



2010

"Let's make a harbor into a harbor": an environmental history of Bellingham Bay

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**“Let’s Make a Harbor Into a Harbor”:
An Environmental History of Bellingham Bay**

By

Derek Nelson

Accepted in Partial Completion
of the Requirements for the Degree
Master of Arts

Moheb A. Ghali, Dean of the Graduate School

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MASTER'S THESIS

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**“Let’s Make a Harbor Into a Harbor”:
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A Thesis
Presented to
The Faculty of
Western Washington University

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Of the Requirements for the Degree
Master of Arts

by
Derek Nelson
June 2010

Abstract:

Bellingham Bay is a rich environment that has been appreciated by geologists, geographers, biologists as well as other academics from the natural sciences. This thesis highlights many of these scholarly approaches, but adds a human element to the history of this harbor. Special attention is paid to the underwater landscape of the Bay because different groups of people have tried to control this feature of the Bay and embed various social constructions into the physical geography. More importantly, differing ideas about the Bay and how it should be managed and altered have brought different groups into conflict. These conflicts make up the bulk of this interpretation. I argue that social scientists have failed to appreciate the relationship between human history and the natural environments below the surface of coastal areas.

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Introduction

In 1946, the United States Army Corps of Engineers (Corps) hosted an important public meeting in the City of Bellingham, Washington. The purpose of this gathering was to garner the views of county residents and local business representatives regarding the prospects of redeveloping the bodies of water adjacent to the city. Many in attendance, like Nick Costanti, a representative of the Fishing Boat Owners Association, complained that the decades old harbor strategy, which was meant to promote economic development through commercial shipping, had run its course. Furthermore, many in attendance pressed the Corps to adopt a new plan for economic development—one that would supplant the commercial interests that had long held sway over harbor management and development—in favor of promoting the region’s nascent recreational boating industry and commercial fishery. To this end, they vigorously argued that the community lacked and direly needed safe moorage for the many small vessels that were visiting Bellingham Bay in increasing numbers. A consequence of this plan was that the waterfront would need to be redeveloped such that it would compromise the ability for shippers to use the deep draft entryways to the inner harbor that had been improved and assiduously protected in prior decades.

Knowingly or not, the attendees were participating in a lengthy historical struggle over the meaning of the Bay and how its underwater landscape should be managed and re-shaped. For instance, meetings about the Bay, like the one in 1946, were somewhat regular occurrences during the first half of the twentieth century. The United States Army Corps of Engineers often met with Bellingham residents to discuss and debate how the waterfront and, especially, the underwater landscape of Bellingham Bay should be

managed and reshaped. Topics that were routinely discussed involved how deep the Bay should be dredged and whether or not the Nooksack River, the principle tributary of the Bay, should be diverted into Lummi Bay (a waterway that resides to the northwest of Bellingham Bay) in order to mitigate the accumulation of sedimentation in the harbor—silt was a major problem for commercial pilots when it shallowed sea-lanes.

Furthermore, many of these meetings were held to discuss the possibility of creating a harbor that could help grow the regional economy. For instance, federal and local officials long envisioned that the Bay could be transformed to benefit waterborne commerce, chiefly deep draft shipping. As early as the 1850s, federal officials had taken a keen interest in the seafloor of Bellingham Bay and whether it was sufficiently deep to warrant developing the harbor into a modern transportation hub. In subsequent years, many more government agents, mostly engineers of the Corps, would come and inspect the Bay for similar reasons. Their visits and reports helped convince Congress that federal funds would be well spent on dredging schemes that benefited large commercial vessels. Later, as the non-Native community of Bellingham Bay grew over time, federal officials allowed these new residents to be a part of the planning and implementation of deep draft harbor improvements.

However, the meeting in 1946 was different. Instead of recommending further deep draft improvements, the attendees argued for improving the Bay so that it could cater to the interests of small-boat owners. In the coming years, when these recommendations were carried out, the character of the Bay changed. Deep draft

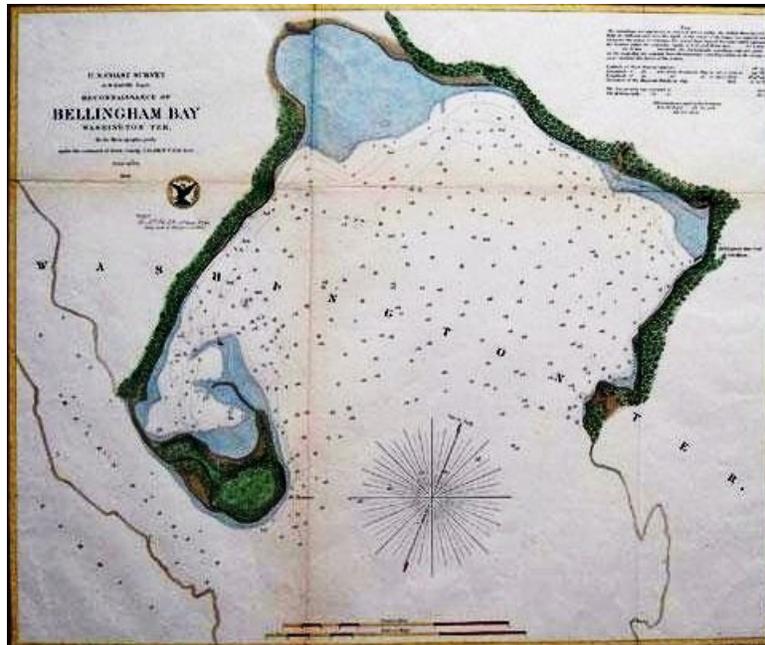


Figure 1:

This aerial representation depicts many of the features of Bellingham Bay that will be discussed in this essay. At the top of the picture is the Nooksack Delta. The elbow at the right of the picture is the original Anglo settlement of the 1850s that is now the central downtown business district and port of Bellingham. Towards the right and lower right is the Fairhaven district and Chuckanut Bay, respectively. The opening at the bottom of the picture leads to Samish Bay and Puget Sound, while the passage at the left opens up to Lummi Bay and the Strait of Georgia. This digitally photographed map was reproduced with the permission of Wade Campbell of Darvill's Rare Prints, www.DarvillsRarePrints.com.

commercial shipping interests, which had dominated public discussions in the past, became marginalized and subsequently lost their ability to demand that the Bay be improved and managed for their needs before the needs of others. A particularly important year for this shift in power was 1952; it was when the Corps, which had long championed deep draft commercial improvements, made a striking about-face and assented to the construction of the small boat basin that residents asked for in 1946. Shipping interests gained nothing from this basin because it was constructed along parts of the waterfront that had formerly been developed into a port terminal and turning basin that were specifically built to match up with dredged underwater channels—thus a small-

boat basin would cause considerable harm to commercial shippers. It was also in 1952 that the once deepened portions of the Bay had filled with sediments to the extent that it had caused havoc for shipping companies and their pilots. The Corps and the Port of Bellingham had often received complaints about the depth of the harbor from shipping interests ever since the Bay was first improved at the turn-of-the-century. But in this particular year, Alex Halstead, of the association the Puget Sound Pilots, signaled to the Port of Bellingham and the Corps that shipping companies had had enough and threatened to stay away from Bellingham Bay. But these concerns were not addressed by the Corps since the latter would not even agree to the simple request that a public meeting be held to discuss the unease of commercial shippers. Ever since 1952, Bellingham Bay has, as a result, become identified more as a destination place for small boats—particularly pleasure boats—than as a harbor for deep draft shippers.

Bellingham Bay, like other coastal marine environments, is a dynamic feature of nature that has long been appreciated by biologists, geographers and geologists. This thesis, however, will endeavor to showcase the equally interesting human relationship with the landscape of Bellingham Bay in the past. The shifting dynamic between shipping and small-boat interests is an example of a larger story about how different people have encountered, thought about and ultimately changed the Bay to suit different needs. Moreover, as diverse peoples formed ideas about the Bay, some obtained more power than others to manage and change this harbor. This thesis is ultimately about the formation of marine environmental thought and about who had the power to embed their ideas about nature into the landscape of the Bay, primarily its underwater landscape.

Different individuals and cultures have encountered the Bay in the past—such as Natives Americans, European explorers, and Euro-Americans settlers—but not all of these people have understood the nature of the Bay similarly. Even people from like backgrounds have had wildly different understandings of the harbor. For example, when federal railroad surveyors first approached the Bay in the 1850s, they saw a feature of nature that could help connect the nation by acting as a railroad terminus. Later, when the big railroad companies fell out of favor with the government, federal officials saw a drastically different purpose for the harbor: Congress and the Corps hoped that the harbor would help combat rising freight rates and, by extension, tame the powerful railroad companies. Nowadays, the meaning of the Bay has changed yet again for much of the community. It is now widely viewed first and foremost as a place for recreational boaters and maturing salmon. While many have encountered Bellingham Bay, they have often formed drastically different ideas about this harbor's most innate function. (See figures two and three)

This thesis is not necessarily meant to catalog all of the ways that people have encountered and conceived of marine environments like Bellingham Bay in the past. Instead it is about how different social constructions of nature brought people into quarrel. Differences were more prone to occur when people tried to embed their respective ideas about nature onto the landscape of the Bay. Humans have changed the Bay a great deal since arriving to the region; it has been altered so extensively through dredging, landfilling and human-induced sedimentation that it should be thought of as a hybrid landscape—a term that environmental historians have increasingly adopted to talk



Figure 2:
This is typical of contemporary visual representations of Bellingham Bay. Note the lack of human presence in the actual Bay itself. “Islands.” Credit: photo by Melinee Fischer, courtesy of the City of Bellingham.

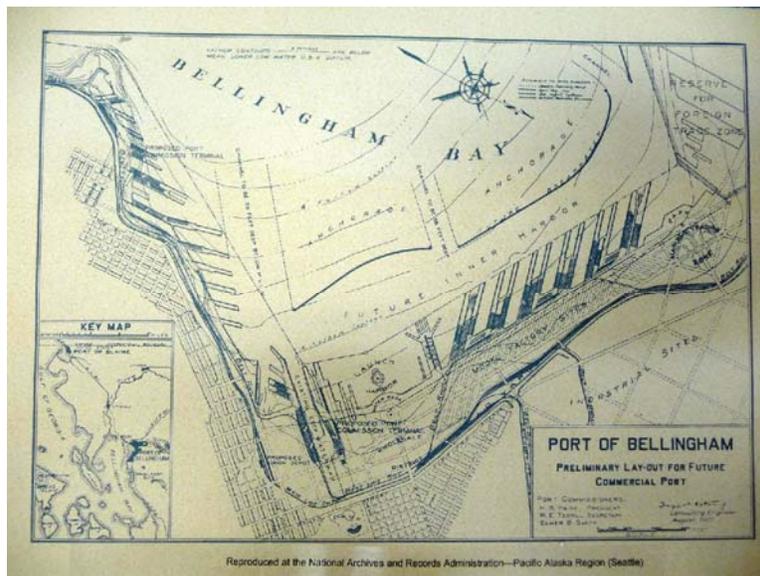


Figure 3:
This sketch, when contrasted with figure two, reveals that past residents of Bellingham Bay had entirely different conceptions of their Bay. Instead of the placid waters that are seemingly free of a human presence, we have a Bay that is viewed as needing intensive development through landfilling and dredging. While many of the projects in this blueprint were never completed, it shows that some saw the Bay in completely different ways. (See note 133 for full citation).

about environments that blur the boundaries between pristine and built environments. These alterations, at least those that were made intentionally, were made so that the Bay better represented the meaning that people had given it. For instance, as the Corps and the Port of Bellingham envisioned a harbor for the service and protection of large vessels, they set to work dredging deep and long channels that allowed ships to enter the shallow tidelands and remain docked at the shoreline during all tides. But the Corps improvements did not mesh with the ways that others had both conceived of and altered the Bay. For example, during the early part of the century, the Corps was constantly troubled by local timber companies because the latter were producing vast amounts of sawdust and other refuse that mill managers disposed into the same waters that engineers were endeavoring to deepen. For mill owners, the meaning of the Bay was different; it was a convenient dumping ground in addition to a waterway for large boats.

As might be expected, ideas about the Bay that were mutually exclusive did not lead to an anarchic scenario whereby anyone was allowed to shape, manage and/or use the Bay as he or she chose. Instead, clear winners and losers emerged from these competing visions and uses of the Bay. For instance, when dumping and shipping interests clashed, the latter emerged victorious. Congress accomplished this through the creation of anti-obstruction laws that outlawed navigational impediments, which the Corps then enforced at Bellingham Bay. For half a century, the Corps acted as a watchdog over the harbor, to the consternation of those who saw its value, for example, as a dump.

The Bay needs to be credited as a catalyst for changing environmental ideas as well. While its landscape was being changed by the likes of Corps engineers, Bellingham Bay was not at all conducive to some of their landscape schemes. Though the Bay lacks the volition that historians generally subscribe to human actors, it was by no means an unchanging and irrelevant backdrop to the regional history. For instance, the Bay left its mark on European explorers. Early non-Native visitors found the Bay attractive because it was a place of tranquility compared to the more precarious waters of the Puget Sound. As a result, Corps engineers sought to build upon these natural qualities and make it into a viable harbor. But Bellingham Bay was not static and it would not allow humans to easily simplify its landscape for commercial shippers. Fluctuating sedimentation was the most important factor that confounded their efforts to maintain proper depths. Over time, commercial pilots were less willing to utilize the Bay's improved features out of fear that their ships would run aground or be forced to vacate the harbor during low tides because of insufficient depths. By the mid-twentieth century, sedimentation (and the problems that it brought about) would open the door for new ways of thinking about the Bay after the efficacy of deep draft shipping had faded from the minds of local and national observers. Yet at the same time that commercial shippers realized that Bay improvements were a failure, many found this changing landscape to be a boon, particularly for recreational boaters and commercial fishermen who saw the shallow waters of the Bay as an opportunity for easy anchorage, rather than a deterrent. As a consequence, they then attempted to seize power over harbor management.

While ideas about the Bay have changed, one thing has remained constant: it is an environment that people have often fought to control and shape so that its underwater landscape fits their ideas about a harbor and its proper function. This thesis will endeavor to explore the relationship between a particular type of coastal marine environment and its human occupants—a historical relationship that has largely been ignored by historians.

This thesis fits most explicitly into the body of research that has been conducted by environmental historians. In the past two decades or so this subfield has come into its own. Its maturity is evident, as one scholar has argued, not only with its growing body of literature, but because its practitioners have increasingly come into disagreement with one another—a sign of health and maturity in the development of an academic field.¹

Despite these advances, comparatively few historians have looked beyond terrestrial environments and interpreted human relationships with marine environments and their biota. Historian W. Jeffery Bolster has been most outspoken about this shortcoming. In his 2006 article published in the journal *Environmental History*, Bolster points out that the prominent environmental historians Carolyn Merchant and Theodore Steinberg had both ignored any treatment of the ocean in their recent synthetic works on American environmental history. Furthermore, they did not suggest that their books were in any way lacking; “neither book,” writes Bolster, “explains that it covers only terrestrial environmental history, and that complementary marine histories are waiting to be told.”²

1. Mart A. Stewart, “Environmental History: Profile of a Developing Field,” *The History Teacher* 31, no. 3 (May 1998): 353.

According to Bolster, this indifference to the ocean is nothing new. Many scholars, ranging from Baron du Montesquieu to Rachael Carson, have failed to think critically about the relationship between humans and the sea, a failing that is the result of longstanding cultural assumptions about the ocean. Scholars have long been tempted to think about marine environments through the lenses of popular cultural tropes that cast these waters as “timeless” and “unchangeable.” As a result of its perceived changelessness, social scientists have not considered the ways that humans have historically interacted with the sea; nor have they thought critically about how they have represented marine nature.³

But in the last few decades these older assumptions about the ocean have been challenged. Commercial fishery failures and scientific studies have revealed that dramatic declines in sea life have occurred and that the oceans of the world have become increasingly polluted. These findings have also generated the belief among modern scientists that the ocean is not as unchangeable as once thought. Furthermore, popular media sources, such as *Newsweek*, have made the public more aware of the state of the ocean. The Newfoundland cod fishery collapse and the “death” of the Black Sea (as the result of a non-native jellyfish) became widely known, leading many to consider that the changes in the ocean are new phenomena.⁴ Consumer habits reflected the popular

2. W. Jeffrey Bolster, “Opportunities in Marine Environmental History,” *Environmental History* 11, no. 3 (July 2006): 576.

3. Barry Cunliffe, *Facing the Ocean: The Atlantic and Its Peoples 8000 BC-AD 1500* (Oxford: Oxford University Press, 2001); Vincent H. Cassidy, *The Sea Around Them: The Atlantic Ocean, A.D. 1250* (Baton Rouge: Louisiana State University Press, 1968). Bolster points to the preceding works as suffering from this lack imagination; Bolster, “Opportunities in Marine Environmental History,” 572-575. Bolster lists and quotes the many important scholars who have considered the ocean timeless.

dissemination of scientific studies as consumers began demanding, for example, “sustainably” certified products out of concern for the state of the world’s fisheries.⁵

But Bolster recommends that environmental historians think critically about the emergence of this “chilling meta-narrative,” as he terms it, and whether the human impact on the ocean is truly a recent phenomenon. As cultural assumptions about the ocean allow for people to think about the ocean as part of human history, environmental historians should try to rethink the history of this relationship in order to determine its true length and extent. Historical scholarship may reveal that the environmental crises that appear to be “recent” and “sudden” may actually be part of longer historical processes. To underscore the opportunities of this pursuit, Bolster discusses an alternative interpretation of the history of the failing Newfoundland cod fishery that has garnered so much attention in the last twenty years. This argument held that the failed fishery had actually been enlarged by humans several centuries ago after intensive whaling freed up large amounts of biomass for other species, such as cod, to feed on and increase in numbers. Drawing on this example, Bolster believes that there is potential for historians to write environmental histories that catalog the longer and more complex relationship between humans and the sea that will complicate the notion that the human impact on the ocean is a recent development.⁶

4. Bolster, “Opportunities in Marine Environmental History.”

5. David Suzuki and Faisal Moola, “Consumer Demand Spur a Corporate Sea Change,” GreenNexus, <http://www.greennexus.com/post/2009/06/Consumer-demand-spurs-a-corporate-sea-change.aspx> (accessed November 25, 2009).

6. Bolster, “Opportunities in Marine Environmental History,” 569, 570.

While Bolster has demonstrated that marine environmental histories are both needed and possible, there are other ways of researching and thinking about non-terrestrial environments than simply reconstructing historical fisheries (he hints at some of these in his article, but fails to develop these sorts of historical opportunities). Geographer Philip Steinberg has for example looked at the history of cultural representations of marine environments. His book, *The Social Construction of the Ocean*, moves towards an explanation of why marine environments have been viewed for so long as a “great void,” as he calls it, and portrayed as absent a human history. Steinberg correlates changes in the modern capitalist world-system with cultural representations of the ocean to determine that general trends in the former—such as periods of capital fixity and capital circulation—have affected how marine environments are conceived of by western cultures. During the mercantilist era, for instance, Steinberg argues that cultural representations often depict the ocean as a social environment. This observation correlates with the commercial and territorial aspects of capitalist nations during that time, which carved up and divided the ocean up into sea lanes. But later during the industrial era, he explains that cultural representations are overwhelmingly asocial and that the ocean is depicted as a dangerous and morally deprave space. These portrayals, according to Steinberg, correlate with a period of capitalism that was intent on fixed investment in place (i.e. factories). Because the ocean was largely undevelopable in this regard, Steinberg believes that the ocean has increasingly become conceived of as a great void, absent a history that overlaps with humanity in any considerable way.⁷

But Steinberg's approach to interpreting the ocean is problematic because he treats the oceans of the world as though they are homogenous environments when in fact they can be quite heterogeneous. Coastal environments, such as bays, provide a contrast to Steinberg's generalizing treatment of marine nature. This history of Bellingham Bay will demonstrate that coastal environments were seen quite differently than the open ocean, especially during the industrial era of capitalist expansion. These types of environments were not feared or viewed as wild places, but seen as environments that could be developed in interesting and dramatic ways.

In general, Steinberg's ill consideration of coastal environments is nothing new. Coastal features of nature have, according to historian Connie Chiang, been skipped over by environmental historians as well.⁸ This is surprising since the seaboard is a place where huge populations of people reside and interact with often dynamic marine ecosystems. Urban environmental historians, for instance, have been in a good position to explore marine environmental histories, but unfortunately few of them have dared get their feet too wet. Matthew Klinge's environmental history of the City of Seattle is a good example. Klinge offers a compelling and extremely nuanced interpretation of the relationship between Seattle's diverse environments and cultures which enables him to conclude that "[f]rom the crest of the Cascades to the shores of Puget Sound, the waters and lands that encompassed the region were neither fully natural nor completely artificial,

7. Philip E. Steinberg, *The Social Construction of the Ocean* (Cambridge: Cambridge University Press, 2001).

8. Connie Chiang, *Shaping the Shoreline: Fisheries and Tourism on the Monterey Coast* (Seattle: University of Washington Press, 2008), 6; Daniel L. Boxberger, *To Fish in Common: The Ethnohistory of Lummi Indian Salmon Fishing* (Lincoln: University of Nebraska Press, 1989). For an even more local example of this see Boxberger's interpretation of the relationship between Native and non-Native fishers.

but a fusion of the two.”⁹ But in spite of this, Klinge has surprisingly little to say about the human relationship with nature beyond the waterfront. When he writes about the Elliot Bay at all, he comes close to pure declension when he discusses how its waters were polluted and, more importantly, when its tidelands were filled and stripped of their communal ownership in favor of private ownership. In general, the further Klinge drifts away from the shoreline, the murkier his interpretation gets.

Historian Matthew Booker’s research on San Francisco Bay, though better, also suffers from this same general fault. His history of the tidelands takes the reader further from the high tide line and offers a fuller history of the human relationship with the Bay than Klinge does. Like Klinge, Booker discusses how the tidelands, which were once communal, became private property. But Booker goes further by discussing how the Bay was successfully cultivated by oyster farmers who brought non-native species to its waters—an industry that lasted until the waters became polluted by other industries. However, Booker fails from the same lack of imagination as Klinge because he is generally only interested in the parts of San Francisco Bay that are dry from time to time during the day.¹⁰

Historians who are more socially orientated have done a better job at detailing the human activities that took place away from the shoreline. Chiang, for instance, has examined the social dynamic of a marine environment that was carved up and known

9. Klinge, *Emerald City*, 249.

10. Matthew Morse Booker, “Oyster Growers and Oyster Pirates in San Francisco Bay,” *Pacific Historical Review* 75, no. 1 (February 2006): 63-88; Matthew Morse Booker, “Real Estate and Refuge: An Environmental History of San Francisco Bay’s Tidal Wetlands, 1846-1972,” (PhD diss., Stanford University, 2005).

through racial lenses. In her history of Monterrey Bay, Chiang has shown that as the marine waters were fished by increasingly polyglot fishermen, racial tensions rose. Some tried to assert more power over the waters of Monterrey Bay by claiming that others were using fishing tactics that were harmful to catches. Because ethnicity often influenced the choice of fishing gear, these arguments were thinly veiled, and sometimes outright, racial attacks used by Anglo fishers to exclude those ethnic groups that they found undesirable by Anglos from the waters of the Bay.¹¹ But beyond Chiang's work in reconstructing the important human geography of power relationships that took place in marine waters, she tends to dismiss how the physical geography of the harbor has played a part in this history.

The attention that Klinge, Booker and Chiang (among others) have given to the waterfront in recent years has been illuminating. But have they privileged the terrestrial aspects of the coastal environments that they explored at the expense of the underwater landscape? Furthermore, is the physical geography that we cannot see even of the province of an environmental historian? This thesis is intended to show that this underwater landscape is indeed important and relevant to the field. Coastal underwater landscapes are middle grounds; they are not quite like the open ocean and not quite like terrestrial coastal lands. Yet underwater coastal landscapes share commonalities with the open ocean and the coast, and thus need to be appreciated with reference to both.

A recent study of Boston Harbor by historian Michael Rawson provides an overdue exception to the general lack of consideration that historians have paid certain

11. Chiang, *Shaping the Shoreline*, 53.

aspects of coastal landscapes, particularly the environments that are submerged and thus out of sight. According to Rawson, nineteenth century Bostonians were very concerned about protecting their naturally deep harbor from filling with sediments because they considered this underwater landscape to be vital to their city. Many saw landfilling along the shoreline as a major problem for the harbor because they thought that shrinking channels would inhibit a tidal scour effect that they believed was keeping the harbor from shoaling. Although this theory was later discredited, it shaped where landfill proponents were able to create new shorelines for much of the nineteenth century, and was the cause for heated debates between landfill and navigational proponents. Rawson's study of Boston Harbor is not only groundbreaking, it provides a model for both urban and environmental historians interested in pushing their scope beyond terrestrial environments.¹²

This study of Bellingham Bay has some unique traits that build on Rawson's study. For example, Bellingham residents managed their harbor as had Bostonians. But the former inherited a feature of nature that was not at all conducive to the types of activities that they intended for it to serve. In other words, Bostonians were protecting their harbor while Bellingham residents were protecting a harbor that they had helped construct. Additionally, my study focuses on the creation and implementation of law to manage the Bay, whereas Rawson was concerned with scientific understanding of marine environments and how it translated into harbor management strategies. But most importantly, this history of Bellingham Bay will provide another example that points to

12. Michael Rawson, "What Lies Beneath: Science, Nature, and the Making of Boston Harbor," *Journal of Urban History* 35, no. 5 (July 2009): 675-697.

the ways that humans thought carefully about and fought over an unseen marine landscape.

This essay is also intended to build upon local histories. Unfortunately there are fewer of them to discuss. One important exception is Daniel Boxberger's impressive history of the underdevelopment of the Lummi Native fishery. Boxberger demonstrates that while the Lummi may have occupied the shoreline of Bellingham Bay with non-Natives, they did not receive an equal share of the natural resources of the Bay. The Lummi were never big players in the early years of the commercial salmon fishery, in spite of their being a primarily fishing people. Boxberger found this peculiar since the Lummi were noted for their technologically diverse fishing tactics and their knowledge of salmon runs. He reasoned that their knowledge of fishing should have placed them in a great position to benefit from this exploding turn-of-the-century industry. Boxberger explains this paradox away by demonstrating that the Lummi commercial fishery was actively underdeveloped by non-Natives during the course of the twentieth century. Race was an important factor that Boxberger utilizes to explain why the Lummi fishery was never on par with non-Native commercial fishing. Cannery owners, for example, did not hire Natives as laborers and avoided receiving Native catches. These reasons, among others, inhibited the Lummi from profiting during the heyday of commercial salmon fishing.¹³

For the purpose of this essay, Boxberger does the work of demonstrating how and why the Lummi Nation was marginalized politically and economically. Their marginal

13. Boxberger, *To Fish in Common*.

status is a likely reason why they rarely show up in the sources relative to the harbor improvements of the early twentieth century that will be discussed at length later in these pages. Although the Lummi played little part in these improvements, their absence in the pages of this thesis is not meant to ignore their history. In fact, their absence should suggest quite the opposite. It should underscore how power was distributed unevenly amongst Bay residents, and not simply regarding fisheries. Fortunately, this dynamic is shifting, and the Lummi are becoming more important actors in the current redevelopment of Bellingham's waterfront, which is discussed more fully in the conclusion. Presently they are playing a role, for instance, by offering suggestions and criticism of the current redevelopment scheme being developed by Port and City of Bellingham. Recently, the Port went so far as to hire an outside mediator to aid in reconciling the problems that the Lummi Nation have with waterfront development proposals, which suggests that the concerns of the Lummi are necessary if the project is to be successful.¹⁴

Historian Beth Kraig's work on the Bellingham Bay Improvement Company (BBIC) is also worth mentioning. Kraig sought to interpret the intentions of the BBIC; that is, whether the company was a "boomer" or "booster." In the late nineteenth century the American West was both urbanizing and industrializing. In order to capitalize on these trends many smaller cities and towns welcomed distant investors into their communities. Investors with genuine interests in developing a city with their capital were called boosters, while other investors turned out to be less sanguine. Boomers, as the

14. John Stark, "Port Hires Waldo to Mediate on Waterfront Issues—Attorney was the Point Man Tribes Preferred," *Bellingham Herald*, February 6, 2008.

latter were called, sold lofty dreams of making a community into a metropolis only to cut-and-run with sizeable profits after inciting speculation, typically in land. Despite Kraig's conclusion that the community of Bellingham was ultimately disappointed with the BBIC (particularly owing to the BBIC's inability to secure a railroad terminus), Kraig interprets the intentions of the company as genuinely booster-like. According to Kraig, the corporation was not run by "con men"—although the owners ultimately became rich, their profits were not derived from speculative investments in the City of Bellingham.¹⁵

While Kraig has thoughtfully considered the history of the BBIC in the context of larger social changes occurring contemporaneously, her work tends to overemphasize the role of this company as the sole provider of capital for the city. In this essay, I will demonstrate that the community had other opportunities available for developing their city. Like many other regions of the West, the City of Bellingham was not entirely "self-made"; that is, it was not entirely carved out of the forest through the ingenuity and hard work of Anglo-American migrants.¹⁶ The residents of Bellingham found the federal government an important source of capital for economic development in addition to private capital. When it came to Bellingham Bay, the community, and even the BBIC, endeavored to convince Congress and the Corps that the federal tax dollars would be well invested in harbor improvements.

15. Beth Kraig, "The Bellingham Bay Improvement Company: Boomers or Boosters?" *Pacific Northwest Quarterly* 80, no. 4 (October 1989): 122-132; Beth Kraig, "A Slow Game: The Bellingham Bay Improvement Company and the Economic Development of Bellingham, 1900-1912," (master's thesis, Western Washington University, 1981).

16. Richard White, *It's Your Misfortune and None of My Own: A New History of the West* (Norman: University of Oklahoma Press, 1991), 57-59. According to White, the federal government shaped the history more than is often assumed. The historical change of the West is typically associated with the multitude of individualistic and self-reliant Anglo-American migrant.

Chapter one will examine some of the earliest written records of human encounters with the Bay. Preceding these encounters will be a general description of the various historical environments. Special attention will be given to the difficulties that early explorers described when they experienced the Bay as well as the general meaning with which it was consequently endowed.

Chapter two will discuss how ideas about the Bay, which had begun forming during the late nineteenth century, were applied to the landscape of the Bay. Also, this chapter will discuss the struggles that occurred as different visions for developing the Bay came into conflict with each other. This chapter will conclude with a discussion of the early twentieth century commercial improvements.

Chapter three will determine when and why the power shifted away from commercial interests. This chapter seeks to sketch out the social and environmental changes that produced both different encounters with the harbor and different ideas about the Bay that emerged at the conclusion of the Great Depression.

One caveat before preceding: this is a history of a marine environment that does not deal significantly with marine biota. Some may find this approach disregardful of the existing historiography regarding marine environments. But it is not meant to downplay fish studies in their multi-faceted and well researched forms. However, it is meant to emphasize that there are other fruitful ways of thinking about marine environments. I argue throughout this work, often implicitly, that the landscape of the Bay has its own

history that needs to be appreciated as something more than a simple backdrop for fish studies. From this perspective the history of the Bay has little direct relationship to the marketable organisms that have produced many studies and, to some people, even a regional identity.¹⁷ Its history also has to do with the big boats that shared the waters with these organisms. Even in cans, organisms like salmon were often not as important as the timber goods that were hauled in and out of the Bay, and which required alterations and careful management of its underwater landscape.

17. John M. Findlay, "A Fishy Proposition: Regional Identity in the Pacific Northwest," in *Many Wests: Place, Culture & Regional Identity*, ed. David M. Wrobel and Michael C. Steiner (Lawrence: University of Kansas Press, 1997), 37-70.

Chapter One

Experiential Encounters of Bellingham Bay: Natives, Explorers and Settlers

Humans encountered Bellingham Bay and often formed very different ideas about it. This chapter will examine some of the initial experiences that they, particularly non-Natives, had with the Bay before any development schemes occurred and before the Bay took on meaning as a commercial place. It is possible to see in these early experiences the origins of subsequent improvements as well as the challenges that engineers would later face as they endeavored to protect their schemes for posterity. However, in order to effectively discuss these encounters it is necessary first to sketch out the historical geography (or, geographies) of the Bay as well as the natural processes that shaped it before any humans settled in the region.

Bellingham Bay was not an immutable environment that humans met and subsequently altered. It was in a continual state of change before *and* after they arrived. This is important to recognize since environmental historians have often assumed that natural environments were self-regulating and predisposed to climactic and stable states that humans, particularly non-Natives, then threw out of balance. Although these ideas are no longer fashionable, and were not so much intended to encompass marine environments, a discussion of the ephemeral history of Bellingham Bay prior to human contact is also meant to avoid unintentionally reinforcing these dated assumptions in this study.¹⁸

18. Rawson, "What Lies Beneath," 676. While Clementian ecologic principles were meant to describe terrestrial environments, there is some evidence that people once thought about marine environments in similar ways. For instance, Rawson has noted that Bostonians thought that their harbor

Bellingham Bay was formed largely from the glacial processes of the last major Ice Age. Glaciers advanced and receded over present-day western Washington State several times between roughly 70,000 BCE and 12,000 BCE. At the end of this period, the Vashon, the last large glacier of the period, receded from its farthest southerly point near Olympia, Washington, the present-day capital of Washington State.¹⁹ As it receded, it carved out a deep channel that filled with seawater. This later became known as Puget Sound. East of Puget Sound, the Vashon Glacier shaped the western slopes of the Cascade Mountain Range, but did not grind them down. Parts of the receding glacier broke off and remained in this mountain range east of Bellingham Bay while the larger Vashon continued gouging out lowlands to the north, depositing marine glacial sediments as it receded into present-day Canada. The last glacial period left its mark on the region by scraping out a large bay; leaving a sloping mountain range that begins to rise near the eastern shore of the Bay; and creating a flat lowland to the north.²⁰

After the last glacial period, subsequent sea level changes continued to alter the size of Bellingham Bay. At one point, the Bay submerged lands north of its present-day western and northern shorelines (possibly beyond the town of Lynden, several miles to the north) when glacial isostatic adjustment, also known as post-glacial rebound, pushed

was in a state of equilibrium that would exist forever if humans did not disrupt it through landfilling in the wrong places.

19. D.J. Kovanen and D.J. Easterbrook, "Late Pleistocene, Post-Vashon, Alpine Glaciation of the Nooksack Drainage, North Cascades, Washington," *Geological Society of America Bulletin* 113 no. 2 (February 2001): 276. See for a modeled representation of the furthest extent of glaciation; Curtis Ray Smelser, "Sequent Occupance of the Nooksack River Valley and the Influence of Man on the Rate of Sediment Delivery to Bellingham Bay," (master's thesis, Western Washington University, 1970), 18. See for a description of the various glacial geography in reference to present-day landmarks.

20. Kovanen and Easterbrook, "Late Pleistocene, Pot-Vashon, Alpine Glaciation of the Nooksack Drainage, North Cascades, Washington," 275-276.

the shoreline further south.²¹ Post-glacial rebound is a process whereby the lands compressed by the weight of glaciers gradually rise after glacial recession. As a result of this process, the shoreline of Bellingham Bay was pushed south as the area north of the present-day western shoreline rose.²²

Post-glacial rebound alone did not push the western shoreline of Bellingham Bay to its present location; the principal tributary of the Bay, the Nooksack River, was also responsible. After rebounding, the area southwest of Lynden was still mostly a marine environment, aside from the present-day Lummi peninsula and the stretch of highlands between the City of Ferndale and Birch Bay, which were both islands. This was the geography that the Nooksack River encountered as it descended from the Cascades and emptied into Bellingham Bay at a point northeast of the present-day City of Bellingham. Somewhere near Lynden the Nooksack River emitted its mountainous sediments into the harbor. The heavier sediments reached the end of their journey at the mouth of the river due to the slackened river flow, forming a delta. One-thousand years after the Vashon had receded, this delta expanded west and then south, creating a large alluvial floodplain in its wake (partly propped up by further post-glacial rebounding) until it connected with the aforementioned island highlands. The northern and western portions of the present-day waterfront of Bellingham Bay were made up largely of alluvial deposits that have accumulated since the end of the last Glacial Period. Though isostatic rebound and

21. Donald J. Easterbrook, "Late Pleistocene Glacial Events and Relative Sea-Level Changes in the North Puget Sound Lowland, Washington," *Geological Society of America Bulletin* 74 (1963): 1482; Smelser, "Sequent Occupance of the Nooksack River Valley and the Influence of Man on the Rate of Sediment Delivery to Bellingham Bay," 70.

22. Smelser, "Sequent Occupance of the Nooksack River Valley and the Influence of Man on the Rate of Sediment Delivery to Bellingham Bay," 70-72.

sedimentation slowed by 10,600, naturally occurring sedimentation continues to shape the Bay today.²³ In fact, the Nooksack River Delta is one of the only Puget Sound estuaries still growing, though much of this growth can be attributed to land-use choices made in the basin over the last 150 years, and not solely the result of natural processes (See chapters two and three).²⁴

While glacial processes have affected the Bay over a longer period of time, the geography of the Bay could also change rather quickly. For example, before non-Natives settled in the region in large numbers—and possibly before they arrived at all—the Nooksack River emptied to the west of its present terminus and into Lummi Bay. To understand how this occurred, it is important to understand the character of the Nooksack River. Like most rivers, the entire Nooksack, and not only its delta, was in a constant state of flux as it grew into a large floodplain. For example, the banks of the river shifted over time. A bend in the river could shoal as heavier sediments collected; opposite a shoal, the river could erode its bank and send once accumulated sediments and even full grown trees downstream. In this way, the Nooksack River constantly shifted like a slithering snake over the floodplain it helped create. Some of these sediments buttressed the bank further downstream. But much of them were not absorbed at different points along the river bank and subsequently found their way into the ever-growing delta.²⁵ As

23. Smelser, “Sequent Occupance of the Nooksack River Valley and the Influence of Man on the Rate of Sediment Delivery to Bellingham Bay,” 71, 72.

24. RE Sources and the North Sound Baykeeper, “State of the North Sound and Straits,” Re Sources (published October 2002), http://www.re-sources.org/pdf/state_of_the_sound.pdf (accessed October 23, 2009), 4.

25. House, *Nooksack, Skagit And Snohomish Rivers, Washington*, 51st Cong., 2d sess., 1890, Ex. Doc. No. 38. Captain Thomas Symons and Captain E. H. Jefferson conducted a survey of the Nooksack

sediments and felled trees (also known as “snags”) clogged the delta, the likelihood of a channel diversion would increase.²⁶ In the nineteenth century, such a log jam was responsible for diverting the Nooksack away from Lummi Bay. At that time, many snags collected just east of where the Nooksack emptied into Lummi Bay until the jam finally diverted the main channel south into what was then either a small creek or slough and into Bellingham Bay. The exact date of this most recent diversion is not known with certainty, but some have surmised that the river changed course in the 1850s or early 1860s.²⁷ The rerouting of the Nooksack River and its sediments from Lummi Bay to

River in 1890. Their description of the river gives some sense of how the river acted before non-Native settlement because it was completed just prior to the deforestation along the Nooksack River’s banks. Jefferson describes the river as “fringed with heavy timber.” Smelser, “Sequent Occupance of the Nooksack River Valley and the Influence of Man on the Rate of Sediment Delivery to Bellingham Bay,” 86-90. But, Smelser argues that the Nooksack River was quickly denuded of vegetation after 1891 when commercial logging began to increase. Thus, this is a fairly good description of how the river may have acted before increased non-Native settlement.; House, *Survey of Nooksack River, Washington*, 53d Cong., 3d sess., 1895, Ex. Doc. No. 276, 2. In 1895, Symons conducted another survey of the Nooksack and submitted a report to Congress. In it he examined how the river changes because of the erosion of one bank and the building up of another.

26. Todd Shallat, *Structures in the Stream: Water, Science, and the Rise of the U.S. Army Corps of Engineers* (Austin: University of Texas Press, 1994), 156. Before the Corps of Topographical Engineers built a fleet of snag-boats during the mid-nineteenth century, the term “snag” signified all of the matter that blocked a river. The engineers narrowed the meaning, dubbing only material that blocked the main channel as a snag.

27. The Nooksack River most likely changed course in 1853. The following evidence generally supports this claim; Wayne Suttles, “Post-contact Culture Change Among The Lummi Indians,” *British Columbia Historical Quarterly* 18, nos. 1 & 2 (Jan-Apr 1954): 58, note 32. Anthropologist Wayne Suttles believed that the river changed course sometime after 1853. His sole piece of evidence was the travel account of a Theodore Winthrop. Winthrop, on route from Victoria B.C., traveled up the main stem of the Nooksack and purportedly descended a slough into Bellingham Bay in 1853. Suttles interpreted Winthrop’s account to mean that he ascended the main channel of the river at Lummi Bay and descended the slough that fed Bellingham Bay where his journey ended; Senate, *Survey of Certain Rivers*, 46th Cong., 3d Sess., 1881, Ex. Doc. No. 39. Other evidence suggests that Suttles may have been generally correct. While surveying the Nooksack in 1881, a Corps engineer noted that the river had formally emptied into Lummi Bay twenty years prior. Habersham was not explicit about his evidence, but most likely it came from talking to locals during his survey of the river; House, *The Report of the Secretary of War Communicating the Several Pacific Railroad Explorations in Three Volumes*, 33d Cong., 1st sess., 1855, H. Exec. Doc. 129 vol. 1, 492. Yet another account of the river was taken sometime between 1853 and 1855 by the Northern Railroad Survey. Their description of Bellingham Bay suggests that the “Lummi River” emptied into the Northern end of Bellingham Bay; House, *Message from the President of the of the United States to the Two Houses of Congress, at the Commencement of the second session of the Thirty-Third*

Bellingham Bay is an example of a process that likely happened several times over thousands of years as the river shifted and eroded its bank and the delta forked around the aforementioned islands (which are now known collectively as the Lummi Peninsula).

Even when the terminus of the Nooksack was Bellingham Bay, much of its sediments, which were most concentrated during periods of flooding, might never reach its waters and, as a result, evade altering the harbor.²⁸ For example, on a few occasions in recorded history, the floodwaters of the Nooksack emptied into the Fraser River Basin to the north, as well as into the Samish River Basin to the south.²⁹ In a related vein, the Nooksack was not entirely responsible for shaping the Bay via its own sediments since the Fraser River has also been known to overflow its banks at flood stage and empty its sediments into the Nooksack River Basin. These sediments would, of course, subsequently make it into the Bay, thus altering the geography.³⁰

Humans would come to Bellingham Bay and find reason to change it, but they did not encounter a stable or self-regulating nature. It was an environment in continual flux. It could change slowly over lengthy periods of time and then, at other times, rather suddenly. Glaciers, sediments and snags all shaped Bellingham Bay before any humans

Congress, 33d Cong., 2d Sess., 1854, Ex. Doc. No. 1, 455. The Secretary of the Interior reported roughly the same information as the Railroad Survey in the 1854 Presidential report; House, *Survey of Nooksack River, Washington*, 53d Cong., 3d sess., 1895, Ex. Doc. No. 276, 5. However, oral accounts provided by “old Indians” were cited in another report by Captain Thomas Symons of the Corps regarding the changing course of the river. These Natives informed Symons that the river had not emptied into Lummi Bay for “nearly a century.” This last source is suspect due to the lengthy period from the time the when river supposedly changed course and when the oral accounts were recorded. It also contradicts other evidence. But, it also suggests the possibility of another diversion within historic times.

28. Smelser, “Sequent Occupance of the Nooksack River Valley and the Influence of Man on the Rate of Sediment Delivery to Bellingham Bay,” 82.

29. House, *Nooksack River, Washington*, 74th Cong., 1st sess., 1935, Doc. No. 159, 11.

30. Senate, *Survey of Certain Rivers*, 46th Cong., 3d sess., 1881, Ex. Doc. No. 39, 7.

settled in the region. Many of these processes would continue to change the Bay on into the period of human occupancy, affecting the history of the region—a topic which will be discussed more fully in chapters two and three.

Native Americans were the first humans to encounter Bellingham Bay. The term “Straits Salish” is generally ascribed to the various kin groups that occupied much of what is now the northern extent of Puget Sound and the southern portion of the Straits of Georgia. According to ethnologists, all of the Straits Salish kin groups shared roughly the same language (Coast Salish) and culture. While several kin groups may have resided at the Bay sporadically to fish, such as the Klallams, the Lummi resided at Bellingham Bay nearly year-round, and they were the largest group to occupy the Bay when non-Natives settled.³¹

Surprisingly—as Boxberger once noted—few written records mention anything about the Lummi prior to non-Native settlement in the mid-nineteenth century. Early explorers stumbled upon settlements that were probably used by the Lummi, but these sites were uninhabited. Boxberger surmised that because the Lummi did not participate in the fur trade to the extent that other kin groups had, record of them is sparse.³²

In spite of this dearth of written sources, it is safe to say that the Lummi experienced the Bay mostly through fishing before non-Natives arrived. Salmon were central to their culture and often determined how they organized their production—

31. Boxberger, *To Fish in Common*, 11, 12, 17.

32.Boxberger, *To Fish in Common*, chap. 1. The information on the prehistory of the Lummi was taken from a synthetic chapter by Boxberger.

particularly as they assembled and manned weir technology. The importance of salmon to their production is particularly interesting because among the Pacific Northwest Coast tribes the Lummi and other nearby Salish speaking tribes cannot be overestimated. So dependent were they on marine organisms that they developed and utilized all known salmon fishing technologies.³³ Although their impact on salmon and other marine species is difficult to say for certain, some historians and anthropologists have estimated that Native catches could be extremely large.³⁴

But aside from their role in shaping salmon fisheries, the Lummi have not been associated with the physical changes that occurred to the landscape of the Bay during the beginning of the twentieth century. Corps records, which are the most detailed sources regarding these changes to the underwater landscape of Bellingham Bay, never mention the role of the Lummi ever affecting such things as the rate of sedimentation and navigability (either by facilitation or obstruction). There is some evidence, however, that suggests that the Corps did not know of, or fully appreciate, the de-snagging efforts of the Lummi at the turn-of-the-century. For instance, D. C. Govan, a Washington State Indian Agent, reported in 1896 that an obstruction at the mouth of the Nooksack (which had been caused by a boom constructed by a local mill company) was partly cleared by the Lummi. It is not likely that the Lummi intended to promote navigation by their actions because the drift threatened to backup the river and wash away an entire Lummi village. “Such a catastrophe,” writes Govan, “was only prevented...by the watchfulness of the Indians, assisted by Mr. Evans, the [reservation teacher].” Govan goes on to explain that

33. Boxberger, *To Fish in Common*, 191-194.

34. Taylor, *Making Salmon*, 13-38. Taylor provides a detailed summary of anthropological and historical research on pre-contact Native American salmon fisheries.

the Lummi “were compelled to work for several days to protect themselves from threatened destruction by the floods.”³⁵ Since the Lummi Reservation resided in a precarious location next to the mouth of the river, and because the Nooksack Delta was constantly obstructed, it is likely that the Lummi often found it necessary to clear parts of the Nooksack Delta like they did in 1896.

While the Lummi may not have received adequate credit for their de-snagging efforts, their lack of participation in the northeasterly harbor improvements, which will be discussed in the subsequent chapters, is also evident in the Corps records. It is safer to say, however, that they did not play a role in deciding the fate of this portion of the Bay. Their exclusion from these improvements is likely the result of their marginal political and economic status in the region, which Boxberger has demonstrated was the result of racial discrimination. Moreover, racial discrimination may also have been a reason why the Lummi were excluded from expressing their ideas about nature onto other parts of the Bay while the underwater landscape was changed by others, such as the Corps.³⁶

Of all the Natives, Europeans and Asians that charted and/or settled at Bellingham Bay, it was the English name for the Bay that has held. Captain George Vancouver “discovered”

35. House, *Report of the Secretary of the Interior; Being Part of the Message and Documents Communicated to the Two Houses of Congress at the Beginning of the First Session of the Fifty-Fourth Congress. In Five Volumes. Volume II*, 54 Cong., 1st sess., 1896, Document 5, 318, 319.

36. Boxberger, *To Fish in Common*. See for a general history of the Lummi. Boxberger details how the Lummi were economically marginalized by non-Natives during the early twentieth century.

Bellingham Bay in 1792 and named it purportedly after Sir William Bellingham of the British Navy.³⁷

It is unclear what meaning was intended, or if any meaning was intended at all, by its designation as a “bay.” For instance, did the explorers consider it a distinctive body of water that stood apart from the Puget Sound and the Pacific Ocean? Was its designation supposed to imply safety and security, perhaps? The word “bay,” like most words, has a long and shifting history, and a probing of it does not shed much light on these questions. Though primarily associated with marine waters nowadays, the word has terrestrial as well as marine origins. Around the fifteenth century, the word “bay,” in a descriptive geographical sense, was used to signify any of the following: an “indentation or rounded projection of the land into the sea”; “an indentation, recess in a range of hills”; or “an arm of a prairie extending into, and partly surrounded by, woods.” When it became associated with marine waters in more recent times, the word did not necessarily imply that an indentation of water held different characteristics than the waters that it diverged from. In the nineteenth century, for instance, a body of water could be labeled as a bay regardless of whether or not it proved safe for anchoring vessels. The Bay of Biscay, for instance, was “noted for its heavy seas and dangerous navigation.” Yet, smaller vessels, presumably ill-equipped for dangerous waters, were named “Bay Vessels.” Furthermore, bays could be deep like the “Bay of Portugall” [*sic*], which “hath an vnknowne bottome,” or shallow since “bay whaling” generally occurred in shallower waters where cows

37. Lelah Jackson Edson, *The Fourth Corner: Highlights from the Early Northwest* (Bellingham: Cox Brothers Inc., 1951), 4.

calved.³⁸ Although it is evident that some sort of meaning was being applied to Bellingham Bay by its cartographic separation from the Puget Sound, it is unclear, however, what type of meaning was intended through its designation as a bay, or whether it was a description derived from nothing more than a casual encounter.

Anglo-American explorers and settlers were more explicit about their encounters with Bellingham Bay and the meaning that they derived from these encounters. Soon after they began to settle in the region—and the Lummi and other nearby Native groups were removed to the reservation at the mouth of the Nooksack—the Bay took on national significance as a place that might connect the two coasts of the nation. Some of the earliest records of Bellingham Bay come from the Pacific Railroad Survey. This survey, also known by its longer title *Reports of Explorations and Surveys, to ascertain the most practicable and economical route for a railroad from the Mississippi River to the Pacific Ocean*, was published in 13 volumes between the years 1855 and 1860. This work was composed of the results of five different railroad surveys of the continental United States: two across the southwest, one across the central latitude, another along the northern border and one last north-south survey along the Pacific Coast.³⁹

38. “bay, *n.*” *Oxford English Dictionary*, 2nd ed. *OED Online* (Oxford: Oxford University Press, 1989), www.oed.com (accessed October 25, 2009).

39. For an overview of the Pacific railroad surveys see, Herman J. Viola, *Exploring the West* (Washington D.C.: Smithsonian Books, 1987), 86-119; For an especially detailed overview of the just the southern surveys see, Edward S. Wallace, *The Great Reconnaissance: Soldiers, Artists and Scientists on the Frontier 1848-1861* (Boston: Little, Brown and Company, 1955); House, *The Report of the Secretary of War Communicating the Several Pacific Railroad Explorations in Three Volumes*, 33d Cong., 1st sess., 1855, H. Exec. Doc. 129. During the 1850s, the Senate and the House of Representatives published content from the railroad survey as reports and documents. The information presented here comes from these documents.

The railroad surveys across the American West were multi-faceted. Surveyors reported on various things while determining the most “economical route” between the two coasts. For instance, they reported extensively on the geology, zoology and botany of the lands they encountered. A deep knowledge of the natural world was not peripheral to their goals of placing railroads; it was thought to be essential for choosing the most auspicious transcontinental path. At Bellingham Bay, for example, attention was given to cataloging different animal species such as salmon and “ouzels”—a duck-like creature that the surveyors found especially curious.⁴⁰ The railroad surveys demonstrate that Americans settlers and explorers were not running roughshod over natural environments as they moved west, for they thought carefully about the lands that they encountered and chronicled their experiences with natural environments in great detail.

Due to its coastal location, Bellingham Bay was considered as a possible location for a railroad terminus by the leaders of the northern survey: Governor Isaac Stevens and Captain George McClellan. The waters surrounding Steilacoom, Seattle and Port Discovery also caught their attention. All four had their advantages and faults, but Bellingham Bay was advantageous because coal had been discovered close to its shore (actually, a coal seam, which is now closed, reaches underneath the Bay) and which the surveyors surmised was of good quality.⁴¹ The coal seams at Bellingham Bay were the

40. Senate, *Reports of Explorations and Surveys, to Ascertain the Most Practicable and Economical Route for a Railroad from the Mississippi River to the Pacific Ocean*, 35th Cong., 2d sess., 1859, Ex. Doc. 46, 176, 268, 311.

41. House, “Chapter X: Resources and Geographical importance of Puget’s Sound, and its relations to the trade of Asia,” *The Report of the Secretary of War Communicating the Several Pacific Railroad Explorations in Three Volumes*, 33d Cong., 1st sess., 1855, H. Exec. Doc. 129 Vol. 1.

first on the west coast to be mined and, according to one geologist, remained so for several years.⁴²

The discovery of coal at Bellingham Bay was a potential boon for regional development. The surveyors recognized its potential for economically linking the nation since the railroads required coal for power. But the discovery was also important because it offered steam powered ships the resource necessary to make the gigantic leap across the Pacific, allowing for the expansion of trade with Asia, which traditional forms of ocean travel could not accomplish with the speed and reliability that steam travel offered. The surveyors considered trans-Pacific transportation so important that they devoted an entire chapter to the topic. It is also why Bellingham Bay was seriously considered as a potential terminus. The Bay was a bay, and a ready supply of energy on its nearby shores made it an attractive nerve center for expanding American trade and economic networks.⁴³

While the Bay offered itself as a potential terminus because of its coal, it could not accommodate all of the needs that the end of a railroad required. Its largest fault was its depth. Because of its shallowness, the Bay made access to the shoreline to obtain the much needed coal difficult. Surveyors complained that “the coal at Bellingham Bay must be lightered on board vessels” since “the water being shallow to a considerable distance from the shore.”⁴⁴ The shallowness of the Bay was also cause for concern because the

42. George Gibbs, “Physical Geography of the North-Western Boundary of the United States.” *Journal of American Geographical Society of New York* 4 (1873): 313, 314.

43. House, *The Report of the Secretary of War Communicating the Several Pacific Railroad Explorations in Three Volumes*, 48-52.

surveyors were aware that the size and draft of oceangoing vessels was increasing substantially. Furthermore, if Bellingham Bay were to become a terminus, the problems that the surveyors faced while transporting coal across it would surely beset the larger vessels that they expected would utilize the harbor. Since future shipping needs were difficult to project, McClellan voiced his concern about placing a railroad terminus at any site except Seattle—Elliot Bay was the only body of water that he was completely confident would continue to berth large vessels because of its estimated 50 foot depth. Furthermore, McClellan commented that “the deep water [of Elliot Bay] comes so near the shore that but very short wharves will be required.”⁴⁵ While some, like Lieut. Trowbridge, envisioned that wharves could be easily constructed to cover the shallow tidelands of Bellingham Bay, the reports lacked unanimous agreement about the prospects of placing a terminus at Bellingham Bay because, simply, the Bay was too shallow to accommodate the uses the surveyors envisioned for it.⁴⁶

Despite its shallowness, the Bay favored other aspects of navigation for nineteenth century observers. Because of its relative isolation from the rougher waters of the Puget Sound and the Strait of Juan de Fuca, the Bay did the service of protecting vessels during stormy weather. Edward Eldridge, a prominent local resident with a self-professed expertise of all things maritime, pointed out this natural advantage of the Bay in a letter that he wrote to Congress. Because of this advantage, he urged the federal

44. House, *The Report of the Secretary of War Communicating the Several Pacific Railroad Explorations in Three Volumes*, 493.

45. House, *The Report of the Secretary of War Communicating the Several Pacific Railroad Explorations in Three Volumes*, 131.

46. Senate, *Reports of Explorations and Surveys, to Ascertain the Most Practicable and Economical Route for a Railroad from the Mississippi River to the Pacific Ocean, Volume VIII, Part V*, 33d Cong., 2d sess., 1856, Ex. Doc. No. 78, 286.

government to improve the Bay and improve the qualities of it that had frustrated the railroad surveyors.⁴⁷

Although the Bay had some natural advantages that aided the type of labor that federal agents found important, it never became a transcontinental railroad terminus, even though some in the adjacent communities vigorously pursued a terminus after the Civil War. Local leaders entertained the last great railroad magnate J. J. Hill several times up through the turn-of-the-century. As a result of his visits, land speculation ran high, especially owing to Hill's waterfront landholdings north and south of Bellingham's port facilities.⁴⁸ In the end, their wishes were left unfulfilled; Hill chose to end his railroad further south of Bellingham Bay.⁴⁹

The reason why Hill repeatedly decided against ending a rail line at Bellingham Bay is uncertain. It may have owed to the fact that no survey over the Northern Cascades had been completed. But the Bay's limitations were likely important reasons as well. Klinge describes Hill as a "capitalist who thought like an engineer" because he paid careful attention to the strengths and limitations of the lands that he purchased. Hill wanted his railroad to end at a deep seaport and he carefully sought out a harbor that fit his vision. Since he had been known to personally inspect his Bellingham Bay properties, he may have determined then that Bellingham Bay did not fit his idea of a

47. House, *Nooksack River, Washington*, 52d Cong., 2d sess., 1892, Ex. Doc. No. 32, 5, 6.

48. "J.J. Hill—C. S. Mellen," *Weekly World-Herald*, August 8, 1902, Center for Pacific Northwest Studies Newspaper Collection, Center for Pacific Northwest Studies, Western Washington University, Bellingham, WA 98225-9123. (Hereafter cited as CPNWS-NC).

49. Beth Kraig, "The Bellingham Bay Improvement Company: Boomers or Boosters?" *Pacific Northwest Quarterly* 80, no. 4 (October 1989), 126-129. Kraig discusses the speculation and fallout of the Great Northern's decision not to construct a terminus at Bellingham Bay.

deep draft port and decided against ending a railroad at a natural terminus that did not favor the human activities he wished to nurture.⁵⁰

50. Klinge, *Emerald City*, 58. For thoughts on J. J. Hill's engineering acumen, see Klinge; "J.J. Hill—C. S. Mellen," *Weekly World-Herald*, August 8, 1902, CPNWS-NC.

Chapter Two

Putting Bellingham Bay to Work

When the Great Northern Railway Company announced that the terminus of what would be the last transcontinental railroad would reach Puget Sound south of Bellingham Bay, the news disappointed both the local community and its distant investors. But their frustration did not sully their dreams of one day making Bellingham Bay a railroad metropolis. This is because they held onto the belief that another transcontinental railroad would be proposed in the future. While these hopes occasionally languished, they could be quickly stoked again, for instance, from a visit by J. J. Hill on his way to inspect his Bellingham Bay properties.⁵¹

But in order for the community to accomplish their goals, they had to be ready. In preparation, some endeavored to complete the railroad survey over the northern Cascades that needed to be finished before a railroad could be planned and constructed.⁵² When it came to the Bay, many in the community welcomed federal efforts to improve its noted limitations (See chapter 1) so that it would appear more attractive to railroad makers.

Even as the Great Northern decided that Bellingham Bay was inadequate, Congress and the Corps were determined to put the Bay to work, to borrow terminology from historian Richard White. In other words, they sought to re-make the energy of the Bay so that it favored human labor—in this case, navigation. This involved dredging the Bay floor; contemplating and making tributary adjustments; and regulating how visitors and residents used the Bay.

51. "J.J. Hill—C. S. Mellen," *Weekly World-Herald*, August 8, 1902, CPNWS-NC.

52. "Surveying in the Mountains," *Weekly World-Herald*, June 6, 1902, CPNWS-NC.

Originally, the federal government took the lead on this front. Although many in the community would later become ardent boosters of Bay improvements, their vision of an improved Bay would diverge from and, at times, conflict with the goals of the federal government in the years immediately following the Great Northern decision. Briefly, these differences surfaced because what the community saw in government plans was a means of making land out of the Bay, while the government viewed its efforts as purely for the benefit of navigation.

The reason that federal agents became interested in improving Bellingham Bay, as well as many other national waterways, developed from their souring relationship with the railroad industry. In 1873, for example, President Grant expressed frustration with the railroads during an annual address to Congress when he cited the “lack of cheap transportation” as a reason for that year’s economic panic. Until the 1887 Interstate Commerce Act was passed, which created a commission to regulate railroads, little could be done to bring down rail costs. Without this ability to directly regulate the railroads, Congress could not act on the President’s warnings. Instead, Congress viewed the prospects of improving the nation’s waterways as a means of indirectly wresting the control that railroads had over transportation rates. According to water policy specialists Robert and William Hull, the Rivers and Harbors Appropriations Act of 1876 (which President Grant signed into law) was the first of many appropriations that sought to create a source of “natural” competition for the railroads by intensively developing national waterways—a goal that, as we shall see, lived on long after the railroad commission had been established. In the matter of a few decades, the social meaning that the federal government had given Bellingham Bay had essentially flipped as Congress, which had

once seen the Bay as a feature of nature that could house a railroad terminus, now viewed the Bay as a regulator of railroads.⁵³

Congress put the U.S. Army Corps of Engineers—which had been reformulated during the Civil War—in charge of this national waterways project.⁵⁴ In addition to maintaining and creating navigable waterways, this agency was responsible for determining proper regulatory measures and deciding which rivers and harbors would serve the larger goals of the Corps most adequately.⁵⁵ The Corps came to Bellingham Bay with these purposes in mind. The recommendations of the Corps led to the turn-of-the-century improvements of the Bay that will be discussed momentarily.

Plans for making a navigable harbor out of Bellingham Bay began rather modestly. Congress assigned the Corps its first task in 1880. In this year legislators passed a rivers and harbors act that provided for a survey of three Puget Sound rivers: the Stillaguamish, Snohomish and Nooksack. Congress desired to know if these rivers could be improved for the commercial betterment of local populations. Col. G. L. Gillespie, along with his assistant engineer Robert A. Habersham, conducted the survey and reported back to Congress via their superior, the Secretary of War.⁵⁶

53. President Ulysses S. Grant, quoted in William J. Hull and Robert W. Hull, *The Origin and Development of the Waterways Policy of the United States* (Washington D.C.: National Waterways Conference, Inc., 1967), 24, chap 5.

54. Shallat, *Structures in the Stream*, 44, 187, 188. The Army Corps of Engineers was a merger of two distinct entities—the Corps of Engineers and the Bureau of Topographical Engineers. President Lincoln combined these separate bureaus during the Civil War.

55. Albert E. Cowdrey, “Pioneering Environmental Law: The Army Corps of Engineers and the Refuse Act,” *The Pacific Historical Review* 44, no. 3 (August 1975): 332. Cowdrey discusses the origins of the Corps’ regulatory powers; Shallat, *Structures in the Stream*, 189, 190. Shallat discusses how the Corps became involved with river and harbor improvements after the Civil War.

56. Senate, *Survey of Certain Rivers*, 46th Cong., 3d sess., 1881, Ex. Doc. No. 39.

After surveying Bellingham Bay and the Nooksack River, Gillespie and Habersham concluded that if these waterways were improved they could handle increased steamer commerce. The respective river deltas, however, were major impediments to increased commerce. Like all Puget Sound tributaries, these rivers suffered from shoaling at their mouths, making navigation to the upriver farming communities tenuous. Regarding the Nooksack River specifically, it was driftwood that was the greatest obstacle blocking steamers from reaching the upstream communities. At the time of his survey, shallow draft steamers could approach and enter the river at all tides because the mouth of the river consisted of mudflats that were completely covered by water to a depth of 1 to 3 feet at low tide. While this depth was too shallow for steamboats to traverse at all tides, three distinct channels had scoured through the tide flats and offered steamers a depth of four feet at low tide—an appropriate depth for steamer traffic. Unfortunately, two of these channels had been blocked by driftwood, which left the navigability of the river in an unreliable state if more debris were to choke off the remaining channel.

Gillespie and Habersham believed that clearing the debris from the mouth of the river would be followed by increased settlement and further development of the basin's commercial agriculture. Also, because the Nooksack Basin was without rail services or good roads, the engineers surmised that the farmers of the fertile region would never market their produce until the basin's most practical entry point at the delta was opened up permanently to shipping.

The engineers suggested a relatively cheap solution to this problem, which was for the government to fund the construction and operation of a snag-boat that would

regularly clear the river and its delta. This recommendation was made more economical because the engineers envisioned that the snag-boat would also work other Puget Sound rivers for the same purpose.⁵⁷ Throughout the 1880s, several congressional appropriations were made for the upkeep of these river deltas, marking the first federally funded improvement of the Puget Sound. All told, Congress spent 67,000 dollars on improving and maintaining these rivers during this period.⁵⁸

In spite of these efforts, the desired outcomes were not quite what the Corps had originally anticipated in 1880. “The operation of the snag boat has done a great deal of good on these rivers,” wrote a Corps engineer at the beginning of the 1890s, “but the amount of money available has never been sufficient to enable the boat to do the necessary and desirable work.”⁵⁹ With regard to the Nooksack, the Corps was unable to remove snags and, as a result, the mouth of the Nooksack continued to inhibit commerce into the basin.

But a decade of relatively ineffective de-slagging did not discourage interest in overcoming this navigational stumbling block. Washington State officials, for instance, showed interest in improving commerce across the Delta. Shortly after admittance into the Union, representatives from this state wasted no time in preparing a memorial for Congress beseeching the latter to remove all obstructions to navigation along the Nooksack. Allen Weir, the Secretary of Washington State, drafted the proposal, which

57. Senate, *Survey of Certain Rivers*, 46th Cong., 3d sess., 1881, Ex. Doc. No. 39.

58. House, *Nooksack, Skagit And Snohomish Rivers, Washington*, 51st Cong., 2d sess., 1890, Ex. Doc. No. 38, 2.

59. House, *Nooksack, Skagit And Snohomish Rivers, Washington*, 51st Cong., 2d sess., 1890, Ex. Doc. No. 38, 2.

was then endorsed by both houses of the state legislature in early December of 1889. The memorial touted that the Nooksack Basin had the “most extensive agricultural valley in Western Washington.” But because the river was still too dangerous for steamer traffic, the produce of the valley could not reach market. While railroads had extended into several parts of the basin in the ten years following the 1880 survey, state legislators did not view the presence of rail as beneficial to the growth of commercial agriculture. They claimed that farmers were forced to pay from 16 to 20 dollars per ton to ship produce to Bellingham Bay. The memorial declared that “the produce of the farmer [was] rendered valueless, transportation taking its price, rendering that industry to little or no profit.” In their view, an improved Nooksack River would be the best way to develop and transport the agricultural resources of the valley to Bellingham Bay and beyond, thus bypassing exorbitant freight rates.⁶⁰

The pleas coming from the Washington State Legislature seem to have been heard because Congress authorized more surveys of the Nooksack in order to determine the costs and benefits of improving it further. As a result of these surveys, which were performed during the 1890s, more ambitious plans were devised for improving the river and the Bay into a modern conduit for navigation.

While assessing these waterways, the Corps discovered new problems. During the 1891 survey, engineers found that the mouth of the river was no longer passable at all tides because the navigable channels that had once cut through the tide flats no longer existed. Three causes explain this development: the aforementioned change of the river’s

60. Senate, *Memorial of the Legislature of the State of Washington Relative to the Improvement of the Nooksack River [sic]*, 51st Cong., 1st sess., 1890, Mis. Doc. No. 69.

course (see chapter one), increased non-Native settlement of the Nooksack Basin, and the blockage of the mouth by log booms.

Natural sedimentation was largely responsible for the creation of the western shoreline before humans came to the region. Therefore, when the river altered its course into Bellingham Bay, the newest obstruction to navigation was likely the result of the sedimentation that had naturally flowed into the Bay over the course of roughly thirty-five years.

But the new obstruction also resulted from increased upriver settlement where farmers were clearing away forest for agriculture (later, the logging industry would finish the job of denuding the basin that farmers had started). Because the forests of the basin held sediments in place, their removal allowed the annual floods to easily wash away large amounts of material from the floodplain and into the Bay.⁶¹ Thus, the obstruction at the delta was likely a product of human induced sedimentation along with naturally occurring sedimentation.

Lastly, newly constructed log booms were also clogging the river. Towards the end of the nineteenth century, logging companies, such as the Bellingham Bay Boom Co., had placed these booms at the mouth of the river in order to catch logs sent down river. These logs were then received by the burgeoning lumber industry, which had sprouted along the eastern shoreline of Bellingham Bay, for processing and/or shipping. One particular boom was troublesome for navigation because it largely restricted steamer

61. Smelser, "Sequent Occupance of the Nooksack River Valley and the Influence of Man on the Rate of Sediment Delivery to Bellingham Bay," 79, 86. Smelser demonstrates that the growth of the Nooksack Delta was the result of removing forest vegetation from the basin. Enlargement of the delta was perceptible between 1855-1891, but doubled in size in the following fourteen years. And then another four-fold after 1905, when the logging industry was at its peak.

access to the river except through an ill kept “trip,” which in theory could be opened for ships to pass through. But this trip, like the entire boom, was constantly collecting detritus and further jamming the river, making navigation through the structure impossible.

It is difficult to say for certain what caused the newest obstructions; however, the combination of all three developments was likely to blame.

Remarkably, Congress and the Corps did not give up on the improvement. In fact, they responded to these new threats quite ardently. Their actions demonstrate just how intent they were on making the Bay a place for commerce. Furthermore, they would no longer allow changes to occur to the Bay (intentional or otherwise) that complicated their efforts to make the Bay serve this purpose.

When Captain Thomas Symons of the Corps learned of the driftwood jam and began to investigate, he became concerned that the increasing sediment load of the river might have a more drastic impact on the navigability of the whole Bay and not only in the vicinity of the Nooksack Delta. His concern was that the sedimentation would fill the entire harbor (an assessment, however, that he would later discredit). In 1892, Symons submitted a report to Congress recommending that the government pay the cost of protecting the Bay from filling. His evidence for this alarming rate of sedimentation came from visiting with longtime residents of Bellingham Bay. Edward Eldridge, one of these residents, offered a lengthy letter to Symons, which was subsequently published along with the engineer’s report to Congress. In this letter, Eldridge explained that both natural and human induced sedimentation had not only caused obstructions at the delta, pushing the tide flats out a mile and a quarter over the preceding forty years, but had

drifted over to the commercially viable part of the northwesterly harbor as well, further impeding navigation there. Eldridge estimated that the already shallow harbor was filling at the astonishing rate of one foot per year.⁶²

Symons proposed drastic measures be taken to deal with these perceived threats to navigation. He, along with Eldridge, recommended that the Corps force the Nooksack River into Lummi Bay in order to limit sedimentation coming into Bellingham harbor. Additionally, Symons proposed another solution: if diverting the river proved too difficult, the Corps should at least dike the mouth of the river so that its silty waters would be forced away from the harbor's northeasterly port facilities. But before any action was taken, Symons recommended that another, more extensive survey be conducted to critically assess both the problem and the potential solutions.⁶³

A reason that Symons recommended a further assessment was because some in the "community" (Symons did not identify exactly to whom in the community he was referring) were averse to a planned diversion. He reported that while some believed that a diversion would likely protect the Bay from filling with sediments, it would also disrupt the biological makeup of the Bay, which also protected navigation. Their concern was with a non-native marine snail, which they referred to as simply "teredo."⁶⁴ This snail had caused much damage to both boats and wharfs. Most likely, the snail found its way

62. House, *Nooksack River, Washington*, 52d Cong., 2d sess., 1892, Ex. Doc. No. 32, 3-5.

63. House, *Nooksack River, Washington*, 52d Cong., 2d sess., 1892, Ex. Doc. No. 32, 3-5.

64. The Taxonomicon, "Taxon: Genus *Teredo*," under "Hierarchy," Universal Taxonomic Services <http://taxonomicon.taxonomy.nl/TaxonTree.aspx> (accessed July 23, 2009). *Teredo* is actually a genus and not a specific species; House, *Nooksack River, Washington*, 52d Cong., 2d sess., 1892, Ex. Doc. No. 32, 4. The precise species that Symons referred to was not identified; Klinge, *Emerald City*, 60. *Teredo* caused problems for navigation in at least one other part of Puget Sound. Klinge briefly mentions that *teredo* were also infesting the wharves of Elliot Bay.

into Bellingham Bay in the same fashion that it had entered other parts of the Puget Sound: within the hull of a wooden ship (it was also known by the colloquialism “shipworm” for this reason). During the late nineteenth century, it was commonly thought that shipworm were harmed by changes in salinity—for instance from the influx of fresh water (this belief was only recently confirmed by scientists).⁶⁵ Symons’ report indicates that some residents of the Bay thought this to be true. As a result, Symons reported to Congress that the benefits of any proposed diversion of the Nooksack be carefully weighed against the possible increase of teredo “as there are persons,” he writes, “who think [that the impact of the Nooksack River on teredo] an advantage paramount to the disadvantage of the sediment brought down by the river.”⁶⁶

Later in the decade, while conducting the follow-up survey that he himself had recommended, Symons found that some of his earlier assessments were both false and true. For instance, the Nooksack Delta was indeed growing. But there was no evidence that sedimentation had built up the mudflat in front of the northeasterly parts of the harbor, as Symons had been led to believe by Eldridge. Symons compared two surveys of Bellingham Bay to determine this. The Coast Survey data that was gathered in 1855, compared with the recently completed Coast and Geodetic Survey of 1891, revealed to him that the depth of the Bay in front of Bellingham harbor was nearly identical in both years. In his view, navigation in the harbor was not threatened by increased

65. John I. Spicer and Jarl-Ove Strömberg, “Metabolic Responses to Low Salinity of the Shipworm *Teredo navalis* (L.),” *Sarsia* 88 (October 2003): 302-305. A scientific study confirmed the belief that salinity harmed species of shipworm.

66. House, *Nooksack River, Washington*, 52d Cong., 2d sess., 1892, Ex. Doc. No. 32, 4.

sedimentation and thus drastic measures, such as diverting the Nooksack, were not necessary.⁶⁷

Furthermore, Symons learned that the teredo infestation was even worse than he was earlier led to believe. It had inflicted much damage to the important wharves that lined the Bay from the City of New Whatcom to the City of Fairhaven. “So important is this fresh water considered,” Symons had learned, “that a strong protest would go up against the project of deflecting [the river] from the harbor.” The teredo infestation and its negative impact on commerce, via wharf and ship damage, was an important reason why Symons decided against a drastic improvement of the river.⁶⁸

David B. Ogden, an assistant engineer for the Corps, added that a diversion of the river would likely hinder, rather than improve, navigation. He reported that the rough water approach to Lummi Bay was too dangerous for smaller vessels, which were the principal users of the river. Bellingham Bay provided a much safer entrance to the river and was another reason why a potential diversion was tabled.⁶⁹

While the Corps still planned to improve the choked Nooksack Delta, it would have to be in a lesser way. Unfortunately, the legality of such an improvement became a problem that eventually brought the federal government into conflict with the Bellingham Bay Boom Co. The details of this legal dispute are discussed below.

67. House, *Preliminary Examination of Bellingham Bay, Washington*, 53d Cong., 3d sess., 1895, Ex. Doc. 228, 2.

68. House, *Preliminary Examination of Bellingham Bay, Washington*, 53d Cong., 3d sess., 1895, Ex. Doc. 228, 3.

69. House, *Survey of the Nooksack River, Washington*, 53d Cong., 3d sess., 1895, Ex. Doc. No. 276, 5.

As the nineteenth century neared a close, many saw the opportunity for expanding commerce in the northern Puget Sound. Moreover, they had a vision for creating a commercial network that was not reliant on rail transportation. Engineers and legislators both saw the potential to realize these goals through a reengineering of Bellingham Bay. While the limitations of the Bay did not discourage them (as it had for the railroad surveyors of a previous generation; see chapter one) their efforts to improve the Bay proved easier to plan than execute. The failed de-snagging operations are an example of this. Moreover, the increasing rate of sedimentation along with the introduction of teredo created new problems for engineers as they were forced to choose between silt and a wharf-hungry marine snail. Though they viewed teredo as the greater of the two evils, the engineers were still mired by the clogging delta.

One would expect that this worsening scenario would bring an end to further Bay improvements. Yet, the Corps would continue to push for grander alterations of the Bay in the coming years, namely through dredging. Moreover, they would even push for these improvements after new navigational problems would emerge—specifically regarding dumping (see below). Their continued interest in improving the Bay underscores how important it was to them as a regulator of transportation rates and a symbol of economic development.

By 1895, the Nooksack River improvement was no longer going to be a dramatic scheme for the reasons discussed, but the Corps was still unable to proceed with the removal of the obstruction at the mouth of the river due to a legal dispute between the justice department and the Bellingham Bay Boom Co. The latter, it seems, had constructed a

boom for catching logs floated downstream by loggers. These logs were then transported to the nearby mills at New Whatcom and Fairhaven or rafted elsewhere along the coast for processing. But because of the boom's faulty trip (a gate that opens and closes for river traffic) detritus had collected in the boom to the extent that the structure was obstructing navigation. Since the trip failed to open and allow vessels through the boom, the federal government sued the company for obstructing navigation. *United States v. Bellingham Bay Boom Co.* was originally decided in favor of the boom company; however, the ruling, which is discussed in more detail below, was appealed all the way to the U.S. Supreme Court where this court overturned the previous rulings.

The suit is important because it demonstrates that not everyone viewed the purpose of marine environments in the same way. Some in the community, like the owners of the boom, had different ideas about what types of human activities the Bay should facilitate. In the past, Congress and the Corps had to contend with the navigational problems caused both by sedimentation (both natural and unnatural) and the introduction of teredo. But luckily for them, the Bay (like "Nature" more generally) is not an active agent that has its own predisposed meaning or inherent purpose; therefore, the Bay cannot actively revolt against human attempts to alter its features. The issue over the boom, however, represents the first of many conflicts amongst Bay residents over what types of activities the Bay should complement; in other words, it draws attention to the fact that some Bay residents had different ideas about the social meaning of their adjacent harbor. The suit also points to a larger trend on the part of the federal government to secure more power over national waterways in order to legalize its conception of the meaning of these environments for others to follow.

In order to understand the importance of the dispute over the log boom, it is important to understand its relationship with the evolving legal and legislative discourses regarding national marine water law. A particularly important dispute that will shed light on the state of marine law is *Willamette Iron Bridge Company v. Hatch*. This case, which the U.S. Supreme Court cited in the decision to *United States v. Bellingham Bay Boom Co.*, was decided in 1888. The case involved the Willamette Iron Bridge Co. and its plan to build a bridge across the Willamette River at a point within the city limits of Portland, Oregon. When the State of Oregon passed legislation assenting to the construction of the bridge, two Portland businessmen, who were unhappy with the proposed bridge, moved to stop its construction. The businessmen filed suit and asserted that the bridge company would violate federal law by constructing the bridge. They maintained that the bridge company required, but did not possess, the permission of the Secretary of War to proceed.⁷⁰

The plaintiffs offered two arguments why the planned crossing should be construed as a violation of federal law. First, they argued that because the river carried commerce, it would be a violation of U.S. law to obstruct the river. This argument invoked the commerce clause of the U.S. Constitution, which allows U.S. citizens the right to move freely about navigable rivers. But upon review, the U.S. Supreme Court found this argument specious; they ruled that the commerce clause applied only to interstate waterways. Since the Willamette River was wholly within the state of Oregon, this law did not give the federal government any jurisdiction over the river (the Supreme Court did not agree with the plaintiff's creative claim that tidal effects from the Pacific

70. *Willamette Iron Bridge Co. v. Hatch*, 125 U. S. 1 (1888).

Ocean made the Willamette River, up to Portland, part of a larger interstate water system). Therefore, the bridge company did not require federal approval for the project, only state approval.⁷¹

The other argument that the plaintiffs offered was that because the government had already allocated funds for improving the Willamette, federal jurisdiction over the entire river was implied. The court, however, denied this claim as well because the Willamette River appropriations did not explicitly assert federal power over the entire river.⁷²

While the final ruling resolved the bridge dispute, the decision had far reaching implications. Mainly, the case demonstrated that the federal government lacked authority over many other intrastate waterways. This discovery was ironic given that Congress was beginning to develop national waterways more intensively. The Justice who wrote the decision was unequivocal about the fact that Congress had not yet passed legislation that permitted federal officials the right to police intrastate waterways and that legislators simply needed to do so. An excerpt of the decision reads as follows: “Until Congress acts respecting navigable streams entirely within a state, the state has plenary power...”⁷³

It was not long after the 1888 ruling that Congress enacted this needed legislation. In fact, several legislators had tried to pass such a law in previous years; however, these bills died without a vote. Finally, in 1890, an amendment to the Rivers and Harbors Act of 1890 extended more federal power over navigable waterways. Legislators found it

71. *Willamette Iron Bridge Co. v. Hatch*, 125 U. S. 1 (1888).

72. *Willamette Iron Bridge Co. v. Hatch*, 125 U. S. 1 (1888).

73. *Willamette Iron Bridge Co. v. Hatch*, 125 U. S. 1 (1888).

easier to slip the law into a rivers and harbors appropriation because these appropriations were typically utilized by Congressmen as logrolling bills during the late nineteenth century.⁷⁴ The anti-obstruction law that legislators finally agreed to was incorporated under Section 10 of the 1890 Rivers and Harbors Act (hereafter, “Sec. 10”). It stated “[t]hat the creation of any obstruction, not affirmatively authorized by law, to the navigable capacity of any waters, in respect of which the United States has jurisdiction, is hereby prohibited.” (Note the clause “not affirmatively authorized by law” for the moment) Holding what it thought to be an unambiguous mandate to manage all navigable waterways, the justice department proceeded to undermine the legal obstruction that prohibited the Corps from clearing the physical obstruction at the mouth of the Nooksack River.

Unfortunately, the legal battle that ensued revealed that the new anti-obstruction law contained problems that made it ineffective. When *United States v. Bellingham Bay Boom Co.* began in May of 1891, the U.S. Attorney General claimed that the boom company had violated the newly enacted Sec. 10. and that the federal government had the right to remove it. However, both the Circuit Court for the District of Washington, Northern Division and the Circuit Court of Appeals for the Ninth Circuit disagreed. They perceived some wiggle room for interpreting Sec. 10—in their view, the new law was not meant to undermine preexisting state law as the U.S. Attorney General had argued it was intended to do. Thus these two courts did not interpret the phrase “not affirmatively

74. Cowdrey, “Pioneering Environmental Law,” 333-338. See for a discussion of the origins and passage of Sec. 10; Edward Lawrence Pross, “A History of Rivers and Harbors Appropriations Bills, 1866-1933” (PhD diss., The Ohio State University, 1938), 42-90. See Pross for an interpretation of how the rivers and harbors appropriations became major logrolling legislation.

authorized by law” to mean solely federal law. With regard to *United States v. Bellingham Bay Boom Co.*, the courts ruled that the boom company had obtained authorization from the state government before the passage of Sec. 10, therefore the obstruction was still legal.⁷⁵

Finally, after a ten year legal bout, the case was appealed to the U.S. Supreme Court where the previous rulings were overturned. Interestingly, the Justices agreed with the lower courts—because the boom had been erected before Sec. 10 had been passed, it was legal. However, they discovered that the boom company had not entirely complied with Washington State law because the boom did not provide room for vessels to pass along the shoreline, which the law clearly stipulated. Therefore, the entire obstruction was not legitimate under preexisting state law. As a result, the previous rulings were overruled and the log boom could no longer block the Nooksack River since the state could not authorize a new boom as the result of Sec. 10. The delta could now be improved.⁷⁶ A rivers and harbors act provided the funds for the removal of the jam after the turn-of-the-century (the outcome of this improvement will be discussed in the following chapter).

While the federal government emerged the victor, federal officials found that they still lacked the power to police Bellingham Bay completely, as well as waterways like it. While Sec. 10 granted the federal government more power to regulate intrastate commerce, the ambiguous wording of the law made it ineffective in some instances. Besides the ambiguity that surfaced in *United States v. Bellingham Bay Boom Co.*, Sec.

75. *United States v. Bellingham Bay Boom Co.*, 176 U.S. 211 (1900).

76. *United States v. Bellingham Bay Boom Co.*, 176 U.S. 211 (1900).

10, it was overly explicit about what could not be thrown into waterways. Dumpers, in effect, retained the right to obstruct navigable waters with things that the law did not explicitly ban. Also, the burden of proof was on the justice department to prove that the material emitted into a given waterway was done so with explicit malice towards navigation. According to historian Albert Cowdrey—who has researched the origins of these anti-obstruction laws—jurists of the period often refused to convict dumpers unless malice was evident, making enforcement of Sec. 10 nearly impossible since most dumpers were interested in disposing of waste and not dumping to intentionally obstruct navigation.⁷⁷

During the 1890s, anti-obstruction proponents enacted new legislation to solve these problems. Sec. 13 of the 1899 Rivers and Harbor Appropriation, which is also commonly referred to as the “Refuse Act,” clarified many of the problems with Sec. 10.⁷⁸ The Refuse Act explicitly stated that only obstructions authorized by the federal government were legal. The law also went further by redefining what a legally permissible obstruction was. Paradoxically, the Refuse Act was even more ambiguous on what could be dumped into navigable waters, making it more effective. The law did not explicitly state what materials were illegal to throw into navigable waterways and added the provision that the Secretary of War was ultimately responsible for granting permission to would-be dumpers on a case-by-case basis (several decades later, this provision was famously reinterpreted by the Supreme Court during the water quality

77. Cowdrey, “Pioneering Environmental Law,” 339.

78. Cowdrey, “Pioneering Environmental Law,” 331, 338-341.

debates of the 1960s and 1970s to mean that the Corps had the right to set up a permit program in order to regulate industrial pollution).⁷⁹

The boom incident was important for several reasons. First, it demonstrated that it was not a forgone conclusion that marine waterways like Bellingham Bay were meant to service navigation above all else. The boom company, for instance, held different ideas about what the Bay was and what types of labor that it should help facilitate. As a result, Congress took control and created laws that gave the Corps the power to decide how best to manage national waterways, ensuring that federal interests would come first. Consequently, the judicial and legislative branches gave the federal government an enormous amount of power over marine landscapes, effectively legalizing the social meaning that they had constructed of these landscapes.

Unfortunately for Congress and the Corps, the boom incident was only a prelude to a larger dispute between those interested in improving the Bay for the sake of navigation and those who saw it as a place that facilitated other forms of labor. As Congress and the Corps planned for a larger reengineering of the Bay, new conflicts over the Bay and how it should be used would emerge as the rapidly expanding waterfront timber processing industries would come to view the Bay as an excellent location to dump the vast amount of sawdust that their factories produced. The manner in which this new detriment to navigation was handled by federal officials, and the way in which the Refuse Act was successfully employed to halt dumping, is where we will turn.

79. Cowdrey, "Pioneering Environmental Law," 338, 339, 346-349. Cowdrey discusses the difficulties of enforcing Sec. 10. and also how the Refuse Act was reinterpreted by the Nixon administration as a permit program.

While the U.S. Supreme Court was determining whether or not the federal government had the right to regulate and control the underwater landscape of the Bay, Congress charged ahead and planned another navigational improvement. In 1897, Congress instructed the Corps to assess again the major problems that commercial pilots had with the harbor and whether other improvements were necessary to help expand commerce. The Corps reported that the region's commerce was generally good and worthy of protection. Surveyors determined that New Whatcom was the largest city north of Seattle and that it was the major distributing point for Whatcom, Skagit, Island and San Juan Counties. Unfortunately, the harbor facilities for both sail and steam powered vessels were poor because ships found it difficult to reach the northeasterly portions of the harbor where the downtown business district resided because of shallow mudflats that were bare at low tides. "The relief that is desired," wrote a Corps engineer, "is for a channel to be dredged from the deep water in toward the city through the mudflats." The Corps recommended that the sediments in the vicinity of Whatcom Creek, a stream which coursed through New Whatcom and emptied into the northeasterly part of the harbor, be dredged. If these tidelands could be successfully deepened, the engineers expected that an underwater channel would connect the shoreline with the deeper waters of the Bay. The improvement would benefit boats and steamers with drafts of twelve feet or less, allowing them to remain at the port facilities at all tides. This was a major benefit because all vessels, no matter how small, had to vacate the terminal before the tide receded or otherwise risk grounding. The cost of Document 80, as the project was often referred to, was to be paid for by the government.⁸⁰

Unlike the legal dilemma that mired the Nooksack improvement, the legality of Document 80 was not in question because the federal government had already obtained authority over certain parts of the northeasterly harbor. Once Washington achieved statehood, the Secretary of War approved a system of abstract harbor lines that cut through the mudflats and provided three publicly owned waterways from the shoreline to the deeper waters of the Bay. These waterways are known as Whatcom Creek Waterway, I & J Street Waterway and Squaticum Creek Waterway. (In addition to creating these public waterways, the harbor commission also carved up the remaining mudflats into abstract lots that were then sold off as private property).⁸¹

After Congress authorized both Document 80 and the improvement of the Nooksack River, the Corps learned of new navigational threats posed by timber processors. In 1902, Major John Millis, who was head of the Corps' recently created Seattle District Office, and who was also responsible for planning and overseeing these new improvements, discovered these threats while conducting surveys. He found that the local lumber mills were using the Bay as a dumping ground for the refuse that their factories had created. Dumping held potential for disrupting navigation because, as the Corps learned from local residents, the mixture of sawdust and river sediment quickly sank.⁸² Once he was aware of the extent of dumping, Millis spearheaded a roughly two year confrontation with the local mills. By the end of 1903, he had successfully stopped

80. House, *Survey of Bellingham Harbor from Deep Water to Mouth of Whatcom Creek, at New Whatcom Wash.*, 55th Cong., 1st sess., 1897, Document No. 80. The Corps often referred to its improvements by the name of the House or Senate Document that contained its recommendations.

81. House, *Survey of Bellingham Harbor from Deep Water to Mouth of Whatcom Creek, at New Whatcom Wash.*, 55th Cong., 1st sess., 1897, Document No. 80, 3.

82. House, *Nooksack River, Washington*, 52d Cong., 2d sess., 1892, Ex. Doc. No. 32, 5. Edward Eldridge made this observation.

the practice of dumping, which was necessary if the navigational improvements were to be successful in the long term.

Surprisingly, the Corps showed little concern over sawdust dumping before Millis took over the Seattle District Office. Their survey reports of the 1880s and 1890s did not mention much about it. The only surviving record that mentions anything about dumping was not even written by a Corps engineer. Instead, it was written by Eldridge. In their 1892 report to Congress, the Corps included the aforementioned letter authored by this prominent resident. In it, he recommended that “strict laws” be established to halt sawdust dumping. Although his recommendation was forcefully stated, it was a mere side note to the primary content of his letter, which was to recommend that the Nooksack be diverted. Aside from this comment, the Corps never explicitly mentioned any concern about the impact of dumping on navigation in their reports.⁸³

It is likely that the Corps was not concerned with dumping because the timber industry was still in its infancy when army engineers first became acquainted with the Bay. While the City of New Whatcom was originally founded as a mill settlement in the 1850s, the city’s timber industry did not begin to grow until after 1890. By 1900, the timber industry was maturing rapidly, accounting for much of the economic activity of the region. According to a report from *The Evening Herald*, a local newspaper, the number of lumber mills that operated in the county jumped from six to fifteen between 1900 and 1903.⁸⁴ Because the northeasterly harbor improvements coincided with the

83. House, *Nooksack River, Washington*, 52d Cong., 2d sess., 1892, Ex. Doc. No. 32, 5.

rapid growth of the timber industry, it is likely that the Corps was unaware of the growing practice of sawdust dumping.

However, the Corps became aware of this expanding industry by 1902 when Millis suspected that the local mills were now dumping sawdust into the Bay to the degree that it would inhibit the efforts of the Corps to improve the Bay for navigation. He consequently took action. In spite of this new scenario, the Corps did not pull the plug on the improvements. Instead, its engineers vigorously pursued improvements, which required them to stop dumpers. The Corps drew on the newly enacted Refuse Act to protect the Bay from dumpers.

The manner in which the Corps went about enforcing the Refuse Act at Bellingham Bay is interesting and worthy of discussing in more detail. This is because historians have been unable to determine how this law was utilized prior to its reformulation during the era of the environmental reform. In the 1960s and early 1970s, many had become concerned that the nation's water quality had worsened. Those who had tried to address this problem were surprised to find that the Corps had long ago obtained a powerful mandate to regulate industrial dumpers yet did not use: the Refuse Act. Legal scholars and historians of the time tried to understand better the history of this power as politicians and environmentalists pushed the courts to reinterpret it as an anti-pollution law in addition to its noted function as an anti-obstruction law. Historian Albert Cowdrey, for instance, has successfully researched its origins as well as the origins of other anti-obstruction laws. But Cowdrey has downplayed the importance of this law

84. "Statistics on Two of the Counties Industries," *The Evening Herald*, July 11, 1903, CPNWS-NC; Smelser, "Sequent Occupance of the Nooksack River Valley and the Influence of Man on the Rate of Sediment Delivery to Bellingham Bay."

between the time that it was created and then reinterpreted; he referred to it as merely “a minor statute to protect navigation.”⁸⁵

Part of the reason why the history of the Refuse Act may have seemed unimportant to historians prior to its reformulation is because the law was not always enforced in typical legal forums, making record of its enforcement seem scant. At Bellingham Bay, the Refuse Act was invoked regularly, and effectively, in the Corps’ effort to halt dumping and protect navigation. But interestingly, the Corps rarely attempted to enforce it in the courtroom. They threatened legal action on a few occasions, but formal legal recourse proved unsuccessful. Instead, the law functioned as a “stick” that was used in tandem with “carrots,” such as the various congressional appropriations to fund Bay improvements. By threatening to withhold congressional appropriations until the Refuse Act was complied with, the Corps was able to utilize this law effectively outside of the courtroom. Thus, the reason why Cowdrey and others may have considered the Refuse Act to be of little importance for so long after its passage was because the enforcement of the law did not leave the usual courtroom tracks, at least in the case of Bellingham Bay.

The first action that Millis took against the lumber mills, which proved unsuccessful, was to simply write the suspected culprits and request their voluntary compliance with the Refuse Act. One of the earliest responses of which there is record came from the Whatcom Falls Mill Co. In their correspondence with Millis, the Loggie Brothers, the mill operators who were leasing Whatcom Falls Mill from the city, openly

85. Cowdrey, “Pioneering Environmental Law,” 331, 332, 341; Diane D. Eames, “The Refuse Act of 1899: Its Scope and Role in Control of Water Pollution,” *California Law Review* 58, no. 6 (November 1970): 1444.

admitted to dumping and were somewhat antagonistic to any request that they discontinue the practice. The Loggie Brothers were fully aware that dumping was now outlawed; however, they carped that compliance would be an undue burden on their operations because it would require them to furnish a refuse burner. This was a cost that they were unwilling to pay because they claimed that their lease was already too expensive.⁸⁶ By the end of the correspondence, the Loggie Brothers had conceded nothing. According to Millis' report to his superiors in Washington D. C., the Loggie Brothers offered no alternative to dumping and plainly "desire an indefinite postponement of the work of harbor improvement."⁸⁷

The Loggie Brothers' reaction to Millis' request was rather extreme in comparison to the responses from other mill owners and managers. Of the records that exist, none contained recommendations that Major Millis forgo the improvement. Those that responded were actually cooperative. They suggested that they were doing one or all of the following: complying with the law, halting the practice of dumping and/or installing refuse burners.

While most of the responses seemed to be cordial, it is uncertain if they were entirely sincere. This is because some of the respondents were later caught dumping after pledging compliance with the law. For example, the Bellingham Bay Improvement Co. (BBIC), which operated a mill just south of The Whatcom Falls Mills Co., was quick to

86. Whatcom Falls Mill Company to Maj. John Millis, May 30, 1902, Folder 1, Box 87, Letters Recd. Relating to Specific River and Harbor Improvements, 1903-1906 (hereafter cited as "Letters Recd."), Seattle District Office (hereafter cited as "SDO"), Record Group 77 (hereafter cited as "RG 77"), National Archives and Record Administration-Pacific Alaska Region-Seattle (hereafter cited as "NARA-Pac-Alaska Region[Sea]").

87. Maj. John Millis to Brig. Gen. Geo. L. Gillespie, August 16, 1902 (hereafter, Millis to Gillespie), Folder 1, Box 87, Letters Recd., SDO, RG 77, NARA-Pacific Alaska Region (SEA).

deny any dumping allegations, claiming instead to be burning all of their refuse. Furthermore, the owners of the mill offered to support Millis in his efforts to control dumping when they offered to “heartily co-operate” with other local lumber companies to “meet all requirements” of the rivers and harbors act that provided congressional funds.⁸⁸ Their sincerity was questionable; months later, the Corps caught the BBIC illegally dumping into the Bay.⁸⁹

After his unfruitful correspondence with the Whatcom Falls Mill Co., Millis adopted a firmer approach to mill dumping when he requested permission to prosecute those mill companies that he believed were violating the law.⁹⁰ This decision would do little to advance his cause because Millis was unable to determine exactly which mills were dumping. Because Millis only had engineers at the Bay to conduct occasional surveys, he had only a limited ability to determine which mills were dumping. As a result, the mills were able to flout the Refuse Act and conduct business as usual for most of 1902 and 1903. Consequently, the Whatcom Falls Mill Co. became an easy early target for Millis because it was the only mill that he was sure had been dumping. Also, because the Loggie Brothers refused to install a refuse burner, there was nowhere else for the sawdust to go except beneath the water; this fact gave Millis the certainty he needed to proceed with a suit.

88. Agent for the Bellingham Bay Improvement Company to Maj. John Millis, June 12, 1902, Folder 1, Box 87, Letters Recd., SDO, RG 77, NARA-Pacific Alaska Region (SEA).

89. Inspector H. S. Shorey to Maj. John Millis, March 23, 1903, Folder 1, Box 87, Letters Recd., SDO, RG 77, NARA-Pacific Alaska Region (SEA).

90. Millis to Gillespie, Folder 1, Box 87, Letters Recd., SDO, RG 77, NARA-Pacific Alaska Region (SEA).

In October of 1902, the Whatcom Falls Mills Co. became the first mill company that Millis requested U.S. Attorney Jesse A. Frye prosecute in violation of the Refuse Act. The lawsuit, however, was not protracted like other federal cases (such as *United States v. Bellingham Bay Boom Co.*, which took almost ten years to decide) since the mill that the Loggie Brothers operated was mostly lost in a fire immediately after the suit began.⁹¹ There is no mention of foul play, probably since mill fires were common in the local lumber and shingle industries.⁹²

Now that the Whatcom Falls Mill Co. was out of the picture, Millis urged Frye to prosecute other mill men. But the mills that Frye threatened with lawsuits were able to convince him that they were either not dumping or in the process of installing refuse burners and/or bulkheads to their waterfront properties so that sawdust would not reach the Bay.⁹³ The Morrison Mill Company was one such mill. The mill owners responded affirmatively to federal requests to construct a refuse burner and to halt dumping. Frye was so satisfied with their outward intimations of compliance that he decided against proceeding with prosecution.⁹⁴ (Ironically, the Morrison Mill Company was also later caught dumping into the Bay after making assurances to the contrary.)⁹⁵

91. U.S. Attorney Jesse A. Frye to U.S. Attorney General, October 22, 1902, Folder 1, Box 87, Letters Recd., SDO, RG 77, NARA-Pacific Alaska Region (SEA).

92. While conducting my research, I came across several instances of mill fires occurring along Bellingham Bay's waterfront. The following are a few examples: "Murchison Mill Plant and Yards Destroyed by Fire," *The Evening Herald*, March 6, 1903, CPNWS-NC; "Big Loss By Fire," *Evening Herald*, August 8, 1903, CPNWS-NC; "Globe Mill In Ruins," *Bellingham Herald*, September 4, 1904, CPNWS-NC.

93. U.S. Attorney Jesse A. Frye to U.S. Attorney General, December 6, 1902, Folder 1, Box 87, Letters Recd., SDO, RG 77, NARA-Pacific Alaska Region (SEA).

94. U.S. Attorney Jesse A. Frye to U.S. Attorney General, December 6, 1902.

During the latter half of 1902, Millis, who was satisfied that compliance had been reached, tried to gain a better perspective on the dumping matter. He sought the help of the New Whatcom City Council to accomplish this. Millis requested that the councilmen furnish the names of the mills that they believed to be violating the law.⁹⁶ The council had already pledged their support for the harbor improvement, so they were a likely ally for Millis—the council went so far as to pass and forward a city resolution to the War Department that declared that they would in no way interfere with the improvement.⁹⁷ Mayor Ed. E. Hardin offered to help Millis by referring the matter to the city marshal. Aside from the Loggie Brothers, the marshal determined that the Bellingham Lumber and Shingle Company of the town of Fairhaven was the only mill company illegally dumping. The marshal did not rule out the possibility that other mills were dumping, but if they were violating the law, they were doing so at night and very quietly.⁹⁸

Although city officials were quick to help Millis so that they would receive the needed appropriation sooner, their zeal to begin the improvement may have shielded them from taking an earnest look at their waterfront industries. Several times during 1902 and 1903, they urged the Corps to begin the improvement after declaring that all dumping had ceased when this was not the case. An especially poignant city council resolution that was passed in February 1903 informed Millis that all of the mills had

95. Inspector H. S. Shorey to Maj. John Millis, from March 20, 1903 to May 18, 1903, Folder 1, Box 87, Letters Recd., SDO, RG 77, NARA-Pacific Alaska Region (SEA).

96. "Opening of the Nooksack Will Begin at Once," *Weekly World-Herald*, September 19, 1902, CPNWS-NC.

97. New Whatcom City Council to Maj. John Millis, August 11, 1902, Folder 1, Box 87, Letters Recd., SDO, RG 77, NARA-Pacific Alaska Region (SEA).

98. Ed. E. Hardin, Mayor of New Whatcom, to Maj. John Millis, October 17, 1902, Folder 1, Box 87, Letters Recd., SDO, RG 77, NARA-Pacific Alaska Region (SEA).

complied with the law.⁹⁹ Ironically, on Millis' next visit to the Bay, he quickly discovered sawdust afloat and determined that the sawdust had emanated from the recently refashioned Loggie Brothers mill. This last incidence of dumping seems to have been enough for Millis because he rescinded the order to commence the project.¹⁰⁰

Alfred Black, the president of the Fairhaven Commercial Club, who would later become a mayor of the City of Bellingham (the communities of Bellingham Bay, aside from the Lummi Nation, incorporated in 1904) quickly apologized to Millis in a letter. He explained that the municipal lease of the Loggie Brothers was about to expire and not likely to be renewed by the City of New Whatcom, which would end any future Loggie Brothers transgressions. But Black also stressed to Millis that the actions on the part of this mill were not representative of the rest of the mills. Black also claimed to have toured all of the mills himself. Thus, he confidently gave Millis his assurance that the rest of the mills were acting within the bounds of the law and that the improvement should commence.¹⁰¹ In addition, both the Mayor of New Whatcom and the president of this city's commercial club assured Millis that all dumping had ceased via telegram.¹⁰²

But after the latest incidence of dumping, Millis decided to place his own inspector at Bellingham Bay. His reasons for doing so most likely stemmed from his

99. City of New Whatcom Resolution forwarded to Maj. John Millis, February 16, 1903, Folder 1, Box 87, Letters Recd., SDO, RG 77, NARA-Pacific Alaska Region (SEA).

100. *Bellingham Reveille*, March 3, 1903, CPNWS-NC.

101. Alfred L. Black, President of the Fairhaven Commercial Club, to Maj. John Millis, February 19, 1903, Folder 1, Box 87, Letters Recd., SDO, RG 77, NARA-Pacific Alaska Region (SEA).

102. C. B. Bennett, Mayor of New Whatcom, and J. J. Donovan, President of the New Whatcom Commercial Club, to Maj. John Millis, March 11, 1903, Folder 1, Box 87, Letters Recd., SDO, RG 77, NARA-Pacific Alaska Region (SEA).

frustrations with local portrayals of mill dumping. Inspector H. S. Shorey was stationed at the Bay and wrote several letters to Millis detailing the activities of the various mills. Shorey described plainly the numerous violations that he had witnessed by several different mill companies, even those mills that had assured federal agents in the past that all dumping had ceased—such as the Morrison and BBIC mill companies.¹⁰³ His reports matter-of-factly contradicted the progress that city leaders and commercial representatives had reported to Millis.

Now that Millis had a clearer picture of mill activities, he could impose stronger measures to halt dumping. Though Millis forwarded Shorey's letters to U.S. Attorney Frye (who was surprised by the reports) prosecution was not necessary this time because a steadfast halting of the improvement accomplished Millis' goal of successful enforcement of anti-dumping laws. Shorey monitored the Bay vigilantly for a few months and sent Millis regular updates regarding new dumping violations and the efforts of the local mills to refigure their operations so that they could finally comply with the law. After touring the local mills, Shorey began to see progress and recommended that the improvement commence, which Millis authorized in late May of 1903.¹⁰⁴

As 1903 closed, the Corps had successfully altered the ways that local mills had interacted with the landscape of the Bay. While some mills occasionally relapsed and were caught dumping, these were rare occasions, and likely the result of individual laborers occasionally throwing material into the Bay without the permission of mill managers. One such violation occurred when Millis observed refuse being dumped into

103. Inspector H. S. Shorey to Maj. John Millis, from March 20, 1903 to May 18, 1903.

104. Inspector H. S. Shorey to Maj. John Millis, from March 20, 1903 to May 18, 1903.

the Bay by the Morrison Mill Co. When it was brought to the attention of the mill manager, he apologized for the violation and claimed that it was not done on his orders. He pledged to have the materials pulled up and disposed of properly. After this, no more incidences of sawdust dumping appear in the records of the Corps.¹⁰⁵ Still, to ensure that dumping would not reoccur, the Corps inspected both refuse burners and bulkheads to make sure that the mills had the capacity to dispose of, or store, the great quantity of sawdust that they produced. This even included a careful probing of the Puget Sound Mill & Timber Company (formerly the Puget Sound Saw Mill & Shingle Co.), a mill that cooperated the most with the Corps in previous years.¹⁰⁶ However, in the end, the mills finally accepted the presence of the Corps in their operations and the new ways that they were to conduct business, which meant that sawdust would go up in smoke or underground rather than beneath the surface of the Bay.

Dredging finally began in late-1903 and ended in mid-1904. The Corps placed an advertisement for bids with local dredging companies. The Seattle Bridge Co. responded with the lowest offer, promising to dredge at the rate of 13 cents per cubic yard of sediment removed. For nearly seven months a crew of forty men lived on the company dredge, operating it both day and night until the tidelands adjacent the shoreline were either dredged out or filled in. This was the first of many dredgings that shaped the Bay so that it could safely accommodate commercial shipping.¹⁰⁷

105. F. S. Greely, USACE Surveyman, to Maj. John Millis, September 6, 1904, Folder 1, Box 87, Letters Recd., SDO, RG 77, NARA-Pacific Alaska Region (SEA).

106. Puget Sound Mills & Timber Co. to Maj. John Millis, March 19, 1904, Folder 1, Box 87, Letters Recd., SDO, RG 77, NARA-Pacific Alaska Region (SEA).

The Corps' victory over sawdust dumpers, however, did not mean that the harbor was now safe for future improvements. Soon after the first dredging had begun, engineers learned of other navigational detriments that, ironically, came from the commercial vessels that the Corps was engineering the Bay to aid. The source of the problem was the ballast that commercial ships, particularly ocean-going ships, were letting accumulate on the Bay bottom.

Surprisingly, the Corps made no mention that ballast might complicate their efforts to deepen the Bay in any of their early reports. However, they must have been aware that prior to the advent of water ballast technology all oceangoing ships required solid ballast (in the absence of cargo) for stability during travel. The Corps must also have known that when a ship intended to take on new cargo its ballast was typically disposed of in the waters near a harbor's port facilities. Thus the Corps should have expected that their efforts to improve commerce would generate more and more ballast that would require disposal. This oversight, however, came into sharp focus when a ship named the Barmbek entered port while the Corps was making plans for another dredging to finish the work that they had begun in 1903/1904.

The Barmbek, a German commercial bark, entered Bellingham Bay in October of 1904. Like all ocean going vessels of the time, the Barmbek intended to dump its ballast before taking on new cargo. But before it proceeded with the discharge, the Barmbek's

107. "Opening of the Waterway," *The Evening Herald*, July 22, 1903, CPNWS-NC. Local newspaper reports on the various bids; "Dredge Working Night and Day," *Evening Herald*, November 25, 1903, CPNWS-NC. Local newspaper article describing the initial dredging; D. W. McMorris, USACE Junior Engineer, to Maj. John Millis, July 18, 1904, Folder 8, Box 87, Letters Recd., SDO, RG 77, NARA-Pacific Alaska Region (SEA). McMorris reports the conclusion of the government dredging as well as privately contracted fillings.

crew contacted Fred Kimme, Bellingham Bay's harbormaster, to ascertain where the ship should dispose of its ballast. Unregulated dumping had been the norm in Bellingham Bay; therefore, Kimme had no real authority other than to suggest a good place for the ballast to be dumped. According to the *Bellingham Herald*, when a harbor was without a ballast law, it was typical for ship captains to take the suggestions of the harbormaster with a grain of salt and dumped wherever they wished.¹⁰⁸

Harbormaster Kimme, however, was in an exceptional state when he greeted the crew. Preceding the Barmbek's arrival, Kimme had for several weeks become more and more distressed at the state of the Bay and his lack of authority regarding its uses. In a few interviews with the *Bellingham Herald*, Kimme expressed his frustrations with his lack of authority and the city council's lack of urgency on the matter of unregulated ballast dumping. According to Kimme, unregulated dumping had created spots in the harbor where the depth was only seventeen feet at low tide—a hazardous depth for larger ships, which required at times twenty-six feet or more of clearance.¹⁰⁹

It was in this worked up state that Kimme greeted the Barmbek crew; consequently, he used the encounter to force a solution to the ballast problem that had troubled him. Instead of admitting to the crew that the Bay was without a dumping ground, Kimme referred the crew to surveyman F.S. Greely of the Corps.¹¹⁰ Given Kimme's recent comments, and given the Corps' stance on mill dumping, it is likely that

108. "Dumping of Ballast Damages Shipping," *The Bellingham Herald*, October 3, 1904, CPNWS-NC.

109. "Must Find Ground for Dumping," *Bellingham Herald*, October 19, 1904, CPNWS-NC.

110. F. S. Greely, USACE Surveyman, to Maj. John Millis, October 17, 1904, Folder 1, Box 87, Letters Recd., SDO, RG 77, NARA-Pacific Alaska Region (SEA).

Kimme suspected that the Corps could accomplish for him what the city council would not: greater regulation over matters of ballast dumping. Greely held about as much authority to regulate dumping as Kimme held, so the surveyman involved Major Millis. Captain Hansen asked Millis whether or not it would be appropriate for his crew to dump the Barmbek's ballast in a deep portion of the Bay. Millis agreed to this recommendation, and all seemed well, aside from Captain Hansen's frustration with being held up in the harbor while the ordeal was debated. Unfortunately, Hansen's crew, in the absence of their captain, did not act as planned. While believing that there was yet a deeper portion of the Bay, the crew allowed the ship to drift away from the agreed upon location where they then disposed of the ballast. After hearing of the unanticipated change of plans, Greely boarded the ship to investigate. He measured the location where the ballast was thrown overboard and discovered that the water was seven fathoms less than the location that was agreed upon. Many tons of ballast was dumped, further threatening navigation.

The Barmbek ordeal brought attention to Kimme's concern: how would the local and federal governments reconcile the maintenance of a navigable harbor with the necessities of ballast disposal in such a shallow harbor? When it came to resolving the issue over sawdust dumping, the Corps could exercise draconian measures over violators because there were conceivable alternatives to dumping, such as burning and bulkheading. But when it came to ship ballast, alternatives were less forthcoming. Yet, what made the situation worse was the more frequent visits that large draft vessels like

the Barmbek were making to Bellingham Bay as indicated by commerce reports. Not long after the arrival of the Barmbek, these problems were formally discussed.¹¹¹

There was some urgency palpable as a solution was debated as several ships were held in limbo while the matter was discussed. Moreover, there was fear that shipping interests would tire of delays and/or become dissatisfied with one of the solutions that was being debated, which involved a proposal for a dumping ground that some thought would be too far away from the port. The *Bellingham Reveille* for instance thought that if a ballast zone was created, the rise in city revenue that had occurred, and which was attributed to the increase of commercial shipping, would shift to other cities such as Port Townsend that did not have dumping ordinances. Consequently, the prospect of ballast regulation stoked fears in the community that economic decline would necessarily result.¹¹²

In addition to a dumping zone, city officials considered having ballast dumped under waterfront buildings and wharves, which had the added benefit of further tideland reclamation. The E. K. Wood Lumber Co. and the BBIC were the first property owners to employ this solution—a rather easy one owing to the fact that many of the mills had already bulkheaded their properties to hold back sawdust and other mill refuse. Unfortunately, bulkheads would not solve all of the ballast problems because many ships would not reach the portions of the port where these bulkheads could be found.

In the end, the creation of a designated ballast dumping ground gained favor in spite of its noted criticism. The city council debated and passed several ordinances that

111. House, *Bellingham Harbor, Washington*, 60th Cong., 2d sess., 1908, Doc. No. 1161, 5-7.

112. “Should Provide Ballast Ground,” *Bellingham Reveille*, October 22, 1904, CPNWS-NC.

stipulated the appropriate depth and location for the dumping of ballast; this body also determined the corresponding fines that would be levied against violators. The efficacy of these ordinances, however, depended on whether or not the Corps would assent to a dumping ground because its engineers ultimately held authority over the Bay and its uses because of the Refuse Act. J. J. Donavon (general manager of the BBIC) and J. W. Romaine (the mayor of Bellingham) forwarded the proposals to Millis for review.¹¹³ Millis agreed with the proposal and forward it on to his superiors in Washington D.C. for their final approval, which they granted shortly thereafter.¹¹⁴

Although the Corps and the city council were able to devise an acceptable solution to the ballast problem, the episode demonstrates that improving the Bay for navigation was not an easy task. By itself, the ballast issue was not problematic enough to halt Bay improvements. But it should be apparent by now that the ballast problem was but one item on a growing laundry list of navigational deterrents. Yet, in the face of these mounting problems, the Corps showed no sign of tiring because they continued to plan new improvements. Not only did the Corps finish Document 80, they initiated new surveys of the harbor with the intent of making it serve ever larger vessels, a topic which will be discussed below.

113. J. W. Romaine, Mayor of Bellingham, to Maj. John Millis, February 4, 1905, Folder 1, Box 87, Letters Recd., SDO, RG 77, NARA-Pacific Alaska Region (SEA). Formal request for the Corps to permit the city to designate a ballast dumping ground in Bellingham Bay; Correspondences between Maj. John Millis and Brig. Gen. A. Mackenzie et al of the Office of Chief of Engineers, Washington, D. C, February 16, 1905 through March 5, 1905, Folder 1, Box 87, Letters Recd., SDO, RG 77, NARA-Pacific Alaska Region (SEA). Maj. Millis requested approval of a dumping ground, which was approved by the War Department.

114. Correspondence between Maj. John Millis and Brig. Gen. A. Mackenzie et al of the Office of Chief of Engineers, Washington, D. C, February 16, 1905 through March 5, 1905. Maj. Millis requested approval of a dumping ground, which was approved by the War Department;

After the sawdust ordeal had been settled, and while the matter of ballast was being discussed, the Corps would find another reason to police dumping at Bellingham Bay. This time it was the city, ironically, that broke ranks. Following the initial dredging of 1903/1904, the non-Native communities of Bellingham Bay, which had recently incorporated as the City of Bellingham, were caught violating the law by dumping municipal trash into the harbor. Surveyman Greeley, who had discovered the wrongdoing, promptly informed Millis of the offense.¹¹⁵

The council's decision to dump seems quite strange given that municipal officials had supported the Corps while Millis had dealt with other forms of dumping. But this new transgression was not without reason. Nowadays, Bellingham's municipal garbage is sufficiently out-of-sight and out-of-mind. It is picked up by garbage trucks, shipped to transfer stations and loaded onto trains where the garbage reaches its final destination in a sparsely populated county in southern Washington State. Upon arriving, the waste is buried in enormous holes, which are lined and guaranteed not to leak for several decades.¹¹⁶ Earlier residents of Bellingham did not have this luxury. As the city grew, and efforts to sell it as a place beneficial for commerce and industry expanded, its garbage grew as well. City leaders, who were always concerned about what visitors and potential investors might think of their city, attempted to do something about the

115. F. S. Greeley, USACE Surveyman, to Maj. John Millis, September 6, 1904.

116. This information comes from the author's personal experience as a volunteer for Thurston County Waste Management.

unsightly trash that had accumulated, for example, on empty lots in the city. For a short time, dumping seemed to be the answer.¹¹⁷

Millis, however, did not think that this decision was wise. According to one newspaper report, Millis “strenuously” objected to the plan. His objections, while they were not explicitly stated, were likely because he feared that the refuse would eventually disrupt navigation.¹¹⁸

The violation was small in comparison to the other forms of the dumping that were occurring contemporaneously. But the *Bellingham Reveille* was particularly concerned that if the city did not move proactively the Corps might not complete Document 80, which still required another round of dredging. The editors therefore recommended that an alternative to dumping be devised by the city council.¹¹⁹ The city searched hard for another solution, an effort that took its officials north to the City of Vancouver, B.C. and to Europe where they sought to learn better ways of managing waste from other municipalities.¹²⁰ Eventually, the city decided to create landfills near the waterfront that protected garbage from reaching the Bay. As a result of this ordeal, the shoreline (and not the Bay) would house municipal trash for much of the twentieth century.

117. “City Garbage Question Up,” *Bellingham Reveille*, October 9, 1904, CPNWS-NC.

118. “City May Build Garbage Crematory,” *Bellingham Herald*, October 7, 1904. CPNWS-NC.

119. “City Garbage Question Up,” *Bellingham Reveille*, October 9, 1904. CPNWS-NC.

120. Bellingham Municipal Government, City Clerk, City Council Proceedings, NW365-6-7, vol. 2, page 125, December 5, 1904, Washington State Archives: Northwest Region. City Engineer Geo. M. Gerhard’s report of visit of Vancouver B.C.’s waste management facilities.

When Document 80 was finally completed in 1906, the Corps had come a long way in their effort to make Bellingham Bay into a feature of nature that could serve commercial shippers. This required them to regulate all sorts of activities. However, their only failure was to gain the entire support of the community. Many visitors and residents of Bellingham welcomed the changes ambivalently at best. While the city council championed the improvements (more or less) mill owners and ship captains became frustrated with the regulations imposed on dumping—even the city council revealed its frustration with this policy when it was also forced to halt Bay dumping. To these sorts of people, the Bay was more than simply a place for big boats: it was a dump.

Given this ambivalence, it is surprising to find that during the period between the initial dredging and the end of the Great Depression—a period of time when the Corps had gradually relaxed its efforts to improve the Bay—local interests would push for future harbor improvements with even more determination than the Corps. The remainder of this chapter will examine when and why the people of Bellingham began to alter their stance on harbor improvements.

As soon as the dredger arrived and began excavating Whatcom Creek Waterway, some of the issues that people had with the strict regulatory measures subsided. The dredger, a relatively new technology, may have been responsible. While it opened up the waterway for vessels of varying sizes, the dredger also made possible new ways of thinking about the Bay. The dredger showed the people of Bellingham that their Bay could be utilized to make valuable waterfront land. These ideas began to surface while the Corps started work on Document 80.

This changing appreciation for the Bay resulted in part because of a minor stipulation of the improvement: in order for the improvement to commence, engineers had to find a place to deposit the large amount of material that they expected to remove from the Bay floor. The adjacent tidelands, which were privately owned, was an obvious first choice. The Corps asked the owners of these tidelands to permit the dredging company to dispose of the sediments on their lots, which was granted (had the property owners demurred, the Corps fully intended to have the sediments placed on scows and dumped in deeper waters so that it would not do any harm to navigation). But as soon as the improvement got under way, many in the community saw the possibility of modifying the improvement from a purely navigational scheme into a means of making land. The landfilling ambitions of local residents became evident when the Seattle Bridge Company made the necessary disposal arrangements. The dredging company learned that the tideland owners would not only agree to the request, but that they would even pay the company for any additional sediments that could be excavated below the approved project depth. Having seen a chance to make an unexpected further profit, the Seattle Bridge Co. asked the Corps for permission to enter into private contracts with tideland owners.¹²¹ An astute engineer named D. W. McMorris had realized that another dredging would be required to complete Document 80, so he recommended that the sale commence because the federal government would save money and come closer to finishing the project if the company was allowed to dredge for additional profit.¹²²

121. Seattle Bridge Company to Maj. John Millis, November 12, 1903, Folder 8, Box 87, Letters Recd., SDO, RG 77, NARA-Pacific Alaska Region (SEA).

Local newspaper reports lauded these landfilling efforts, claiming that once the mudflats were “reclaimed,” tideland properties could be used for such things as new factories. Even George Loggie of the Whatcom Falls Mill Co., who had once been a detractor of the improvement, now praised the dredging; not incidentally, twenty-five acres of his company’s tidelands were to be reclaimed through dredging.¹²³ The city council also entered the landfilling frenzy. They speculated that if the federal government proposed future navigational improvements, they should seriously consider filling their municipal property near the mouth of Whatcom Creek.¹²⁴ Almost overnight, the Corps’ requirement that mill owners bulkhead their properties to prevent refuse from entering the Bay began to look less like a burden and more like a profitable investment in property.

Landfilling was so attractive that local residents welcomed further navigational improvements because it meant that more land could be reclaimed. And when the Corps planned a more ambitious and longer lasting improvement of Whatcom Creek Waterway, it looked as though the government would again subsidize these goals. Unfortunately, the win-win scenario of the first two dredgings (of 1903/1904 and 1905/1906) did not easily transfer over to the eventual dredging of 1913. This was because the Corps and

122. D. W. McMorris, USACE Junior Engineer, to Maj. John Millis, March 4, 1904, Folder 8, Box 87, Letters Recd., SDO, RG 77, NARA-Pacific Alaska Region (SEA). McMorris informs Millis that a future dredging of Whatcom Creek Waterway would be necessary; Maj. John Millis to Brig. Gen. George L. Gillespie, November 21, 1903 through December 3, 1903, Folder 8, Box 87, Letters Recd., SDO, RG 77, NARA-Pacific Alaska Region (SEA). The War Department and the Office of the Chief of Engineers endorse the Seattle Bridge Companies request to enter into private contracts.

123. “Dredge Working Day and Night,” *Evening Herald*, November 25, 1903, CPNWS-NC.

124. Bellingham Municipal Government, City Clerk, City Council Proceedings, NW365-6-7, vol. 2, page 121, November 28, 1904, Washington State Archives: Northwest Region. A petition was read to the Council declaring that if Whatcom Creek Waterway was dredged further, the city should obtain material to fill in streets north of Holly Street. The petition was referred to the Street Committee.

local residents shared different conceptions of what the improvement was intended to accomplish: landfill or navigation. As a result, plans to maintain and to continue reengineering the Bay almost failed to continue.

Major Hiram Chittenden was responsible for planning the first of many improvements that aimed to improve and protect Bellingham Bay specifically for deep draft commercial uses (whereas before, the improvements were designed for shallower draft vessels). Chittenden's legacy is known to many in the Pacific Northwest, especially to the residents of Seattle because he endorsed many important improvements in this city—his most recognized achievement was the locks of Seattle's Ballard neighborhood (part of the larger Lake Washington Ship Canal improvement) which bears his name.¹²⁵ But Chittenden's influence has extended beyond the Seattle city limits. After personally inspecting Bellingham Bay and attending a public meeting to garner the views of Bellingham residents, Chittenden proposed a new improvement that would expand upon the vision of House Document 80 and shape the Bay into a commercial port that could berth deep draft vessels in addition to the smaller commercial vessels that had made use of the harbor. The plan, which was eventually approved by the Chief of Engineers and Secretary of War, and funded by Congress, was published as House Document 1161. Document 1161 was the official framework that guided federal decisions regarding the Bay for roughly half a century (though it became less strictly adhered to after the onset of the Great Depression; see Chapter 3). Originally, the plan he proposed called for Whatcom Creek Waterway to be dredged to a depth of 26 feet below mean low tide. But in subsequent years, the Corps and the Port of Bellingham (which had been established in

125. For a more detailed account of his influence on the City of Seattle see Klinge, *Emerald City*.

the 1920s) would modify Document 1161 so that it provided for the improvement of other parts of Bellingham Bay.¹²⁶

Despite the positive reaction that Chittenden received during the public meeting he attended in 1907, local support for his improvement languished in the following years. The weakening enthusiasm likely resulted from certain stipulations of Document 1161—this time the federal government required that local residents, and not taxpayers, pay for the construction of bulkheads to hold back the fillings. They were also required to pay for a portion of the fill as well. While tideland property owners had no qualms with these stipulations upon learning of them at the meeting in 1907, they claimed that they were too much of a financial burden when the improvement was about to commence a few years later. The Corps—which knew full well by this point that the tideland owners desired the fill as much, if not more, than they did a navigable Bay—held firm and maintained that these stipulations be complied with before any federal funds were expended. One reason that engineers did not budge was because they knew that if Chittenden’s ambitious and costly proposal was to be worthwhile, permanent bulkheads would be needed to hold back the fill from re-entering the waterway.¹²⁷ At the last minute, the Bellingham Bay Improvement Co. (BBIC) salvaged the project by offering to construct the necessary bulkheads if the sediments were placed on their property. The Corps saw no problem with this proposal and it looked as though the improvement was ready to commence.

All seemed well when the city council unexpectedly challenged the BBIC’s right to the fill. In a resolution, the council declared that public fillings should precede any

126. House, *Bellingham Harbor, Washington*, 60th Cong., 2d sess., 1908, Doc. No. 1161.

127. House, *Bellingham Harbor, Washington*, 60th Cong., 2d sess., 1908, Doc. No. 1161, 3.

private fillings. The city's challenge resulted from its wish to fill the mouth of Whatcom Creek in the vicinity northeast of Holly Street, a trestle which crossed the creek—they devised this plan nearly a decade earlier.¹²⁸ After the unexpected announcement, the BBIC and the city council prepared to fight for the dirt.

There was a lot at stake; had this fight occurred, it would have delayed the beginning of the project and, as a result, Congress would have likely opposed authorizing the second half of the appropriation that was expected to come from the following year's rivers and harbor act. Furthermore, this second appropriation was so vital to the project that the Corps would not have, in all likelihood, pursued the improvement—a fact that BBIC officials were very concerned about, as indicated by an internal correspondence.¹²⁹

This confrontation, which turned out to be a short one, is interesting because it demonstrates that there were still lingering disagreements about the goal of improving the Bay. For instance, when the council tried to obtain the fill, the BBIC complained to the Corps that “city authorities in their zeal to improve [their] real estate...[have] lost sight of the spirit of the act,” which was navigation. Company officials, on the other hand, told the Corps that they construed the “spirit” to be purely navigational in nature. “The act,” as one company official wrote to a Corps engineer, “does not contemplate the improvement by filling except as an incident to the development of shipping and commerce in Bellingham harbor for which latter purpose the Waterway is to be

128. “City's Fill-In Must Come First,” *The Morning Reveille*, May 16, 1911, Bulkheads-Bellingham Harbor 117.5, Box 145, Correspondence Relating to Specific River and Harbor Improvements, SDO, RG 77, NARA-Pacific Alaska Region (SEA).

129. Glen C. Hyatt, BBIC official, to H. H. Taylor, BBIC President, March 18, 1911 (hereafter, Hyatt to Taylor), Center for Pacific Northwest Studies (hereafter, CPNWS), Box 143, Folder 2.

dredged.”¹³⁰ But these statements were likely not representative of how the BBIC truly saw the goals of the improvement. Outwardly, they stressed navigation; but internally they valued the dredged material as landfill just as much as the city. Furthermore, the BBIC would have filled their properties whether the navigational improvement was to go forward or not. However, the government appropriation made their goal more cost effective. As a result, they desired, in their words, to “take the dirt at this time,” rather than later.¹³¹ The Corps was the only entity that truly stressed the importance of navigation as the central goal of the improvement, while the actions of local interests demonstrate that they were more interested in filling tidelands.

Luckily for the BBIC and the Corps, a technical difficulty made it impossible for the council to pay for the fill. The factor that determined that fill should be placed on BBIC lands, and not city property, was that the city wanted the material moved as far as 3,000 feet from the waterway. Unfortunately, the dredging technology of the time could not accomplish this feat alone and other modes of transporting the material such a distance would have been required, which would have greatly increased the cost. As a result, the council put their landfilling ambitions on hold and the fill was placed on BBIC lands (later the city would accomplish their goals and fill these lands). The dredging commenced and was completed in 1913.¹³²

130. Glen. C. Hyatt, BBIC official, to Maj. C. W. Kutz, May 17, 1911, Bulkheads-Bellingham Harbor 117.5, Box 145, Correspondence Relating to Specific River and Harbor Improvements, Seattle District Office, Record Group 77, NARA-Pacific Alaska Region (SEA).

131. Hyatt to Taylor, CPNWS, Box 143, Folder 2.

132. J. M. Clapp, consulting engineer for BBIC, to Glen C. Hyatt, BBIC official, May 26, 1911, CPNWS, Box 143, Folder 7.

Clearly, this episode demonstrates that federal officials saw something quite different than the local community when the former looked upon the Bay. They saw a Bay with navigable channels and waterborne commerce that brought down rail costs. However, the local community, which first saw the Bay as a convenient dump, were amazed at the Bay's capacity to create relatively cheap fill. While these differing ideas about the Bay were compatible in 1903/1904 and 1905/1906, by 1913 it was a tenuous compromise that could just have easily been a loss for all parties.

For a time following the 1913 dredging, the presence of the Corps at Bellingham Bay was less pronounced. Aside from the minor maintenance that was necessary to protect the completed improvements, the Corps did not see fit to propose any adjuncts to House Document 1161 immediately after the dredging.

In the absence of the Corps, local residents earnestly bought into the idea of improving the Bay for navigation, and not merely as a means of making land. One example that demonstrates this sincere appreciation for navigation involves a public vote authorizing the Port of Bellingham in 1920. The new commission placed navigability as one of their key priorities. Their grandiose blueprints for further improvements, which they made available to the Corps, are point to this desire (see figure three).¹³³ The Port Commission made good on their promises of improving the Bay when they dredged and re-dredged parts of Whatcom Creek Waterway further, to a depth of 35 feet below mean

133. Bellingham Port Commission's August, 1921 Blueprint of Bellingham Harbor forwarded to and received by the Seattle District Office on January 4, 1922, Terminal Facilities – Bellingham Harbor 1118.5, Box 147, Correspondence Relating to Specific River and Harbor Improvements, SDO, RG 77, NARA-Pacific Alaska Region (SEA).

low water.¹³⁴ They also looked to other parts of the Bay, such as the previously undeveloped Squalicum Creek Waterway, as a means of relieving the commercial pressure on the principal port of the Bay. The Port Commission purchased portions of the waterfront near Squalicum Creek and began construction of a deep draft shipping terminal. Also, a turning basin was dredged to a depth of 26 feet at mean low water to facilitate deep draft traffic. This improvement originally began without federal aid; but by the onset of the Great Depression, the Port Commission had accumulated a debt of 400,000 dollars while trying to dredge the waterway to a suitable depth.¹³⁵ One Corps engineer praised the efforts of local residents, claiming that they have “shown their faith in the proposed development by the expenditure of a considerable sum in the acquisition of property and the initiation of work.” Furthermore, Corps engineers were impressed enough that they recommend that Congress allow them to complete the Squalicum Creek Waterway improvement by dredging an underwater channel that connected the turning basin and the deeper waters of the Bay. Later, Congress incorporated the Squalicum Creek Waterway improvements under the framework of House Document 1161, which made Corps engineers responsible for maintaining the waterway. In addition to finishing the improvement, Congress ordered the Corps to protect the newly filled port facilities from the actions of the tides by constructing a large breakwater, which required the costly importation of many tons of boulders from other parts of the Puget Sound.¹³⁶

134. House, Committee on Rivers and Harbors, *Bellingham Harbor, Wash.*, 74th Cong., 1st sess., 1935, Document No. 70, 3.

135. House, Committee on Rivers and Harbors, *Bellingham Harbor, Wash.*, 74th Cong., 1st sess., 1935, Document No. 70, 8.

136. House, *Bellingham Harbor, Washington*, 70th Cong., 1st sess., 1928, Doc. No. 187, 13.

The port commission also made a case for redirecting the Nooksack River into Lummi Bay in order to promote waterborne commerce. Just before the Great Depression, the port implicated the sediments from the Nooksack as a problem for navigation and urged the Corps (unsuccessfully) to consider diverting this river (an idea that a previous generation had considered; see chapter one). Though the Corps assessed this claim, they disagreed with the port commission's conclusions.¹³⁷ The Corps likely considered Whatcom and Squalicum Creeks the source of the sedimentation—an argument that they used during the 1950s (see chapter 3)—and that maintenance dredging was the proper solution (because the report was unpublished the Corps' exact reasoning is unclear). Interestingly, subsequent research has revealed that the Port of Bellingham was correct when its commissioners argued that the Nooksack had become a problem for navigation. Curtis Ray Smelser, who produced a master's thesis on the rate of sedimentation, has convincingly demonstrated that the Nooksack River was the source of shoaling, particularly after 1900 when the timber industry grew substantially.¹³⁸ Regardless, the initiation and maintenance of Bay improvements reveals that the people of Bellingham (through an organization which was established by the public) were very concerned about the state of the Bay and desired to protect it as a feature of nature that was conducive for navigation and not simply as a means of making land.

137. House, *Bellingham Harbor, Wash.*, 82d Cong., 2d sess., 1952, H. Doc. 558, 11. The actual survey was never published, and my research has yet to uncover an unpublished copy of it. The conclusions, however, are summarized in the report cited here.

138. Smelser, "Sequent Occupance of the Nooksack River Valley and the Influence of Man on the Rate of Sediment Delivery to Bellingham Bay." Smelser, using various surveys, is able to demonstrate that the rate of sedimentation increased greatly after 1900 and is likely the result of the denuding of the Nooksack River Basin.

By now it should be clear that the human impact on Bellingham Bay is very complex. By the onset of World War II, Bellingham Bay had undergone much environmental change. Some of these changes were the result of natural processes that predate the arrival of humans, such as the growth of the Nooksack River Delta. Other changes were made unintentionally by humans. Again, the building up of the Delta through upstream land use choices is an example of this.

But the human induced changes were also intentionally caused. The Bay was once managed and shaped intensively—tributaries were cleared, channels were dredged and tidelands were filled—and it should rightfully be considered a type of hybrid landscape. At their core, these changes flowed from quite clear conceptions about what activities the Bay should serve, which were then literally embedded into the Bay's underwater landscape.

These changes are particularly interesting because they brought different people, who often had different ideas about the Bay, into conflict. These struggles were inextricably tied to the underwater landscape. For instance, the goals of the Corps (navigation) and the goals of the local lumber companies (dumping) were mutually exclusive—when one person changed the Bay, another was necessarily worse for wear.

Amidst a changing landscape and different, often competing, understandings of this marine environment, some were able to obtain more power to remake the Bay to their liking than were others. The federal government, for instance, worked assiduously to obtain control of the Bay. Through the creation and enforcement of anti-obstruction legislation, the government's leading agent, the Corps, was able to control the landscape and how it was used and changed.

Local residents came to accept the rules that Congress and the Corps had legislated. There is even evidence that many adopted the federal government's notions about the Bay and how it should be used, as was finally evident by compliance with anti-dumping laws and the public efforts to create another deep draft terminal. Regardless, a relatively lasting consensus had been struck between leaders from the federal and local levels: the underwater landscape was to be treated with care and left unobstructed for deep draft shipping.

Chapter Three

The Decline of the Bay Consensus

The consensus that had been negotiated between Congress and the Corps on the one hand and local residents on the other, and which held that navigation was the Bay's most essential function, had unraveled as time went on. It has crumbled to the extent that the Bay does not hold nearly the same types of meaning for present-day residents as it did for previous generations. For newer residents, the Bay is a place for maturing salmon and for people to recreate, not an environment that should be strictly maintained for commercial vessels above all else. This chapter will examine how the Bay, which had been shaped and regulated for so specific a purpose as commercial shipping, came to be managed along different lines as different interests attempted to take control of the underwater landscape and give it new types social meanings as well as new physical characteristics.

The Corps, as in the past, played an important part in these changes. Interestingly, it is the Corps' flagging interest in Bellingham Bay that allowed others to move in and take control of the harbor and apply new meaning to its underwater landscape.

The Corps' interest in re-engineering Bellingham Bay began to wane as early as 1909. An example of this occurred when the upstream communities of Ferndale and Lynden tried to convince the Corps (unsuccessfully) that the Nooksack River would facilitate a larger amount of commerce if it could be improved further.

While the Nooksack River Delta was where navigational improvements were first made by engineers, the Corps was ultimately disappointed that their most recent

improvement of 1902 was not followed by increased commercial activity. Major C. W. Kutz, Chittenden's replacement as the head of the Seattle District Office, conducted a post-improvement survey of the river to assess the situation.

As part of his assessment, Kutz met with the people of Ferndale and Lynden at respective public meetings. At these public gatherings, Kutz determined that these communities still desired more river improvements. Specifically, they wanted the Corps to make the Nooksack delta passable not only at high tide but also at low tide as well. To entice Kutz, they offered the usual reason why the Corps should undertake this project: further improvements would bring down freight rates.

But Kutz objected to their proposal because the river had carried only a slight amount of commerce since the last improvement, most of which was floated timber products, not steamer traffic. Furthermore, shingles, which were the major commodity that was floated downriver by this time, were loaded onto trains at Bellingham Bay and shipped back east. Kutz did not see this practice changing even if the river was made passable at all tides; therefore, he chose not to recommend the improvement since navigation would only have a marginal impact on the shipping rates from Lynden and Ferndale to Bellingham.¹³⁹

Interestingly, there were benefits to be had if the proposed improvement was completed. Kutz recognized that the improvement would have an “indirect” benefits—which is to say, non-navigational benefits—for the farmers that lived along the river since it would improve drainage and reduce the likelihood of future flood damages. Kutz recognized that the farmers of the basin had made an unknown amount of river

139. House, *Nooksak [sic] River to Lynden, Wash.*, 61st Cong., 2d sess., 1909, Document No. 414.

improvements, at an equally unknown cost, in their efforts to battle the annual floods. But he did not consider the problem of flooding important enough, in his words, to “warrant a radical improvement of the mouth of the Nooksack River.”¹⁴⁰

But things were changing. Before the Great Depression, the federal government had slowly altered its position on flood control along the Nooksack, as they had with other national watersheds. Chittenden, who had been instrumental in the planning the Bellingham Bay improvement of 1913, was responsible for some of these changing sentiments. In an influential paper submitted to Congress in 1896, Chittenden—who had once been an opponent of flood control—became a champion of national flood control policy.¹⁴¹ Later, during the early years of the twentieth century, Chittenden’s ideas slowly became national policy after several flood control acts had been passed between 1917 and 1928.¹⁴²

This changing national policy is evident at Bellingham Bay too. During the 1920s, the Committee on Indian Affairs sought to reclaim Lummi Reservation lands, which lay near the mouths of both the Nooksack and Lummi Rivers. These lands were of little or no agriculture value as they were prone to river and tidal flooding. But if these lands were protected from flood waters, the committee assumed that they could be turned

140. House, *Nooksak [sic] River to Lynden, Wash.*, 61st Cong., 2d sess., 1909, Document No. 414, 4.

141. Kingle, *Emerald City*, 69.

142. Karen M. O’Neill, *Rivers by Design: State Power and the Origins of U. S. Flood Control* (Durham: Duke University Press, 2006). See for an alternative interpretation of the flood control policy. O’Neill argues that the pressure to institute a national flood control policy came from activists operating at the local level and not necessarily from national politicians and engineers.

into valuable agricultural plots.¹⁴³ Even though the committee made no mention that the improvement would aid (or hinder) navigation, the War Department permitted the Indian Reclamation Service to improve flood control measures along the Nooksack River—a remarkable position change given that the department disapproved of a similar measure nearly twenty years prior when upstream residents listed this as an auxiliary benefit to the proposed commercial improvement. With the blessing of the War Department, reclamation service engineers made the Nooksack River the permanent terminus of Bellingham Bay through the construction of a dam that blocked the Nooksack (and its silt) from ever again turning into Lummi Bay.¹⁴⁴

Or so the engineers thought. This improvement was not as permanent as the dam-builders had envisioned it to be. In the fall of 1949, the regional director of the Office of Indian Affairs (OIA) personally inspected the dam and concluded that it would not withstand another season of flooding.¹⁴⁵ His prediction was correct; in January of 1950 an ice jam created a back-up in the river that was finally relieved when the dam burst and created a fifty foot hole that allowed the Nooksack to flow down into Lummi Bay.¹⁴⁶

143. Senate, *For the Purpose of Reclaiming Certain Lands in Indian and Private Ownership Within and Immediately Adjacent to the Lummi Indian Reservation*, 69th Cong., 1st sess., 1926, Report No. 354, 1, 2.

144. House, *Nooksack River, Wash.*, 74th Cong., 1st sess., 1935, Document No. 159, 10.

145. Morgan Pryse, Office of Indian Affairs Regional Director, to USACE Seattle District Office, September 8, 1949, folder 824.3 (Nooksack Riv) Levees and Dikes, 1949-1950, 4-52, Box 47, Civil Works Project Construction Files 1900-1952 (hereafter, CWPCF 1900-1952), SDO, RG 77, NARA-Pacific Alaska Region-Seattle.

146. F. A. Gross, Superintendent of the Tulalip Indian Agency, to Colonel E. C. Itschner, USACE Seattle District Engineer, January 23, 1950, folder 824.3 (Nooksack Riv) Levees and Dikes, 1949-1950, 4-52, Box 47, CWPCF 1900-1952, SDO, RG 77, NARA-Pacific Alaska Region-Seattle.

The diversion created quite a stir in the region, as could have been expected. The OIA, for instance, was very anxious to have the Corps repair the dam quickly; they feared that heavy spring rains would cause more damage to the farms within the Lummi Diking District unless it was rebuilt.¹⁴⁷ Unfortunately, the Corps was unable to provide the resources necessary to fix it until later in the year.¹⁴⁸

But this lapse in time provided other local residents time to interpret the broken dam differently than had the OIA. Some viewed it as an opportunity rather than an unfortunate event. For instance, the farmers below the dam welcomed the breach and recommended that the dam not be rebuilt since the diversion protected their property from flood damages. The diversion provided these farmers with another outlet for the Nooksack River during times of flooding. Seventy-nine owners of agricultural land near the break, but outside the Lummi Diking District, forwarded this argument in a petition to U.S. Senators Warren Magnusson and Harry Cain, as well as to U.S. Congressman Henry Jackson. Senator Magnusson forwarded these complaints on to Colonel E. C. Itschner, the head of the Seattle District Office, for review.¹⁴⁹

Officials for the City of Bellingham and Whatcom County also saw an opportunity as a result of the dam breach. They petitioned the Corps to stop the

147. F. A. Gross, Superintendent of the Tulalip Indian Agency, to Colonel E. C. Itschner, USACE Seattle District Engineer, February 14, 1950, folder 824.3 (Nooksack Riv) Levees and Dikes, 1949-1950, 4-52, Box 47, CWPCF 1900-1952, SDO, RG 77, NARA-Pacific Alaska Region (SEA).

148. A. N. Edmiston, Tulalip Indian Agency Irrigation Engineer, to F. A. Gross, Tulalip Indian Agency Superintendent, February 23, 1950, folder 824.3 (Nooksack Riv) Levees and Dikes, 1949-1950, 4-52, Box 47, CWPCF 1900-1952, SDO, RG 77, NARA-Pacific Alaska Region (SEA).

149. U.S. Senator Warren G. Magnuson to Chief of Engineers Department, June 12, 1950, folder 824.3 (Nooksack Riv) Levees and Dikes, 1949-1950, 4-52, Box 47, CWPCF 1900-1952, SDO, RG 77, NARA-Pacific Alaska Region (SEA).

Nooksack's silt from impeding navigation at Bellingham harbor. In March of 1950, they formed a committee comprised of city councilmen as well as port and county commissioners. The tripartite committee requested that the Corps conduct a public meeting on the matter. Although the correspondences between the committee and Corps do not explicitly mention a rerouting of the Nooksack away from Bellingham Bay, this was likely implied because the port had made this argument in the past.¹⁵⁰

After Corps engineers had considered all of the different arguments, they decided to reconstruct the dam and so prevent further damages to the Lummi Diking District. In a letter addressed to Representative Jackson, Colonel Itschner discussed the reasons behind his recommendation: the lands, roads and bridges within the diking district needed to be protected above all else.¹⁵¹

The Corps made concessions to some of those that opposed reconstructing the dam, but not all. Those farmers that resided outside the Lummi Diking District would enjoy some flood relief because the proposed dam would include a spillway, allowing for some of the seasonal flood waters to escape through the Lummi River.¹⁵² The ad hoc shipping commission, however, was not aided by the decision; the Corps refused even to hold a public meeting on the matter of sedimentation. Furthermore, they only offered to

150. H. F. Isler, Manager and Engineer for the Port of Bellingham, to Colonel E. C. Itschner, June 28, 1950, folder 827.1 (Nooksack River) Dredging, hydraulic and other, 1949-1950, 4-5, Box 47, CWPCF 1900-1952, SDO, RG 77, NARA-Pacific Alaska Region-Seattle.

151. Colonel E. C. Itschner, USACE Seattle District Engineer, to U.S. Representative Henry M. Jackson, July 11, 1950, folder 824.3 (Nooksack Riv) Levees and Dikes, 1949-1950, 4-52, Box 47, CWPCF 1900-1952, SDO, RG 77, NARA-Pacific Alaska Region (SEA).

152. Colonel E. C. Itschner, USACE Seattle District Office Engineer, to U.S. Representative Henry M. Jackson, July 11, 1950, folder 824.3 (Nooksack Riv) Levees and Dikes, 1949-1950, 4-52, Box 47, CWPCF 1900-1952, SDO, RG 77, NARA-Pacific Alaska Region (SEA).

institute silt control measures if it could be accomplished as an incidence to flood control.¹⁵³ Since flood control measures required that the Nooksack continue to empty into Bellingham Bay, commercial shipping interests had no recourse but to accept the consequence of sedimentation.

The Corps' decision to favor flood control over commercial shipping represents an interesting and dramatic shift in its priorities. The Corps no longer championed commercial shipping above all other uses of the Bay. Instead, the priorities of the Corps had flipped, as they chose to protect commercial agriculture, through flood control measures, over commercial shipping.

The consequences to commercial shipping were severe. The Corps received several complaints about the shallowing of Whatcom Creek Waterway over the years. As early as 1928, the Port of Bellingham had begun forwarding complaints regarding the shallowing of this waterway to Corps engineers. In this year, a port engineer passed a message on to the Corps about a verbal "kicking" that he was forced to endure from a Mr. Hough who represented the Shell Oil Company. Hough, upset that certain steamship lines had informed him that they would no longer port at Bellingham Bay because of the risk of grounding, inquired about the status of a dredging.¹⁵⁴ These types of complaints continued to collect when in June of 1952 (after the Corps refused to redirect the river)

153. Colonel E. C. Itschner, USACE Seattle District Office Engineer, to H. F. Isler, Manager and Engineer for the Port of Bellingham, August 1, 1950, folder 827.1 (Nooksack River) Dredging, hydraulic and other, 1949-1950, 4-5, Box 47, CWPCF 1900-1952, SDO, RG 77, NARA-Pacific Alaska Region (SEA).

154. Port of Bellingham Engineer to Major Jno. S. Butler, Seattle District Office, October 18, 1928, folder 136.5 Bellingham Harbor, Box 145, Office of Chief of Engineers, SDO, Specific Project Decimal Files – Correspondence, .5 Bellingham Harbor 1910-1930, RG 77, NARA-Pacific Alaska Region (SEA).

Corps engineers were met with a more forceful and unified complaint by shipping interests in the form of a poignant letter written by Alex Halstead of the Puget Sound Pilots. He requested that the Seattle District Office dredge the waterway back to the project depth of 26 feet because his association had received complaints from pilots that had suffered damage there as a result of shoaling. The Port of Bellingham also contacted the Corps and claimed that they had received several complaints from shipping interests regarding the shallowing of the waterway as well. The port feared that if nothing were done, then certain shipping interests would cease calling on the port.¹⁵⁵ Their fears slowly came true as commercial shipping has declined throughout the century. While factors such as the construction of Interstate 5 in the 1960s likely played a part, it is clear that environmental constraints were responsible for this decline as sedimentation troubled those commercial shippers that tried to use the dredged portions of the Bay between roughly 1913 through the midcentury.

But ecological change was not the only reason for this decline. It was the Corps' surprising lack of interest in maintaining and surveying the Bay that proved to be the most important factor behind this decline. The Bay, which the Corps had obtained so much power to regulate, became an afterthought to engineers. Their priorities had changed; flood control along the Nooksack River was their new pet project. Instituting flood control measures, however, had a negative effect on their prior navigational improvements. Had they been concerned enough with harbor shoaling and heeded the warnings of city and county officials, they certainly would have been aware of the

155. H. F. Isler, Port of Bellingham Manager, to Seattle District Office, November 6, 1952, folder 800.94 (Bellingham Harbor) Miscellaneous data and descriptive matter; statistical data: Folder #1 1953-1954, Box 13/28, CWPC, SDO, RG 77, NARA-Pacific Alaska Region (SEA).

accumulation of silt on the Bay floor. Regardless, it is a rare sight these days to see a fully loaded commercial vessel coming in and out of the Bay.

While the Corps loosened its grip over the Bay, others sought to undermine the Bay consensus and alter the physical geography of the harbor in a more dramatic and intentional way. A probing of the aforementioned public meeting of 1946—a meeting that was introduced at the beginning of this essay—will show how the consensus was further undermined.

As World War II came to a close, Congress, the Corps and local residents began to raise concerns about the value of their earlier efforts to improve the Bay. The House Committee on Rivers and Harbors responded to these concerns by initiating a formal discussion about the Bay in 1944. The committee subsequently gave the Corps the task of reviewing the existing project (House Document 1161 and all of its various add-ons) with the possibility of modifying it.¹⁵⁶ As a condition of this review, the Corps hosted a public meeting to gather a more detailed account of local views regarding the future of their Bay.

At this meeting, the Corps learned that many local residents desired that the federal government fund the construction of a small boat basin in the harbor. This plan was finally approved by Congress in 1952, and the basin was constructed in the previously improved Squalicum Creek Waterway.

The decision to construct a small boat basin is fascinating because in order to construct it part of the terminal that had been dredged and maintained for deep draft

156. House, *Bellingham Harbor, Wash.*, 82d Cong., 2d sess., 1952, H. Doc. 558, 5.

vessels would need to be undeveloped. But more generally, this decision diverges from several decades of consensus, which held that the Bay should serve deep draft commerce above all else. At the meeting, city residents voiced their concerns about the social changes that were occurring in the region and that were making the prior Bay improvements out-of-date. Their hope was that a small boat basin would channel these changes into new sources of economic growth.

The public meeting of 1946 got off to a very slow start; none of the Port Commissioners had arrived on time and many of the attendees were reluctant to voice their concerns, even despite the prodding of Mayor of Bellingham Arthur Howard, who acted in a dual role as a participant and meeting facilitator. But after a short time this reticence gave way to a lively and often impassioned discussion about the benefits that a small boat basin would bring to the community. The perspectives of those that spoke in favor of the improvement were many, ranging from railroad officials to local labor organizations.¹⁵⁷

Many voiced concerns that the city's industrial base was declining and that something needed to replace the types of jobs that had been lost as a result. Alvin Anderson of the Bellingham Yacht Club spoke to these concerns, perhaps overdramatically, when he claimed that on his way to the meeting he had stopped to "sign termination slips for 200 men who [had] been released from the Bellingham Iron Works from lack of work." His comments were meant to underscore the urgency of determining

157. *Report of Public Hearing held April 10, 1946 at Bellingham, Washington, with Notice and Papers Presented in Connection with Review of Previous Reports on Bellingham Harbor, Washington* (hereafter, *Report of Public Hearing*), folder 800, 92, (Bellingham Harbor) 78/1, 78/2, 78/4, Box 13/28, Civil Works Project Correspondence, 1908-1958 (hereafter, CWPC), SDO, RG 77, NARA-Pacific Alaska Region (SEA).

a new direction for the local economy and how the Bay was to play a part. Many other attendees were specifically concerned that big timber, which had been the region's largest industry and employer, was the root of the problem and that other industries needed to be nurtured to fill its void. For instance, Nick Costanti, representing the Fishing Boat Owners Association, spoke to this concern when he went on the record to state that "Today, our lumber is dwindling. Our main stay is the farmer and the fisherman."¹⁵⁸

Those who had blamed the decline of timber for the region's economic woes were largely right. While timber had been the keystone industry of the region up through the 1920s, it had begun to decline after 1925 when the Nooksack River Basin had become heavily deforested. Deforestation was pronounced by 1945 as ninety percent of the valley's forests had been replaced with farms. Costanti's concern about the timber industry was well timed and likely related to the fact that only one of the large sawmills that had previously dotted the shoreline remained open in 1946. Although the timber industry would rebound slightly after 1950, there was much concern regarding the fate of the region's economic future in the immediate postwar years.¹⁵⁹

The timber industry was not only important to the regional economy, but it was also the industry, more than any other, that used the Bay as a commercial space. Commercial statistics show that wood and paper products made up the bulk of all incoming and outgoing shipments.¹⁶⁰ As the declining timber industry and global

158. *Report of Public Hearing*, folder 800, 92, (Bellingham Harbor) 78/1, 78/2, 78/4, Box 13/28, CWPC, SDO, RG 77, NARA-Pacific Alaska Region (SEA).

159. William H. Pierson, "The Geography of the Bellingham Lowland, Washington," (PhD diss., University of Chicago, 1953) 6, 7.

economic depression worked their way through the economy of Bellingham Bay, a noticeable and steady decrease in the tonnage and draft of vessels is evident.¹⁶¹ The result was that the Bay, which had seen substantial investments, was dramatically underutilized.

In response to this evolving economic scenario, Costanti offered a different vision for future economic growth when he went on to declare that “we can improve the conditions for the fisherman and induce more to come here....”¹⁶² By the 1940s the fishing industry had rebounded slightly after witnessing declining catches during the 1920s and 1930s; the fall resulted from various causes, such as overfishing and damming.¹⁶³ Some at the meeting, like Costanti, saw the rising catches as an encouraging sign and advocated improving the Bay to induce more fishermen to permanently base their operations out of Bellingham.

Fisherman had avoided the Bay in the past because there was not enough safe moorage. Fred Elsethagen, who represented the Boat Owners Association, described the moorage facilities for small vessels as “temporary and inadequate,” as well as “dangerous to an extreme condition.”¹⁶⁴ While captains of large ships had always found Bellingham Bay attractive due to the security it offered their boats during storms, the harbor’s

160. Pierson, “Geography of the Bellingham Lowland, Washington,” 8. After the Nooksack River Basin had been heavily deforested, timber from other more distant origins was shipped into the Bay for processing.

161. House, *Bellingham Harbor, Wash.*, 82d Cong., 2d sess., 1952, H. Doc. 558, 23, 24.

162. *Report of Public Hearing*, folder 800, 92, (Bellingham Harbor) 78/1, 78/2, 78/4, Box 13/28, CWPC, SDO, RG 77, NARA-Pacific Alaska Region (SEA).

163. Pierson, “The Geography of the Bellingham Lowland, Washington,” 13, 14; Taylor III, *Making Salmon*. See Taylor for a compelling interpretation of the complexity of the salmon crisis.

164. *Report of Public Hearing*, folder 800, 92, (Bellingham Harbor) 78/1, 78/2, 78/4, Box 13/28, CWPC, SDO, RG 77, NARA-Pacific Alaska Region (SEA).

relatively calm waters could not protect the smaller and thus more vulnerable fishing vessels from excessively stormy weather. And many storms had pounded the temporary small boat moorages, inflicting costly damages. In 1943, for instance, a storm hit and sank seven moored boats. But one particularly bad storm occurred the year following the meeting, demonstrating just how vulnerable these moorage facilities were. The storm hit the temporary boat haven of south Bellingham in January of 1947 and damaged forty-four boats, sinking most of them. The haven was subsequently abandoned.¹⁶⁵

Since the Bay was without proper moorage facilities, there was concern at the meeting that the region would not benefit from the increasing catches that they were anticipating from the efforts of the International Salmon Commission. If salmon restoration was successful, the attendees saw an opportunity for reinvigorating the local economy by basing it around commercial fishing in a way that it had not been in the past. Costanti explained this best when he commented that “on these boats, it takes from eight to nine men to operate them. When you stop and think that the average fisherman has two or three children, that means there is 30 people making a living from the boat.”¹⁶⁶ Although many commercial fisherman frequented the Bay in order to have their catches processed, very few fishing boat owners made Bellingham Bay their permanent harbor due to the shortage of adequate moorage—most commercial fisherman berthed their vessels further south of Bellingham Bay at Seattle or Everett. As a result, Costanti voiced fears that the larger economic benefits of a renewed commercial fishery would not

165. House, *Bellingham Harbor, Wash.*, 82d Cong., 2d sess., 1952, H. Doc. 558, 25.

166. *Report of Public Hearing*, folder 800, 92, (Bellingham Harbor) 78/1, 78/2, 78/4, Box 13/28, CWPC, SDO, RG 77, NARA-Pacific Alaska Region (SEA).

ripple out into the community unless these facilities were constructed. Some attendees were optimistic that many commercial fishers would relocate to Bellingham Bay once moorage facilities were made available because Bellingham Bay had the advantage of being roughly ten hours closer to popular fishing grounds, such as the Hackett Straits, than Seattle.¹⁶⁷ There was good reason for this optimism. Already by 1946, Bellingham Bay had attracted fishing boats from other regions to berth permanently at Bellingham—by that time seventy-one fishing vessels had made Bellingham Bay home, which was up from only twenty-one in 1938.¹⁶⁸ If suitable moorage were made available, many at the meeting expected that this already increasing figure would explode and the local economy would further stabilize around a stronger commercial fishing economy.

The attendees more or less agreed that better moorage was needed if commercial fishermen were to help stabilize the local economy, and most wholeheartedly endorsed the construction of a small boat basin to that end. But others offered a different and more controversial reason why a small boat basin should be constructed. This argument held that recreational uses of the Bay were underdeveloped and that its development could bring comparable, if not greater, potential for stabilizing the economy than could commercial fisherman. Though many recreational boaters had made use of Bellingham Bay's temporary boat moorages, only a small number of boats made Bellingham Bay their permanent harbor. But this scenario was changing rapidly. The Corps believed

167. *Report of Public Hearing*, folder 800, 92, (Bellingham Harbor) 78/1, 78/2, 78/4, Box 13/28, CWPC, SDO, RG 77, NARA-Pacific Alaska Region (SEA).

168. House, *Bellingham Harbor, Wash.*, 82d Cong., 2d sess., 1952, H. Doc. 558, 25.

there to be 164 locally based pleasure boats in 1946, up from 60 in 1938.¹⁶⁹ The pleasure craft that had relocated amounted to an investment roughly estimated at half of a million dollars. Furthermore, Elsethagen, who made these off-the-cuff financial approximations, expected an even greater investment in recreational craft if a proper small boat basin was constructed. Elsethagen claimed that numerous Seattle yachtsman had approached the Bellingham Boat Owners Association and declared their intentions to move their vessels to Bellingham Bay once better facilities were made available. Elsethagen summed up the economic benefits to the community of constructing a small boat basin for recreational boaters when he claimed that “one of the main things that is not completely developed or has not been overdeveloped lies in Bellingham’s surrounding waters,” and “certainly [recreational boating was] Bellingham’s potential development and future.”¹⁷⁰

Most attendees agreed that nurturing the recreational industry at Bellingham Bay was important for regional economic growth (unless they chose not to comment) but a few of the speakers gave the impression that shaping the Bay to meet these ends was a controversial notion and that many in the community would need to be convinced of the benefits of recreational boating. According to Elsethagen, the problem that many in the community had with the recreational industry was that it did not fit into their framework of the most important function of the Bay: deep draft navigation. Elsethagen claimed that most people in the community were holding onto an aging notion of what the term

169. House, *Bellingham Harbor, Wash.*, 82d Cong., 2d sess., 1952, H. Doc. 558, 25. The exact number of incoming and outgoing visits to Bellingham Bay by pleasure craft is difficult to determine before 1947 since no record was maintained before that year.

170. *Report of Public Hearing*, folder 800, 92, (Bellingham Harbor) 78/1, 78/2, 78/4, Box 13/28, CWPC, SDO, RG 77, NARA-Pacific Alaska Region (SEA).

navigation meant. He stated that “when navigation is discussed...I imagine the average man thinks of ocean-going vessels, liners, steamers, just as in land transportation we think of railroads [and] mile-long freight trains.” But Elsethagen went on to explain that this definition of navigation was too limited, and needed to be revised. “However, there is a second function of navigation transportation,” he remarks, “On land we have commercial cars, commercial trucks, and we have pleasure cars; and on the waters we have commercial fishing craft and we have pleasure boats.” Navigation had always been a central goal of improving the Bay, but according to Elsethagen and others, economic growth would not occur unless the term “navigation” was broadened and other uses of the Bay subsequently nurtured through improvements, namely for recreational and commercial fishing vessels.

Elsethagen’s effort to expand the meaning of the word “navigation” was very crafty considering the power that the word conjured in the minds of Bellingham residents. It was a word that long summoned the prospects of economic growth. Elsethagen may have been trying to equate pleasure boating with deep draft navigation because a significant portion of the community of Bellingham was averse to the idea of making the Bay conducive to recreational boaters. Anderson explained this hesitancy best when he claimed that “If you go out in the county, many times you will find people saying we don’t believe in having boat facilities for recreation.” Anderson suggests that they felt it to be a “secondary” industry—probably to the timber industry.

These sentiments were beginning to change, however, and the developing recreational industries of Florida and California were, according to Anderson, responsible for changing sentiments. According to him, these states had demonstrated to the rest of

the nation that the recreational industry was both profitable and long-lasting. Anderson, as a result, declared to the audience that he “didn’t believe you can say that recreation is secondary to anything. It is tops.” Mayor Howard seconded this belief when he reminded the attendees that City Hall had been convinced of the benefits a small boat basin would have on the fishing industry, only later to be convinced of the very important additional benefit to the region’s nascent recreational industry.¹⁷¹

It is not clear whether or not Anderson represented accurately the views of the majority of the people of Whatcom County regarding the development of a small boat basin and, specifically, whether the community had truly changed their minds about the benefits of a recreational industry. But a representative of the local labor organization who attended the meeting mentioned that his constituents supported the construction of the boat haven, giving some credence to Anderson’s claims that things were changing. Henry Biesheuvel of the Bellingham Central Labor Council explained to the attendees that his association favored the boat basin because “[o]rganized labor,” he declared, “believes one thing the working man needs is recreation. This proposed boat haven, located handily, where our men could go out and have their small craft and be near to the fishing grounds, is very desirable.” Furthermore, many in the organization, like Biesheuvel himself, had lost boats to storms, and were forced to berth their vessels in distant cities for protection.

Although the labor council supported the small boat basin and intended to utilize it for recreational uses, the support does not add up to support for the development of the

171. *Report of Public Hearing*, folder 800, 92, (Bellingham Harbor) 78/1, 78/2, 78/4, Box 13/28, CWPC, SDO, RG 77, NARA-Pacific Alaska Region (SEA).

recreational industry because the council did not support constructing a boat haven to spur economic growth through the replacement of existing jobs. They endorsed it because it would enhance the leisure time of existing types of labor.¹⁷²

By the end of the meeting, support for the small-boat basin was clearly evident, though the original site of the small boat basin had still not been determined. Most of the attendees had agreed that the basin should be constructed in Chuckanut Bay, a small secure cove contiguous to both the City and Bay of Bellingham. The process of selecting the final location of the small boat basin also reveals how the Bay had taken on different meaning to the Corps and, especially, local residents—both of whom began to doubt the need for maintaining the Bay as a feature of nature that supported commerce first and foremost.

One of the reasons for holding the public meeting was to convince the Great Northern Railway company to relinquish its railroad right-of-way to small vessels coming to and from the proposed boat haven. This was an issue because the Great Northern had constructed a train trestle across Chuckanut Bay in 1902 (which was later replaced with fill in 1920). This trestle effectively cut the waterway off from Bellingham Bay.¹⁷³ Unfortunately, the best site for the boat haven was within the trestle; all of the sites outside trestle would have been impossible to develop because of the unstable bay floor.¹⁷⁴ The representative for the Great Northern in attendance refrained from

172. *Report of Public Hearing*, folder 800, 92, (Bellingham Harbor) 78/1, 78/2, 78/4, Box 13/28, CWPC, SDO, RG 77, NARA-Pacific Alaska Region (SEA).

173. House, *Bellingham Harbor, Wash.*, 82d Cong., 2d sess., 1952, H. Doc. 558, 16.

commenting on the proposal, but by the tone of the meeting it was evident that this was a huge request. Thus, it was little surprise when the company later informed the Corps that it would not give up its right-of-way.¹⁷⁵ They claimed that the necessary drawbridge would cost the company too much money to construct. Furthermore, it would cause unavoidable delays and unnecessary risks.¹⁷⁶

Although the planners of the small boat basin failed to gain the Great Northern's support for a boat haven at Chuckanut Bay, their efforts were quite bold because they demonstrate that the community was willing to un-develop, ever so slightly, something that they had for years deemed absolutely necessary for economic growth: railroads. This trend would continue as the community sought out a new location for a permanent small boat basin. After the Great Northern announcement, the community set their eyes on the northeasterly portions of the harbor where many of the most dramatic changes to Bellingham Bay had occurred. Originally, plans were made to further assist both deep and small draft navigation. But, in the end, deep draft channels were undermined in favor of a small boat basin.

Even before the public meeting was held, the demand for moorage was so great that the port commission was forced to develop parts of the northeasterly harbor that had been reengineered for commercial vessels. By 1937, the port had been forced to alter a portion of Squalicum Creek Waterway for the temporary use of small boats. This

174. *Review of Reports on Bellingham Harbor, Washington*, May 17, 1949 (hereafter, *Review of Reports*), folder 800, 92, (Bellingham Harbor) 78/1, 78/2, 78/4, Box 13/28, CWPC, SDO, RG 77, NARA-Pacific Alaska Region (SEA), 21.

175. *Report of Public Hearing*, folder 800, 92, (Bellingham Harbor) 78/1, 78/2, 78/4, Box 13/28, CWPC, SDO, RG 77, NARA-Pacific Alaska Region (SEA).

176. *Review of Reports*, folder 800, 92, (Bellingham Harbor) 78/1, 78/2, 78/4, Box 13/28, CWPC, SDO, RG 77, NARA-Pacific Alaska Region (SEA), 20.

facility, which was originally intended to help the commercial fishing fleet, quickly became overcrowded by recreational boats. The needs of small boats was such that another portion of Squalicum Creek Waterway was redeveloped for the use of fishermen in 1946 and 1947. While these temporary facilities helped alleviate moorage problems, the situation was so dire that the port commission was later forced to construct temporary facilities in a portion of Whatcom Creek Waterway—the principal deep draft channel in the harbor. After plans for a small boat haven at Chuckanut Bay were abandoned, and the temporary moorage of South Bellingham was destroyed in a storm, the Squalicum Creek moorage was made permanent.¹⁷⁷

Although the proposals to re-make Squalicum Creek Waterway became a reality, there were alternatives available for the port. While South Bellingham and Chuckanut Bay turned out to be poor places to construct a boat haven, the I & J Street Waterway was still largely undeveloped—aside from some minor dredgings completed by the Navy—and could have alleviated the pressure that small boats had put on the other deep draft facilities. The Port of Bellingham had even submitted a proposal to the Corps to develop this underutilized waterway into a dual use terminal to assist shallow and deep draft vessels.

This waterway could have been made into a suitable boat basin had it not been for the opposition of pleasure boat owners—they objected to the plan because it meant that their boats would be too close to industrial operations for their comfort. The decision to forgo development of the I & J Street Waterway further shows that recreational interests

177. *Review of Reports*, folder 800, 92, (Bellingham Harbor) 78/1, 78/2, 78/4, Box 13/28, CWPC, SDO, RG 77, NARA-Pacific Alaska Region (SEA), 15, 16.

had obtained (while commercial shippers had lost) a relative degree of power over the types of functions that they Bay should serve.¹⁷⁸ The decision to improve Squaticum Creek Waterway instead of the I & J Street Waterway underscores the way that the Bay had changed in meaning for the people of Bellingham and the Corps. The Bay was no longer a place where big ships were signifiers of the best use of marine nature. As a result, plans to manipulate the Bay further for deep draft shipping, which the Port of Bellingham had greatly desired during the 1920s and 1930s, were abandoned and even reversed as small boat interests, most of which were recreational, demanded that the Bay serve their interests instead.

178. House, *Bellingham Harbor, Wash.*, 82d Cong., 2d sess., 1952, H. Doc. 558, 20 26, 27.

Conclusion

It should be evident by now, that the underwater landscape was extremely important to the former residents of Bellingham Bay. Indeed, on more than one occasion, it brought people into conflict as some sought to control and shape this unseen environment.

But this type of conflict is far from being something unique to the Bay's history. Present-day residents have continued to seek control over the Bay in order to embed their ideas of nature into the landscape. Before closing, it is important that we look briefly at the ways that new ideas about nature are coming into conflict, and how the Bay is, and will continue to be, an environment that people try to control and embed with social meaning.

Bellingham has become something of an Ecotopia in recent years, to borrow the title of a regionally popular fictional novel about the environmentally minded populace of Washington, Oregon and Northern California that seceded from the United States to form a state founded on ecological principles.¹⁷⁹ For those who are unfamiliar with Bellingham, Washington, it would be difficult to overstate to them how “nature” and the “environment” have become more than words, more like city mottos. According to one study, for instance, when describing their city, many residents typically point to the adjacent bay and mountains, and opportunities for outdoor activities in these as Bellingham's most notable qualities. This is interesting because its residents point to these as the most defining characteristics of the city before ever mentioning the important

179. Ernest Callenbach, *Ecotopia: The Notebooks and Reports of William Weston* (Berkeley: Banyan Tree Books, 1975, 2004); Findlay, “A Fishy Proposition.” See Findlay for an interpretation of the importance of this book to the people of the Pacific Northwest.

historic buildings or popular urban cultural activities.¹⁸⁰ Furthermore, countless descriptions of the community by national publications verify that the city's surrounding nature is one of its most important characteristics. Take for instance the following praise from an advertisement about great places to retire: "With Bellingham Bay to its west and snow-capped Mount Baker to the east, Bellingham is a city designed for nature lovers."¹⁸¹ One might expect to find this type of description in portrayals of the city by the Sierra Club or the Audubon Society, but it was penned by the editors of the financial magazine *Kiplinger*. In 2005, *Kiplinger* ranked Bellingham as one of the nation's premier retirement destinations because of its nearness to prominent features of nature in the Pacific Northwest, such as Puget Sound and the Cascade Mountain Range. That a national financial magazine with no ostensible outdoor recreational or environmental affiliation can recognize and tout the relationship between Bellingham and its surrounding natural environments underscores the importance of certain qualities of the environment as selling points, but also how wide and far the city's reputation as a place to find them, has reached. Praise from nature and outdoor recreational magazines like *Outside* further support this generalization. In 2001, the magazine listed Bellingham as

180. Jori C. Burnett, "After G-P: Socially Sustainable Development Applied to Local Waterfront Redevelopment in Bellingham" (master's thesis, Western Washington University, 2003), 89. In a recent study of Bellingham's waterfront redevelopment proposals, 38 residents of varying backgrounds were asked to characterize their city. Many who took part in the study refrained from commenting on the "built environment," and instead "defined Bellingham by the natural environment that surrounds," according to the study's author.

181. Pat Mertz Esswein, Mary Beth Franklin and Magali Rheault "Retirement Living: 12 Great Places to Retire," *Kiplinger.com*, March 16, 2005, <http://www.kiplinger.com/features/archives/2005/03/12places.html> (accessed June 24, 2009).

one of its “Dream Towns” because of the community’s generally outdoorsy orientation.¹⁸²

The Bay, despite its touting by *Kiplinger* and others, fails to live up to the newer meanings that have been given to the city and its surrounding natural environments. This is because it is no longer a pristine feature of nature. Therefore it does not correspond with the types of social meanings that people now place on it. Consequently, its underwater landscape has once again become contested as many in the community have attempted to “restore” the Bay to a pre-contact state after years of environmental change caused, in part, by industrial producers.

This most recent conflict has resulted from the actions of Georgia-Pacific West Inc. (Georgia-Pacific). In the last forty years, many residents and grassroots environmental groups, such as the Bellingham Bay Foundation, have grown increasingly angry with the way that the Bay has been treated by this company. Georgia-Pacific, which owned a pulp and tissue processing plant that closed in the last decade, was responsible for polluting the Bay with mercury during the 1960s and 1970s. Mercury, a byproduct from their tissue bleaching process, and a potentially deadly chemical, has been pointed to by local environmentalists as a reason for the decline in the Bay’s marine life. Since the original contaminations, many in the community have confronted the company and demanded that mercury laden sediments be removed from the Bay so that its waters can act as marine habitat again—particularly for young salmon. Victories were won in the 1970s when the EPA required Georgia-Pacific to construct a waste water

182. Mike Grudowski, “Dream Towns 2001: Welcome to Your New Backyard,” *Outside Online*, September, 2001. http://outside.away.com/outside/destinations/200109/200109towns_1.adp (accessed November 29, 2009).

treatment facility at the waterfront to prevent additional contaminations. Further victories seemed imminent when the city acquired the contaminated waterfront properties, as well as the responsibility for handling the mercury, from Georgia-Pacific in 2004.¹⁸³

Rather than disappearing, the anger that many had towards Georgia-Pacific shifted onto the City and Port of Bellingham. To many, the city council and port commission are treating the Bay as carelessly as Georgia-Pacific by proposing that much of the contaminated sediments be “capped” with non-contaminated sediments instead of removed. Calls for the total removal of mercury can be heard from grassroots environmental groups such as the People for a Healthy Bay. Environmental groups, such as this one, have argued that the port and city are skimping on cleanup efforts and habitat restoration by capping so that they can help facilitate the construction of another small-boat basin along the waterfront. The port and city deny that their cleanup proposals are inadequate and that they are intentionally forgoing a more rigorous cleanup effort in order to help facilitate the construction of the basin that will bring in revenue.

However, environmentalists think that the Port and City of Bellingham are intentionally skimping, so they continue to advocate for the removal of mercury. Those that desire the total removal started a petition in 2006. The petition nearly resulted in a voter’s initiative that would have allowed city residents the power to demand that the largest amount of mercury possible be removed. Though the initiative garnered double the necessary signatures to warrant a place on the ballot—suggesting that many, if not most of the community wanted most of the mercury removed—it was invalidated by the

183. David Gallagher, “A Century of Development Along the Waterfront,” *Bellingham Herald*, December 16, 2007.

county courts. The judge ruled that the initiative lacked the qualities of a legally binding ordinance, which the State initiative process requires. The attorney representing the port best summed up the reason the initiative was stricken: “While it’s seductive to say ‘Let’s let the people vote,’ this is a misuse of the initiative power,” since it would “turn the initiative into a public poll.”¹⁸⁴ In spite of the decision, the mercury dilemma has remained a relatively hot topic in the community.

The mercury dilemma provides an appropriate story on which to end this thesis because it is a dispute that shares commonalities with other disputes that occurred in the past. At the core of the mercury conflict are the following questions: who should get to control the underwater landscape of the Bay? And, for what purposes should it be used and physically altered?

Residents of Bellingham Bay have often had to confront and debate these questions, especially after the arrival of non-Natives. Disagreements resulted because the “nature” of Bellingham Bay was not at all self-evident. Some saw the harbor as a vital link in the chain connecting the two major coasts of the nation by rail. Others saw it serving other purposes, like its role as a dump. While these two different conceptions of nature did not necessarily conflict, other conceptions would. This was especially the case when the Bay took on more specific meaning as place for deep draft navigation—this conception of the Bay brought the Corps and mill companies into conflict. Later, as recreational and agricultural interests came to obtain more power and support from the federal government, the different meanings of the Bay would collide yet again as

184. John Stark, “Judge Throws Out Clean Bay Initiative,” *Bellingham Herald*, September 19, 2006.

commercial interests were forced to hand control of the Bay over to the increasing number of small boat owners—primarily recreational boaters.

Competing ideas about the Bay, which were at times mutually exclusive, inevitably led to a struggle for control of the harbor's underwater landscape. Congress was the first entity to exercise control over the Bay. For much of the early part of the twentieth century, Congress regulated the uses of the Bay, chiefly through its agent, the Corps. The rules that legislators instituted were simple: the only interaction with the Bay that they were critical of were those that inhibited navigation. During the late-nineteenth and early-twentieth centuries, the Corps exercised their powers fully.

But as the Corps relaxed its control over the Bay and turned its attention to flood control measures, a power vacuum appeared. New ideas about the Bay emerged and gained strength, especially after environmental and social changes (i.e. sedimentation, decline of the timber industry) had taken place. Recreational boating interests emerged as the strongest lobby with the most convincing plan for developing the Bay in the future. The Corps, which still nominally held control over the Bay, assented to this new vision. By allowing recreational interests to plan future Bay improvements, the Corps, in effect, surrendered its control of the underwater landscape. Whether or not recreational boating interests are wagging the tail of the Port and City of Bellingham with reference to the present redevelopment scheme, these boaters have remained powerful actors over the years, especially when it comes to the present harbor redevelopment scheme.

To conclude, this thesis has made a case that to understand the history of the City of Bellingham it is necessary to understand the underwater landscape of the Bay. Furthermore, marine coastal environments like it should be thought of as middle grounds

that need to be considered in isolation from, as well as in relation to, terrestrial and deep ocean environments. My approach was to examine the ways in which this particular underwater landscape was fought over and reshaped. Marine environmental historians as well as urban historians could do no harm by peering under the surface of the water more often than they have in order to incorporate these sorts of dynamic environments into their interpretations.

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Abbreviations:

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