HYDROLOGIC DISCOURSES: THE POLITICS AND PRACTICES OF HIDDEN WATER IN NASHVILLE, TENNESSEE

By

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INTRODUCTION: RIPARIAN LEGACIES

> Every river felt the effect of the lowering sea; its waters were speeded in their course to the ocean and given new strength for the deepening and cutting of its channel. Following the downward-moving shorelines, the rivers extended their courses over the drying sands and muds of what only recently had been the sloping sea bottom. Here the rushing torrents – swollen with melting glacier water – picked up great quantities of loose mud and sand and rolled into the sea as a turgid flood.
> (Rachel Carson, *The Sea Around Us* [New York: Oxford University Press, 2003], 136)

The work of rivers is often invisible. Many of the channels we see today are snapshots of ongoing processes of erosion and deposition that have taken place over geologic time spans. Swiftly moving currents pick up and carry small pieces of softer, more forgiving rocks, often the sandstones and shale, leaving behind the more obdurate rocks of igneous and metamorphic origins. In this way, the bodies of rivers etch a pathway through the landscape, sometimes yielding and other times being yielded to. Neither the water nor the land is as fixed, or as separate, as they might at first appear. They simultaneously construct and deconstruct each other in a mountain building, course changing, sediment shifting, freezing and melting, expanding and contracting, liminal dance where both water and rock become solid and fluid.

However, the dance of the river is not just within the purview of the water and the land. People are also architects of water. A quick survey of today's[1] online news headlines reveals a small sampling of the many relations between people and water:

[1] September 30, 2011

"Argentine water in demand amid gold, oil, gas rush"[2]
"Radioactive water found under Ga. nuke plant"[3]
"Powerful figure in California's water wars steps down"[4]
"MIT create an artificial leaf that can split water, power fuel cells"[5]
"Milford residents call town to take over water system"[6]

Like the land, we both shape and are shaped by the water around us. Our bodies and the bodies of water bear the legacy of past choices. Embedded within the present are signs of the past and traces of histories human and nonhuman.

This history of water has been one architect of my own life, one that influences the choices I make and the lens through which I view the world. Much of my life has been oriented around water. I grew up in a small town, 20 minutes outside of New York City, near the confluence of the Pompton and the Passaic Rivers. These two rivers and their tributaries created an elaborate network of waterways that wound throughout the town. My street was one of many in the neighborhood that abruptly dead-ended at a lateral strip of woodlands. Within the woodlands, a stream coursed enclosed by the dense forested greenery. Every year I would watch water inch toward my house from the far end of the street. These seasonal spring floods would typically be limited to our yard and basement, but at times larger events caused river currents to flow through our home resulting in a redistribution of fluvial sediments and childhood possessions.

It was, in a sense, an experiential education in the dynamics of water. The annual ebb and flow was a consistent backdrop, not unlike the changing of seasons. Some events, like the record-breaking flood that entered our home in 1984, were serious points

[2] http://www.cbsnews.com/stories/2011/09/30/ap/business/main20114057.shtml
[3] http://www.forbes.com/feeds/ap/2011/09/30/business-multiutilities-us-plant-hatch-leak-georgia_8710682.html
[4] http://www.mercurynews.com/news/ci_19006234
[5] http://www.geek.com/articles/geek-pick/mit-create-an-artificial-leaf-that-can-split-water-power-fuel-cells-20110930/
[6] http://www.milforddailynews.com/lifestyle/health/x609832455/Milford-residents-call-town-to-take-over-water-system

of crisis. I have memories of coming home from school just after performing in the second grade play. My mother, having observed the water rapidly approach our home from multiple directions as the floodplains of streams began to merge and become one large body of water, instructed my brother (five years old) and me to roll up the area rugs and tie them with some kind of twine. Then, the three of us together lifted the unwieldy, dense tubes to the tops of higher pieces of wooden furniture. We worked to keep as much of our family's belongings from being submerged by the encroaching water as possible until my mom handed each of us a garbage bag with instructions to fill it with clothes and one toy each. I remember her being adamant about the one toy. At some point she must have moved the car to "the lanes," the soccer and baseball fields that never seem to flood.[7] By the time my father arrived, our home was an island. We waded through the water, the garbage bags with our belongings in tow behind us.

My experience of this flood is complex and extends beyond the expected feelings of fear and insecurity that come from any traumatic event. After the point of initial crisis, the lessons were compounding and significant. My family's house, one of the older homes in the community, was one of the few with a second story. This meant that we were able to keep many of our belongings above the flow of water. I remember my mother scrubbing the sediment left by the river from the walls of our kitchen, where the water reached over a foot above the height of the countertops. The hundred-year-old plaster walls, insulated with newspaper and reinforced by metal, survived the inundation (only the insulation needed replacing). In contrast, most of our neighbors' homes were newer single-story constructions with walls composed of more porous sheetrock. I saw

[7] It is common knowledge in our community that the sports fields at "the lanes" do not flood. When flooding threatens, people often move their cars to the lanes, and then walk home before the water rises.

how many lost nearly everything when there was nowhere to safely move their belongings from the path of the water and when their sheetrock walls became saturated and crumbled. For years, we would come across small pieces of lives literally embedded within the soil of our town: a pink Barbie shoe in a neighbor's front lawn, wooden toy logs in the woods at the end of the street, a kickboard for swimming with my last name written in Sharpie stuck in a tree along the riverbank. I only have memories of children's toys, but there must have been other kinds of objects. The juxtaposition of these household items in the trees, grass, and soil, combined with the presence of alluvial sediment in my family's kitchen, blurred the boundary between inside and outside, possession and dispossession, human and nature.

While the 1984 flood was the most severe flood to affect my family, flooding occurred still annually and chronically. With ongoing floods, the intersection between physical position and economic status became clear. Disparities went beyond individual home design and construction. Neighborhoods where houses were built in the lowest areas, in close proximity to the water's edge, were also usually the poorest sections of the town. These small single-story bungalows, originally constructed as summer vacation properties, took on water in the main living areas almost annually. These homes were usually less expensive than homes less directly situated in the river's floodplain, which made them, at least initially, more affordable for people with lower incomes who were situated in the increasingly competitive housing market in the commuting suburbs of New York City (Filippone & Walsh 1990). Reflecting upon this brings Barbara Ehrenreich's (2008) words to mind, "There are no secret economies that nourish the poor; on the contrary, there are a host of special costs" (27). When people with lower incomes

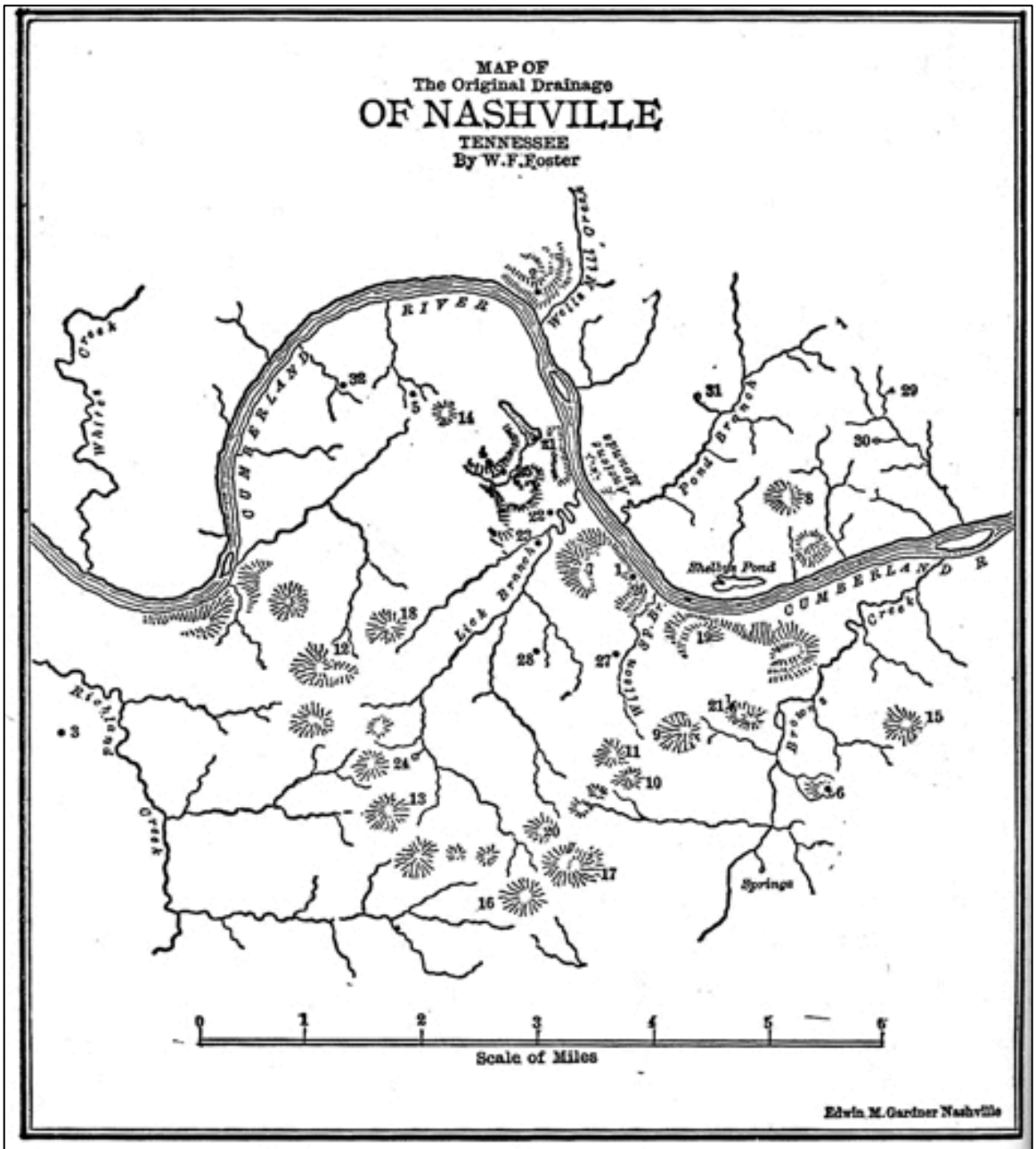
buy homes in a floodplain because they cannot afford other options for home ownership, they end up bearing a disproportionate amount of the costs of flooding and rising housing prices. They pay a greater economic and psychological price over time through a systemic cycle of inequality that is reinforced with each seasonal flood. The Army Corps of Engineers proposed to construct an expensive tunnel to funnel water directly to Newark Bay, bypassing the lower Passaic River watershed. My parents talked of this often. There were FEMA buyouts of some of the most flood-prone properties, and a new town ordinance that required new structures to be elevated above the height of the first floor. Political tensions and negotiations were ongoing. Looking back, I can see that both design and position mattered. And, that there were and are no simple solutions.

The influence of this education flows throughout my life and my work. In a sense, the work of rivers is never completely invisible. This leads me to my current research, which explores the relationship between people and water in an urban context. Urban spaces are places where boundaries between people and nature are under negotiation. In an urban setting, nature is often cordoned off into green spaces. These urban green spaces can be designed and planted or they can be left to become a less organized sprouting up of vegetation. Nature is also located in the flows of water, which sometimes course through streamlined concrete channels and other times wind gracefully across city parks. In these instances, people are often providing constraints, deciding and delineating where boundaries exist. However, the physical environment also provides limits, lending its voice to the human constructions that we see. In the sections that follow, we travel south from New Jersey to Nashville, Tennessee, where I trace some of the historical constraints and contingencies of water in the development of the city's present infrastructure.

Historic Highways

The Cumberland River intersects the city of Nashville, Tennessee along its 688-mile journey across the Cumberland Plateau to the Ohio River. A tie to Nashville's heritage as a river port, the river is a physical and symbolic connection between Nashville and distant cities and towns. The river's adjacency to the density of Nashville's downtown also makes it one of the most prominent features within the city's landscape. In the current post-industrial environment, the downtown riverfront is the site of a large-scale waterfront redevelopment project. However, the Cumberland River is only part of the hydrologic network that is so integral to the city. Smaller tributaries, groundwater resources, water infrastructures, and stormwater drainage systems are also elements of the city's water system. The history of Nashville's water system is connected to the history of the development of the city itself.

While much of Nashville's focus is on the Cumberland's waterfront, a salt lick that was located just west of the Cumberland River is originally what drew people and animals to the area. A salt lick is a wet, muddy area where salts and other minerals seep up to the surface from deeper deposits underground. Nashville's salt lick was located in a bottomland just north of the Lick Branch Creek. The Lick Branch Creek (later named the French Lick Creek after the French fur traders who used the area as a trading post) is no longer an open stream because it was buried in an underground sewer in 1892 (Jessen 1930). However, a representation of the original creek can be seen on a map of the original drainage system in the area from Lizzie Porterfield Elliot's (1911) historical account of Nashville (Figure 1). Salt licks attract animals who travel to the area to gain access to the relatively rare minerals that they need for biological growth and



	Elevation above sea.		Elevation above sea.		Elevation above sea.
1 The Bluff	488	12 Barrow Hill	690	21½ Lewis Hill	
2 Eaton's Station		13 Bosley Hill	741	22 French Lick, Sulphur Spgs.	390
3 Gen. Robertson's Station		14 St. Cecilia	529	23 Bridge Spring	400
4 Freeland's Station	462	15 Foster's	587	24 Cockrill's Spring	508
5 Denton's Station		16 Belmont Heights, Battery Location	690	25 Freeland's Spring	430
6 Rains' Station		17 Belmont Hts, Lawson's Hill	710	26 Bluff Spring, foot of Church Street	
7 Capitol Hill	555	19 Rolling Mill and College Hill	535	27 Wilson's Spring	
8 Confederate Hill	550	20 Belmont College, Acklen Place		28 McNairy Spring	445
9 St. Cloud Hill	622	21 Vinegar Hill	440	29 Spout Spring	
10 Kirkpatrick Hill (Reservoir)	680			30 Lockeland Spring	
11 Overton Hill	655				

Figure 1. Map of Historic Drainages of Nashville (*Adapted from Elliot 1911, 16*)

development. In Nashville, the salt lick and the nearby sulphur spring became a gathering place for animals who wore paths through the woodlands as they traveled to the lick from many surrounding directions (Elliot 1911). These game paths eventually became routes of travel for people who followed the animal trails to the salt lick:

> The chain of hills or knobs that encircles the city shaped the underlying structure of Nashville's historic pikes and railroad tracks, which follow the paths of least resistance first traveled by bison and the natives who hunted them (Kreyling 2004, 7).

The distinctive "spoke-and-wheel" pattern of Nashville's roadways bears the legacy of these initial game paths to the salt lick. Elliot's (1911) map of historic localities in Nashville shows the main roadways of its time radiating into the city from multiple directions. The roadways converge at the "French Lick and Fort" (Figure 2). An 1862 military map of Middle Tennessee exhibits a similar pattern (Figure 3). Nashville's current road and highway system reflects this radial pattern. Many of the local roads in Elliot's map are still main arteries of the city, although with redevelopment the direct connection to the salt lick has been attenuated.

As the original game paths have become more firmly etched into the landscape, these paths of least resistance have also become sites of resistance. The main streets radiating out from the center of the city's downtown have facilitated the development of wedge-shaped residential neighborhoods. Traffic has become a problem for many as an increasingly larger number of people (and cars) are served by fewer main roadways the farther one gets from the downtown area. This relative absence of the orthogonal also has implications for the development of public transportation. Providing access to efficient public transportation becomes more difficult the farther one gets from downtown as residences are often located at increasing distances from the main roads. This has

implications from an environmental standpoint and from an equity standpoint. If public transportation is either inconvenient or not available, people with the ability and economic resources to drive are probably more likely to do so, while the choices of those who either cannot afford the expense of automobile ownership or who are unable to drive are more limited by a lack of access to public transportation.

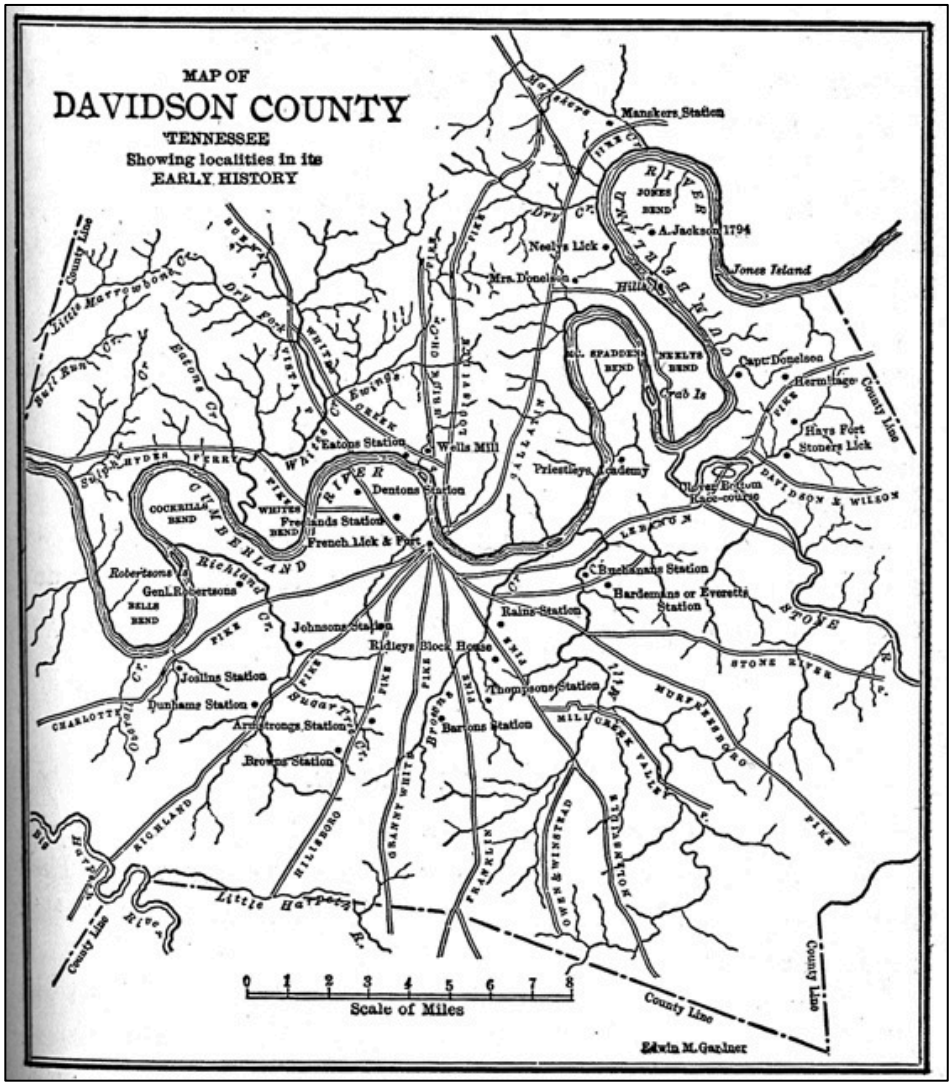


Figure 2. Historic map of Davidson County roadways meeting at the French Lick (*Adapted from Elliot 1911, 91*)

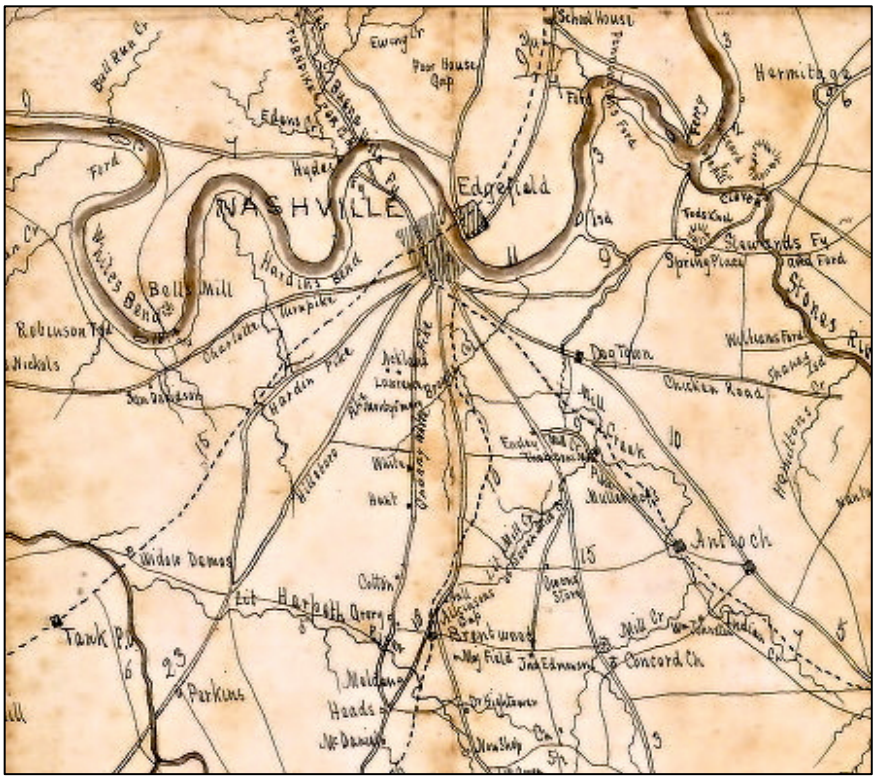


Figure 3. Section of a military map of Middle Tennessee from the Benjamin Franklin Cheatham papers (circa 1862) (*Courtesy of the Tennessee State Library and Archives*[8])

While the role of the salt lick in the history of Nashville's road development is not the only factor that influences present traffic and public transportation concerns, it is a constraint that is important to recognize. Future choices regarding the alleviation of traffic and the accessibility of public transportation are influenced by past choices and development patterns. My intent is not to suggest that natural affordances, in and of themselves, determine development patterns, nor to suggest that we can or should aim to overcome all constraints. Rather, I am suggesting that present conditions and future eventualities are shaped by the physical environment *and* human decisions. In Nashville, as physical affordances and past decisions have become more firmly written into the

[8] http://teva.contentdm.oclc.org/u?/p15138coll2,35

landscape with concrete and asphalt, they have become more fixed and the means of their original construction has become increasingly hidden.

Streams, Sewers, and the Sanitary City

While game paths were transformed into Nashville's highways, the city's waterways became transportation systems of a different sort. Prior to the construction of a centralized wastewater treatment system, streams and creeks were employed as open sewers. As the city grew increasingly larger, the impaired water quality in the waterways created concerns for public health. Cholera epidemics struck Tennessee in 1834, 1849, 1873, and 1892. The growth of Nashville had occurred so rapidly that the city's drinking water supply, which had previously been above development on the Cumberland River, was now located directly below the outfall of sewage from communities on the eastern shoreline (Barnes et al. 1875). At this time, the Lick Branch Creek was severely contaminated. All waste from the Tennessee State Penitentiary as well as the offal from many upstream slaughterhouses drained into the creek. Black slums emerged in the muddy, wetland areas north and west of the bottom of Capitol Hill, south of Broadway, and on the east bank of the Cumberland River. Known as Hell's Half Acre, Black Bottom, and Crappy Shoot, respectively, these lowland areas would have been difficult to build upon and likely of lesser economic value. Hell's Half Acre was located along the Lick Branch Creek, downstream from the penitentiary and the slaughterhouses. While this community was severely affected by the pollution of their water supply and by the spread of disease, the residents themselves were blamed for the pollution and outbreaks:

> Nashville, a beautiful and attractive city, is possessed of filthy and repulsive suburbs. The small streets and lanes that surround the base of Capitol Hill are

> occupied exclusively by the lower classes. The houses are dirty and filthy in the extreme, the streets and gutters are filled with filth. Gutters and sewers upon either side empty into the branches, which afford the only efficient drainage in the city (Barnes et al. 1875, 142).

Hell's Half Acre was subsequently redeveloped during Nashville's first major urban renewal project in 1950. The Capitol Hill Redevelopment Project cleared Hell's Half Acre, replacing it with James Robertson Parkway and new commercial development, which extended the downtown business district. Following the 19th century cholera outbreaks, the city of Nashville focused public health efforts on enclosing the streams contaminated with sewage and other refuse. The streams were buried in underground trunk sewers. The first sewer in Nashville was constructed on Wilson's Branch in 1884 (Creighton 1969). The Lick Branch Creek was channelized, or straightened, in 1889 to increase the efficiency of the flow of the stream and to allow for faster movement of sewage into the Cumberland River away from residential areas (Kreyling 2004). Then in 1892, the Lick Branch became the second stream in Nashville to become completely enclosed in an underground brick sewer:

> The Lick Branch Sewer was the second built in Nashville. It drains into the Cumberland River near Jackson Street … It runs through the old sulphur and salt marshes which were used by pioneers to get salt. At one time water from a spring in that neighborhood had a slight taste of sulphur and was a very popular drink. Baseball fans at the old "Sulphur Dell" ball park could buy all they could drink for a nickel. It finally occurred to city health authorities that this drinking water might be contaminated from leakage by the sewer and the sale of it was ended (Creighton 1969, 60-61).

With this development, the French Lick, which had such an important role in the history of Nashville, was transformed into a 15-foot diameter underground brick pipe. Pipes of this sort formed the foundation for Nashville's urban sewer system, which surprisingly

remained largely unmodified until the 1950's.[9] These combined sewer basins carried both stormwater runoff and raw sewage directly into the Cumberland River. By the time the city's first wastewater treatment plant was completed in 1958, almost 400 miles of sewer lines were releasing sewage directly into the Cumberland.[10] There are now currently three wastewater treatment plants in the Nashville system: the Central Wastewater Treatment Plant (completed in 1958), the Dry Creek Wastewater Treatment Plant (completed in 1961), and the Whites Creek Wastewater Treatment Plant (completed in 1975).

As of 1981, stormwater was still discharged directly into the city's surface waters, although some older areas were designed with combined sewers. Under typical conditions, combined sewers carry both sewage and stormwater to a water treatment facility where the water is released back into surfacewaters. However during heavy rains, the system can become overloaded causing a combined sewer overflow (CSO). When this occurs, stormwater and sewage both flow directly into waterways without treatment. In the late 1990s, mandatory assessments of the health of the Cumberland River in compliance with the Clean Water Act found that these CSO events occurred so frequently that the Cumberland was listed on the EPA's list of impaired waterways. The city responded by upgrading the combined sewer system, and the Cumberland River was removed from the EPA's impaired waterway list in 2002.[11]

This impairment of the Cumberland was due, in part, to a rapid increase in the extent of Nashville's sewer system. In Nashville, there are two options for private wastewater treatment: public sewer systems or individual septic systems. Because individual septic systems are typically less expensive to install compared to a centralized

[9] http://www.nashville.gov/water/cleanwater/sanitarysewer/index.asp
[10] http://www.nashville.gov/water/subHistory.asp
[11] http://www.nashville.gov/water/cleanwater/combinedsewer/index.asp

sewer system, septic systems were predominantly used in residential developments before the mid-1960s in Nashville (Planning Commission 1981). However, Nashville's shallow soil and limestone bedrock required properties with septic tanks to be at least a ½-acre or larger (Kreyling 2004). These restrictions in lot size have acted as a constraint on the density of development. Thus Nashville generally has a lower population density relative to land area compared to cities of similar size.

When Section 208 monitoring for the Clean Water Act (the Water Quality Management Program), revealed ground and surface water pollution resulting from the numerous septic systems throughout Nashville (Planning Commission 1981), the city required public sewers for all urban development. However, vertical expansion of sewer systems into "prime development areas" was prioritized over "lateral sewer" expansion in areas that were already developed:

> The orderly extension of sanitary sewer service into presently unserved areas is a key to guiding and promoting an orderly and efficient pattern of development. However, achieving this coordination through public programs is severely limited at the present time because of the substantial amount of sewer system expansion needed for many already urbanized areas which developed initially with on-site disposal systems and no provision of sewers. Although the importance of providing sewers to existing development is recognized, meeting those needs prior to extending sewers into areas of future development will take decades which would preclude the use of public sewer expansion programs as a means of guiding development for that period of time (Planning Commission 1981, 182).

While the expansion of sewer systems throughout Davidson County was connected to issues of water pollution and public health, the previous quote illustrates that greater value was placed on expanding sewers into areas with the potential for new creating development and increasing the production of capital and the city's tax base.

This driving value behind sewer expansion was not lost on the members of some communities. For those who wished to preserve the low-density of development, the ½-

acre constraint required for septic systems provided an important means of resistance. In the rural community of Bells Bend, in the northwest corner of Nashville, residents fought against sewer development, even as a water treatment facility was being constructed in their neighborhood (Price & Coco *n.d.*). While the residents lost the battle against the treatment plant, they won against construction of sewer lines. Thus the Harpeth Valley Utilities District water treatment facility built in Bells Bend does not treat any of the water from within the community of Bells Bend. The resistance to development of sewer infrastructure by the residents of Bells Bend relates to the preservation of the larger lot sizes required by septic systems. While centralized sewer systems may provide for cleaner water resources, they also afford higher density construction.

The previous examples illustrate ways in which multiple value systems intersect and interact with natural and technologic affordances. Similar to the development of Nashville's transportation infrastructure, once water systems are constructed, there are consequences (intended and unintended) that shape present realities. From the French Lick Creek to the construction of sewer lines, technologies of water are often constructed with the stated intention to clean water that has been contaminated with organic and chemical waste. However, the implementation of water infrastructures influences more than the water itself. In the case of the French Lick Creek, the stream and adjacent minority community simultaneously bear the impacts of the lack of water infrastructure. The construction of an underground sewer pipe meant to lessen exposure to sewage also made the surrounding land more valuable for commercial development. The increase in land value subsequently facilitated the community redevelopment, which resulted in a parallel clearing of the landscape as the existing black community was moved off of the

land into public housing. Similarly, residential sewer construction in Nashville prioritizes economic interests by affording more dense development at the expense of ameliorating drinking water concerns at already existing residences. This uncovering of buried streams and pipes brings to light the hidden commercial and economic interests that have marginalized people and the physical environment.

Hydrologic Dimensions

These tracings illustrate some of the ways in which the present landscape in Nashville, Tennessee is shaped by past decisions and constraints. In many discourses surrounding environmental conservation, people and nature are often positioned on opposite ends of a binary, separate ends of a pole where helping one means impacting the other. Just as water and the land mutually construct the landscape, the relationship between people and water is more complex and interwoven.

In the chapters that follow, I explore the dimensions of this relationship through multiple disciplinary perspectives. I employed multiple methods, including ethnographic observation, photography, mapping, and the collection of documents and media reports to ethnographically document the politics of hidden waterways within an urban context. My goal is to create a textual and visual layering, similar to the overlapping layers of a GIS map. I focus on water within the city of Nashville, Tennessee to ground the chapters in a common location. Each chapter is intended to serve as a layer that conveys information by itself and also overlays upon the other chapters to create intersections of knowledge and understanding that cannot be seen solely by reading each chapter alone. In the first chapter, “Becoming Waterbodies: Temporality and Difference in Urban Water Systems,”

I draw upon qualitative research of urban waterbodies in the city of Nashville, Tennessee to explore the relationship between temporality and corporeality through the lens of feminist philosophy. I show how attention to the complexity within urban water systems renders accessible the invisible by uncovering the subsurface narratives hidden within dominant discourses and revealing hidden possibilities for resistance against those dominant narratives. The second chapter, "Writing Place: Constructing Bells Bend, Tennessee," examines the geography of place through qualitative analysis of letters written to the city planning commission regarding an ongoing land development debate. This analysis is sensitive to the ways in which the Cumberland River is both reproduced and recreated through citizen's writing and the role of the physical environment in the social meanings and experiences of residents. From these letters, we see that people relate to the physical environment in ways that are personal and reflect embedded assumptions and values about the role and purpose of land and water. The final chapter, "Symbolic Security: Revisibilizing the Waterfront in the Aftermath of Large-scale Flooding," investigates the formation of community identity following the widespread flooding that occurred in Nashville in May 2010. I engage with the field of science and technology studies to illustrate how flooding events can function as sites for the revisibilization of hydrologic processes that reveal an underlying logic of inequality reflective of broader social and political rationalities.

CHAPTER II

BECOMING WATERBODIES: TEMPORALITY AND DIFFERENCE IN URBAN WATER SYSTEMS

> Wildness has no conditions, no sure routes, no peaks or goals, no source that is not instantly becoming something more than itself, then letting go of that, always becoming. It cannot be stripped to its complexity by CAT scan or telescope. Rather, it is a many-pointed truth, almost a bluntness, a sudden essence like the wild strawberries strung along the ground on scarlet runners under my feet. … Wildness is source and fruition at once, as if every river circled round, the mouth eating the tail—and the tail, the source.
> (Gretel Ehrlich, "River History," In *Sisters of the Earth*, edited by Lorraine Anderson [New York: Vintage Books, 1991], 116)

Introduction

There is a temporality embedded within water systems. Flowing rivers shift sediments and change courses over time. Bogs and fens are created where the flow of water is impeded, slowing decomposition and reducing oxygen and nutrient levels. Vernal pools, an essential part of the lifecycle for a number of woodland-dwelling amphibians and aquatic organisms, are temporary ponds created by seasonal increases in water table height and runoff levels. The sine curve of daily tide cycles is a visual representation of the connection between earth's water systems and the movement of astronomical bodies. The dynamics of water systems are created through relationships between the biotic and the abiotic, the living and the non-living.

We are part of these dynamics. The bodies of people are intimately connected to bodies of water. As water molecules moving through the water cycle become physically incorporated into bodies, contaminants discarded into waterways also become integrated

into living organisms. The implications for the way we treat water are significant for both humans and nonhumans, as exemplified by the exceedingly high rates of cancer found in beluga whales and people who live in close proximity to polycyclic aromatic hydrocarbon (PAH) contamination from aluminum smelters in the St. Lawrence estuary (Martineau et al. 2002).

However, the connection between people and water is not solely physiologic. The strength of the relationship between people and water can also be seen in the central role that rivers have played in the spatial patterning of urbanization. A majority of metropolitan cities are built adjacent to waterways (Brunn, Hays-Mitchell, and Zeigler 2008). These rivers have provided substantial valuable resources for growing cities, first through transportation corridors and drinking water sources, later as sites for industrialization, and more recently as locations for waterfront "revitalization" projects and economic redevelopment.

These services, however, have not been provided to people without significant costs. The construction of urban water infrastructures physically redesigns the bodies of water in ways that alter temporal dynamics along with spatial patterns. Systems of dams and reservoirs designed to control hydrologic flows impound water in large reservoirs, impeding movement in order to generate power, mitigate flooding, and improve navigation. The structural simplification of urban waterways, combined with widespread impervious surfaces across urban landscapes, increases the speed and volume of water runoff resulting in greater extremes of high- and low-water levels and reduced ecological functioning (Walsh et al. 2005).

In this chapter, I turn toward the bodies of urban waterways to seek new ways of understanding the relationship between people and water. I apply Elizabeth Grosz's (1993) concept of corporeality, which explores the utility of Deleuze and Guattari's work in *A Thousand Plateaus* to the feminist project of connecting materiality with meaning. She develops a framework for research that conceives bodies in ways that aim to displace binary oppositions. Bodies are reconceived in terms of action and movement. Grosz discusses two forms of energy and alignment that do not subordinate difference to identity: processes of becoming (beyond being) and the notion of multiplicity (beyond doubling). She states:

> A multiplicity is not a pluralized notion of identity, identity multiplied by *n* locations, but is rather an ever-changing, non-totalizable collectivity, an assemblage defined, not by its abiding identity or principle of sameness over time, but through its capacity to undergo permutations and transformations, that is its dimensionality (Grosz 1993, 170).

In this way, knowledge production is reconfigured as non-linear and active; spatial and temporal. The focus shifts from structure to function: "It is thus no longer appropriate to ask what a text means, what is says, the structure of its interiority, how to interpret or decipher it. Instead, one must ask what it does, how it connects with other things" (Grosz 1993, 170). However, power is not equally distributed among all positions and discussions need to be sensitive to these power differentials. Similarly, there are material constraints, frictions, and resistances that reduce movement. Continual movement is analogous to being everywhere and nowhere. Not all positions are possible and not all positions exert equal power.

In this chapter, I analyze the diverse conceptions of time that are embedded within water infrastructures in an urban water landscape. Drawing upon qualitative research of

urban water systems in the city of Nashville, Tennessee, I explore the relationship between temporality and corporeality, human and non-human, organic and inorganic. I show how temporality can be seen as more than a linear progression of time and that urban waterscapes can be viewed as a heterogeneous temporal patchwork of patterns and processes.

Seasonal Bodies (Sevier Park)

Inscribed within the box formed by four intersecting roadways, Sevier Park occupies the area of a square city block in Nashville, Tennessee. This 20-acre park can be found approximately 2-1/2 miles south of the city's downtown in a neighborhood with tree-lined streets and medium-sized homes interspersed with small local businesses. The stone walls that trace the line between the park and the roads do not quite meet at the park's northwestern corner, revealing an entrance to the green space that is enclosed within.

Sevier Park is a neighborhood park in the 12 South community. A 160-year-old yellow Greek revival house currently inhabited by the city's Metropolitan Historical Commission and Historic Zoning Commission stands facing westward on the top of a large grassy hill at the center of the park. Tennis and basketball courts fill the remaining space on the hill behind the yellow building, while a grove of mature American elm and basswood trees surrounds a picnic shelter and children's playground, which dwell in the lowland at the southern edge of the park. An expansive lawn at the northern border provides a site for pickup soccer or a game of fetch.

A small stream coursing through the park follows the perimeter of the property. Within the park the stream is channelized. Stone walls extend downward until they reach the base of the streambed, creating distinct shoreline edges (Figure 4). The bottom of the stream is graded and filled with pebbles and larger rocks. A paved walking path winds from the northwest entrance of the park and continues southward, paralleling the stream.

Figure 4. The Sevier Park path and stream mirror each other across the park. (*photo by Jennifer Mokos*)

The physical structures of the stream are designed to encourage the rapid flow of water common in urban waterways. Numerous concrete “slides” rapidly funnel stormwater from the grassy upland into the waterway during rain events. The stream is

fed by multiple culverts, which carry water from storm drains through large metal pipes under the streets of Nashville (Figure 5). At the southern edge of the park, the stream leaves the park and disappears into a culvert that runs under the road. The stream reappears on the other side of the road and continues above ground although now it is mostly hidden from view by a densely vegetated riparian buffer. From this perspective, the stream within the park, the channelized, controlled, pastoral stream becomes the ideal, the identity of the stream. The stream does not exist outside of the park.

Figure 5. This metal culvert feeds into the stream into Sevier Park, carrying stormwater from beneath the streets of Nashville into the body of water. (*photo by Jennifer Mokos*)

Within the park, there is a mirroring between water and land, fluid and solid, nature and culture that is reflected in the design. The stream body closely mirrors the walking path through the park (Figure 4). The path and the stream follow each other turning and weaving. The physical body of the stream and the proximity of the path to the stream produce a relation between the people walking the path and the stream. On the paved path, people are situated above the stream, gazing at the surface of the water that is carried within the stone river channel. The physical separation between the path and the stream creates a sharp boundary that physically distances people from the waterway.

Does one's understanding of the stream in Sevier Park change if it is viewed as one river … with multiple becomings? When viewed as one river, the stream becomes nonlinear. While a line can be intersected and divided into segments at points – the park, the pipe, the stream along the roadside – the stream cannot be completely understood, perceived, through any one point in space or time. The stream is not solely the pastoral stream in the park, or the isolated water in the pipe. There are multiple streams contained within this single body of water. The stream that is not one? There are (at least) three streams within one relatively small amount of space. Three streams that are not separate, but connected and multiple. Within the park is an idealized stream – tame, pastoral, and controlled. The physical design of the stream reproduces a romanticized view of nature reflected through culture. Beyond where the stream enters the park, it becomes a flow of water contained and bound within a pipe fed by water that travels across parking lots and roads and into storm drains. Hidden below ground, these water infrastructures are designed to move water quickly and efficiently. The values reproduced by this urban water system are those of detachment, efficiency, and rationality (values that have been

prioritized and implicitly coded as masculine [Anderson and Smith 2001]), influencing nature/human relations along with ecological processes.

However, the values encoded within the design of the stream do not solely fix and determine the relationship between people and the stream. The relationship between people and water is more complex and multidimensional. This became evident during one particular visit I made to the park. It was the first day of spring. Not in the calendar (date and month) sense, but that first day when you can inhale the new growth of spring into your lungs and feel the newly increased warmth of the sunlight in your bones. I decided to visit my research sites partly in response to my own restlessness to be outside. When I arrived at Sevier Park, I observed something that I had never seen in the multiple times I had visited the park over the previous year. People (children and adults) were sitting, walking, and playing within the stream. Two young girls stood in the stream maneuvering rocks in an attempt to create a pool for fish, while a man sitting on a large rock in the streambed watched a toddler splash and toss rocks into the shallow water. Three boys walked together in a line inside the stream channel along the southern edge of the park, and a girl and woman stood in the streambed balancing stones on top of the channel walls in stacks reminiscent of the style of Andy Goldsworthy. These exchanges were small-scale, interactive, and tactile. They were also temporal.

This interaction between people and the stream in Sevier Park reflects a temporality that is seasonal and suggests a phenological relationship possible between people and water. Phenology can be described as the observation of seasonal cycles of natural phenomena. Among the recording of annual dates of spring blooms and bird migrations, there is often an absence of humans. People are typically in the position of

the recorder, the observer of nature positioned outside seasonal cues and cycles. However, people are not completely separate from the seasonal cues and cyclic temporalities that simultaneously influence the opening of flowers and the return of birds. Maria Kaika (2005) describes the potential for water infrastructures to create multiple "space envelopes" that divide water into separate spheres that affect the way that water is perceived, fostering a separation of "cultural" water inside cities and "natural" water outside. The example at Sevier Park illustrates that this effect can also occur entirely within the boundaries of an urban area. The stream running through Sevier Park is neither pure culture nor pure nature; it is a hybrid of the technologic and the natural. Outside of the park the stream is piped or hidden, an invisible technologic stream. The stream is more visible within the park, within a landscape coded as natural (even if it is a somewhat designed nature). The values of detachment and speed reproduced in the design of the stream can be mirrored in the way people typically relate to the stream – walking, running, or cycling above the stream on the paved, smooth, efficient path. However, when people and temporality intersect, there is the possibility of inverting this relationship as people become situated within the stream, actively engaging with the texture and heterogeneity. The space envelope still exists but it functions in a different manner. Thus, the space envelope is also temporal. The stone wall, which can separate and distance people from the stream, also can also bring people closer to the body of the stream attenuating the presence of surrounding roads and buildings. The ways that hydrologic structures function can vary in relation to changing seasonal cues and temporalities.

Sevier Park suggests that the way people interact with the stream and the way that water infrastructures function in relation to people is neither discrete nor linear. While values of speed, efficiency, and distance are encoded within the design of the stream, they are not determined. I'm not suggesting that all issues, complications, and negative impacts associated with the urbanization of streams are merely relative or disappear (nor should we ignore them), or that all people will act in exactly the same way (in fact, many people in the park did not venture into the streambed and some people decided not to go outside at all that day). There are multiple layers of meaning that emerge in a co-created relational space between people and nature.

Historical Bodies (Sulphur Spring Bottom)

The Sulphur Spring Bottom is an area just north of downtown Nashville in between the Capitol Building and the Germantown neighborhood. The spring and nearby salt lick were originally a meeting place. The readily available freshwater and natural mineral deposits from the spring and salt lick once drew in animals; people followed the animals and the game paths worn into the landscape became paths for people to travel (Jessen 1930, Kreyling 2004). However, the current landscape belies the important role this area has played in the history of Nashville. Standing at the site of Sulphur Spring Bottom today, it is difficult to imagine the freshwater spring and muddy salt lick that once occupied the place. An expansive asphalt parking lot and gathering of newly built condominiums have supplanted the salty muddy expanse that was once a gathering place for bison and other animals (Figure 6). The only prominent identifying feature is the

historic sign marking the location of the Sulphur Dell, Nashville's first professional baseball stadium, which was constructed in 1885.

Figure 6. Parking lots and condominiums now stand on the place that was once the marshy expanse of Sulphur Spring Bottom. (*photo by Jennifer Mokos*)

The French Lick Creek, which runs through Sulphur Spring to the Cumberland River, was also a prominent feature in the landscape, at least until 1892 when it was buried underground (Jessen 1930). The stream, also known as the Lick Branch Creek, was completely enclosed in a brick sewer 15-feet in diameter to streamline the flow of water and sewage from the waterway into the Cumberland (Nashville Riverfront 2010). I

visited the site to find the underground creek and to trace the route of the stream from Sulphur Spring Bottom to the Cumberland River. Near the sign marking the Sulphur Dell, a path flanked with trees meanders across the asphalt landscape. The French Lick Greenway follows the path of the original French Lick Creek from Bicentennial Mall to the Cumberland River. The greenway is designed to reproduce the appearance and feel of a streambed (Figure 7). The path winds back and forth towards the Cumberland, mimicking curves that would be created by the erosion and deposition of sediments caught in the flowing arc of water. However, the substrate of this "stream" is composed of impervious concrete. A smooth central path is bordered on each side by stones and large boulders embedded in the concrete, creating the feel of a river channel and a shoreline. A vegetated strip adjacent to the "shoreline" edge simulates a riparian buffer and defines the boundaries of the greenway. Two interpretive signs adjoin the path: one on the construction of the Sulphur Dell baseball stadium, and the second on patterns of development on the creek and Sulphur Spring Bottom. Dawn redwood, sweet gum, sycamore, tulip poplar, and birch are among the trees planted along the raised berm that parallels the greenway trail. According to the sign, sculptures along the pathway are reminiscent of the animals that used to gather at the Salt Lick before extensive human settlement.

The French Lick Creek is another example of multiplicities within an urban stream body. The physical stream is present, but buried and disconnected from many of the physical and biological processes that ecologists would use to define a stream. Fish no longer swim in the stream. Alluvial sediments are no longer deposited during seasonal floods. One stream is visible and the other, hidden. A physical mirroring occurs between

the underground stream and visible stream. This mirroring could be interpreted as a veiling of the buried stream, a veiling of the Other with the idealized image of the Same. It is the covering of the historic stream that allows the created stream to exist (if the historic stream was not buried, there would be no need to create a stream). The created stream is produced with the idealized image of the buried stream, not in the image of the piped water body or the historic sewage-degraded stream.

Figure 7. The French Lick Greenway, designed to look like a streambed, follows the original pathway of the French Lick Creek, which is now buried in a sewer underground. (*photo by Jennifer Mokos*)

The concrete path is a sanitized image of the stream buried below. The smooth pavement, which curves in gentle symmetrical arcs, never transgresses outside of its sharply delineated streambed. From the perspective of the developers, the created stream becomes an orderly and efficient connection between the farmer's market at the Bicentennial Mall and the downtown riverfront; a tributary that carries people and capital instead of water to the Cumberland River. The construction of the French Lick Greenway is a project of the urban redevelopment currently underway in Nashville that is focused on reconnecting people with the "invisible" Cumberland River (Nashville Civic Design Center 2006). While many current urban revitalization efforts in the United States have focused on reconnecting people to the neglected waterfronts of cities, a main priority of waterfront redevelopment projects is to increase economic productivity, often at the expense of ecological functioning or social equality (De Oliver 1997; Rodriguez, Martinez, and Guenaga. 2001; Friedman and Andrews 2010). From this perspective, the circulation of the stream is associated with the circulation and accumulation of capital.

This association of Lick Branch Creek with the circulation of capital connects the stream to the values and assumptions embedded within land development practices. The language of development, which positions change as a linear progression over time, marginalizes the water along with human communities that stand in the way of economic progress. The text on one of the interpretive signs on the greenway describes the filling of Sulphur Spring Bottom as a necessary step towards the establishment of Nashville as a city. The sign reads:

> The early pioneers survived and established Nashville, but extensive settlement in this low-lying area was impossible due to the frequent flooding. Around 1892 the

> landscape changed when the "bottom" was filled to accommodate development. French Lick Creek was buried in a 15-foot diameter sewer that still diverts the waters beneath you to the Cumberland River.

In this example, the frequent flooding of this bottomland area is positioned as an impediment hindering Nashville's progression from a pioneer outpost to a fully settled place. The subsequent change in the landscape is positioned as a response to facilitate initial development. The narrative on the sign continues:

> By the 1940s, a portion of the area mostly inhabited by African-Americans was known as "Hell's Half Acre." Nashville, the nation's first urban renewal city, undertook redevelopment of the area around the Capitol in 1949, and the land was re-shaped for the second time.

The description of this second reshaping of the land associates the African-American community living in the area with the degraded conditions in "Hell's Half Acre," which implicitly serves as the justification for the city's means of redevelopment and renewal.

Here in the signs, human histories are buried and hidden along with the French Lick Creek. There is no mention of the cholera outbreaks in the late 1800s that prompted the changes to Sulphur Spring Bottom and the French Lick Creek or the black community that was already established in the area. Nor is there mention of the greater number of African Americans who died during the outbreak partially because they obtained free drinking water from public springs on the French Lick Creek (water contaminated with sewage from the state penitentiary and offal from slaughterhouses upstream) when they could not afford the taxes for the cleaner water piped from upstream of the city (Barnes et al. 1875).[12] The narrative on the sign abstractly references the city's "renewal" in reference to the 1950 Capital Hill Redevelopment Project, distancing the reader from the

[12] According to Barnes et al. (1875), of the 647 deaths from cholera that were recorded in Nashville from June 7-July 1, 1873, 244 of the people were identified as white compared to 402 identified as black. The authors also note that 402 is possibly a conservative figure since many black people were buried before their deaths were officially recorded.

implications of the project. The project integrated the construction of new public housing with economic development by physically moving the African-American residents already living in the area into public housing to make way for new commercial properties (Spinney 1998). Just as the design of the greenway created an image of the buried stream, the narrative on the signs created an image of human histories reflected through the eyes of the developers. This solitary perspective, which falsely appears to represent a unified reality, results in the hiding of histories and the appropriation of the image of others.

The in-between provides a space for the buried stream and communities to exist. The stream cannot be understood solely through one temporal scale or from one perspective. The materiality and functionality of the creek have changed over time. More than just the stream has changed – the entire social and physical landscape has been altered. It is not possible to undo the past and restore the stream to an original state. Nor is the landscape moving through successive stages of development towards a teleological endpoint. Past, present, and future are not discrete entities. The past is here in the present, and futures are shaped by present decisions. A richer understanding of place goes beyond the separation of entities into Ideals and Others. For example, signs can (and should) be designed to include the voices of multiple bodies, multiple histories, in an overlaying matrix that respects difference without the enforcement of convergence to a single, solitary truth.

Rhythmic Bodies (Thompson Lane)

This third example highlights a small tributary of Browns Creek near the intersection of a busy four-lane road and an interstate highway. The stream is located in

the space between a moderately busy access road and a long series of parking lots that serve the line of CarMax, Home Depot, and Staples stores standing adjacent to each other (Figure 8). I happened upon this site by accident (or perhaps serendipity) one July evening while driving home when I turned into the CarMax lot and realized that I was passing over a body of water. As I craned my neck to see the stream, I noticed a slender bird standing in the water. Curious, I stopped to watch the bird from the parking lot until it flew away. The bird was a juvenile yellow-crowned night heron, at the edge of its breeding range in Nashville and not particularly common in the city.

Figure 8. Browns Creek tributary and surrounding landscape (*photo by Jennifer Mokos*)

Throughout the summer, I returned to the stream two or three evenings a week around the same time and nearly always found the heron fishing in the stream. The heron never appeared to be disturbed by the steady stream of vehicles that paralleled the far side of the stream. The behavior of the heron also did not appear to change when I or other people drove up to the edge of the parking lot and got out of the car. As long as people and cars stayed on the parking lot or the road, the heron did not appear to react to their presence. However, when I stepped onto the grass between the parking lot and the stream, the heron would fly up and perch on the power lines above the stream (Figure 9). When I stepped back onto the pavement of the parking lot, the heron would return to the stream.[13]

One afternoon, I observed a man park a large, red SUV in the parking lot right at the edge between the grass and the pavement. The car was parallel to the stream parked across a number of lined spaces. A weeping willow tree and the stream served as the backdrop for the many photographs that the man took of the SUV from various angles. I watched the man face the car, with the stream behind the car, and the heron in the stream. Neither the man nor the heron seemed aware or concerned about the other's presence. The man did not appear to notice the heron, and in the many times I visited the stream, I never observed another person besides myself notice the bird.

These interactions with the heron help me to see ways that the landscape functions around the stream. The heron's behavior suggests that people do not often walk on the grass. While the bird did not react to people driving in cars or walking on the

[13] Although I observed the heron's response to my presence on a few occasions, I did not initially notice the relationship to the parking lot and the grass. Once I noticed this pattern, I did not repeat the interaction more than once. When the heron was in the stream, I chose to observe from the parking lot since I did not want to stress the bird or scare the bird away from feeding grounds.

pavement, she was more sensitive to a person on the grass, in some cases with only a very small change in proximity. The space of the heron and the space of the cars and shoppers in the parking lot appear to function in two separate ways. The stream is not readily visible from the road (Figures 10, 11) and not easily noticed from the parking lot. Pavement and buildings dominate the landscape, creating a visual unity from the roads to the parking lot and stores that seems to create a blind spot where the stream sits in the middle. This invisibility facilitates a distancing between people and the stream. This distancing occurs even when people are in close proximity to the physical stream.

Figure 9. Yellow-crowned night heron perched on power lines (*photo by Jennifer Mokos*)

Figure 10. The stream is not easily visible from the adjacent roadway (summer view). (*photo by Jennifer Mokos*)

Figure 11. Even during winter, it is difficult to see the stream from the roadway because of the topography of the surrounding landscape (winter view). (*photo by Jennifer Mokos*)

There also appears to be different temporal senses in the two areas. The predominance of pavement surrounding the stream encodes a value of speed and efficiency into the landscape. Water moves rapidly into streams and storm drains, and cars speed quickly from place to place. As paces increase, smaller features and details become less apparent. Faster moving people require larger signs. Businesses are aware of this, as evidenced by the large brightly colored electric signs that line the road by the stream. The tempo embedded within the landscape influences the rhythm of movement, conveying a message that this is not a place to pause for a stroll in the grass near a stream.

However, this small area can be a place to pause. The heron often stands silently still on long, slender legs, patiently watching the water for fish. The heron is not the only one who pauses. At various times a yellow jacket settles on a rock for a drink of water, a school of fish feasts on the algae that grows near the outfall from a stormwater pipe, and a rabbit peeks out from the brush at the edge of the grass. Even the stormwater moves more slowly over the grass than over the pavement. The tempo here is calmer, slower than the surrounding landscape.

These physical materialities and social constructions intersect to create places, to create meanings. These meanings are produced in-between human, nonhuman, water, and technology. For many people, this place is a blur within the landscape, an overlooked space with little value or interest. For the man in the red SUV, it was (at least) a backdrop for portraits of his car. For the heron, the stream is perhaps an evening fishing hole, and to the yellow jacket, it is a source of drinking water. For me, the researcher, the stream is a serendipitous research site and a place to observe a really neat bird.

These meanings are not isolated constructions; they are produced in relation to each other. The stream itself exists physically in an in-between space in the landscape. The fast-paced landscape that distances people from the stream also helps to create a slower, quieter place for the heron and other plants and animals. In this sense, the stream becomes a semi-hidden island of habitat within an increasingly urban matrix.

Conclusion

> That the good life on any river may … depend on the perception of its music, and the preservation of some music to perceive, is a form of doubt not yet entertained by science.
> (Aldo Leopold, *A Sand County Almanac* [New York: Oxford, 1949], 154).

In this chapter, I have discussed three dimensions of temporality embedded within urban water systems. Although I focused on one particular dimension in each example, there are elements of the different dimensions embedded throughout the cases. Likewise, these experiences are not meant to create an exhaustive list of new variables or categories to study. This conception of time questions not just what we know about water, but how we come to know it. Knowledge is created through a relational exchange between human, non-human, researcher and environment. In this way, temporal changes can be seen as cyclical rather than linear, past histories can live in the present, and multiple senses of time can exist simultaneously in the landscape. We see that it is possible for physical spaces to function in multiple ways and designs that distance people from water can also bring them closer. Multiple perspectives merge into a heterogeneous temporal patchwork and new understandings are opened through the emergence of the invisible: invisible pasts, invisible cycles, and invisible relationships.

A more just ecology asks the question: Who is able to participate in the creation of knowledge and who able to be heard? Are we are so focused on seeing that we are losing the ability to hear, or more appropriately, to listen? The music of the river is more than the sound of the water. Just as music is a temporal phenomenon, the music of water is also temporal. We are not detached observers. We are actively involved in the song of the river, in its creation as well as whether we allow the music to be heard or overpower it with the cacophony of our needs. This blurring of boundaries is not a blurring of reality. It is a blurring of the dualisms that force bodies and beings (nonhuman and human) into sharply defined, hierarchical categories. An ecology that only divides water into separate, distinct, and measurable pieces isolates the notes, but misses the orchestral beauty. Understanding is a becoming that is more than the sum of the individual notes.

CHAPTER III

WRITING PLACE: CONSTRUCTING BELLS BEND, TENNESSEE

There is reciprocal interconnectedness between water and land that shapes much of what we see across landscapes. The powerful, though sometimes subtle, erosive forces of water shape and mold the land, carving valleys through rock, and carrying sediments to new places. The underlying geology, in turn, influences the chemical composition of surface and groundwater, which shapes biological community composition and influences ecosystem functioning. However, the flow of water connects more than just landscapes and landforms. A myriad of social and cultural meanings are woven into landscapes in ways that are integrated with physical and biological systems. These multiple systems interact and intersect with each other in an ecological geography of place.

Constructions of place are always political. Relations of power are ingrained within the production and reproduction of the meaning and identity of places. Places can be sites of struggle, of contestation and resistance between and among people and communities over what places will look like, how they should function, who is included and who is excluded. However, power is not concentrated in one individual or community and transferred through a direct linear succession of places. These relations of power are embedded and distributed among networks containing multiple situated positions. Thus, power is not static quality to be possessed and different positions have different relations of power.

This chapter explores the construction of place during an active land development debate in Nashville, Tennessee. The residents of Bells Bend are organizing against a zoning change that would increase the density of development allowed within the currently rural community in the northwest corner of the city. Bells Landing Partners, who purchased 1,500 acres in the community, initiated the zoning change with plans to build “May Town Center,” a business, residential, and commercial project posited to become a second downtown within the city. Residents of Bells Bend are also fighting the construction of (at least) three bridges to be constructed across the Cumberland River in order to connect May Town to the rest of Nashville. Through qualitative analysis of letters written to the city planning commission, I examine the diverse means by which individuals communicate their understandings of place and community. Among the letters, there appear to be multiple "voices," each comprising a distinct community perspective. From these letters, we see that people relate to land in ways that are personal and reflect embedded assumptions and values about the role and purpose of land. These relationships are both reflected in actions as well as re-inscribed by those actions, thus setting up cycles of coproduced systems that influence both people and landscapes. Through this chapter, I will illustrate how power differentials embedded within these systems influence both who is able to frame the debate over place, and how certain types of knowledge are prioritized and implicitly given authority over other perspectives and alternative means of knowledge production.

What is place?

Space and place are integral concepts in geography. Space is often referred to as the physical location or physical environment absent of human perceptions or meanings; while place relates to the meanings and values that people ascribe to a particular location. Places are sites of materiality, meaning, and practice composed of three dimensions: location, locale, and sense of place (Cresswell 1996). The concept of place was formalized during the turn to human geography during the late 1970s. Tuan (1977) describes temporal dimensions of place in terms of historical time and movement. Place is beyond rootedness, or being in one place over time. The development of a sense of place is about a conscious effort to connect the present to the past. According to Tuan (1977) the creation of place also requires a pausing or stopping of movement; places cannot be established in sites of constant change: "Place is an organized world of meaning. It is essentially a static concept. If we see the world as process, constantly changing, we should not be able to develop any sense of place" (179). If too much movement keeps people from developing a sense of place, then, according to Relph (1976) the increased mobility and mass production of globalization has transformed places into "placeless" spaces. However, these "placeless" spaces that are created are not valueless, in the sense that there are values encoded into the design, into the place, even if they appear to be neutral. Placeless spaces are still places. Massey's (1993) concept of a progressive sense of place considers places in a way that is more plastic and diverse. Places are constructed through connections rather than through the establishment of fixed boundaries.

A second conception of place relevant to this paper is that of a standpoint, or a particular position or perspective. A place can be thought of as more than a particular location with insiders and outsiders. A particular standpoint, or place, within a system can produce unique meanings, values, and understandings. "Standpoint approaches provide a map, a method, for maximizing a 'strong objectivity' in the natural and social sciences. They provide more objective ways of explaining the limitations of standard accounts of nature and social relations" (Harding 1998, 163). Applying the concept of "strong objectivity" to place allows the possibility for multiple places to exist within the same space. A place is best understood from multiple perspectives, where multiple standpoints or positions create an overlying matrix of meanings and values.

Methods

This paper is based on qualitative analysis of over 600 letters to the Nashville Planning Commission and city public officials that were sent by people either supporting or arguing against the zoning change and the construction of May Town Center. I also examined documents and websites produced by and for the Bells Bend Conservation Community and the Bells Landing Partners, as well as the Nashville Detailed Design Plan for Bells Bend and Scottsboro. In order to become familiar with the landscape of Bells Bend, I made multiple site visits to public properties within the Bells Bend community over the course of one year.

The letters against the construction of May Town Center primarily separated into three main groups that corresponded to geographic area: residents and landowners from Bells Bend and the adjacent Scottsboro community, residents in West Nashville

neighborhoods who will be impacted upon by the potential construction of the bridges across the Cumberland River, and a more general grouping from people throughout Davidson County and broader geographic areas. Letters supporting the construction of May Town Center included letters primarily from the Bordeaux and North Nashville communities, form letters sent by Tennessee State University (TSU) alumni in North Nashville, and form letters sent by people throughout Davidson County through an online form on the May Town Center website. In this chapter, I have focused on the letters against May Town Center from the residents of Bells Bend and Scottsboro and on the letters supporting the development from Bordeaux/North Nashville, TSU, and the website form letters.

Setting and Background

Bells Bend is located in Nashville, Tennessee in the northwest corner of metropolitan Davidson County within a deep U-shaped bend in the Cumberland River. Bells Bend is an oxbow created by the erosion and deposition of alluvial sediments over millions of years by the meandering Cumberland River (Figure 12). Separating Bells Bend from the majority of metropolitan Nashville, the Cumberland River borders the area on its east, west, and south sides (Figure 13). Currently, the only access to Bells Bend is along a two lane paved road at the north end of the community (Figure 14). An abandoned wooden railway trestle reinforced with steel frames the entrance to Bells Bend on Old Hickory Boulevard (Figure 15). Green plants grow on the forgotten tracks and a wooden board with the words “Keep It Country” spray-painted in red hangs from the steel beam overhead. Old Hickory Boulevard, runs the length of the bend, about four and

a half miles, and a pair of signs that read “road ends to water ahead” flank the roadway warning of the road’s ending directly into the Cumberland River at the old Cleeces Ferry site (Figures 16, 17). The only two paved roads that split off of the main roadway, Cleeces Ferry Road and Tidwell Hollow Road, are each about a mile long, and just wide enough for two cars to pass in opposite directions (Figure 18). The landscape is primarily comprised of rolling wooded hills and flat agricultural fields, interspersed with homes, small farms, and rural gravel drives (Figure 19). Trees, streams, and wooden fences delineate the land and bound properties (Figure 20). Although technically this area is within the boundary of the city of Nashville, it is noticeably devoid of pavement (with the exception of the three roadways), concrete, and urban infrastructure (Figure 21).

Figure 12. Bells Bend is an oxbow created by the erosion and deposition of alluvial sediments over millions of years by the meandering Cumberland River. (*photo by Jennifer Mokos*)

Figure 13. Separating Bells Bend from the majority of metropolitan Nashville, the Cumberland River borders the area on its east, west, and south sides. (*photo by Jennifer Mokos*)

Figure 14. Currently the only access to Bells Bend is along a two lane paved road at the north end of the community. Old Hickory Boulevard runs the length of the bend, about four and a half miles. (*photo by Jennifer Mokos*)

Figure 15. A pair of signs that read “road ends to water ahead” flank the roadway… (*photo by Jennifer Mokos*)

Figure 16. … warning of the roads ending directly in the Cumberland River at the old Cleeces Ferry site. (*photo by Jennifer Mokos*)

Figure 17. An abandoned wooden railway trestle reinforced with steel frames the entrance to Bells Bend. Green plants grow on the forgotten tracks and a wooden board with the words “Keep It Country” spray-painted in red hangs from the beam overhead. (*photo by Jennifer Mokos*)

Figure 18. The only other paved roads, Cleeces Ferry Road and Tidwell Hollow Road are each about a mile long and just wide enough for two cars to pass in opposite directions. (*photo by Jennifer Mokos*)

Figure 19. The landscape is primarily composed of rolling wooded hills and flat agricultural fields, interspersed with homes, small farms, and rural gravel drives. (*photo by Jennifer Mokos*)

Figure 20. Trees, streams, and wooden fences delineate the land and bound properties. (*photo by Jennifer Mokos*)

Figure 21. Although technically this area is within the boundary of the city of Nashville, it is noticeably devoid of pavement, concrete, and urban infrastructure (with the exception of the three roadways). (*photo by Jennifer Mokos*)

The community of Bells Bend is organizing against the development of 1,500 acres of land on the eastern shoreline, directly across Old Hickory Boulevard from Bells Bend Park. Bells Landing Partners, who purchased the property in 2007, have proposed the construction of a large development entitled "May Town Center" on the site. This development is much greater in scope than a new subdivision or a single residential or commercial project. The developers plan to construct a "mix of office campuses, housing options and lifestyle retail within a lively mixed-use town center" (Bells Landing Partners *n.d.*) which is intended to function as a second downtown located five miles from Nashville's primary downtown district. The plans for the development detail an urban town center surrounded by high and medium density residential town homes, mid-rise apartment buildings, single family homes and estates; a 42-acre office district; two corporate campuses each targeting multiple corporate headquarters; a research park and agricultural research fields; and sites for schools, fire stations, and additional civic and urban infrastructures (RTKL 2009).

The northwestern area of Nashville, consisting of Bells Bend and the adjacent neighborhoods of Scottsboro, Bordeaux, and White's Creek, have frequently been the recipients of unwanted construction projects. In the words of one long-term Bells Bend resident:

> There seemed to be invisable [*sic*] forces that tended to weld Northwest Davidson County together and to keep this Region separated from the more affluent communities. The topography of the land – the agrarian life – the universal feeling that the "power structure" was neglecting our Region when it came to improvements such as roads and utilities – and the congealed thinking that our area had to bear more than its fair share of undesirable projects. For example, when one of the powder magazines exploded in Bordeaux in 1906, shattering windows of homes in a one mile radius, the Davidson County Court was kind enough to move the remaining ones to Scottsboro where they stayed for nearly forty years before being moved to the Bells Bend area. The above project was

> only one of a dozen that tended to lower property values in the Region (Graves 1985, 11).

Currently, two of the five youth development centers in the state of Tennessee are located in northwest Nashville: the Woodland Hills Youth Development Center and the New Visions Youth Development Center.[14] Woodland Hills is the only center that houses both adolescent males and females and New Visions is the only facility for adolescent females in TN. Four of the six state prisons located within Middle Tennessee are also in Nashville.[15] The Tennessee Prison for Women, the Charles B. Bass Correction Complex, the Loise M. DeBerry Special Needs Facility, and the Riverbend Maximum Security Institution are all located in the area. Nashville's solid waste facilities are also concentrated in the northwestern area of the city. The only metropolitan brush grinding facility is located in Bordeaux and one of the two class IV waste disposal facilities in Nashville for the disposal of construction and demolition waste is also located in Bordeaux (Gresham Smith and Partners & O'Brien 2008).

Approximately 270 people live in Bells Bend and the racial makeup of the community is predominately white (over 95%).[16] The per capita income for Bells Bend and Scottsboro is $23,069 (Metropolitan Planning Commission 2008). Population density is much lower per acre than the rest of Davidson County, reflecting the current rural landscape of the community. Bells Bends residents are familiar with having to fight against unwanted land use. The "Bells Bend Defenders" have successfully fought against the construction of a landfill during the early 1990s.[17] They were unable to block the widening of Ashland City Highway, which intersects Old Hickory Boulevard just north

[14] http://www.tn.gov/youth/juvenilejustice/ydcenters2.htm
[15] http://www.tn.gov/correction/institutions/regions.html#Middle
[16] U.S. Census Bureau 2000
[17] http://www.nashvillescene.com/nashville/road-kill/Content?oid=1197156

of the entrance to the Bend from a two-lane road to seven lanes of highway, or to stop the construction of a wastewater treatment plant by the Harpeth Valley Utilities District in 2000 (Price & Coco *n.d.*). In 2005, the Bells Bend Defenders stopped the construction of 1,200 new homes on property that has since been incorporated into the current May Town property.

While the community of Bells Bend is no stranger to the fight against development pressure and unwanted land use, the proposed constructions would signal a more drastic change in the existing landscape of the community than the projects they have fought previously. As pressure for development has increased, Bells Bend residents have shifted their methods to preemptively define their own goals for future land use and economic development within the community. Shifting from the "Bells Bend Defenders" to the "Bells Bend Conservation Community", they have defined a "Third Vision" for development to create a conservation corridor from Beaman Park in Scottsboro to the southern tip of Bells Bend with projects focused on environmental education, recreation, community supported agriculture, agritourism, and cultural resource preservation (Price & Coco *n.d.*).

Constructing the Cumberland River, Constructing Community

The Cumberland River frames the community of Bells Bend. This is true in a physical sense and a symbolic sense to the residents of Bells Bend. The river's role in the formation of the community is still visible in the present landscape. Prior to human development, the river shaped the land, defining the physical form of the community. However, the role of the Cumberland River in constructing Bells Bend is more complex

than a line that traces the edge of the community.

The invisibility of the community and the lack of physical access to the area has contributed to the proposal and placing of negative land use projects within the Bend. For example, the Harpeth Valley Utilities District wastewater treatment facility located on the southern tip of Bells Bend services the more affluent Bellevue neighborhood located across the Cumberland River. Sewage from Bellevue in West Nashville is piped across the river into Bells Bend and annually produces "more than two million pounds of biosolids used to fertilize fields around the plant."[18] The biosolids created from the treated sewage of Belleview residents is spread on adjacent fields that are located in Bells Bend. However, the facility does not treat any sewage from properties that are physically located on Bells Bend: "In negotiating where to place the plant, the utility promised not to provide sewer service to the north side of the river, so as to calm fears of sewer-induced sprawl" (Price & Coco *n.d.*, 116). There are no public stormdrains in Bells Bend and properties are not connected to the city sewer system but instead utilize private septic systems. The lack of water infrastructure provides a constraint that limits construction.

The Cumberland River also functions as a friction to the spread of development radiating out from downtown Nashville. The landscape on each of the two sides of the Cumberland River is dramatically different in terms of the density of development, type of development, and presence of urban infrastructure. An aerial photograph of Nashville and Bells Bend illustrates the density of development leading out from downtown Nashville toward the southeastern edge of Bells Bend (Figure 22). Photographs taken from the shoreline of the Cumberland River illustrate these differences in land use and development patterns. The photographs of the West Nashville shoreline taken from Bells

[18] http://www.hvud.com/html/environmental_report.php

Bend demonstrate the dense development constructed up to the edge of the river (Figure 23). From the perspective of West Nashville looking towards Bells Bend, there is a lack of built objects and prevalence instead of vegetation and shoreline (Figure 24).

These photographs illustrate the differences in the density of development on the two sides of the river. In West Nashville, houses and apartment buildings are constructed right up to the river's edge, lining the entire shoreline that is visible. The buildings are located in close proximity to each other forming a dense wall along the riverfront. In contrast, the shoreline of the river in Bells Bend is free of buildings and there is minimal evidence of human construction. Trees and other vegetation line the riparian zone and hills are visible in the background. These photographs illustrate the Cumberland River's role in relation to the community of Bells Bend. Just as riparian plants slow the speed of floodwaters allowing nutrient-rich sediments to settle onto the land, the river itself slows the momentum of development advancing outward from downtown Nashville. Dense residential and commercial development, intersecting roads and highways, streetlights and stormdrains define an urbanized landscape in West Nashville. Crowded right up to the river's edge, these constructions have little patience for flooding or river flows; while in Bells Bend, farms relate to the river in a more flexible arrangement of sediment and space in the absence of billboards, streetlights, and drains. It is likely that the Bells Bend located at these particular Cartesian coordinates would be a very different place were it not for the presence and the actions of the Cumberland River. The physical environment is not an inert canvas to which people imprint meanings. It is also not a deterministic force. Place is itself a product of the ongoing relationship negotiated between the human and nonhuman, and the material and the symbolic.

Figure 22. Aerial photograph showing the Cumberland River, downtown Nashville, and Bells Bend

Figure 23. Photograph of the shoreline of West Nashville near Charlotte Pike taken from the perspective of the Cleeces Ferry site in Bells Bend. (*photo by Jennifer Mokos*)

Figure 24. Photograph of the shoreline of Bells Bend taken from the perspective of the Cleeces Ferry site in West Nashville. (*photo by Jennifer Mokos*)

The Cumberland River has symbolic meaning to the residents of Bells Bend. The river is defined as an asset in the Detailed Design Plan for Scottsboro/Bells Bend (Metropolitan Planning Commission 2008). In the words of one resident:

> The [Cumberland] protects us and makes it hard to get here.

The residents perceive the river as something that is valued by the community. They view the potential construction of bridges across the Cumberland River as inducing sprawl by removing the protection of the river:

> As residents of the bend area we will be pushed out as other developers descend

> upon [our] pastures to put in other developments. Can you imagine 100 acres of land within 1 mile of May Town staying rural? With 3 bridges and thousands of people we will be gone.

The significance of the river to Bells Bend residents is illustrated in its prominence in the logo designed for the Bells Bend Conservation Community (Figure 25). The river is shown forming a boundary around the community of Bells Bend in the foreground of the logo. A fence similar to the wooden fences that surround agriculture fields and pastures emerges from the distance on the left. The curve of the fence suggests that it follows the curve of the river encircling and protecting Bells Bend, suggesting that to the people of Bells Bend, the Cumberland functions as a fence surrounding and protecting the rural community. The river is depicted in the margins, reflecting the waterway's physical position surrounding Bells Bend and also its symbolic value to residents as the protector of the land and community. The river is viewed as physically peripheral, yet valuable and important to the formation of the community. In this way, there appears to be an integration of the river, the land, and the community perceived by the residents.

Bells Landing Partners also view the river as an important in the formation of community; however for the developers, the community is defined as the city of Nashville at large and the river exerts a negative influence. Bells Landing Partners blame the lack of connectivity between Bells Bend and Nashville for impeding economic development. The economy is equated with the life force or "vitality" of the city:

> Surrounded by the Cumberland River on three sides and bordered by Ashland City Highway to the north, this area has not contributed to the economic vitality of our city.

Figure 25. Logo for the Bells Bend Conservation Community on a sign for a neighborhood farm. (*photo by Jennifer Mokos*)

The developers prioritize economic production over other possible values associated with the land and water. They suggest that the river bordering three sides of the Bells Bend is to blame for the lack of productivity. In a second quote, the location of the Cumberland River is more explicitly charged with limiting growth:

> [Bells Bend] has been isolated because of its unique location along the Cumberland River and lack of access to the surrounding community. A new bridge will afford the opportunity to knit Bells Bend … into the community while creating a mixed-use center reflective of the City's goals for a more sustainable and livable approach to growth.

Bells Landing Partners define the community as the city of Nashville (rather than Bells Bend) and connect the location of Bells Bend with isolation from the Nashville

community. Widening the boundaries of "the community" to include the city facilitates the image that the rural character of Bells Bend negatively affects the city of Nashville and personalizes the issue to people living in other neighborhoods within the city. The developers specifically implicate the river, blaming the perceived disconnection and lack of growth on the location of the waterway in relation to Bells Bend. The Cumberland is depicted as a passive contributor in contrast to the active role of the river to the people of Bells Bend, while the bridge is proposed as the solution to establish the missing connection and to virtuously bring the errant Bells Bend back into the community of Nashville.

The previous examples illustrate the multiple relations of meaning regarding the Cumberland River that are formed in conjunction with the river's physicality. The presence of the river influences the physical relationship between Bells Bend and the city of Nashville. The density of construction on the West Nashville shoreline suggests that if the river were not present, development would have likely continued its spread into Bells Bend. There are, however, multiple interpretations of this phenomenon, which are formed in relation to position and underlying values. For residents in Bells Bend, the river is seen as defining and protecting the community. The river is constructed as a living subject, an active participant in the community of Bells Bend. In contrast, Bells Landing Partners construct the river as a barrier that divides the community and impedes productivity. For the developers, economic growth is prioritized and valued. The land is valued more than the river for its potential to create capital through the construction of a development that will primarily serve business and commercial interests. The name, Bells Landing Partners, reflects this shift in focus from the river (Bells Bend) to the land (Bells

Landing). Thus, to the developers, the river becomes an object to be overcome through the construction of multiple bridges across and over the waterway. In this way, the Cumberland River, the physical body of water surrounding Bells Bend, both influences and is influenced by the meanings and values of the Bells Bend residents and the developers.

Experiencing place in Bells Bend

The relationship between people and the physical place of Bells Bend is also reflected within the letters written to the Nashville Planning Commission. The letters from Bells Bend residents were overwhelmingly against the construction of May Town Center. The letters that follow demonstrate that residents perceive place as personal and integrated into the character of the community. They attribute value to the qualities of the physical landscape that the residents feel positively influence personal wellbeing and a unique community character.

To the residents of Bells Bend, the construction of the development will negatively impact much more than the 1,500 acres upon which it will be built. The residents express a strong connection to place that is intertwined with personal and family history. Repeatedly, residents list the number of years they have lived in Bells Bend, the number of generations the land has been in their family, or familial connections to the land. Longer, narrative letters frequently begin with statements similar to this one:

> I grew up on my family's farm, the [family name] farm, that is six generations old dating back to David Lipscom's property on the river.

Short, direct statements also commonly express a sense of time:

> As a 20 year resident of Scottsboro and Bells Bend, I do not understand the merit for reconsideration, for rezoning.

The length of time a person has been connected to Bells Bend is occasionally listed following the individual's name at the end of the letter, much like a job title or degree. This dating appears to function as a way to establish legitimacy, a legitimacy that is connected to personal histories and direct experiences. It is sometimes paired with other forms of establishing credibility such as civic or financial responsibility, as shown in the following statement:

> I have lived here 20 years, I vote, pay taxes.

However, the meaning of Bells Bend to its residents is conveyed through more than a length of time or number of generations. The place is personal and connected to personal histories:

> My home, community, farm, and city are in danger. There is a massive development in the works for the last rural area in Nashville, where I grew up in the creeks and cow pastures next [to] some of the most beautiful people in the world.

This resident is situated *in* the creeks and pastures and *next* to people. This positioning signifies a more equal relation between people and the land (and water). To the residents of Bells Bend, the landscape is not a passive backdrop that is visually consumed; the land itself is actively experienced and directly felt.

Besides relating their own personal stories to establish meaning and importance, residents utilize multiple ways of providing a direct experience of place. In the following example, rich sensory language is used to describe the feel of the landscape, followed by an invitation to experience it first hand,

> Have you ever stepped out into the crisp air or the damp foggy wetness and experienced the pure quiet of being all alone for miles around, just you, birds, and animals of field and forest? Everyone should have joy; this bolstering of life within acknowledges life's worth. Having your own unique time in a land without signs, noise, clutter can bring much satisfaction and is a wonderful gift for a community. Come experience it in Bells Bend. Save it forever.

Images and music are also used as a way to create a sensory, experiential message. Instead of writing a letter, one resident emailed a link to an online gallery of photographs to the city planning commissioners. The images include farms encased in fog, views of the Cumberland River, community members gathering at a cemetery for a funeral, close details of homes, farm buildings, farm equipment, old cars, an iconic American flag painted on a piece of wood nailed to an old fence post. The lyrics to a song written by another resident relate her connection to Bells Bend in a language that invokes the senses of sight, sound, smell, and touch:

> I remember the river, the hills, and the trees.
> I remember the hollyhocks, the buzz of the bees.
> We slept on the front porch with a warm summer breeze.
> I remember the screen door full of cottonwood seeds.
>
> I remember the smell of the soil as it turned.
> I can feel God's hands touching the earth.
> The smell of the hay as it cured in the sun.
> I remember the pleasure when the day's work was done.

This feeling of connection to the land in Bells Bend goes beyond the individual. Many letters by residents cite specific areas that they feel will be negatively affected by the development of May Town Center. Damage to the land, wildlife, natural and cultural resources, and agriculture are frequently mentioned. However, even more frequently, residents mention the loss of the rural nature and community. The following letter, hand-written on lined loose leaf paper by a resident whose family has lived and farmed in Bells

Bend for 90 years, describes the integration of the land with the character of the community:

> Ruralness – You can feel it. You can see it. You can smell it. You can hear it. You can touch it and you can taste it. It is real and authentic and inside the ruralness lives the community character. Because of the geography of our rural community – pastures, flood plains, hills, forrest, the river, and the length of time people have lived here there is a delicate balance that drives this community and gives it personality. The truth is with the introduction of May Town into any part of our community's ruralness which is the foundation of its character and pride [and] cannot be measured in lots, squares and maps, the connection between its land and its people will be forever destroyed.

According to this resident, the physical environment, the people and their histories, and the character of the community are integrated as a whole and, as such, cannot be divided into individual components. For the Bells Bend residents, such a drastic change to one part of the community, as proposed by the May Town construction, will completely change the others. Residents generally perceive a finality that will accompany changes to the land and to the community. There is an acute awareness of the magnitude and directionality of the risks associated with the construction of May Town Center. As another resident states:

> Once rural land is lost, it can never be replaced.

Residents recognize that the potential loss of rural land is also significant for the nonhuman entities within the community. As seen below, nature is considered part of the community and in need of protection:

> [Maytown's] ad's promote nature is nurture.. You promote a nuturing nature area by leaving it natural and protecting the soil and animals..Not by building a city in there [*sic*] yard & homes… what is gonna happen to their homes.. They can't speak for themselves so we have to speak for the animals..

According to this perspective, the animals also have homes that will be destroyed and will be displaced by the construction of May Town; thus the impacts are not seen solely from a human-centered perspective. Nature is not described as a resource to be controlled, managed, or made productive, but as an entity that is beneficial existing as it is. The role of people is described as a voice for the animals since they cannot write letters themselves. The residents generally feel that they are stewards of Bells Bend and the non-human nature coexisting within the community. This perspective is communicated by the following resident after explaining why she and her husband chose to live in Bells Bend two decades ago:

> I have made it my vocation to tend and maintain our little plot of God's green earth, feeding the birds, planting trees and flowers and growing fruit and vegetables while also working full time as a productive Nashville resident.

This resident feels a responsibility to care for the land in a way that is analogous to the responsibility of a job. The use of the word "vocation" expresses a responsibility that includes a personal dedication to caring for the land juxtaposed to her description of "working full time as a productive Nashville resident," which appears to be a way of establishing credibility. Evidently for her, it is not enough to care for the land; to be productive includes full time work, earning money. She describes the land as alive with birds and plants, which are also in need of maintenance – birds need feeding, trees and flowers need planting, and fruit and vegetables need growing.

The main themes communicated by Bells Bend residents that are addressed in this section include those of personal history, sensory experience, an integrated sense of community, and stewardship. Through their personal histories, residents establish their entitlement to Bells Bend. This authority is communicated through the combination of an

accounting of the number of years a person or family has lived in Bells Bend and through the retelling of personal stories. To the residents, the past is valued and highlighted, which shifts the frame of temporality as residents' perceptions of the past are integrated into their present construction of place. There is also a figurative shifting of spatial boundaries as residents utilize language and media in a manner that physically draws readers into Bells Bend. While readers are invited to visit and experience Bells Bend for themselves, the songs, photographs, sensory language, and thick description included within the letters also allow readers to construct an experience of Bells Bend through the lens of the current residents.

The images and words from Bells Bend residents communicate a valuing of close proximity and tactile, emotional sensing, which connects with the theme of an integrated community character. The residents of Bells Bend understand community as an entity that is created through multiple interrelationships that will be lost through attempts to directly measure or reduce Bells Bend into individual components. This theme is reinforced through the utilization of photographs, stories, and songs that represent Bells Bend through intact images and experiences rather than through isolated concepts. Residents' descriptions include the physical landscape, non-human lives, human lives and personal histories. Within this community, people are situated within the land and positioned with a responsibility to care for non-human entities. Thus, to the residents of Bells Bend, protection is a reciprocal concept held in relationship between people and nature. The Cumberland River is seen as a protective entity to the community of Bells Bend, while the people of Bells Bend also feel a responsibility to protect the physical and non-human nature within their community.

Economizing place in support of May Town Center

The letters supporting May Town Center are primarily written by people who live outside of Bells Bend and reflect a different understanding of place compared to the residents of Bells Bend. The letters submitted to the planning commission in support of the development group into three main types: form letters sent through the completion of an online form on the May Town Center website (n=74), form letters sent by Tennessee State University alumni (n=13), and a group of letters, primarily from people in the Bordeaux and North Nashville communities (n=74). North Nashville and Bordeaux are predominately African-American, less-affluent neighborhoods located to the east of Bells Bend (Metropolitan Planning Commission 2010, 2011). Tennessee State University (TSU) is a historically black, land-grant public university located in the North Nashville community. Bells Landing Partners forged a partnership with TSU to create a 50-acre Research Park within the proposed May Town Center development and a Center for Sustainable Agriculture on 200-acre farm in the floodplain of the Cumberland River. All three groups of letters almost exclusively discuss May Town Center in terms of economic benefits, reinforcing the notion that land is valued primarily for economic gain. They also appear to encompass a more universal perspective rather than a particular, situated perspective.

The text in the body of the letters is identical for all of the letters that were submitted through the May Town Center website. The only variation within the letters was the space where each individual's name, address, email, and phone number were typed below the main paragraph of text. All of the form letters state:

> As a citizen of Nashville, I feel that job creation, corporate relocation and retention, funding our schools, public safety, economic development, Smart

> Growth and increasing the local tax base are all priorities for Davidson County. May Town Center is a balance between economic development and land conservation. The project will enable us to meet the needs of today while preserving resources for future generations.

Although the names of individuals were attached to each submitted letter, the words were crafted by the developers rather than by the individuals themselves. The benefits of May Town Center described in the form letter are overwhelming economic – jobs, companies, taxes. Education and public safety are framed as the beneficiaries of the capital that will be created by the development. Thus, from this perspective, positions against the May Town development are linked with negatively impacting education and safety. Land conservation is positioned as a secondary benefit of the proposed construction, permitted solely by the balance provided by the economic development.

Similar to the letters submitted through the May Town website, the letters submitted by TSU alumni were also identical form letters, with the exception of signatures and dates. The text in these letters simply reads:

> Our community needs more economic development and better jobs. Because of that, I offer my support in favor of the May Town Project.

Thus, for the TSU alumni, the benefits of May Town are solely focused on economic outcomes. There is no mention of sustainability or environmental concerns within the text of the letters. The letters emphasize the creation of capital and new jobs, which supports the economic focus of the form letter from the May Town Center website.

The remaining letters supporting May Town Center from Nashville residents also appear to be formulaic, although they are not identical form letters. The format and language are almost completely similar across the letters. All of the letters are typed in a

business letter format and signed by hand. The individual's address is hand written, rather than typed, underneath the signature (although addresses were not included on some letters). Personal accounts and stories are notably absent and the writing style is formal. There is limited use of personal voice in the letters. The similarities in format and writing style among these letters suggest the possibility that they may have been written by individuals directly associated with May Town Center rather than by members of the general public. The communities of Bordeaux and North Nashville appear to be particularly targeted for signatures. The following excerpt exemplifies the writing typically contained within the letters:

> I have recently learned about the new shopping center and mixed use proposal in Bell Bend. I have found this to be highly consistent with what is needed in the community. May Town Center, as it is referred to, is exactly what the neighborhood needs.
>
> Such a substantial and well thought-out project can serve as the missing component of job growth opportunity that we need…Please do not be thwarted by the few people who are naysayers and opponents of this great opportunity. The Bordeaux community is clearly unified and solidly in support of you and May Town…Please vote for May Town Center. This may be our last opportunity to bring forth new and attractive development.

The use of language that conveys certainty is common among the letters written in support of the development. May Town Center is described as "*exactly* what the neighborhood needs" (emphasis added). This certainty extends to include the support of additional residents besides the original writer of the letter, as the letter states: "the Bordeaux community is clearly unified and solidly in support of you and May Town." Individuals do not stand alone in these letters; they enlist entire communities, constructing the image of a single, unified voice in support of the construction of May

Town Center. As the following quote illustrates, this support is frequently described within the letters in terms of progress and opportunity:

> It is time we join the 21st century and become a progressive community.

Mechanical and medical language frequently embedded within statements, may serve as a way of further associating May Town Center with notions of progress and opportunity:

> "the missing component of job growth"
> "a $4B injection"
> "an economic boost"
> "part of the cure"
> "state-of-the-art project"
> "breathing new life into the economy"
> "an incubator to bring jobs"
> "a highly efficient use of the land in Bells Bend"
> "act as a catalyst in bringing jobs back to Nashville"
> "the type of plan that is needed to thrust our local economy into full gear"

Through the use of scientific and technologic metaphors, the letters supporting the May Town development connect ideologic concepts of progress, efficiency, and growth with economic values, capital, and jobs. This linkage between economic concepts and techno-scientific terminology facilitates the appearance of rationality and detached objectivity. Within the letters, the themes of progress and opportunity are commonly associated with those of scarcity and competition. The May Town Center development is described as the only opportunity, the "last opportunity" to overcome the perceived scarcity of employment and business opportunities in Nashville:

> I recognize that May Town Center may be the biggest chance yet to allow Nashville and Metro-Davidson the opportunity to compete with neighboring counties that have taken business and employment opportunities from our area.

In this example, there is a boundary drawn between Nashville/Davidson County and the surrounding counties, whereby surrounding communities are charged with taking economic opportunities from the city of Nashville. In this way, the boundary of Nashville in constructed as a boundary in need of defense from outside communities. The primary means of that defense is constructed as the proposed development in Bells Bend. From this perspective, Bells Bend becomes a weak link within the community of Nashville that needs reinforcement through land and economic development in order to protect against antagonistic outsiders that threaten the city's security. Thus while the North Nashville and Bordeaux communities within Nashville are enlisted in the fight to save Bells Bend through economic development, communities outside of Nashville are othered and constructed as competing entities.

Overall, the letters submitted in support of May Town Center reflect values of distance, progress, and efficiency. The lack of personal experiences and stories within the letters supporting May Town reinforces the focus on universal benefits and needs. This focus on the universal corresponds to a spatial distancing that occurs through the letters as the scale of focus is zoomed out to include the city of Nashville within community boundaries and to highlight neighboring communities perceived as competing with Nashville.

A corresponding shift in temporality prioritizes the future while distancing the present and invisibilizing the past. Techno-scientific language employed in the letters signifies progress and forward movement while simultaneously facilitating a metaphorical mediation of direct experience through the deployment of symbolic artifacts such as "incubators," "catalysts," and "gears" commonly associated with rationality and

objectivity. This economizing rationality is reinforced by the format and structure of the letters submitted in support of the construction of May Town Center. Online forms and pre-written form letters standardize and control the mode of communication and the message held within the letters. In addition, the remaining letters supporting the development are conspicuously similar to each other in content and format through the predominance of a typed, business-style format and impersonal universal-focused language, suggesting that individuals connected to the development may have written the letters prior to obtaining signatures. The use of (possibly) pre-written letters, identical form letters, and web-based forms likely allowed individuals to sign and submit letters quickly and efficiently. The multiple efforts to create distance in the letters supporting the May Town Center development construct an image of a single, unitary perspective based on an instrumental quantification of support that communicates authority through construction of "facts" and an economy of voice.

The design plans for the proposed development express a parallel distancing and instrumental view of land that prioritizes economic value over other possible values through the rhetoric of conservation. According to the developers, the footprint of May Town Center will be compact, leaving 900 acres of the 1,500-acre site available to be conserved as open space (RTKL 2009). However, the developers describe various ways that the land and water will still be transformed into economic resources. The following examples illustrate the conversion of aspects of the landscape into amenities:

> Streams, ponds, ridgelines, and other natural features will be kept intact as open space amenities (RTKL 2009, 5).
>
> May Town Center has been designed to allow existing wetlands and streams to become amenities, wildlife corridors, and areas of enjoyment for the community. Rather than being constraints on development, these areas are important features

> of the master plan, meant to be preserved and appreciated as natural resources (RTKL 2009, 23).

Furthermore, from the perspective of the developers, the land is specifically designed to be put work, to be productive, by performing "bioremediatory functions":

> … burdens on infrastructure will be minimized due to the fact that natural surroundings will serve a bioremediatory function. Stream buffers, wetlands, and vast forests will naturally filter the water and air and provide important habitat protection (RTKL 2009, 56).

The developer's views appear to combine the visual consumption of land with the commoditization of ecosystem services. Physical entities are valued primarily for their ability to be consumed as amenities by potential residents or for their productive bioremediary functions that purify the surrounding landscape for potential residents. Through the eyes of the developers, physical place of Bells Bend is objectified as a compressed, ideal landscape to be visually consumed, or as an individual machine that earns its place as a "natural" cleaning facility through the efficient removal of unwanted matter. Thus the conservation practices proposed by the developers reflect a position whereby any intrinsic value of the land is subordinated to economic value and nonhuman needs are subordinated to human needs.

Conclusion

The letters written in response to the proposed May Town Center development in Bells Bend do more than represent viewpoints for or against the development; they are themselves an active construction of place. Each of the letters is written from a particular perspective relative to the writer's position in relation to Bells Bend. From these

individual perspectives, multiple distinct "voices" emerge, each comprising a distinct community perspective that generally corresponds to geographic location, although there is likely greater heterogeneity within each group than is reflected in the letters. These multiple perspectives communicate different ways of producing knowledge in the construction of meanings related to physical space in Bells Bend. The residents of Bells Bend communicate an understanding of place through creating multi-sensory experiences that incorporate the past into the present and illustrate qualities associated with particular features of the landscape. In contrast, letters supporting the construction of May Town Center communicate an understanding of place by constructing facts through focus on progress, quantification, and a distanced spatial perspective. Bells Bend is less actively present within the writings supporting the development. People and the land are generally positioned as passive or are silent through their absence. Personal experiences are conspicuously missing from the letters supporting the development, as are the specific details and features of the landscape.

These multiple positions and ways of understanding place are also reflected in the ways that people relate to and influence construction of the land. The physical environment has had a distinctive role in the formation of the community currently in Bells Bend. In return, people's understandings of place and underlying values influence physical constructions and designs related to land and water. Physical and social systems are not separate and bounded; rather they interact with and influence each other. Places can be delineated and defined through classifications such as urban/rural, land/water, and developed/undeveloped, and constructions of place can include multiple spaces and

times. Thus multiple social and physical constructions of place exist simultaneously and combine to create the "place" of Bells Bend.

The multiple social and physical constructions of Bells Bend exist within larger networks of social, economic, and symbolic power. The May Town developers have the power to shape the terms of the debate over Bells Bend in ways that reflect their own interests. Through an economization of voice, the developers are able to create an image of a single voice among people supporting the construction of May Town Center. This "consensus" is fostered through the means by which letters were submitted: the form letter on the May Town Center website, the TSU form letters, and the letters from Bordeaux and North Nashville that appear to be written by the developers. The content of the letters submitted in support of May Town Center appears to be primarily, if not completely, shaped by the developers. Furthermore the developers seem to target particular communities, Bordeaux and North Nashville. Through this instrumental cultivation of support for the development from the predominantly African-American communities near Bells Bend, the developers frame the debate over place through race in addition to economics. A larger cultural universe of symbolic value also influences and enacts power throughout the debate. Values of efficiency, progress, and economic growth are expressed as clear "goods," while environmental connection and landscape health must be proven to be vital "goods." The value of environmental connection and landscape health bear a disproportionate burden of proof within the larger symbolic realm. This becomes particularly evident when considering what is missing from the debate overall. The "Third Vision" created by the Bells Bend community is, on one hand, an example of the community's vision for development within their community.

However, this plan presupposes that economic development is needed within Bells Bend in order to fight the undesired development that threatens the community. Such a massive plan for development as May Town Center, combined with past unwanted land uses within the community, seems to foreclose alternative options for community change that do not first and foremost attend to economic development. The promise of the "Third Vision" is to combine economic growth (for example, through job creation and ecotourism) with maintenance of the rural character of Bells Bend. This suggests that the economic and political power of the May Town developers combined with the symbolic power of economic, efficient, and progressive value systems constrain the possibilities for the future of the place that will become Bells Bend, Tennessee.

CHAPTER IV

SYMBOLIC SECURITY: REVISIBILIZING THE WATERFRONT IN THE AFTERMATH OF LARGE-SCALE FLOODING

While Middle Tennessee is no stranger to strong storms, high winds, rolling thunder, and heavy rainfall, the storm that arrived on first two days of May 2010 brought an unprecedented amount of rain to the region. The National Weather Service (NWS) recorded more than 13 inches of rain at the Nashville International Airport over the 48-hour period (Hayes 2011). The intensity of rain that fell within such a short period of time contributed to widespread flooding throughout Nashville and across Middle Tennessee (Robertson 2011, Hayes 2011). The flooding brought water from the Cumberland River and its tributaries into areas not typically submerged. Highways, homes, businesses, power lines and other structures literally became part of the flowing waterways (Figure 26). The flood also brought people into places where the water merged with the city as Nashville's downtown became inundated with individuals congregating at the edge of the river (Figures 27, 28).

Water was in the forefront of the city's consciousness. Conversations about personal experiences during the storm, projections for how high the water would rise, and the recounting of stories covered on the local news were common occurrences. Residents became intimately aware of their proximity to creeks and drainage culverts as the water in these smaller waterways quickly rose. Volunteers gathering near the Cumberland River reinforced a leaking levee with sandbags to keep businesses and apartments from flooding. Posters and flyers were created to publicize the importance of conserving

drinking water after one of the city's two water treatment plants flooded and the second was in danger of becoming submerged.

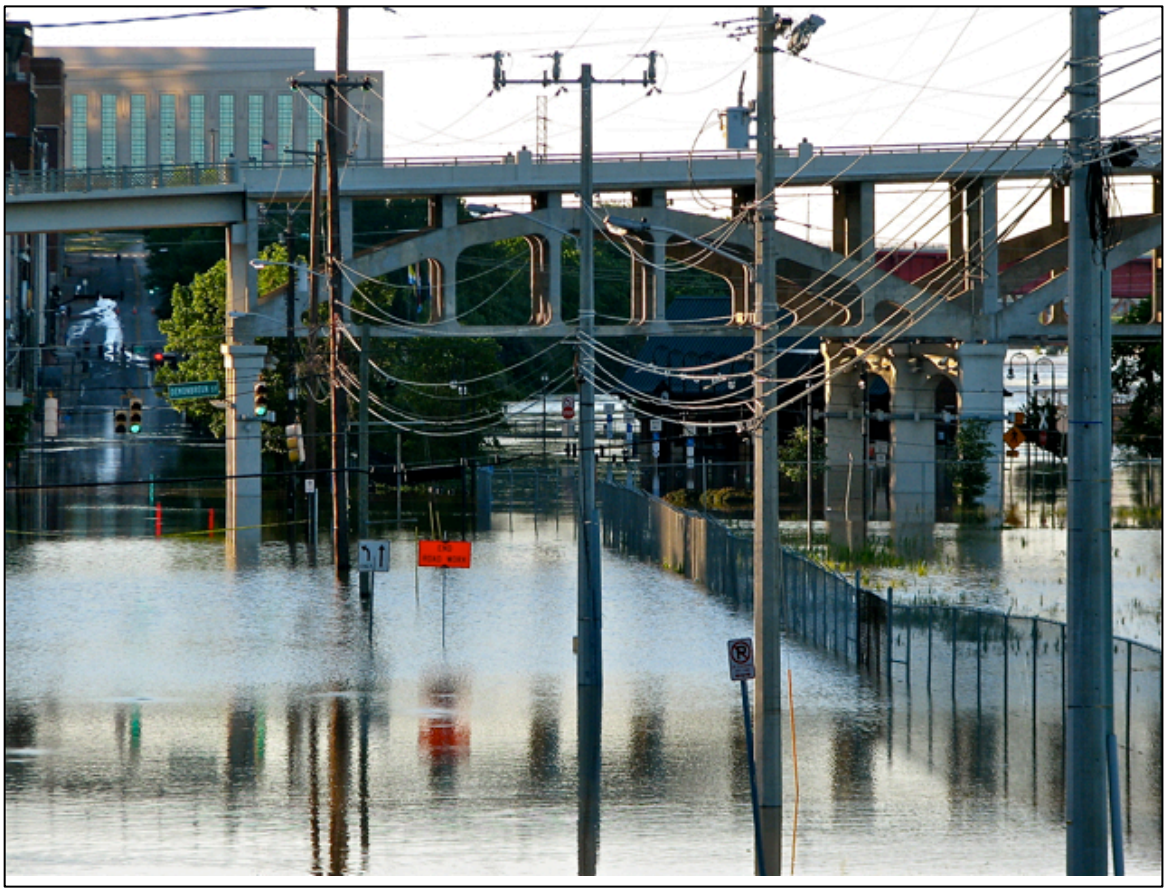


Figure 26. Water from the Cumberland River surrounds power lines and other urban infrastructures. (*photo by Jennifer Mokos*)

The flooding that brought so many people to the downtown riverfront highlighted the connections between the city of Nashville and its water, connections that are often hidden within practices of modern water management. Urban water systems are a fusion of the technological and the natural. In urban watersheds, the flow of water is often modified in a network of human-constructed infrastructures. Drainage ditches and

concrete channels rapidly funnel rainwater through stormdrains and into underground pipes and culverts, invisibilizing and impairing the physical presence of water along with the dynamics of ecological processes. The placement of water treatment plants, which are often out of sight in less traveled areas and gated for security, facilitates the perception that drinking water magically appears from the tap. Practices aimed at diverting and detaining water behind dams for navigation, power, or flood-control further alter and hide water flow patterns, while constructed levees create a reinforced wall between people and water that constrains the meandering movement of riverbanks.

Figure 27. People on the walking bridge surveying the floodwaters in downtown Nashville. (*photo by Jennifer Mokos*)

These technological infrastructures hide water in a physical sense; however, the structures themselves and the work that they do are also largely invisible, at least while they are functioning. Usually hidden in the background of daily life, infrastructures frequently become visible only when they break or fail (Bowker and Star 1999). Thus the

work of a water treatment plant is taken for granted as long as "clean" water flows from the tap, yet it becomes acutely visible when flooding compromises the plant's operation. In this way, flood events can be interpreted as a breakdown in the infrastructures that people construct to order and control water. When flooding occurs, these hydrologies and technologies are rendered visible, opening space for the possibility of new understandings. Thus flooding events can function as sites for the *revisibilization* of hydrologic processes and water infrastructures, lending insight into the social and moral orders embedded within the ways that people classify and organize urban water.

This concept of revisibilization parallels the current trend in urban redevelopment along post-industrial urban waterfronts. As the industrial development that previously impeded access to urban waterways has become less economically viable, city planners are reinventing the uses of downtown waterfronts by focusing on reconnecting urbanites to their neglected riverfronts (Robertson 1995). The city of Nashville's ongoing waterfront redevelopment project exemplifies this ideal. In 1997, the Nashville Downtown Partnership, a private nonprofit development corporation, initiated the "Connecting with the Invisible River Subcommittee," explicitly connecting redevelopment with the revisibilization of the previously invisible waterfront. The actions of the subcommittee resulted in the establishment of a task force to create and implement a riverfront master plan for the Cumberland River (Nashville Civic Design Center 2006). *The Plan of Nashville* (Kreyling 2004) later reinforced the importance of the Cumberland River in the redevelopment of Nashville through the initiation of the Nashville Riverfront Concept Plan.

Figure 28. A man takes photographs of the water inundating roads and businesses. (*photo by Jennifer Mokos*)

While this reconnection may be needed, the primary goal of urban waterfront redevelopment projects is often to create capital, rather than to restore ecological dynamics or to advance social equality. In a sense, current waterfront redevelopment practices transform industrial city ports from sites of production to sites of consumption (Norcliffe et al. 1996). The promotion of a consumerist culture is often associated with a social justification that relies upon a notion of democracy whereby increasing numbers of citizens are able to purchase and own consumer items (Whitely 1993). Urban waterfront redevelopment projects are often situated within a similar discourse of egalitarian access. However, just as notions of "consumer-led design" fall short of these ascribed ideals,

mainstream riverfront development projects emphasize individualism over individuality through the creation of spaces where even landscapes themselves become objects of consumption. As public waterfronts become private "Business Improvement Districts" (BIDS), decision-making power frequently becomes concentrated in the hands of commercial interests, reducing opportunities for democratic participation (Zukin 1996, Schaller & Modan 2005, Christopherson 1994). While these commercial interests often lie outside primary avenues of public scrutiny, surveillance of the public by private interests tends to increase. People who are homeless and others on the margins of this consumerist landscape become increasingly surveilled and policed as waterfronts become privatized and commodified (Gross 1996, Schaller & Modan 2005). In many ways, the existence and success of these redeveloped riverfronts is predicated upon the reproduction of social hierarchies that subordinate the environment, women, and ethnic minorities in the "landmarks that promote security and consumption in the consumer market" (De Oliver 1997, 230), which suggests a symbolic effort to distance nature from culture that is in conflict with the stated goal of waterfront development to reconnect people and water.

These riverfront redevelopment projects can be viewed as an intentional effort to revisibilize urban waterways. However, we can also learn from the unintentional or undesired revisibilization that occurs during "natural" flood events. In the sections that follow, I identify and discuss inequalities associated with the city of Nashville's attempts to intentionally revisibilize the waterfront. Then I examine the response to unintentional revisibilization of water in the aftermath of the May 2010 flooding through a semiotic analysis of the Opryland Hotel and the "We Are Nashville" fundraising campaign.

Nashville's Invisible Water

Walking east down Broadway in downtown Nashville, I travel past blocks of blinking neon signs, Honky Tonk bars blaring country music, and stores with lines of Western boots in the front window to where the road ends just beyond the Hard Rock Cafe at the Metro Riverfront Park. The park sits on a bluff looking out over the Cumberland River, which winds through the city on its 688-mile journey westward to the Ohio River. A series of grassed terraces lead down the slope toward the water. Across the river, LP Field, the football stadium that is home to the Tennessee Titans, dominates the viewshed on the east bank (Figure 29). To the south of the stadium, the construction of an $8 million water play park is underway (Figure 30). In the shadow of the stadium and the future play park, a drainage pipe opens out to the river (Figure 31). As I watch, water suddenly rushes out from the pipe into the Cumberland. The sound of the water can be heard across the river on the western shore. This landscape is the center of Nashville's ongoing large-scale waterfront redevelopment project. There is an inherent tension between the Nashville Downtown Partnership's focus on "connecting with the invisible river" and its stated mission "to make Downtown Nashville the [most] compelling urban center in the southeast in which to LIVE, WORK, PLAY, and INVEST."[19]

Standing at the riverfront, I consider what it means to connect with the invisible water in the city as I watch the current of water stream from the underground pipe into the Cumberland River. The river is part of a larger system; a watershed of connections and flows. A watershed, or drainage basin, can be defined as the land area that is drained by a river system (Wetzel 2001). Tributaries are the smaller streams that merge into a larger river, creating a network of interconnected waterways. While watersheds can be

[19] http://www.nashvilledowntown.com/about

delineated at different scales, they are typically defined by surface water systems, creating an artificial separation between surface water and groundwater. Watershed maps usually only display surface water streams and basins. Groundwater systems usually have different physical boundaries than surface water systems (Gordon et al. 2004) but are not represented on watershed maps. Furthermore, these subterranean water systems, typically hidden from sight, are less protected from contamination as watershed regulations typically focused upon protecting surface waters leave groundwater-fed water systems more prone to biological contamination than surface water systems (Yoder et al. 2008).

Figure 29. LP field as seen from the riverfront redevelopment on the west bank of the Cumberland River. (*photo by Jennifer Mokos*)

Figure 30. A water play park and office building under construction on the east bank of the Cumberland River across from Riverfront Park. (*photo by Jennifer Mokos*)

Figure 31. Outflow pipe on the east bank of the Cumberland River near the LP Field football stadium (*photo by Jennifer Mokos*)

Similarly, water infrastructures, such as underground pipes, are also not represented on watershed maps. However, these pipes are not separate from the visible urban watershed. In some cases, streams that were once free-flowing are now contained and buried in underground sewers and pipes. These waterways disappear from the maps once they are buried and streams contained underground become technologic artifacts. Water from rainfall rushes over city streets and vanishes underground into the nearest stormdrain (Figure 32). Processes that at one time were slower and more visible are now more difficult to perceive. Stormdrains that empty into surface waters (as opposed to Combined Sewers which lead to wastewater treatment facilities) are often labeled with tags or stencils that warn "Dump No Waste – Drains to River" in order to increase awareness of the sensitivity of the water entering the pipes. However, even these warnings do not reconnect the network in a way that is visible. The water still disappears underground. We typically do not see where the pipe leads and the sign on the stormdrain leaves us still unaware of the deeper systemic connections that lie below the ground.

While some waterways, such as the French Lick Creek in Nashville, are completely piped underground for the entire course of the stream, others contain a mixture of forms and functions. For example, a stream can exist as an aboveground waterway within a park, such as in Sevier Park in Nashville, but become piped underground outside of the park's boundary. The stream, although it is channelized for most of its path, winds around the perimeter of the neighborhood park. Within the park, people interact with the stream by walking along adjacent paths. Outside of the park, the stream disappears from view. The water enters the stream in the park through an underground metal culvert and leaves the park in a similar fashion. I doubt that people

would be as amenable to interacting with the water contained in the pipes, even if it were possible. In a way, this single waterway contains within it the multiple identities of wastewater, stormwater, natural water, and recreational water. Within the park, the stream becomes a stream from and to nowhere. While water systems are networks, characterized by the flow of water, the disconnection of urban water impedes this experience. Water is likely to be perceived as a point, a static object, rather than as a dynamic integrated system.

Figure 32. Water rushing into a stormdrain in downtown Nashville. (*photo by Jennifer Mokos*)

Despite Nashville's plan to reconnect to the invisible river, much of the physical presence of the river outside of the immediate downtown redevelopment site is hidden from view. Industrial infrastructure still lines much of the shoreline on the east and west bank. Some of this infrastructure is part of the city's drinking water and wastewater treatment system. In some areas, entire sections of the riverfront are completely blocked from access. On the east bank of the Cumberland, just north of the redevelopment sight, an impenetrable barrier of locked fences, security cameras, and industrial buildings line the waterfront, making it impossible to view, let alone reach, the riverfront (Figure 33).

Large-scale infrastructures located outside of the immediate proximity of downtown Nashville mediate the hydrologic processes of the Cumberland River. Dams constructed for flood-control and navigation divert and detain river waters. The US Army Corps of Engineers (ACOE) completed the Old Hickory dam, located on the Cumberland River 25 miles north of downtown Nashville, in 1954.[20] The dam transformed a section of the river into a 97-mile long lake, which functions as a site for public recreation. Besides recreation, the purpose of the dam is to improve navigation and flood control along the river. By managing the water in the river at a consistent level, it is possible that the dam inadvertently creates a false sense of security by invisibilizing water flow patterns and processes. Rather than experiencing moderate fluctuations in water levels, and perhaps smaller-scale seasonal flooding, damming regulates water in a way that the water appears stable except in extreme circumstances, creating the possibility for fewer flooding events, but with a greater intensity of damage.

[20] http://www.orn.usace.army.mil/op/old/rec/project_information.htm

Figure 33. Industrial development hides much of the east bank of the Cumberland River from view. (*photo by Jennifer Mokos*)

The previous examples illustrate that while riverfront redevelopment in Nashville is connected publicly to language geared towards the intentional reconnect people to the "invisible river," this reconnection is focused on one narrow segment of the riverfront. Reconnecting the diverse realities of the city's urban water infrastructure and land use practices would require a more systemic approach. These land use patterns create categories of expected purposes and functions. Public spaces along the riverfront communicate messages of a controlled and orderly nature suitable for leisure and human use. These classifications are hidden along with the physical presence of water in the urban landscape. Floods are occurrences that unintentionally revisibilize the water within

the urban landscape. They are events that contest the ways we classify and order water through land use practices and building and infrastructure constructions. The next two sections discuss some of the politics that were revealed during the aftermath of the May 2010 floods in Nashville.

Securing Opryland

While many of Nashville's iconic places and tourist attractions were submerged during the May 2010 flood, only the Opryland Hotel was surrounded by a levee constructed to keep the waters of the Cumberland River away from the site. Opryland is located within Pennington Bend, a narrow loop of the Cumberland River to the east of downtown Nashville. The Opryland Hotel and Convention Center is a large upscale facility built in close proximity to the Grand Ole Opry. During the May 2010 flooding, water surpassed the height of the levee constructed to protect Opryland. The first floor of the hotel was flooded, along with the Grand Ole Opry house and the nearby Opry Mills Mall. The levee surrounding the western edge of the Opryland Hotel is inconspicuous in the landscape (Figure 34). The unassuming cement wall visible from the roadway is just the tip of the levee. The main portion of the levee is the earthen construction rising from the river up towards the roadway.

There are two main categories of levees: natural levees and artificial levees. Natural levees are created by the action of a river overflowing its banks (Malanson 1993). When rivers flood, riparian vegetation along the shoreline reduces the velocity of the water. As the water slows down, sediments that are suspended in the water column precipitate out of the river water. The heaviest, or most coarse, sediments are deposited

first, over time building up a natural levee (or high point) at the edge between the river and the shoreline. In contrast, people construct artificial levees in order to prevent the overflow of a river and to protect land development from flood damage. While artificial levees are built to prevent the overflow of a river, natural levees are created through the flooding of rivers. The process that creates the natural levee is the process that the artificial levee is intended to halt. An artificial levee delineates a boundary between a river and the land, constraining the path of the river. However, rather than prevent flooding, artificial levees protect specific constructions or land uses. Choices are made regarding the construction of levees as to which land and which properties will be protected over others. In this rubric, the Opryland levee is an artificial levee constructed to prevent the overflow of water from the adjacent Cumberland River.

Although the Opryland levee was constructed to secure the Opryland Hotel from the threat of flooding, the image of security extends beyond the levee. The design of the hotel itself conveys the image of a fortress. The roadway winding through the Opryland compound passes by nondescript brick buildings and large expanses of parking lots (where it costs $18 to park). The front of the hotel is difficult to locate. There are no sidewalks or paths for walking. Rows of trees function as barriers to lines of sight and also to movement (Figure 35), and gatehouses and barriers guard the parking lots closest to the building (Figure 36). The entrance to the hotel is the only area that is decorative and visible. The hotel faces a highway, located only a short distance from the building entrance. The external space communicates that the Opryland Hotel is for insiders – those who can afford the $18 to park or the $200 a night for a hotel room. Although walking is allowable, the landscaping and security stations create a sense of transgression; a

purposeful inhibiting of wayfinding and access. The front of the hotel is primarily visible to the automobiles speeding along the highway. Overall, the external landscape of Opryland is meant to be experienced from a distance rather than through close, direct contact.

Figure 34. The Opryland levee following repairs to the damage caused by the 2010 flood. (*photo by Jennifer Mokos*)

The stark exterior of the Opryland Hotel is in contrast to the opulence that lies within. Much of the interior looks similar to that of any upscale hotel. However, at the center of the hotel is a series of constructed "natural" environments in an entirely enclosed greenhouse (Figure 37). The domed glass ceiling is high enough that the room feels as if it were outdoors. Designed water features, which are prominent in each of the

environments, include a quiet winding "river," a series of cascading "tropical" waterfalls, and multiple pools with decorative aquatic plants. In the "Delta," a boat tour guided on a circular track carries passengers on a scenic voyage through the space (Figure 38). While walking paths, missing outside the hotel, are common in the interior gardens. The paths wind through a landscape filled with orchids and streams, restaurants and stores (Figure 39). The interior landscape is a constructed city. However, it is a city constructed with a perfect order and a highly controlled representation of nature. The glass ceiling shields visitors from the inconvenience of the weather, from the harsh summer sun to the deluge of a rainstorm, and the interior temperature is controlled for comfort. In this predicable, safe environment, it never rains, the boat will always stay on course, plants grow in their assigned spaces, flowers bloom without insects, and rivers never overflow their banks (Figure 40).

Figure 35. Rows of greenery shield much of the outside of the Opryland Hotel from view. (*photo by Jennifer Mokos*)

Figure 36. Security gates contribute to the fortress-like feeling outside the Opryland Hotel. (*photo by Jennifer Mokos*)

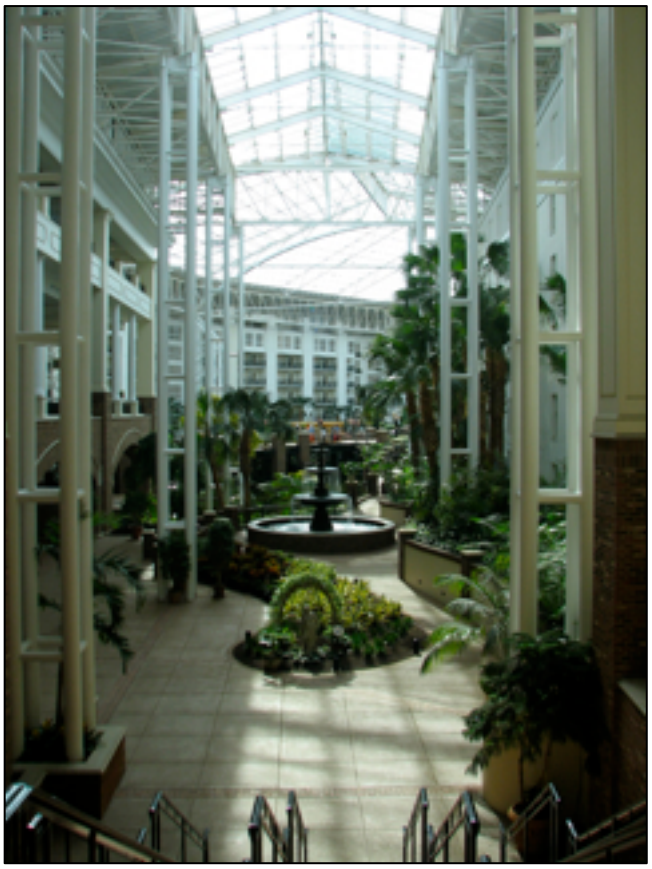


Figure 37. In contrast to the external environment of Opryland, the internal space is a constructed greenhouse with lush plantings, walking paths, and numerous waterways. (*photo by Jennifer Mokos*)

Figure 38. Visitors to Opryland can tour “The Delta” on a boat guided along a track at the bottom of the water. (*photo by Jennifer Mokos*)

Figure 39. The numerous options for “outdoor” dining and shopping along the walkways and paths convey the feeling of a redeveloped urban waterfront. (*photo by Jennifer Mokos*)

Figure 40. The design of the interior waterfront inside Opryland is controlled and ordered so that each component has a particular place and function. (*photo by Jennifer Mokos*)

However, rivers do overflow their banks, and less than one year ago the flooding Cumberland River flowed through the atriums of the Opryland Hotel. Although the damage to the property was extensive, the hotel reopened on November 15, 2010 – just six months after the flood. The speed with which Opryland reopened is remarkable particularly considering the cost of repairs reached over $170 million. An additional $20 million was needed by Gaylord Entertainment to repair the Grand Ole Opry. Gaylord Entertainment, the owner of Opryland and the Grand Ole Opry, was aided in making these repairs by an additional 1% hotel occupancy tax levied on the rooms at the Opryland Hotel. The city of Nashville approved $1.6 million in tax revenue upfront to the

company as well as the future revenue from the additional tax for up to 25 years in order to cover the cost of repairs to the Opry House (Metropolitan Clerk's Office, Nashville and Davidson County Metropolitan Council Meeting Minutes, August 17, 2010). Part of the rapid recovery is likely due to economic concerns, as evidenced by the following response from the CEO of the Nashville Chamber of Commerce:

> Nashville Chamber of Commerce … acknowledged that the layoffs will be hard on the workers, but said the speed with which the hotel plans to reopen is great news for the city where the flood damage is projected to cost more than $2 billion. 'It could so easily have been a whole lot worse that it is almost amazing that this is the answer.'[21]

This statement was made in response to the June announcement that Opryland would reopen in November. At the same time, it was also stated that 1,743 Opryland employees would be laid off. The prioritization of capital over individual loss is seen in this example. The language used to describe the effect of the layoffs on the workers is simply described as "hard," which is juxtaposed to the "great news" and "amazing" answer for the city. Revenue from Opryland provides a large percentage of the hotel sales tax for the city of Nashville. However, the restoration of Opryland carries more than economic significance for the city of Nashville, as illustrated by the following quote:

> The Grand Ole Opry is synonymous with Nashville's identity as Music City … If there is a way for the city to help this iconic institution reopen its doors, I think it's certainly something we should consider.[22]

Opryland, both by itself and through its association with the Grand Ole Opry, is a symbol of community identity. The reopening of Opryland signifies a "strength and resilience" that is attributed to the entire city:

> Nashville Mayor Karl Dean called Opryland's reopening a "real testament to the

[21] http://www.knoxnews.com/news/2010/jun/03/gaylord-laying-off-1743-employees/
[22] http://www.wsmv.com/news/23918583/detail.html

city's strength and resilience," adding, "this is a big milestone in our recovery."[23]

However, the restoration of Opryland is also based upon a hyperbolic degree of conspicuous consumption that reveals an even deeper significance:

> Four shades of freshly laid marble tile line the grand lobby floor. The protective plastic is off the new velvet sofas, and somebody has already flicked the "on" switch to the waterfalls cascading again under the central 15-story glass-domed atrium… six months ago the [hotel] resembled a partially filled aquarium.[24]

> A large, museum-quality glass sculpture now adorns the Cascades lobby. Flat-screen TV's line the marble wall space behind the expansive check-in counters. In the middle of the main lobby – a room that had been completely submerged – are 10-foot-wide double-sided sofas; orange velvet high-backed chairs; small tables for guest's laptops; and colorful throw pillows. Everything is brand new. There are five new restaurants, five football fields' worth of new carpeting and 700 renovated rooms – although only 120 were damaged during the flood.[25]

These lists of "repairs" to the Opryland read like a quantifiable frenzy of extravagant goods. The tone of the articles is imbued with pride. These lists of items are symbols of security. The transgression of the Cumberland River beyond its banks highlights the boundary between spaces coded as nature and those coded as culture. Thus consumption becomes a mechanism by which security can be actualized and asserted:

> In an age where we depend heavily on technology to keep us informed and keep us safe, Mother Nature can still throw a dangerous curve, making humans' efforts look miniscule. That only means we should redouble our plans to protect the people and possessions we hold dear.[26]

This connection goes beyond the individuals directly associated with Opryland. It is a way of processing and grieving on a community-level. However, it also reinforces inequalities in resources and recovery. There are material realities associated with these actions. While Gaylord Entertainment was spending millions of dollars to recreate "The

[23] http://www.wkrn.com/story/13360317/opryland-announces-reopening-events?clienttype=printable
[24] http://www.houmatoday.com/article/20101115/ENTERTAINMENT/101119579 [Tennessean ref]
[25] http://travel.usatoday.com/hotels/2010-11-15-gaylord-opryland-hotel-reopening_N.htm
[26] http://www.knoxnews.com/news/2010/aug/16/better-flood-warning-system-needed/?print=1

Delta", nearby homes, that were also submerged, still stand empty and unrepaired. The flooding reveals that even within one small bend of the Cumberland River, separate social spheres are created and reinforced.

"We Are Nashville"

The themes of consumption and individualism brought to light by the flooding at Opryland are also present in objects created during the flood response. The "We Are Nashville" flood campaign was created in response to a perceived lack of national media attention on the Nashville flood. Although the flooding in Nashville was widespread and devastating, many in the area felt that coverage by national news outlets was minimal, overshadowed by the concurrent BP oil spill and attempted car bombing in Time's Square. A May 4th post on a blog typically devoted to the Nashville Predators, the city's professional ice hockey team, communicated the fear that the lack of media attention could inhibit the possibility of raising the capital needed to rebuild and recover from the flooding. The post rallied around the idea that the reason for this lack of media attention was due to the way the people of Nashville were dealing with the crisis, with order and self-sufficiency:

> A large part of the reason that we are being ignored is because of who we are … Did you hear about looting? Did you hear about crime sprees? No … you didn't … A large portion of why we were being ignored was that we weren't doing anything to draw attention to ourselves. We were handling it on our own. [27]

The writer of this post blames the low amounts of media coverage on the lack of sensational accounts of violence and crime in the aftermath of the flood. In this post the value of the individual is evident. The writer locates the reason for this lack of violence in

[27] http://www.section303.com/we-are-nashville-4366

the qualities of Nashville's citizens, who supposedly go about the business of handling the flood without waiting for outside assistance.

Within two days of this blog, the Nashville-based company *Cool People Care*, created a t-shirt to raise awareness of the Nashville flood and money for the relief efforts. "We Are Nashville," the title of the blog post, became the slogan on the t-shirt. This shirt functions as more than an article of clothing; it signifies order and unity, communicating the ways that "responsible" citizens respond to the uncertainty and disorder created by natural disasters. The slogan "We Are Nashville" invokes the ritual of a sports team chanting before a game. (The movie *We Are Marshall* comes to mind.) This ritual has the function to both create a sense of unity among teammates as well as to show pride in one's team. This image of solidarity is also meant to present an intimidating, invulnerable front to outsiders; to the other team. There is no image of dissent among teammates; there is one voice in the construction of a single, uniformed body that becomes the team.

This value of unity is encoded within the design of the shirt. The color of the shirt is a tonal combination of a light-blue shirt with a darker blue logo (Figure 41). The blue color of the shirt is a symbol of calm, blue water (rather than brown, turbulent floodwaters), while the soft tones of the blues further portray a sense of calmness. The lack of contrast between the printing and the shirt convey a unity among the different parts. Within the logo, "Nashville" is positioned within a rectangular block of text. The city is linear and orderly compared to the curves that reproduce the image of the Cumberland River (though even those have been somewhat tamed). The square overall shape of the logo appears as a stamp on the shirt – perhaps signifying a branding or

tattooing of the identity of Nashville directly onto the physical shirts and by extension onto the bodies who wear them.

Figure 41. Photograph of the "We Are Nashville" t-shirt depicting the design of the shirt.[28]

A connection to Nashville is encoded within the "We Are Nashville" t-shirts from the design process through the product to the final consumer. A local Nashville graphic designer donated the logo for the shirt to *Cool People Care*, a company also located in Nashville. Proceeds from the t-shirts are donated to the Community Foundation of Middle Tennessee's flood relief fund. The *Cool People Care* website, where the organic cotton t-shirts can be purchased for $20, attributes an agency to the shirts themselves to raise money for Middle Tennessee communities and to represent a community comprised of individuals who take responsibility for restoring the city of Nashville:

[28] http://www.coolpeoplecare.org

> And here it is. The T-shirt that you can proudly wear knowing it did two things:
> 1) Supported the Community Foundation's Flood Relief Fund, which means all money stays local in the affected areas to assist nonprofits who are helping victims of this disaster.
> 2) Makes a statement about the kind of community you live in that is quick to help a neighbor and rebuild a great city.[29]

An article for *The City Paper* entitled "T-shirts Capture Essence of Nashville" states that the shirts were being shipped to 48 states and 10 countries within the first four days of being available for purchase.[30] When Anderson Cooper displayed the shirts during his first CNN broadcast from Nashville on the first day the shirts were sold, "demand exploded" for the shirts crashing company's website.[31] Thus, the "We Are Nashville" t-shirts became physical representations of Nashville, which people could purchase to both help provide funds to non-profit organizations and to become a symbolic part of the community of Nashville.

The "We Are Nashville" t-shirts are constructed with an image of social and environmental responsibility. *Cool People Care* market themselves as a company that aims "to clothe you in a lifestyle of caring".[32] The shirts are printed on 100% organic cotton fabric. The company and the designer are both local Nashville businesses, and the proceeds of the shirt are given to the Community Foundation's Flood Relief Fund. However, the ideals of unity and order communicated by the shirts construct a narrative that hides difference and inequalities within Nashville, and beyond. The media, which played a role in the creation of the shirts, also, played a role in popularizing them. The focus on the slogan "We Are Nashville" and purchasing shirts to aid recovery seems to hide or minimize critique of the role of the media in constructing responsibility. "We Are

[29] http://store.coolpeoplecare.org/products/we-are-nashville-t-shirt
[30] http://nashvillecitypaper.com/content/2010-flood/t-shirts-capture-essence-nashville
[31] www.tennessean.com/article/20100510/NEWS01/5100337/-We-Nashville-blog-unites-city
[32] http://store.coolpeoplecare.org/pages/about-us

Nashville" locates the media's lack of response to the flooding in the individual characteristics of valiant Nashville citizens who pulled together, took responsibility for their misfortunes, and found solutions without support from outsiders. Through all of the rhetoric of Nashville as a community, there is a valorization of individual responsibility. The December 23-29 cover of the *Nashville Scene* illustrates this focus with the headline "We are Nashvill(ians)," embodying this prioritization of the individual citizen (Figure 42).

Figure 42. Cover of the December 23-29, 2010 issue of the *Nashville Scene* with the headline "We Are Nashvill(ians)."[33]

[33] http://www.nashvillescene.com/nashville/we-are-nashvillians-of-the-year-2010/Content?oid=2105077

The influence of language is particularly evident when looking at exclusions. Within the narrative of unity and solidarity in the "We Are Nashville" slogan is the corollary "We Are *Not* New Orleans." This is the underlying myth that both produces and is produced by the t-shirt design. As the implied narrative goes:

> The media did not attend to the Nashville flooding because there was no looting or crime. Looting and crime did not occur because the people of Nashville are good, hard-working individuals. The people of Nashville do not wait for government help; they help themselves. Order is kept in the face of the disorder caused by "nature."

This message is contrasted to the crime and looting portrayed by the media during the aftermath of hurricane Katrina. By this standard of judgment, the two floods are constructed as equal, neutral factors, and it is the individual characteristics of the people that determine whether the outcome is peaceful or violent. This narrative both reinforces inequalities by creating an Other in the city of New Orleans and hides the possibility for a more robust critique of larger social systems. My point is neither to minimize the extensive impacts people experienced from the flooding within Nashville, nor to discount the ways the people did rally together to help rebuild and restore. However, more richer explanations and critiques are possible to better understand the reasons for disparities in particular outcomes. In what ways were media and government responses different between the Nashville and Katrina floods? How do other circumstances and constraints (for example, the availability of transportation, the extensiveness of flooding) affect outcomes for people of different races and/or different socio-economic status?

A similar critique is possible when looking at ways that the value of conspicuous consumption is embedded within the design of the "We Are Nashville" t-shirt. There is a commodification that occurs when the ideal of community identity is embedded within an

object and placed for sale. The shirt, in a sense, becomes a physical embodiment of community that is then possessed and worn. One can gain entry (to some degree) by purchasing the shirt. Who, then, is excluded by not being able to purchase the shirt? If the main purpose of the shirt is to generate funds for relief efforts, then one might assume that most people purchasing Nashville flood t-shirts would not be severely impacted by the flood. Thus, the people with the power to purchase in a sense become "Nashville," while the beneficiaries of the funds would occupy a different position. A cartoon from the Nashville Scene depicts the image of Nashville musicians wearing the Nashville flood t-shirts walking down Broadway carrying their instruments over their heads (Figure 43).[34] The cartoon, the winner of the publication's "You're so Nashville if…" contest, is captioned with "Your city got flooded and all you got was a lousy T-shirt." The cartoon underscores the focus of the media on Broadway and commercial losses at the expense of human loss. The "We Are Nashville" t-shirt is associated with the high-profile commercialization of the flood as a concert or souvenir t-shirt that one might purchase to commemorate an event.

People do have options to donate money or to help people impacted by flooding in other ways besides purchasing a t-shirt. However, the availability of the shirt combined with its prevalence in the media could make it difficult for people to recognize alternatives:

> There are several ways to help. You can make a flat donation by going to The Community Foundation's website, volunteer (if you're local) by signing up at HON.org or, if you want some pretty sweet swag for your donation, you can buy a We Are Nashville t-shirt from the good people over at coolpeoplecare.com.[35]

[34] http://www.nashvillescene.com/nashville/so-nashville-if-this-years-winner-the-contenders-a-yasni-wave-of-relief-the-weirdies/Content?oid=1656374
[35] http://www.section303.com/the-30330-we-are-nashville-author-news-2-anchors-4426

The prospect of getting some "pretty sweet swag" in return for a donation sounds like prospect where everyone wins. However, the valence is more likely to be in the direction of purchasing a shirt, in a commodification of community and altruistic ideals to be worn on the body for public consumption.

Figure 43. Winner of the *Nashville Scene*'s 2010 "You're so Nashville if…" contest.[36]

Conclusion

There are parallels between the intentional revisibilization of Nashville's riverfront and the unintended revisibilization that occurs through flood events. The ways that people respond to the crisis of flooding, such as through Opryland and "We Are Nashville," reveal an underlying logic of inequality and neoliberal values that reflects and reinforces the rationales that undergird waterfront redevelopment. Just as post-industrial

[36] http://www.nashvillescene.com/nashville/so-nashville-if-this-years-winner-the-contenders-a-yasni-wave-of-relief-the-weirdies/Content?oid=1656374

waterfronts have becomes places of consumption, the post-flood landscape is riddled with conspicuous messages to purchase and consume, from individual t-shirts to the dramatic rebuilding of iconic buildings. The predominant narrative places responsibility on individuals to maintain order, work together, and work hard to make repairs without outside assistance. Those without the financial means to absorb the financial cost of repairs or the social capital to garner citizen support are left behind. There is a moralizing effect to this narrative whereby some people are deemed worthy of support and others are not. Similarly, some kinds of government support are tacitly approved over others. Millions of dollars of public tax revenue were allotted to a single private entity to repair flood damage, while "ordinary" people still have homes in need of restoration and damages that are not fully reimbursed.

I am struck by the immensity of the economic investment in restoring Opryland, and also by the pervasive emotional investment in the "We Are Nashville" anthem that is palpable in the bumper stickers and t-shirts that I still come across over a year later. I think of the failure of the Opryland levee to defend the property against the advancing water front, and the floodwaters that become constructed as a threatening Other. David Harvey (1989) writes of the ideological role of waterfront development projects in defending the city against competition from rival cities and adversarial outsiders. The dual purpose of this defense is to project an image of glitter over the harsh realities of inequality and deterioration to attract and appease outside investors and to create an internal sense of community and unity. He states, "The circus succeeds even if the bread is lacking. The triumph of image over substance is complete" (14). There are similar logics at work visibilized by the Nashville flood. "We Are Nashville" functions as a

rallying battle cry that simultaneously creates an internal sense of community and projects an external image of invulnerability. Similarly the economic investment in Opryland signifies its perceived importance in the identity and security of the Nashville community. However, hidden within this narrative is the perpetuation of economic and social inequalities that create division and promote insecurity: inequalities that are revealed by the floodwaters themselves.

CHAPTER V

CONCLUSION

Walking out of a local grocery store, I catch sight of stacks of bottled water constructed into a shoulder-high wall, the kind that tends to appear when inclement weather threatens even though today there is no storm. A carefully ordered display of translucent blue bottles alternate with white cardboard boxes printed with the brand's logo. The words "REAL WATER" stand out in large, black, block lettering. I have never seen this particular brand before and I can't resist taking a closer look. Upon closer inspection, the box reveals that contained within the bottles is "Alkalized, Antioxidant water with stabilized negative ions. You will Taste and Feel *this* Difference!" Let's leave aside, for the moment, a larger critique on the bottled water industry, and consider the water. The company claims the water in its bottles is not "Smartwater" or "Fiji Water," but real water. Does the company's claim mean that other brands of bottled water do not contain real water? This seems like an absurd suggestion. And, yet, there is still a certain power (and perhaps hubris) in laying an absolute claim to the real.

Just like the water in the plastic bottle, urban water is both a product of nature and a construction of society. What is seen depends on perspective, and some perspectives are more visible than others. Connecting with the invisible water means seeking out those hidden places and perspectives. In the previous pages, I have tried to understand water by showing the significance in the everyday experiences and interactions between people and water and the everyday nature that is in some way made invisible or less visible.

Waterbodies range from the prominent Cumberland River to less conspicuous buried streams and nameless creeks that also makeup the watershed. The Cumberland River is both a peripheral, yet important, entity in constructing place and a central agent in illuminating inequality. Likewise the materialities and identities of the river are simultaneously constructed by multiple overlapping, and at times, competing value systems. In these examples, water is neither a blank slate nor an isolated or sole determining force. The discourse surrounding water and people is often one that is polarized where water is positioned as a resource for human use and consumption or as an environmental entity to be preserved. However, the relationship between people and water is more complex. The way water is treated is related to the way that people are treated.

Attention to the complexity within urban water systems reveals the layered histories of domination that are embedded within the landscape. Relations of power that are buried and hidden are rendered visible by uncovering the subsurface narratives hidden within dominant discourses and by revealing the hidden possibilities for resistance against those dominant narratives. In Sevier Park, the multiple forms of the stream engender different interactions between people and the water. The stream itself is both designed and natural. The design of the stream influences the ecological functioning of the waterway. Within the park, water moves quickly into the channel through concrete slides while vertical stone walls create a distinct edge between the land and the water. Outside of the park, the stream is contained underground within streamlined large metal pipes, similar to the fate of the French Lick Creek. This prioritization of speed and efficiency parallels the speed and efficiency encoded into the roads surrounding

Thompson Lane. Within the urban environment, people are "encouraged" to move quickly on paved roads and water flows rapidly into channelized streams and metal pipes.

However, resistances also exist to these patterns. On Thompson Lane, a quieter, slower environment provides a space for the heron and people to pause. This in-between space situated within the landscape of roads and stores often goes unnoticed. In Bells Bend, the meandering Cumberland River acts as a friction that slows the spread of development. In a similar way, the refusal of the Bells Bend residents to implement centralized water infrastructures and sanitary sewers has impeded the construction of high-density development within the community.

While environmental justice often focuses on ways that communities, often minority and low-income communities, are impacted by environmental problems, through the French Lick Creek, the landscape itself is marginalized in a similar way as the human community living on the creek. The French Lick Creek was piped and paved over in response to concerns regarding the sewage and offal polluting the waterway. The sewage also affected the health of the members of African American community who lived alongside the stream. To clean up the stream, the waterway was moved and hidden underground. Similarly, to "revitalize" the community, people were moved from the area into public housing located on less commercially valuable land. In this way, the health of the stream is connected to human health and the needs of people and of the water are both positioned as secondary to the needs of commercial interests.

Commercial interests also take priority in the aftermath of the Nashville flood. While individuals are encouraged to take responsibility to mitigate the insecurity caused by the flooding, large corporate entities, such as Opryland, are provided significant

government support through tax revenue. There is symbolic value placed upon the restoration of Opryland that is connected to the construction of community identity through the themes of resiliency and strength. These values are also illustrated through the narratives of unity and solidarity in the "We Are Nashville" fundraising campaign. Through these examples, a dominant concept of community identity is formed that constructs the water and other communities, such as New Orleans, as threatening Others. In this way, Nashville's restoration reinforces the marginalization of both people and water.

In this thesis, I have endeavored to revisibilize some of the politics and practices of urban water systems, along with their multiplicities and nuances. The parallels between people and water are both physical and ideological. They connect notions of pollution and health, physical boundaries and social classifications, efficiency and order, and capital and commodification. Improving environmental wellbeing and human opportunities relies on the incorporation of physical materialities and social constructions through the relationship between human and nonhuman. In this way, attention to present understandings that are produced in the spaces between people and water can provide a richer awareness of the future possibilities for both people and water.

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