From Colonization and Suburbanization to Reconciliation:

A Brief Account of Thornton Creek’s Environmental History

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With its headwaters near North Seattle Community College (NSCC) and its confluence at Mathews Beach, Thornton Creek spans eleven square miles through North Seattle. According to the King County Resource Division, roughly 75,000 people call this area home, while thousands more visit the watershed annually.1 Today, Thornton Creek is best described as a hybrid landscape dominated by urbanization, native and non-native species, and a diversity of human opinions. These characteristics are different from just a few centuries ago, and represent the influence of environmental, political, economic, and social factors. Unlike original Native inhabitants, early American settlement was fueled by national priorities that emphasized creek side development and neglected the complexity of the local ecology. However, by the late 1950s, suburbanization had created public meeting venues, which nurtured a growing awareness for creek protection. This awareness helped shape, and was shaped by, the national environmental movement of the late 20th century. Current community views of nature reflect this dynamic history and range from favoring increased development to supporting restoration of natural habitats and species. These opposing desires, coupled with questions regarding the value of restoration in an altered environment, complicate the creek’s future. However, Thornton Place, a multiuse complex near Northgate Mall, represents an innovative idea that may help reconcile past environmental transgressions and create mutually beneficial solutions for the community.

The underlying ecological and environmental processes of Thornton Creek were carved during the end of the last ice age. When the Cordilleran Ice sheet retreated roughly 14,000 years ago, it deposited several large boulders along the creek.2 In fact, a 9x10x20-foot glacier erratic is currently located near 15th Avenue NE.3 This rock serves as evidence to the ecological forces that originally shaped the area. In addition to the erratic, the creek’s soil profile contains remnants of its glacial past. When the ice moved northward, heavy deposits of silt and sediments were left behind.
As a result, a thick layer of grey Lawton clay accumulated, creating the perfect conditions for a water rich ecosystem. In fact, large cranberry bogs dominated the area where present day Northgate Mall stands. While no exact records exist, it is estimated that the bog spanned anywhere from 30-100 acres. These conditions awaited Native Americans when they settled near the creek.

The first Native people to occupy Thornton Creek not only relied on the creek’s ecological resources, but also began to alter them for their benefit. Roughly 5,000 years ago, a band of the Duwamish tribe called the tu-oh-beh-DAHISH (“people of the DAHISH”) settled along the creek. The tribe was intimately tied to the local resources, which included anadromous fish, beavers, berries, coniferous trees, and Wapato. Not only did the people rely on these staples for food, housing, and clothing, but their social structure was also organized around access to several resources. The most important of these was salmon. Of the tribe’s approximately 18 homes, half were located near spawning grounds at the mouth of the Thornton, while the rest were distributed downstream along McAlee Creek. Since harvesting of salmon was done through weirs that prevented fish from moving upstream, historian David Buerge explains that complex “agreements were worked out between up and downstream groups over [the weirs] placement.” Although these hunting practices were small in scale, they represent the first human-induced modifications to the hydrology of Thornton Creek.

The passage of several federally sponsored land acts in the 19th century encouraged American settlement along Thornton Creek and consequently intensified the ecological changes already begun by the tu-oh-beh-DAHISH. The 1848 Oregon Territory Donation Land Claims Act granted 160 acres of land per adult as long as it was “cleared, cultivated, and occupied for a minimum of four years.” Settlers were quick to take advantage of this stimulus and soon colonized the area. Spurred by demand from east coast textile mills and the development of harvest
technologies, these individuals built several logging mills along the creek. The passage of the Homestead Act in 1863 brought additional settlers to the creek. However by this time, much of the land had been deforested, prompting the formation of farms, orchards, and dairies. Similar to other cases of Western settlement, these new land uses not only displaced the original native inhabitants, but they also began to heavily pollute and alter the creek’s ecology.

Desire to expand Seattle in the late 1800s and early 1900s accelerated the pace of settlement and environmental change. In the race to be the largest and most economically important city on the west coast, Seattle city officials condoned a series of activities that had a dramatic and lasting impact on the ecology of Thornton Creek. For example, in 1917, engineers constructed a canal to connect Puget Sound to Lake Washington. This resulted in the lowering of Lake Washington by nine feet, which consequently redirected the outlet of Thornton Creek to Mathew’s Beach. This event not only dramatically altered the shoreline, but also left several estuaries vulnerable to weed invasion. In fact, researchers point to the lowering of the lake as the sole culprit in the elimination of Wapato, a common staple food of the first native peoples. Paving of Bothell Road in 1922, as well as the construction of Jackson Park Golf Course in 1926, were two other noteworthy events that disrupted habitat and environmental conditions along Thornton Creek. While these changes were significant, they paled in comparison to what was about to occur in the next 50 years.

Fueled by post-WWII growth, the pinnacle of human-induced environmental change occurred during the 1950s-1960s. In 1960, the population of Thornton Creek exploded from 43,680 (1950) to 61,347. This was due to the construction of homes, Northgate Mall, and Interstate 5 (I-5). Spurred by federally sponsored loans and mortgages, residential housing nearly doubled during this decade and is now the dominate land use (53%). Construction of Northgate Mall also attracted thousands of visitors to the area. Not only did these developments increase pollution, but
they also fragmented the watershed, reducing drainage and amplifying the risk of flooding.\textsuperscript{19} I-5, which was completed in 1961, further disrupted natural conditions at the creek. In fact, the interstate culverted the northern tributaries of Thornton Creek, eliminating fish passage beyond the mall.\textsuperscript{20}

The rapid suburbanization of this time also created a boom in community as auto shops, theaters, and schools began to pop-up. While these spaces were additional sources of pollution, they also served as meeting spots that facilitated dialogue on the creek’s growing ecological problems. As a result, they helped nurture a growing effort to reconcile suburbanization with environmental quality.

The notion that urban sprawl helped stimulate a local environmental awareness is not only ironic, but it is also cited as a widespread event that propelled the United States environmental movement. Adam Rome, author of \textit{Bulldozer in the Countryside}, argues that since the “homebuilding industry had all but shut down during the Depression and the war,” America witnessed a sharp increase in construction at the fringes of cities.\textsuperscript{21} Federal mortgage insurance, government loans, and the Highway Act of 1956 helped stimulate this development, as did cultural desires for outdoor recreation and pastoral scenery.\textsuperscript{22} Unfortunately, these “social circumstances …greatly intensified the competitive pressure to reduce production costs by ignoring environmental burdens.”\textsuperscript{23} As a result, developers rapidly cleared land, which created ecological consequences and simplified aesthetic beauty. For example, cheap and easy methods for waste disposal polluted groundwater, while pavement increased run-off and flooding. Similarly, deforestation caused a loss of open space and a decline in biological diversity.

As these problems began to intensify, residents and scientists soon began to question unrestrained development and homebuilding. Led by William Whyte, a vocal sociologist in favor of increased open space, advocates began to think broadly about the consequences of urban sprawl. As such, different views of nature began to form in American culture. Some were concerned with
property values and recreational amenities, while others lamented the rise of irresponsible
development policies that failed to consider the environment. Not only did these views promote the
national environmental movement, but they were also influenced and shaped by it. Following
WWII, this sequence of events—environmental consequences and the growth of suburban
environmental advocates—is apparent at Thornton Creek and helps explain the rise of diverse
community desires surrounding increased development and creek side protection.

By the war’s end, several local ecological disasters expanded community concerns about
the pace of urban sprawl and its impacts on the creek. By the 1950s, sewage discharge into Lake
Washington had created a nauseating stench for residents living near Mathew’s Beach. In 1969,
the culverting of Thornton Creek by Nathan Hale High School angered several homeowners who
lost direct access to the creek. For some, this event was troublesome due to the loss in home
values, while others were upset over the loss of aesthetic beauty. In 1970, when the last remnants
of the tu-oh-beh-DAHISH cranberry bog were paved over to make room for Northgate’s south
parking lot, community disapproval of development began to increase. One resident described this
event as “a terrible tragedy. A piece of history was gone forever. Critters and plants lost out too.”
Seven years later, a portion of Thornton Creek erupted in flames; further escalating concerns and
bringing city-wide attention to the danger of pollution problems. As these surmounting problems
began to threaten and detract from suburban life, several volunteer groups formed during the 1980s
and began to take on small projects to improve the safety of the creek.

Responses to suburbanization on a national scale also helped foster a shift in attitude away
from unbridled expansionism and towards the need for some form of environmental protection.
These events caused many city officials to analyze the environmental history of Thornton Creek and
to consider the value of restoration. As Rome argues, several “experts had concluded that the effort
to preserve open space forced a reckoning with the problem of water pollution.”

In 1962, a technical report argued this point and “persuaded a cabinet-level committee of federal officials.” That same year, Rachel Carson’s *Silent Spring* intensified doubts over increased technology and development and its consequences for water pollution and human health. Eight years later, the first Earth Day added fuel to the movement, while in 1972, reports on urban population growth highlighted problems such as congestion, lack of open space, and ecological deterioration.

These national events, as well as concerns from a growing number of creek residents, placed pressure on the state and city governments to promote and fund some form of restoration. To address pollution in Lake Washington and along the creek’s south branch, the state created a metropolitan government (“Metro”), which in 1966, opened a sewage treatment plant in West Seattle. This plant eliminated sewage dumping into the lake. In 1989, the City of Seattle created a Drainage and Wastewater Utility “to take responsibility for flood control and prevention.” Five years later, the parks department acquired $260,000 to fund salmon rehabilitation. Since the late 1990s, a number of additional propositions have secured funding for various restoration projects. Together, these legislative acts mark a turning point in the environmental history of Thornton Creek. No longer would political and economic desires emphasizing unbridled development be the sole dictators in the creek’s future. Rather, the environmental and social effects of that development would need to be considered. Unfortunately, such negotiations have been laced with conflict due to diverse community desires and questions surrounding the value of restoration.

The historical events of Thornton Creek influenced a diversity of community aspirations related to creek restoration in the late 20th century that still persist today. These desires are far from universal and have made consensus over future plans difficult. For example, several residents favor the suburban view of life and want the Northgate area to be developed to create a sense of leisure.
and community. The schools, businesses, and theaters that have been built since the 1950s represent a vibrant dynamic between work and play. While these advocates may not oppose restoration, they tend to place more concern on creating “walkable” areas that are safe for children. As the Seattle Press reports, others moved to the area to “live on the creek for solitude in an urban setting.” These people might also desire restoration, but may not be willing to sacrifice property values or low taxes for ecological repair. Finally, there are others who wish to see the area restored, regardless of costs for moral and historical reasons. In fact, several residents have risked their own money to sue businesses for damage to salmon habitat. Others believe that restoration is necessary to preserve a sense of history that is quickly being erased. Clearly, the desires that have been shaped over the years vary in their intensity of support for creek protection.

Further complicating the above debate is the need for business development, as well as creek residents that are either indifferent or in favor of future growth. Several land owners, whose profits are dependent on the number of consumers that visit the region, argue in favor of continued growth. This argument is the strongest among the owners of Northgate Mall, who in the late 1990s battled environmentalists for the development of the mall’s south parking lot. City planners needing to maximize income have also favored development. In fact, Deputy Mayor Tom Byers has cited homebuilding as a solution for clinching growing budget gaps. Similarly, city officials bought a portion of the Northgate south lot in 2002 to create a park and ride to help alleviate traffic and parking problems. In addition to these issues, several creek residents enjoy Northgate’s urban amenities—the Seattle Press reports, “Molly Burke [a creek resident]…found walking to amenities and facilities appealing when she moved to Victory Heights 28 years ago.” Other residents have little opinion on the creek’s future. In fact, according to a 1998 survey by Seattle Public Utilities (SPU), 50% of watershed residents do not know a creek runs through their neighborhood.
The extensive ecological change that has occurred throughout history also makes establishing a restoration plan for Thornton Creek difficult. The Society for Ecological Restoration states that, “restoration attempts to return an ecosystem to its historic trajectory.”\(^{47}\) Clearly, this is not possible for a number of reasons. First, the ecological conditions that dominated the region following the last ice age have been largely replaced by concrete and homes. Second, invasive weeds, such as the Himalayan blackberry, have colonized the area and displaced native species like Wapato. Third, the hydrology of the creek has been radically altered through culverts and urban runoff. This new ecology has placed limits on what can now be accomplished in terms of restoration. Fourth, attempting to recreate historical conditions would not only displace thousands of residents, but it would also destroy jobs and eliminate a considerable portion of revenue. Finally, restoring the creek to a historical condition would not only cost millions, but require significant engineering. SPU reports that many public officials fear that since Thornton Creek is so “degraded, that a great deal of money would need to be spent to achieve only small improvements.”\(^{48}\)

Given these limitations and tensions, scientists are currently advocating for a form of “selective restoration” that seeks to \textit{reconcile} past environmental transgressions. To accomplish this goal, environmentalists focus on repairing areas of the creek that have the greatest potential for successful recovery within a suburban ecology.\(^{49}\) The term recovery is not defined as a return to historical conditions, but rather as the creation of a new ecosystem that is both functional and resilient. These goals are the most indicative of natural landscapes and have the potential to support rich species diversity.\(^{50}\) For example, Jeff Bouma, a landscape architect, says that, “we're looking for habitat units...ripples and glides in the stream with gravel bottoms or dead wood in the water, shaded by overhanging boughs.”\(^{51}\) These areas not only act like a “giant sponge that absorb and release water gradually,” but also provide ideal habitat for salmon.\(^{52}\) Given this, “selective
restoration” is more accurately defined as a type of selective repair that seeks to not necessarily return the creek to a specific historical state, but rather to create healthy ecological conditions within a suburban landscape.

Thornton Place is an excellent example of a project that utilizes this approach to create a new ecosystem that incorporates the various environmental, economic, and social values of the creek. The Seattle P-I reports that the development “includes a 16-screen cinema, nearly 400 apartments and condominiums, 52,000 square feet of retail space, a retirement community and a landscaped drainage trench.” By “daylighting,” or surfacing, a section of Thornton Creek that was confined by culverts, the project will help satisfy those in favor of environmental protection. Not only does Thornton Place aim to please these residents, but it will also please those in favor of new development projects. In addition, it will also improve community and open space. For example, the P-I expects the project to produce a “more pedestrian-friendly neighborhood, with public art, walking paths, and nearly 3 acres of green space around the new waterway.”

If construction schematics are not convincing enough, reaction to the Thornton Place during its unveiling in 2006 provides ample evidence for the project’s ability to extinguish existing debates over future land use. One creek-activist in favor of salmon recovery recently told the P-I that “if somebody gave me a million dollars today, it wouldn't be any better than this.” Similarly, the Mayor Greg Nickels expressed his satisfaction, as did hundreds of community members that showed up to the ceremony. While critics may argue that Thornton Place will not please everyone, it clearly represents a step in the right direction towards meshing the myriad of human desires and ecological issues created by the creek’s complex environmental history.

It is clear that the current qualities of Thornton Creek have been shaped by a variety of national and local forces. Unlike the tu-oh-beh-DAHISH, whose social structure was mediated by
the creek’s ecology and resources, the first American settlers were driven by a series of national policies and demand for timber. Not long after this, local desires to expand the size and economy of Seattle exacerbated ecological impacts along Thornton Creek. While these changes were significant, the rapid urbanization of the landscape following WWII was perhaps the greatest influencing factor on the creek’s current qualities. Not only did this dramatically alter the ecology of the region, but it also helped foster a local shift in awareness. This awareness, which was strengthened by national events, is now portrayed through several different community desires. Unfortunately, these aspirations are at odds with the desire for increased creek-side development—a legacy that stems from businesses and homes established during and after the 1950s. Further complicating the situation are questions surrounding the potential for restoration in an urban environment that contains a heavily damaged stream.

Clearly, the environmental history of Thornton Creek has created a dense set of economic, political, social, and ecological qualities that are radically different than what originally existed. Finding ways to balance individual desires with the ecological limits of the creek will continue to require creative solutions. However, Thornton Place represents one such solution that may help reconcile the effects of suburbanization with environmental quality. If successful, the project will not only be a relief to the local community, but it may also represent a model for other parts of the nation. City planners all over the United States are attempting to develop strategies that balance mixed community desires for restoration with severe ecological degradation and the need for increased development. Given this, the events at Thornton Creek have the potential to shape the histories of several places around the nation.
Notes

4 Homewaters Project (2009).
5 Williams, D (2005).
7 Ibid., 30.
14 Ibid.
18 King County Land and Water Resource Division (2009).
20 Stauffer, J, Personal Communication, November 8, 2008. **Ms. Stauffer is a member of Earthcorps.
24 Ibid.
26 Homewaters Project (2009).
27 Schultz, K, Personal Communication, April 11 2009. **While walking through Thornton Creek, I ran into Mrs. Schultz who inquired as to why I was taking photographs and notes. I told her about my project and she became immediately interested. Mrs. Schultz has lived along Thornton Creek her whole life. She provided personal accounts of the environmental, political, and cultural changes that took place from 1940-2009.
28 Ibid.
31 Rome, A (2002), pg 140.
32 Ibid, pg 141.
37 Ibid.
41 Schultz, K, Personal Communication, April 11 2009.


Ibid.


Ibid. **Not only will business around Northgate will see a boom in consumers entering the area, but the “waterway and lush green space will be wonderful amenities to sell to potential homeowners and renters.”**

Ibid.

Ibid.