richard Stradling, in *Where the River Burned*, note how the landscape of Cleveland encouraged nature's removal from the landscape and promoted the rapid accumulation of wealth through the construction of the new infrastructure and growth of manufacturing industries. However, this emphasis on industrial expansion distorted a healthy environment into a landscape marred by water and air pollution.³ In the 1970s, hoping to stimulate a dragging economy, urban planners began rebuilding the Cleveland waterfront to

² Harold M. Mayer, "Travel by Water, Land, and Air: Transportation for Milwaukee County," in *Trading Post to Metropolis: Milwaukee County's First 150 Years* (Milwaukee County Historical Society, 1987); John Gurda, *Milwaukee: A City Built on Water* (Madison, WI: Wisconsin Historical Society Press, 2018), 185; Dan Egan, *The Death and Life of the Great Lakes* (New York: W. W. Norton & Company, 2017), xv; Owen D. Gutfreund, *Twentieth Century Sprawl: Highways and the Reshaping of the American Landscape* (New York: Oxford University Press, 2004), 5.

³ David Stradling and Richard Stradling, *Where the River Burned: Carl Stokes and the Struggle to Save Cleveland* (Ithaca, NY: Cornell University Press, 2015), 4–6.

expand recreational and residential opportunities. These river spaces provided a means for humans to co-exist with a healthy environment and reboot the economy.⁴ Planners argued that if the city government invested in the strength and potential of the riverway, then people would be attracted to the downtown and foster a growing economy.

However, the story of urban river redevelopment was still being determined as the economy of the cities changed. Providing a more complex story of Manhattan's development in the nineteenth century, Catherine McNeur, in *Taming Manhattan*, demonstrates how city officials' attempts to control the urban environment not only resulted in debates over what was appropriate in urban versus rural spaces but also reflected wealthy patrons' desire to use space for leisure, while the poor sought the same areas for labor and survival. The increasingly tamed city privileged one group's vision for Manhattan and its environment while amplifying environmental and economic disparities. Although this led to new boundaries between the city and the country, it did little to alleviate social tensions.⁵

Depicting the local Indigenous people's struggle, Coll Thrush's study on the transformation of Seattle's watersheds demonstrates how zoning policies continue to exclude Native Americans. Although he notes how the 1950s represented a changing urban identity centered on undoing environmental degradation, First Nations fought for their right to exist in these places of renewal.⁶ Similarly, the story of Milwaukee's downtown redevelopment and the river revitalization reflected the interests of Mayor Maier and the Milwaukee Department of City Development (MDCD), which widely ignored the interests of Native American and African American voices that did not share the same economic priorities.

Despite calls from early European settlers to remove Native Americans from the Milwaukee area and

⁴ Stradling and Stradling, 9, 17; Joel A. Tarr, ed., *Devastation and Renewal: An Environmental History of Pittsburgh and Its Region* (Pittsburgh: University of Pittsburgh Press, 2003), 12.

⁵ Catherine McNeur, *Taming Manhattan: Environmental Battles in the Antebellum City* (Cambridge, MA: Harvard University Press, 2014), 4, 235.

⁶ Coll Thrush, "City of the Changers: Indigenous People and the Transformation of Seattle's Watersheds," *Pacific Historical Review* 75, no. 1 (2006): 89, 116.

the Maier Administration's disregard, over 20% of Wisconsin's Indigenous population resided in Milwaukee in the 1980s.⁷

Although scholars draw attention to the conflicts between business, environmental, and ethical interests, recognizing the importance of geography in defining the public and the public interest plays a more significant role in the 1960 debates over the Milwaukee River's health. I argue that after the passage of the Federal Water Quality Act of 1965, city leaders prioritized the overall well-being of Milwaukee, while state and federal leaders emphasized the Milwaukee River ecosystem. Representing a public defined by state and national boundaries, United States and Wisconsin legislators, working to restore the waterways, became more involved in determining the public interest. Although the city's leaders argued that the downtown riverway revitalization could renew a shared public interest in the Milwaukee River water quality, state and federal pollution abatement strategies diverted the financial resources from the Maier Administration's economic rescue efforts.⁸

⁷ Anderson and Olson, *Milwaukee: At the Gathering of the Waters*, 162.

⁸ McNeur, *Taming Manhattan*; Andrew Hurley, *Environmental Inequalities: Class, Race, and Industrial Pollution in Gary, Indiana, 1945-1980* (Chapel Hill, N.C: University of North Carolina Press, 1995); Andrew Hurley, "Floods, Rats, and Toxic Waste: Allocating Environmental Hazards since World War II," in *Common Fields: An Environmental History of St. Louis*, ed. Andrew Hurley (St. Louis, MO: Missouri Historical Society Press, 1997), 242–62; Giovanna Di Chiro, "Nature as Community: The Convergence of Environment and Social Justice," in *Uncommon Ground: Rethinking the Human Place in Nature*, ed. William Cronon (New York: W. W. Norton & Company, 1996), 298–320; Thrush, "City of the Changers: Indigenous People and the Transformation of Seattle's Watersheds"; Matthew W. Klinge, *Emerald City: An Environmental History of Seattle* (New Haven: Yale University Press, 2007); Adam Rome, *The Bulldozer in the Countryside: Suburban Sprawl and the Rise of American Environmentalism* (Cambridge and New York: Cambridge University Press, 2001); Christopher C. Sellers, *Crabgrass Crucible: Suburban Nature and the Rise of Environmentalism in Twentieth-Century America* (Chapel Hill: University of North Carolina Press, 2012); Paul S. Sutter, *Driven Wild: How the Fight against Automobiles Launched the Modern Wilderness Movement* (Seattle, WA: University of Washington Press, 2002); Laura Alice Watt, *The Paradox of Preservation: Wilderness and Working Landscapes at Point Reyes National Seashore* (Oakland, CA: University of California Press, 2017); Jared Orsi, *Hazardous Metropolis: Flooding and Urban Ecology in Los Angeles* (Berkeley: University of California Press, 2004); Kelman, *A River and Its City: The Nature of Landscape in New Orleans*; Craig Colten, *An Unnatural Metropolis: Wrestling New Orleans from Nature* (Baton Rouge: Louisiana State University Press, 2005); Blake Gumprecht, *The Los Angeles River: Its Life, Death, and Possible Re-Birth* (Baltimore: John Hopkins University Press, 1999); Cioc, *The Rhine: An Eco-Biography. 1815-2000*; Stéphane Castonguay, "Rivers, Industrial Cities, and Hinterland Production in Quebec in the Nineteenth and Twentieth Centuries," in *Rivers Lost Rivers Regained: Rethinking City-River Relations*, ed. Martin Knoll, Uwe Lubken, and Dieter Schott (Pittsburgh, PA: University of Pittsburgh Press, 2017), 25–45; Matthew D. Evenden, *Fish versus Power: An Environmental History of the Fraser River* (New York: Cambridge University Press, 2004); Christopher J. Casteneda and Lee M. A. Simpson, *River City and Valley Life: An Environmental History of the Sacramento Region* (Pittsburgh, PA: University of Pittsburgh Press,

The chapter will start by examining the desire of the Maier Administration to restore the Milwaukee River while prioritizing economic development along the urban riverway. Both the Department of City Development and the Milwaukee River Technical Study Committees were formed in Maier's first term to help with the planning. Not only did city leaders claim that bringing people to the riverfront would strengthen the city's economy, but leaders also saw their plans as a means to build public interest in revitalizing the river and addressing water quality concerns. One of the significant obstacles for Maier's administration was coping with an aging infrastructure that contributed to the pollution of the Milwaukee River. Yet the primary focus of the Maier Administration was to restore Milwaukee's prominence in a time of economic decline.

Then I will examine how state and national interests expressed by the passage of environmental laws in 1965 and 1966 prioritized the rescue of the waterway from the city's reliance on an outdated CSS, which contributed to point source pollution. Although Mayor Maier recognized the need to address water quality, he would not support proposals that jeopardized Milwaukee's economy or neglected his belief that the state and national governments were responsible for providing financial aid. US Congressional leader Henry Reuss promoted programming to address pollution and was a prominent spokesperson at the 1966 House Committee on Natural Resources and Power Public Hearing held in Milwaukee. Speakers representing the city, state, and national interests debated the best course of

2013); Jennifer L. Bonnell, *Reclaiming the Don: An Environmental History of Toronto's Don River Valley* (Toronto: University of Toronto Press, 2014); Martin V. Melosi, *The Sanitary City: Urban Infrastructure in America from Colonial Times to the Present* (Baltimore: John Hopkins University Press, 2000); Christopher Morris, *The Big Muddy: An Environmental History of the Mississippi and Its Peoples from Hernando de Soto to Hurricane Katrina* (Oxford: Oxford University Press, 2012); Richard Walker, *The Country in the City: The Greening of the San Francisco Bay Area* (Seattle: University of Washington Press, 2007); Tarr, *Devastation and Renewal*; Harold Platt, *Shock Cities: The Environmental Transformation and Reform of Manchester and Chicago* (Chicago, IL: University of Chicago Press, 2005); Harold L. Platt, *Sinking Chicago: Climate Change and the Remaking of a Flood-Prone Environment* (Philadelphia, PA: Temple University Press, 2018); Kate Foss-Mollan, *Hard Water: Politics and Water Supply in Milwaukee, 1870-1995* (West Lafayette, IN: Purdue University Press, 2001); Jasper Rubin, *A Negotiated Landscape: The Transformation of San Francisco's Waterfront since 1950*, 2nd ed. (Pittsburgh, PA: University of Pittsburgh Press, 2016); Joshua A.T. Salzmann, *Liquid Capital: Making the Chicago Waterfront* (Philadelphia, PA: University of Pennsylvania Press, 2018); Carl S. Smith, *City Water, City Life: Water and the Infrastructure of Ideas in Urbanizing Philadelphia, Boston, and Chicago* (Chicago: University of Chicago Press, 2013).

action for the revitalization of the Milwaukee River. Also, environmental groups located within the watershed promoted faster timetables to clean up the river. These debates between government and nongovernment entities revealed that policymakers needed to examine riverway issues from a broader perspective beyond the city limits. Thus, efforts to investigate the river's health began to flow toward a watershed view. Throughout the 1960s, the prominence of the City of Milwaukee and what a healthy environmental would look like was still to be debated. Although the Milwaukee River's water quality remained poor, the importance of a watershed approach for revitalizing the Milwaukee River started to float towards the surface.

Mayor Henry Maier's Administration's Plan

The changing economy and transportation networks provided the prospect for city planners and mayoral candidates to reexamine how Milwaukeeans used the Milwaukee River's natural potential to attract new businesses and customers to the downtown. In 1960 two Democratic candidates, Henry Maier and Henry Reuss, campaigned for mayor in Milwaukee's non-partisan election system.⁹ Henry Maier was a Wisconsin State Senator and Henry Reuss was Wisconsin's 5th District US Representative. Both Maier and Reuss sought to persuade voters that the future development of the downtown would be best served under their leadership. Reuss argued for a more extensive plan to address soil erosion, flooding, and pollution in cooperation with communities throughout southeastern Wisconsin. In addition, he pledged to develop the lakefront to encourage a more substantial tax base in Milwaukee.¹⁰ Maier called for greater cooperation with public and private groups to improve the waterway by

⁹ Thomas J. Jablonsky, "Non-Partisan Elections," in *Encyclopedia of Milwaukee*, ed. Amanda I. Seligman and Margo Anderson, 2016, <https://emke.uwm.edu/entry/non-partisan-elections/>.

¹⁰ "Reuss, Maier Beat Bushes," *Milwaukee Sentinel*, April 5, 1960, Milwaukee Journal Sentinel Historical Newspapers; "Platforms: Three Major Candidates Set Goals," *Milwaukee Journal*, March 4, 1960, Milwaukee Journal Sentinel Historical Newspapers; Anderson and Olson, *Milwaukee*.

providing commercial opportunities and a theatre district along the riverbanks, focusing his attention on urban renewal through the attraction of industries and businesses.¹¹

The winner of Milwaukee's mayoral race, Henry Maier, served as mayor for the next 28 years. Many people remember Maier for his leadership or lack of leadership during the Open Housing protests led by Father James Groppi and Alderman Vel Phillips throughout much of the 1960s.¹² Reuss continued his political career of 28 years as a Wisconsin Congressional leader. He is remembered for his role in creating the Ice Age National Scenic Trail.¹³ However, both Mayor Maier and Congressman Reuss used their positions to shape and defend the public interest in the revitalization of the Milwaukee River and Milwaukee's downtown. Maier claimed to speak for the interests of the city of Milwaukee, while Reuss represented local and national perspectives.

During Henry Maier's first two terms, he was most concerned with the public interests of his urban constituents. Recognizing the riverfront property's value, city developers and planners drafted new plans for waterfront properties. Maier's redevelopment goals and the MDCD's vision prioritized commerce along the riverfront to bring consumers and new residents to the downtown. The MDCD was formed in 1961 to help consolidate urban renewal, public housing, and long-range planning. Richard Perrin, the executive director and secretary of the city Housing Authority, was the first executive director of the MDCD.¹⁴ The city, once thriving as a Great Lakes port city with a labor force living near

¹¹ "Reuss, Maier Beat Bushes"; "Platforms: Three Major Candidates Set Goals"; Anderson and Olson, *Milwaukee*, 145.

¹² Bethany Harding, "Henry W. Maier," in *Encyclopedia of Milwaukee*, ed. Amanda I. Seligman and Margo Anderson, 2016, <https://emke.uwm.edu/entry/henry-w-maier/>; UWM Libraries - March on Milwaukee, "Maier, Henry W.," accessed October 20, 2021, <https://uwm.edu/marchonmilwaukee/keyterms/maier-henry/>; Matthew J. Prigge, "The Story behind This Henry Maier Paperweight," *Milwaukee*, November 14, 2017, <https://www.milwaukeeemag.com/story-behind-this-henry-maier-paperweight/>; Bill Peterson, "'Urban Statesman' Steps Down," *The Washington Post*, April 2, 1988, <https://www.washingtonpost.com/archive/politics/1988/04/02/urban-statesman-steps-down/f1ab73f4-65f8-45b1-b136-230093fda81f/?noredirect=on>.

¹³ Karalee Surface, "Henry S. Reuss," in *Encyclopedia of Milwaukee*, 2016, <https://emke.uwm.edu/entry/henry-s-reuss/>.

¹⁴ Henry W. Maier, *Challenge to the Cities: An Approach to a Theory of Urban Leadership* (New York: Random House, 1966), 77–79.

the waterway, had evolved into a landscape more dependent on highway transportation with more workers living in suburban and rural areas. In 1963 without the commercial water congestion, the MDCCD's *Preliminary Report on the Milwaukee River* concluded that the degraded and neglected riverway should be changed into a public asset for future economic growth and recreational opportunities.¹⁵

After the MDCCD's initial survey of the river was completed, Maier announced the creation of the Milwaukee River Technical Study Committee (MRTSC) to examine how the beautification of the waterway and downtown redevelopment would benefit from private and public financial support. MRTSC members came from various service groups in Milwaukee. Richard Perrin initially chaired the committee but stepped down from his leadership role to focus on other urban development projects. Taking over the chairman role was Henry Brockel, the Municipal Port Director. Other key members were Herbert Goetsch, Commissioner of Public Works; Kenneth Fry, Director of the Economic Development Division; Howard Gregg, General Manager of Milwaukee County Park Commission; E. R. Krumbiegel, Commissioner of Health; Raymond Leary, Chief Engineer and General Manager of Milwaukee Sewerage Commission; Herbert McCullough, City Engineer; and Henry Wildschut, Director of Public Works. Maier's appointments reflected the mayor's desire to promote plans that incorporated the perspectives of city government and private development companies.¹⁶ MRTSC envisioned a new Performance Arts Center (PAC) along the riverway. They claimed the PAC would provide an aesthetic

¹⁵ Department of City Development, *Preliminary Report: On the Milwaukee River*, 1963.

¹⁶ "Maier Call for Public Private Task Force for River Beautification," January 29, 1963, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 115, Folder 5, UW-Milwaukee Libraries, Archives; "Maier Endorsed Fitch's Beautification of River Banks," January 29, 1963, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 115, Folder 5, UW-Milwaukee Libraries, Archives; "Milwaukee: It's Time to Move on River Bank Blight in Downtown," January 30, 1963; "Maier Asks Perrin for East Side Redevelopment to Include River Bank," February 14, 1963, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 115, Folder 5, UW-Milwaukee Libraries, Archives.

and cultural focal point that would create a festive environment and establish a space where people would like to gather along the riverway.¹⁷

Emphasizing the importance of urban growth, the MRTSC examined how other cities enhanced their riverfronts, including San Antonio, Cincinnati, and Pittsburgh. Each of these redevelopment programs looked for ways to improve the aesthetics of the riverbanks and make coming to the river visually attractive. Similarly, the Milwaukee planners assumed that if more people started to go to the waterway, their interest in improving the river's water quality would grow.¹⁸ Maier and the city developers argued that the city's economy needed attention before the river's water quality could be addressed.¹⁹ Samuel Hays, in *Beauty, Health, and Permanence*, argued that perspectives of nature after WWII reflected a shift from seeing resources consumed rather than part of the production process. He asserted that environmental quality was seen in the context of economic progress and moving forward rather than a return to a once pristine past.²⁰ The MRTSC was not going to advise the removal of commercial activity; instead, it would just change its scope. Also, MRTSC's attention was focused on improvements to the city's waterway, not the entire watershed.

Stressing the importance of enhancing the waterway's visual appeal was difficult as most of the public only recognized the river as an open sewer, not a natural asset to the city. One of Mayor Maier's

¹⁷ Kenneth Fry to Henry W. Maier, "Economic Development Considering Development of Milwaukee Riverfront," April 10, 1963; "Turning an Eyesore into a Major Asset," April 11, 1963, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 115, Folder 5, UW-Milwaukee Libraries, Archives; "A Beautiful River? Someday - Maybe," February 15, 1963, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 115, Folder 5, UW-Milwaukee Libraries, Archives; "Letter between Mayor Maier and City Club Committee Members," April 18, 1963, City Club of Milwaukee Records, Box 108, Folder 28, UW-Milwaukee Libraries, Archives.

¹⁸ Joel A Tarr, *Devastation and Renewal*; David Holmes, "Freshwater Mecca: Milwaukee's Riverwalk vs. San Antonio's," *Urban Milwaukee*, February 4, 2015, <https://urbanmilwaukee.com/2015/02/04/freshwater-mecca-milwaukes-riverwalk-vs-san-antonios/>; Char Miller, "Urban Nature: An Introduction," in *On The Border: An Environmental History of San Antonio*, ed. Char Miller (Pittsburgh, PA: University of Pittsburgh Press, 2001), 1-16.

¹⁹ Richard Perrin, "River Front Technical Committee Minutes," September 29, 1963, City Club of Milwaukee Records, Box 108, Folder 28, UW-Milwaukee Libraries, Archives.

²⁰ Samuel P. Hays, *Beauty, Health, and Permanence: Environmental Politics in the United States, 1955-1985*, (Cambridge: Cambridge University Press, 1987), 4-5.

outspoken supporters was Eliot Fitch. Fitch was a Marine National Exchange Bank executive officer and Milwaukee Development Group representative. Fitch was involved in the River Development and headed the Milwaukee County expressway project as a member of the City Land Commission. Maier and Fitch touted the importance of cleaning up the riverfront to attract private development. Local news agencies published editorials supporting the mayor's desires for the Milwaukee River redevelopment. The relationship with the press was a concerted effort to convince the public of the MRTSC plan's merits.²¹ Leo Tiefenthaler, secretary of the Milwaukee City Club, emphasized that the highest priority was the river's beautification, regardless of the time and cost. Mr. John Behling, a representative for the Milwaukee Public Works, noted that purchasing property along the riverbanks could also help lessen pollution.²²

Despite appeals from local fishermen, during Maier's first two terms, water quality was secondary to the redevelopment of the waterfront.²³ Although the MRTSC members recognized people's concerns, they argued that the cost to address the CSS was insurmountable.²⁴ Martin Melosi, in *Sanitary City*, about the evolution of city sewer systems, investigated how choices made by previous municipal administrations presented significant obstacles for later development. As a result, city governments coping with aging infrastructure struggled financially to address changing needs.²⁵ Joel Tarr, in *The Search for the Ultimate Sink*, argues that in the twentieth century, one of the urban planners' most significant obstacles was coping with CSS constructed in the early nineteenth century, which mixed rainwater runoff with sewage from homes. The CSS lessened the original construction

²¹ Richard W. E. Perrin to Henry W. Maier, "Most Important Element to Visual Impression of City," May 27, 1963, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 115, Folder 5, UW-Milwaukee Libraries, Archives; Henry W. Maier to Richard W. E. Perrin, "Milwaukee Riverfront Neglected," May 14, 1963, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 115, Folder 5, UW-Milwaukee Libraries, Archives; "A Beautiful River? Someday - Maybe."

²² Perrin, "River Front Technical Committee Minutes."

²³ Tom Guyant, "Man's 'Progress' Is Destroying the Habitat of Fish," *Milwaukee Journal*, January 14, 1963, Milwaukee Journal Sentinel Historical Newspapers.

²⁴ Perrin, "River Front Technical Committee Minutes."

²⁵ Melosi, *The Sanitary City*, 2, 10.

costs. However, the CSS capacity was overwhelmed as the metropolitan population expanded throughout the twentieth century.²⁶

Milwaukee city leaders regularly discussed the overwhelming cost of improving the sewer infrastructure. For example, Ray Leary, chief engineer of the Milwaukee Sewer Commission, emphasized the importance of addressing the CSS. He hoped a new federal water pollution act would provide additional funding to lessen the amount of pollution entering the stream from this source.²⁷ Committee members claimed that the cost of addressing the CSS would bankrupt the city without outside assistance. Milwaukee Public Works Commissioner Eugene Schmidt estimated that the costs of separating the sewer system would be \$250-500 million and take 50-100 years to complete.²⁸ MRTSC members stressed the steps that would continue to alleviate pollution sources in a fiscally responsible way.²⁹ *Milwaukee Sentinel* and *Journal* writers highlighted the importance of beautifying the riverway and the need for state and federal financial support to tackle pollution at its source.³⁰ Content to wait for technological advances and less expensive means to abate pollution, the MRTSC promoted the beautification of the riverway.³¹ For example, Spencer Havelick, a biologist studying the Milwaukee River, noted the problems of the CSS and the public's likely unwillingness to pay additional taxes to clean the river. He argued that if the people wanted to swim in the water, the city government should "build

²⁶ Joel A. Tarr, *The Search for the Ultimate Sink* (Akron: The University of Akron Press, 1996), xxxiv, <https://muse.jhu.edu/book/4186/>.

²⁷ Ray D. Leary, "Report on Organic Pollution in the Milwaukee River and Flushing Station Operation," March 13, 1964, City Club of Milwaukee Records, Box 108, Folder 28, UW-Milwaukee Libraries, Archives.

²⁸ Perrin, "River Front Technical Committee Minutes."

²⁹ E.R. Krumbiegel M.D. to Frank P. Zeidler, "Public Agencies and Lake Michigan Pollution," July 29, 1963, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 192, Folder 30, UW-Milwaukee Libraries, Archives; Martin E. Bruening to Henry W. Maier, "River and Lake Water," August 6, 1963, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 115, Folder 5, UW-Milwaukee Libraries, Archives.

³⁰ Robert L. Dishon, "Waterway Could Be an Asset," *Milwaukee Sentinel*, June 24, 1963, Milwaukee Journal Sentinel Historical Newspapers; Robert L. Dishon, "Interest Grows for Redeveloping Waterway," *Milwaukee Sentinel*, June 25, 1963, Milwaukee Journal Sentinel Historical Newspapers; "River's Future," *Milwaukee Sentinel*, June 27, 1963, Milwaukee Journal Sentinel Historical Newspapers.

³¹ Fry to Maier, "Economic Development Considering Development of Milwaukee Riverfront," April 10, 1963.

swimming pools along the lakefront.”³² Members of the MRTSC and Kenneth Fry, the city’s Director of Economic Development, concurred on suggesting concrete and feasible plans rather than utopian ideas.³³

This is not to say that the Milwaukee Common Council and Mayor Maier were not addressing water pollution. The Common Council approved multimillion-dollar projects focusing on sewage problems, including updates to parts of the CSS.³⁴ When considering the Milwaukee River’s water quality, the city’s leaders looked for solutions with low price tags. They promoted dilution rather than the removal or prohibition of waterway pollutants. Searching for an economically feasible fix, the MRTSC considered restoring the flushing tunnel to aid the river’s labor of removing waste and pushing the pollution to Lake Michigan. In 1888 it was used 24 hours per day, 365 days per year. Constructed by the Edward P. Allis Company, it pumped over 500 million gallons of water per day and was the largest such water pump in the world.³⁵ However, after sewers were constructed, it had been reduced to 20-50 hours per week, seven months of the year.³⁶ Maier inquired with Richard Perrin about a suggested proposal to increase the use of the flushing tunnel to dilute and move water out of the Milwaukee River during low flowage periods. However, this method would only move polluted waters out into Lake Michigan, which might have impacted the quality of Milwaukee’s drinking water source.³⁷ This idea was later circulated in the local newspapers as pipe dreams with high price tags.³⁸ Moreover, the idea of

³² “Pools for Swimming on Lake Front Urged,” *Milwaukee Journal*, January 6, 1962, Milwaukee Journal Sentinel Historical Newspapers.

³³ The Technical Committee Milwaukee River Study, “January 10 General Meeting Notes,” January 10, 1964, City Club of Milwaukee Records, Box 108, Folder 28, UW-Milwaukee Libraries, Archives.

³⁴ “Sewerage Boards OK ‘65 Projects,” *Milwaukee Sentinel*, December 15, 1964, Milwaukee Journal Sentinel Historical Newspapers.

³⁵ “ASME-Landmark:Milwaukee River Flushing Station,” November 23, 2017, https://ethw.org/ASME-Landmark:Milwaukee_River_Flushing_Station.

³⁶ “Minutes of Technical Committee - Milwaukee River Study - March,” March 26, 1964, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 115, Folder 5, UW-Milwaukee Libraries, Archives.

³⁷ Leary, “Report on Organic Pollution in the Milwaukee River and Flushing Station Operation.”

³⁸ “Maier Pipes Up with Proposal to Stem Reiver Pollution, Warm Beach Water,” *Milwaukee Journal*, July 26, 1963, Milwaukee Journal Sentinel Historical Newspapers; “Maier Plan,” *Milwaukee Sentinel*, July 29, 1963, Milwaukee Journal Sentinel Historical Newspapers.

flushing the polluted waters reflected the city's concern to improve the health of the urban waterway, not the MRW or the waters of the Great Lakes Basin (Chapter 4).

Another way MRTSC members looked to improve the urban riverway focused their attention on surface pollution. For example, MRTSC members agreed to address problems associated with the alewives. The alewives were just one of many invasive species that entered the Great Lakes through the St. Lawrence Seaway. In *Death and Life of the Great Lakes*, Dan Egan explains that the explosion of the alewife's population was connected to the near extinction of one of its predators, the Lake Trout. Its demise occurred in the 1950s with the sea lamprey infestation. They attached themselves to the trout, killing them. By 1962 alewives made up 17% of Lake Michigan's total fish mass.³⁹ However, yearly seasonal temperature changes in the Great Lakes caused massive die-offs, littering the beaches and filling the Milwaukee estuary with putrid masses of dead fish.⁴⁰ Reacting to the stench, the Common Council approved the purchase of a surface skimmer to pick up debris and dead fish in the river.⁴¹ Cleaning up surface debris, the city government provided the public with a more enjoyable experience, walking along the riverway. In addition, it was an affordable option for the city budget. Although MRTSC members recognized the problems associated with poor water quality, most emphasized that the river's appearance was the immediate concern.⁴² Comparing the efforts of other American and European river cities' beautification efforts on their waterfronts, Perrin wrote Maier that "there probably is no single element in the city that is more important from the standpoint of creating a visual impression of the city's character." The MRTSC recognized the complexity and cost of water pollution abatement but promoted simple solutions to generate public enthusiasm.

³⁹ Egan, *The Death and Life of the Great Lakes*, 53, 68.

⁴⁰ John Gurda, *The Making of Milwaukee*, Third edition (Milwaukee: Milwaukee County Historical Society, 2008), 357.

⁴¹ H.C. Brockel and Herbert A. Goetsch, "Findings and Recommendations with Respect to Bridges over Milwaukee River," January 24, 1964, City Club of Milwaukee Records, Box 108, Folder 28, UW-Milwaukee Libraries, Archives.

⁴² Perrin, "River Front Technical Committee Minutes"; Perrin to Maier, "Most Important Element to Visual Impression of City," May 27, 1963.

The plans for addressing the Milwaukee River's problems and developing the riverfront were placed in short-term and long-term buckets. Issues that required more intensive effort and perhaps expense would be placed in the long-term bucket. This fit with Milwaukee Development Group member Edmund Fitzgerald's opinion that stressed the importance of demonstrating to the public that the city government accomplished its goals.⁴³ Moreover, he argued that as the public visited the riverfront, they would be more interested and willing to take on the responsibility of cleaning the waterway.

Although Mayor Maier and MRTSC members argued that it was in the public interest to develop the river as a place to gather rather than as a commercial shipping hub, they recognized that public participation and interest in their plans were not a given. To gather public input, the MRTSC held a civic viewpoint meeting at the City Club of Milwaukee in July 1964. The City Club was founded in 1909 to foster citizens' understanding of urban affairs and promote Milwaukee residents' well-being. Leo Tiefenthaler, Secretary of the City Club of Milwaukee, supported plans to preserve the urban environment and restore it to a prominent position. He argued that any project would require continued cooperation from public and private capital sources. To foster public interest within the city's boundaries, the City Development Department encouraged civic groups and newspapers to support the effort.⁴⁴

Throughout the 1960s, the city's administration prioritized making the riverfront a place for people to live, work, and play. In 1966 Charles H. Harper and Associates Architects presented a plan that emphasized the primary goal of improving the riverfront's "beauty" without addressing the river's pollution. Their plan claimed that the Milwaukee River was the city's most "Hidden Asset," providing the city with open space. However, to take advantage of this area, the natural river itself needed to be

⁴³ Raymond F. McGuire, "Minutes of Meeting of the Technical Committee Milwaukee River Study," December 13, 1963, City Club of Milwaukee Records, Box 108, Folder 28, UW-Milwaukee Libraries, Archives.

⁴⁴ Leo Tiefenthaler, "Civic Viewpoint Meeting: The Milwaukee River," July 31, 1964, City Club of Milwaukee Records, Box 110, Folder 3, UW-Milwaukee Libraries, Archives; "April 24 General Meeting Notes," April 24, 1964, City Club of Milwaukee Records, Box 108, Folder 28, UW-Milwaukee Libraries, Archives.

hidden, more accurately, encased under cement to conceal the unsightly and putrid smells of the river. Rather than clean the dirty river, it would be submerged below a park area. The public space would be a monitored and controlled water system rather than an unruly and unsightly river. Also, walkways between Clybourn and Juneau Avenues would line the riverbanks so spectators could enjoy light and fountain displays. The architects surmised that the water flowing above the natural river channel would be pumped from the lake or hydrants in the city water system. In other words, the sensual appeal of the riverway would be obtained from the burial of the “natural” Milwaukee River.⁴⁵ The Harper Plan to bury the natural river was never accepted, despite the city administration’s aesthetic orientation.

Milwaukee’s story was not unique, as many cities’ water systems were built to supply water, and storm and sewer systems were created for specific purposes, which reflected the economic and health concerns of the early twentieth century. For example, in “The Interaction of Natural and Built Environments in the Pittsburgh Landscape,” Joel Tarr notes how Pittsburgh’s infrastructure was built for the steel industry but was later redesigned when the steel industry declined. Later the river landscape was redesigned to provide more recreation opportunities.⁴⁶ Harold Platt, in *Shock Cities*, notes how rapid industrialization in Chicago and Manchester, England required each city to remake itself multiple times. Despite the changes to the infrastructure, Platt contends these changes often involved attempts of affluent enclaves seeking to protect themselves from pollution and disease that was common in the cities. Also, examining power relationships, Kate Foss-Mollan, in *Hard Water*, demonstrates how the city of Milwaukee, which funded and built its infrastructure, used its control of the water to not only expand its ability to distribute water to residents but also maintain its power to support city politics.⁴⁷ Carl

⁴⁵ Charles H. Harper and Associates, Inc., “The Milwaukee River: Our Hidden Asset,” January 4, 1966, City Club of Milwaukee Records, Box 110, Folder 11, UW-Milwaukee Libraries, Archives.

⁴⁶ Edward K. Muller and Joel A. Tarr, “The Interaction of Natural and Built Environments in the Pittsburgh Landscape,” in *Devastation and Renewal: An Environmental History of Pittsburgh and Its Region*, ed. Joel A. Tarr (Pittsburgh, PA: University of Pittsburgh Press, 2003), 12, 38.

⁴⁷ Foss-Mollan, *Hard Water*, 213.

Smith, in *City Water, City Life*, further argues that these changes in the water infrastructure not only reflected the city administration's desire to cope with a present problem but also represented a particular vision for the future.⁴⁸ These studies primarily see the changing infrastructure as a product of politics within the city. However, as the economic and health needs changed, city governments were often strapped with outdated systems that were not built to adapt to new circumstances and insurmountable costs.⁴⁹ Seeking funds from sources outside the city limits ultimately broadened the boundaries that defined the public interest and shifted some decision-making to state and federal government bodies.

In many ways, the city's economic well-being was the central focus of Maier's administration. As people moved to the suburbs, the city's welfare appeared threatened. Urban planners hoped revitalizing the river would maintain the public interest waterway's health and residents' desire to stay. However, the state, the federal government, and other agencies would put additional pressure on the city to prioritize pollution and invest more money in addressing the failings of the combined sewer system. The Wisconsin sanitary engineer, O.J. Muegge, argued that cities could do more to address pollution. After the passage of state and federal water quality laws in 1965, city governments were required to direct more money toward pollution abatement programs.⁵⁰ Although the city continued to fight to revitalize the downtown economy while addressing pollution, Henry Maier's administration would no longer be able to dismiss a broader audience that prioritized water quality.

⁴⁸ Smith, *City Water, City Life*, 6.

⁴⁹ Sarah Elkind, *Bay Cities and Water Politics: The Battles for Resources in Boston and Oakland* (Lawrence, Kansas: University Press of Kansas, 1998); Nicholas Casner, "Acid Mine Drainage and Pittsburgh's Water Quality," in *Devastation and Renewal: An Environmental History of Pittsburgh and Its Region*, ed. Joel A. Tarr (Pittsburgh, PA: University of Pittsburgh Press, 2003), 89–109; Gerard T. Koeppe, *Water for Gotham: A History* (Princeton, N.J.: Princeton University Press, 2000); Tarr, *Devastation and Renewal*; Klinge, *Emerald City*.

⁵⁰ Robert L. Dishon, "State Prods City on Sewer Plan," *Milwaukee Sentinel*, August 20, 1965, Milwaukee Journal Sentinel Historical Newspapers.

A Public Interest of the State and Nation

Despite the Maier Administration's original focus on revitalizing the urban waterway, they recognized the need to address regional problems. Maier argued that many issues required cooperation from neighboring communities to find common ground and provide monetary support.⁵¹ In the early 1960s, a broader perspective involving the redevelopment of the Milwaukee River was aided by the formation of the Southeastern Wisconsin Regional Planning Commission (SEWRPC). The Greater Milwaukee Committee, formed in 1948 to advance various civic projects, encouraged Governor Walter Kohler to create a Metropolitan Study Commission, appointing fifteen members from different communities and professions. The committee's purpose was to find solutions to government inefficiencies in Milwaukee County involving problems that crossed political boundaries.⁵² It should also be noted that the Greater Milwaukee Committee consisted of 150 professionals who owned over 25% of the business property in the city of Milwaukee.⁵³ On the recommendation of the Metropolitan Study Commission, the Wisconsin legislature passed, and Governor Gaylord Nelson signed an act to form the seven-county regional planning committee in 1959.

The commission initially consisted of twenty-one citizen members representing Milwaukee County and the cooperating counties that border Milwaukee County. The purpose of SEWRPC was to study issues related to transportation, housing, demography, watershed development, pollution and water quality, and land use planning. SEWRPC acted as an advisory group to search for solutions that required cooperation across various government agencies. Mayor Frank Zeidler opposed the formation

⁵¹ Henry W. Maier, *The Mayor Who Made Milwaukee Famous: An Autobiography* (Lanham, MD: Madison Books: Distributed by National Book Network, 1993), 2–3; Richard W. Cutler, *Greater Milwaukee's Growing Pains, 1950-2000* (Milwaukee, WI: Milwaukee County Historical Society, 2001), 40–42.

⁵² Cutler, *Greater Milwaukee's Growing Pains*, 33–34.

⁵³ Tula A. Connell, *Conservative Counterrevolution: Challenging Liberalism in the 1950s Milwaukee* (Urbana, IL: University of Illinois Press, 2016), 20.

of SEWRPC, as the city did not have majority representation. However, his successor, Mayor Maier, was a strong supporter of SEWRPC throughout his 28 years as mayor of Milwaukee.⁵⁴

In 1964 the Milwaukee Common Council requested, and in 1965 the County Board of Supervisors approved SEWRPC's study of the Milwaukee River Watershed.⁵⁵ Pearl Pohl of the IWL expressed her dislike in another study and the Milwaukee River Watershed Planning Committee (MRWPC) formation. She argued that the MRWPC proposal for a comprehensive study was redundant considering the 1965 Report of the Wisconsin State Committee on Water Pollution and the US Department of the Interior, "A Comprehensive Water Pollution Control Program, Milwaukee Area," had already been completed.⁵⁶ IWL members and others claimed the city and county governments were delaying the necessary action to improve the waterways. In 1966, Mayor Maier concurred with SEWRPC's "Milwaukee River Watershed Planning Prospectus" that argued multiple river concerns, including pollution, need to be addressed from a watershed perspective.⁵⁷ Maier emphasized that the MRW was a seven-county fiscal responsibility and interest. This coincided with city planners' and the mayor's argument that water quality efforts could not jeopardize the municipality's overall well-being. More importantly, the city's leaders were fighting for their vision of developing the urban waterway. It supported a watershed perspective that maintained the city's prominence.

However, many suburban communities desired to wash their hands of their responsibility to address "Milwaukee's problems." They saw the Milwaukee River's degradation as a product of urban society; therefore, the city's responsibility. Both Jon Teaford, in *City and Suburb*, and Robert Fishman, in

⁵⁴ Anderson and Olson, *Milwaukee*, 144; Cutler, *Greater Milwaukee's Growing Pains*, 40.

⁵⁵ Richard W. Cutler to Warren P. Knowles et al., "The Merging Program for Solving Pollution and Other Problems of the Milwaukee River," July 20, 1966, Henry Reuss Papers, Box 53, Folder 14, UW-Milwaukee Libraries, Archives; SEWRPC, "Milwaukee River Watershed Planning Prospectus," September 1966, Henry Reuss Papers, Box 53, Folder 15, Milwaukee River, 1966, UW-Milwaukee Libraries, Archives.

⁵⁶ Henry S. Reuss to SEWRPC, "Comprehensive Water Pollution Control Program," July 28, 1966, Henry Reuss Papers, Box 53, Folder 14, UW-Milwaukee Libraries, Archives.

⁵⁷ Southeastern Wisconsin Regional Planning Commission, *Milwaukee River Watershed Planning Program Prospectus* (Waukesha, WI, 1966).

Bourgeois Utopias, argue that the urban landscape went into a period of decline as people not only moved out of the city but also created barriers to separate themselves from urban politics. Teaford demonstrated how the urban landscape had been closed off from the metropolitan or surrounding area. Furthermore, as Americans left the city in search of improved public services and places to live, they sought means to separate themselves from the city rather than to remain united with the city.⁵⁸ Similarly, Fishman noted that urban migrants moved, in part, to separate themselves from the city's degraded environment. People searched for green and less congested spaces.⁵⁹

Despite suburban and rural detachment from the city, Maier supported the federal government's river basin approach to address the long-term consequences of using rivers as waste channels. In 1958 the IWL had already stressed the importance of a watershed perspective after a large fish kill in the lower Milwaukee River. They argued that water degradation must be addressed throughout the Milwaukee River system to prevent future fish kills. Although the IWL members focused their attention on urban pollution, they also recognized the problem of soil erosion in farmers' fields as one of the problems.⁶⁰

Although the idea of a regional solution was slowly emerging, the passage of state and federal laws marked a significant change in how public interest in the river would be defined.⁶¹ For example, in 1965, President Lyndon B. Johnson signed the Quality Water Act. This act required states to create water quality standards for interstate water bodies.⁶² Promising federal funding of abatement programs

⁵⁸ Jon C. Teaford, *City and Suburb: The Political Fragmentation of Metropolitan America, 1850-1970* (Baltimore: John Hopkins University Press, 1979), 1-3, 24.

⁵⁹ Robert Fishman, *Bourgeois Utopias: The Rise and Fall of Suburbia* (New York: Basic Books, 1987), 4.

⁶⁰ "Back Exploratory Unit to Improve Watershed," *Milwaukee Journal*, September 18, 1957, Milwaukee Journal Sentinel Historical Newspapers; "Silt Cleanup Aid Is Sought: Milwaukee Watershed," *Milwaukee Journal*, February 13, 1958, Milwaukee Journal Sentinel Historical Newspapers.

⁶¹ Milwaukee River Task Force, "Milwaukee River Strategy," 1975, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 115, Folder 12, UW-Milwaukee Libraries, Archives.

⁶² Edmund S. Muskie, "Water Quality Act," January 6, 1965, <http://acsc.lib.udel.edu/exhibits/show/legislation/item/291>.

across the country, the federal government passed the Clean Water Restoration Act of 1966.⁶³ One of the most significant shifts resulting from the 1965 Water Act and ensuing acts was the inclusion of state and federal agencies involved in the revitalization process.

The 1965 laws significantly expanded the federal government's role in setting water quality standards previously regulated under the 1948 Water Pollution Control Act. The 1948 Act responded to the increased pollution resulting from manufacturing during and after WWII. However, it did not provide the necessary means to enforce regulations, which was considered a state issue. In addition, the 1948 Water Act limited its concern to interstate waterways.⁶⁴ The 1965 Clean Water required states to gain the federal government's approval by submitting state regulations that met health and safety standards. Although the federal government assumed additional powers to enforce water quality standards in future acts, the 1965 law marked a greater interest in water quality.⁶⁵ This is important to note as the primary attention shifted to pollution abatement programs rather than the economic or even overall health of river communities.

The Wisconsin State Water Law of 1965 and the Federal Water Quality Act of 1965 required cities to answer to a broader audience. No longer could the decisions for the Milwaukee River's revitalization primarily rest with the public will as defined by Mayor Maier, the City Club of Milwaukee, and the other public and private civic organizations in the metropolitan area. The federal and state legislation effectively broadened the boundaries of the public interest in the waterway to reflect a state and national audience. This presented a significant shift in the focus of finding a public interest from the

⁶³ Theodore F Wisniewski, "Federal Assistance Program for Water Pollution Abatement Facilities," August 1, 1969, Henry Reuss Papers, Box 10, Folder 29, Milwaukee River, 1967-1979, UW-Milwaukee Libraries, Archives.

⁶⁴ Frank J. Barry, "The Evolution of the Enforcement Provisions of the Federal Water Pollution Control Act: A Study of the Difficulty in Developing Effective Legislation," *Michigan Law Review* 68, no. 6 (May 1970): 1104; Ann Powers, "Federal Water Pollution Control Act (1948)" (Cengage, 2019), <https://www.encyclopedia.com/history/encyclopedias-almanacs-transcripts-and-maps/federal-water-pollution-control-act-1948>.

⁶⁵ Barry, "The Evolution of the Enforcement Provisions of the Federal Water Pollution Control Act: A Study of the Difficulty in Developing Effective Legislation," 1115.

city's residents to a public interest garnered from the citizens of the state and nation. Previously, the city government led the efforts to address the environment. For example, Increase Lapham, the city's original ecologist and surveyor, called for reforestation and limited tree harvests in the 1850s. Also, in the late 19th and early 20th century, the Milwaukee city government, under socialist leadership, expanded and updated the sewer system and water treatment facilities.⁶⁶ Similarly, Carl Smith, in *City Water, City Life*, examined how the infrastructure of Boston, Philadelphia, and Chicago reflected the aspirations of city government leaders in the 19th century.⁶⁷ However, the federal and state water quality laws in 1965 forced the city government to include and recognize a public that did not reside in the city.

Although aesthetic appeal continued to garner support from city officials, state and national perspectives to prioritize water quality became more prevalent. William Swearingen, in *Environmental City*, demonstrates the power of national interests and argues that the federal environmental movements of the 1960s and 1970s encouraged Austin, Texas, residents to reconsider prioritizing economic growth over ecological well-being.⁶⁸ Karl Boyd Brooks, in *Before Earth Day*, argues that the leadership role of the national government would play in the 1970s was formed during the New Deal and WWII.⁶⁹ However, I would argue that it was not until the federal and state laws passed in the 1960s and 1970s that city leaders were required to consider federal and state environmental interests, which lessened the power of the city's government leaders to make decisions on their own.

⁶⁶ Michael Pulido, "Public Works," in *Encyclopedia of Milwaukee*, ed. Amanda I. Seligman and Margo Anderson, 2016, <https://emke.uwm.edu/entry/public-works/>; Kathleen Foss, "Water Policy," in *Encyclopedia of Milwaukee*, ed. Amanda I. Seligman and Margo Anderson, 2016, <https://emke.uwm.edu/entry/water-policy/>.

⁶⁷ Smith, *City Water, City Life*, 2–4.

⁶⁸ William Scott Swearingen, *Environmental City: People, Place, Politics and the Meaning of Modern Austin* (Austin, TX: University of Texas Press, 2010), 2–3.

⁶⁹ Karl Boyd Brooks, *Before Earth Day: The Origins of American Environmental Law, 1945-1970* (Lawrence: University Press of Kansas, 2009), 85–86.

As the federal and state authorities mandated changes to Milwaukee's CSS, Henry Maier argued that the cost to improve the water quality should be shared. This would require various levels of government to find common ground rather than competing to address pollution entering streams throughout the watershed.⁷⁰ Although the city government welcomed state and federal funding, the Water Quality Act of 1965 recognized a regional interest that prioritized programs to improve the water quality over the aesthetic changes proposed by urban planners.

As required by the Quality Water Act, Wisconsin created water quality standards for the interstate waterways. Regulating the waterways outside the reach of federal law, the State of Wisconsin passed Chapter 614, Wisconsin Water Law (1965), which applied national standards to intrastate waterways. In 1967 the Wisconsin Committee on Water Pollution, which merged with the newly created Wisconsin Department of Natural Resources (WDNR), was assigned the task of enforcing these rules. The WDNR was formed under the leadership of Wisconsin Governor Warren Knowles. The WDNR was formed by merging the departments of Resource Development and Conservation. One of the roles of the newly created WDNR was to oversee the protection of the Public Trust Doctrine established in the Wisconsin Constitution.⁷¹ The standards set minimum requirements for all state waters reflecting various waterway uses. Defined by multiple Wisconsin Supreme Court cases and regulations found in Chapter 30 of the Wisconsin Statutes, the public's right to Wisconsin waterways has included navigation, swimming, hunting, and enjoying the natural scenic beauty.⁷² Timetables to achieve these standards

⁷⁰ Henry W. Maier to President Lyndon B. Johnson, "Johnson River Basin Approach," February 1966, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 192, Folder 31, UW-Milwaukee Libraries, Archives.

⁷¹ Michael J. Cain, "Wisconsin's Public Trust Doctrine: Its Influence on the Evolution of Wisconsin's Water Ethic" (Wisconsin Lakes Convention, March 2010), https://www3.uwsp.edu/cnr-ap/UWEXLakes/Documents/ecology/shoreland/nr115/cain_michael_2010wilakescovention_public_trust_doctrine_essay_mjc_margins.pdf; "History and Role: NRB Turns 50," n.d.

⁷² Claire Silverman, "An Overview of the Public Trust Doctrine: Public Rights in Surface Water," *The Municipality*, August 2019, 19, <https://www.lwm-info.org/DocumentCenter/View/3200/Miscellaneous-5R-1-an-overview-of-the-public-trust-doctrine---public-rights-in-surface-water>.

were to reflect reasonable or feasible methods.⁷³ (The debates over the viable and appropriate ways to address pollution are further developed in Chapter 4.) On the other hand, the primary concern for the city of Milwaukee leaders was a public use of the waterway that would send ripples in a stagnant economy and attract water enthusiasts to the river's spring rapids and fishing holes, while slowly improving the water ecosystem.

Henry Reuss, defeated by Henry Maier in the 1960 mayoral race, still retained his political voice in revitalizing the Milwaukee River at the national level. In addition, the representatives of environmental groups, which prioritized biological results over short-term economic growth, gained a more receptive audience. Their efforts to encourage an approach to protect waterways from urbanization and pollution industries took center stage. The interest in saving the city's declining economy took the second stage to water quality concerns.

State and national leaders supported pollution abatement programs that would yield immediate results. Thus, urban sources of pollution drew the most attention. Henry Reuss called for better enforcement of laws. Reuss argued that the main culprits of pollution were municipal waste treatment facilities and industries throughout the watershed. For example, industrial wastes from the Peter Cooper Corporation; the Western Condensing Company; Libby, McNeil, and Libby; the Krier Preserving Company; and Level Valley Dairy near West Bend were all listed as violators of state water laws.

Agreeing with the Metropolitan Sewerage Commission (MSC), Reuss supported their efforts to request a grant for a demonstration project to reduce the overflow from Milwaukee's CSS.⁷⁴ However, Reuss emphasized that he wanted to see action. In a letter to the Izaak Walton League of Milwaukee, he

⁷³ Freeman Holmer, "Public Hearing Announcement on Water Quality," November 3, 1967, Henry Reuss Papers, Box 53, Folder 16, Milwaukee River, 1967, UW-Milwaukee Libraries, Archives.

⁷⁴ Henry S. Reuss to Theodore F. Wisniewski, "Water Pollution in Milwaukee River," July 19, 1966, Henry Reuss Papers, Box 53, Folder 14, UW-Milwaukee Libraries, Archives.

emphasized that studies had already been completed and that action was needed now.⁷⁵ In letters between Edmund Muskie, Henry Maier, and Vice President Humphrey, Reuss expressed his desire to see meaningful results in the next six years.⁷⁶

The new relationship between the various levels of government and public and private interests can already be seen at House Committee on Natural Resources and Power public hearing in September of 1966 in Milwaukee, Wisconsin. The conference drew representatives from a broad geographic audience; nearly thirty local and state officials attended. Unlike previous meetings held by the various Milwaukee civic organizations working on the Milwaukee River's revitalization, the state and federal officials would be the primary decision-makers. The primary concern of these individuals involved the clean-up and overall water quality of the urban river.⁷⁷

Fearing Wisconsin rivers and Lake Michigan could end up like Lake Erie, Wisconsin Senator Gaylord Nelson and US Representative Henry Reuss continued to push Maier's administration to address the water quality of the Milwaukee River. Nelson spoke of the dire condition of Wisconsin's stream and fresh water, calling for an all-out attack on the polluters. In Wisconsin, Nelson had already made his mark as the "Conservation Governor" and gained national recognition for his ambitious Outdoor Recreation Act Program (ORAP). This program, anticipating a growing state population and expanding tourist industry, dedicated \$50 million to fund land purchases for conservation and recreation. He called for a state-federal interstate water conference to address water pollution to focus on effluent in

⁷⁵ Henry S. Reuss to Pearl Pohl, "IWL Action Needed," July 25, 1966, Henry Reuss Papers, Box 53, Folder 14, UW-Milwaukee Libraries, Archives.

⁷⁶ "Various Letter Regarding Water Pollution," 1966, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 192, Folder 31, UW-Milwaukee Libraries, Archives.

⁷⁷ Henry S. Reuss, "An Action Program to Clean Up the Waters of the Milwaukee River Basin," September 1966, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 192, Folder 31, UW-Milwaukee Libraries, Archives.

interstate rivers. He argued that abatement programs would be most effective if all government entities within the watershed worked together.⁷⁸

Other spokespersons at the hearing mentioned the likely death of Lake Michigan if pollution was not addressed in a timely fashion. Robert McClory of the 12th district argued that a polluted river impacted the health of the Great Lakes. If the Milwaukee River and other waterways that led into Lake Michigan were not cleaned, the lake might experience similar problems as those experienced in Lake Erie.⁷⁹ Lake Erie in the 1960s was known as the “Dead Lake,” as algae fouled the waters and discouraged beachgoers.⁸⁰ Similarly, Henry Reuss emphasized a shared public interest in cleaning the Milwaukee River. He argued that the abatement programs must occur over the next ten years. Although Reuss mentioned the dangers of farm runoff and phosphorous from detergents, he stressed that Milwaukee’s CSS was the main culprit. A ten-year time frame contrasted with the city revitalization proposals that addressed water quality over a more extended period.⁸¹ Wisconsin Attorney General Bronson C. La Follette was not surprised that the river was still polluted. He argued that the federal government’s poor enforcement of laws and weak financial support contributed to poor water quality. Deflecting some industries’ responsibility, he noted a high level of citizen apathy toward fighting pollution.⁸²

Nongovernmental groups from the Milwaukee River Watershed stressed the importance of a well-informed citizenry and the need to clean the urban river. Pearl Pohl of the La Budde Chapter of the

⁷⁸ Gaylord A. Nelson, “Statement to the House Natural Resources and Power Subcommittee,” September 16, 1966, City Club of Milwaukee Records, Box 109, Folder 7, UW-Milwaukee Libraries, Archives.

⁷⁹ Robert McClory, “Statement before the House Subcommittee on Natural Resources and Power,” September 17, 1966, City Club of Milwaukee Records, Box 109, Folder 7, UW-Milwaukee Libraries, Archives.

⁸⁰ U-M History Department, “Great Lakes Pollution” (Michigan World and Justice HistoryLab, 2017), http://michiganintheworld.history.lsa.umich.edu/environmentalism/exhibits/show/main_exhibit/pollution_politics/great-lakes-pollution; Hill Galdwin, “Lake Erie Illness Diagnosed as Chronic Case of Old Age: Experts Say It’s Completing the Evolution...,” *Chicago Tribune*, June 20, 1965, ProQuest Historical Newspapers; Casey Bukro, “Pollution Siphoning Off Lake Erie Life: Lake Erie Life Drained Short by Pollution,” *Chicago Tribune*, August 25, 1967, ProQuest Historical Newspapers.

⁸¹ Reuss, “An Action Program to Clean Up the Waters of the Milwaukee River Basin.”

⁸² Bronson C. La Follette, “Statement Before the House Subcommittee on Natural Resources and Power,” September 16, 1966, City Club of Milwaukee Records, Box 109, Folder 7, UW-Milwaukee Libraries, Archives.

IWL underscored that the best way to overcome citizen apathy was to have cleanup programs and media campaigns coincide. They argued that the public needed to know what had been done and how they might utilize the river in ways prohibited or dangerous in the past. Praising the work of the La Budde Chapter of the IWL, Pohl highlighted efforts to promote the conservation education of the youth and previous attempts by the IWL to address water pollution. Also, she expressed her approval of legislation that mandated the city to prioritize water quality over aesthetics.⁸³ Delbert Cook, president of the Cedar Creek Restoration Council (CCRC), emphasized the work accomplished outside of the government's aid, presenting how the public participated in hands-on efforts to clean up the river.⁸⁴ The CCRC and the IWL worked outside of the government establishment. They both prioritized a healthy ecosystem as the means to a sustainable economy. The CCRC was a model for the Milwaukee River Restoration Council that formed in the late 1960s. (Chapter 4)

Although many speakers at the House Committee on Natural Resources and Power public hearing focused on river pollution, the city's representatives concentrated on the cost and timeline to meet proposed water quality standards. Alderman Robert Jendusa reported to the Natural Resources Board that the city's economy and tax base lacked the fiscal ability to meet state and federal pollution abatement measures. He argued that the cost to separate the CSS and make new sewer line hookups was too much to ask of Milwaukee property owners. The means to address the problem required an increase in state and federal funding. Furthermore, he stressed that the overall health of the city's environment must be included in any plan to clean up the Milwaukee River and the waters of the Great Lakes Basin.⁸⁵

⁸³ Pearl Pohl, "Izaak Walton La Budde Statement," September 16, 1966, City Club of Milwaukee Records, Box 109, Folder 7, UW-Milwaukee Libraries, Archives.

⁸⁴ Delbert J. Cook, "Cedar Creek Is on the Long Way Back," September 16, 1966, City Club of Milwaukee Records, Box 109, Folder 7, UW-Milwaukee Libraries, Archives.

⁸⁵ Alderman Robert J. Jendusa, "Statement before the Natural Resources and Power Subcommittee," September 16, 1966, City Club of Milwaukee Records, Box 109, Folder 7, UW-Milwaukee Libraries, Archives.

The city engineer, Herbert McCullough, argued that the city government had proactively addressed pollution in the Milwaukee River. Despite limited funding, he provided various examples of what city leadership supported and accomplished. For McCullough, the reasonable approach to pollution abatement followed a long-term strategy, not the federal government's demand for faster results.⁸⁶ Also stressing the importance of time, Herbert Goetsch mentioned the prospects of storage tunnels to handle the CSS overflow.⁸⁷ However, this project was estimated at \$300 million to hold 900 million gallons of run-off.⁸⁸

E. R. Krumbiegel argued that the inflexibility of federal laws was at issue. He noted that river and lake pollution occurred only at times of high-water flow that resulted from spring melts and high rainfall. Thus, he postulated that the total amount of pollution that entered the Great Lakes should be more important than the amount at any particular time.⁸⁹ Krumbiegel's, McCullough's, and Jendusa's remarks highlighted an approach that saw the public defined by the boundaries of the city of Milwaukee. The faster ten-year clean-up programs proposed by federal and state agencies reflected a public representation of state and national interests.

Highlighting the difference between a public defined by the city boundaries and a public that included areas outside of the city limits, Lynn Stalbaum, representing the city of Kenosha, indicated that pollution was not just a city concern but also a rural problem. She noted that rural communities located further from the shores of Lake Michigan did not have the same interest level in Lake Michigan's water quality. She claimed those distanced from the consequences of poor water quality cared less. For

⁸⁶ McCullough and Goetsch to Subcommittee on House Natural Resources and Power, September 14, 1966.

⁸⁷ Herbert Moore, "Herbert Moore Statement," September 16, 1966, City Club of Milwaukee Records, Box 109, Folder 7, UW-Milwaukee Libraries, Archives.

⁸⁸ WTMJ-TV, "State and Federal Legislation to Help Milwaukee Address Pollution," November 22, 1966, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 192, Folder 31, UW-Milwaukee Libraries, Archives.

⁸⁹ E.R. Krumbiegel, "Krumbiegel Statement to Subcommittee," September 12, 1966, City Club of Milwaukee Records, Box 109, Folder 7, UW-Milwaukee Libraries, Archives.

example, the cost-benefit ratio to lessen the pollution entering streams versus the trade-off of letting farm runoff continue was higher for struggling family farmers. However, the current farming practices were of great consequence to urban communities located downstream and along the beaches of Lake Michigan that accumulated pollution from multiple communities.⁹⁰ Stalbaum's argument for a concerted effort, which included both rural and urban sources of point and nonpoint pollution, would gain more attention in the 1980s. (Chapter 4)

The city's government leaders sought allies to support their belief that federal and state laws harmed the overall health of America's urban areas. For example, Mayor Maier reached out to other city government leaders through the National League of Cities (NLC). Founded in 1924, the NLC promoted local control and innovation to address urban problems and influence federal policies. Although cities were promised financial assistance from the federal government in the 1966 Clean Water Restoration Act, the NLC noted the gap between federal funding and the cost of the projects.⁹¹ Mayors across the country argued that the federal government's quest to improve the water quality at the current funding levels would bankrupt many American cities.

Joseph Rodriguez, in *Bootstrap New Urbanism*, and Howard Gillette, in *Camden after the Fall*, demonstrated the disparity between the national government's lack of financial aid to cities and budgetary needs.⁹² Joseph Rodriguez argued that New Urbanism promoted a slow incremental process of redeveloping the urban landscape. To attract people and industry to the city, grassroots advocates and planning elites needed to take the initiative to incorporate suburban-like landscapes into an urban

⁹⁰ Lynn E. Stalbaum, "Stalbaum Statement before Natural Resources and Power Subcommittee," September 16, 1966, City Club of Milwaukee Records, Box 109, Folder 7, UW-Milwaukee Libraries, Archives.

⁹¹ Carl B. Stokes, "Improvements in Water Pollution Facility Financing," April 28, 1970, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 142, Folder 6, UW-Milwaukee Libraries, Archives; Robert W. Knecht, "Improvements in Water Pollution Facility Financing," April 28, 1970, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 142, Folder 6, UW-Milwaukee Libraries, Archives; "About NLC," 2022, <https://www.nlc.org/about/>.

⁹² Joseph Rodriguez, *Bootstrap New Urbanism: Design, Race and Redevelopment in Milwaukee* (Lanham, Maryland: Lexington Books, 2014), ProQuest Ebook Central; Howard Gillette, *Camden after the Fall: Decline and Renewal in a Post-Industrial City* (Philadelphia, PA: University of Pennsylvania Press, 2005).

setting. However, unlike the federal economic support provided for the development of suburban landscapes to attract urbanites, New Urbanism would have to transform its landscapes with little help and cooperation from the larger metropolitan area. Thus, urban self-help programs reflected local people's agency and a lack of federal and state resources.⁹³ Similarly, Howard Gillette further emphasizes that the struggle to revitalize urban spaces required plans to improve the landscapes' environmental health and the political, economic, and social will to support it financially.⁹⁴ After years of actively seeking ways to remove nature, urban planners saw nature's role in helping to make a healthy landscape. Yet as Gillette and Rodriguez demonstrated, the political will was not reflected in the federal government's actions.

The opinions expressed at this 1966 congressional hearing drew attention to the many different perspectives on not only who should finance the revitalization but what the riverway would look like when the abatement programs were finished. Although Henry Reuss commented on the efforts to abate pollution in the Milwaukee River Watershed, he always pushed forward on what still needed to be accomplished in the urban waterway, keeping water quality as the top concern.⁹⁵ On the other hand, city developers and state government officials agreed to address the stench of dead alewives. In 1966 after seeing the success of Howard Tanner's leadership over the Michigan Department of Conservation's introduction of salmon in Lake Michigan, Henry Reuss requested the development of habitats for Chinook Salmon to spawn in the Milwaukee River.⁹⁶ By 1967, the salmon were feeding on the alewives,

⁹³ Rodriguez, *Bootstrap New Urbanism*, 14–16.

⁹⁴ Gillette, *Camden after the Fall*, 9, 13.

⁹⁵ Congressman Henry S. Reuss, "No Progress Made in Last Year in Cutting Milwaukee Water Pollution," October 8, 1967, Henry Reuss Papers, Box 10, Folder 29, Milwaukee River, 1967-1979, UW-Milwaukee Libraries, Archives; Egan, *The Death and Life of the Great Lakes*, 91–94.

⁹⁶ K. W. Bauer, "SEWRPC Meeting Notes Dec 1967," December 7, 1967, City Club of Milwaukee Records, Box 109, Folder 10, UW-Milwaukee Libraries, Archives.

significantly controlling the alewife population, and people flocked to the streams and rivers to catch Chinook and Coho salmon.⁹⁷

Scholars have documented the difficulty of searching for water pollution solutions across various political units. Mark Cioc and other historians note how river systems and nonurban lands have historically been seen for their natural abundance and potential to support human health. Yet human development has paradoxically transformed waterways and landscapes in ways that have lessened the watershed's ability to support life.⁹⁸ Cioc contends that these projects designed to improve human life failed because they sought short-term objectives and did not recognize the complexity of how these projects impacted the entire river ecosystem. Cioc traces the Rhine River's history through the shared international boundaries and negotiated interests to transform the river for various uses.⁹⁹ Cioc explains how city planners' attempts to control the rivers for the sake of the economy were not sustainable. However, in the case of the national and federal laws of the United States in 1965, the well-being of the city was jeopardized. Adam Rome, in *The Bulldozer in the Countryside*, notes how environmental problems overlapped political boundaries. He contends that government entities outside of major cities were less willing to support regulations to address pollution in urban settings. Thus, government efforts to improve living conditions were less effective.¹⁰⁰

Although the state of the urban waterway and how to improve its water quality remained the top concerns, the participants at the Wisconsin Department of Natural Resources hearing in November

⁹⁷ Gurda, *The Making of Milwaukee*, 357; Dave Kinchen, "Conservation Is a Crusade for Borden," *Milwaukee Sentinel*, June 3, 1968, Milwaukee Journal Sentinel Historical Newspapers.

⁹⁸ Colten, *An Unnatural Metropolis*; Kelman, *A River and Its City*; Morris, *The Big Muddy*; Donald Worster, *Shrinking the Earth: The Rise and Decline of Natural Abundance* (Oxford: Oxford University Press, 2016); Donald Worster, *Dust Bowl: The Southern Plains in the 1930s* (New York, 1979); James Earl Sherow, *Watering the Valley: Development along the High Plains Arkansas River Valley* (Lawrence, KS: University of Kansas Press, 1990); Stephen Macekura, *Of Limits and Growth: Global Environmentalism and Sustainable Development in the Twentieth Century* (Cambridge: Cambridge University Press, 2015); Ester Boserup, "Environment, Population, and Technology in Primitive Societies," in *The Ends of the Earth: Perspectives on Modern Environmental History* (Cambridge: Cambridge University Press, 1998), 23–38.

⁹⁹ Cioc, *The Rhine*, 4-5, 14, 170.

¹⁰⁰ Rome, *The Bulldozer in the Countryside*, 263, 267.

1967 addressed the requirements to achieve a healthy ecosystem and at what cost. Water quality laws set an objective to restore fishable streams by 1997. One of the points of contention was presented by Lawrence Ernest of the MSC. He commented that a goal never to decrease a stream's water quality was unrealistic. He stressed that this would limit all development on "virgin streams" as any municipality would need to construct a water treatment facility that, by its nature, would contribute to pollution beyond the current level. Also, Sol Burstein of the WI Electric Power Company contended that fishable and swimmable water standards for all the waterways were unrealistic. He highlighted that most of Wisconsin's citizens depended on agricultural and industrial uses of land. If these uses required more regulation, they could not be realistically maintained and provide the standard of living people were accustomed to. Similarly, an unidentified speaker at the hearing mentioned concern about the government stepping on people's toes for the sake of the mighty minnow.¹⁰¹

On the other hand, Cedar Creek River Restoration president Delbert Cook spoke on people's need to recognize that the way they were living might not be sustainable. Thus, change was inevitable. It was only a matter of time. He also noted that bacteria from farm-run-off, natural sources, street run-offs, fertilizers, and pesticides contributed to dangerous coliform levels. According to Cook, 99% of the streams were unsuitable for full-body contact and posed a risk to human health.¹⁰²

Recognizing population growth and demographic changes in Southeastern Wisconsin, K.W. Bauer, executive director of SEWRPC, argued that population growth contributed to ecological problems in the watershed. Like Garrett Hardin's warning in "The Tragedy of the Commons," to limit the dangers of unchecked self-interest, Bauer emphasized that future development required planning, so water and land resources were sustained rather than destroyed over time. His approach was not to restore something that had been damaged or polluted but to create an urban space that recognized the value of

¹⁰¹ Holmer, "Public Hearing Announcement on Water Quality."

¹⁰² Holmer, "Public Hearing Announcement on Water Quality."

these resources. In this manner, SEWRPC was looking toward the public interest of future generations in hopes that they would not have to cope with the previous generations' decisions that created problems rather than opportunities. Alluding to Aldo Leopold's land ethic concept, Bauer referred to this as an urban conservative ethic.¹⁰³ Bauer's urban conservation ethic, rather than a land ethic, emphasized the urban landscape. SEWRPC argued that you needed to promote both the city and the ecological system.

In December 1968, the Milwaukee River Technical Study Committee finished its study of the Milwaukee River. "The Milwaukee River: an Inventory of Its Problems, An Appraisal of Its Potentials" primarily focused on the waterway's appearance and a desire to make the river a recreational and tourist attraction.¹⁰⁴ However, the mayor criticized the plan for not including a cost-benefit analysis. Not satisfied with the results of the 1968 report, the mayor advocated hiring SEWRPC to study the entire Milwaukee River Watershed. Even though the mayor had expressed Milwaukee's interest in taking the lead in revitalizing the Milwaukee River, he was now calling for other communities to cooperate with the city's leaders to restore the river. This also represented a change in Maier's belief that the city of Milwaukee desired to revitalize the Milwaukee River with the support of a broader audience. The public interest needed to be defined by a cooperative effort of communities and counties throughout the watershed.

Another change in Maier's perspective may have resulted from the rising voices of Milwaukee's Black community. When the projects and ideas for the downtown redevelopment began in the earlier 1960s, the Black citizens' voices were largely ignored. However, in 1967 the Open Housing Marches in Milwaukee were at their height. Perhaps the civil rights protests helped to promote more discussion on

¹⁰³ K. W. Bauer, "Resource Conservation and Regional Planning" (Milwaukee, WI, October 26, 1968), Pearl Pohl Papers, 1928-1981, Box 3, Folder 4, UW-Milwaukee Libraries, Archives; Garrett Hardin, "The Tragedy of the Commons," *Science* 162, no. 3859 (December 13, 1968): 1243-48.

¹⁰⁴ Dick Budelman to Henry W. Maier, "Milwaukee River Study Report," December 16, 1968, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 115, Folder 6, UW-Milwaukee Libraries, Archives.

residents' quality of life through more significant cultural and recreational opportunities beyond the riverbanks. In Mayor Maier's first six years of office, he saw the development along the river as a means of saving the city. However, in the late sixties, Maier began to argue that city planning needed to address housing, health, employment, education, care for the elderly, safety, and recreation.¹⁰⁵ All these programs required the city to raise revenue and weakened the city government's ability to improve water quality. Herbert Goetsch, Commissioner of Public Works, confirmed the financial limitations of the city government but stressed that the city acted.¹⁰⁶ He argued that outside funds would need to be raised if more pollution abatement programs were desired.¹⁰⁷

Conclusion

Despite many pressing needs, pollution continued to be a top priority for many residents in Milwaukee and around the country. In 1969 Senator Gaylord Nelson called for a nationwide environmental teach-in. In April 1970, approximately 1,500 colleges and 10,000 schools were involved in the First Earth Day celebration. Much attention was placed on pollution in urban environments. Maier was flooded with mail from schoolchildren. Others asked what was being done to clean up the rivers. Maier noted the city of Milwaukee's previous actions and emphasized the importance of considering these programs' costs and benefits.¹⁰⁸ Also, the mayor's office stressed the importance of everyone

¹⁰⁵ Mayor's Division of Economic Development, "Quality of Life: An Economic Asset - Working Paper on Policy-Setting in the Cultural and Recreational Development of Milwaukee," April 1, 1969, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 155, Folder 28, UW-Milwaukee Libraries, Archives.

¹⁰⁶ Herbert A. Goetsch to Honorable Henry Reuss, "Pollution Control," January 19, 1970, Henry Reuss Papers, Box 53, Folder 19, Milwaukee River, 1968-1969, UW-Milwaukee Libraries, Archives.

¹⁰⁷ Herbert A. Goetsch to Henry W. Maier, "Attention - Mr Robert Welch," May 26, 1970, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 115, Folder 6, UW-Milwaukee Libraries, Archives.

¹⁰⁸ Candy Leach to Henry W. Maier, "Leach - Maier Letters," April 1970, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 142, Folder 6, UW-Milwaukee Libraries, Archives; Denise Tischer to Henry W. Maier, "Tischer - Maier Letters," April 23, 1970, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 142, Folder 6, UW-Milwaukee Libraries, Archives; WITI-TV6, "Earth Week Is Over. What Now?," April 27, 1970, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 142, Folder 6, UW-Milwaukee Libraries, Archives; Adam Rome, *The Genius of Earth Day: How a 1970 Teach-In Unexpectedly Made the First Green Generation* (New York: Hill and Wang, 2013), x.

doing their part. For example, he reminded schoolchildren to be responsible and stop littering streams. He called for a solid education to foster a new ethic in the minds of the citizens to do their part.¹⁰⁹

Furthermore, Mayor Maier reemphasized that water pollution was not simply a Milwaukee issue, as the Milwaukee River included six counties and fifty-one cities, and all these government agencies must do their part.¹¹⁰

The public interest in the waterway, as defined by Maier's administration, represented a public defined by its geographic boundaries and a viewpoint that the redevelopment of the riverway needed to foster economic growth in the city of Milwaukee. These efforts would continue throughout the 20th century. However, the passage of federal and state laws in 1965 expanded the understanding of the public interest to include people's perspectives outside the city's boundaries. State and federal government representatives provided greater attention to voices prioritizing water quality ahead of the city's economic well-being. Although all government entities expressed an interest in restoring the watershed, they primarily focused on revitalizing a particular section of the river.

¹⁰⁹ William Van Roo to Henry W. Maier, "Letters Van Roo - Maier," April 30, 1970, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 142, Folder 6, UW-Milwaukee Libraries, Archives; Henry W. Maier, "Water Pollution Worries," May 1970, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 142, Folder 6, UW-Milwaukee Libraries, Archives; Susan Curtiss to Mayor Henry Maier, "Milwaukee's Fight against Pollution," December 2, 1970, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 142, Folder 7, UW-Milwaukee Libraries, Archives.

¹¹⁰ Mayor's Office, "Pollution Abatement and Control in the City of Milwaukee," May 1970, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 142, Folder 6, UW-Milwaukee Libraries, Archives; Bert C. Mulroy, "General Update of Mayor's Pollution Abatement Efforts," May 1970, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 142, Folder 7, UW-Milwaukee Libraries, Archives; Bert C. Mulroy, "Reply Letter to Students Concerned about Pollution," May 1970, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 142, Folder 6, UW-Milwaukee Libraries, Archives; Lorraine Lambert to Henry W. Maier, "Lambert - Maier Letters," May 3, 1970, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 142, Folder 6, UW-Milwaukee Libraries, Archives; Olive Dilworth to Henry W. Maier, "Concerned Mothers Fight Pollution," June 2, 1970, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 142, Folder 7, UW-Milwaukee Libraries, Archives.

Chapter 2: Riveredge Nature Center, From Island to Interconnected Web

To look at anything,
If you would know that thing,
You must look at it long:
To look at this green and say
'I have seen spring in these
Woods,' will not do – you must
Be the thing you see:
You must be the dark snakes of
Stems and ferny plumes of leaves,
You must enter in
To the small silences between
The leaves,
You must take your time
And touch the very peace
They issue from.¹ (John Moffit)

As Mayor Henry Maier and various civic groups worked to revitalize the downtown along the Milwaukee River in the 1960s, a group of suburban women from the Whitefish Bay Garden Club (WBGC) set their sights north on a parcel of land believed to be untainted by urbanization. These women viewed the urban landscape primarily as a threat rather than something that needed revitalizing. They underscored that urbanization threatened the existence of vibrant animal and plant habitats. Thus, they led an effort to rescue lands that would eventually be the home of the Riveredge Nature Center (RNC), just a short paddle downstream from Newburg, Wisconsin, and approximately a 55-mile float to downtown Milwaukee. To raise money for the establishment of the nature center, the Whitefish Bay Garden Club formed the Riveredge Foundation, Inc (RFI) in 1968. Isabel Lillie, Donna Hodgson, and Margaret Reisinger led the WBGC efforts to establish the foundation. The first officers of the RFI were: Isabel Lillie, president; Bill Ahrens (Biology teacher at Whitefish Bay High School), vice president; Roger Boerner (Milwaukee attorney), secretary; and Donna Hodgson, treasurer. They desired to find a place

¹ John Moffit, "To Look at Anything," *Riveredge Newsletter*, Labor Day 1973, Binder - Library, Riveredge Nature Center.

relatively untouched by humans' destructive hands and nurture a vibrant and diverse habitat. This chapter analyzes the founding of Riveredge and how it evolved from an area separated from the urban environment to a place intertwined with the urban environment through its relationship with the Milwaukee River and its watershed.²

Adam Rome, in *Bulldozer in the Countryside*, and Christopher Sellers, in *Crabgrass Crucible*, studied suburbanites' efforts to address environmental degradation. Rome describes the paradox of suburbanites coping with the reality that their desire to bring urban amenities to the suburbs contributed to the devastation of the environment. For example, contractors, real estate developers, and homeowners built homes in environmentally sensitive areas, including wetlands, steep hillsides, and floodplains. These practices often resulted in more frequent flooding, costly erosion, and drastic changes to wildlife populations.³ Similarly, Sellers describes how suburbanites' demand for multiple cars, houses, and other forms of material consumption alienated them from nature.⁴ Despite this paradox, both scholars contend that suburbanites' experience with wild spaces deteriorating in their backyard helped to fuel the growing conservation movement. Suburbanites, ecologists, public health officials, landscape architects, and urban planners helped motivate the federal government to enact laws to protect open spaces and limit the spread of large housing tracts.⁵ Similarly, the women of the WBGC were inspired to conserve rural lands not only for conservation but to educate people about the workings of nature, removed from urban areas.

Recognizing the pervasive nature of consumerism, Ann Vileisis, in *Discovering the Unknown Landscape*, postulates that the history of the United States has been dominated by stories of how

² Riveredge Foundation, Inc, "Proposal for Establishment of Riveredge Nature Center," March 1, 1968, Attic Storage - Historical Materials - RLB Folder, Riveredge Nature Center.

³ Adam Rome, *The Bulldozer in the Countryside: Suburban Sprawl and the Rise of American Environmentalism* (Cambridge and New York: Cambridge University Press, 2001), 3, 13.

⁴ Christopher C. Sellers, *Crabgrass Crucible: Suburban Nature and the Rise of Environmentalism in Twentieth-Century America* (Chapel Hill: University of North Carolina Press, 2012), 288.

⁵

humans created the urban landscape and agricultural lands. Vileisis contends this occurred as the habitats for non-human species were buried and fragmented. Secondly, perhaps more importantly, she stresses that the wetlands' productive power and benefits to humanity have been hidden between the lines of progressive narratives. Thus, people's understanding of the processes of nature and life cycles was lost.⁶ In addition, as justice advocates often recognized the urge to hear the voice of the oppressed, ecologists and environmental activists argued that humans needed to learn from the *voices* of nature. For example, United States Supreme Court Justice William O. Douglas promoted the notion of a Wilderness Bill of Rights in the 1960s. He argued, "Since one function of a free society is to protect minority rights, we need to guarantee that large areas of America will be preserved in perpetuity."⁷ If not for most citizens, those who desired the lands were protected and conserved.

Vileisis stressed that the danger to the overall health of an ecosystem was not just whether various ecosystems existed but whether people understood how human and nonhuman influences produced abundance. I contend that the RFI created Riveredge to provide the people of southeastern Wisconsin with a place to hear nature's *voice* and observe nature's *role* in the community. To witness nature, the RFI believed the area needed to be removed and protected from the urban setting. Secondly, these protected spheres were necessary for humans to understand how natural forces and non-human species benefited the world community.

Like the city planners and the Maier Administration that sought to revitalize the downtown along the Milwaukee River in the name of the public interest, the WBGC saw their efforts to conserve land from urbanization as a public interest. In the case of Mayor Maier, he hoped for a vibrant downtown bustling with economic activity while onlookers enjoyed observing the Milwaukee River flowing to Lake Michigan. On the other hand, the founders of the RNC envisioned an island protected from urban

⁶ Ann Vileisis, *Discovering the Unknown Landscape: A History of America's Wetlands* (Washington, D.C: Island Press, 1997), 9.

⁷ William O. Douglas, *A Wilderness Bill of Rights* (Boston, MA: Little, Brown and Company, 1965), 26.

development on lands adjacent to the Milwaukee River, approximately 30 miles north of downtown Milwaukee. Thus, the founders of Riveredge and the board members that followed fought for a natural space endangered by economic development. However, they created habitats for people to witness nature's marvels at Riveredge and in urban areas.

Adam Rome, in *The Bulldozer in the Countryside*, argues that divergent views between suburbanites and urban residents weakened the environmental movement.⁸ For example, he notes that suburban interests may have resulted in a lack of support to address environmental degradation in the city.⁹ This belief was reflected in Mayor Maier's frequent criticism of communities outside of Milwaukee for not contributing their fair share to restore the river's water quality in the 1980s.¹⁰ Rather than working towards a common public interest, which included rural, suburban, and urban perspectives, each entity prioritized its community over the other. Although the RNC was founded as an "island" removed from the city's environment, the Riveredge community embraced how the urban and rural waterways were interconnected. This might be seen as a fissure within the environmental movement but I would argue it was part of the process of seeing places disconnected from one another to appreciating how the public interest in the watershed could be considered from multiple perspectives.

Another division in the environmental movement can be seen in the creation of the Wilderness Society in 1935. As a national organization, the Wilderness Society worked to protect wild places from human endeavors throughout the United States. In part, it grew out of a conflict between competing environmental groups' interests over access and use of national parks. Paul Sutter, in *Driven Wild*,

⁸ Robert Gottlieb, *Forcing the Spring: The Transformation of the American Environmental Movement* (Washington: Island Press, 2005).

⁹ Rome, *The Bulldozer in the Countryside*, 12.

¹⁰ "Media Brief of the Report from the Task Force on Pollution from Sources outside the Milwaukee Metropolitan Sewerage District," July 6, 1983, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 142, Folder 10, UW-Milwaukee Libraries, Archives; Ed Hinshaw, "Upstream Pollution from MMSD" (WTMY, July 12, 1983), Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 142, Folder 10, UW-Milwaukee Libraries, Archives; Don Kosterman, "River Cooperation Needed," July 12, 1983, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 142, Folder 11, UW-Milwaukee Libraries, Archives.

demonstrates how the Wilderness Society sought to preserve wilderness areas from modern American consumerism.¹¹ Efforts led by the Wilderness Society helped to persuade President Lyndon B. Johnson to sign the 1964 Wilderness Act. This act and subsequent amendments have protected over 800 federally designated wilderness areas from the encroachment of human society and the steady intrusion of humans' mechanical and energy needs.¹² As the United States constructed more highways, wilderness advocates argued that lands less touched by human endeavors were becoming endangered. However, others saw the attempts to lessen access to these wilderness zones as restrictions on opportunities for the working class to restore their physical and moral fitness after a long work week. Critics of the Wilderness Society asked how humans would come to realize the relationships shared between humans and other lifeforms in a biotic community. Also, if people had less experience with the "wild," they might understand nature only as a place removed from where people lived and worked.¹³ Unlike the Maier Administration and the RFI, which sought to bring people and nature into appreciative contact, the Wilderness Society sought to define the public interest in wilderness areas as dependent on limited public access to the space. Although the RFI recognized the value of spaces removed from urban commercialism, they evolved to appreciate how urban and rural lands were intertwined.

Although the WBGC started in 1958 as a group that primarily brought suburban women together to learn techniques for creating flower arrangements and gardening techniques, the group's blend of conservationists and educators soon worked to save lands from the encroachment of urban and suburban development.¹⁴ In addition, they cultivated opportunities for young and old students and rural and urban residents to learn how natural forces and non-human life helped to sustain life. They saw

¹¹ Sutter, *Driven Wild: How the Fight against Automobiles Launched the Modern Wilderness Movement*, 140

¹² *America's Wilderness*, 2021, <https://www.nps.gov/subjects/wilderness/law-and-policy.htm>; Environment and Natural Resources Division of The United States Department of Justice, "The Wilderness Act of 1964," May 12, 2015, <https://www.justice.gov/enrd/wilderness-act-1964>.

¹³ Sutter, *Driven Wild*, 45–47.

¹⁴ Winnie Davis, Winnie Davis Intro, interview by Diane Reece, October 14, 2015, <https://www.youtube.com/watch?reload=9&v=QJT3j6-V8YA&t=38s>.

humans' role as sustainers rather than destroyers of these relationships. Although RFI and the RNC board started with a vision of an island removed from urbanization, their understanding of its land and community became intertwined with the Milwaukee River Watershed (MRW), which included urban and rural spaces.

In this chapter, I will argue that the Riveredge community fostered an interest in the Milwaukee River that united urban and non-urban environmental interests, worked to conserve natural domains, and improved human understanding of nature's role in watershed communities. I will start by examining how the WBGC and others helped to establish the Riveredge Nature Center, a refuge and sanctuary that highlighted its separation from the urban and suburban places people worked and lived. This sanctuary fostered a diversity of life in its attention to plant and animal life and welcomed people regularly excluded from the opportunity to participate in environmental education. In this manner, the RNC sought to teach people in southeastern Wisconsin that the conservation of lands was in their public interest. This included continued efforts to purchase more property and to fight against the Waubeka Reservoir proposal (Chapter 3).

Then, I will draw attention to the Riveredge members' efforts to connect peoples' experiences at the RNC sanctuary to children's schoolyards and members' backyards through the Teacher-Naturalist program and Wild Yards workshops. These learning experiences were embraced by WBGC members and Andy Larsen, RNC's first hired naturalist. Although WBGC members were regularly known for their lush lawns and ornamental plants, these members used their skills to promote diverse landscapes using native plantings. In this manner, the public interest was not just a human interest but a community that fostered biological diversity and human relationships with all living things. Also, the RNC members' promotion of indigenous plantings in the area connected with people's efforts to conserve areas throughout the watershed.

The chapter ends with an investigation of how the RNC community began to see its community intertwined with urban and suburban settings rather than as an island separated from the urban landscape. This transformation occurred through their dedicated efforts to educate its members, protect its lands from encroachment, and later partnerships with the Wisconsin Department of Natural Resources (WDNR) to test the Milwaukee River of pollutants. Although the concept of a watershed was not new, the evolution of the RNC from an island community to a strand in the interconnected web of the MRW demonstrates one of the many paths people living in southeastern Wisconsin learned how their actions influenced the well-being of all life throughout the region. RNC members stressed that it was in the public interest to recognize that MRW's ecological health required cooperation from various entities and appreciation of the RNC's interconnections with urban areas rather than their separation. In this manner, the RNC board promoted the public interest in the MRW and the importance of lands to witness natural processes and nonhuman life in relationship with urban spaces rather than separated as an island.

The Vision and Development of a Place Called Riveredge

The motives of the WBGC members, unlike the Milwaukee urban planners, grew out of their passion for preserving areas that thrived with little human contact instead of revitalizing lands destroyed by human actions. In May of 1960, the WBGC, under the leadership of Winnie Davies and Isabel Lillie, toured the Fairy Chasm Reserve with Lorrie Otto as the guest of honor.¹⁵ Otto led a protection effort to stop additional development in her backyard, the Fairy Chasm Reserve. The land contained rare native plant species, an 80-100-foot-deep chasm cut by Fish Creek, and a meeting ground for neighborhood children who lived on each side of the ravine. This land would eventually come under the ownership of the Ozaukee Washington Land Trust in 1968. Rather than market these lands to attract human

¹⁵ "Bay Gardeners to Tour Reserve," *Milwaukee Sentinel*, May 9, 1960.

interactions with the habitats of Fairy Chasm, the land trust followed the Wilderness Society's model to lessen human exposure. In addition, Otto led a fight against spraying DDT to save the Dutch Elm tree. She drew attention to DDT's devastation on the environment, especially bird populations.¹⁶

WBGC members recalled the leadership of Isabel Lillie and the influence of Rachel Carson's *Silent Spring* on the group. Rafael De La Uz and Michelle Ferrari, in "Rachel Carson: She Set Out to Save a Species... Us," recognized the role Carson's work had in starting conversations about the impact of technology on the natural world and that people were members of the natural world rather than separated from it.¹⁷ Robert Musil, in *Rachel Carson and Her Sisters*, depicts the efforts of women before and after Rachel Carson to promote people's understanding and interest in the world around them.¹⁸ Inspired by Carson's concern for natural habitats for birds and other nonhuman species, which were threatened by human activity and the use of DDT, Lillie, Otto, and other WBGC members envisioned the creation of a place devoted to good land management. The group believed one of the primary threats to these natural habitats was urban sprawl. Thus, the WGBC pursued opportunities to purchase lands for endangered species habitats threatened by urban and suburban expansion.¹⁹

In the 1950s and early 1960s, other organizations failed to gain enough financial support to create a nature center in Southeastern Wisconsin. However, the WBGC continued efforts to find land and money.²⁰ The Milwaukee Audubon Society (MAS) eagerly supported the WBGC. Noticing a decline in migratory bird populations due to the spraying of DDT and the destruction of bird habitats, the MAS worked to protect wetland habitats in southeast Wisconsin. They cited farming and real estate practices

¹⁶ Bill Berry, *Banning DDT: How Citizens Activists in Wisconsin Led the Way* (Madison: Wisconsin Historical Society Press, 2014), xiii, 6; "Nature Can Bring Its Wild Beauty to Your Yard," *Milwaukee Journal*, August 13, 1972, Milwaukee Journal Sentinel Historical Newspapers.

¹⁷ *Rachel Carson: She Set Out to Save a Species... Us* (American Experience, 2017), <http://www.pbs.org/wgbh/americanexperience/films/rachel-carson/>.

¹⁸ Robert K. Musil, *Rachel Carson and Her Sisters: Extraordinary Women Who Have Shaped America's Environment* (New Brunswick, New Jersey: Rutgers University Press, 2014), 2.

¹⁹ Riveredge Foundation, Inc, "Proposal for Establishment of Riveredge Nature Center"; Davis, Winnie Davis Intro.

²⁰ Riveredge Foundation, Inc, "Proposal for Establishment of Riveredge Nature Center."

that drained water from the lands as the two main culprits in destroying bird habitats. They believed land conservation projects could work as “islands” for migratory birds to rest on their journeys north and south.²¹ The effort to preserve such “islands” in the Milwaukee area coincided with the WBGC’s desire for a space protected from the urban environment. This strategy differed from the efforts to preserve corridors that connected urban and rural lands proposed by Charles Whitnall, Milwaukee County Park Commissioner from 1907 to 1941, and the Southeastern Wisconsin Regional Planning Commission (SEWRPC) in the 1960s.²²

Members of the WBGC were also interested in saving lands for educating youth. Margaret (Marge) Reisinger led WBGC’s conservation committee. Reisinger, a former educator, member of multiple conservation organizations, and a board member of the Nature Conservancy of Wisconsin, had a particular interest in outdoor education sites.²³ Acting on a lead from the Audubon Society in 1966, Reisinger contacted E.P. Grady, a dentist from Kewaunee, Wisconsin. Since the 1930s, E.P. Grady owned over seventy acres outside Newburg, Wisconsin but allowed his brother, Oscar Grady, to live on the land until his death. Oscar Grady, a Saukville banker convicted of bank fraud during the Great Depression, lived a secluded life on the property. Tragically, Oscar Grady was hit by a car while walking alongside a country road one dark evening in 1965.²⁴

²¹ Berry, *Banning DDT*, 83, 102; “Fee for National Refuges?,” *Milwaukee Journal*, December 24, 1961, Milwaukee Journal Sentinel Historical Newspapers; “Fast Action Promised for Wetland Bill,” *Milwaukee Sentinel*, August 1, 1961, Milwaukee Journal Sentinel Historical Newspapers.

²² “Let’s Preserve Our Environmental Corridors - Now!,” *SEWRPC - Newsletter*, April 1967, SEWRPC, file:///Users/tonygentine/Desktop/aaa%20Milwaukee%20River/Henry%20Maier/SEWRPC%20Newsletter%206-2%201966.pdf; SEWRPC, “Resources Planning - A Major Regional Concern,” April 1962, <https://www.sewrpc.org/SEWRPCFiles/Publications/nl/SEWRPC-Newsletter-V02-N02-1962.pdf>; Charles B. Whitnall and E.A. Howard, *Milwaukee’s Effort in City and Regional Planning and Planning for Milwaukee County*, 1929.

²³ “Dreaming and Roaming Factors in Education,” *Milwaukee Journal*, October 18, 1963, Milwaukee Journal Sentinel Historical Newspapers; “UWM Forest Land Dedicated; Tract Called Living Museum,” *Milwaukee Journal*, May 17, 1965, Milwaukee Journal Sentinel Historical Newspapers.

²⁴ Paul G. Hayes, “A Hermit’s Gift Is a Gain for All,” *Milwaukee Journal*, July 29, 1983, Milwaukee Journal Sentinel Historical Newspapers.

The Riveredge founders learned of the Grady property's natural and social history. Over 10,000 years ago, before human settlement, the Laurentide Ice Sheet shaped the terrain of Southeastern Wisconsin, leaving behind two kames and a giant esker. Although some founders considered the land primarily left to nature's devices, the Grady property had a long history of development and redevelopment.²⁵ Before the arrival of European immigrants in the 1800s, the land likely contained effigy mounds and provided a gathering space for Potawatomi and Ojibwe communities. Arrowheads found on the property date back to 3000-1000 BCE. Also, the Snyder Point arrowhead fashioned by mid-Woodland Indians 300 BCE-400 CE was found on the site.²⁶

After the Fox-Sauk War, European immigrants settled the lands. Solomon Juneau, co-founder of Milwaukee, and other settlers and landowners logged basswood, maple, and beech trees from the area for the Newburg sawmill. Through the 1920s, many of the land's resources were sent to the rapidly expanding cities of Chicago and Milwaukee.²⁷ Also, natural spring water from Grady's property was delivered to Milwaukee in the 1930s.²⁸ Residing on the land during the Great Depression, Oscar Grady replanted trees and created the many stone buildings and other structures on the property.²⁹ Intrigued by his natural surroundings, Oscar Grady frequently wrote articles in local newspapers and kept a scrapbook containing many stories depicting humans' relationship with nature. He observed the changing state of the river in different seasons, the impact of human attempts to alleviate ice dams, and

²⁵ Dean Jensen, "Foundation Sees 72 Acres as Nature Lover's Dream," *Milwaukee Sentinel*, June 10, 1968, Milwaukee Journal Sentinel Historical Newspapers.

²⁶ Robert A. Birmingham, "Effigy Mounds," in *Encyclopedia of Milwaukee*, ed. Amanda I. Seligman and Margo Anderson, 2016, <https://emke.uwm.edu/entry/effigy-mounds/>; "Center Historical Vignette," *Riveredge Newsletter*, September 1981, Binder - Library, Riveredge Nature Center.

²⁷ "RNC Timeline with National Events Scattered Among" (2002), Bookshelf - RNC Timeline, Riveredge Nature Center; Norman Lasca and Christian L. Larsen, "The Land Called Riveredge," *Riveredge Newsletter*, April 1984, Binder - Library, Riveredge Nature Center; Bicentennial Committee, *Town of Trenton and Village of Newburg Bicentennial*, 1976; "Milwaukee Founder Juneau Left His Mark in Trenton, Too," *Milwaukee Journal Sentinel*, September 13, 1999, Town of Trenton Box 1, File 250000, folder 1: History and General Information, The History Center of Washington County; Harding, "Solomon Juneau."

²⁸ Lasca and Larsen, "The Land Called Riveredge."

²⁹ E.P Grady to Roger L. Boerner, "Land Sale," November 26, 1967, Attic Storage - Historical Materials - RLB Folder, Riveredge Nature Center.

the harm caused by the expansion of Highway 57.³⁰ The WBGC saw these lands bordering the Milwaukee River as the perfect place for the RNC.³¹

The vision for a nature center started with the WBGC members' and their close acquaintances' passion for preserving lands. Convincing the public to share their vision required WBGC members to educate the communities they wished to serve and find financial support. E.P. Grady's remembrance of his brother Oscar as a naturalist motivated his desire to sell the land to a conservation group. Yet Grady was not going to donate the property to the WBGC. Grady offered to sell the estate for \$1000 per acre or \$72,000 for the entire acreage.³² In 1967, this presented a significant challenge for the WBGC as it only had \$300 to offer. If funds were not secured, E.P. Grady reminded the WBGC that he would not have any problem selling to a real estate developer.³³ The price was non-negotiable.

In 1966 Isabel Lillie organized a meeting at Whitefish Bay High School. Lillie and the founders of Riveredge hoped that the Whitefish Bay School District would purchase the land as a school forest. Not only would this help conserve the natural habitat, but the school could also use the land as an outdoor laboratory.³⁴ To help persuade school officials, business leaders, and representatives from various area organizations and clubs, the WBGC invited Paul J. Olsen, Principal of the Midvale School in Madison and director of the Madison school forest, to speak on the value of school forests for nature studies.³⁵ In 1960, the Milwaukee University School established the first school forest in southeastern Wisconsin. Jim Ahrens, Whitefish Bay High School teacher, and Jim Zimmerman, UW Arboretum staff and chief naturalist at the Madison School Forest, praised the estate for its plant diversity and the future home of

³⁰ Oscar Grady, *The Ideal Scrap Book - Oscar Grady*, n.d.

³¹ Jensen, "Foundation Sees 72 Acres as Nature Lover's Dream."

³² Jensen, "Foundation Sees 72 Acres as Nature Lover's Dream."

³³ "Isabel Lillie Receives Award," *Riveredge Newsletter*, April 28, 1968, Attic Storage - Historical Materials - RLB Folder, Riveredge Nature Center; Grady to Boerner, "Land Sale," November 26, 1967.

³⁴ Jensen, "Foundation Sees 72 Acres as Nature Lover's Dream"; "Group in Whitefish Bay Considers a School Forest," *Milwaukee Journal*, January 12, 1966, Milwaukee Journal Sentinel Historical Newspapers; "Garden Clubs Aid Bog Goal: College Arboretum," February 24, 1964, Milwaukee Journal Sentinel Historical Newspapers.

³⁵ "Isabel Lillie Receives Award"; Joy Krause, "The Time to Dream," *Milwaukee Journal*, September 4, 1969, Milwaukee Journal Sentinel Historical Newspapers.

a nature center.³⁶ However, the school district board claimed it could not finance the land purchase.³⁷

Thus, the Riveredge founders began to think of the Grady property as a place for the Milwaukee metropolitan area rather than a community defined by the school district's boundaries.

The WBGC members and other supporters founded the RFI to raise funds necessary to purchase the lands.³⁸ Not only did they expand the communities that would be represented, but they also created a private rather than a publicly administered organization. Unlike other land conservation projects, which severely limited public access to the conserved land, the founders hoped to create a place encouraging urban and suburban, young and old, to travel a short distance and learn about the many interactions between animal and plant species. For example, a portion of the Saukville Bog was recently purchased as a field station for the University of Wisconsin - Milwaukee (UWM) researchers. Dr. Philip Whitford of the UWM Botany Department mentioned his interest in the nature center because it would help to alleviate human pressure on the newly created University of Wisconsin Field Station. Whitford was also a charter member of the Wisconsin Natural Conservancy, advisor to the Aldo Leopold Conservation Club at UWM, and the Environmental Education Council of Greater Milwaukee.³⁹ Although the RFI recognized the importance of ecological studies, they envisioned a center for the public. The nature center would not have land locked up to a few researchers but would be available to school children of all grade levels and backgrounds.⁴⁰ This focus helped the founders gain support from

³⁶ Isabel R. Lillie to Roger L. Boerner, "Riveredge Plant Diversity," November 26, 1967, Attic Storage - Historical Materials - RLB Folder, Riveredge Nature Center; Jensen, "Foundation Sees 72 Acres as Nature Lover's Dream."

³⁷ "Isabel Lillie Receives Award"; Friend to Donna Hodgeson, "Whitefish Bay Schools," April 17, 1967, Attic Storage - Historical Materials - RLB Folder, Riveredge Nature Center; Jensen, "Foundation Sees 72 Acres as Nature Lover's Dream"; Krause, "The Time to Dream."

³⁸ "Isabel Lillie Receives Award"; Friend to Hodgeson, "Whitefish Bay Schools," April 17, 1967; Jensen, "Foundation Sees 72 Acres as Nature Lover's Dream."

³⁹ "Chief Officer Elected by Riveredge Group," *Milwaukee Journal*, April 16, 1969, Milwaukee Journal Sentinel Historical Newspapers; "Sentinel Writer Johnson," *Milwaukee Sentinel*, January 23, 1974, Milwaukee Journal Sentinel Historical Newspapers.

⁴⁰ "Milwaukee: A Bit of Wild Land for Our Children, Grandchildren," *Milwaukee Journal*, May 26, 1968, Henry Reuss Papers, Box 53, Folder 18, Milwaukee River, 1968-1969, UW-Milwaukee Libraries, Archives.

SEWRPC, the Wisconsin Department of Instruction, private and public schools, and various youth groups.⁴¹ However, the search for funding continued.

Roger Boerner mentioned that the group wanted to avoid government funding as this money was earmarked for recreation rather than preservation/restoration of land and education. Although the source of the government program Boerner was referring to was not explicitly stated, the government money was likely associated with the Wisconsin Outdoor Recreation Act Program (ORAP) drafted by Governor Gaylord Nelson in 1961. This program raised revenue from a statewide penny tax on cigarettes to fund the acquisition of lands. However, most funds went towards purchasing and renovating land for recreational purposes. Boerner noted that the state funds required asphalt parking facilities and swing sets.⁴² Boerner also argued that the RFI would be stronger with widespread financial support rather than relying on a few wealthy donors or government funding.⁴³ The RFI understood the importance of building a community that would support not only the creation of Riveredge but have a stake in its long-term survival.

WBGC members and their friends believed land conservation was in the public interest. Yet convincing members of the public to open their wallets was a difficult task. Publicizing the importance of conserving the land for educational purposes, Isabel Lillie presented slide shows to civic groups. In addition, Lillie partnered with the Friends of the Milwaukee Public Museum and John Diedrich, museum zoological collector, to share insights on the diversity of plant life and its value to the City of Milwaukee, only an hour's drive away. WBGC member Mary Berry led fundraising efforts by selling stationery and

⁴¹ "Isabel Lillie Receives Award"; Friend to Hodgeson, "Whitefish Bay Schools," April 17, 1967; Jensen, "Foundation Sees 72 Acres as Nature Lover's Dream."

⁴² "Land to Be Bought for Nature Center," *Milwaukee Journal*, October 29, 1968, Milwaukee Journal Sentinel Historical Newspapers; Roger L. Boerner to Sam Sorgel, "History of Riveredge," June 3, 1991, Attic Storage - Historical Materials - RLB Folder, Riveredge Nature Center; L. P. Voigt, "ORAP Gets Underway" (Madison, WI: Wisconsin State Conservation Department, 1962), <https://content.wisconsinhistory.org/digital/collection/tp/id/48792>.

⁴³ "Riveredge Center to Enroll Members," *Milwaukee Journal*, March 8, 1970, Milwaukee Journal Sentinel Historical Newspapers; "Milwaukee Public Gets Chance to Help Develop Nature Area," *Milwaukee Journal*, March 16, 1970, Milwaukee Journal Sentinel Historical Newspapers.

other RNC merchandise at various commercial outlets. Also, schoolchildren created and sold RNC buttons. John Roethle, Roger Boerner, and David Fleck, all attorneys in Milwaukee, likely used their networks to secure more significant donations.⁴⁴

Although the RNC would be the first nature center in southeastern Wisconsin, plans for the Nine-Mile Farm in Bayside (Schlitz Audubon Center) and the Wehr Center on the Southside of Milwaukee were created in the 1960s as well.⁴⁵ The founders argued that these nature centers, located in three different natural settings, could foster environmental education throughout southeastern Wisconsin. However, the founding of these three nature centers made fundraising more competitive with a limited pool of donors.⁴⁶ Not to be discouraged, the RFI pushed ahead. James Grootemaat, a real estate developer and MAS member, worked to secure a property for the RNC. His passion for expanding bird habitats likely influenced his interest in conserving lands. Grootemaat alerted the founders that the sale price of \$1000 per acre was reasonable, given the proximity of Grady's land to the Milwaukee River and various land features.⁴⁷

In October 1968, despite the many attempts to attract donors, the RFI still needed to reach its \$150,000 goal. Although the overall price of the land remained over \$70,000, Grady agreed to accept \$15,000 upfront and that the rest of the balance could be paid over ten annual installments.⁴⁸ Soon after the publication of an October 20th article in the *Milwaukee Journal*, "Have You Heard," a check for

⁴⁴ Karen Helms Ward, "Profile: Mary Berry," *Riveredge Newsletter*, May 1974, Binder - Library, Riveredge Nature Center; "Chief Officer Elected by Riveredge Group"; Char Johnson, "Profile: David H. Fleck," *Riveredge Newsletter*, Summer 1971, Binder - Library, Riveredge Nature Center; Harry S. Pease, "Energy and \$550 Are Stakes for Children's Nature Center," *Milwaukee Journal*, April 28, 1968, Henry Reuss Papers, Box 53, Folder 18, Milwaukee River, 1968-1969, UW-Milwaukee Libraries, Archives; "Museum Club Tours Riveredge," May 19, 1968, Milwaukee Journal Sentinel Historical Newspapers; "Getting to Know Plants, Animals," *The Milwaukee Journal*, June 16, 1968, Milwaukee Journal Sentinel Historical Newspapers.

⁴⁵ "Our History" (Friends of Wehr Nature Center, 2021), <https://friendsofwehr.org/about/#history>; "Our History" (Schlitz Audubon Nature Center, 2022), <https://www.schlitzaudubon.org/about-us/our-history/>.

⁴⁶ Riveredge Foundation, Inc, "Proposal for Establishment of Riveredge Nature Center"; Boerner to Sorgel, "History of Riveredge," June 3, 1991.

⁴⁷ Boerner to Sorgel, "History of Riveredge," June 3, 1991.

⁴⁸ "Low Funds, Deadline Peril Nature Center," *The Milwaukee Journal*, October 20, 1968, sec. 2, Milwaukee Journal Sentinel Historical Newspapers.

\$2,000 arrived, stirring the founders' confidence. With the help of a few wealthy donors and the many children who ran bake sales and button sales, the RFI agreed to make the first installment of \$15,000 to purchase the lands, having just raised \$25,000. Over the next ten years, they hoped to pay off the mortgage and raise an additional \$175,000 for programming and further land restoration. Despite the initial failure to gain the Whitefish Bay School District funding, the foundation secured funds from many young and old donors.⁴⁹ The dream of creating a nature center was coming to fruition.

After securing Grady's property in 1968, the RFI set out to develop an outdoor laboratory and create an "island" protected from urban sprawl and unwanted human interference. Lillie underscored the importance of preserving various habitats, including five different forest environments, a meadow, and wetlands. Also, the group would look to protect geological formations, woodland vegetation, and wildlife on the site. John D. Roethle, a principal in Anderson, Roethle, and Associates management consulting firm, succeeded Isabel Lillie as president of the Riveredge board of directors. WBGC member Char Johnson replaced Bill Ahrens as vice president. David Fleck, a Milwaukee attorney, replaced Roger Boerner as secretary, and Alton Bathrick, assistant vice president of First Wisconsin National Bank, assumed the treasurer position, formerly held by Donna Hodgson. Although Lillie and Hodgson stepped down from their leadership roles on the Riveredge board, they continued to hold director positions. Besides the four officers, there were sixteen board directors, evenly split between men and women.⁵⁰

Despite a desire to open the lands to the public, the RNC board cautioned that too many visitors could degrade the reserve. This concern fit the board's vision of a place where visitors would recognize a natural space where people's roles in shaping the landscape were less noticed than non-human actors in the landscape. Yet people would have more access to Riveredge than to lands protected by the

⁴⁹ "Nature Center Gets Suburb School Push," *Milwaukee Journal*, October 31, 1968, Milwaukee Journal Sentinel Historical Newspapers; "Have You Heard," *Milwaukee Journal*, April 19, 1972, Milwaukee Journal Sentinel Historical Newspapers.

⁵⁰ "Land, People, Money = Nature Center," *Riveredge Newsletter*, Summer 1969, Binder - Library, Riveredge Nature Center.

Wilderness Act of 1964. According to the original plans for the RNC, the land was to be fenced and supervised to protect it from overuse and vandalism. It is important to note that the public interest expressed by the RFI did not advocate for free and unlimited access to the place. In addition, the public interest was to be defined by the particular use of an outdoor nature center. Unlike the Kettle Moraine Forest or the Milwaukee River, both available for multiple uses nearly every day and hour, the founders worked to protect the property by limiting its access. Yet the primary goal of providing opportunities for natural education required that children and adults were readily welcomed to Riveredge's diverse landscape.⁵¹

Although the WBGC members continued to be instrumental in the RNC's development, the creation of the place called Riveredge was also shaped by its first staff naturalist, G. Andrew Larsen, who was known as Andy. In January 1969, the Junior League of Milwaukee granted the RFI over \$33,000 for teaching purposes. Since its founding in 1915, the Junior League of Milwaukee has educated young women on community issues and trained them to serve in leadership roles. With the Junior League's donation, the RFI hired Larsen. Larsen earned his undergraduate degree from Carleton College in Minnesota and a master's degree in forestry from Yale University. Before he arrived at the RNC, he was the director-naturalist at Lakeside Nature Center, 20 miles north of New York City along the Hudson River. Raised in Fond Du Lac, WI, he eagerly moved back to the Midwest.⁵²

The importance of conservation education throughout the twentieth century was noted by Benjamin Heber Johnson, in *Escaping the Dark, Gray City*. Johnson argues that the movement's strength

⁵¹ "Group Buys Land for Nature Center," *Milwaukee Journal*, December 19, 1968, Milwaukee Journal Sentinel Historical Newspapers; "Riveredge Foundation, Inc - History and Purpose - C1968" (c1968), Junior League of Milwaukee Records, 1916-2002, Box 12, Folder 31; "Rest for Nature Center in August," *Riveredge Newsletter*, Summer 1971, Binder - Library, Riveredge Nature Center.

⁵² William I. Tchakirides, "Junior League of Milwaukee," in *Encyclopedia of Milwaukee*, ed. Amanda I. Seligman and Margo Anderson, 2016, <https://emke.uwm.edu/entry/junior-league-of-milwaukee/>; Fran Bauer, "Education Committee," July 1966, Junior League of Milwaukee Records, 1916-2002, Box 17, Folder 12, UW-Milwaukee Libraries, Archives; Nancy Mersereau, "Riveredge Leader Defies Description," *Lakeshore Life*, June 1994, Newsletter Binder - Library, Riveredge Nature Center.

was not in its efforts to persuade lawmakers to change laws but in its attempt to transform American culture through promoting outdoor recreation and the study of nature in schools.⁵³ Following other environmental educators' footsteps, Larsen saw the landscape as a tool to educate children and adults rather than simply as a wild terrain. Larsen and a core of volunteers developed trails to keep feet from wandering over unique species of plants. In addition, the pathways provided opportunities for a multi-sensory understanding of how the land, plants, and animals achieved harmony at Riveredge.⁵⁴

Although the RNC board was actively protecting its land from urbanization, they saw their work as essential to the public interest of southeastern Wisconsin's diverse residents. Lillie and Reisinger emphasized the need for inner-city youth to escape the urban landscape and experience woodlands along the Milwaukee River. In addition, board members thought the RNC could be a place for urban and suburban children to escape the tensions of the urban environment and come together to learn about nature.⁵⁵

In *The Sand County Almanac*, Aldo Leopold espoused the importance of the "Land Ethic." He argued that people needed to understand that "the individual is a member of a community of interdependent parts." This philosophy was instrumental to the construction of the Riveredge trails.⁵⁶ These trails not only helped people learn about nature's doing but also provided opportunities to those usually denied access to natural areas. For example, Riveredge's paths were developed and utilized by RNC members with various physical disabilities. Ruth Brunner, a WBGC member and longtime crafter at

⁵³ Benjamin Heber Johnson, *Escaping the Dark, Gray City: Fear and Hope in Progressive-Era Conservation* (New Haven, CT: Yale University Press, 2017), 130.

⁵⁴ "Naturalist Larsen Hired for Riveredge," *Riveredge Newsletter*, Summer 1969, Binder - Library, Riveredge Nature Center; "Nature Center's Role: Build Understanding," *Riveredge Newsletter*, Summer 1969, Binder - Library, Riveredge Nature Center; "To Be Done...", *Riveredge Newsletter*, Autumn 1969, Binder - Library, Riveredge Nature Center; Andy Larsen, "The Land Ethic," *Riveredge Newsletter*, Winter 1970, Binder - Library, Riveredge Nature Center.

⁵⁵ Jensen, "Foundation Sees 72 Acres as Nature Lover's Dream"; "Women Put Riveredge Dreams to Work," *Milwaukee Journal*, September 4, 1969, Milwaukee Journal Sentinel Historical Newspapers; Harold H. Emch Jr., "Letter from the President," *Riveredge Newsletter*, Labor Day 1973, Binder - Library, Riveredge Nature Center.

⁵⁶ Larsen, "The Land Ethic"; Leopold, Aldo Leopold, *A Sand County Almanac and Sketches Here and There* (Oxford and New York: Oxford University Press, 1949).

the Homecrafter Shops, undoubtedly influenced the trail development. In addition, Allan Goldman, Chairman of the Handicapped Children's Education Board of Ozaukee County, was on the RNC Board.⁵⁷ Furthermore, Linda Stephenson, the media relations volunteer at RNC, had contracted polio in 1955, six months before the Salk vaccine became public. Committed to the community's needs, she joined the board of Goodwill Industries and the Wisconsin Society for the Prevention of Blindness. Also, she played an active role in the Junior League of Milwaukee, interested in the destruction or the overcoming of "Architectural Barriers."⁵⁸ Likely emboldened by these people's passions, Lillie sought donations not only for the purchase of the property but for the construction of these trails.⁵⁹ In June 1974, Brunner was one of the first people to enjoy access to the new paths.

More importantly, it was not simply enough to provide trail access. Riveredge also sought to create opportunities for people to experience nature using multiple senses. Thus, people with physical disabilities or vision impairments could come to experience nature at the RNC in ways that were not available in many other southeastern Wisconsin nature preserves.⁶⁰ Describing the pathways, members observed that the trails were not all on the same surface. Some paths were hard-packed gravel, and other routes were constructed of wood chips. People with vision impairments could sense the land's sponginess underneath their feet, get tickled or scratched by various plants growing up near the pathways, or smell skunk cabbage near the stream's shady banks. Visitors experienced Riveredge's wonders that were otherwise denied to them. Although the RNC board desired to limit the number of

⁵⁷ "Newcomers Crowd Ballot in Mequon Council Vote," *Milwaukee Sentinel*, March 31, 1973, Milwaukee Journal Sentinel Historical Newspapers.

⁵⁸ Beth Taylor, "Profile: Linda Stephenson," *Riveredge Newsletter*, Winter, -1973 1972, Binder - Library, Riveredge Nature Center.

⁵⁹ Sylvia Bernstein, "Have You Heard," *Milwaukee Sentinel*, October 23, 1968, Milwaukee Journal Sentinel Historical Newspapers.

⁶⁰ Riveredge Foundation, Inc., "Proposal for Establishment of Riveredge Nature Center"; Emch, "Letter from the President," Labor Day 1973.

visitors to protect the site's sanctity, under Larsen's leadership, Riveredge provided people with new experiences, regardless of their physical capabilities.⁶¹

At the trail dedication on June 11, 1974, Larsen mentioned that the trails would continue to be designed to provide opportunities for all.⁶² Michael Sullivan, handicapped from polio at six, stressed that people needed opportunities to demonstrate that they could do things themselves, regardless of their various physical abilities. Harold M. Emch, Jr., the Riveredge president, mentioned the importance of providing opportunities for people to come and enjoy RNC was more than just getting people in a car or a bus. Larsen asserted that people needed to share communal spaces. Humans' survival on the earth depended on fostering the value of sharing. Laura Goetsch commented, "at last someone has thought of [people with physical disabilities]. There's a whole world out there, and now we can experience it too."⁶³ Accessibility to nature was one of the founding principles of the RNC in 1968. This attention to accessibility for people with varying physical abilities occurred twenty-two years before the Americans with Disabilities Act in 1990.

Naturalist like Gardener: Fostering a Diverse Habitat

Creating pathways through wild terrains was not Larsen's only passion. Larsen saw himself as a nature developer. He saw the property not only as it existed in 1969 but also as how humans could shape the area to provide more learning activities. For example, dams could be constructed to create marshes. Lands could be dynamited to craft spring pools. Unlike the efforts to redevelop the riverway in

⁶¹ "Development of Handicap Trail Underway," *Riveredge Newsletter*, November 1973, Binder - Library, Riveredge Nature Center; Mary Simpson, "Book Review: Edward Abbey, *Desert Solitaire*," *Riveredge Newsletter*, Labor Day 1973, Binder - Library, Riveredge Nature Center; Loren H. Osman, "Handicapped Now Can Meet Nature," *Milwaukee Journal*, May 5, 1974, Milwaukee Journal Sentinel Historical Newspapers.

⁶² Osman, "Handicapped Now Can Meet Nature."

⁶³ Loren H. Osman, "Trail Dedicated at Riveredge," *Milwaukee Journal*, June 23, 1974, Milwaukee Journal Sentinel Historical Newspapers; Wisconsin Court System, "Former Judges: Judge Michael T. Sullivan," December 10, 2021, <https://www.wicourts.gov/courts/appeals/judges/retired/sullivan.htm>.

the city of Milwaukee, the RNC's community strove to expand space for non-humans. For instance, they established salamander and migrating bird habitats. Furthermore, he perceived his role as a gardener who worked to foster a diverse landscape, watching over and tending the land to ensure no plant or animal species begins to box out another species. Contrasting the labor of a forester who harvested trees in the 19th and early 20th century with a nature developer, Larsen argued that naturalists labored to promote diversity.⁶⁴

Larsen's fervor for cultivating multiple habitats and safe places for many living creatures was shared by other RNC members. For example, Lorrie Otto led efforts to shrink the deer herd, threatening the endangered pinedrops on the Fairy Chasm Preserve. This quest for diversity required continual attention. Reflecting on Otto's devotion to maintaining multiple landscapes, Larsen commented, "Riveredge will be ready in the spring, but it will never be finished. There is always something new."⁶⁵ In this manner, he saw the public's need to experience and learn that it was in their interest to utilize humans' talents to provide biodiversity. In *Second Nature: A Gardener's Education*, Michael Pollan argued, "Even Yellowstone, our country's greatest 'wilderness,' stands in need of careful management." This was not a call to develop more subdivisions and highways but to develop the community's interest to deliberately alter landscapes in manners that provided a variety of life.⁶⁶

Riveredge's mission at its inception was to have its members and visitors learn to make educated choices recognizing how social, economic, and political decisions affected the environment. The land was to promote environmentally literate citizens through their interactions with the land and the many RNC programs. In 1971 board president John Roethle described the RNC as an ecological laboratory to

⁶⁴ Harry S. Pease, "Pathfinder at Riveredge Plots Trails to Make Young Marvel," *Milwaukee Journal*, October 5, 1969, Milwaukee Journal Sentinel Historical Newspapers; Harry S. Pease, "Dig In, Naturalist Tells Children," *Milwaukee Journal*, June 1, 1969, Milwaukee Journal Sentinel Historical Newspapers; "Naturalist Larsen Hired for Riveredge."

⁶⁵ Krause, "'The Time to Dream'"; Paul G. Hayes, "Doing What Comes Naturally," *Milwaukee Journal*, June 28, 1992, Milwaukee Journal Sentinel Historical Newspapers.

⁶⁶ Michael Pollan, *Second Nature: A Gardener's Education* (New York, NY: Grove Press, 1991), 49, 114–15.

develop people's awareness of their inter-relationship with all living things. Rather than see the environment as a commodity belonging to humans, he argued that people must appreciate the environment as a community of many living creatures and natural resources shared by all.⁶⁷ Larsen, while enjoying the exclamations of children as they investigated the different habitats and animals, reiterated the RNC's mission that "Riveredge was created to provide opportunities for discovery and understanding of the natural environment."⁶⁸ By 1974, Riveredge was serving 10,000 students per year. In recognition of his work, the Wisconsin Wildlife Federation named Larsen the Educator of the Year in March 1974.⁶⁹ The RNC's mission was tied to the place and the land rescued from residential development for education.

Fostering the development of a community and the public's interest, Larsen created work experiences and projects at the RNC to create a sense of ownership. This helped to develop a more personal interest in the well-being and sustaining of a nature sanctuary. Not only was it maintained through financial contributions but also many organizations' voluntary labor force.⁷⁰ Jim Grootemaat, director of Riveredge's development program, recognized how businesspeople, school children, teachers, homemakers, Scouts, and many others were involved in creating a place for everyone. For example, the Aldo Leopold Club at UW-Milwaukee, Girl Scout troops, and many others volunteered to clean up the land. Also, Whitefish Bay schools regularly had students working on projects. The high school graduating class of 1969 donated \$1,000 to install drinking water at the RNC.⁷¹ Public interest was generated through a sense of ownership and participation.

⁶⁷ John D. Roethle, "Letter to Riveredge Members," *Riveredge Newsletter*, Spring 1971, Binder - Library, Riveredge Nature Center.

⁶⁸ Andy Larsen, "School Programs -- The Essence of Riveredge," *Riveredge Newsletter*, Summer 1973, Binder - Library, Riveredge Nature Center.

⁶⁹ "G. Andrew Larsen Receives Honor," *Riveredge Newsletter*, May 1974, Binder - Library, Riveredge Nature Center.

⁷⁰ "Done!," *Riveredge Newsletter*, Autumn 1969, Binder - Library, Riveredge Nature Center; Mary Beth Murphy, "Clearing the Way," *Milwaukee Sentinel*, June 12, 1974, Milwaukee Journal Sentinel Historical Newspapers.

⁷¹ "Riveredge Center to Enroll Members"; "Naturalist Larsen Hired for Riveredge"; "Clean-up Almost Accomplished, Thanks to Our Friends," *Riveredge Newsletter*, Summer 1969, Binder - Library, Riveredge Nature Center.

Researchers also came to the RNC. Collaborating with the Audubon Society of Milwaukee and the Milwaukee Public Museum (MPM), the RNC launched a bird banding project. Acting director of the MPM Wallace MacBriar led the first effort netting, banding, and taking the measurements of thirty-six species of birds. Data from the project contributed to the US Fish and Wildlife Service studies.⁷² In 1971, Riveredge members participated in a yearly Christmas bird count, starting in 1971, sponsored by the Wisconsin State Ornithological Society and the National Audubon Society.⁷³ Most of the birds tagged at the RNC were temporary residents migrating to a new destination. However, some of the previously tagged birds returned to Riveredge each year. Through the members' participation in the bird count, they recognized the land's importance for people and birds.

Although the RNC was named for its location along the Milwaukee River, it did not take a prominent position in creating the place during its earlier years. Most of the attention was on land restoration projects and trail construction throughout the property. However, visitors remembered their encounters with the waterway. A Henry Clay School student who participated in a river ecology course thanked the RNC for the experience and her new desire to become a river ecologist when she grew up. Another student enjoyed a river walk and learned about all the animals in the waterway.⁷⁴ Furthermore, the RNC hosted "River Clean-Up" events yearly. Classes on the river included "Life in the River" and "Will

⁷² "Bird Banding at Riveredge," *Riveredge Newsletter*, Spring-Summer 1970, Binder - Library, Riveredge Nature Center; "Bird Banding at Riveredge," *Riveredge Newsletter*, Fall-Winter, -1971 1970, Binder - Library, Riveredge Nature Center.

⁷³ G. Andrew Larsen, "Christmas Bird Count," *Riveredge Newsletter*, Spring 1971, Binder - Library, Riveredge Nature Center; "Want to Help Count Birds?," *Milwaukee Journal*, December 16, 1971, Milwaukee Journal Sentinel Historical Newspapers; "Finding Feathered Friends Is Quiet Outdoor Hobby," *Milwaukee Sentinel*, December 20, 1971, Milwaukee Journal Sentinel Historical Newspapers; "Bird Watchers Wanted Dec. 30," *Milwaukee Journal*, December 11, 1972, Milwaukee Journal Sentinel Historical Newspapers; "Nature Center to Count Birds," *Milwaukee Sentinel*, December 23, 1974, Milwaukee Journal Sentinel Historical Newspapers.

⁷⁴ Andy Larsen, "Pilot Project Humming," *Riveredge Newsletter*, Spring-Summer 1970, Binder - Library, Riveredge Nature Center.

the Milwaukee River Support a Trout Population?”⁷⁵ Donna Hodgson, one of the founders of the RNC, identified the waterway as her true home at the RNC, helping children explore its life.⁷⁶

Welcomed and Unwelcomed Human Intervention

Although the Riveredge founders had also searched for a space removed from urbanization, they recognized the need to seek opportunities to expand and protect the existing property from outside threats and limit human activity. Many environmental histories investigate the suburban space in relationship to the city, but Lincoln Bramwell examines the suburban edge with the wilderness, an area he called “the Wilderburbs.” Bramwell notes how Wilderburb residents sought to escape traffic and proximity to neighbors while maintaining various urban amenities and protection from wild animals and fires. Bramwell argued that the Wilderburbs, like their “sister suburbs,” created novel landscapes that appealed to homeowners’ changing attitudes about the quality of life and nature. Yet this new landscape produced unintended consequences, which were more difficult and complex than anyone had imagined.⁷⁷ Thus, Bramwell drew attention to the reality that environmental conflicts were not just between human groups but also nature’s capacity to support their aspirations.⁷⁸ RNC board members shared developers’ interests in lands and waters outside the city limits. However, they feared land speculators’ and housing contractors’ ambitions might harm the RNC sanctuary. Protecting the land from urbanization, the RNC board promoted a public interest that contrasted with planners who sought watershed solutions for economic development.

⁷⁵ “School Programs,” *Riveredge Newsletter*, Spring 1971, Binder - Library, Riveredge Nature Center.

⁷⁶ “Profile: Donna Hodgson,” *Riveredge Newsletter*, Spring 1971, Binder - Library, Riveredge Nature Center; Betty Winter, “Over the Hill and into the River with Fourth Graders - Come with Us,” *Riveredge Newsletter*, September 1975, Binder - Library, Riveredge Nature Center.

⁷⁷ Lincoln Bramwell, *Wilderburbs: Communities on Nature’s Edge*, (Seattle: University of Washington Press, 2014), 14.

⁷⁸ Bramwell, *Wilderburbs*, 215.

The first threat to the property came from the Southeastern Wisconsin Regional Planning Committee's proposal to construct the Waubeka Reservoir. In 1965 SEWRPC formed the Milwaukee River Watershed Committee. This committee was responsible for providing recommendations for seven fundamental problems with the watershed that required long-term solutions and cooperation between all levels and agencies of government involved. These problems dealt with water pollution; inadequate soil and water conservation and management practices; deteriorating fish and wildlife habitat; flooding; open space and recreation needs; groundwater problems; and problems associated with changing land use. They promoted the reservoir as a recreational outlet and a means to protect urban property from flood damage. Recognized in this study was that no river community was an island disconnected from the others.⁷⁹ However, RNC board members claimed that the reservoir would flood a third of the Riveredge property and farmlands owned by local families. Professor Whitford from the UWM Biology department and RNC supporter argued that eutrophication and sediment buildup would occur behind the dam, lessening the reservoir's recreational appeal and likely requiring costly measures to address sediment buildup and algae growth. In addition, the value of the RNC for educational purposes would decrease if its lands were flooded.⁸⁰ Moreover, the founders had hoped to distance the RNC from the likely commercialization of nature that the Waubeka reservoir would generate.

⁷⁹ Southeastern Wisconsin Regional Planning Commission, *Milwaukee River Watershed Planning Program Prospectus*; Southeastern Wisconsin Regional Planning Commission, *A Comprehensive Plan for the Milwaukee River Watershed: Alternative Plans and Recommended Plan*, vol. 2 (Waukesha, WI: WI Department of Natural Resources: The US Department of Housing and Urban Development: US Environmental Protection Agency, 1971), http://www.sewrpc.org/SEWRPCFiles/Publications/pr/pr-013_vol-02_comp_plan_for_the_milwaukee_river_watershed.pdf.

⁸⁰ Philip B. Whitford, "An Ecological View of Man-Made Lakes and the Milwaukee River Dam Proposal," April 22, 1970, Newsletter Binder - Library, Riveredge Nature Center; "Milwaukee River Dams," *Riveredge Newsletter*, Spring-Summer 1970, Binder - Library, Riveredge Nature Center; "Waubeka Dam Not Dead -- Help!," *Riveredge Newsletter*, Spring 1971, Binder - Library, Riveredge Nature Center; Patricia Roberts, "Nature Shows Off for Riveredge Workers," *Milwaukee Journal*, October 19, 1970, Milwaukee Journal Sentinel Historical Newspapers; Paul G. Hayes, "Reservoir Peril Feared at Riveredge Center," *Milwaukee Journal*, October 27, 1970, Milwaukee Journal Sentinel Historical Newspapers.

Supporting the idea of the Waubeka Reservoir, Kurt Bauer, the executive director of SEWRPC, argued that if flooded out, the RNC could relocate to a site with more valuable wetlands, woodlands, and agricultural lands that could be preserved. SEWRPC was working to address the forecasted recreational demands of a growing urban population. They hoped that the reservoir could be planned in a manner to limit the ecological damage, although they could not stop it completely. SEWRPC executive director Kurt W. Bauer argued, "Sprawl is unplanned growth outside existing or planned rational urban service area, existing or potential." In 1965 SEWRPC was not attempting to stop development but to moderate it through zoning and land ordinances to channel growth in desired locations.⁸¹ As explained in the next chapter, the Waubeka Reservoir never materialized, and the RNC escaped one of its first threats. Although the public was interested in recreational facilities, the Riveredge community defended the public interest in lands developed for biodiversity and education (more on the Waubeka Reservoir and other SEWRPC plans in Chapter Three).

Protecting the lands from encroachment also involved the purchase of more properties. In the fall of 1970, one year after the purchase of the original 72 acres, the Riveredge Board approved the acquisition of another 70 acres bordering the site's northeast corner.⁸² Development of this area consisted of a 750-foot boardwalk through a marsh. Larsen remarked on the stream's cleanliness and the possibility that children could drink water directly from the streams. President Fleck suggested that constructing a dam on the little creek running through the property would form a pond so that children could learn about aquatic life in still and moving water. On the one hand, this suggestion reflected the

⁸¹ Richard W. Cutler, *Greater Milwaukee's Growing Pains, 1950-2000* (Milwaukee, WI: Milwaukee County Historical Society, 2001), 195–97.

⁸² John D. Roethle, "Letter to Riveredge Members," *Riveredge Newsletter*, Fall, -Winter, 1971 1970, Binder - Library, Riveredge Nature Center.

board members' belief that people played a role in creating space for the public interest. On the other hand, the RNC board viewed the creation of the Waubeka reservoir as a threat to the public interest.⁸³

Unlike the proposals to redevelop the riverway in the city of Milwaukee for economic activity, the Riveredge board rejuvenated and expanded its space to promote biological diversity and educational opportunities for children to study life in ponds created by humans to witness nature's activity.⁸⁴ At this time, the Riveredge board deemed lands separated from the places in which people worked and lived as the best opportunities to witness these nonhuman relations. In part, Riveredge was a sanctuary where people would allow "nature" to perform its work to heal the human mind from the daily grind of living in suburban and urban landscapes.

Between 1972 and 1985, Riveredge's territory expanded from 72 acres to just over 350 acres. In 1972 the Riveredge board approved the purchase of the 70-acre Wallner property, further providing space to escape the confines of the city. This land was adjacent to an existing site, expanding the entire property to 220 acres.⁸⁵ A temporary setback occurred in February 1975, when a fire consumed the buildings used for storage and indoor class opportunities during inclement weather. Larsen's daughter commented that she was happy it was not the forests and fields that burned. Despite this loss, the Riveredge board purchased the Sugarline farm, which bordered the Milwaukee River and encompassed

⁸³ James E. Grootemaat, "Improvements Scheduled for Riveredge Property," *Riveredge Newsletter*, Summer 1971, Binder - Library, Riveredge Nature Center; "Land Added to Riveredge Center," *Milwaukee Journal*, July 30, 1970, Milwaukee Journal Sentinel Historical Newspapers; "Seed of Riveredge Burgeons in 5th Year," *Milwaukee Journal*, May 21, 1972, Milwaukee Journal Sentinel Historical Newspapers.

⁸⁴ Donald A. Bluhm, "Riveredge," *Milwaukee Journal*, November 5, 1972, Milwaukee Journal Sentinel Historical Newspapers.

⁸⁵ "Purchase of Wallner Property Announced," *Riveredge Newsletter*, Summer 1972, Binder - Library, Riveredge Nature Center.

a vernal pond. This expanded Riveredge to 250 acres.⁸⁶ In 1985, it purchased additional property, bringing the total acreage to 351 acres.⁸⁷

The Riveredge board worked under the conviction that people needed access to sanctuaries removed from urban and suburban environments. They purported that the land and society's relationship with the Milwaukee River should not be to expand an urban, economic landscape nor for recreational interests that threatened the living diversity. The Riveredge board redeveloped land along the Milwaukee River, creating a new relationship with nature. The ecological diversity witnessed at Riveredge could be seen as a strength rather than an inefficiency. Riveredge was a place where humans could focus on learning how plants and life interacted with one another to sustain and, at times, threaten the livelihood of another. At first, this effort was to save a rural or non-urban landscape from further human development. However, rather than rescue the land from human development, the founders of Riveredge demonstrate how humans could develop and maintain a space to promote diversity. Although human labor shaped the landscape, people shared the spotlight with the products of nature at Riveredge.

In the late 1960s, the Riveredge founders and the Maier Administration saw their redevelopment projects along the riverway in separate spaces rather than belonging to a single watershed community. Contrastingly, the Maier Administration argued that residents of Milwaukee and tourists would appreciate the natural terrain within the urban environment if properly redeveloped for commercial activity. The administration looked at the riverway as an underutilized economic space. On

⁸⁶ W. Stuart Parsons, "President's Letter," *Riveredge Newsletter*, September 1975, Binder - Library, Riveredge Nature Center; "Riveredge 1975 Grant Portfolio" (1975); Andy Larsen, "Monday.. February 24, 1975," *Riveredge Newsletter*, March 1975, Binder - Library, Riveredge Nature Center; Andy Larsen, "Sugarline Farm Pond and Barn: Thoughts from Andy Larsen," *Riveredge Newsletter*, November 1975, Binder - Library, Riveredge Nature Center; "Riveredge Halts Nature Classes," *Milwaukee Journal*, February 25, 1975, Milwaukee Journal Sentinel Historical Newspapers; Loren H. Osman, "Accent on the News: Andy Larsen," *Milwaukee Journal*, March 20, 1975, Milwaukee Journal Sentinel Historical Newspapers; "Nature Center Adds 10 Acres," *Milwaukee Journal*, May 22, 1975, Milwaukee Journal Sentinel Historical Newspapers.

⁸⁷ "1993 Annual Report," 1993, Library, Riveredge Nature Center.

the other hand, SEWRPC's proposal for the Waubeka represented a conscious effort to address a watershed concern. However, as RNC members defended their lands, they emphasized the importance of protecting areas from urban encroachment. The time for more cooperative efforts to address water quality would have to wait.

Bringing the Lessons of Riveredge into People's Living and Workspaces

Michael Rawson, in *Eden on the Charles*, emphasized that Boston residents continued to connect with the natural world, despite visual contrasts between the urban and the wild.⁸⁸ Unlike other American cities in the nineteenth century, Rawson argues that citizens of Boston worked for the broader public good rather than embracing American ideals of privatization and individual rights. Regardless of the path taken by city planners, Rawson noted that Boston's urbanization never severed human relationships with the natural world but produced new ones. Moreover, nature was not only to be experienced "out there," away from the city.⁸⁹ Although the Riveredge founders stressed the importance of a place removed from the urban, it also searched for ways to spread its influence outside the RNC's property lines. These programs would help its members and others recognize that Riveredge was interwoven with rural and urban areas throughout the watershed, not removed.

In 1970 Andy Larsen started the Teacher-Naturalists (T-N) program. The first group of T-Ns was a group of nine women: Kathy Bourne, Donna Hodgson, Hildy Liebherr, Sylvia Miller, Laurie Otto, Hattie Purtell, Mary Simpson, Libby Smyth, and Betty Winter. Although these women were well versed in environmental causes, they attended class with Andy Larsen in the winter of 1970 to learn or perhaps help to formulate the "Riveredge Philosophy." Heavily influenced by Aldo Leopold's *A Sand County Almanac*, the T-Ns embraced the idea that all living things, including humans, were interdependent and

⁸⁸ Michael Rawson, *Eden on the Charles: The Making of Boston* (Cambridge, MA: Harvard University Press, 2010), vii.

⁸⁹ Rawson, *Eden on the Charles*, 2–3, 15.

that humans were part of a community that implied reverence for all life.⁹⁰ The emphasis was on a “life ethic” that could not simply be purchased as pollution control technologies were developed.⁹¹ The T-Ns embraced and nurtured this philosophy at the RNC and then spread it to other communities. Lorrie Otto, no stranger to environmental activism, said that Larsen’s course helped her to find her eloquence and build more confidence in her speaking.⁹² In 1972, this program ran alongside an in-service program for area schoolteachers at Riveredge to develop strategies for implementing nature activities in their communities.⁹³

Other naturalists worked with adults. For example, in November of 1972, Laurie Otto started a course called “Environmental Sensitivity for Suburban Homemakers.” She promised her class would leave no stone “unturned in helping you understand how to heal man’s injury to the earth.”⁹⁴ Otto convinced several RNC and WBGC members to remove their lawns and plant wildflowers to provide habitats for animals, butterflies, hummingbirds, and other living things threatened by the expansion of manicured lawns.⁹⁵ Otto stressed that learning and teaching needed more consistency. She argued that starting at an early age, people had been taught that one form of life depended upon another. Yet, in the very places where people often spoke of the value of life and the desire to preserve life: schools, hospitals, churches, and people’s backyards, the habitats that supported life were often degraded. Otto saw women as natural caretakers for the earth. She vowed that her class “will act upon the public with

⁹⁰ “Teaching Naturalists,” *Riveredge Newsletter*, Winter 1970, Binder - Library, Riveredge Nature Center; Marilyn Gardner, “Learning to Teach,” February 15, 1970, Milwaukee Journal Sentinel Historical Newspapers.

⁹¹ Larsen, “The Land Ethic.”

⁹² Hayes, “Doing What Comes Naturally.”

⁹³ David H. Fleck, “Letter from the President,” *Riveredge Newsletter*, Winter, -1972 1971, Binder - Library, Riveredge Nature Center.

⁹⁴ “November and December Membership Programs,” *Riveredge Newsletter*, Autumn 1972, Binder - Library, Riveredge Nature Center; “Environment Course Set at Riveredge,” *Milwaukee Journal*, October 31, 1972, Milwaukee Journal Sentinel Historical Newspapers.

⁹⁵ “Nature Can Bring Its Wild Beauty to Your Yard”; “Exhibit of Native Plants Readied,” *Milwaukee Journal*, November 11, 1973, Milwaukee Journal Sentinel Historical Newspapers; “Wild Plants Deserve Place in Yard, Too,” *Milwaukee Sentinel*, June 1, 1974, Milwaukee Journal Sentinel Historical Newspapers.

the force of fashions that led millions of women into pointed-toed and stiletto-heeled shoes, and then changed them into square-toed, high, chunky boots.”⁹⁶

In 1974 Isabel Lillie and Lorrie Otto continued to spread the seeds of the “Riveredge Philosophy” as they worked with the Milwaukee Public Museum to open a wild plantings exhibit. Lillie and Otto explored ways to help property owners bring a natural setting to the suburban landscapes by replacing green lawns with native plants. Virginia Scott Jenkins, in *The Lawn: A History of an American Obsession*, demonstrates that the American definition of a good lawn, consisting of a single type of grass properly mowed and edged, was unlike any other country in the world.⁹⁷ Although the Garden Club of America helped to spread the ideal American lawn, two WBGC members, Lillie and Otto, promoted an alternative. The Wild Yard supporters, as they came to be known, considered grass lawns to be only a small step above artificial turf.⁹⁸ Like the human labor involved in developing the RNC’s lands, Otto stressed that “wild” lawns required human effort to establish native plants, much like the efforts many gardeners took to establish non-native plantings in their yards. Although natural lawns were promoted in drought areas, Otto understood how native lawns could help to reduce runoff into the combined storm and sewer system contributing to flooding and pollution in area rivers. For example, a rain garden might direct runoff to holding areas where water might be slowed down before entering streams or slowly filtering into the groundwater. This practice also helped to lessen the effects of pesticides and fertilizers entering the streams.⁹⁹ Thus, not only was the natural lawn a gardener’s endeavor, but it also

⁹⁶ “Riveredge - Milwaukee Public Museum Offer ‘Healing the Earth,’” *Riveredge Newsletter*, Labor Day 1973, Binder - Library, Riveredge Nature Center; Lorrie Otto, “Healing the Earth,” *Riveredge Newsletter*, January 1974, Binder - Library, Riveredge Nature Center; Isabel Lillie, “Riveredge - Museum Exhibit: What It’s All About,” *Riveredge Newsletter*, March 1974, Binder - Library, Riveredge Nature Center; Harry S. Pease, “A Wild Idea for Your Lawn,” *Milwaukee Journal*, May 27, 1973, Milwaukee Journal Sentinel Historical Newspapers; “Wild Can Be Beautiful, Group Told,” *Milwaukee Journal*, April 26, 1974, Milwaukee Journal Sentinel Historical Newspapers.

⁹⁷ Virginia Scott Jenkins, *The Lawn: A History of an American Obsession* (Washington D.C.: Smithsonian Books, 1994), 2–3.

⁹⁸ Emch, “Letter from the President,” Labor Day 1973; Pease, “A Wild Idea for Your Lawn”; Roberts, “Wild Can Be Beautiful, Group Told”; Jenkins, *The Lawn*, 35.

⁹⁹ “Wild Plants Deserve Place in Yard, Too”; “The Debate Over Natural Plantings,” *Milwaukee Journal*, April 20, 1975, Milwaukee Journal Sentinel Historical Newspapers; Jenkins, *The Lawn*, 156; Wisconsin Department of

demonstrated how a person’s decision to create a wild lawn could impact others and promote biodiversity in lands far from the RNC.

Leaders of the museum exhibit recognized that wild lawns often conflicted with local ordinances. David Kopitzke, the acting curator of botany at the Milwaukee Public Museum, observed that city ordinances usually banned noxious weeds, and the definition of a weed varied in different cities. In addition, he stressed that Wisconsin prohibited people from removing plants from state and county parks. Laurie Otto argued that laws were often inconsistent. For example, a vegetable garden on a front lawn could look like a wild yard.

Arguing for a person’s right to a naturally kept lawn, Otto and other RNC members looked to defend people in the court system.¹⁰⁰ Otto was no longer new to this battle, as she had already fought against the “weed laws” in her home community of Bayside, WI.¹⁰¹ In 1974, Donald Hagar, a wildlife biologist, violated a New Berlin weed ordinance. The grass on Hagar’s 2.8-acre lot was more than 12 inches high. In addition, some of the plants were labeled as noxious weeds. Laurie Otto, a naturalist at the RNC, declared, “We’re going to conduct a fund drive to support him. This is an ideal case to take to court.”¹⁰² The RNC board officially voted to support Hagar and urged RNC members to support him financially as his case was heard before the courts.¹⁰³ Otto’s efforts in raising money and assembling a team of lawyers helped Hagar defend himself. One of the trial highlights occurred when Canadian thistle and ragweed (understood as weeds on both sides of the case) were found on the lawn at the New Berlin

Natural Resources, “Rain Gardens: A Beautiful Way to Reduce Runoff Pollution!,” 2022, <https://dnr.wisconsin.gov/topic/Stormwater/raingarden#:~:text=Rain%20gardens%2C%20which%20are%20small,protect%20our%20lakes%20and%20streams>.

¹⁰⁰ Lillie, “Riveredge - Museum Exhibit: What It’s All About”; Pease, “A Wild Idea for Your Lawn”; “Wild Can Be Beautiful, Group Told.”

¹⁰¹ Berry, *Banning DDT*, 78.

¹⁰² David L. Beal, “Hay, There: Naturalist, Neighbors Tangle,” *Milwaukee Journal*, October 24, 1974, Milwaukee Journal Sentinel Historical Newspapers.

¹⁰³ Harold H. Emch Jr., “Letter from the President,” *Riveredge Newsletter*, January 1975, Binder - Library, Riveredge Nature Center; Lorrie Otto, “Letter to the Editor,” *Riveredge Newsletter*, January 1975, Binder - Library, Riveredge Nature Center.

city hall but not on Hagar's property. After many years in court, Hagar eventually won his case in 1978.¹⁰⁴

In 1975 Andy Larsen was in the courts after Cedarburg authorities mowed down his lawn. Larsen and other defenders of the natural properties argued that the weed ordinances were similar to school dress codes; therefore, they should be ruled unconstitutional as the Supreme Court was striking down school dress codes.¹⁰⁵ What started as an effort to promote the creation of an alternative lawn with a variety of plantings, indirectly promoting healthier waterways, turned into an individual's right to choose a lawn that did not conform with the American "ideal" yard. Environmental organizations often seemed to rely on regulations restricting a property owner's actions in the name of the public interest. However, the Wild Yard supporters worked to promote property owners' free will this time.

Protecting the Interest of the Watershed

As noted at the beginning of the chapter, the RNC started with a mission that stressed the natural center's distinction or separation from the urban environment. The founders believed it was in the public's interest to separate themselves from the degraded environment of the city and save a pristine land. Although it may be said that the Riveredge board looked at the needs of the entire watershed through its educational outreach throughout southeastern Wisconsin, it saw Riveredge as an island, separated from the more urban areas of the region. The community of Riveredge supporters was people who looked for a natural sanctuary removed from the urban environment. However, the idea of separating themselves from the urban environment changed as the Riveredge community's awareness of the Milwaukee River swelled. Like the river, overflowing its banks and spreading out over flood lands,

¹⁰⁴ Draga Meyer, "Garden Gets Free Rein," *Milwaukee Sentinel*, March 18, 1978, Milwaukee Journal Sentinel Historical Newspapers; Hayes, "Doing What Comes Naturally"; Jenkins, *The Lawn*, 175.

¹⁰⁵ Robert Griffin, Jr., "Weed Law a Thorn to Naturalist," *Milwaukee Sentinel*, July 25, 1975, Milwaukee Journal Sentinel Historical Newspapers.

the Riveredge board recognized Riveredge's interconnection with the city rather than its separation. This change occurred as the Riveredge community became more involved in watershed issues, which affected urban, suburban, and rural spaces. The RNC developed into a place interconnected with the urban environment through its relationship with communities throughout the Milwaukee River Watershed. Rather than think of the public interest in an area removed, the Riveredge board promoted a public interest as something that connects a rural nature conservancy with the urban environment.¹⁰⁶

The idea of a watershed was not new to southeast Wisconsin. Cyril Kabat, President of the Social Society of Wisconsin, called for a study of the Milwaukee River Watershed in 1958. As early as 1940, he helped his 6th-grade class trace the Milwaukee River from one of its sources in Sheboygan County.¹⁰⁷ Shen Hou, in *The City Natural*, notes how Garden and Forest magazine editors in the late 19th century tried hard to transcend the confines of urban spaces and reached out to remote regions to redefine a state of harmony between all of nature and all people. They saw urban and rural areas connected by natural, economic, and cultural links. Recognizing various interests, the editors tried to balance urban and rural needs.¹⁰⁸

In 1976 Larsen began stressing the interconnections between communities. Not only with the various communities within the nature reserve boundaries but also with Riveredge's connection with other communities within the watershed and the world. Larsen described Riveredge as a "Noah's Ark," providing a sanctuary for wildlife and endangered species to live and a space for migrating birds to rest in their journeys north and south.¹⁰⁹

¹⁰⁶ David H. Fleck, "Letter from the President," *Riveredge Newsletter*, Spring 1972, Binder - Library, Riveredge Nature Center; Riveredge Foundation, Inc, "Proposal for Establishment of Riveredge Nature Center."

¹⁰⁷ Pohl and Kabat, "Concerning the Protection of Milwaukee River Watershed," January 5, 1958.

¹⁰⁸ Shen Hou, *The City Natural: Garden and Forest Magazine and the Rise of American Environmentalism* (Pittsburgh, PA: University of Pittsburgh Press, 2013), 182.

¹⁰⁹ Andy Larsen, "Year 2000 Coming -- Are We Ostriches," *Riveredge Newsletter*, January 1981, Binder - Library, Riveredge Nature Center.

The most visible link between rural and urban communities was the Milwaukee River. In RNC classes, schoolchildren investigated and searched for caddisflies, mayflies, and stoneflies. Riveredge educators taught the children that these insects, highly sensitive to pollution, were all classified as “class one” organisms. On the other end of the spectrum were “class three” organisms that could tolerate high levels of organic pollution, including midges, mosquito larvae, and leeches.¹¹⁰ Investigating the various microorganisms in the streams, the school children assessed the waterway’s health.

The RNC’s connection with the rest of the watershed expanded with the help of the Milwaukee Foundation, founded in 1915 by Patrick Cudahy. They provided a grant to increase the recreational use of the Milwaukee River in the northern sections. Unlike the effort to engineer recreational activities at the proposed Waubeka Reservoir, people were encouraged to pursue recreational opportunities primarily created by the Laurentian Ice Sheets retreat. The Milwaukee Foundation’s grant also helped to support courses on wetlands, the publication of the book, *Listen to the River* by Andy Larsen, and a new club, the Milwaukee River Natural Living Club.¹¹¹

The Riveredge board also recognized that their efforts to provide a sanctuary and biologically diverse landscape required them to address pollution from other lands. Students in RNC classes had already learned what happened when humans did not care about their natural surroundings. Although students enjoyed their river experiences, RNC educators warned them that they should not drink polluted river water.¹¹² Further connecting the RNC to the public interest within the entire watershed was the Milwaukee River Priority Watershed Program (MRPWP). In 1978 the Priority Watershed

¹¹⁰ Andy Larsen, “The Miner’s Canary,” *Riveredge Newsletter*, November 1975, Binder - Library, Riveredge Nature Center.

¹¹¹ Margaret Nettesheim Hoffmann, “Philanthropy,” in *Encyclopedia of Milwaukee*, ed. Amanda I. Seligman and Margo Anderson, 2016, <https://emke.uwm.edu/entry/philanthropy/>; G. Andrew Larsen, *Listen to the River* (The Milwaukee Foundation, 1981); “Wetlands: A Focus on Wetland Ecology,” *Riveredge Newsletter*, September 1981, Binder - Library, Riveredge Nature Center.

¹¹² Loren H. Osman, “Riveredge Becomes Outdoor Classroom,” *Milwaukee Journal*, May 19, 1970, Milwaukee Journal Sentinel Historical Newspapers.

Program began in the state of Wisconsin. In 1984 the State legislature identified the Milwaukee River as a priority watershed. The program's primary goal was to address nonpoint pollution and target best land management practices to improve the water quality in the state waterways.¹¹³ Involved with the MRPWP, Larsen became more active in addressing farm runoff and its impact on the life forms in the Riveredge sanctuary.¹¹⁴ Also, Larsen helped to push the Newburg water treatment facility to reduce its chance of polluting the Milwaukee River while it was painted.¹¹⁵

Another way the Riveredge community began to see itself as part of the watershed was its purchase of 50 acres along the Milwaukee River in 1985. In the past, land purchases were seen in the public interest to protect and expand the sanctuary. However, the justification this time was in the interest of the public throughout the watershed. RNC board members commented that the land provided an area for flood waters to collect, lessening the chance of flooding downstream and providing additional habitat for bird populations.¹¹⁶ Although most hydro specialists would likely say this one act by Riveredge would do very little to lessen floods further downstream, it did reflect a perceived benefit to a public that might never travel to RNC.

In 1986 both Larsen and Suzanne Wade became more involved in MRPWP. Larsen joined the Information and Education subcommittee of the MRPWP. Suzanne Wade, an education specialist at Riveredge, was a member of the Wisconsin Association for Environmental Education and the Wisconsin

¹¹³ Wisconsin Department of Natural Resources, "Wisconsin's Nonpoint Source Program Management Plan: FFY 2011-2015," June 28, 2011, <https://dnr.wisconsin.gov/search/google?keys=priority++watersheds#gsc.tab=0&gsc.q=priority%20%20watershed s&gsc.sort=>; Jeff Bode to Henry W. Maier, "Milwaukee River Priority Watershed," May 7, 1984, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 142, Folder 12, UW-Milwaukee Libraries, Archives.

¹¹⁴ Paul G. Hayes, "Little Things Mean a Lot to River," *Milwaukee Journal*, August 26, 1982, Milwaukee Journal Sentinel Historical Newspapers; Gary D. Kurer to Andrew Larsen, "Animal Waste Runoff," June 6, 1988, Riveredge Nature Center.

¹¹⁵ "Newburg Seeks Speed in Painting of Plant," *Milwaukee Journal*, May 24, 1985, Milwaukee Journal Sentinel Historical Newspapers.

¹¹⁶ Andy Larsen, "New Land Along the River," *Riveredge Newsletter*, August 1985, Binder - Library, Riveredge Nature Center.

Electric Education Advisory Board. Both Larsen and Wade understood that educating youth was not just about what was happening within the RNC sanctuary but also about the role of a watchdog protecting the entire watershed system.¹¹⁷ Although Riveredge's primary focus and mission was to educate the next generation and provide a sanctuary, Riveredge began to highlight the land's interconnections with the rest of the watershed and beyond.¹¹⁸ As a result, Riveredge needed to address a broader public audience.

Larsen and Wade were aware of the ongoing attempts to improve water quality in the Milwaukee River Watershed since the 1960s and the problems of NPS pollution. NPS pollution abatement got more attention with the formation of the MRPWP and legislation signed into law by Governor Tony Earl. However, Larsen was cautiously optimistic as he recognized the complexity of the river system and the difficulty of finding paths to cooperate across political boundaries.¹¹⁹ In 1990, the Testing the Waters (TTW) program started, the RNC's mission to both educate youth and speak to a broader audience. The TTW program was coordinated by Suzanne Wade and sponsored by the Greater Milwaukee Foundation, Helen Bader Foundation, Miller Brewing Company, the WDNR, and other state agencies. Children from sixteen schools, eventually expanding to over thirty-two schools, learned how to collect water samples throughout the watershed to understand better where problems existed and practices that might help abate pollution.¹²⁰

The first water tests found Water Quality Indexes between 58-85, giving the river system an overall "good" rating. However, water collections in the spring and after heavy rains often found higher

¹¹⁷ "Riveredge Reaches Out," *Riveredge Newsletter*, February 1986, Binder - Library, Riveredge Nature Center.

¹¹⁸ "RNC Mission Reaffirmed," *Riveredge Newsletter*, December 1985, Binder - Library, Riveredge Nature Center.

¹¹⁹ "A Clean River Is a Challenge," *Riveredge Newsletter*, April 1986, Binder - Library, Riveredge Nature Center.

¹²⁰ "Testing the Waters' Unites Schools, Nature Centers and Public Agencies," *Riveredge Newsletter*, October 1990, Binder - Library, Riveredge Nature Center; Phil Nero, "Diving In: Students from 16 Schools Testing 2 Rivers to Fight Pollution," *Milwaukee Journal*, October 20, 1990, Milwaukee Journal Sentinel Historical Newspapers; "Testing the Waters," *Milwaukee Journal*, November 1, 1989, Milwaukee Journal Sentinel Historical Newspapers.

fecal coliform in the streams due to farm run-off.¹²¹ In 1995, the students connected their studies with researchers worldwide, sharing data through the internet. Also, the TTW program led to partnerships with the Izaak Walton League's "Adopt-a-Stream" program. The RNC sanctuary's interconnections with the world and residents throughout the watershed were emphasized more than its separation from urban areas.¹²²

Other times students documented improvements in water quality. For example, Milwaukee's Jackie Robinson School students observed sow bugs in the Milwaukee River, just upstream from where the North Avenue Dam was removed (Chapter Five). The existence of sow bugs and other class one insects reflected a healthy stream, as they could not tolerate polluted waters.¹²³ The Milwaukee Metropolitan Sewerage District and the WDNR also performed their own waters tests, but Riveredge led the TTW program itself after two years of the program. Terrie Cooper of the RNC took over the project's leadership when Suzanne Wade moved to lead water quality initiatives in southwestern Wisconsin.¹²⁴ Moreover, students from participating schools gathered to report on their findings and suggest ways to improve water quality further.

Challenging the perspective of the hinterland and urban landscape were separate spheres of influence; William Cronon, in *Nature's Metropolis*, demonstrated how the development of Chicago shaped the hinterland landscape. He also emphasized that the city was a product of nature rather than

¹²¹ Tom Cioni, "Eco Patrol: Port Washington Students on Front Lines of Water Pollution Fight," *Milwaukee Journal*, December 24, 1992, Milwaukee Journal Sentinel Historical Newspapers; "Students Cover Miles of River," *Milwaukee Journal Sentinel*, December 24, 1992, Milwaukee Journal Sentinel Historical Newspapers.

¹²² "The Limits of Riveredge," *Riveredge Newsletter*, December 1989, Binder - Library, Riveredge Nature Center; "Testing the Waters Update," *Riveredge Newsletter*, December 1992, Binder - Library, Riveredge Nature Center; "Testing the Waters Update," *Riveredge Newsletter*, February 1993, Binder - Library, Riveredge Nature Center; "Environmental Education at Riveredge: Adopt a Stream," *Riveredge Newsletter*, December 1991, Binder - Library, Riveredge Nature Center.

¹²³ Don Behm, "Students Find Creatures in River - Program Teaches," *Milwaukee Journal Sentinel*, May 16, 1995, Milwaukee Journal Sentinel Historical Newspapers.

¹²⁴ "Staff Changes: Suzanne Wade," *Riveredge Newsletter*, October 1992, Binder - Library, Riveredge Nature Center; Paula A. Poda, "Teens Get Close Look at Pollution," *Milwaukee Journal Sentinel*, May 9, 1992, sec. News, Milwaukee Journal Sentinel Historical Newspapers.

an example of its separation from nature. Chicago's landscape depended on "first nature" to create what he describes as a "second nature" landscape. Cronon defined "first nature" as before the evolution of humans and "second nature" as the development that people erect over the first nature landscape. Cronon demonstrated the interconnections between urban and rural space through the markets and the natural systems which supplied it. However, he notes that economic exchanges, which took place through markets, also blinded people to the interconnections he sought to demonstrate.¹²⁵ However, the TTW program and the educational programming that went along with the river testing program led by the RNC staff helped its members see the interconnections between the hinterland and urban landscape from a watershed perspective.

Conclusion

The work of RNC staff with the TTW program was also a story of its effort to build a community that recognized its interconnection between rural and urban watershed areas. The Riveredge community looked to educate their members about people's relationship with the Milwaukee River and to imagine new interactions with life within the watershed community. In the 1960s and much of the 1970s, as state and federal government leaders regulated cities' relationship with the rivers to improve water quality and the Henry Maier Administration looked to redevelop its downtown, the RNC community separated themselves and their land from the city. However, in the 1980s, the RNC, WDNR, and the Maier Administration (Chapter Four) emphasized their connections with areas throughout the watershed. The evolution of the RNC as a sanctuary separated from the urban environment to a community through its experiences with the river and the urban, suburban, and rural watershed communities began to imagine opportunities for cooperation rather than division.

¹²⁵ William Cronon, *Nature's Metropolis: Chicago and the Great West* (New York: W. W. Norton, 1991), xvi, xvii, 18, 64, 384.

The work of the RNC community not only represented the importance of rural and urban areas' interconnectivity but also represented the effort within commonly held areas to promote biodiversity. At first, this was emphasized by the RNC board members welcoming a community that reflected the diversity of human life in southeastern Wisconsin. However, the development of the "Wild yards" reminded participants of the value of a biodiverse community. They demonstrated that the public interest in areas held in common could benefit human life by promoting biodiversity.

Riveredge expanded its sense of community, recognizing its relationship with people throughout the Milwaukee watershed community.¹²⁶ The TTW program continues today with partnerships with the Milwaukee Metropolitan Sewerage District and the Urban Ecology Center located in the lower stretches of the Milwaukee River. Over 37,000 students have participated in the TTW program since its beginning. The understanding of community connected with others over a shared public interest in the river continues to thrive among the participants.¹²⁷

¹²⁶ Tom Aranow, "From the Executive Director: Looking Back and Looking Ahead," *Riveredge Newsletter*, August 1988, Binder - Library, Riveredge Nature Center.

¹²⁷ Riveredge Staff, "Water World," 2022, <https://www.riveredgenaturecenter.org/water-world/>.

Chapter 3: Contesting the Flow of the Milwaukee River

The study of landscape history contributes its share to the new approach by reminding us, among other things, that since the beginning of history humanity has modified and scarred the environment to convey some message, and that for our own peace of mind we should learn to differentiate among those wounds inflicted by greed and destructive fury, those which serve to keep us alive, and those which are inspired by the love of order and beauty, in obedience to some divine law.¹

In Chapters One and Two, we examined how the city of Milwaukee's leaders and Riveredge Nature Center members worked to develop areas along the Milwaukee River for economic growth and conservation of natural resources and public spaces. These efforts also coincided with attempts to improve water quality. In Chapter Three, we examine how the Southeastern Wisconsin Regional Planning Commission (SEWRPC) proposed watershed approaches to control the flow of the Milwaukee River. The people residing in suburban areas along the riverway expressed a desire for the government to protect their homes from flood damage; however, engineered fixes did not come to fruition. The opposition noted ecological factors against the construction of a channel and reservoir. In addition, rural residents felt their way of life and property rights were threatened by these proposals. Both sides presented a public interest in the watershed from their point of view. Although some may contend that the enlargement of the environmental corridor served the public interest, the SEWRPC proposals to lessen flooding failed to recognize how both rural and urban perspectives could shape a watershed approach.

In the 1930s, New Deal programs put human labor and earth-moving equipment to work to control the hydrologic labor of the Milwaukee River Watershed (MRW) with levees and dams to contain

¹ John Brinckerhoff Jackson, *A Sense of Place, A Sense of Time* (New Haven: Yale University Press, 1994), vii.

floods.² Humans attempted to protect property interests and bring order to the water flow within the MRW. Despite these attempts to reshape the riverbanks to keep the water contained, ice dams formed along its winding course, and the flooding continued.

After WWII, US citizens took advantage of many government programs to build single-family homes, rapidly extending metropolitan areas into rural landscapes. Unlike early European migrants to the Milwaukee area who shaped the landscape for agricultural interests, many of these city migrants attempted to change the landscape to meet “urban” needs. Between 1945 and 1959, land developers in the seven southeastern counties of Wisconsin converted 170,000 acres of agricultural land for urban expansion. Every three days, the equivalent of a 115-acre farm was transformed into a metropolitan landscape.³ By the early 1960s, less than half of the original MRW’s wetlands remained.⁴ Seeking spacious lots for their homes, new residents of these suburban communities of Milwaukee transformed the landscape. During this time, the city of Glendale, incorporated in 1950, was advertised as a place close to everything with low taxes. Furthermore, suburbanites supported the construction of a new expressway to provide them with quick access to work and shopping.⁵

In the 1960s, some scholars worried that the quick influx of people to these rural lands would destroy nature and spread urban problems across a wider area. For example, William Whyte in “A Plan to Save the Vanishing Countryside” and Peter Blake, in *God’s Own Junkyard*, depicted the carnage or “rape” of the countryside. Across the United States from the mid-1950s to the mid-1970s, almost a

² Robert R. Morris, *Glendale, Wisconsin: Rich Past, Bright Future, 1950-2000* (Glendale: Wisconsin 50th Anniversary Committee, 2000), 26, 43.

³ Charles Ball, “Economic and Ecologic Base Study, City of Mequon, Wisconsin” (Milwaukee: Nelson-Ball and Associates, August 26, 1959), 2.

⁴ Southeastern Wisconsin Regional Planning Commission, *A Comprehensive Plan for the Milwaukee River Watershed: Inventory Findings and Forecasts*, vol. One (Waukesha, WI: WI Department of Natural Resources: The US Department of Housing and Urban Development: US Department of the Interior, 1970), 65, http://www.sewrpc.org/SEWRPCFiles/Publications/pr/pr-013_vol-01_comp_plan_for_the_milwaukee_river_watershed.pdf.

⁵ Morris, *Glendale, Wisconsin*, 59–60.

million acres of marshes, swamps, bogs, and coastal estuaries were drained by urban development.⁶ This damage to the MRW ecosystem motivated the Riveredge founders to purchase lands, protecting areas from further encroachment (Chapter Two). In effect, human-built landscapes have reduced the biological processes of the watershed's ability to filter and store water. For example, the wetlands slowed the water movement after spring snow melts and heavy rains, which helped reduce flood damage. Ann Vileisis, in *Discovering the Unknown Landscape*, argues that the destruction of wetlands has contributed to the public's willingness to drain wetlands in the name of economic progress as they don't understand the actual costs.⁷ Also, the Milwaukee Department of City Development (MDCD) noted that flooding occurred in urban areas where structures built on floodplains, paved roads, driveways, and rooftops had increased runoff. Thus, further development in the northern regions of the MRW could increase the chances of flood damage within the city limits.⁸

Between 1940 and 1960, the population of the metropolitan area of southeast Wisconsin expanded from 745,000 to 1,025,400.⁹ Developers began to question how the region could grow to an estimated 2.7 million people by 1990. One of the ideas was for the construction of "new towns" to better distribute population or build "another Milwaukee."¹⁰ John McCarthy, in *Making Milwaukee Mightier*, argued that the 1954 Housing Act was passed, in part, to lessen US urban density, making cities less vulnerable to nuclear attacks. Mayor Frank Zeidler's administration encouraged civil defense planning to relieve Milwaukee's congestion and housing shortage. Zeidler's plans to lower the city's

⁶ Adam W. Rome, "William Whyte, Open Space, and Environmental Activism," *Geographical Review* 88, no. 2 (1998): 259-260, <https://doi.org/10.2307/215804>; Peter Blake, *God's Own Junkyard: The Planned Deterioration of America's Landscape* (New York: Holt, Rinehart and Winston, 1964).

⁷ Ann Vileisis, *Discovering the Unknown Landscape: A History of America's Wetlands* (Washington, D.C: Island Press, 1997), 9.

⁸ Department of City Development, *Preliminary Report: On the Milwaukee River*, 1963, 8; Col. A.R. Striegl, "Milwaukee's Flood Problem: Special Report," *Milwaukee Engineering*, June 1960, 21.

⁹ US Army Engineer, District Chicago, "Preliminary Report: Summary Flood Control Study of the Milwaukee River and Tributaries, Wisconsin," 3.

¹⁰ "Destroying the Character of Southeastern Wisconsin Part II," *Milwaukee Magazine*, February 1970, 22, 28, Milwaukee Magazines, UW-Milwaukee, Special Collections.

density also called for annexing communities as “satellite cities.” Despite Zeidler’s desire, the bordering districts rebelled and fought annexation. Yet, the number of people moving to southeast Wisconsin continued to increase along with pressure to build homes in environmentally sensitive areas, including flood plains.¹¹

SEWRPC was founded in 1960. Helping to create SEWRPC, Wisconsin Governor Gaylord Nelson recognized that a growing state population would require more recreational spaces. Nelson hoped SEWRPC would foster development with recreational sites near metropolitan areas by promoting regional solutions.¹² SEWRPC took an active role in studying regional problems and advising local municipalities and the seven county governments of southeast Wisconsin of possible future development and conservation of lands. SEWRPC reported that some 1,700 acres in the lower MRW had been taken from their natural floodwater storage and wildlife habitat uses and converted to residential and industrial landscapes.¹³ SEWRPC recognized that these concerns coincided with population growth and property damage resulting from flooding in the MRW. Forecasting the population of southeastern Wisconsin would double between 1970-1990, SEWRPC argued that unplanned development and increased demand for public access to natural resources would lead to more property damage.¹⁴

Working to address environmental concerns from a regional perspective, the Milwaukee Common Council and the Milwaukee County Board of Supervisors in 1965 asked SEWRPC to study the MRW. Forming the Milwaukee River Watershed Committee, they recognized how using the waterway in one section could adversely impact communities in other parts of the watershed. The committee included twenty-four elected and appointed local public officials and concerned citizens, along with

¹¹ John M. McCarthy, *Making Milwaukee Mightier: Planning and Politics of Growth, 1910-1960*. (DeKalb, IL: Northern Illinois University Press, 2009), 140, 144, 152, 158–59.

¹² Paul G. Hayes, *Master Planners: Fifty Years of Regional Planning in Southeastern Wisconsin, 1960-2010* (Milwaukee, Wis.: Marquette University Press, 2010), 23.

¹³ Southeastern Wisconsin Regional Planning Commission, *Milwaukee River Watershed Planning Program Prospectus* (Waukesha, WI, 1966), 25.

¹⁴ SEWRPC, “Resources Planning - A Major Regional Concern.”

eighteen SEWRPC technical advisors representing local, state, and federal agencies responsible for resource conservation and management. The study was financed by county, state, and federal government agencies. Members of the committee studied and reviewed the alternative plans for pollution abatement and flood control “in terms of engineering, economic, and legal feasibility, and how well each element satisfied the watershed development objectives.”¹⁵ SEWRPC published a two-volume study, *A Comprehensive Plan for the Milwaukee River Watershed, Inventory Findings and Forecasts*, in 1970 and, *A Comprehensive Plan for the Milwaukee River Watershed, Alternative Plans and Recommended Plan*, in 1971. Although several alternatives were examined, the Saukville Diversion Channel and the Waubeka Reservoir were the most controversial plans. Expanding an environmental corridor through local land use plans became the preferred action plan. However, even this plan was deemed controversial as supporters and opponents of the environmental corridor plan debated what authority would enforce and fund it.¹⁶

In this chapter, I will examine the proposals for a Saukville Diversion Channel, the Waubeka Reservoir, and the environmental corridor to control the water flow of the Milwaukee River. Although SEWRPC stressed the importance of a watershed approach to address regional concerns, the commission found translating these proposals into a shared public interest challenging. William Cronon, in *Uncommon Ground*, contends that seeing beyond experts’ cultural views of nature is essential. He notes how people who have failed to understand the environment from other peoples’ perspectives often misunderstand the world and themselves.¹⁷ Although the failure of the Saukville Diversion Channel and the Waubeka Reservoir engineering fixes to control flooding could be viewed as unacceptable based

¹⁵ Southeastern Wisconsin Regional Planning Commission, “Comprehensive Milwaukee River Watershed Report Completed,” *Southeastern Wisconsin Regional Planning Commission Newsletter*, October 1971, 6.

¹⁶ SEWRPC, “Comprehensive Milwaukee River Watershed Plan Completed,” *SEWRPC - Newsletter*, October 1971, Henry Reuss Papers, Box 53, Folder 20, Milwaukee River, 1968-1969, UW-Milwaukee Libraries, Archives.

¹⁷ William Cronon, ed., *Uncommon Ground: Toward Reinventing Nature* (New York: W. W. Norton & Company, 1995), 21–22.

on ecological grounds or a preference for a non-engineered solution, the failure to gain a consensus or a holistic solution is best understood by the inability to find common ground between people's conceptions of nature and humans' relationship with natural resources, especially between rural and suburban residents. Thus, the failure of these proposals for a watershed solution highlighted the importance of recognizing regional, cultural, and historical understandings of people living within the watershed and not just the portrayal of an engineered or ecological solution to lessen property damage caused by flooding in the MRW.

To demonstrate my argument, I will examine the unruly Milwaukee River and the previous decisions made by various government agencies to address flooding and property damage. Often these plans involved engineered fixes to contain the water within the banks. However, accurately determining how the waters would flow after heavy rains and spring snow melts appeared elusive. Also, housing developers built on floodplains as the chance of floods lessened. As a result, when floods did occur in the early 1960s, more people's property was destroyed. Moreover, people clamored for additional government assistance.

The second half of the chapter analyzes the debates over the three proposals presented by SEWRPC to address flooding in the MRW: the Saukville Diversion Channel, the Waubeka Reservoir, and an environmental corridor. These proposals and the following debates revealed the difficulty of finding common ground over common water. In addition, rather than reflect a special interest, I claim the opposing sides of the debate reflect different conceptions of public interest in the utilization and protection of the public and private lands and waters throughout the MRW. Although a shared public interest did not form over how best to control water flow and protect property, the debates revealed the need to incorporate rural and urban perspectives if a substantial change was to occur.

The Milwaukee River: The Unruly Waterway

Urban planners envisioned methods to control the Milwaukee River's water flow to accomplish economic development goals, expanding suburban residences and recreational interests. The US Army Corps of Engineers described floods as events when the water flow within the riverbanks exceeded the river's capacity. The capacity of a waterway was measured in cubic feet per second (cfs). Therefore, a river's capacity denoted the amount of water (cfs) the river could move inside its banks. The Milwaukee River's capacity at Saukville was 3000cfs and 6000cfs near the river's mouth. The average flow of the Milwaukee River was approximately 400cfs. The most significant floods recorded in the twentieth century were in March 1918 and August 1924. These natural disasters had peak water flows over 14,000cfs, thirty-five times the river's average flow.¹⁸ Property damage for the 1918 disaster was not provided, but the 1924 calamity was over one million dollars.¹⁹ Although these twentieth century floods caused significant property damage, the US Corps of Engineering estimated a peak discharge of 35,000cfs was a statistical possibility. This potential catastrophic event would result in astronomical destruction to public and private properties. In addition, higher Lake Michigan water levels, development around the Milwaukee River banks, and changes in the river channel's depth and width could put the city's public and private properties at risk during lower flows.²⁰

Although the MRW's flood waters were higher in the early twentieth century, property damage resulting from highwaters was rising. According to the MDCD, between 1914 and 1960, sixteen floods averaged over 6000cfs.²¹ The disasters of April 1959 and March 1960 each resulted in an estimated

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¹⁹ US Army Engineer, District Chicago, "Preliminary Report: Summary Flood Control Study of the Milwaukee River and Tributaries, Wisconsin," 6; Southeastern Wisconsin Regional Planning Commission, *A Comprehensive Plan for the Milwaukee River Watershed: Inventory Findings and Forecasts*, 1:171.

²⁰ Milwaukee River Technical Study Committee, *The Milwaukee River: An Inventory of Its Problems, an Appraisal of Its Potentials* (Milwaukee, WI: City of Milwaukee, 1968), 36-38.

²¹ Department of City Development, *Preliminary Report: On the Milwaukee River*, 30.

\$400,000 damage.²² Ted Steinberg, in *Acts of God*, argues that human decision-making, not nature's perceived uncontrollability, was often to blame for increased property damage. For example, he notes that the 1993 flood damage along the Mississippi River at St. Charles, Missouri was a product of federal programs that had encouraged development within the flood lands and the drainage of wetlands.²³ Similarly, SEWRPC's 1966 study on the Milwaukee River watershed attributed residential and industrial occupancy in the floodplain to the rise in flood damage.²⁴

Richard White, in *The Organic Machine*, demonstrates how nature has acted according to its own rules and shaped human decisions. White contends that the human world and the natural (non-human) world are not separate entities but intertwined and inseparable. White demonstrates how the Columbia River acted on its own accord. For example, the river's tendency to maintain an even velocity resulted in the widening or building up of the riverbed over time. White notes that the Columbia River was dammed to maximize profit, yet the hydrologic power of the river's natural flow limited humans' control. Moreover, human intervention in the natural system of the riverway required human labor to maintain the dams.²⁵

Scholars have noted the failures to lessen flood damage in the twentieth century, as city planners relied on engineered solutions.²⁶ For example, Jared Orsi, in *Hazardous Metropolis*, notes that city of Los Angeles officials often assumed that nature's chaos caused havoc only when engineers did

²² Southeastern Wisconsin Regional Planning Commission, *Milwaukee River Watershed Planning Program Prospectus*, 23.

²³ Ted Steinberg, *Acts of God: The Unnatural History of Natural Disaster in America*, (Oxford: Oxford University Press, 2000), xxi-xxii.

²⁴ Southeastern Wisconsin Regional Planning Commission, *Milwaukee River Watershed Planning Program Prospectus*, 23.

²⁵ Richard White, *The Organic Machine: The Remaking of the Columbia River* (New York: Hill and Wang, 1996), ix, 12, 59, 112-13.

²⁶ Orsi, *Hazardous Metropolis*, 9; D.W. Meinig, "The Beholding Eye: Ten Versions of the Same Scene," in *The Interpretation of Ordinary Landscapes: Geographical Essays* (New York: Oxford: Oxford University Press, 1979), 39-40; Rutherford H. Platt, *Open Land in Urban Illinois; Roles of the Citizen Advocate* (DeKalb, IL: Northern Illinois University Press, 1971), 28.

not adequately prepare. The engineers' solution to flooding required more bulldozers and concrete.²⁷ The 1930s engineered solutions to address the Milwaukee River's unruliness proved equally inadequate. For example, funded through the federal government, Works Progress Administration (WPA) workers redirected the flow of the Milwaukee River in Lincoln Park.²⁸ However, in the 1950s, property owners in Glendale continued to experience flood damage. Rather than recognize the hydrologic process that made earlier programs fail, Glendale's solution to the flooding was another engineering fix. Beginning in the 1950s, the Milwaukee and Metropolitan Sewerage Commissions began deepening and widening tributaries of the Milwaukee River, including Lincoln Creek. This strategy, in theory, common throughout the country in the 1960s, was a way to accelerate water through flood areas before it overflowed the banks. However, flood damage continued.²⁹

A flood would cause minor property damage without human activity within a floodplain. Ironically, humans' desire to live and work closer to the river expanded the possible threats and yearly damages resulting from floods in the MRW. During the fifties and sixties, Glendale followed this blueprint and developed land in the floodplains. By 1971, developers had constructed 200 homes within the 100-year flood plain.³⁰ Following a consistent pattern to protect against property damage, SEWRPC looked for engineered solutions to lower the chances of flood damage in Glendale and throughout the MRW. Although SEWRPC offered proposals to reduce development in the floodplain, the public interest and opposition to more engineered solutions to lessen flood damage garnered the most attention. Yet the opposition did not reflect a widespread dislike for engineered solutions. Instead, the most significant resistance correlated to regional differences. One vision shared a public interest in expanding urban areas, and the other shared a public interest in preserving rural lands.

²⁷ Orsi, *Hazardous Metropolis*, 9.

²⁸ Gurda, *Milwaukee: A City Built on Water*, 170; Gurda, *The Making of Milwaukee*, 285–87.

²⁹ Gurda, *Milwaukee*, 172–73.

³⁰ Hayes, *Master Planners*, 51.

Saukville Diversion Channel

One of the proposed engineering plans, which would have been capable of containing many of the floods experienced in the twentieth century, was the Saukville Diversion Channel. The plans called for a diversion channel starting along the Milwaukee River in Saukville, diverting waters 1.5 miles south of Port Washington to Lake Michigan.³¹ Representative Henry Reuss supported scientific data collection to evaluate the project's economic feasibility.³² Studies claimed that flood waters would be effectively removed from the river to the channel when the water reached 4,000cfs, sending the additional water to Lake Michigan, just south of Port Washington. Researchers argued the channel would protect people's property from a flood with a discharge of 17,500cfs, which had an estimated frequency of once every 100 years (1% yearly chance), exceeding the two most significant floods of record.³³ To be this effective, the channel needed to be 70-90 feet wide at the bottom and 390-1,105 feet wide across the spoil banks at the top of the levees. This diversion channel would be capable of diverting approximately 11,000cfs from the Milwaukee River, helping to ensure that water, even at the height of the highest recorded flood in 1918, would remain in the riverbanks as it traveled to Lake Michigan.³⁴

According to the 1965 US Army Corps of Engineers Survey, the total cost of the diversion dam would be \$4,410,000 for construction, \$350,000 for land rights and easements, and \$591,000 for the construction of highway bridges over the diversion channel. In addition, various government units would need to spend approximately \$12,000 on yearly maintenance. However, the US Army Corps in early

³¹ Milwaukee River Technical Study Committee, *The Milwaukee River*, 39.

³² "Seek Completion of River Flood Survey in Late '63," *Sheboygan Press*, October 17, 1962, Newspaper Archive: Academic Library Edition.

³³ Milwaukee River Technical Study Committee, *The Milwaukee River*, 39; "Proposed Channel to Solve Ozaukee's Flood Problem," *Sheboygan Press*, February 9, 1961, Newspaper Archive: Academic Library Edition.

³⁴ US Army Engineer, District Chicago, "Preliminary Report: Summary Flood Control Study of the Milwaukee River and Tributaries, Wisconsin"; "Army Engineers Give Support to Milwaukee River Project," *Sheboygan Press*, January 6, 1965, Newspaper Archive: Academic Library Edition.

1964 said the channel could save \$181,000 in annual flood damage. With the project's capital costs amortized over many years, the benefits appeared to outweigh the costs.³⁵

Support for the Saukville Diversion Channel came from various river committee members and residents impacted by the recent floods. For example, Leroy Grossman, Chairman of the Milwaukee River Flood Control Committee, supported the project.³⁶ Grossman, seemingly confident in the likely construction of the diversion channel, petitioned the Wisconsin Public Service Commission to act on behalf of petitioners in Saukville, Grafton, Mequon, Thiensville, River Hills, Brown Deer, and Glendale.³⁷ In letters sent to Representative Henry Reuss, the Mequon-Thiensville Advancement Association and Irwin Unger expressed support for the diversion proposal to lessen future property damage.³⁸ Members of the Milwaukee River Technical Study Committee (MRTSC) claimed the diversion channel would allow the City of Milwaukee more freedom in planning and executing river projects in downtown Milwaukee.³⁹ Originally, Congressman John Race, representing the people from the northern counties of the MRW, showed his support for the channel. He noted that the diversion channel would not impact existing fish and wildlife resources.⁴⁰ Representative Henry Reuss supported the multi-million-dollar diversion channel, claiming it was the best possible means to prevent yearly flooding of properties south of Saukville.⁴¹

Despite perceived benefits, the voices of those who opposed the construction of the Saukville Diversion Channel would eventually defeat its passage. Representative John Race, seemingly

³⁵ "Army Engineers Give Support to Milwaukee River Project"; Richard W. Cutler, *Greater Milwaukee's Growing Pains, 1950-2000* (Milwaukee, WI: Milwaukee County Historical Society, 2001), 120–21; Milwaukee River Technical Study Committee, *The Milwaukee River*, 39.

³⁶ "Seek Completion of River Flood Survey in Late '63."

³⁷ "Petition for Flood Control in Ozaukee," *Sheboygan Press*, March 17, 1964, Newspaper Archive: Academic Library Edition.

³⁸ Allen Goldman to Representative Henry Reuss, November 28, 1960, Henry Reuss Papers, Box 35, Folder 21, UW-Milwaukee Libraries, Archives; Irvin W. Unger to Congressman Henry S. Reuss, October 28, 1960, Henry Reuss Papers, Box 35, Folder 21, UW-Milwaukee Libraries, Archives.

³⁹ Milwaukee River Technical Study Committee, *The Milwaukee River*, 40.

⁴⁰ "Army Engineers Give Support to Milwaukee River Project."

⁴¹ "Proposed Channel to Solve Ozaukee's Flood Problem."

backtracking on his original comments that the diversion channel would be a good idea, called for more public hearings on redirecting the river's waters. Defending his apparent flip-flop, he mentioned that the channel was previously considered in the 1950s and that recent development along the proposed water passage made it less appealing. At these local hearings, residents in Ozaukee County spoke out against the plan for a "Big Ditch" splitting Ozaukee County in half, north and south, suburban and rural. In addition, Port Washington mayor Frank Meyer defended his community's economic and property interests, claiming that Port Washington would be asked to pay for the ditch, but would not benefit, because it was not in the flood area (Port Washington is also outside of the MRW). Moreover, he mentioned residents' concerns that pollution would enter Lake Michigan from the diversion channel rather than be contained in the Milwaukee River Basin. Port Washington residents worried this might lessen their property values and recreational opportunities.⁴²

Other SEWRPC members expressed their dismay over the limited practicality of the diversion channel. For example, George Watts, a Milwaukee River Watershed Committee member, spoke negatively of the enormous ditch and its limited use-value beyond flood control.⁴³ SEWRPC desired a watershed plan that addressed water pollution concerns, open space, and recreational needs. In addition, they recommended that planning maps delineated floodplains and floodways to assist land control measures.⁴⁴ Also, George Watts, SEWRPC, and the MDCD expressed concerns about restricting the water flow during high water because it would handicap the river's ability to flush debris and pollution out of the waterways. In addition, reducing the water flow increased silting in the lower

⁴² "Rep. Race Told of Ozaukee Opposition to 'Big Ditch,'" *Sheboygan Press*, February 13, 1965, Newspaper Archive: Academic Library Edition; "Race Asks for Public Hearing," *Oshkosh Daily Northwestern*, February 15, 1965, Newspaper Archive: Academic Library Edition.

⁴³ George Watts, *Insurrection in Milwaukee: The Right to Rise* (Milwaukee, WI: Linden Design, 2003), 54; Cutler, *Greater Milwaukee's Growing Pains*, 121–22.

⁴⁴ Southeastern Wisconsin Regional Planning Commission, *Milwaukee River Watershed Planning Program Prospectus*, 40.

Milwaukee River.⁴⁵ Although Wisconsin Governor Warren Knowles initially expressed support for the Saukville Diversion plan, he was ultimately persuaded by SEWRPC, and perhaps the City of Milwaukee, to hold off on the start of the channel until SEWRPC completed its study of a multi-use reservoir at Waubesa.⁴⁶ However, due to rising inflation, costs outweighed the benefits when the diversion channel was finally reconsidered in 1970.⁴⁷

Matthew Klinge notes that groups in Seattle framed their sense of place into a utopian ideal that reflects a narrow perspective.⁴⁸ Supporters of the Saukville Diversion plan appeared to hold their vision of a natural landscape that needed to be fixed or improved to keep the river in its banks, pleasing the residents along the river south of the diversion. These residents, especially with homes along the riverway, appeared to value the river for its aesthetic appeal. However, these interests required human labor to limit the MRW's "chaotic nature," especially during spring rains and snow thaws. From the perspective of the residents living near the proposed diversion channel, their natural landscape would be scarred by constructing a "large ditch" to solve the suburbanites' problems. Thus, they viewed the diversion channel as an economic and aesthetic burden. Although SEWRPC proposed the Saukville diversion channel as a possible solution to address flooding in the watershed, its impact would burden rural residents disproportionately while favoring suburban residents living downstream.

James D. Proctor argues, "the intrinsic value in nature implies that its worth is independent of its utility to humans; instrumental value implies that its worth depends on its ability to serve a human

⁴⁵ Watts, *Insurrection in Milwaukee*, 54; Cutler, *Greater Milwaukee's Growing Pains*, 121–22; Department of City Development, *Preliminary Report: On the Milwaukee River*.

⁴⁶ Henry Reuss to George Berteau, July 6, 1971, Henry Reuss Papers, Box 60, Folder 9, UW-Milwaukee Libraries, Archives; Donald A. Schwartz to Colonel John C. Mattina, "Milwaukee River Flood Control Study File NCCED-R," August 20, 1964, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 83, Folder 20, UW-Milwaukee Libraries, Archives; Alex P. LeGrand to Mayor Maier, "Milwaukee River Flood Control Legislation," February 23, 1966, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 83, Folder 21, UW-Milwaukee Libraries, Archives.

⁴⁷ K.W. Bauer to Henry W. Maier, January 25, 1971, 4, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 115, Folder 7, State Historical Society of Wisconsin.

⁴⁸ Matthew W. Klinge, *Emerald City: An Environmental History of Seattle* (New Haven: Yale University Press, 2007), 264.

end.”⁴⁹ SEWRPC studied the economic cost of the project, which viewed the instrumental value of the property, reflecting an estimated cost of sale. However, the lands that were not being “used or maintained” held more intrinsic than economic value by people who resided in the area. Moreover, creating the “big ditch” would have little utility or intrinsic value for them. Fortunately for the people against the diversion channel, the development interest, expressed partly by SEWRPC, hoped for a multi-use flood control measure rather than a structure limited to flood control use. The Saukville diversion channel failed to portray a shared public interest in its construction.

The Waubeka Reservoir: A Multi-Purpose Fix to an Imperfect Stream

Regional planning efforts also reflected the public interest in more recreational opportunities. Many Milwaukee area political leaders and state organizations concerned with the expected population explosion called for the development and protection of lakes and open spaces for recreation. For example, the Wisconsin Conservation Department supported legislation to ensure greater access to the waterways and the need to clean them of debris, which clogged the streams and created “mud holes” of the lakes.⁵⁰ Also, a SEWRPC study revealed the high demand for swimming, boating, and fishing in the MRW.⁵¹

The northern MRW was important not only because it was the origin of surface waters but also because it was a place for weekend tourists’ recreational interests. For example, Long Lake was filled with skiers, fishers, and bathers from Milwaukee and Chicago metropolitan areas on summer weekends. Although dairy farming and agriculture operations desired land for food production, most economic

⁴⁹ James D. Proctor, “Whose Nature? The Contested Moral Terrain of Ancient Forests,” in *Uncommon Ground: Rethinking the Human Place in Nature*, ed. William Cronon (New York: W. W. Norton, 1996), 281.

⁵⁰ Cyril Kabat and Melville Cohee, “Milwaukee River Watershed: Outdoor Recreation Demands and Ecological Problems” (Conference on Resource Conservation through Regional Planning: The Milwaukee River Watershed: Wisconsin Department of Natural Resources, October 26, 1968).

⁵¹ Southeastern Wisconsin Regional Planning Commission, *A Comprehensive Plan for the Milwaukee River Watershed: Inventory Findings and Forecasts*, 1:397–99.

users hoped for more recreational areas throughout the MRW.⁵² The cultural complexity of citizens' expectations exemplified in this transition period mirrored the arguments debated over changing the landscape of the MRW.

Matthew Gandy, in *Concrete and Clay*, argues that the reshaping of nature has made urban life possible.⁵³ In *Taming Manhattan*, Catherine McNeur demonstrates how Manhattan officials' attempts to erase urban agriculture in the nineteenth century resulted in debates over what was appropriate in urban versus rural spaces. Wealthy patrons desired parklands for leisure, while the poor sought the same areas for labor and survival.⁵⁴ In the 1960s, people residing in the MRW debated how much of the urban landscape would expand into the rural lands. Like the Saukville Diversion Channel arguments, the Waubeka Reservoir debates demonstrated residents' conceptions of the public interest based on where they lived in relationship to the proposed structure.

SEWRPC's most extensive and expensive engineering proposal was the Waubeka Reservoir. It would include a 50-57 foot dam at an outlet of a natural valley, approximately a half-mile upstream from the village of Waubeka, Wisconsin, stretching across parts of Ozaukee and Washington counties. The dam could hold about 155,000 acre-feet of water (an acre-foot is equivalent to a foot of water spread across an acre of land) and form a 10,400-acre lake with average depths between 15-40 feet. In addition, it would have the capacity to expand to 12,200 acres during high water times to help contain water equivalent to the highest floods of record.⁵⁵ Moreover, other potential projects suggested the Waubeka Reservoir could have been utilized as a hydroelectric storage pond with water pumped from

⁵² Southeastern Wisconsin Regional Planning Commission, *Milwaukee River Watershed Planning Program Prospectus*, 13–14.

⁵³ Matthew Gandy, *Concrete and Clay: Reworking Nature in New York City* (Cambridge, Mass: MIT Press, 2002), 2, 37.

⁵⁴ Catherine McNeur, *Taming Manhattan: Environmental Battles in the Antebellum City* (Cambridge, MA: Harvard University Press, 2014), 4.

⁵⁵ Southeastern Wisconsin Regional Planning Commission, *A Comprehensive Plan for the Milwaukee River Watershed: Alternative Plans and Recommended Plan*, 2:80; Cutler, *Greater Milwaukee's Growing Pains*, 123.

Lake Michigan to Waubeka in low-peak energy times and then reversed to Lake Michigan during high-peak energy demands. In addition, the pumping station could maintain a consistent flowage in the reservoir and current in the river downstream.⁵⁶ Although the public was interested in more water recreation opportunities, this project, like the Saukville Diversion Channel, was never authorized.

Harza Engineering, the firm that designed the plans for the Waubeka Reservoir, recommended the construction of a multi-purpose reservoir to control drainage and provide a place for water recreation. A new dam would contain the downward rush of floodwaters after snowmelts and heavy rains to limit flooding. It would also create a recreational lake serving residents and tourists. Finally, the third advantage was that it could improve water quality downstream by increasing the water flow of the Milwaukee River during low flow periods.⁵⁷ Although the Waubeka reservoir's total cost was over \$47 million, the annual benefit of eliminating flood damage, creating another space for water recreation activities, and other economic benefits associated with the water reservoir construction would more than compensate for the expense.

Moreover, its 1.37 benefit-to-cost ratio was better than the Saukville Diversion Channel's perceived benefits. In addition, if the reservoir increased the Milwaukee River current during dry periods, it could help to address stagnant water and the stench of dead alewives in downtown

⁵⁶ R.W. Burwell, "Letter from R.W. Burwell, Regional Director, US Department of the Interior, Fish and Wildlife Service to District Engineer, US Army Engineer District Chicago, Dated June 8, 1964, Appendix E," in *Survey Report for Flood Control on Milwaukee River and Tributaries, Wisconsin* (Chicago: US Army Engineer District, Chicago, 1964), E-8; Herbert Moore, "New Idea: Pump Storage! A Multipurpose Source of Water for Public Supplies," (*Water Works Engineering*, April 1962) Henry Reuss Papers, Box 35, Folder 21, University of Wisconsin-Milwaukee Libraries, Archives.

⁵⁷ James C. Ringenoldus, "Flood and Pollution Problems of the Milwaukee River System" (Harza Engineering Company, October 1968), Izaak Walton League of America, Milwaukee Chapter, Box 2, Folder Milwaukee River Restoration Council, State Historical Society of Wisconsin; Southeastern Wisconsin Regional Planning Commission, *A Comprehensive Plan for the Milwaukee River Watershed: Alternative Plans and Recommended Plan*, 2:82; "Town Port Civic Association Opposes Proposed Waubeka Dam," *Sheboygan Press*, January 6, 1971, Newspaper Archive: Academic Library Edition.

Milwaukee.⁵⁸ Thus, like the Saukville Diversion Channel, urban and suburban residents downriver favored the proposed dam as it satisfied their recreational and housing concerns.

The most extensive support for the Waubeka Reservoir came from Glendale's residents, the people most frequently impacted by the Milwaukee River's floodwaters. Without the reservoir, over 500 homes would continue to be in danger of flood damage, with over 300 homes in Glendale alone.⁵⁹ In the 1950s and 1960s, federal housing programs contributed to Glendale's residential boom. However, the unruliness of the Milwaukee River dampened their dreams.⁶⁰

Not only did the engineers predict a decrease in the number of flood events, but also, the artificial lake would have the ability to generate \$1.2 million in recreational fishing and \$2.3 million in additional recreational spending. This spending coincided with Gaylord Nelson's Outdoor Recreation Action Plan (ORAP), passed in 1961. ORAP was a \$50 million program paid for by a one-cent cigarette pack tax. The money raised through the tax was earmarked to pay for the land acquisition for recreation and conservation purposes. Supporters of ORAP hoped to alleviate health and sanitation problems that resulted from overcrowded parks. Like SEWRPC's regional planning focus, Nelson recognized the necessity of ensuring urbanization and development coincided with the protection and expansion of open space and recreational opportunities for a growing population.⁶¹ In 1969, assisting recreation

⁵⁸ Southeastern Wisconsin Regional Planning Commission, *A Comprehensive Plan for the Milwaukee River Watershed: Alternative Plans and Recommended Plan*, 2:74–78, 98; Bill Bulger to Mayor Henry Maier, "Report on Environmental Problems: Lecture #1 by H.C. Brockel," February 12, 1971, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 115, Folder 7, State Historical Society of Wisconsin; George Berteau to Honorable William A. Steiger, November 16, 1970, Henry Reuss Papers, Box 60, Folder 7, UW-Milwaukee Libraries, Archives.

⁵⁹ "Waubeka 'Lake' Rejected," *Sheboygan Press*, November 18, 1970, Newspaper Archive: Academic Library Edition.

⁶⁰ Morris, *Glendale, Wisconsin*, 59–60.

⁶¹ Bill Christofferson, *The Man from Clear Lake: Earth Day Founder Senator Gaylord Nelson* (Madison, WI: University of Wisconsin Press, 2004), 138–41.

enthusiasts, Governor Knowles supported additional funding to restore and protect existing lakes and create more lakes.⁶²

George Watts noted that the cost-benefit ratio of the Waubeka dam was favorable. A critic of the Saukville Diversion channel as nothing more than a big ugly ditch, Watts commented that the Waubeka Reservoir could provide lakeside development, effectively expanding the property tax base of communities bordering the proposed reservoir.⁶³

Similar to the Saukville Diversion plan, the most outspoken critics of the Waubeka reservoir were local residents. For example, Joan Rosenberger, a resident of Farmington, Wisconsin, argued that the strategy was not worth drowning 3,000 trees and acres of beautiful land.⁶⁴ Norbert Dettman reminded fellow residents of Farmington that they had been fighting the plans for a reservoir since the 1930s. Dettman blamed the “uninformed Milwaukee politicians” for failing to recognize that the federal Works Progress Administration (WPA) and Wisconsin Public Service Commission had rejected plans for a reservoir multiple times since 1938.⁶⁵ The Works Progress Administration, one of President Franklin D. Roosevelt’s New Deal programs during the Great Depression, constructed dams and deepened river channels to lessen flooding along the Milwaukee River. Yet they didn’t pursue the creation of the reservoir.

Others from Washington County mentioned their desire to maintain the region’s rural character.⁶⁶ Farmers and landowners argued they would be flooded out “just to provide recreation to

⁶² Warren P. Knowles and Wisconsin Boaters, January 3, 1969, Warren P. Knowles Papers, 1910-1970, Series 2142 General Correspondence, Box 30, Folder 3, Wisconsin Historical Society.

⁶³ Watts, *Insurrection in Milwaukee*, 53–56.

⁶⁴ “Concerned Citizens Discuss Proposed Reservoir, I-Road,” *Sheboygan Press*, March 15, 1971, Newspaper Archive: Academic Library Edition.

⁶⁵ “Waubeka Area Towns Set Watershed Confab,” *Sheboygan Press*, February 25, 1972, Sheboygan Press Newspaper Archives.

⁶⁶ “Farmington Area Residents Seem Against Reservoir,” *Fond Du Lac Commonwealth Reporter*, November 14, 1970, Newspaper Archive: Academic Library Edition.

the people from the Milwaukee area.⁶⁷ SEWRPC representative Richard Cutler recalled that the most effective opposition came from farmers and local officials who disapproved of the lake because it would remove nineteen square miles from the tax rolls. They did not believe Harza Engineering's forecast that the lake would attract new recreational facilities more valuable than the lost tax base.⁶⁸

Also, ecological interests spoke up against the proposed Waubeka Reservoir. For example, Philip Whitford, a UWM ecologist and member of Riveredge Nature Center, opposed the reservoir. He reported that sediment would collect behind the dam, and the lake would silt up quickly. Moreover, the shallow waters would heat up so the reservoir would only support rough fish: carp and bullheads, rather than sport fish that were more desirable to catch and eat. He estimated the reservoir would have a 20-year recreation value before it filled with cattails. In addition, Whitford also noted that the studies did not include a groundwater impact survey to determine if surrounding lands would be turned into swamplands.⁶⁹

The lack of support from Representative Henry Reuss and the US Army Corps of Engineers effectively ended the plans for the Waubeka reservoir. Although Reuss conceded that the benefit-to-cost ratio worked in favor of the reservoir, the recreational benefits exceeded the flood and energy benefits. Thus, federal funding was unlikely.⁷⁰ Congressman Reuss objected to the proposal, highlighting that northern MRW residents, most directly impacted, should not have to pay for a project they did not

⁶⁷ "Reservoir Dam Proposed Again at Waubeka," *Sheboygan Press*, January 27, 1972, Newspaper Archive: Academic Library Edition; Emerald Valley Association, Lake Twelve to Henry Reuss, August 30, 1971, Henry Reuss Papers, Box 60, Folder 7, UW-Milwaukee Libraries, Archives.

⁶⁸ Cutler, *Greater Milwaukee's Growing Pains*, 123–24.

⁶⁹ Philip B. Whitford, "An Ecological View of Man-Made Lakes and the Milwaukee River Dam Proposal" (Earth Day Presentation, April 22, 1970), Henry Reuss Papers, Box 60, Folder 7, UW-Milwaukee Libraries, Archives; Hayes, *Master Planners: Fifty Years of Regional Planning in Southeastern Wisconsin, 1960-2010*, 54; Francis Walter to Henry Reuss, September 17, 1971, Henry Reuss Papers, Box 60, Folder 7, UW-Milwaukee Libraries, Archives.

⁷⁰ Walter to Reuss, September 17, 1971.

want. Moreover, Reuss also contended that land speculators seeking lakefront real estate would benefit the most from the publicly financed Waubeka Reservoir.⁷¹

The failure to build or “engineer” support for the Waubeka reservoir partly reflected rural and suburban residents’ inability to find a shared public interest in the upper and lower sections of the Milwaukee River watershed. The urban residents desired more recreation opportunities, and rural residents argued for protecting agricultural lands. Also, the Waubeka reservoir proposal benefitted those who saw the outdoors for boating and water sports at the expense of those that would rather hunt whitetail deer, waterfowl, and other wild game in the existing wetlands slated to be drowned by the reservoir. Others desired retirement homes overlooking the countryside or the protection of agricultural lands, while others envisioned lakeside properties and future economic development.

Urban planners and city leaders downstream from the proposed reservoir desired the creation of spaces for more suburban landscapes that controlled the drainage of the Milwaukee River more than the cultural ties to preserve the rural landscape and wetland areas along the riverway. Ecologists viewed their relationship with nature as honoring the centuries that wetlands and floodplains labored to absorb the snow melts and drenching rains. At the same time, suburban residents desired human labor to engineer and construct a solution to contain the drainage of the MRW. From the perspective of suburbanites, agricultural opportunities and rural landscapes were in plentiful supply, and land tracts for housing were in low supply.

Although the Waubeka site was eventually voted down, SEWRPC recommended the Waubeka site be zoned primarily as open space, should development factors and public attitudes warrant or necessitate a reservoir in the future.⁷² As of 2022, the Waubeka Reservoir has yet to be constructed.

⁷¹ Reuss to Berteau, July 6, 1971; “Slim Hope for Financing Proposed Waubeka Dam,” *Sheboygan Press*, September 24, 1971, Newspaper Archive: Academic Library Edition.

⁷² Southeastern Wisconsin Regional Planning Commission, “Comprehensive Milwaukee River Watershed Report Completed,” 14–15; Southeastern Wisconsin Regional Planning Commission, *A Comprehensive Plan for the Milwaukee River Watershed: Inventory Findings and Forecasts*; Southeastern Wisconsin Regional Planning

The Environmental Corridor

A third proposal called for expanding and protecting environmental corridors along the Milwaukee River and its tributaries. These lands contained the best natural resource base available in the state, including wetlands, woodlands, wildlife habitats, lakes, and streams. SEWRPC identified primary environmental corridors as areas at least two miles long, 200 feet wide, and covering at least 400 acres. These corridors were deemed essential to the overall MRW health.⁷³ SEWRPC would recommend the protection of over 100,000 acres of land and water. Two-thirds of this land they hoped to secure for public ownership. In 1970 approximately 24,000 acres were owned by the public.⁷⁴

Milwaukee River Watershed Committee member George Watts claimed in his book, *Insurrection in Milwaukee*, that he was instrumental in the eventual Watershed Committee vote against the dam. He prioritized the efforts to secure more land for the environmental corridor. Although Watts favored the Waubesa reservoir's potential to improve the property tax base, his main argument against the reservoir was that he believed the existing environmental corridor along the riverway would be at risk if there were no longer concerns about a 100-year flood. Although many critics argued that the reservoir would not work as planned, he argued that it might work too well. If land speculators, farmers, and citizens received word that there was no longer a flood threat, they would be eager to develop the floodplain and effectively contribute to urban sprawl at the expense of the environmental corridor.⁷⁵

Unable to enact an engineered solution, various governing bodies eventually accepted the formation of the environmental corridor to address regular flooding. The idea of an environmental

Commission, *A Comprehensive Plan for the Milwaukee River Watershed: Alternative Plans and Recommended Plan*, 2:376.

⁷³ Southeastern Wisconsin Regional Planning Commission, *A Comprehensive Plan for the Milwaukee River Watershed: Inventory Findings and Forecasts*, 1:447.

⁷⁴ Southeastern Wisconsin Regional Planning Commission, *A Comprehensive Plan for the Milwaukee River Watershed: Alternative Plans and Recommended Plan*, 2:371.

⁷⁵ Watts, *Insurrection in Milwaukee*, 53–56.

corridor was not new. In the 1920s, Milwaukee Park Commissioner Charles Whitnall designed plans for an environmental corridor throughout the city, following the path of its waterways. Preserving these areas would provide urban residents an escape from what Whitnall viewed as the deplorable conditions ubiquitous to the city's landscape.⁷⁶ Forty years after Whitnall first proposed the environmental corridor, regional planners continued to garner support for these conserved natural areas along the riverway. In the 1960s, federal and state funding contributed to the conservation of these lands. The federal Land and Water Conservation Fund (LAWCON) provided \$2.5 million a year, and the Wisconsin ORAP, provided funding to expand environmental corridors.⁷⁷

Stressing the importance of reducing flood damage, University of Wisconsin-Madison agriculture professor Walter Rowlands argued it was better to keep people out of the flood path. This policy was also a product of the National Flood Insurance Act of 1968, which required the mapping and zoning of flood-prone areas to limit flood damage. As a result, river communities gradually began removing structures in the floodplain and returned the lands to open space.⁷⁸ In 1968, K.W. Bauer, the chairman of SEWRPC, warned that without proper planning, urban sprawl would contribute to more property damage and deterioration of fish and animal habitats with increased flooding and water pollution. He contended that the development on floodplains decreased groundwater supplies and should be limited.⁷⁹ Furthermore, in 1971, when SEWRPC published its final Milwaukee River Watershed report, the Wisconsin Legislature enacted Section 87.30, requiring counties and municipalities throughout Wisconsin to zone against development in floodplains.⁸⁰ SEWRPC worked to identify and delineate areas

⁷⁶ Platt, *Open Land in Urban Illinois*, 780; Gurda, *The Making of Milwaukee*, 268–71.

⁷⁷ "Let's Preserve Our Environmental Corridors - Now!"

⁷⁸ Bauer to Henry W. Maier, January 25, 1971.

⁷⁹ K. W. Bauer, "Resource Conservation and Regional Planning Talk" (Milwaukee County Museum: The Milwaukee River Watershed, October 25, 1968), 3,11-12, Izaak Walton League of America. Milwaukee Chapter Records, 1923-1985, Box 2, Folder 9, State Historical Society of Wisconsin; Southeastern Wisconsin Regional Planning Commission, *Milwaukee River Watershed Planning Program Prospectus*, 22.

⁸⁰ Cutler, *Greater Milwaukee's Growing Pains*, 124–25.

where concentrations of scenic, recreational, and historical resources could be preserved and protected. These zoning efforts recognized that the natural resource base was essential for the ecological balance and the watershed's natural beauty. Most environmental corridors lay within the Northern Kettle Moraine or northern MRW, surrounding lakes, and along major stream valleys.⁸¹

David Fonesca Jr., the SEWRPC administrator, defended the "Stream's Right" to its natural floodplain at periodic intervals. Fonesca supported more zoning to prevent construction in floodplains because residential, business, and agricultural interests could work outside of these areas rather than in them.⁸² In addition, Fonesca implied that the stream had rights as humans had rights. His views corresponded with many environmentalists, including Supreme Court Justice William O. Douglas, who promoted a Wilderness Bill of Rights (WBR) in the 1960s. The basic premise was that people who enjoyed the wilderness had as much right to protect their interests, even if they were in the minority of US citizens. Also, automobiles, bulldozers, and industries defaced and destroyed the natural areas. Therefore, the WBR supporters reasoned that the government needed to protect these areas, like the efforts to safeguard people's civil rights.⁸³ Interesting to note about Fonesca's argument was that he reasoned that not only homeowners and businesses should remain out of the floodplain but also agricultural interests. Much opposition to the Waubeka reservoir came from agricultural interests that desired to keep their landed interest around the waterway. As nonpoint source pollution gained greater attention, the call to separate, perhaps remove, agrarian lands from the river's edge became more vocal (Chapter Five).

Many residents in the floodplains, noting the failure of the government to support their interest in either the Waubeka Reservoir or Saukville Diversion, criticized what appeared to them as the

⁸¹ Southeastern Wisconsin Regional Planning Commission, *A Comprehensive Plan for the Milwaukee River Watershed: Inventory Findings and Forecasts*, 1:73–76.

⁸² "Flood Threats, Adequate Outdoor Facilities Aired," *Kenosha News*, November 22, 1963, Newspaper Archive: Academic Library Edition.

⁸³ William O. Douglas, *A Wilderness Bill of Rights* (Boston, MA: Little, Brown and Company, 1965), 37–38.

government's lack of concern for their property rights and the apparent desire of an overanxious government to take land out of private interests.⁸⁴ However, land developers benefitted from building construction and selling lands in the flood plain as the cost of flood damage did not burden them. The property damages were often dispersed to state taxpayers when county agencies or municipal governments provided relief to flood victims. SEWRPC's eventual recommendation against the Waubeka Reservoir demonstrated an ecological perspective to protect the environmental corridor from developmental interests and protect wetlands bordering the river. However, in 1971 the City of Glendale passed a resolution against creating an environmental corridor.⁸⁵ Two years later, development lobbyists encouraged a bill to the Wisconsin state government that passed the Senate to shrink the defined flood plain to 10-years rather than 100-years.⁸⁶ With or without the Waubeka Reservoir, the battle over the rights to decide how the floodplain was utilized continued.

Conclusion

Some people may look at the debates over the Waubeka and Saukville diversion plans as an example of northern MRW residents' ability to push back against plans to shape the landscape for the suburban residents' benefit at their expense. Although the results prevented the large, engineered solutions that would have altered their rural landscapes, the debates also reflected how public interest in shared spaces is not singular. Multiple perspectives shaped a broad audience's conception of the public interest. The proposals SEWRPC presented to the MRW citizens demonstrated how problems

⁸⁴ "Informational Meetings Set on Proposed Reservoir at Waubeka," *Sheboygan Press*, June 15, 1971, Newspaper Archive: Academic Library Edition; "Proposed Waubeka Dam Discussed at Cedarburg," *Sheboygan Press*, June 26, 1971, Newspaper Archive: Academic Library Edition; Rali Albright, "SEWRPC 'Land Grab!'" (File Clipping), June 2, 1971, sec. Letter to the Editor, Henry Reuss Papers, Box 60, Folder 7, UW-Milwaukee Libraries, Archives.

⁸⁵ Mayor Robert C. Cayze and Glendale Common Council, "City of Glendale: Resolution," May 11, 1971, Henry Reuss Papers, Box 60, Folder 7, UW-Milwaukee Libraries, Archives.

⁸⁶ Edward J. Hayes to Mr. George Whittow, "S-445 - Floodlands," July 9, 1973, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 83, Folder 20, UW-Milwaukee Libraries, Archives.

might be resolved and how the future uses of lands and waters would be utilized. Jennifer Bonnell, in *Reclaiming the Don*, often uses the term “imagined futures.” She notes that in the 19th and 20th centuries, human development of the landscape was built on an “imagined future” that would alter an unpredictable wilderness and transform it into a productive and efficient garden. In addition, she notes that these imagined futures must also displace or replace earlier visions.⁸⁷ Similarly, the rural and urban perspectives reflected the people’s present concerns and future aspirations to protect or preserve a way of life. Ecological answers were given to improve the waterway’s health, and engineered solutions were provided to lessen flood damage. These claims were widely accepted with little disagreement. However, the social and cultural understandings of people’s relationship with the riverway fueled the divide. Rural residents fought over preserving their farmlands and family remembrances of living in the countryside against urban residents’ future desires to drown out these traditions to reshape the landscape, protect downstream homesteads from flood damage, and create another lake for water enthusiasts.

The unruly river described at the beginning of the chapter continues to leave its mark on and shape the landscape. In addition, the ecological understanding of human development limitations and the harm of potential overuse or misuse of resources remains an important factor to consider. Garrett Hardin’s “The Tragedy of the Commons” addressed the prospect of the degradation of the land by the self-interest acts of herders. The story of the attempts to control water flow in the MRW demonstrates the difficulty when people’s understanding of the land is not shared. How farm and urban communities imagined the future of the landscape conflicted with one another. In the 1960s and 1970s, the quest to find a regional solution that reflected the public interest defined by the Milwaukee River Watershed was led by SEWRPC. As these failed attempts to find answers to address flood control measures and expand recreational opportunities demonstrated, a shared public interest requires greater cooperation between

⁸⁷ Bonnell, *Reclaiming the Don*, 3-4.

rural and urban residents. Without a cultural or social understanding of people's aspirations, the quest to address watershed issues continued to trickle along.

Chapter 4: Water Quality, Working towards a Watershed Perspective

As Mayor Henry Maier's administration fought with the state and federal governments over how to clean up the Milwaukee River, a group of suburban residents in Grafton, Wisconsin, formed the Milwaukee River Restoration Council in March 1967. This organization was modeled after the Cedar Creek Restoration Council (CCRC), founded by Delbert Cook. The CCRC was active in water quality programs cleaning up Cedar Creek and weighing in on other projects and problems throughout the Milwaukee River Watershed (MRW). To lessen confusion between the similarly-named Milwaukee River Restoration Council and the Milwaukee River Revitalization Council, which was formed in the late 1980s (discussed in Chapter 5), I will refer to the Milwaukee River Restoration Council as the "Restoration Council." Based in Grafton, members of the Restoration Council first focused their energies on municipalities north of Milwaukee County. Not content to restore a section of the river, they united with government agencies and nongovernment groups demanding pollution abatement throughout the watershed. As discussed in Chapter One, Milwaukee's aging combined storm and sewer system (CSS) significantly contributed to water pollution entering the Milwaukee River Watershed, which emptied into Lake Michigan. Joining the fight, the International Joint Commission of the Great Lakes, founded in 1912 between the United States and Canada, recommended updating the City of Milwaukee's outdated sewage system. Also, Chicago and the State of Illinois government leaders filed a lawsuit with the city of Milwaukee. They argued that pollution entering Lake Michigan threatened their public water supply from sewage overflows. Although their tactics differed, they all agreed that the time to cleanse the waterway should not be delayed as the public living within the MRW and Great Lakes Basin demanded cleaner waters. Although attacks came from people representing different territories, the debates and actions taken to address pollution furthered the need for a watershed perspective.

In Mayor Maier's first two terms, his administration focused on a community defined by the city boundaries, not a community defined by state or federal boundaries. Mayor Maier worked to revitalize the Milwaukee River's economic and aesthetic beauty in accordance with the public interest, representing the city's residents. However, as the Restoration Council and government entities urged Milwaukee's leaders to prioritize water quality, the Maier Administration emphasized that pollution was a watershed problem, not just a concern within the city of Milwaukee. Moreover, if Milwaukee government leaders needed to prioritize water quality over economic development, Maier contended that nonpoint source (NPS) pollution must be addressed with the same enthusiasm and government mandates. He stressed that if billions of dollars would be spent to address CSS overflows, then NPS pollution abatement programs needed strengthening to justify the cost and to attain "swimmable and fishable" waterways in a timely manner.¹

Addressing the Milwaukee river's polluted water over the multiple decades of Maier's term as mayor must be recognized as an attempt to restrain the behavior of others. Matthew Klinge, in *Emerald City*, notes how struggles to control nature in Seattle, Washington, often coincided with attempts to regulate other humans.² In this chapter, I demonstrate how the Restoration Council's energies overlapped with the methods state and federal agencies used to control how the Maier Administration tackled point source pollution. However, as municipalities improved their aging sewer systems, the Restoration Council joined forces with the Maier Administration to regulate rural landowners' farming practices that contributed to nonpoint source (NPS) pollution. Andrew Needham, in *Power Lines*, argues that urban growth in Phoenix, Arizona impacted people's lives beyond city boundaries. Needham focuses on how infrastructures, particularly power sources, were constructed for Phoenix's benefit at

¹ James C. Ringenoldus, "Flood and Pollution Problems of the Milwaukee River System," October 1968, Henry Reuss Papers, Box 53, Folder 19, Milwaukee River, 1968-1969, UW-Milwaukee Libraries, Archives.

² Matthew W. Klinge, *Emerald City: An Environmental History of Seattle* (New Haven: Yale University Press, 2007), xii.

the expense of those living away from the city.³ Contrastingly, the federal Water Acts of 1968 and 1972, and coinciding state laws, passed the financial burden of pollution abatement on city governments without mandatory regulations placed on private landowners upstream. Urban and rural MRW residents disagreed over how pollution abatement programs would be implemented. Like the debates over controlling the flow of the Milwaukee River's waters, perspectives were shaped by how they envisioned the permanence of rural and urban spaces within the watershed, reflecting a cultural understanding of their relationship with the waterway.

In this chapter, I argue that Mayor Henry Maier, through his battles against state and federal mandates and public pressure from the Restoration Council to address the aging Milwaukee CSS, began to emphasize a public interest defined by the watershed's boundaries more than the city limits. Addressing the watershed's residents, Maier stressed the importance of NPS pollution abatement. Although the federal and state government would not address NPS pollution with the same vigor, Maier and the Restoration Council argued that the public interest in cleaner waters required the watershed communities, the state of Wisconsin, and the federal government all to take greater responsibility to lessen pollution.

First, I will look at the formation of the Restoration Council and its urgent conviction to address pollution in the Milwaukee River's northern branches. Much of their attention was on volunteer clean-up projects and public criticism of the state government for continuing to study the river instead of enforcing water regulations and taking action to abate pollution. Then, I will examine how international bodies and the State of Illinois attempted to force Milwaukee to address its aging CSS, along with the Restoration Council's continued public outcry against Milwaukee and state government officials' lack of action. Resigned to the construction of an over \$2 billion clean water infrastructure program to limit

³ Andrew Needham, *Power Lines: Phoenix and the Making of the Modern Southwest* (Princeton: Princeton University Press, 2014), 5, 10, 250.

sewer overflows, the Maier Administration pushed the State of Wisconsin to recognize NPS pollution's impact on the Milwaukee River's water quality. Concerning the Maier Administration, the state government insisted on voluntary programming to lessen farm runoff instead of mandating regulations as imposed on the city of Milwaukee. Although the Restoration Council and Maier Administration would disagree on how best to reduce NPS pollution, their alliance represented an effort to improve water quality from a watershed approach. As a result, the public interest was defined more by residents living within the watershed than a public interest represented by municipal boundaries.

Milwaukee River Restoration Council: Cleaner Waters Now!

Grounded in the MRW, the Restoration Council understood that cleaning up the waterways was in the public interest. Like the CCRC, the Restoration Council embraced the responsibility to act without delay. They hoped that by providing a model for citizen groups, others would join them, and the watershed's water quality would improve.⁴ Unlike the constituents of a government district or the members of the Riveredge Nature Center, Restoration Council members represented a public not bound by territorial boundaries. Instead, they represented a public that desired clean waters immediately, regardless of residence or affiliation with a particular place. Although motivated by the recent state and national clean water legislation and the work of the CCRC, the Restoration Council members were inspired by personal memories of swimming in the river without the fear of getting sick.⁵ Some of the

⁴ "Clean River Council Will Be Organized," *Milwaukee Journal*, March 3, 1967, Milwaukee Journal Sentinel Historical Newspapers; "Milwaukee River Is Antipollution Target," *Milwaukee Sentinel*, March 6, 1967, Milwaukee Journal Sentinel Historical Newspapers; "River Lovers Start Fund," *Milwaukee Journal*, March 9, 1967, Milwaukee Journal Sentinel Historical Newspapers; "Grafton Barber Heads River Cleanup Group," *Milwaukee Sentinel*, April 3, 1967, Milwaukee Journal Sentinel Historical Newspapers; Steve Tatarsky, "Measures Proposed to Clean Milwaukee River," *Milwaukee Sentinel*, July 31, 1967, Milwaukee Journal Sentinel Historical Newspapers.

⁵ "Milwaukee Busybodies Prowl to Find Sources of Pollution," *Milwaukee Journal*, May 27, 1967, Milwaukee Journal Sentinel Historical Newspapers; "River Lovers Start Fund"; Dave Kinchen, "Grafton Barber Cuts into Pollution Problem," *Milwaukee Sentinel*, February 3, 1969, Milwaukee Journal Sentinel Historical Newspapers; Tatarsky, "Measures Proposed to Clean Milwaukee River."

most active early members of the Restoration Council were its first president Oliver Fick, a barber from Grafton; William B. Wolf, a bus driver and Ozaukee County supervisor; and Joseph Zingsheim, a music store owner in Grafton. Unlike the RNC, which was formed to protect lands bordering the Milwaukee River from urbanization, the Restoration Council started with the purpose of cleaning the waters.

The Council recognized that pollution was a Milwaukee issue and a problem throughout the watershed. Its charter read, "To restore the waters of the Milwaukee River so as to support game fish and permit swimming with a reasonable degree of safety from contamination; to improve the stream bed and its banks, to prevent erosion and silting and to restore its natural beauty."⁶ Rather than pointing a finger to abate water pollution in a single area or emphasizing Milwaukee's failures, they sought to address the sources of pollution wherever it existed.

One of the Restoration Council's proposed strategies to cleanse the riverway called for the removal and replacement of existing dams with new structures that would allow for the seasonal free flow of water to help remove the silt buildup in the waterway. Along with initial support for the Waubesa Reservoir (Chapter 3), the Restoration Council conceived plans for a large, artificial lake along County Highway C near Saukville. They argued that these artificial lakes would not only ensure places for leisure but also provide collection areas to dredge sediment, lessening silt downstream. The Restoration Council supported recreational opportunities that required human construction for people to enjoy the waterway. They argued that more people would recognize the value of the watershed's clean waters if "better" recreational opportunities were available.

Similarly, Dan Egan, in *The Death and Life of the Great Lakes*, spoke of the excitement young people have had catching fish and how these experiences might foster a love of the waterways.⁷ In the 1950s, the federal Sport Fish Restoration Act was passed. Over the next 40 years, the US Department of

⁶ Kinchen, "Grafton Barber Cuts into Pollution Problem."

⁷ Dan Egan, *The Death and Life of the Great Lakes* (New York: W. W. Norton & Company, 2017), 320–21.

the Interior helped expand over 40,000 acres of new fishing waters by constructing small artificial lakes. This approach contrasted with the Riveredge Nature Center (RNC) board, whose goal was to bring people to their site to experience nature in a non-urban setting and find value in conserving natural areas. However, the RNC board and the Restoration Council agreed that there was a need to increase the public interest in revitalizing the rivers.⁸ The Restoration Council's quest to expand the public interest coincided with their efforts to persuade the public and government officials to work for cleaner waters.⁹

Members of the Restoration Council stressed that the public should not have to wait for government action. In the 1960s, Wisconsin governor Warren Knowles called for a study to reorganize state government to improve efficiency. As a result, the state government approved consolidating the Department of Conservation and the Department of Resource Development into the Wisconsin Department of Natural Resources (WDNR). This newly constructed government authority was charged with enforcing environmental laws and protecting the public's interest in the state's waterways.¹⁰ However, the Restoration Council argued that reorganizing the government bureaucracy or forming the WDNR was not the solution.

Like the CCRC, the Restoration Council complained about the government's insistence that more studies were necessary rather than focusing on better enforcement of existing water laws. Thomas Kroehn of the WDNR-Milwaukee Branch mentioned that the state actively tested the water quality in the 1950s. However, the WDNR's 1967 study provided essential information for effectively cleaning the

⁸ W.B Wolfe, "Prospectus - Milwaukee River 1967," July 1967, Henry Reuss Papers, Box 53, Folder 19, Milwaukee River, 1968-1969, UW-Milwaukee Libraries, Archives; "Milwaukee River Lakes Urged," *Milwaukee Journal*, July 21, 1967, Milwaukee Journal Sentinel Historical Newspapers; Tatarsky, "Measures Proposed to Clean Milwaukee River."

⁹ Tatarsky, "Measures Proposed to Clean Milwaukee River"; United States Department of the Interior Fish and Wildlife Service, "Restoring America's Sport Fisheries," c1989, Box 1988-1994, Folder 1990, Blue Folder, MRRC - Ray Krueger Collection. The Ray Krueger Collection was kept in storage at the River Revitalization Foundation in Milwaukee, Wisconsin. It has since been donated to the University of Wisconsin Milwaukee Archives Department. As of October 2022, it has not been cataloged.

¹⁰ "History and Role: NRB Turns 50."

waterways. This study identified thirty-five municipal sewage plants that contributed to river pollution.¹¹ Also, the WDNR gave legal notices to responsible parties for point source pollution based on investigations of the Milwaukee River Basin between 1966 and 1967.¹²

The Restoration Council also criticized Southeastern Wisconsin Regional Planning Commission (SEWRPC), which often led watershed studies. For example, SEWRPC was in the process of a \$500,000 study of the Milwaukee River. SEWRPC contended that the watershed study was critical because a solution in one part of the river might lead to problems in other parts of the river. Richard Cutler, Secretary of SEWRPC, insisted that a united front between SEWRPC, WDNR, Restoration Council, and CCRC representatives was necessary so that the public did not become confused. Delbert Cook, CCRC president, appeared to agree on the surface. However, the CCRC and the Restoration Council continued to criticize the WDNR's and SEWRPC's support for additional studies. The Restoration Council argued that more studies were simply delay-tactics and that the public wanted cleaner rivers now.¹³ Although the Restoration Council may have had a point that the government was more interested in studying the problem rather than abating pollution, the need for a watershed approach to clean up the riverway would eventually be realized.

The Restoration Council members were not the only ones looking to improve waterway cleanup. Supporting the Restoration Council, US Congressman Henry Reuss argued that too much blaming and pointing fingers in the fight against poor water quality had led to inaction. Yet a finger-pointer himself, Reuss criticized local governments' inaction, despite the national and state governments' inadequate

¹¹ "State Tests Show Pollution Effects," *Milwaukee Sentinel*, July 31, 1967, Milwaukee Journal Sentinel Historical Newspapers.

¹² Department of Natural Resources, "Report on an Investigation of the Pollution in the Milwaukee River Basin Made during 1966 and 1967," January 23, 1968, Henry Reuss Papers, Box 59, Folder 19, Milwaukee River, 1968-1969, UW-Milwaukee Libraries, Archives.

¹³ "Co-Operation on River Urged," *Milwaukee Sentinel*, January 23, 1968, Milwaukee Journal Sentinel Historical Newspapers.

funding and enforcement of regulations.¹⁴ Agreeing with Reuss, Restoration Council president Oliver Fick stressed that town boards refused to enforce pollution violations. The Restoration Council had already located septic drainpipes and other pollution sources emptying directly into the Milwaukee River. They found that most septic outfalls were near older subdivisions. In addition, milk plants, canning companies, and other industries contributed to pollution entering the Milwaukee River and its tributaries.¹⁵ The Restoration Council argued that now was the time to rectify the problem. WDNR representative Thomas Kroehn asserted that they had been prosecuting offenders, noting the Libby Company in Jackson, WI. The Restoration Council replied that the state did not enforce the law as quickly as the public wished. They argued that a state sanitarian might be a better law enforcer. The sanitarian's primary duty would be to investigate health and safety complaints and enforce state water laws.¹⁶

Suburban residents seemed happy to have Milwaukee deal with its own river problems. Yet they were less enthusiastic about addressing pollution in their communities. The Restoration Council continued to pressure suburban communities to assume their responsibilities to revitalize and protect the northern branches of the Milwaukee River. For example, Ozaukee County Board Supervisor and Restoration Council member William Wolf proposed that Ozaukee County hire health supervisors to inspect septic systems that appeared to be leaking effluent into the river. Oliver Fick noted the relative success of Sheboygan County in addressing pollution violations as an example of how well a hired sanitarian helped enforce regulations. Furthermore, Wolf recommended that legislation require

¹⁴ "Reuss Says State Lax on Pollution," *Milwaukee Sentinel*, October 24, 1968, Milwaukee Journal Sentinel Historical Newspapers; "Reuss Says US Lax on Pollution," *Milwaukee Sentinel*, December 23, 1968, Milwaukee Journal Sentinel Historical Newspapers.

¹⁵ "Group to Map River Polluters," *Milwaukee Sentinel*, May 8, 1967, Milwaukee Journal Sentinel Historical Newspapers; "River Searched for Sewage Sources," *Milwaukee Journal*, May 21, 1967, Milwaukee Journal Sentinel Historical Newspapers; "State Tests Show Pollution Effects."

¹⁶ "River Group to Ask Aid," *Milwaukee Sentinel*, August 9, 1968, Milwaukee Journal Sentinel Historical Newspapers; "Firmer State Action Urged on Pollution," *Milwaukee Sentinel*, January 8, 1969, Milwaukee Journal Sentinel Historical Newspapers.

landowners to upgrade faulty sewer systems at their own expense. However, the Restoration Council's efforts were shot down twice. Opposition came from suburban housing tract owners suspected of having faulty septic systems.¹⁷ Even though the water quality of the northern sections was generally better than the downtown sections of the Milwaukee River, the Restoration Council argued that Saukville and other northern communities must learn from the mistakes made downstream before upstream waters were degraded. This required expanding and improving the sewer systems to meet the growing population's needs.¹⁸

Earth Day, April 22, 1970, and subsequent Earth Day celebrations continued to remind the public of their relationship with nature and the importance of quality air, water, and land. As already noted, many environmental groups worked for a healthier environment before the spring of 1970. Earth Day hardly represented people's first encounter with nature and concern for the planet's ecological well-being. However, as Christopher Sellers, in *Crabgrass Crucible*, and other historians argue, the event helped to galvanize people in the United States and around the world that the time to restore the planet's environment was paramount to our survival.¹⁹ Despite an understanding that we all live on a shared Earth, people's reactions to clean-up programs and environmental regulations appeared to complicate what was understood as a "shared experience" of a community. Depending on how the borders of the community were defined, the interest in utilizing the resources of air, water, and land varied.

¹⁷ Rudy Pelecky, "Counties Take Different Pollution Control Routes," *Milwaukee Sentinel*, February 2, 1970, Milwaukee Journal Sentinel Historical Newspapers.

¹⁸ Al Moritz, "River's Ozaukee Flowage Placid but Overfertilized," *Milwaukee Sentinel*, September 7, 1970, Milwaukee Journal Sentinel Historical Newspapers; "River Use by Cows Denied," *Milwaukee Sentinel*, September 12, 1970, Milwaukee Journal Sentinel Historical Newspapers; Mary A. Jaroch, "Pollution Violations," September 28, 1970, Henry Reuss Papers, Box 53, Folder 13, UW-Milwaukee Libraries, Archives; "Milwaukee River Restoration Council - Sept. Newsletter," September 14, 1970, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 115, Folder 6, UW-Milwaukee Libraries, Archives.

¹⁹ Christopher C. Sellers, *Crabgrass Crucible: Suburban Nature and the Rise of Environmentalism in Twentieth-Century America* (Chapel Hill: University of North Carolina Press, 2012), 290; Philip Schabecoff, *The Fierce Green Fire: The American Environmental Movement* (New York: Hill & Wang, 1993); Karl Boyd Brooks, *Before Earth Day: The Origins of American Environmental Law, 1945-1970* (Lawrence: University Press of Kansas, 2009).

The Restoration Council demonstrated multiple activities that would immediately impact the waterway's health. For example, the Restoration Council and other civic groups organized debris clean-up programs and identified locations where pollution entered the Milwaukee River and its tributaries. Another aspect of Earth Day was to educate the public. Joseph Zingsheim of the Restoration Council let people know that politicians dragged their feet on enforcing pollution laws and working to clean up the river. For the Restoration Council, Earth Day was a reminder of what individuals and communities might accomplish and when government entities had failed to improve water quality.²⁰

Demanding immediate action, the Restoration Council continued its strong stand against municipal governments' lack of enforcement of state laws throughout the watershed. For example, between 1974-1975, the Restoration Council sued the local governments of West Bend, Saukville, and Jackson for approving permits to extend sewer lines even though the existing sewer systems were not equipped to handle the added sewage loads.²¹ Local and state government authorities compromised under the condition that upgrades to the sewer system would occur as the construction of the site proceeded rather than requiring the upgrade to occur before any construction could begin. The Restoration Council worried whether promises to make improvements would be kept.²²

²⁰ "River Group Will Search for Polluters," *Milwaukee Journal*, April 24, 1970, Milwaukee Journal Sentinel Historical Newspapers; Paul G. Hayes, "Hidden Pipes Divulge Secrets of Pollution," *Milwaukee Journal*, April 26, 1970, Milwaukee Journal Sentinel Historical Newspapers; H. Carl Mueller, "Girls Final Fling Brightens River," *Milwaukee Sentinel*, May 9, 1970, Milwaukee Journal Sentinel Historical Newspapers; H. Carl Mueller, "Lincoln Creek Still Polluted but Cleanup Continues," *Milwaukee Sentinel*, May 18, 1970, Milwaukee Journal Sentinel Historical Newspapers; Joseph Zingsheim, "Editorial: Challenges City," *Milwaukee Sentinel*, May 30, 1970, Milwaukee Journal Sentinel Historical Newspapers.

²¹ "State Asked to Deny Sewer Extensions," *Milwaukee Journal*, September 20, 1974, Milwaukee Journal Sentinel Historical Newspapers; "Saukville Sewer Extension Studied," *Milwaukee Sentinel*, April 30, 1975, Milwaukee Journal Sentinel Historical Newspapers.

²² Loren H. Osman, "Saukville's Industrial Park Finally Begins to Sprout," *Milwaukee Journal*, May 13, 1976, Milwaukee Journal Sentinel Historical Newspapers; "Sewer Rule Action Pleases Officials," *Milwaukee Sentinel*, May 14, 1976, Milwaukee Journal Sentinel Historical Newspapers; Terry Devitt, "Saukville Sewer Accord Near," *Milwaukee Journal*, June 3, 1976, Milwaukee Journal Sentinel Historical Newspapers; "Saukville Battle Over Sewers Ends," *Milwaukee Journal*, April 26, 1977; "Discharge Permit Expected," *Milwaukee Journal*, January 24, 1980, Milwaukee Journal Sentinel Historical Newspapers; "Sewer Operations" (City of West Bend, 2022), https://www.ci.west-bend.wi.us/departments/sewer/sewer_operations.php.

Continued Pressure on the City of Milwaukee

While the Restoration Council initially focused most of its attention on cleaning up the MRW north of Milwaukee County, the International Joint Commission (IJC) agreement of 1972 and amendment 1978 worked to monitor the water quality of the Great Lakes between the United States and Canada. As a point of reference, the MRW drains water from approximately 900 square miles of land into the Milwaukee River. The Great Lakes Basin includes the MRW but covers about 94,000 square miles of land transcending state and international political boundaries. My attention to the following arguments between the international organizations and the state of Illinois with the city of Milwaukee is to demonstrate how a watershed approach evolved. These arguments represented struggles to find agreeable solutions to improve the water quality in the Great Lakes Basin area. Like SEWRPC's watershed proposals to find an acceptable means to control flood damage, finding a shared public interest in the MRW was elusive (Chapter Three). However, they also provided the catalyst to revitalize the waterway from a watershed perspective.

The IJC worked to control municipal and industrial pollution sources and NPS pollution from agricultural and forested lands. In 1971, the IJC published the *IJC Lower Lakes Report*. The IJC recommended actions to protect the shared water resources of the Great Lakes.²³ Lake Erie was the primary concern. Yet Lake Michigan was not immune.²⁴ Like SEWRPC's regional approach to addressing

²³ Richard B. Bilder, "Controlling Great Lakes Pollution: A Study in United States-Canadian Environmental Cooperation," *Michigan Law Review* 70, no. 3 (January 1972): 469–556.

²⁴ International Joint Commission United States and Canada, "Farm, Urban Drainage Polluting Great Lakes," April 15, 1980, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 78, Folder 9, UW-Milwaukee Libraries, Archives; United States Environmental Protection Agency and Wisconsin Department of Natural Resources, "Final Environmental Impact Statement - Water Pollution Abatement Program Milwaukee Metropolitan Sewerage District," June 15, 1981, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 78, Folder 10, UW-Milwaukee Libraries, Archives.

recreational needs and flood control measures and the Restoration Council's efforts to lessen water pollution, social and cultural consideration were also not prioritized by the IJC.

Working with the IJC, the Great Lakes Conference on Pollution (GLCP) in 1968 addressed water quality in the Great Lakes Basin. Governor Otto Kerner of Illinois and Secretary Stewart L. Udall, US Secretary of Interior, requested an investigation of pollution entering Lake Michigan. Kerner served two terms as the Illinois governor from 1960-1968. He was most remembered for his role as chair of the National Advisory Commission on Civil Disorders, better known as the Kerner Commission.²⁵ Stewart Udall served as Secretary of the Interior for nine years, first appointed by President John F. Kennedy. He was most noted for his work on the Wilderness Bill and the 1968 Wilderness and Scenic Rivers Act.²⁶ The GLCP identified several Wisconsin rivers that were not meeting the state and federal government's water quality standards. This conference charged cities with the responsibility to address the outdated CSS and lessen overflow events.²⁷ Udall further expressed his support for an abatement program for Lake Michigan that restored the lake in the shortest time possible.²⁸

In 1968 the Federal Quality Water Act was amended. Representing a broader constituency, the federal law confirmed a willingness to move forward with point source control measures. The Water Quality Act of 1968 stressed the need for federal funding to lessen city governments' financial burden to cope with aging municipal waste treatment facilities.²⁹ Yet city governments were still mandated to

²⁵ Seth S. King, "Ex-Gov. Otto Kerner Dies; Convicted While a Judge," *New York Times*, May 10, 1976, <https://www.nytimes.com/1976/05/10/archives/exgov-otto-kerner-dies-convicted-while-a-judge.html>; Kirk H. Beetz, "Otto Kerner, Jr.," in *Encyclopedia.com* (Cengage Learning, 2019), <https://www.nga.org/governor/otto-kerner/>.

²⁶ University of Arizona Special Collections, "Stewart L. Udall: Advocate for the Earth," n.d., <https://speccoll.library.arizona.edu/online-exhibits/exhibits/show/stewart-lee-udall/bio>; John de Graaf, "Stewart Udall: A Remembrance," April 25, 2020, <https://www.sierraclub.org/sierra/stewart-udall-remembrance>.

²⁷ Action for Clean Water and US Department of the Interior, "Water Pollution Problems of Lake Michigan and Tributaries," January 1968, Henry Reuss Papers, Box 53, Folder 20, Milwaukee River, 1968-1969, UW-Milwaukee Libraries, Archives.

²⁸ Department of the Interior, Water Pollution Control Administration, "Udall Approves Lake Michigan Clean-Up Program," April 28, 1968, Henry Reuss Papers, Box 53, Folder 21, UW-Milwaukee Libraries, Archives.

²⁹ Representative Henry Reuss, "Statement in Support of the Water Quality Improvement Act of 1968," April 24, 1968, Henry Reuss Papers, Box 53, Folder 18, Milwaukee River, 1968-1969, UW-Milwaukee Libraries, Archives.

address their CSS and municipal water treatment facilities.³⁰ Mayor Maier welcomed federal support but also argued that a broader community shared the interest and the burden to manage the MRW's water quality. Similarly, SEWRPC claimed that the best way of protecting, conserving, and utilizing southeastern Wisconsin's water resources was through a watershed perspective. However, as Samantha Fleischmann notes in "Redistributing Resources," the conflicts between the city of Milwaukee and the surrounding communities have existed since the 1920s. They were magnified in the 1950s over access to public water services and tax reforms.³¹

Like the Restoration Council, the voices at the conference wanted the abatement of pollution addressed in a timely fashion. Effectively, the public concern over the water quality of the Milwaukee River included not only the residents in the MRW but also people represented by the states and nations bordering the Great Lakes. Milwaukee city officials, speaking for the public interest defined by the city's boundaries, protested the difficulty of correcting the CSS and that the high cost of such a project was unreasonable.

Mayor Maier's administration also stressed that although the city was considered a significant contributor to the pollution of Lake Michigan, it was also part of a federal research project to examine the feasibility of detention tanks to treat storm sewer overflow before it entered the Milwaukee River. The federal government provided a grant of 1.5 million dollars to offset the 2.1 million dollar cost for this study.³² Reuss urged the city to meet the federal guidelines sooner rather than later by utilizing pillow tanks that could capture storm sewage overflow along an 11-mile stretch of the Milwaukee

³⁰ William D. McElwee, "Watershed Planning Process in Southeastern Wisconsin" (Milwaukee, WI, October 26, 1968), Pearl Pohl Papers, 1928-1981, Box 3, Folder 4, UW-Milwaukee Libraries, Archives.

³¹ Samantha Fleischman. "Redistributing Resources: Henry Maier, the Wisconsin Alliance of Cities, and the Movement to Modify Wisconsin's State Shared Revenues". ProQuest Dissertations Publishing, 2020.

³² United States Department of the Interior, Federal Water Pollution Control Administration, "Storm and Combined Sewer Pollution Control Demonstration Project," March 1, 1968, Henry Reuss Papers, Box 53, Folder 21, UW-Milwaukee Libraries, Archives.

River.³³ Reuss argued the costs would not be unrealistic if rubber storage “pillows,” or Fabridams, similar to ones installed in St. Paul, Minnesota, were used in the Milwaukee River.³⁴ This approach prioritized the speed at which the riverway’s water quality improved. Contrastingly, Maier’s administration concentrated on developing an aesthetically pleasing place that was also an economic asset. More importantly, these quick fixes did not recognize all the sources of pollution the pillow tanks would not be able to capture. Thus, the waters would remain degraded.

Unwilling to wait, nor seemingly concerned about the economic implications, the state government of Illinois held Maier Mayor’s administration responsible for the sewage overflows that polluted Lake Michigan, particularly Chicago’s water supply. Attorney General William Scott of Illinois stressed the injustice of fining two women for throwing bras into the Chicago River while steel companies poured 800 million gallons of pollutants and the Milwaukee emptied its sewage overflow into the same lake that the children of Illinois were trying to swim in.³⁵ Scott sued the city of Milwaukee to clean up its act. Attempting to defend Milwaukee, Wisconsin Governor Warren P. Knowles supported the Maier Administration’s abatement programs related to the existing problems associated with the CSS. Governor Knowles stressed to Walter Hickel, the US Secretary of the Interior, that the Jones Island water treatment facility near the mouth of the Milwaukee River received international recognition for its efforts to abate pollution. Although Hickel praised the strides Milwaukee had achieved, he sided with Murray Stein, the Chairman of the Lake Michigan Enforcement Conference, that Henry Maier’s

³³ “Congressman Henry S. Reuss - 5th District Wisconsin,” *Washington Report*, May 10, 1968, Henry Reuss Papers, Box 53, Folder 19, Milwaukee River, 1968-1969, UW-Milwaukee Libraries, Archives.

³⁴ Congressman Henry S. Reuss, “Reuss Urges Intensification of Effort to Stem Milwaukee River Combined Sewer Overflow” (August 1968), Henry Reuss Papers, Box 53, Folder 21, UW-Milwaukee Libraries, Archives; Congressman Henry S. Reuss, “Reuss Cites Innovations in Sewage Control, Urges Milwaukee Study of Pilot Projects to Find Solution to Problem of Milwaukee River Pollution,” August 12, 1968, Henry Reuss Papers, Box 53, Folder 21, UW-Milwaukee Libraries, Archives.

³⁵ Henry W. Maier and Richard Salant, “CBS NEWS - Maier Letters,” April 24, 1970, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 142, Folder 6, UW-Milwaukee Libraries, Archives; Lee Murray to Henry W. Maier, “Interview Regarding Illinois Attorney General Charges,” April 30, 1970, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 142, Folder 6, UW-Milwaukee Libraries, Archives.

administration was not doing enough to clean up the municipal waste that entered Lake Michigan. Hickel argued that better coordination must exist between federal, state, and local entities to get the water quality to meet the mutually held goal of all parties to protect Lake Michigan's water quality.³⁶ Yet this did not excuse the city of Milwaukee for delaying its clean-up.

As Illinois used the courts to appeal its desire to clean the waterways, the Maier Administration argued that there were not only environmental and economic implications but also social considerations. Maier stressed that the public interest included a nourishing environment with adequate housing, open spaces, quality schools, and an economy where citizens could earn a living. Thus, the city of Milwaukee could not afford to put all its tax revenue into this one cause.³⁷ In addition, the responsibility to restore the waters of the Milwaukee River Watershed and Great Lakes Basin area could not be left to the cities. Reemphasizing his point to the Milwaukee Common Council's Water Pollution and Sewerage Control Board in July 1970, Maier reported that the city of Milwaukee shared a mutual interest with other states and cities bordering the Great Lakes in cleaning up the environment. However, separating the existing sewer system would cost the city over \$500 million by 1977. (This number would eventually go over \$2 billion.) Herbert Goetsch, Commissioner of Public Works, and Herbert McCullough, the city engineer, further emphasized that current plans to address the outdated sewer system could not be fiscally achieved without federal and state funding or loans.³⁸

Furthermore, addressing the public interest in clean water, the mayor contended that the city of Milwaukee had already taken significant action to reduce pollution entering the waterway. He

³⁶ Warren P. Knowles to Henry W. Maier, "Milwaukee Waste Disposal System," April 30, 1970, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 142, Folder 6, UW-Milwaukee Libraries, Archives.

³⁷ Henry W. Maier, "Pollution Control and Cost Conference," July 1, 1970, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 142, Folder 7, UW-Milwaukee Libraries, Archives.

³⁸ Herbert D. McCullough and Herbert A. Goetsch to Thomas G. Frangos, "Pollution Abatement and Control of Clear Water," January 29, 1971, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 142, Folder 8, UW-Milwaukee Libraries, Archives.

highlighted that the city had spent millions since 1950. For example, effective in 1953, construction companies were required to have footing drains connected to a deep storm sewer or install sump pumps on all new buildings. In addition, in 1957, all 8-hole sewer maintenance holes were replaced with new one-hole lids to slow water drainage into the sewer system. Another effort established new city codes to decrease sewer and drainpipe leaks. These efforts and others were meant to limit clear water entry into the overburdened sanitary systems after heavy rains and spring snow melts, which resulted in sewage overflow into the Milwaukee River system. However, Maier emphasized that requiring the city to spend \$500 million within a decade to address an aging CSS was unreasonable.³⁹

Industrial leaders united with city representatives to express dislike of the expensive pollution abatement mandates. For example, W. C. Messinger of Rex Chainbelt Inc. representatives argued that fighting pollution was not simply a collaboration between local, state, and federal officials but also a partnership with industry and the government. He claimed that the crackdown on industries to lessen pollution required a more realistic approach. Also, the cost to clean up the existing industries needed to be shared if the community desired to keep these businesses solvent.⁴⁰

This did not mean the city of Milwaukee abandoned its future responsibilities to address the CSS's failings. Goetsch and McCollough mentioned the city's efforts to address the CSS, including eight ongoing studies to address sewer overflows. For example, Bauer and Harza Engineering were waiting on reports of deep tunnel projects in Boston, Chicago, Canada, and Germany.⁴¹ Also, SEWRPC continued its studies to address sewer overflows, including the Deep Tunnel System.⁴²

³⁹ McCullough and Goetsch to Frangos; Maier, "Pollution Control and Cost Conference."

⁴⁰ W.C. Messinger, "Industry and Government Need to Become Partners in the Pollution Battle," *NAM Reports*, May 24, 1971, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 142, Folder 9, UW-Milwaukee Libraries, Archives.

⁴¹ Ringenoldus, "Flood and Pollution Problems of the Milwaukee River System," October 1968.

⁴² K. W. Bauer to Henry W. Maier, "Costs of Alternative Plans," January 25, 1971, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 115, Folder 7, UW-Milwaukee Libraries, Archives.

Milwaukee's Deep Tunnel System became the cornerstone program to address the aging CSS and lessen the sewage overflows into the watershed. Before the Deep Tunnel System construction, the CSS was ill-equipped to handle the water that entered the system after heavy rains and snow melt, overflowing sewage 50-60 times a year. Opened in 1994, the first phase of the Deep Tunnel System would be 19.4 miles long and could store 405 million gallons of runoff approximately 300 feet under the ground. With two additional Deep Tunnel System expansions, this project lessened the overflow events on average to 2.3 per year.⁴³

Similar to Maier's reservations regarding the 1968 Water Quality Act, he expressed his concern over the passage of the Clean Water Act of 1972. Maier stressed the economic and social implications of federal mandates. He claimed that the expense to the city would result in higher property taxes for city dwellers and further limit low-income residents' housing opportunities.⁴⁴ In Mayor Maier's 1973 inaugural address, he stressed the importance of continuing the development of Milwaukee's economic growth and ability to attract businesses rather than have them migrate South. He warned that if Milwaukee's economy was not vibrant, the city government would not have funding to address other pressing needs and invest in leisure activities that more citizens desired. City officials continued to communicate back and forth with the EPA over the 1972 Clean Water Act and its impact on the fiscal realities of cities.⁴⁵

Responding to further criticism over continued water pollution in the MRW, Mayor Maier announced the formation of another river committee, the Milwaukee River Technical Task Force

⁴³ Milwaukee Metropolitan Sewerage District, "Milwaukee Deep Tunnels," 2022, <https://www.mmsd.com/what-we-do/wastewater-treatment/deep-tunnel>.

⁴⁴ Clement J. Zablocki to Henry W. Maier, "Implementation of Clean Water Act," March 26, 1980, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 78, Folder 9, UW-Milwaukee Libraries, Archives.

⁴⁵ George W. Whittow, Herbert A. Goetsch, and Edwin J Laszewski to Francis Mayo, "1974 State of Wisconsin Quality Plan," August 1, 1973, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 78, Folder 7, UW-Milwaukee Libraries, Archives.

(MRRTF), to examine the cost and benefits of proposals submitted by SEWRPC. He commended the work of SEWRPC, which completed its study of the Milwaukee watershed, for its effort to include a cost-benefit analysis of various alternatives the city of Milwaukee and the region, more importantly, could use to make informed decisions on how to proceed. This report suggested the construction of the Deep Tunnel System to address the poor water quality of the river during sewer and storm runoff that previously went into the river. More importantly, SEWRPC's studies, as noted earlier, emphasized that healthy waters required more than an upgrade to Milwaukee's sewage systems. Healthy waters required a watershed approach that addressed sources of pollution in the cities and the countryside.⁴⁶

The Restoration Council Joins with the State of Illinois

Although Maier's administration attempted to enlarge the scope of the problem to include the entire watershed, the Restoration Council joined with the State of Illinois to demand that the city of Milwaukee's leadership promptly address the CSS. Similar to the Restoration Council's attacks on Ozaukee County municipalities and the state's delay in enforcing pollution violations, Restoration Council members argued Milwaukee's government leaders could improve the river's water quality with little expense. Moreover, they argued that Maier's formation of MRRTF was unnecessary. One of the MRRTF's primary tasks was to examine how to fund the Deep Tunnel System, a costly endeavor. Despite the Restoration Council's appeal for less expensive abatement projects, the Deep Tunnel System gained support for addressing Milwaukee's CSS overflows. State and city political leaders noted the importance

⁴⁶ "Inaugural Message of Mayor Henry W. Maier," April 18, 1972, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 145, Folder 3, UW-Milwaukee Libraries, Archives; Environment Education Council of Greater Milwaukee, "Agenda Restoring Rivers Workshop," May 19, 1973, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 78, Folder 7, UW-Milwaukee Libraries, Archives; "Rivers Still Dirty, Workshop Told," *Milwaukee Journal*, May 20, 1973, Milwaukee Journal Sentinel Historical Newspapers; Environmental Education Council of Greater Milwaukee, "Restoring Milwaukee's Rivers," *Environmental Education Council of Greater Milwaukee Newsletter*, April 1973, Willis and Lillian Leenhouts Architects Records, 1936-1990, Box 17, Folder 6, UW-Milwaukee Libraries, Archives.

of federal funding to pay for 80% of the costs of managing sewage systems.⁴⁷ Seeing a fight over funding as another delay tactic, Marcey Jaskulski, a Restoration Council and League of Women Voters member, argued that cities and states could not use the lack of state and federal funding as a permanent excuse. If the federal government did not provide the funds, cities and states still needed to address water pollution rather than ignore the problem. Although Jaskulski did not live in the MRW, she argued that polluted waters threatened people regardless of where they lived.⁴⁸

Although the Restoration Council continued to hold the city of Milwaukee primarily responsible for the polluted waters, under the leadership of Robert Fuller and Helen Jacobs, they pushed the WDNR Secretary Anthony Earl to enforce pollution controls on the city of Milwaukee and the necessary improvements to the MSC South Shore Treatment facility. Fuller claimed that this facility was the largest polluter in the state. The Wisconsin Environmental Decade joined the Restoration Council in its effort to demand the enforcement of current legislation. The Environmental Decade, later named Clean Wisconsin, helped create Wisconsin's Environmental Policy Act (WEPA) in 1972 and defended individuals' right to sue a state agency if they did not comply with WEPA.⁴⁹

The Restoration Council further highlighted the failures of the CSS after a flood on March 4, 1976. The Oak Creek Sewage plant (OCSP) suffered one million dollars in damages. As a result, the OCSP sought a permit to build a bypass system allowing sewage to pass directly into Lake Michigan. The Restoration Council countered that this was an attempt to place a band-aid over the problem rather than spending money to eliminate illegal clear-water hookups that overburdened the system. They

⁴⁷ "Maier's River Plan Praised, Criticized," *Milwaukee Journal*, August 7, 1973, Milwaukee Journal Sentinel Historical Newspapers; Joseph Zingsheim, "Editorial: Milwaukee River," *Milwaukee Sentinel*, August 13, 1973, Milwaukee Journal Sentinel Historical Newspapers.

⁴⁸ Alan J. Borsuk, "Sanitary Pipes Hobble Fight for River's Life," *Milwaukee Journal*, June 3, 1974, Milwaukee Journal Sentinel Historical Newspapers; "She's Interested in Water for Survival, Not Boating," *Milwaukee Journal*, June 3, 1974, Milwaukee Journal Sentinel Historical Newspapers.

⁴⁹ Clean Wisconsin, "Wisconsin's Environmental Decade Legacy Cases," 2022, <https://www.cleanwisconsin.org/our-work/legal-action/wisconsins-environmental-decade-legacy-cases/>.

noted that Brown Deer and other communities required home inspections after each sale to check for illicit connections to the sewer system and argued that Oak Creek should do so. Furthermore, every time the sewage overflowed or bypassed the treatment centers, the city was forced to close local beaches due to high fecal counts along Lake Michigan's shores.⁵⁰ With the growing threat that sewage overflow could impact the public's drinking water supplies, the Restoration Council demanded that the time to act was now.⁵¹

Complicating the matter, the water overflowed into the river and backed up into people's homes after heavy rains. Although Milwaukee had over 200 sewer outlets leading to the rivers, city officials argued that 18 additional outlets were required to lessen residential sewage backups. The Restoration Council sympathized with the misfortune of homes being backed up with sewage but also noted that the problem related to the overall CSS and the water quality of the rivers could not improve without getting the sewer system fixed.

Despite the Restoration Council's claim that the WDNR did not do enough, local communities and contractors argued that the WDNR's recent attempt to enforce regulations usurped the local communities' power.⁵² Also, the Restoration Council and WDNR were blamed for the loss of tax dollars and jobs. In the spring of 1976, seventy-two building projects were put on hold.⁵³ Richard Snow of the Allied Construction Employers Association argued that the WDNR's recent enforcement attempts were moving the region to a zero economic growth policy. Interestingly, Richard Snow would later become the first chairman of the Milwaukee River Revitalization Council in 1988, under the direction of Tommy

⁵⁰ "Plant May Get Bypass," *Milwaukee Journal*, August 3, 1976, Milwaukee Journal Sentinel Historical Newspapers; "Sewage Overflow Forces Beach Closing," *Milwaukee Sentinel*, August 3, 1976, Milwaukee Journal Sentinel Historical Newspapers.

⁵¹ "Suburb Raps Sewerage Plan," *Milwaukee Journal*, December 19, 1976, Milwaukee Journal Sentinel Historical Newspapers.

⁵² "City Officials Blast State Sewer Plan," *Milwaukee Sentinel*, October 8, 1976.

⁵³ H. Carl Mueller, "Pollution Controls Draw Praise, Fire," *Milwaukee Sentinel*, March 5, 1976, Milwaukee Journal Sentinel Historical Newspapers; Paul G. Hayes, "Storm Points Up Sewage Plant Woes," *Milwaukee Journal*, March 7, 1976, Milwaukee Journal Sentinel Historical Newspapers; Richard C. Klenits, "State Stiffens Regulation of Sewers," *Milwaukee Journal*, April 16, 1976, Milwaukee Journal Sentinel Historical Newspapers.

Thompson and the WDNR (Chapter 5). Snow contended that the WDNR regulations cost many jobs and lessened the tax base when cities were asked to contribute more tax dollars to make the necessary sewer upgrades. Rodney Vandenhoven, Waukesha's Public Works Director, argued that all the restrictions on the city contributed more, not less, to urban sprawl, as contractors and builders worked on locations outside the city.⁵⁴ In other words, the WDNR critics claimed the city's leaders were in a better position than the state to determine the public interest.

The WDNR was caught between critics on both sides, arguing for either less or greater enforcement of environmental regulations. Keeping the WDNR on task and addressing other municipalities' violations, the Restoration Council forced the WDNR to schedule hearings. The Restoration Council believed public participation would motivate the WDNR to act and force municipalities to upgrade sewer systems. For example, Secretary of the Restoration Council Robert Fuller wanted the WDNR to publicly acknowledge when they approved discharge permits, allowing cities to drain overflow waste into riverways. These hearings took place throughout the watershed.⁵⁵

In the ongoing fight against sewage overflows, the State of Illinois continued its lawsuit against the city of Milwaukee. Joining in on the case, the Restoration Council filed a friends-of-the-court brief in favor of the State of Illinois that stressed that Wisconsin and Milwaukee had known of the problem for a long time and failed to act.⁵⁶ In the early spring of 1977, the Restoration Council praised WDNR for taking a stronger stand against the Milwaukee Metropolitan Sewerage Commission (MMSC). However, it attacked the WDNR's desire to permit the South Shore Treatment facility to discharge sewage when the flow exceeded 320 million gallons of waste. The Restoration Council emphasized more vigorous

⁵⁴ "Hearing Set on Sewage Proposal," *Milwaukee Journal*, November 3, 1976, Milwaukee Journal Sentinel Historical Newspapers; H. Carl Mueller, "Sewer Backup Problem Aired," *Milwaukee Sentinel*, November 23, 1976, Milwaukee Journal Sentinel Historical Newspapers.

⁵⁵ "DNR Grants Request for River Group," *Milwaukee Journal*, October 10, 1977, Milwaukee Journal Sentinel Historical Newspapers.

⁵⁶ H. Carl Mueller, "Sewer Plan Could Strangle Milwaukee Area Growth," *Milwaukee Sentinel*, January 10, 1977, Milwaukee Journal Sentinel Historical Newspapers.

enforcement of illegal installations and preventing new service hookups that allowed additional development on an already overloaded system.⁵⁷ In May 1977, the State of Wisconsin reached a deal with the MMSC to extend services and allow 420 square miles of sewer extensions on the condition that it continued to upgrade its sewers. These upgrades would cost the city \$667 million and lessen the amount of pollution entering the waterways. However, the Restoration Council feared that the enhancements would fail to meet the daily loads and that new construction might create more pollution violations.⁵⁸

In July 1977, a federal judge ruled in favor of Illinois, demanding that Milwaukee clean up its sewer systems. This ruling effectively voided the Wisconsin agreement reached just months earlier. Maier called the ruling absurd. He queried why Milwaukee would have to pay for its pollution overloads into Lake Michigan when Chicago sent its waste down the river towards St. Louis. In addition, the demands effectively required the city government to spend all its tax revenue on sewers. Acting Wisconsin Governor Martin Schreiber said the federal government needed to step up its funding. On the other hand, support for the ruling came from a previous critic of environmental regulations, Richard Snow. He hoped it would end debates, solve problems, and get construction companies back to work. In other words, the city and state needed to get the job done to prevent further construction delays.⁵⁹

The federal court ruling did not end the lawsuit as the city of Milwaukee petitioned the US Supreme Court to grant a writ of certiorari to review the case. Milwaukee attorneys argued that the Federal Water Pollution Control Act (FWPCA) allowed the city government to consider the financial burden to the party charged with cleaning up the riverway. Countering the Milwaukee attorneys, the Illinois attorneys utilized 19th-century law, the federal "Common Law of Nuisance." Attorneys of

⁵⁷ Alfred G. Lustig, "Editorial: Sewage in Lake," *Milwaukee Journal*, April 6, 1977, Milwaukee Journal Sentinel Historical Newspapers.

⁵⁸ David L. Beal, "Sewer Chiefs Buoyed by Settlement," *Milwaukee Journal*, May 26, 1977.

⁵⁹ Ron Marose, "Schreiber to Seek US Sewer Aid," *Milwaukee Sentinel*, July 30, 1977, Milwaukee Journal Sentinel Historical Newspapers.

Milwaukee argued this was beyond a reasonable cost and outside of the intent of current federal law.⁶⁰

Maier noted that the district court was ordering the city of Milwaukee to clean its wastewater to a level six times the requirement of the current regulations. In Maier's view, this was ridiculous in that it would cost an additional \$300 million to \$600 million more on top of an already estimated \$1.3-billion clean-up program currently underway.⁶¹ Even more, Wisconsin residents were being held to a water quality standard higher than the standards set by Illinois for its communities.⁶²

Part of the issue was that the federal government was not funding its mandates, despite laws requiring federal spending and support.⁶³ Maier wrote James McIntyre, Director of the Office of Management and Budget of the Natural Resources Division of the US Department of Justice, warning that if Illinois won its case against the city of Milwaukee, Maier would be forced to sue the EPA for funding that was promised to Milwaukee.⁶⁴ After multiple appeals, the US Supreme Court ruled in favor of Milwaukee on April 28, 1981.⁶⁵ However, over the next 40 years, the Milwaukee Metropolitan Sewerage District, along with state and federal government support, would spend over \$3 billion on clean water infrastructure programs, including expanding the Deep Tunnel System. Since 1994, less than 2% of the stormwater and wastewater has entered the system untreated. This amount exceeded the

⁶⁰ Richard W. Cutler to Louis Clairborne, "Supreme Court Review," December 5, 1979, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 78, Folder 9, UW-Milwaukee Libraries, Archives.

⁶¹ Henry W. Maier to Honorable Benjamin R. Civiletti, "Certiorari Request in Illinois v. Milwaukee," December 18, 1979, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 78, Folder 9, UW-Milwaukee Libraries, Archives.

⁶² Henry W. Maier to Richard W. Cutler, "Suit against Milwaukee," March 6, 1980, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 78, Folder 9, UW-Milwaukee Libraries, Archives; Bronson C. La Follette to Henry W. Maier, "Illinois Lawsuit over Sewage Treatment," March 6, 1980, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 78, Folder 9, UW-Milwaukee Libraries, Archives; Zablocki to Maier, "Implementation of Clean Water Act," March 26, 1980.

⁶³ Dennis Bass, "EPA Sewer Funds to Drop as Budget Is Balanced," March 31, 1980, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 78, Folder 9, UW-Milwaukee Libraries, Archives.

⁶⁴ Henry W. Maier to James McIntyre, "Argument over Health Risk of Milwaukee's Sewer Discharges," July 14, 1980, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 78, Folder 9, UW-Milwaukee Libraries, Archives.

⁶⁵ William H. Rehnquist, *City of Milwaukee v. Illinois*, No. 79-408 (United States Supreme Court April 28, 1981).

national standard in capturing and cleaning 85% of the wastewater and stormwater.⁶⁶ However, as SEWRPC and Milwaukee's government leaders warned, all these efforts were still not enough to revitalize the waters.

Struggling to Build a Watershed Solution

Throughout the 1970s, Mayor Maier emphasized that the Milwaukee River's uncleanness was not just the city's responsibility. Many levels of government, upland farmers, suburbanites, other property owners, and city dwellers all shared a role in the waterway's health.⁶⁷ The public quickly identified the city's outdated CSS for its contribution to pollution. However, urban and rural landscapes degraded watershed habitats, as they were designed to drain polluted water into the river to support city development, housing construction, and agricultural interests. Commenting on the need for government authorities to work together, Harry Brockel, former head of the Milwaukee River Technical Committee, noted that communities along the upper branches of the waterway also needed to change their practices. Farming strategies, housing developments, and inefficient sewage systems continued to pollute the waterway. If not addressed, these problems would only worsen as the population expanded upstream.⁶⁸ Stressing the need for a regional approach, Mayor Maier promoted a "Little TVA" to fight pollution.⁶⁹ The "Little TVA" was intended to draw a comparison to President Franklin D. Roosevelt's

⁶⁶ Lawrence A. Michael, "Milwaukee Water Pollution Abatement Program - In Line Storage," March 2, 1981, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 78, Folder 10, UW-Milwaukee Libraries, Archives; Milwaukee Metropolitan Sewerage District, "History," 2022, <https://www.mmsd.com/about-us/history>.

⁶⁷ Henry W. Maier to Milwaukee Common Council, "Milwaukee River Strategy Report to Council Members," January 28, 1977, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 115, Folder 11, UW-Milwaukee Libraries, Archives.

⁶⁸ "Editorial: Fight Pollution," *Milwaukee Sentinel*, April 3, 1972, Milwaukee Journal Sentinel Historical Newspapers; "Milwaukee River Pollution Focus Shifts Upstream," *Milwaukee Sentinel*, April 15, 1971, Milwaukee Journal Sentinel Historical Newspapers.

⁶⁹ Kenneth R. Lamke, "'Little TVA' Eyed for River Cleanup," *Milwaukee Sentinel*, August 11, 1972, Milwaukee Journal Sentinel Historical Newspapers; Kenneth Starr to Henry W. Maier, "Museum Staff Little TVA," August 15, 1972, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 115, Folder 8, UW-Milwaukee Libraries, Archives.

Tennessee Valley Authority, formed in 1933 to address residents' flood control and energy needs living in the Tennessee River Watershed.⁷⁰ Maier favored a regional response to address the financial burden that included urban and rural residents of the Milwaukee River Watershed.

As municipalities addressed their outdated sewage treatment facilities, Maier's administration and the Restoration Council took aim at NPS pollution. If the public desired swimmable and fishable waters, then the landscapes and infrastructure, shaped by human development, would need to be upgraded to address NPS. Unlike industrial and municipal sewer sources of pollution, NPS often originates from multiple sources, as rainfall and snowmelts collect pollutants as it drains to the rivers.⁷¹ One of the top concerns was the phosphorous levels in the waterways. Phosphorous was a significant contributor to the growth of algae. In 1979 Kurt Bauer of SEWRPC recommended setting a goal of 1/10 of the current levels or 60lbs per day in the MRW. He warned that one pound of phosphorous could stimulate 10,000 pounds of additional algae growth. At the current levels, phosphorus and the ensuing algae growth made many streams un-fishable and un-swimmable. Humans exposed to blue-green algae sometimes experience temporary bowel discomfort. In cases of acute exposure, humans can suffer liver damage and respiratory failure.⁷² SEWRPC's recommendation was to spend \$6.7 million on technology to improve water treatment facilities' ability to remove phosphorus. SEWRPC estimated that 90% of southeastern Wisconsin's streams would be fishable and swimmable if the plans were adopted. The Restoration Council supported the effort and noted that the cost to deal with the problem was high, but it would only increase if it were left unchecked.⁷³

⁷⁰ William E. Leuchtenberg, "The Achievement of the New Deal," in *Fifty Years Later: The New Deal Evaluated*, ed. Harvard Sitkoff, 1st ed (New York: McGraw-Hill Publishing Company, 1985), 223; Allan M. Winkler, *Franklin D. Roosevelt and the Making of Modern America* (New York: Pearson Education, Inc., 2006), 111.

⁷¹ "Basic Information about Nonpoint Source (NPS) Pollution" (Environmental Protection Agency, 2022), <https://www.epa.gov/nps/basic-information-about-nonpoint-source-nps-pollution>; "Sewage Chiefs Hit Phosphorus Plan," *Milwaukee Journal*, April 20, 1979, Milwaukee Journal Sentinel Historical Newspapers.

⁷² Wisconsin Department of Natural Resources, "Blue-Green Algae," 2022, <https://dnr.wisconsin.gov/topic/lakes/bluegreenalgae>; "Sewage Chiefs Hit Phosphorus Plan."

⁷³ "Sewage Chiefs Hit Phosphorus Plan."

Maier expressed his frustration to WDNR secretary Caroll D. Besadny over Milwaukee's mandated multi-billion-dollar Deep Tunnel System without equal attention being placed on other projects to address NPS pollution. The agreement between Wisconsin state authorities required the Milwaukee Metropolitan Sewerage District (MMSD) to take measures to prevent sewage overflows, but rural landowners were being asked to address dangerous runoff from their lands voluntarily. Maier emphasized that the MMSD had no control over NPS pollution. If NPS pollution was not deterred, the city would be unable to meet the "swimmable and fishable" standards demanded of them.⁷⁴ Maier had focused on reducing the cost and increasing the clean-up time to reduce the burden on the city. However, he claimed this financial burden could not be justified without "fishable and swimmable" waters. The Mayor's Task Force on Pollution from Sources Outside the Milwaukee Metropolitan Sewerage District published a report in July 1983, highlighting the city's pollution abatement strategies but dismay at the lack of NPS abatement programs throughout the watershed. SEWRPC member Kurt Bauer argued that the water quality standards would not be met without addressing NPS pollution outside of the MMSD. Mayor Maier argued that more point source pollution could not be exchanged for less NPS programming.⁷⁵

In August 1982, Paul Hayes, *Milwaukee Journal* editor, praised the work of cities and environmental groups for raising public awareness to address the inefficiencies of municipal treatment facilities. The Restoration Council was one of the environmental groups he praised for its efforts. Interviewed by Hayes, Robert Fuller and Helen Jacobs mentioned that there was more to do. They both

⁷⁴ Henry W. Maier to Carroll Besadny, "Non-Point Pollution Shift," May 7, 1982, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 78, Folder 10, UW-Milwaukee Libraries, Archives; Henry W. Maier to Edwin J Laszewski, "Task Force Concerns," July 8, 1982, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 142, Folder 10, UW-Milwaukee Libraries, Archives; Edwin J Laszewski, "Information Relating to Mayor's Task Force Report," June 29, 1983, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 142, Folder 10, UW-Milwaukee Libraries, Archives.

⁷⁵ Task Force on Pollution from Sources outside the Milwaukee Metropolitan Sewerage District, "Mayor's Task Force on Pollution from Sources outside the Milwaukee Metropolitan Sewerage District," July 1983, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 266, Folder 44, UW-Milwaukee Libraries, Archives.

recognized the continued problem of NPS pollution. Robert Fuller stressed the difficulty of generating public support for a more complex problem to understand and correct.⁷⁶ Restoration Council member Joseph Zingsheim wrote Maier to support his effort to reduce farm runoff. He noted several suggestions to clean the river, from fencing to keep animals out of the stream, buffer zones between streams and croplands, and better fertilizing techniques. He also criticized the WDNR for not doing its job.⁷⁷

On the surface, the watershed community shared an interest in the Milwaukee River's water quality. However, many communities debated how to clean the riverways and timetables to complete abatement programs. Besadny mentioned that in Wisconsin, NPS pollution reduction was a voluntary program. He argued it was the only way to succeed, as mandated NPS regulations would have faced political opposition.⁷⁸ Challenging the effectiveness of voluntary programming, Maier claimed local and state governments would not be incentivized to address NPS. Maier noted the importance of seeing water quality as a watershed community issue. Thus, river health would continue to suffer if the state focused only on urban areas.⁷⁹ Reemphasizing this claim for a mini-TVA, Maier explained that the watershed community needed to address rural runoff to revitalize the river. Furthermore, if the city of Milwaukee taxpayers were paying over \$2.5 billion to rectify the CSS, then they should expect clean waters.⁸⁰ Part of Maier's reaction stemmed from WDNR's fast-track push to address the CSS problem by

⁷⁶ Paul G. Hayes, "Upstream, the River Is Now Cleaner," *Milwaukee Journal*, August 25, 1982, Milwaukee Journal Sentinel Historical Newspapers.

⁷⁷ Joseph Zingsheim to Henry W. Maier, "Pollution in River," July 12, 1983, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 142, Folder 11, UW-Milwaukee Libraries, Archives.

⁷⁸ Task Force on Pollution from Sources Outside the Milwaukee Metropolitan Sewerage District, "Mayor's Task Force on Pollution from Sources Outside the Milwaukee Metropolitan Sewerage District."

⁷⁹ Hinshaw, "Upstream Pollution from MMSD"; "Milwaukee Looks North for Source of Pollution," *Random Lake - The Sounder*, July 14, 1983, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 142, Folder 11, UW-Milwaukee Libraries, Archives.

⁸⁰ Carl Zimmermann, "State Should Listen to Mayor Maier's Call for Upstream Clean-Up" (WITI-TV6, July 17, 1983), Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 142, Folder 10, UW-Milwaukee Libraries, Archives; "Go After the Upstream Filth," *Milwaukee Journal*, July 22, 1983, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 142, Folder 11, UW-Milwaukee Libraries, Archives.

1996.⁸¹ Maier issued a public statement condemning Governor Tony Earl's decision to keep a hearing on NPS pollution entering the Milwaukee River off the July 1983 agenda. He referred to SEWRPC studies that indicated NPS pollution would continue to plague the watershed for 140 more years if abatement programming remained voluntary in rural communities. This was too long, considering the forced mandates placed on the city of Milwaukee, and MMSD needed to remediate point source pollution in 10-12 years.⁸²

Fuller emphasized that the city and rural areas were to blame for NPS pollution. In addition, he did not agree with the need to create another layer of government or "Little TVA." He argued that the government just needed to fulfill its existing responsibilities.⁸³ However, residents in the watershed did not just argue over another layer of government but also the assumption that a watershed community had a shared interest. As previously discussed in the debates surrounding the Waubesa reservoir proposal, common ground over common water was elusive between urban and rural interests throughout the watershed. Although both areas shared resources, the communities within the MRW saw themselves as separate entities rather than part of a collective group. For example, residents in Ozaukee County were concerned that their perspectives would not be valued as much as visions reflected by people in Milwaukee.⁸⁴ Thus, a shared public interest between residents of the MRW failed to emerge.

Farmers questioned why agriculture and dairy practices were being targeted. When Milwaukee's economy thrived and the waste of industrial and manufacturing filled the waterways, there was little concern over agricultural runoff. However, as these point sources of pollution were addressed,

⁸¹ Robert Fuller, "Regional Authority to Clean Up River Opposed," *Milwaukee Sentinel*, July 23, 1983, Milwaukee Journal Sentinel Historical Newspapers.

⁸² Henry W. Maier to Tony Earl, "Nonpoint versus Point Pollution Abatement Funding," cAugust 1983, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 142, Folder 14, UW-Milwaukee Libraries, Archives.

⁸³ Hayes, "Upstream, the River Is Now Cleaner."

⁸⁴ Kosterman, "River Cooperation Needed."

the problems of rural NPS pollution entering streams became a more significant concern. Farmers argued that farm waste was only cited for 50% of the NPS pollution, but they were being blamed disproportionately. However, farmers' use of fertilizers, insecticides, and herbicides (familiar sources of NPS) had rapidly increased, and the number of small farms steadily declined since 1950. Although these chemicals contributed to the increased productivity of farms, applying these chemical and synthetic products on cropland had potential environmental consequences, including the pollution of rivers.⁸⁵

The state legislature considered laws to regulate barnyard runoff (another NPS source) of farms with over 1000 cattle, manure equivalent to a city of 10,000 people. Yet this would only include 1% of the farms in Wisconsin. The state budget would provide \$10,000 for the larger farms to address runoff. Yet many small farms could not spend the time or the money addressing some of these issues.⁸⁶ Also, farmers wanted the State Department of Agriculture Trade and Consumer Protection (DATCP) to regulate the farms rather than the WDNR.⁸⁷ This proposal gave farmers more control and would be addressed during the Tommy Thompson administration (Chapter 5).

Even though Earl and Maier were part of the Democratic Party, they were at odds over how best to address NPS pollution. Maier's letter to Governor Earl in July 1983 emphasized his dismay that rural nonpoint pollution was not being addressed with the same diligence as the city of Milwaukee was being charged to do by federal and state mandates at great expense to all parties. If the sources of pollution entered the river upstream from Milwaukee, the city's clean-up efforts would still result in polluted waters. MMSD would not be able to meet the water quality standards imposed on it by the state

⁸⁵ Paul Conkin, *A Revolution Down on the Farm: The Transformation of American Agriculture Since 1929* (Lexington, KY: University Press of Kentucky, 2008), 97–122.

⁸⁶ Stuart Carlson, "Farmers Accept Blame for Some River Pollution," July 23, 1983, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 142, Folder 11, UW-Milwaukee Libraries, Archives.

⁸⁷ "Pollution on the Farm," *The Capital Times*, July 21, 1983, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 142, Folder 11, UW-Milwaukee Libraries, Archives.

without NPS abatement.⁸⁸ If Milwaukee residents were required to pay the expense necessary to address the failings of the CSS, Maier expected fishable and swimmable rivers.⁸⁹ Maier called for the WDNR to require NPS abatement programs to match what was being asked of the MMSD.⁹⁰ However, Governor Tony Earl reminded Maier that all levels of the government were under budget constraints.⁹¹

In 1984 the Wisconsin State Legislative Audit Bureau recommended a plan to address NPS pollution. They called for watershed-focused efforts first to identify the most drastic NPS sources of pollution. Then state agencies and local landowners could collaborate to lessen NPS pollution and improve water quality. The idea was first to consider what worked before assuming one project worked better, especially when heavy or unexpected rains might foil plans.⁹² In June 1984, the WDNR announced that it would begin a new study of the Milwaukee River. As before, the Restoration Council argued that the river had been studied to death, and it would be better to spend \$200,000 on efforts to clean the river with already established knowledge. For example, the state could give money to farmers as incentives to provide buffer zones between fields and the riverway. More importantly, despite calls for mandatory regulations, NPS abatement remained voluntary.⁹³ Edwin Laszewski, Milwaukee engineer, speaking before the State of Wisconsin Senate Energy and Environmental Resource Committee, noted

⁸⁸ "Media Brief of the Report from the Task Force on Pollution from Sources Outside the Milwaukee Metropolitan Sewerage District."

⁸⁹ Honorable Henry W. Maier to Anthony Earl, "State Responsibility to Address Non-Point Pollution Outside Milwaukee County," July 7, 1983, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 134, Folder 4, UW-Milwaukee Libraries, Archives; "Milwaukee Looks North for Source of Pollution."

⁹⁰ Kocheisen, "Senate Unit Votes Plan to Curb Water Pollution," *Nation's Cities Weekly*, September 26, 1983, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 142, Folder 11, UW-Milwaukee Libraries, Archives.

⁹¹ Anthony S. Earl to Henry W. Maier, "Non-Point Pollution," July 13, 1983, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 142, Folder 10, UW-Milwaukee Libraries, Archives.

⁹² "Nonpoint Pollution Recommendations," *Wisconsin Report*, January 17, 1984, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 142, Folder 12, UW-Milwaukee Libraries, Archives.

⁹³ Carol Wahlen, "DNR Schedules Study of River's Non-Point Pollution," *Milwaukee Journal*, June 4, 1984, Milwaukee Journal Sentinel Historical Newspapers.

Milwaukee's frustration that the urban sewers were regulated but NPS pollution on rural lands was not, even though 50% of the pollution in Milwaukee and Menomonee rivers came from rural lands.⁹⁴

Supporting Maier's call for a government advisory committee, the state designated the Milwaukee River as a Priority Watershed (MRPW). Wisconsin legislature enacted the MRPW program to assist the MMSD's efforts to address NPS pollution throughout the watershed. This designation also approved funding for NPS pollution abatement programming.⁹⁵ Neil O'Reilly, a DNR water resources manager, called on people at the meeting to stop pointing fingers at each other, noting the squabbling between rural and urban land interests. WDNR was content with landowners' voluntary efforts to reduce runoff. However, the WDNR and the Restoration Council agreed that the endeavors to improve municipal waste treatment facilities over the past 15 years would not make rivers swimmable and fishable if field and farm runoff were not addressed.⁹⁶ In his inaugural letter to the city in 1984, Maier mentioned his continued frustration that the city of Milwaukee would pay \$500 million towards a \$2.6-billion project, equivalent to Milwaukee's entire capital budget to address pollution abatement over seven years. Yet even then, the waters would not be fishable or swimmable if NPS pollution in rural areas was not averted.⁹⁷ The WDNR indicated that NPS should be significantly reduced in the Milwaukee River Watershed by 1996. Yet this goal required continued funding by the state and, hopefully, additional support from the federal government.⁹⁸

⁹⁴ Edwin J Laszewski, "Laszewski Statement on Senate Bill 548," January 25, 1984, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 142, Folder 12, UW-Milwaukee Libraries, Archives.

⁹⁵ "River Quality to Be Topic," *Milwaukee Sentinel*, June 18, 1984, Milwaukee Journal Sentinel Historical Newspapers; Bode to Maier, "Milwaukee River Priority Watershed," May 7, 1984; "Cleaner Waters in the Milwaukee River Basin," *Milwaukee River Priority Watersheds Program*, c1989, Box, Priority Watershed, Box 00001852140, Folder MRRC Initial Materials, 2005, MRRC - Ray Krueger Collection.

⁹⁶ Carol Wahlen, "Unity on River Cleanup Urged," *Milwaukee Journal*, June 22, 1984, Milwaukee Journal Sentinel Historical Newspapers.

⁹⁷ Henry W. Maier, "Fiscal and Human Needs Fill Mayor's Agenda," April 17, 1984.

⁹⁸ William C. Carey to Henry W. Maier, "Carey's Notes Konrad DNR Nonpoint Concerns," May 10, 1984, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 142, Folder 12, UW-Milwaukee Libraries, Archives.

Further pushing the need to address NPS, Maier held a symposium on non-point pollution on May 11, 1984. He continued to speak about the expenses Milwaukee County citizens were paying to clean up the waterway, while NPS pollution had no timetables and mandates. He mentioned Milwaukee residents, on average, could be asked to spend \$3000 to clean up a river that would still be dirty. Bauer, Executive Director of SEWRPC, reported on the findings from their study that addressing NPS pollution was crucial to making waters fishable and swimmable. Yet, at the current rate, it would take 80-140 years if landowners were not required to participate and state funding of the program remained low.⁹⁹ Chairperson of the Milwaukee Metropolitan Sewerage Commission Dean Showers reported on the federal and state government's efforts to address NPS pollution. Both emphasized the watershed approach and that voluntary NPS programming was the only way to pass legislation. Thus, Governor Earl continued to move forward with voluntary programming, unwilling to challenge the farm lobby.¹⁰⁰

Conclusion

Despite the Restoration Council's attempts to build public interest to address the overall health of the Milwaukee River, the community defined by the watershed stumbled to find common ground over its common waterway. The Maier Administration initially stressed the importance of recognizing mandated abated programs' social and economic impact. At the same time, the Restoration Council and

⁹⁹ Kurt Bauer, "Summary of Findings: Mayor's Task Force on Non-Point Pollution" (An Environmental Symposium on Non-Point Pollution and Its Effects on Pollution of Lake Michigan and Milwaukee's Rivers, May 11, 1984), Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 142, Folder 14, UW-Milwaukee Libraries, Archives; Henry W. Maier, "Unattended Up-River Pollution Symposium," May 3, 1984, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 134, Folder 4, UW-Milwaukee Libraries, Archives; Bruce Gill, "Maier Shock Tactic May Hurt His Cause," May 4, 1984, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 142, Folder 12, UW-Milwaukee Libraries, Archives.

¹⁰⁰ "Don't Sell Out the Soil, Governor," *The Capital Times*, October 13, 1984, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 134, Folder 3, UW-Milwaukee Libraries, Archives; "Earl's Conservation Courage Erodes," October 15, 1984, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 134, Folder 3, UW-Milwaukee Libraries, Archives; "On, Wisconsin Both Air and Land Need Earl's Help," *Milwaukee Journal*, October 21, 1984, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 134, Folder 3, UW-Milwaukee Libraries, Archives.

state and Federal government agencies pressured the city government's compliance. However, as the Milwaukee Metropolitan Sewer District and the city administration worked to construct the Milwaukee Deep Tunnel System, the Maier demanded a more comprehensive pollution abatement program, which included NPS pollution. The Milwaukee Deep Tunnel System became active on August 1, 1993. In the first year of operation, 4.1 billion gallons of flow and another 4.1 billion gallons of inflow were collected in the tunnels. This prevented billions of gallons of untreated wastewater from entering the waterways. The work and effort of the Milwaukee River Basin communities and partnerships were showcased at the National Watershed Conference in 1995.¹⁰¹ Unfortunately, Maier noted that the rivers remained polluted without additional efforts to address NPS.

In Chapter Two, I demonstrated how the Riveredge community initially looked to separate itself from what it perceived as the degradation caused by urbanization. In Chapter Three, I described the difficulty of forming a shared public interest in the watershed. SEWRPC shared proposals to limit flood damage and expand recreation opportunities that emphasized engineered solutions without considering the social implications held by rural and urban residents. Similarly, Maier's administration was forced to interact with the state of Illinois and rural areas of the MRW, even if they desired to emphasize their separation. The use of the waterway in one section of the river influenced the use of it in another area. If water quality was to be prioritized, a watershed approach was required. However, the communities that separated themselves would not agree to the terms.

Attempts to address NPS pollution continued to stagger through the end of Maier's administration. In September 1985, Maier appointed Milwaukee City Engineer Edwin J. Laszewski to the Milwaukee River Priority Watersheds committee; however, Maier remained skeptical of the organization moving forward as the Wisconsin legislature gutted the program's effectiveness by not

¹⁰¹ Milwaukee River Revitalization Council and Wisconsin Department of Natural Resources, "1994-1995 Annual Report: State of the Milwaukee River Basin," 1995, Box 1995-199, Folder 00001370922 Folder 000001 - Correspondence, MRRC - Ray Krueger Collection.

funding SEWRPC's research that coincided with it. He did not see it as a priority of the state legislative branch and wondered about its ability to have much success or value without the necessary funding.¹⁰² In addition, voluntary programming for NPS abatement became the standard, and advisory committees and state agencies would seek a 25% reduction through voluntary programming as a push for mandatory controls was seen as a threat to the state's watershed programming.¹⁰³

The Restoration Council continued to push for cleaner waters. Regularly on the defense of Restoration Council attacks, industrial, agricultural, and elected officials came to despise the group.¹⁰⁴ In 1989, Oliver Fick mentioned his support for programs to give farmers incentives to improve structures and drainage to limit the amount of phosphorus and material that enters the Milwaukee River. However, Fick argued that the program should have been mandatory. Fick compared letting farmers continue to pollute the river was like allowing car drivers to drive as fast as they like but requesting that they voluntarily follow posted speed limits. Robert A. Fetcher, a farmer and county supervisor in Ozaukee County, expressed his dismay that the WDNR was focused on farmers rather than the expanding development in the area.¹⁰⁵

The Restoration Council continued to work under the assumption that the best way to improve water quality was to address pollution at its source. Their efforts helped to inform the public of water pollution violations and the inability of state and local governments to enforce water regulations.

¹⁰² Henry W. Maier to Gary L. Nelson, "Maier Recommends Edwin Laszewski to Address Nonpoint Pollution in Watershed," October 18, 1985, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 142, Folder 15, UW-Milwaukee Libraries, Archives; Gary Nelson to Henry W. Maier, "Minutes of Milwaukee River Priority Watersheds Advisory Committee - August 28, 1985," September 16, 1985, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 142, Folder 14, UW-Milwaukee Libraries, Archives.

¹⁰³ C. P. Potos to Tom Wolf and Patrick Marchese, "MMSD Policy Related to the Nonpoint Source Abatement Program for the Milwaukee and Kinnickinnic River Basins," October 2, 1985, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 142, Folder 15, UW-Milwaukee Libraries, Archives.

¹⁰⁴ Joseph Zingsheim, "Editorial: Start Cleaning River Now," *Milwaukee Sentinel*, January 8, 1988, Milwaukee Journal Sentinel Historical Newspapers.

¹⁰⁵ Robert Gebeloff, "Milwaukee River Cleanup Plan Called Inadequate," *Milwaukee Journal*, December 7, 1989, Milwaukee Journal Sentinel Historical Newspapers.

Although studies performed by SEWRPC helped to shape the clean-up debates on the need to take a watershed perspective, the Restoration Council worked under the assumption that lessening pollution entering the stream today was better than waiting until tomorrow. Despite an active membership for most of the 1970s and 1980s, the Restoration Council would terminate in the early 1990s. The Milwaukee River Revitalization Council assumed the quest to develop a watershed perspective.

Chapter 5: Milwaukee River Revitalization Council

The Milwaukee River Revitalization Council (Revitalization Council) was formed at the beginning of Governor Tommy Thompson's first term of office in 1988. Unlike the non-profit Restoration Council, which worked outside the reins of government, the Revitalization Council was an active government advisory group through 2010 under the Wisconsin Department of Natural Resources' (WDNR) leadership.¹ As noted in the previous chapter, Mayor Henry Maier consistently argued that the WDNR and the state must do more to clean the waters, especially addressing nonpoint source (NPS) pollution. Maier and the state authorities' primary contention against one another revolved around the timing of NPS abatement in the Milwaukee River Watershed. Maier demanded that the NPS abatement programming have mandatory regulations and finish in a similar period as the point source requirements placed on the city. However, the WDNR and Governor Tony Earl argued it was impossible. They claimed that the state's political will was not present and that the public outcry against mandatory NPS regulation would not allow it. Carroll D. Besadny, Secretary of the WDNR, further defended the work of the WDNR, claiming that long-range education programming would inform the public of the waterway's value and generate more community involvement to make cleaner waters a reality in the Milwaukee River Watershed (MRW).² In 1988 newly elected Governor Tommy Thompson formed the Revitalization Council to foster public interest in the river and to improve the MRW's overall health.

Although 18th and 19th-century developers sought ways to separate nature from the urban landscape, William Cronon, in *Nature's Metropolis*, draws connections between the city of Chicago and the hinterland through economic processes. Challenging the perspective that the hinterland and urban

¹ Wisconsin Legislative Reference Bureau, "Milwaukee River Revitalization Council," *State of Wisconsin Blue Book*, 2012 2011, 462.

² "1989 MRRC Agenda and Notes - February," February 13, 1989, Box, Priority Watershed, Box 00001852140, Folder MRRC Initial Materials, 2005, MRRC - Ray Krueger Collection.

landscape were separate spheres of influence, Cronon demonstrates how the city's development shaped the landscape of the hinterland.³ In the late twentieth century, water quality initiatives attempted to reshape urban areas and hinterlands to support cleaner riverways. The Revitalization Council's efforts to improve water quality stressed the importance of forming a watershed perspective to achieve many of its goals. How people utilized the waterway in one section of the river impacted the use and water quality in other parts of the river. For example, in the 1990s, the agricultural uses of the waterway in the upper sections influenced downstream recreation and economic development.

Ecologically one defined the watershed as the area in which waters drained from land into a common river or lake system. Although people resided in a watershed together, a shared perspective of a watershed's use and importance did not come automatically. People might have identified with residents in politically defined areas or other geographic regions more than they might have associated themselves as part of a shared watershed. Although the Revitalization Council promoted and educated the public on the importance of a watershed perspective, this did not appear to be a common way people recognized their relationship with one another.

As noted in previous chapters, the city of Milwaukee was required to address its combined storm and sewer system (CSS), which had contributed to the Milwaukee River's degradation when overflows occurred throughout the sewer district. However, rural agricultural lands, cultivated to support the growing population of Milwaukee and beyond, also contributed to MRW's poor water quality as pollution and soil runoff entered the riverway. Although the city administration attempted to stimulate economic growth through the river's revitalization along the banks downtown, the waterway's health required more than closing the Milwaukee River to commercial traffic and addressing pollution within the city limits. However, unlike the businesses and industries that had closed along the riverway in Milwaukee, agricultural interests strove to keep their family farms solvent and to use the river as a

³ William Cronon, *Nature's Metropolis: Chicago and the Great West* (New York: W. W. Norton, 1991), xvi, 18.

channel to remove access water from the fields. Thus, the Revitalization Council needed to encourage a watershed perspective that met the public's rural and urban interests.

Scholars have depicted the stories of a city's renewal and attention to addressing environmental degradation as a Phoenix rising from the ashes. For example, David and Richard Stradling note how Cleveland and other cities sought to remake themselves by embracing nature and transforming waterfronts for residential and recreational use. Industrial cities evolved into service cities as urban developers worked to maintain healthy environments for the residents to live, work, and play.⁴ Jennifer Bonnell, in *Reclaiming the Don*, emphasizes the need to recognize the "imagined futures" of the Don River Valley. She defines imagined futures as the practice of re-envisioning a landscape in harmony with the economic and political realities, and technological capabilities of a particular time and place.⁵

As the Revitalization Council worked with the WDNR and Milwaukee's city government to reimagine the human interactions with the riverway and the watershed's health, they were required to adapt their strategy to promote a shared public interest, reflecting on the social and economic needs of rural and urban residents within the watershed community. Unlike city leaders attempting to redevelop the downtown into a service-orientated economy, the rural farm communities fought to maintain, rather than change, their economic livelihood. From this urban and rural divide, the Revitalization Council members tailored their strategies to educate the public on how rural and urban landscapes must be redeveloped to improve the MRW's water quality.

Although the Revitalization Council was involved in programs to address water quality, I argue that working with rural and urban communities to develop a shared public interest in the value and human use of the Milwaukee River was essential to the success of improving the watershed's overall

⁴ David Stradling and Richard Stradling, *Where the River Burned: Carl Stokes and the Struggle to Save Cleveland* (Ithaca, NY: Cornell University Press, 2015), 9, 17.

⁵ Jennifer L. Bonnell, *Reclaiming the Don: An Environmental History of Toronto's Don River Valley* (Toronto: University of Toronto Press, 2014), xx.

health in the late twentieth century. Representing Milwaukee residents, Mayor John Norquist and his administration (1988-2004) worked with the Revitalization Council to expand green space and access to the Milwaukee River through the extension of the Riverwalk, long supported by Mayor Henry Maier's administration. Working to address NPS pollution required the Revitalization Council to work with people throughout the watershed. The WDNR, with the Revitalization Council's assistance, hoped to capture a broader audience and build public support for voluntary NPS pollution abatement. Despite Mayor Maier's outcry that a lack of mandatory programming would leave the Milwaukee River "unswimmable and unfishable" for decades, the Revitalization Council strove to clean the waterway through voluntary programming.⁶

Examining the efforts of the Revitalization Council to find common ground over the common waters of the MRW, I will first discuss the formation of the Council. Then, I will share how the Revitalization Council addressed NPS pollution within the confines of a voluntary approach. This required changing the people's will and the redevelopment of lands to lessen NPS pollution from entering the riverway. The Revitalization Council succeeded in educating the public through workshops, video productions, and other programming. The Revitalization Council made significant strides in addressing water quality. They demonstrated how some farmers' voluntary contributions to the watershed's overall health occurred without damaging their economic well-being. However, NPS pollution still degraded the waters through the twentieth century. Finally, I will look at the Revitalization Council's determination and success in creating more urban green space and improving residents' access to the waterway, especially after the formation of the Riverway Plan in 1991 and the removal of the North Avenue dam in 1997. Like the efforts of Riveredge's Teacher-Naturalist program to bring wild planting into people's suburban landscapes, the Revitalization Council worked to restore urban lands by

⁶ Potos to Wolf and Marchese, "MMSD Policy Related to the Nonpoint Source Abatement Program for the Milwaukee and Kinnickinnic River Basins," October 2, 1985; Maier to Nelson, "Maier Recommends Edwin Laszewski to Address Nonpoint Pollution in Watershed," October 18, 1985.

expanding city residents' access to the waterway and places to experience nature's wonders within the city boundaries. In the 1990s nonprofit River Revitalization Foundation (RRF) was formed. The work of the Revitalization Council provided the base for the RRF and other civic organizations to further expand Milwaukee's green space along the Milwaukee River. Although these efforts can be seen for their attempts to improve the ecological balance in the MRW and develop the environmental corridor, they also recognized the need for people to understand the value of nature within both urban and rural areas and how human actions may foster or hinder water quality.

Formation of the Revitalization Council

The Revitalization Council's primary purpose was to help fulfill the expectations of Wisconsin's Milwaukee River Program. Governor Tony Earl and the Wisconsin legislature designated the Milwaukee River as a Priority Watershed in 1984. The WDNR would oversee the efforts to address NPS pollution and help to allocate funding to programs addressing Milwaukee River water quality issues.⁷ At first, Governor Tommy Thompson desired the Department of Agriculture, Trade and Consumer Protection (DATCP) to address water quality issues in the state instead of the WDNR. This would give farmers more control over the enforcement and creation of regulations.⁸ Mayor Maier and Carrol Besadny expressed their opposition to transferring power away from the WDNR, especially NPS pollution and soil erosion programming. Maier argued that the DATCP was more likely to take a county-by-county approach rather than a basin-wide approach, which was most efficient for looking at the problem. In addition, the DATCP aligned with farm interests that favored voluntary rather than mandatory programming.⁹ With public

⁷ Bode to Maier, "Milwaukee River Priority Watershed," May 7, 1984.

⁸ "Pollution on the Farm."

⁹ Kevin W. Conlon to William C. Carey, "City Position on Non-Point Pollution," March 23, 1987, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 142, Folder 17, UW-Milwaukee Libraries, Archives; Henry W. Maier to Tommy Thompson, "Addressing Nonpoint Pollution in Rural Landscapes," May 8, 1987, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 142, Folder 17, UW-Milwaukee Libraries, Archives.

outcry against removing the WDNR from its responsibility, a compromise was reached, agreeing to shared duties between the two agencies. Both agencies acknowledged that urban and rural NPS needed to be addressed and that a cooperative approach between the DATCP and WDNR was critical.¹⁰

In 1988 Wisconsin State Senator Barbara Ulichny and Wisconsin State Senator Gary George helped draft the legislation to form the Revitalization Council. The Council was a government agency that reported to the WDNR representatives. Both Senators mobilized private and public support for water quality initiatives. Newly elected Milwaukee Mayor John Norquist also provided his insights. Governor Tommy Thompson appointed the Council members to work with the WDNR. Although people shared an interest in clean waters, the public's will to revitalize the Milwaukee River slowly drifted. The first Revitalization Council members came from a variety of backgrounds. Gary Ahrens and Ray Krueger were attorneys. James Williams and Charles McNuer represented southeastern Wisconsin companies. Judith Murphy and Janet Hessler represented banking and finance institutions. Loren Anderson was on the Milwaukee Department of City Development. Ron Kazmierczak worked for the WDNR. Gerald Ninneman represented northern sections of the Milwaukee River and wrote for the Campbell Sports and News. Michael Mervis owned a public relations firm. Richard Snow was the first president of the Revitalization Council. He sparred with Delbert Cook of the Cedar Creek Restoration Council over enforcing state water regulations limiting effluent overflow from the sewer systems when he represented the Associated Contractors of Greater Milwaukee (Chapter Four).¹¹

WDNR employees Carroll Besadny, Sharon Gayan, Jo Mercurio, and Therese Gripentrog worked actively with the Revitalization Council. Sharon Gayan was the coordinator of the Milwaukee River

¹⁰ Nonpoint Source, Soil and Water Policy Advisory Committee, "Nonpoint Source, Soil and Water Policy Advisory Committee Minutes," November 20, 1987, Records of Mayor Henry W. Maier Administration, Milwaukee, Wisconsin 1957-1989, Box 42, Folder 17, UW-Milwaukee Libraries, Archives.

¹¹ Nelson to Maier, "Minutes of Milwaukee River Priority Watersheds Advisory Committee - August 28, 1985," September 16, 1985; Gloria McCutcheon to Barbara Ulichny, "Formation of Milwaukee River Revitalization Council," June 24, 1988, Barbara L. Ulichny Records, Box 2, Folder 41, UW-Milwaukee Libraries, Archives.

Program and liaison to the Revitalization Council. She provided the coordination and direction for the Integrated Resource Management plans and the Nonpoint Source Pollution Abatement Program for the five watersheds in the Milwaukee River Basin. Program planning agent Jo Mercurio worked with Gayan on planning and implementing water quality programming. Landscape architect and park planner Therese Gripenrog provided staff assistance to the Revitalization Council working on identifying recreational activities in the Milwaukee River Basin.¹²

Despite the previous efforts to address the water quality, Besadny and the Revitalization Council argued that much was still left to be accomplished. The state of Wisconsin and its residents had failed to live up to their responsibility to protect Wisconsin's waters.¹³ Working with the Revitalization Council, Besadny insisted that the Council's vision for the riverway utilize the Public Trust Doctrine to guide them.¹⁴ Legally, Wisconsin's legislative branch was the trustee of Wisconsin's waters and was responsible for protecting the public interest as defined by the Public Trust Doctrine. These legislative duties date back to the federal Northwest Ordinance of 1787, which outlined states' responsibilities to protect the public's rights to access the navigable waters of the Mississippi River and the St. Lawrence waterways. In 1848, these same water rights were written into the Wisconsin constitution.¹⁵ In addition, the trustees' duties were expanded to protect water resources for recreation and maintain pollution-free waters.¹⁶ Despite a region rich in water resources, conflicts emerged as competing interests fought over what they believed was in *the best* public interest.

¹² Ron Kazmierczak to Richard Snow and Ray Krueger, "MRRC Roles and Responsibilities," December 8, 1989, Box, Priority Watershed, Box 00001852140, Folder MRRC Initial Materials, 2005, MRRC - Ray Krueger Collection.

¹³ "1989 MRRC Agenda and Notes - February."

¹⁴ "1989 MRRC Agenda and Notes - February."

¹⁵ Rock-Koshkonong Lake District, *Rock River- Koshkonong Association, Inc. and Lake Koshkonong Recreational Association, Inc. v. State of Wisconsin Department of Natural Resources*.

¹⁶ Scanlan, "The Evolution of the Public Trust Doctrine and Degradation of Trust Resources: Courts, Trustees and Political Power in Wisconsin," 137.

Although the federal Clean Water Act in 1972 demanded that streams be fishable and swimmable by 1983, Wisconsin still struggled to achieve clean waters in 1989. The EPA gave Wisconsin waters an “F” rating and declared them among the worst in the nation. WDNR disputed their grade as Wisconsin collected more data than other states, which skewed their data. However, the WDNR stressed that more pollution abatement was still needed. The report identified the southern two-thirds of the state’s agricultural activities as contributing to most of the water pollution, now that point sources of pollution were widely addressed. Although much attention was given to rural problems, the WDNR also identified urban sources. The promising news in 1989 was that most industrial and municipal waste was widely corrected, and the construction of Milwaukee’s Deep Tunnel System to reduce the CSS overflows would be finished in 1993.¹⁷

The Revitalization Council members were not the only people working to inform the public of Wisconsin’s degraded water resources. In 1989 Don Behm, a *Milwaukee Journal* writer, published the series, *Ill Waters*, describing the problems of NPS pollution in the MRW. Behm explained that the WDNR reported that 93% of lakes and 40% of Wisconsin streams were polluted and that most pollution came from diffuse sources or NPS pollution. Behm identified agriculture and construction as the primary sources of NPS pollution. For example, farmers were blamed for overplanting and fertilizing to maintain crop yields. Concerning Behm, livestock owners who dumped manure into streams went without prosecution, while a recreational fisherman could be fined over \$1000 if caught overfishing. Behm argued that NPS pollution would likely have caused more harm to the fish population than one person’s overabundant catch.¹⁸ Manure runoff of 100 cows caused the same water pollution as untreated sewage of 1500 humans. Noting the inconsistency, Behm highlighted that communities were required to

¹⁷ Don Behm, “State Lakes Rated Worst,” *Milwaukee Journal*, October 31, 1989; Milwaukee River Priority Watersheds Program, “Why Is the River Polluted? What’s Being Done?,” *Milwaukee River South Watershed Newsletter*, November 1989, Box 1988-1994, Folder 19644, 98-0405, MRRC - Ray Krueger Collection.

¹⁸ “ILL Waters: The Fouling of Wisconsin’s Lakes and Streams,” *Milwaukee Journal*, November 5, 1989, Box 1988-1994, Folder 1990, Blue Folder, MRRC - Ray Krueger Collection.

clean up water by installing sewage treatment facilities costing 1.5 million dollars or more, equivalent to \$1000 per person. However, farmers were asked to address manure runoff voluntarily.¹⁹

Behm highlighted farmers' practices that were a cost to others, as river harbors needed to be dredged and storm sewers unclogged. Federal soil research estimated that approximately 6.8 tons of soil were lost in fields per acre of land each year. The soil runoff filled streams, clogged recreation routes, disrupted fish breeding and spawning grounds, and blocked light for submerged plants. Glenn Stoddard of the Wisconsin Farmers Union noted that Wisconsin farmers had soil losses 4-5 times the established tolerable rate and still received federal subsidies. He argued that the federal farm program encouraged soil erosion, water pollution, and cultivation of marginal lands at an environmental cost to the rest of the citizens, resulting from the subsidies the federal government provided to farmers.²⁰

Blaming the urban development of rural lands, Behm noted that construction sites cause 25 to 200 tons of erosion from each acre. In addition, wetlands were often drained for the creation of suburban plots. On the one hand, these practices were often recognized as signs of economic growth. On the other hand, these changes to the landscape might destroy fish breeding grounds. Although the city of Milwaukee adopted ordinances to lessen soil runoff into streams, it did not have adequate enforcement due to budget cuts. Behm praised the city of West Bend, which required the installation of erosion controls before building permits were granted.²¹

Doug Haag, a WDNR community service specialist, reported to the Revitalization Council that Behm's articles should be seen as public service announcements to motivate a public response. Dan Kaemmerer, WDNR and Revitalization Council member, noted how NPS abatement programs could lead

¹⁹ Don Behm, "Sacred Cows Choking Our Rivers," *Milwaukee Journal*, November 7, 1989, Milwaukee Journal Sentinel Historical Newspapers.

²⁰ Don Behm, "Farmers Ignoring Time Honored Conservation Measures Are Plowing Their Fields Bare," *Milwaukee Journal*, November 8, 1989, Milwaukee Journal Sentinel Historical Newspapers.

²¹ Don Behm, "Making Dirty Waves," *Milwaukee Journal*, November 6, 1989, Milwaukee Journal Sentinel Historical Newspapers.

to dramatic changes in the overall water quality of the Milwaukee River.²² However, as much as the *Milwaukee Journal* and *Sentinel* stories reported a public need, they also highlighted the failures of the WDNR and state government that the Restoration Council and Maier's administration had asked them to address for many years. Not only did the WDNR have work to accomplish, but they also had to restore their reputation. Although regional agencies had worked to address environmental degradation in the past, the Revitalization Council needed to address the social and economic impact of various proposals to support the public interest.

Addressing NPS Pollution in Rural and Urban Communities

The Milwaukee River Watershed is a geographic area representing the lands that drain excess water to the Milwaukee River and its tributaries. Although various groups argued it was in the public interest to address problems in the waterway from a watershed perspective. The communities throughout the watershed sometimes disagreed over what constituted the public interest and the best course of action to address watershed concerns. Acknowledging these differences, the Revitalization Council members tried recognizing geographic standpoints when addressing NPS pollution and the river's overall water quality.

Howard Richards, secretary of the DATCP, agreed that NPS should be addressed to make waters fishable and swimmable. These programs required the public to pay to clean it up. In this manner, Richards focused on a broader community responsibility. He argued that the federal, state, and local governments committed over \$3 billion to address untreated urban sewage and industrial wastes. Yet they collectively only provided \$65 million to clean and abate NPS.

²² "1989 MRRC Agenda and Notes - November," November 14, 1989, Box, Priority Watershed, Box 00001852140, Folder MRRC Initial Materials, 2005, MRRC - Ray Krueger Collection.

Addressing NPS pollution, the Revitalization Council primarily focused on education and public information. Nearly fifteen years before the creation of the Revitalization Council, the Southeastern Wisconsin Regional Planning Commission (SEWRPC) published a report identifying construction sites' responsibility for soil erosion in streams. Mayor Maier had claimed this disproportionately held his administration responsible for abatement programming, while rural communities did not have similar mandates. Although the WDNR and Revitalization Council still encouraged city ordinances to address soil erosion, they moved forward on the belief that whether programs were voluntary or mandatory, each required an understanding of best practices.²³ The Revitalization Council worked to promote Milwaukee River programs in its annual report. The publication included descriptions of various endeavors to clean up the riverway and the impact on the overall water quality.²⁴ The Revitalization Council worked closely with the WDNR to build public awareness of the riverway's problems and the efforts that made a difference. They argued that more people would support the government oversight to improve the waterway by demonstrating the achievements more than the failures. Highlighting people's support and participation in the various restoration enterprises also revealed the value to the community and the waterway's health.²⁵

Another aspect of the Revitalization Council's publicity role was producing a video series with the Milwaukee Information and Education Subcommittee and the Milwaukee River Basin Citizen Advisory Committee. These videos showed the problems related to urban and rural NPS pollution and the WDNR's tactics to revitalize the Milwaukee River Basin. For example, cropland management, livestock management, and stream corridor protection strategies were highlighted. These videos sought

²³ Milwaukee River Revitalization Council, "Project Proposal: Construction Erosion Control Workshops Milwaukee River Program," September 1989, Box 1988-1994, Folder 19644, 98-0405, MRRC - Ray Krueger Collection.

²⁴ Jo Mercurio, "9/25 Promotional Campaign Meeting Notes," September 28, 1989, Box 1988-1994, Folder 19644, 98-0405, MRRC - Ray Krueger Collection.

²⁵ "Milwaukee River Revitalization Council Promotional Theme/Campaign Committee," October 10, 1989, Box 1988-1994, Folder 19644, 98-0405, MRRC - Ray Krueger Collection.

to improve citizen knowledge of how they impacted the waterway's quality and what they could do to lessen the harm they caused.²⁶

Educating the public in 1990, the Revitalization Council and the WDNR provided erosion control workshops for construction sites. John Pfender, a WDNR environmental specialist, reported at a seminar at UW-Milwaukee that 50% of the city's pollution entered the Milwaukee River from Lincoln Creek, including approximately 10,000 pounds of lead.²⁷ One of the significant lead sources came from the highways and roads. It was not until January 1996 that the federal government banned leaded gasoline vehicles in all new cars.²⁸ Speaking on behalf of Mayor Norquist, John Erickson reported to the Revitalization Council that the city's administration was interested in cooperating with the Revitalization Council to address NPS pollution. For example, the Milwaukee Common Council approved the creation of detention ponds to contain stormwater runoff to reduce the burden on the CSS and help to filter pollutants. However, the city's administration continued to emphasize that NPS pollution and the overall quality of the river required abatement programs upstream of the city boundaries.²⁹

Besadny reported on the WDNR's desire to address nonpoint pollution throughout the watershed through the cooperation of all municipalities. The Revitalization Council published a report that highlighted cooperative activities. In addition, the annual report put forth goals to create a healthy

²⁶ "1989 MRRC Agenda and Notes - October," October 10, 1989, Box, Priority Watershed, Box 00001852140, Folder MRRC Initial Materials, 2005, MRRC - Ray Krueger Collection; "Videotapes as Educational Resources for Nonpoint Source Pollution Control," cJanuary 1990, Box 1988-1994, Folder 19644, 98-0405, MRRC - Ray Krueger Collection.

²⁷ Don Behm, "Creek Proves a Pipeline for Pollution," November 17, 1989, Milwaukee Journal Sentinel Historical Newspapers.

²⁸ "Gasoline Explained" (U.S. Energy Information Administration, November 19, 2020), <https://www.eia.gov/energyexplained/gasoline/gasoline-and-the-environment-leaded-gasoline.php#:~:text=By%201975%2C%20unleaded%20gasoline%20was,farm%20equipment%2C%20and%20marine%20engines>.

²⁹ "1990 MRRC Agenda and Notes - January," January 9, 1990, Box, Priority Watershed, Box 00001852140, Folder MRRC Initial Materials, 2005, MRRC - Ray Krueger Collection; "1990 MRRC Agenda and Notes - January."

ecosystem that could support fish populations and opportunities for recreation in the Milwaukee River Watershed.³⁰

Working to emphasize the progress of voluntary NPS programming, the Revitalization Council highlighted the positive gains. Jo Mercurio mentioned that 400 landowners were contacted regarding participation in the voluntary NPS abatement programming in 1989, and another 700 would be contacted in 1990.³¹ Farm families were also cooperating with the Revitalization Council. For instance, Bob and Cindy Roden put in a system to divert rainwater from the barnyard and filter pollutants before entering the stream at their Saukville farm. Also, Gerald Arndt of the Town of Scott constructed a runoff management system to divert waste from the waterway. Arndt mentioned that cleaner water led to cleaner cows.³² Demonstrating people's participation in the voluntary programming would also help family farm owners recognize how they benefitted from the programs while also helping to address NPS pollution. Validating a mutual benefit helped to create a shared public interest.

These efforts to promote public awareness of successful NPS programming continued throughout the 1990s. Ruth Johnson and Jim D'Antuono, NPS Coordinators of the Southeast District – WDNR, reported on the efforts to reduce NPS. 80% of the watershed and 100 rural landowners participated in the NPS programs. For example, with the help of the WDNR, Karl Schultz, a Fond du Lac County farmer, restored a wetland on his farm. Both WDNR representatives stressed the importance of cooperative efforts between community leaders, landowners, and local and federal agencies. Jim D'Antuono, WDNR- Urban NPS Programmer, argued that these joint programs embodied the collaboration required to cope with the 125 years of neglect and disregard of the MRW's health. He also noted the programming that thirty communities had begun to curb urban runoff. By the end of 1995,

³⁰ Milwaukee River Revitalization Council, "The River - 1990 Annual Report," May 1990, Box, Priority Watershed, Box 00001852140, Folder MRRRC Initial Materials, 2005, MRRRC - Ray Krueger Collection.

³¹ "1990 MRRRC Agenda and Notes - February," February 13, 1990, Box, Priority Watershed, Box 00001852140, Folder MRRRC Initial Materials, 2005, MRRRC - Ray Krueger Collection.

³² Milwaukee River Revitalization Council, "The River - 1990 Annual Report."

364 landowners participated in a cost-share program to curb rural runoff, costing them three million dollars. State initiatives funded approximately six million dollars.³³

Green Space

In the late 1980s, the Revitalization Council worked with other city agencies to improve urban residents' access to green spaces along the Milwaukee River. Fourteen years after the publication of the 1975 River Strategy by the Milwaukee River Technical Task Force, the Milwaukee Department of City Development (MDCD) published its planning guide for the middle and upper portions of the Milwaukee River in June 1989. Although they recognized some changes along the river, the most concerning was that minimal land had been purchased along the river to expand green space. The only land purchased by the city was a 2.3-acre parcel funded through the state Land and Water Conservation (LAWCON) fund. LAWCON was a federally financed fund administered by individual states to expand recreational activities. The MDCD argued that green space would improve the river's environmental quality and provide opportunities for the public to view the riverway. In addition, the purchase of private lands would help to extend the environmental corridor. One option to extend public ownership of green space along the river would become available after the Milwaukee Deep Tunnel System was finished.

Furthermore, the WDNR studied the feasibility of removing the North Avenue Dam. Removing the dam would expand public land for trails along the riverfront. City advisory groups and the Revitalization Council believed that expanded green space along the river and waterway access would help build public interest in water quality issues.³⁴ In addition, unlike the effort to conserve lands from

³³ Milwaukee River Revitalization Council and Wisconsin Department of Natural Resources, "1994-1995 Annual Report: State of the Milwaukee River Basin"; Wisconsin Department of Natural Resources and University of Wisconsin-Extension, "A Tour of the Milwaukee River Basin," August 14, 1990, Box 1988-1994, Folder 1990, Blue Folder, MRRC - Ray Krueger Collection.

³⁴ City Plan Commission of the Department of City Development - Land Use Planning Section, "A Planning Guide for the Middle and Upper Portions of the Milwaukee River," June 1989, Box 1988-1994, Folder 19644, 98-0405, MRRC - Ray Krueger Collection.

urbanization outside the city's limits, these programs stressed the need for green space in urban and rural watershed areas.

In 1989 the city administration presented the Milwaukee Riverwalk Guidelines to the Revitalization Council. Loren R. Anderson and Larry Baker from the MDCD mentioned the economic impact of revitalizing waterways using Racine and Kenosha Harbor projects as examples. The Riverwalk proposal sought to expand public access to the waterway.³⁵ These proposals reflected the local community's interest in recreational use and economic development in Milwaukee.

Investigating other American city riverwalks, Krueger visited the San Antonio Riverwalk and spoke with city officials. Officials claimed the walkway generated one billion dollars and provided 22,000 jobs. Sue Oshman, the Southeast District Park Planner, led the Revitalization Council to develop goals and objectives for the Riverway Plan. Public participation was a vital component of the Riverway Study. The Milwaukee City Council approved the 12-month study option and sought to expand recreational corridors along the major rivers within the basin.³⁶

In hopes of raising additional revenue to purchase green space along the waterway and restore degraded lands, Ray Krueger of the Revitalization Council sought to have the Milwaukee River designated as a Scenic Urban Waterway.³⁷ The Revitalization Council emphasized the importance of the Scenic Urban River Designation to secure funding to clean up the Milwaukee River and expand recreational and economic opportunities along the river. These plans reflected Mayor Maier's previous assertions that a healthy environment required more than just clean water.³⁸

³⁵ "1989 MRRC Agenda and Notes - December," December 12, 1989, Box, Priority Watershed, Box 00001852140, Folder MRRC Initial Materials, 2005, MRRC - Ray Krueger Collection.

³⁶ "1990 MRRC Agenda and Notes - April," April 10, 1990, Box, Priority Watershed, Box 00001852140, Folder MRRC Initial Materials, 2005, MRRC - Ray Krueger Collection; "1990 MRRC Agenda and Notes - March," March 13, 1990, Box, Priority Watershed, Box 00001852140, Folder MRRC Initial Materials, 2005, MRRC - Ray Krueger Collection; "1990 MRRC Agenda and Notes - April."

³⁷ "1989 MRRC Agenda and Notes - December."

³⁸ "Chair Notes for the Milwaukee River Revitalization Council Meeting," December 11, 1990, MRRC - Ray Krueger Collection.

In January 1991, the Revitalization Council announced the completion of the Riverway Plan, calling for more green space along much of the Milwaukee River.³⁹ The Riverway Plan recognized the importance of the Riverway for urban residents and the changes in how people utilized the river and its bordering space. However, rather than distinguish urban versus rural or private versus public interests, the Revitalization Council recommended a watershed perspective, which shared these interests. The desire was to build consensus around the public interest of the watershed. The goals of the Riverway plan included improving environmental quality, restoring degraded resources, increasing opportunities for public access, and preserving cultural and historic spaces.

They were promoting the benefits of NPS abatement programs that coincided with these programs to expand green space. The waterway revitalization would benefit the watershed community by working towards a cleaner and healthier water system.⁴⁰ Rural farm communities learned that improving the waterway's ecological health did not interfere with their economic well-being and that their interest in maintaining their family was not threatened. In addition, land conservation was not limited to rural lands; urban areas could also benefit from green spaces. The WDNR emphasized that the path toward the perspective of the watershed community was to embrace the Public Trust Doctrine.⁴¹

North Avenue Dam Removal

Balancing various interests in the flow of the Milwaukee River, the WDNR not only asked the Revitalization Council to oversee the funding of programs, but they also asked them to take a role in the study to remove the North Ave Dam. Before the WDNR approved the necessary safety upgrades to the

³⁹ Department of Natural Resources, "MRRC Recommends the Riverway Plan," January 1991, Box 1988-1994, Folder 975504 (1991-1995), MRRC - Ray Krueger Collection.

⁴⁰ Milwaukee River Revitalization Council and Wisconsin Department of Natural Resources, "The Riverway Plan - Executive Summary," January 1991, Box, Priority Watershed, Box 00001852140, Folder MRRC Initial Materials, 2005, MRRC - Ray Krueger Collection.

⁴¹ Donald Tills, "Southeastern Wisconsin's Lakes - The Access Issue," *Natural Resource Horizons*, Spring 1991, Box 1988-1994, Folder 975504 (1991-1995), MRRC - Ray Krueger Collection.

North Avenue dam in 1990, they studied the cost and benefits of demolishing or repairing it. The study examined the ecological consequences and economic and social implications of the dam's removal. For example, the Revitalization Council investigated the historical uses of the dam and the public interest in maintaining the dam for these various activities. Revitalization Council member Gary Ahrens, a rowing participant, noted that the drawdown would impact the current site but that the rowing club had been looking for a spot in the estuary below the North Ave Dam. On purely biological grounds, the WDNR favored dam removal.⁴² Ahrens stressed that the potential water quality benefits should be balanced with current uses of the waterway that would not exist if the dam was removed.⁴³

Similar to plans for the Waubeka Reservoir construction, not all agreed with the dam demolition. Mayor Norbert Hynek and the common council of Glendale called on the WDNR to hold public hearings on removing any dams. The Glendale Common Council supported the continued maintenance of the North Avenue Dam. They feared its demolition would lead to the removal of both the Estabrook and Thiensville dams.⁴⁴ Glendale officials and residents actively promoted the construction of dams (Chapter 3) to protect property interests in their communities from flood damage.

Moving ahead with the Riverway Plan, the Revitalization Council gathered public input through public meetings, especially regarding how the dam removal would impact public waterway use.⁴⁵ One of the top concerns involved the drawdown of the Milwaukee River behind the North Avenue dam. This occurred in December 1990 to aid in conducting the dam removal feasibility study. Various groups organized clean-up campaigns with the water level lowered behind the dam. The Youth Conservation

⁴² Jo Mercurio to Milwaukee River Revitalization Council Members, "MRRC May 1991 Minutes and Materials," June 3, 1991, Box 1988-1994, Folder 975504 (1991-1995), MRRC - Ray Krueger Collection.

⁴³ "1990 MRRC Agenda and Notes - February"; "1990 MRRC Agenda and Notes - March."

⁴⁴ Norbert J. Hynek, "A Resolution Regarding the Wisconsin Department of Natural Resources Study on Impoundments and Dams along the Milwaukee River Including North Avenue, Estabrook Park, Kletzsch Park and Thiensville Dams," March 12, 1990, Box 1988-1994, Folder 19644, 98-0405, MRRC - Ray Krueger Collection.

⁴⁵ Milwaukee River Revitalization Council, "Riverside Park Area Study," January 1991, Box 1988-1994, Folder 975504 (1991-1995), MRRC - Ray Krueger Collection; "MRRC Quarterly Meeting Proposed Focus 1991," 1991, Box 1988-1994, Folder 975504 (1991-1995), MRRC - Ray Krueger Collection.

Corps, Trout Unlimited, Sierra Club, and Kiwanis Club sponsored clean-ups, removing over 200 tires and over 600 yards of debris. Most of the debris removal was possible only with the drawdown.⁴⁶ Also, the Revitalization Council was concerned about the environmental impact of exposing polluted sediment.⁴⁷

The Revitalization Council stressed that the Riverway Plan focused on the waterway's health and promoted the understanding that the river was universally owned.⁴⁸ To improve access to the Milwaukee River, the WDNR sought representatives from various programs, wildlife fisheries, real estate, and property management to investigate a Milwaukee River Trail system.⁴⁹ The study committee needed to address the concern that many Wisconsin citizens did not have equal access to many of Wisconsin's waterways as private development limited public use. Revitalization Council oversight also examined how modern technology complicated acceptable water recreation activities and the possibility that expanded public use could degrade the waterways, especially the size and number of boats that might crowd the river.⁵⁰

Harry Anderson of the Milwaukee County Historical Society and Will Wawryzn reported to the Revitalization Council on the historical significance of the North Avenue dam. They noted that the dam was initially constructed in 1835 as an attempt to build the Milwaukee and Rock River Canal, a project that Byron Kilbourn soon abandoned. Poorly made, it washed out five times between 1841-1882. The dam, which existed in 1990, was built in 1891. The dam provided opportunities for recreation and industry upstream of its current location. The waters behind the dam became a popular swimming location and recreational gathering spot. Also, commercial ice houses were constructed along the river.

⁴⁶ Milwaukee River Revitalization Council, "1992 Annual Report on the State of the Milwaukee River Basin," November 24, 1992, Box 1988-1994, Folder 975504 (1991-1995), MRRC - Ray Krueger Collection.

⁴⁷ Gloria McCutcheon to Ray Krueger, "North Ave. Dam Feasibility Study," March 22, 1991, Box 1988-1994, Folder 975504 (1991-1995), MRRC - Ray Krueger Collection.

⁴⁸ Milwaukee River Revitalization Council, "1992 Annual Report on the State of the Milwaukee River Basin."

⁴⁹ Kim Murphy, "1992 MRRC Agenda and Minutes - April," April 14, 1992, Box 1988-1994, Folder 975504 (1991-1995), MRRC - Ray Krueger Collection; Milwaukee River Revitalization Council, "1992 Annual Report on the State of the Milwaukee River Basin."

⁵⁰ Tills, "Southeastern Wisconsin's Lakes - The Access Issue."

However, water pollution and changing economics led to many of these facilities closing. Anderson mentioned there was little information on the river before the dam was constructed other than the river was narrow with mud flats after the dams were washed away.⁵¹ However, Wawryzn noted that the Woolen Mills Dam removal in West Bend improved fishing and water quality.⁵²

The public input over the North Avenue Dam removal study demonstrated how a decision in one section of the river would impact people and communities throughout the watershed. In 1994 the North Avenue Dam feasibility study was completed. The WDNR report recommended the removal of the dam. Not only was this seen as the best biological option, but it was also less expensive than restoring the dam. Also, gathering public input and studying the social, economic, and historical perspectives on the dam's value beyond the ecological implications likely contributed to broader support. The WDNR was now working with the city of Milwaukee, other municipalities impacted, and the landowners to realize the most effective management strategies to address the dam removal and the lands around the river.⁵³ The following year, the Milwaukee County Parks Department approved a feasibility study to construct hiking trails from the North Avenue Dam to Good Hope Road. County Supervisor Penny Podell reported to the Revitalization Council that the North Avenue Dam removal helped with the development of the trails as lands once submerged became the property of the City of Milwaukee.⁵⁴

Helping to fund more public access to the river and business development, Mayor Norquist announced that he sought \$10 million from the Milwaukee Common Council to finish the Riverwalk from Clybourn to Walnut Street along the west side of the river. Gary Grunau, chairman of the Milwaukee Riverwalk District, led the charge for the mayor. Other Common Council members supported

⁵¹ "1990 MRRC Agenda and Notes - April."

⁵² Milwaukee River Revitalization Council, "The River - 1990 Annual Report"; Milwaukee River Revitalization Council, "1992 Annual Report on the State of the Milwaukee River Basin."

⁵³ Milwaukee River Revitalization Council and Wisconsin Department of Natural Resources, "1994-1995 Annual Report: State of the Milwaukee River Basin."

⁵⁴ "River Trail Feasibility Study Milwaukee River Trail," 1995, Box 1988-1994, Folder 975504 (1991-1995), MRRC - Ray Krueger Collection.

the program, but some expressed concern about how it fits the rest of the budget.⁵⁵ To promote a watershed community interest, the Revitalization Council wrote letters to government leaders of municipalities along the Milwaukee River seeking to afford space for canoe launches.⁵⁶

Fostering a watershed community, the Revitalization Council hosted the Milwaukee River Summit on June 2, 1994. The Summit highlighted renewal activities and the groups working to enhance people's experiences with the river.⁵⁷ Additionally, one of the Summit's goals was to foster partnerships between agencies and groups working to restore the Milwaukee River. At the summit, Mayor Norquist of Milwaukee drew attention to his work to invest in the walkway downtown. Michael Miller, Mayor of West Bend, showcased his city's accomplishments. Also, Sherry Burocker, Land and Water Conservation Board member and dairy farm owner, praised the work accomplishment through Wisconsin's Nonpoint Source Pollution Abatement Program (NPAP).⁵⁸ While complimenting the agencies actively involved in revitalization efforts, the Summit recognized the importance of finding common ground over common water. Continuing to acknowledge the work of various environmental agencies within the watershed, the Revitalization Council began meeting at different agencies and locations. The first of these meetings was held at Riveredge Nature Center, further connecting rural and urban interests in the MRW.⁵⁹

Recognizing the need for more funding and looking for more control over where money was spent on restoration efforts, members of the Revitalization Council formed the River Revitalization

⁵⁵ Gretchen Schuldt, "Mayor Seeks \$10 Million for Riverwalk," *Milwaukee Sentinel*, September 28, 1993, MRRC - Ray Krueger Collection.

⁵⁶ Department of Natural Resources, "Public Forum to Address Brown Deer Public Access Site," February 22, 1994, Box 1988-1994, Folder 975504 (1991-1995), MRRC - Ray Krueger Collection.

⁵⁷ "Milwaukee River Summit Agenda," June 2, 1994, Box 1988-1994, Folder Michael, Best, Friedrich - Milwaukee River Revitalization (Miscellaneous), MRRC - Ray Krueger Collection.

⁵⁸ "DNR Appointees," *Wisconsin State Journal*, May 8, 1993, <https://www.newspapers.com/clip/56065051/betty-jo-nelsen-dnr-board/>; Joe Beck, "Nelson Closes Career Chapter," *Wisconsin State Journal*, January 22, 1990, <https://www.newspapers.com/clip/56065670/nelsen-food-and-nutrition-service/>; MRRC and Wisconsin Department of Natural Resources, "Milwaukee River Summit: Building Pathways and Partnerships," June 2, 1994, Box 1988-1994 Folder Michael Best Friedrich - Milwaukee River Revitalization Project Folder River Summit, MRRC - Ray Krueger Collection.

⁵⁹ "1994 MRRC Agenda and Notes - July," July 19, 1994, Box 1988-1994, Folder Michael, Best, Friedrich - Milwaukee River Revitalization (Miscellaneous), MRRC - Ray Krueger Collection.

Foundation (RRF) in July 1994. Although the Revitalization Council remained an active state advisory group throughout the 1990s, the River Revitalization Foundation sought funds to purchase lands along the river to form a Greenway Space. The foundation supported educational programs seeking to combat environmental degradation and acquire lands bordering natural waterways and rivers, expanding public use of green spaces and recreational areas. These goals facilitated the implementation of the Milwaukee River Revitalization Plan created by the WDNR and Revitalization Council. The RRF helped to build public interest and support for public uses of the waterway for study, recreation, and historic preservation. Joining the RRF was James Grootemaat, a long-term member and one of the founders of the Riveredge Nature Center. The RRF remains an active foundation in 2022.⁶⁰

The Revitalization Council remained focused on being an advocate for river restoration projects and played a supportive role for the RRF during its infancy.⁶¹ Working with the broader watershed community, the Revitalization Council continued to praise landowners who were addressing NPS on farms, utilizing state cost-sharing programs. These efforts were coordinated with the Riverway Plan to make the river cleaner, safer, and more enjoyable for environmental, recreational, cultural, and entrepreneurial activities and improvement. Much of the work to encourage voluntary efforts to address NPS pollution was educational programming. C. D. Besadny noted the educational efforts of the Riveredge Nature Center's Testing the Waters Program (Chapter Two). He also praised the Revitalization Council's Nutrient and Pesticide management programs, watershed tours, and local assistance grants that help local municipalities, state agencies, citizen advisory groups, and private landowners revive the region's ecosystem. He encouraged the public's continued support to restore one of Wisconsin's

⁶⁰ "River Revitalization Foundation, Inc.," July 21, 1994, Box 1988-1994 Folder Michael Best Friedrich - Milwaukee River Revitalization Project (Box 02049277, Folder 1990/1991 Milwaukee River Plan, MRRC - Ray Krueger Collection; Kim Murphy to MRRC, "Meeting Announcement Milwaukee River Corridor Land Use Survey," September 20, 1994, Box 1988-1994, Folder 975504 (1991-1995), MRRC - Ray Krueger Collection.

⁶¹ "1995 MRRC Agenda and Notes - January," January 17, 1995, Box 1988-1994, Folder Michael, Best, Friedrich - Milwaukee River Revitalization (Miscellaneous), MRRC - Ray Krueger Collection.

greatest riches. The Revitalization Council took the approach that a good paddle forward was stroked in the riverway, but more needed to be accomplished.⁶²

In 1997 the North Avenue Dam was demolished. With the help of multiple civic organizations, a group known as the “River Rats” formed to continue the plans for the urban wilderness. In 2005 the River Rats evolved into the Milwaukee River Work Group, followed by the Milwaukee River Greenway Coalition in 2010. These groups brought together other water-centered environmental groups to safeguard what is now referred to by some as “Milwaukee’s Central Park.” Today, over 800 square miles of land bordering the Milwaukee River are attended to, affording a unique space within an urban setting that embraces a habitat for many living creatures to thrive and humans to find sanctuary.⁶³

Conclusion

Like the divide between urban and rural interests in the Waubeka debate, the differences between urban communities and rural communities presented a challenge to forming a watershed community with a shared interest in the waterway. Although the two communities were interested in protecting the river, it was not for the same use. Thus, the efforts of the Revitalization Council to educate the agricultural community and the state government to fund voluntary programs that contribute to the health of the soil and water were the means to seek common ground over common water.

The Riverway Plan reflected various outlooks for the Milwaukee River’s revitalization. Private interest in the community reflected service industries along the waterway. Public interest in green space and recreational spaces within the city were intertwined. However, the more encompassing watershed

⁶² Milwaukee River Revitalization Council, “The River: 1990-1991 Annual Report on the State of the Milwaukee River Basin,” July 1991, Box 1988-1994, Folder 975504 (1991-1995), MRRC - Ray Krueger Collection.

⁶³ Eddee Daniel, *The Milwaukee River Greenway: A Wealth of Nature in the Heart of the City* (Milwaukee, WI: River Revitalization Foundation, 2021); Milwaukee Revitalization Foundation, “Milwaukee River Greenway,” 2022, <https://www.riverrevitalizationfoundation.org/milwaukee-river-greenway/>.

community included farmers' private interests. They saw the river as a vehicle to remove water from fields. Farmers looked to survive, continue their lives as farmers, and protect lands from urban encroachment. They were not seeking to transform the rural landscape for a service economy to thrive, as city leaders looked to renovate the downtown. Thus, the Revitalization Council's efforts focused on educating farmers on how their agricultural practices could be improved to address water quality issues in the watershed and maintain their way of life.

In August 2001, the WDNR released its "The State of the Milwaukee River Basin" report. The Milwaukee River Basin contains approximately 600 miles of perennial and 450 miles of intermittent streams. According to the report, 12% of these streams consistently failed to meet quality water standards. Many of these streams were in the most densely populated areas. The most common pollutants were contaminated sediment and NPS pollution. Although the Revitalization Council would continue through 2010, its efforts focused on expanding the public trail system and entrepreneurial and cultural activities as laid out in the Riverway Plan (1991). The WDNR's report focused on ecological problems and potential solutions to improve the health of the Milwaukee River Watershed. Representing the assistance of many people and organizations, issues and solutions continued to be seen from a watershed perspective. What remains to be seen after the Revitalization Council faded is whether the work to promote a watershed view would include social, economic, and historical along with the ecological understandings of the public interest in the waterway.⁶⁴

⁶⁴ Wisconsin Department of Natural Resources - Southeast Region and Milwaukee River Basin Land and Water Partners Team, "The State of the Milwaukee River Basin," August 2001, https://dnr.wi.gov/water/basin/milw/milwaukee_801.pdf.

Conclusion: An Interconnected Web

One of the factors that drew European immigrants to the lands in the western hemisphere reflected people's perspective that there were limited opportunities in Europe for growth. In 1853 *New Rome or the United States of America* was published. Karl Goepp and Theodore Poesche argued,

The old world had no room for the expansion of new ideas; Columbus opened a new arena upon the virgin soil of the new-found continent. As Mother Earth of the Grecian fable upreared the island of Delos on her bosom, wherein to conceal the infant Jupiter from the murderous fangs of his unnatural father, Time, so the Genius of humanity transported the new ideas to America, there to gather their forces for the impending conquest of heaven and earth.¹

Migrants saw America as a place free of the natural resource constraints felt by many in Europe. The land was a place of natural abundance. Yet, people believed they could improve it to support their livelihood and aspirations. One such region for opportunity was found in the Milwaukee River Watershed (MRW). The largest city, Milwaukee, was linked to the hinterland via its three waterways-- the Milwaukee, Menomonee, and Kinnickinnic rivers—and the world market via the Great Lakes. The newly arrived migrants shaped the landscape and waterways to meet their diverse needs while destroying others' livelihoods. Some residents worked to harness the water's energy through a series of mills along the Milwaukee River. Other humans' relationship with the waters involved recreation. Where the dams existed, the mill ponds created a space for the community to gather. During the winter, people skated on the mill ponds and swam or floated on the calm river in the summer. Some people would fish the waters, casting the riverbanks or trolling the expansive waters of Lake Michigan. While some people saw an opportunity, others saw the Milwaukee River as an obstacle to move around, finding bridges to traverse to the other side. Still, others took pleasure in the sounds of the stream trickled past them,

¹ Theodore Poesche and Charles Goepp, *The New Rome: Or, The United States of the World* (New York: G.P. Putnam and Company, 1853), 23, <https://hdl.handle.net/2027/loc.ark:/13960/t3rv12k78>.

while others were threatened by the waterway when spring rains threatened their homes, businesses, and property. Water, sometimes seen as an opportunity for life's sustenance, was very much, at times, a threat to survival.

Left behind after the Laurentide Ice Sheet retreated, the Milwaukee River labored to cut through the soils and rocks over centuries, pushed debris out to Lake Michigan, and provided habitats for aquatic life. The early leaders of the United States and the state of Wisconsin recognized the importance of these waters. They charged the state legislature to protect the public interest in its shared water resources. This approach became known as the Public Trust Doctrine. However, rather than defend these waters from degradation, people managed the waterways to transport goods and dispose of waste away from human living and working spaces. Although the riverways labored to remove the wastes humans disposed of into the waters, the river's natural flow was not strong enough to disperse all the debris. People recognized the harm to the waterways and attempted to clean the Milwaukee River. However, the land and water of the MRW degraded to the point that would be unrecognizable to the Potawatomi, Ho-Chunk, and Menominee, who had hunted, gathered, and harvested the MRW's natural resources before Europeans and Americans migrated to the area. As much as people worked to improve the land of natural abundance for some uses, the waters were neglected. The land and waters that once represented an opportunity for unlimited growth reflected its limits in the 1960s.

Donald Worster, in *Shrinking the Earth*, recognizes the earth as a powerful agent in human history, both when it was a place of natural abundance and an area with a *shrinking* natural abundance. He contends that many stories ignore the persistence of natural limits that no human power can wholly overcome.² My account is about the attempts to reclaim human relationships with the Milwaukee River

² Donald Worster, *Shrinking the Earth: The Rise and Decline of Natural Abundance* (Oxford: Oxford University Press, 2016), 5–6.

and its watershed since the 1960s. It demonstrates how people worked to expand opportunities for life to flourish where it had shrunk away. Growth would have to occur from a state of degradation rather than natural abundance. Recognizing the degradation of the MRW's ecosystem, groups like the Riveredge Nature Center (RNC) founders, the Milwaukee River Restoration Council, and later the Milwaukee River Revitalization Council worked to conserve, expand, and reintroduce natural habitats threatened by human development. Although many individuals and groups pointed to cities and urbanization as the main threats to life in the watershed, researchers at the Southeastern Wisconsin Regional Planning Commission (SEWRPC) and Mayor Henry Maier emphasized to people that the dangers of nonpoint source (NPS) pollution were a product of human development in the rural and urban areas. Working to change peoples' relationship with the waterway and each other throughout the ecosystem, individuals and groups reimagined a new future that protected the life-sustaining qualities of the region's shared resources.

This river revitalization was not only an ecologically and economically driven endeavor but also reflected the vision for a watershed community. Often these reimagined plans to abate pollution or control the water flow of the Milwaukee River conflicted with the interests of others that shared the same resources. How people experienced the river in different places along the waterway shaped their understanding of its value or lack of value. Hence, part of the effort to restore the waterway was a tale of creating places along the riverway that provided opportunities to recognize its value. This process required a new outlook on how the community lived its daily life and how people from different communities within the area shaped a new public interest.

In Chapter One, we examined the efforts of the Mayor Maier Administration through the 1960s to not only refocus attention on the Milwaukee River as an economic asset to the city but also to renew the waterway's health. The mills, dams, and sewer systems constructed to meet the needs of many watershed residents had outlived their workable lifespans. Although the ports and the lands adjacent to

the waterway continued to produce resources and goods traded around the Great Lakes region and the world, Mayor Maier and his administration recognized that a revitalized riverway could be an asset for new economic growth. However, the city government's plans conflicted with the state and national governments' aspirations. The city government's interest in prioritizing economic development was not in line with the state and federal government's commitment to pollution abatement. Henry Maier argued that the health of the city's economy and its overall well-being needed to coincide with cleaner waters. The story of new public interest in the MRW started in the urban stretches of the river and involved a conflict over priorities.

In Chapter Two, we examined how the Riveredge Nature Center (RNC) founders sought to protect lands along the Milwaukee River from further urban development. In this protected space, people could foster a habitat to witness life with less human interference. The founders argued that the river and its adjacent lands must be protected from urbanization. Unlike the Maier administration, the founders of the RNC did not see the city's growth as beneficial. It was a threat. The idea of an island, a place to witness an alternative to the urban experience, is still seen today. However, as the RNC community evolved, it embraced its relationship with suburban and urban communities rather than emphasizing its separation. The Riveredge community emphasized its connections with metropolitan areas to foster a public interest that searched how urban and nonurban areas would not only coexist but may come together to promote a broader regional interest. Teacher-Naturalists, Andy Larsen and Laurie Otto encouraged people to bring native plantings to their suburban living spaces. Other educators taught children to search outside the RNC's boundaries to witness the workings of non-human life. Also embracing their role in a watershed community, the educators at the RNC involved volunteers in the Testing the Waters program. The community once formed to distance itself from the urban landscape helped foster the need to understand the interconnected relationships between urban and rural lands and life throughout the region.

In Chapter Three, we explored how SEWRPC studied regional solutions and mediated discussions between municipalities and people from different communities. Created in 1960, SEWRPC examined how to control flood waters in the MRW. As Matthew Klingle, in *Emerald City*, notes that attempts to control nature were also attempting to manage human activity.³ SEWRPC not only needed to recommend projects to limit flood damage, but they also needed to address how proposals to divert water, contain water or limit human development in some areas benefitted some residents while presenting a burden to others. SEWRPC recommended ways in which to change the way that people shared the public space of the watershed. However, only some residents desired change and had the same vision of what activities the future landscape would support. Just as the Maier Administration sought to protect the city of Milwaukee's well-being from what was seen as the state and national governments' disregard for the city's overall environmental health, rural communities held their ground to protect their way of life from further encroachment. Some people desired more water recreation opportunities and fought to create the Waubeka Reservoir. Other people argued for the Saukville Diversion channel to divert flood waters from their private property to Lake Michigan. In the end, plans for an environmental corridor, first envisioned by Milwaukee County Parks commissioner Charles Whitnall in the 1920s, became the standard means to protect property from floods. However, this plan also struggled to find community support. Similar debates over control of the Milwaukee River's flow continued throughout the 20th century and into the 21st century.

In Chapter Four, we examined debates over the water quality and the use of the Milwaukee River that continued throughout the 1970s and 1980s between the Milwaukee River Restoration Council, the state government of Illinois, the state government of Wisconsin, and Milwaukee's city government. Mayor Maier continued to work for what he saw was in the city's public interest. However,

³ Matthew W. Klingle, *Emerald City: An Environmental History of Seattle* (New Haven: Yale University Press, 2007), 264

the State of Illinois and the Milwaukee River Restoration Council pushed the Maier Administration and other government authorities to recognize a Great Lakes Basin or MRW public interest in clean waters. Federal and state laws mandated that the waters be swimmable and fishable. The public interest in the waterways demanded that the polluted waters needed to be cleaned and waters sustaining life needed protection. These were the rights of the people residing throughout the watershed. To hold responsible parties accountable, the State of Illinois brought the city of Milwaukee to court, and the Restoration Council engaged the public in clean-up activities and campaigned for municipalities to upgrade their facilities. This eventually led to the “Deep Tunnel” and sewage center upgrades to limit sewage overflows into the riverway. Despite the great strides that improved the overall water quality, the MRW and the Great Lakes Basin communities remained divided, hindering pollution abatement programs. Mayor Maier professed that the waters would not be fishable and swimmable despite the great expense and human labor. He anticipated that the problems associated with NPS pollution would take many more years to address.

On the one hand, the Wisconsin Department of Natural Resources (WDNR) and the Wisconsin government, under Governor Tony Earl’s leadership, supported mandatory regulations to update municipal sewer systems and other point sources of pollution. On the other hand, state government leaders were unwilling to demand mandatory efforts to address NPS pollution, especially from agricultural practices. This raised the question of what price the public should pay for clean waters and what people should expect to gain from their efforts. Moreover, one’s sense of a watershed community and public interest in the shared natural resources required cooperation from urban and rural residents. This continued to be an elusive goal throughout the twentieth century.

In Chapter Five, we examined the role of the Milwaukee River Revitalization Council under the authority of the WDNR to foster public interest in the Milwaukee River’s water quality and shared use of the waterway. Paddling ahead, the Revitalization Council recognized the challenge of building a

watershed community that promoted and took responsibility for improving the ecosystem. The Revitalization Council worked with Mayor John Norquist's administration and civic organizations to expand the environmental corridor and access to the Milwaukee River within the city of Milwaukee. These efforts led to expanded green space within the city's boundaries. They also helped to extend the Riverwalk, long supported by Mayor Henry Maier. In addition, the Revitalization Council worked to address the problems of NPS pollution throughout the MRW. Although attempts to make NPS pollution abatement mandatory failed, the Revitalization Council worked to build community support, educating the public about voluntary efforts that made contributions to the overall health of the watershed. In this manner, the Revitalization Council worked to find common ground over the common waters of the MRW.

Today various government and nongovernment agencies continue to foster a sense of community and public interest in the waterway. Nature centers pursue opportunities to demonstrate the watershed communities' ties with each. One effort, the sturgeon restocking program, unites groups throughout the region.⁴ Also, the Ozaukee County Clean Farm Families organization works with farmers and landowners to preserve agricultural lands by promoting the best soil and water conservation practices. These practices engage people directly involved with agriculture and the community in the efforts to protect the MRW's ecosystem. These programs are designed for community members to take ownership and responsibility for protecting the watershed's health.⁵ However, groups continue to be divided over various ways to conserve and protect natural resources and how the land and waterways should be used. These debates over controlling the river's flow, like the water quality concerns, revealed the significance of a watershed approach and the importance of community building. Without a shared

⁴ Sheri Mount to Ray Krueger, "Sturgeon Release into the Milwaukee River," November 6, 2003, Box 2000-2007 Folder 02343740 (2003-2006), MRRC - Ray Krueger Collection; "Lake Sturgeon Rehabilitation in the Milwaukee River," 2005, Box 2000-2007 Folder 02343740 (2003-2006), MRRC - Ray Krueger Collection; "Return the Sturgeon!" (Riveredge Nature Center, 2022), <https://www.riveredgenaturecenter.org/return-the-sturgeon/>.

⁵ "Clean Farm Families," 2022, <https://www.cleanfarmfamilies.com/about-us>.

interest in the watershed, the visions of what is in the public's interests will seldom be collectively agreed upon.

Harold Platt, in *Sinking Chicago*, notes how the transformation of the city of Chicago from its wet riparian landscape to an urban space laced with canals and a stormwater infrastructure has hidden the long history of Chicago's interactions with water. Examining the decisions made to construct systems separating the water from the land, Platt cautions about the potential economic and social consequences that may occur if climate change increases the yearly rainfalls.⁶ Platt and others challenge histories to consider longer time scales when demonstrating how people have related to the natural world.⁷ Milwaukee's own Increase Lapham also took an interest in climate change. He took meticulous notes on Lake Michigan's water level in the 1830s and 1840s. Although the water level was relatively constant in this period, in 1849 he created a plot map that portrayed the impact of a twenty-five-foot rise in the lake's water level on the city of Milwaukee's landscape.⁸ The concern over the water level reflected the inhabitants' experiences of Milwaukee. Newspaper accounts after floods in the late nineteenth century spoke of how the river took away people's property, eroded the banks, and swept the land out to the lake. Also, Silas Chapman, an early settler in Milwaukee, noted that land speculators were more than happy to sell people anything, even land plots underwater.⁹ Although people believed that one's property rights were permanent, the path of the river, or "will of the river," continues to

⁶ Harold L. Platt, *Sinking Chicago: Climate Change and the Remaking of a Flood-Prone Environment* (Philadelphia, PA: Temple University Press, 2018), 6.

⁷ Platt, *Sinking Chicago*, 24; B. Simmons and J. Scott, "The River Has Recorded the Story, Living with the Hawkesbury River, Sydney, NSW, Australia," in *A History of Water: Water Control and River Biographies*, ed. T. Tvedt and E. Jacobsson (London : New York: I.B. Tauris, 2006), 253–76; Wayne Grady, *The Great Lakes: The Natural History of a Changing Region* (Vancouver, B.C.: Greystone Books, 2011); Gustaf Utterstrom, "Climatic Fluctuations and Population Problems in Early Modern History," in *The Ends of the Earth: Perspectives on Modern Environmental History*, ed. Donald Worster (Cambridge: Cambridge University Press, 1988), 39–79.

⁸ I. A. Lapham, *Map of Milwaukee - 25ft Increase in Lake Michigan (Handwritten)* (Milwaukee, 1849), Milwaukee Public Library, Rare Books Collection.

⁹ Silas Chapman, "Pioneer Land Speculation in Milwaukee," in *Early Milwaukee: Papers from the Archives of the Old Settlers' Club of Milwaukee County*, ed. Old Settlers' Club of Milwaukee County (Milwaukee, WI: The Club, 1893), 25.

change despite human desires. More importantly, this study recognizes the importance of finding common ground to create solutions to regional problems. As concerns over the impact of climate change will require similar efforts to find common ground, finding solutions will become more complicated when the region becomes the world community.

Not only will it be challenging to find common ground, but the ability to address the decisions made in the past will have more significant consequences. David Pietz, in *The Yellow River*, explores how past choices to harness the Yellow River for various uses have framed future constraints and opportunities for development. The power and strength of China reflected the state's ability to allocate water supplies to both urban and agricultural interests at a particular time. However, Pietz asserts that the maintenance of these past systems is necessary to prevent human and environmental catastrophes. For example, if lands are turned back to swamplands, then massive dislocations of rural people will likely occur. Thus, political stability in China requires a tenuous balancing act of addressing modern concerns of allocating scarce water supplies and coping with polluted streams and the myriad of systems that are dependent on an outmoded water system. More importantly, Pietz predicts that these problems, which may appear to be confined within Chinese boundaries, will undoubtedly overflow into economic and security concerns throughout the world if this balancing act is not maintained.¹⁰ This was one of the questions communities of the Milwaukee River watershed addressed between 1960-2000 and will continue to be discussed in the future. Not only were there ecological and economic costs to address environmental degradation but challenges to how people perceived their communities. As the public learned about the obstacles to restoring the MRW, they learned of the equally significant challenges to reshaping the community's understanding of how it adapts and manipulates the environment.

¹⁰ David A. Pietz, *The Yellow River: The Problem of Water in Modern China* (Cambridge: Harvard University Press, 2015), 2, 4, 27, 130, 320.

With these debates also comes a question of whose river it belonged to and for what purpose. Is the goal for something that must remain indefinitely, or is it a temporary purpose? Damming up the river provided an opportunity to harvest ice from the river. This greatly benefited the breweries and meat packers that occupied Milwaukee's landscape. Damming the river also provided power for the saw and gristmills that found spaces along the river. However, the river was also once seen as a part of a land of natural abundance, producing wild rice and a habitat for fish, wild game, and fowl. Questions of whose waterway and for what purposes will continue throughout the history of the MRW. Yet, it is inevitable that the river will continue its labor, transforming the land regardless of the human debates over its ownership and use. Moreover, the struggle to find common ground over common water will continue as the people of the Milwaukee River Watershed cope with new challenges.

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