Central Washington University ScholarWorks@CWU

All Master's Theses

Master's Theses

Summer 2016

The Alaska Yukon Pacific Exposition and Seattle's Health Modernization

Shannon J. Rodman
Central Washington University, rodmans@cwu.edu

Follow this and additional works at: http://digitalcommons.cwu.edu/etd

Part of the <u>History of Science, Technology, and Medicine Commons</u>, <u>Social History Commons</u>, and the United States History Commons

Recommended Citation

Rodman, Shannon J., "The Alaska Yukon Pacific Exposition and Seattle's Health Modernization" (2016). All Master's Theses. Paper 437.

This Thesis is brought to you for free and open access by the Master's Theses at ScholarWorks@CWU. It has been accepted for inclusion in All Master's Theses by an authorized administrator of ScholarWorks@CWU.

THE ALASKA YUKON PACIFIC EXPOSITION AND SEATTLE'S HEALTH MODERNIZATION

A Thesis

Presented to

The Graduate Faculty

Central Washington University

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts
History

by
Shannon Janine Rodman
August 2016

CENTRAL WASHINGTON UNIVERSITY

Graduate Studies

We hereby approve the thesis of		
Sha	nnon Janine Rodman	
Candidate for the degree of Master of Arts		
	Dr. Brian Carroll, Committee Chair	
	Dr. Daniel Herman	
	Dr. Lacy Ferrell	
	Dean of Graduate Studies	

ABSTRACT

THE ALASKA YUKON PACIFIC EXPOSITION AND SEATTLE'S HEALTH MODERNIZATION

by

Shannon Janine Rodman

August 2016

This study examines the impacts of modernization in Seattle, Washington during the late nineteenth-century and early twentieth-century. Using Seattle as a case study, this thesis looks at how modernization was presented at the Alaska Yukon Pacific Exposition (AYPE) in 1909. During Seattle's modernization phase, public health, sanitation, and racial fears associated with disease were of utmost importance. By looking at Seattle and its relationship with the AYPE, it becomes clear that the exposition forced Seattle to modernize to become the premier city in the West.

TABLE OF CONTENTS

Chapter	Page	
I	INTRODUCTION	
	Historiography3	
	Purpose and Organization8	
II	DIRTY WATER AND A PLAGUE OF FLIES: SANITATION REFORM	
AND BUILDING SEATTLE'S MUNICIPAL WATER SUPPLY11		
	The Need for Sewers and Clean Water	
	The Progressive Agenda Versus Capitalism	
	The Health Department Takes Control	
	Typhoid Fever and the Alaska Yukon Pacific Exposition27	
	Conclusion35	
III	EXTERMINATE THE RATE: RACE, ASIAN IMMIGRANTS AND	
SEATTL	E'S PUBLIC HEALTH CRISES, 1907-190937	
	History of Anti-Chinese Attitudes and Its Connection to Disease41	
	San Francisco as Model and Testing Ground for Plague44	
	Seattle and the Plague	
	Conclusion	
IV	PRIMITIVE WILD PEOPLE AND INCUBATOR BABIES: IMPERIALSIM,	
HEALTH	I, AND SEATTLE'S ENTRANCE ON THE NATIONAL STAGE59	
	Attracting Business to Seattle	
	Promoting Progression and Health	
	Conclusion72	

REFERENCES75	5
--------------	---

LIST OF FIGURES

Figure		Page
1	Kinyoun Begs for Mercy in Court	46
2	Advertisement for Alaska Yukon Pacific Exposition	62
3	Igorrote Village Entrance	67

CHAPTER I

INTRODUCTION

As their small frontier town became a boomtown, the threat of disease for Seattle residents in the late nineteenth to early twentieth century, played a dominant role in their lives. Based on East Coast precedents, Seattle officials created a Board of Health to combat diseases. When prospectors discovered gold in Alaska in 1897, Seattle grew in population from 3,500 to 40,000 in a matter of months as people flocked to the area, which became a staging area for the Klondike Gold Rush. As the population grew, characteristically urban diseases, such as typhoid fever, diphtheria, small pox, and bubonic plague, followed. City health officials realized the need to modernize their growing metropolis in order to prevent disease. Progressive engineers and physicians found opportunity in Seattle to mold the city to their vision. Seattle became the testing ground for progressive prevention against diseases such as typhoid fever and the plague.

In preparation for the Alaska Yukon Pacific Exposition (AYPE), Seattle used Progressive reform to present itself as modern. During the late nineteenth century and into the mid twentieth century, individuals, particularly journalists, began speaking out about political and social issues, ranging from corruption in government and business, promotion of safety and health, and poverty. This social and political movement was one tool city officials used to make Seattle appear in step with modern and progressive cities in the East. Officials invoked clean-up campaigns against flies and rats to prevent

¹ "A Short History of Seattle," *National Parks Services*, accessed on August 10, 2016, from nps.gov.

disease, they began food and milk inspections, and looked to race relationships when plague threatened the city. These acts helped Seattle present itself as modern at the Exposition.

Major outbreaks of typhoid fever and the plague occurred during this transitional phase in Seattle's history. Officials were in the process of remaking the city and hoped to present their city as modern and healthy for the Alaska Yukon Pacific Exposition, in 1909.² Ironically, both typhoid and the plague gave the city an opportunity to display its modernity. Typhoid fever helped start a change over from a privately owned water supply to a city-owned system. Both capitalist and progressive interests came together in order to promote Seattle, which was fairly uncommon in the West. The city's response to the plague, often radicalized as an Asian disease, challenged entrenched stereotypes. During the 1880s, Seattle was staunchly anti-Asian in sentiments. In 1907 when plague entered the city, Seattle officials quickly blamed rats and fleas. With the help of able health officers and scientific discourse with strong progressive overtones, they replaced older racial plague narratives in Seattle. Unlike San Francisco, who blamed their large Asian population for the disease.

The AYPE was the catalyst for this change in Seattle, specifically in how the city chose to present itself to the nation. As early as 1900, Seattle officials began talking of hosting a World's Fair. These fairs highlighted cities' past and put them on the national stage. Seattle city officials chose to promote their city as progressive, modern, and healthy in the hopes of elevating Seattle as the premiere city in the West. When Seattle

² The Alaska Yukon Pacific Exposition was the name of the World's Fair hosted in Seattle. The two names are synonymous.

was chosen to host the AYPE, it illuminated two major health challenges facing the city: typhoid fever and the plague. Through the AYPE, effective public health initiatives to combat the diseases showcased Seattle as a modern healthy city. The World's Fair prompted Seattle to modernize. The AYPE put Seattle on the national stage, and allowed doctors with influence over public policy to present the city as the healthiest in the nation.

Historiography

Pacific Northwest historians often overlook the study of medicine and its connection to the AYPE in Seattle. Prominent Seattle historians, such as Richard C. Berner and Paul Dorpat, authors of *Seattle 1900-1920: From Boomtown, Urban Turbulence, to Restoration* written in 1992, have written extensively on the growth and development of Seattle, but have not fully explored the role of medicine and health reform. Instead, they focused primarily on the Progressive Era in terms of labor and political history. The history of medicine has been seen as a completely separate area of study. Environmental historian Matthew Klingle brings together urban and environmental history of Seattle during the Progressive Era in his *Emerald City: An Environmental History of Seattle 2007*. He explains how the natural landscape of Seattle changed as city officials modernized their growing metropolis and beautified the city for the AYPE, but he neglects to make connections with disease. Specific changes included diverting rivers, building sewers, and initiating sanitation reforms. These all connected to typhoid fever. It seems, the study of Seattle is often divided into labor, political, environmental, and social

history with only brief mentions of the AYPE and medicine and rarely have the two been connected. Most often, given small blurbs or brief mentions in most general histories of Seattle, the AYPE importance in Seattle's development is downplayed. While several historians have published case studies and histories about the AYPE, none have focused directly on role it played in Seattle's medical development.

The four historians who have published works about the AYPE and medicine in Seattle have taken several approaches. Nancy Rockafellar's "Public Health in Progressive Seattle, 1876-1919" is by far the most important work about Seattle's medical development. In her 1986 University of Washington master's thesis, Rockafellar examined "the impact which medical bacteriology had upon actual practice" of medicine in Seattle.³ "Public Health in Progressive Seattle" is a comprehensive survey of the evolution of scientific knowledge and its role reforming the city. Rockafellar argues that advances in medical theory during the Progressive era led to a change in medical and health developments in Seattle. For example, she explored how Seattle went from the "miasmatic theory" of disorders to accepting germ theory. Rockafellar only briefly mentions the AYPE and its role in promoting Seattle as a healthy modern city to the nation. But, for her, like previous historians, the role of the AYPE in Seattle's development is a topic of minor importance.

Historian Sanford P. Leham described the history of health in Seattle through the lens of county health departments. In his work, *The Road to Health: A Short History of the Seattle King County Health Department* published in 1954, Leham gives a survey of

³ Nancy Rockafellar, "Public Health in Progressive Seattle, 1876-1919" (Master Thesis, University of Washington, 1986), 8.

the beginnings of public health to the "highly-trained army of 5,000 persons" working today in the King County Health Department.⁴ Starting with the formation of a public health administration, Leham then follows the development of major services such as sanitation, food and water inspections as well as garbage collection. Leham then looks at specific diseases and how physicians and public health authorities respond to these threats. Leham's study, while useful to see the evolution of public health, is very focused on administrative history and ignores the larger historical context of what is happening in Seattle. He gives no credit to Progressive reformers or makes any connection to the AYPE.

Reimert T. Ravehold studied medicine in Seattle by looking at the mortality record of disease in his article "Historical Epidemiology and Grid Analysis of Epidemiological Data" published in 1962. Ravenhold's death records showed the poor quality of water and milk as responsible for typhoid fever. Furthermore, his study highlighted the changes in how physicians recorded information about disease. 5 While useful in the study of disease, his narrow study does not illuminate larger changes in Seattle's development. For example, his work does not explain decreases in disease due to the creation of a municipal water system, the large clean-up the city campaigns, and a major campaign to exterminate rats.

⁴ Sanford Leham, *The Road to Health: A Short History of the Seattle King County Health Department* (Seattle: Seattle-King county department of Public Health, 1954), 3.

⁵ Reimert T. Ravehold, "Historical Epidemiology and Grid Analysis of Epidemiological Data," *National Center for Biotechnology Information* 52, no. 5, (1962): 5, accessed 7/23/16 from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1522984/pdf/amjphnation00491-0050.pdf.

Historians studying health and the development of health in Seattle see it as a separate historiography divorced from that of the Alaska Yukon Pacific Exposition. In studying the AYPE, historians have made three major arguments: it promoted Seattle, connected to imperialism, and revealed ideas about immigration. Historians largely view the World's Fair as Seattle's coming out party and entrance to the national stage.

Alan J. Stein and Paula Becker give a comprehensive view of AYPE in *Washington's First World's Fair: Alaska Yukon Pacific Exposition* (2009).⁶ Primarily focused on the AYPE as a campaign to promote Seattle, Stein and Becker focused on how the exhibits tied back to Seattle's economic growth. Their work is not necessarily a strong argument, but rather a survey of the Fair itself. While they explain medical exhibits, the overall importance of medical development and its ties to the fair are not emphasized.

Shelley Sang-Hee Lee revealed an imperialist discourse present at the AYPE in her article "The Contradictions of Cosmopolitanism: Consuming the Orient at the Alaska-Yukon-Pacific Exposition and the International Potlatch Festival, 1909-1934" and her book *Claiming the Oriental Gateway: Prewar Seattle and Japanese America*. In both works, Lee argues that Seattle may appeared to embrace Japanese and Asian culture, but only as a basis for expanding Seattle's business markets. The AYPE celebrated Asian culture while clearly maintaining and promoting white superiority. This was seen in the

⁶ Alan Stein and Paula Becker, *Washington's First World Fair: Alaska Yukon Pacific Exposition* (Seattle: History Ink & University of Washington press, 2009).

⁷ Shelley Lee, "The Contradictions of Cosmopolitanism: Consuming the Orient at the Alaska-Yukon-Pacific Exposition and the International Potlatch Festival, 1909-1934" Western Historical Quarterly 38, (Autumn 2007): 277-302; Shelley Sang-Hee Lee, Claiming the Oriental Gateway: Prewar Seattle and Japanese America (Philadelphia: Temple University Press, 2011

actual exhibits presented itself at the fair. While this study is useful, it too does not delve enough into how racial issues connect to public health responses to the plague outbreak in 1907 leading up the AYPE. In order to achieve that one needs to look back at developments in health policy and why Seattle marketed itself as racially tolerant when in reality only sought to exploit Asian markets.

Continuing to focus on economics historian George Frykman's article published in 1962 explained how the AYPE promoted business and immigration to Seattle in "The Alaska-Yukon-Pacific Exposition, 1909." His article adds to previous work by Arthur J. Brown, "The Promotion of Emigration to Washington, 1854-1909," (1945). Frykman determined that the goal of the exposition was to bring business and immigration to Seattle by exploiting "local industry and commercial development." In this regard, city officials displayed Seattle's robust hinterland and commercial advantages it had by being located on Puget Sound. However, Frykman's study only focuses on the fair itself. He does not look at the years leading up to it and the city's preparations, which started as early as 1905.

So far, historians approach Seattle's medical development and the Alaska Yukon Pacific Exposition as separate topics. I combine both subjects. One cannot study public health in Seattle without looking at how it all culminated at the AYPE. The AYPE was the most significant motivation for reforming and modernizing Seattle's health programs.

By combining the AYPE and the development of health in Seattle, I contribute to other works done by previous authors. This approach allows me to frame how public

⁸ George Frykman, "The Alaska-Yukon-Pacific Exposition, 1909," *Pacific Northwest Quarterly* 53, 4 (July:1962): 90.

health influenced political and environmental policies in Seattle. Seattle endorsed its public health during the AYPE to encourage business and immigrants to the city. They advertised their relationship with Asian countries to embolden business to settle in Seattle. My thesis fits into this historiography because, like the authors listed above, I look at the development of Seattle, but through the lens of medicine. However, one cannot study public health without looking at how it all culminated at the AYPE. I will argue the AYPE showcased two diseases, and these diseases, typhoid and the plague, demonstrate social and economic issues that culminated at the Exposition.

Purpose & Organization

Chapter II introduces typhoid fever as a case study in the promotion of Seattle as modern and healthy at the AYPE. Typhoid fever was the first major case that brought about change in Seattle specifically the creation of state-of-the-art sewer and water systems as well as leading successful clean-up campaigns against flies and impure milk. It looks at the importance of potable water to prevent typhoid fever. Culminating in the creation of modern sewer systems and municipally owned Cedar River Watershed. Furthermore, this chapter looks at campaigns against flies and impure milk, which health officials believed to cause typhoid fever. These campaigns illuminated the city-wide clean-up campaigns in preparation for the AYPE. The AYPE highlighted three ways to prevent typhoid fever: creating new sewers, making a complex water system, and leading

health campaigns against vectors of disease. Because of these improvements, Seattle claimed the city to be healthy and modern at the AYPE.

Chapter III gives an in-depth break down of how Seattle officials dealt with a plague outbreak while advertising for the AYPE. When San Francisco experienced a plague epidemic in 1901, Seattle officials observed successful strategies to prevent epidemics. In fact, when Seattle fell victim to plague, it became an opportunity for Seattle to show the nation their quick and successful response to disease. Furthermore, the chapter looks at race relations. While San Francisco actively blamed their Asian population for the outbreak, Seattle consciously changed their narrative to focus instead on how the disease was caused by rats and fleas. Seattle replaced a discourse focused on racial stereotypes with one based on germ theory, thus making their city appear up-to-date and scientifically advance. Consequently, this allowed city officials to reinforce Seattle's modernity for the AYPE.

The fourth and final chapter ties everything together by focusing on the AYPE itself. The Exposition was the chance for business, government, and health officials to advertise Seattle as a modern, healthy, and state-of-the-art urban center. Even though business and governmental officials were promoting trade with Alaska and Asia, health remained a constant theme throughout. Health was how Seattle enticed business and immigration to the city at the AYPE. The thesis concludes with a brief summary of the advances made in Seattle and how they link back to the AYPE.

Through this study, I hope to effectively demonstrate the importance of the AYPE through community medicine and urban development in Seattle. By looking at Seattle

and the AYPE, I hope to show how the Alaska Yukon Pacific Exposition inspired the city and health officials to create and present Seattle as a healthy, modern city.

CHAPTER II:

DIRTY WATER AND A PLAGUE OF FLIES: SANITATION REFORM AND BUILDING SEATTLE'S MUNICIPAL WATER SUPPLY

In 1909, Seattle hosted the World's Fair: The Alaska Yukon Pacific Exposition (AYPE). The AYPE was an aggressive advertisement to promote Seattle as the premier city in the west. City officials emphasized health and Seattle's ties to Alaska and Asia. This exposition gave city officials and businesspersons the opportunity to showcase the city in order to encourage business. They wanted to show the nation that Seattle was a modern city. But, to move away from its frontier past, Seattle needed to modernize and industrialize. However, with industrialization and urbanization came public health crises like epidemics. Progressives, such as City Engineer Reginald Thomas and Health Commissioner James Crichton, sought to improve municipal health conditions while enticing foreign and national immigration and investment. The biggest achievement of Seattle progressives was the establishment of city-owned water to end typhoid fever epidemics. This put them in direct confrontation with capitalists who preferred to monopolize control over Seattle's water. In the end, both capitalists and progressives united for the AYPE to advertise Seattle to the nation and the world. By promoting Seattle as a healthy city, city officials and business leaders hoped to establish Seattle as the premier city in the west.

The late growth and development of Seattle gave the city a distinct advantage over eastern cities established decades, and some centuries earlier. Heeding examples set

by eastern cities. Seattle accessed the latest advances in science without having to invest time in developing new strategies. Eastern states, such as New York and Massachusetts, created Boards of Health that actively prevented and treated epidemics in their states. Newspapers and histories attributed Seattle's success with public health during the territorial days, 1853 to 1890, to Doctor Gideon A. Weed. Weed served as health officer, physician, and later mayor of Seattle. Weed arrived in Seattle in 1870; and he was one of only ten medical professionals in Seattle. Educated at Rush Medical College in Chicago, Dr. Weed established a lucrative medical practice and became president of the Washington Territory Medical Society in 1888. As mayor, Weed implemented quarantine and mandatory vaccination during a small pox epidemic in 1876-1877. Weed also helped pass a bill modeled after previously established bills from the east, creating elected health officers that served the city. A municipal health officer had the backing and finances of the city; furthermore, the job was to serve the city by inspecting facilities and quarantining the sick. Early on city officials realized the importance of health. As the city grew in population, disease tested Seattle's response.

The rapid growth of Seattle from 1890-1900 led to a series of communicable disease outbreaks, which was fairly typical when small towns experienced rapid population growth because health services were not fully developed. Typhoid fever was one of the largest of these.² Contamination of water by both sewage (human and animal

¹ Seattle City Clerk, "Mayors of the City of Seattle," accessed March 14, 2016 http://www.seattle.gov/cityarchives/seattle-facts/city-officials/mayors; Clarence B. Bagley, *History of Seattle From the Earliest Settlement to the Present Time*, Vol. 1 (Chicago: The S. J. Clarke Publishing Company, 1916).

² Ravehold, "Historical Epidemiology," 782.

excrement) as well as garbage caused typhoid epidemics and other enteric diseases. Seattle had one of the highest typhoid fever death rates in the state, approximately "166 per 100,000" in 1889. It increased during the Yukon gold rush in 1898 when "254 city residents per 100,000 contracted the disease." Having proper water and sewer systems was the first act towards ending typhoid fever epidemics.

The Washington State constitution of 1890 highlighted a larger progressive agenda. The Washington State Medical Society had been instrumental in writing parts of the Constitution, particularly Article 20, about public health and vital statistics. This article established, by law, a state Board of Health. The state legislature also enacted laws to increase the authority of the Board of Health. The following excerpt from an 1891 board report reflects its reach:

authority to make such rules and regulations and such sanitary investigations as they may from time to time, deem necessary for the preservation or improvement of public health; and it shall be the duty of all police officers, sheriffs and constables. . . to enforce such rules and regulations.⁴

Enforcement of regulations gave Health Officers unprecedented power and influence, in the name of preventing typhoid.

Potable water was key for any growing city. Above ground, troughs and pipes brought water to Seattle. Seattle's first water system was created in 1854. Wells and springs constituted other ways to get water. Unfortunately, with above ground and open trough systems, contamination from garbage and sewage habitually infected drinking

³ Marcelle Dunning and Robert Heskett, "Disease Through the Century: Public Health Becomes Involved," *Saddlebags to Scanners: The First 100 Years of Medicine in Washington State* (Seattle: Washington State Medical Association Education & Research Foundation, 1989),137.

⁴ *To Create a Board of Health and Bureau of Vital Statistic*, 1891, S.B. No. 28.1 (Olympia: O.C. White State Printer, 1891).

water. This opened the door for the city engineer and the Board of Health to create a state-of-the-art water system.

Seattle went through a three-stage process to create a modern watershed to fend off typhoid. The first two phases dealt primarily with recognizing the need for clean water and gaining approval for the project from the city. After the city established the watershed, progressive officials hailed Seattle as modernized. However, typhoid fever epidemics continued to occur. Two epidemics took place, one while the city was advertising the Alaska Yukon Pacific Exposition in 1907 and the second at the Exposition in 1909. Both incidents happened because of pipeline contamination. However, officials never once questioned the purity of their water system because they considered it state-of-the-art. They led campaigns instead against flies and unpasteurized milk believing these caused the typhoid fever outbreaks. Seattle entered fully into the Progressive Era by instituting citywide clean-up campaigns and milk inspections. Typhoid epidemics threatened the city's reputation as a modern healthy city. These campaigns tied directly back to the Alaska Yukon Pacific Exposition because the goal was to attract people and business to Seattle. Epidemics threatened the city's image, so city and health officials joined to end the threat of typhoid. By advertising Seattle as modern and healthy at the AYPE, Seattle officials promoted the creation of modern sewers and water systems as part of progressive campaigns of a modern city

The Need for Sewers and Clean Water

The health department and the city's engineering department realized the need for better sewers, garbage collection, and water if they were going to stop typhoid. By the 1880s, Seattle's growth from just over 2,000 to a population of 40,000 caused both garbage and sanitation crises. Open water systems and lack of sewers attributed to typhoid fever epidemics. The *Seattle Post Intelligencer* printed an article pointing out, "The prevalence of contagious diseases is leading many prominent men to give their most earnest attention to the subject of proper sewerage." The article ended with a call to action for the municipal authority:

Our city, perhaps, does not show any higher rate of mortality than the average of other towns of the same size, but with its general advantages in point of salubrity, the municipal authorities owe it to the citizens to take such sanitary precautions that the standard of healthfulness shall be altogether above the average of other places—above the chance of cavil or impeachment. The health of a struggling village on new ground may take care of itself, but when a village grows into a city its sanitary ordering demands careful attention and large expenditure.⁵

The article's writer, David Higgins, advocated municipal responsibility for public health and sanitation. Cost was secondary. Placing health first signaled Seattle's commitment to public health. It also gave the health department significant power within the city. Physicians would be in charge of creating sanitation policies.

Presenting Seattle as the healthiest city in the Pacific Northwest was key to the campaign and development of Seattle. Its main competition was San Francisco. The two cities competed to dominate American trade with Asia. In effect, the Health Department's report in 1887 noted, "The question of salubrity of climate is foremost in the minds of

⁵ David Higgins, "Sewerage and Health," *The Daily Intelligencer* [Seattle], December 15, 1876, accessed from *Chronicling America: Historic American Newspapers*. Lib. of Congress, March 12, 2016, http://chroniclingamerica.loc.gov/.

most emigrants, and ours certainly is such that we can afford to advertise it." Seattle wanted immigration to their city; more specifically, they wanted big business interests from the east to migrate to their city. More people would bring more business, boost the city's economy, and thus help develop the city. However, the influx of people came with a cost. More people meant more human waste, and more human waste meant more disease.

The implementation of sewers was the first step in curtailing contagions. Prior to modern sewers, Seattle depended on a chaotic collection of sewers and cesspools that drained into surrounding lakes that the city then used as the primary water supply.

Typhoid is a water borne illness that occurs when people ingest tainted water, so inadequate sewers exacerbate its spread. The goal of modernization was to prevent human waste from filtering into the water supply and infecting people. From 1882 to 1883, the city built a series of wooden and clay sewers in Yesler Way and Union Street, the most densely populated areas. City officials passed ordinances that required properties to connect to them.⁸ Progressive statutes made it illegal to live on a property without sewer access in order to prevent water contamination.

In 1888, Seattle Mayor Robert Moran and the city council "urged public ownership of the water supply and the construction of the gravity system from Cedar

⁶ Edward L. Smith, July 1887, Series 322, box 1, folder prior to 1901, Reports to the Department of Health and Sanitation Prior to 1901-1927, King County Archive (hereafter cited as Department of Health and Sanitation).

⁷ John M. Findlay, "Fair City: Seattle as Host of the 1909 Alaska-Yukon-Pacific Exposition," *Pacific Northwest Quarterly* 100, no. 1 (Winter: 2008/2009):3.

⁸ Rockafellar, "Public Health in Progressive Seattle," 39.

River." Health officials also urged this after reading about Massachusetts Board of Health's discovery. In Massachusetts, the Board of Health found a clear connection to unclean water and disease. In 1878, Massachusetts Board of Health members traveled to Europe to study water filtration systems. ¹⁰ Using knowledge gained from Massachusetts, Seattle officials realized untreated sewage from houses were a major contaminant source and a precondition for typhoid outbreaks. City-owned water provided protection.

City engineer Reginald H. Thomson saw an opportunity to modernize Seattle's sewer and water systems. Educated at Hanover College in Indiana, Thomson came to Seattle in 1881. It was here where Thomson's progressive goals came to fruition.

Biographers tell stories that Thomson claimed that when he came to Seattle he looked at the hills, ruts, and mudflats of undeveloped land as impeding Seattle's growth and development. His goal was to develop the frontier town into a great city. Using the threat of disease, Thomson, as city engineer, oversaw the construction of new sewers in 1892. In the *Seattle Post-Intelligencer*, Thomson reminded readers that, "The threatened invasion of cholera or other epidemic diseases demands that every precaution be taken to guard the public health." In addition, Thomson began the Lake Union Sewer Tunnel and the South Sewer Tunnel. Minimizing potential mistakes by learning from earlier systems in the east, Thomson used only the latest advances. Armed with scientific

⁹ Bagley, *History of Seattle*, 267.

¹⁰ Rockafellar, "Public Health in Progressive Seattle," 38.

¹¹ R. H. Thomson, *That Man Thomson* (Seattle: University of Washington Press, 1950).

¹² The above information retrieved from, "Sewers and Streets," *The Seattle post-intelligencer*, January 30, 1893 accessed from *Chronicling America: Historic American Newspapers*. Lib. of Congress, March 12, 2016, http://chroniclingamerica.loc.gov/lccn/sn83045604/1893-01-30/ed-1/seq-8/

knowledge, Thomson created a modern sewer system. At the Alaska Yukon Pacific Exposition in 1909, Seattle's sewer system was on exhibit as a demonstration of Seattle's modernity. The display at the Exposition highlighted city health officials' attempts to prevent disease.

The Progressive Agenda versus Capitalism

The Great Fire of 1889 further demonstrated the need for a reliable water supply. Private companies monopolized water, which made the city dependent on them.

Moreover, the city had to buy the water from the companies. Privately-owned water companies supplied the Seattle area with water from Lake Union and Lake Washington.

The largest supplier of water was the Spring Hill Water Company. When the Great Fire of 1889 burned down the business and commercial district, it was apparent that privately-owned water companies could protect the city from neither typhoid fever nor fires. Water pipes were too small and the Spring Hill Company made them from hollow logs; consequently, the fire burned those. Additionally, hydrants "were only located on every other street." City officials and city engineers began seriously debating city-owned water after the private companies proved inadequate. Under the city's supervision, they

¹³ Bagley, *History of Seattle*, 326.

¹⁴ Above information retrieved from, "Great Seattle Fire," University of Washington Libraries Digital Collections, accessed 4/22/2016, http://web.archive.org/web/20070520045115/http://content.lib.washington.edu/seattle-fire/index.html

increased pipe size. They also eliminated wooden pipes and built more hydrants. ¹⁵ Cityowned water was part of a larger state of progressive ideas since most cities relied on private companies supplying water. This was especially true in many states where companies would charge more money to certain neighborhoods. City-owned water threatened capitalist interests. Private-corporations would not be able to sell water at whatever rates they wanted. In fact, Progressive reformers claimed municipal water would charge far less. ¹⁶ Thus, Seattle entered its first major conflict of private versus public ownership of water.

From the perspective of progressives, private water companies proved inadequate. After the Great Fire of 1889 and during the rebuilding phase in 1890, citizens were once again plagued with typhoid fever due to a lack of clean water supply. Amid the 1891 epidemic, health reports began actively supporting the formation of the Cedar River Watershed. In October, an unnamed health officer concluded that water from Lake Union was yet again the cause of the outbreak, and it "all tends to show that the eventual supply of water must come from Cedar River." Pollutants had not reached mountain-fed Cedar River, like they had polluted Lake Union and Lake Washington. Health Officer George Sparling reported on typhoid fever in a December report. Sparling found that in the Lake Union district "their only sewers [were] three immense ditches carrying the sewage of

¹⁵ "Great Seattle Fire," University of Washington Libraries Digital Collections.

¹⁶ Werner Troesken and Rick Geddes, "Municipalizing American Waterworks, 1897-1915," *Journal of Law, Economics, & Organization* 19, no. 2 (October: 2003): 2, accessed 4/22/2016, http://www.jstor.org/stable/3555109.

¹⁷ Department of Health and Sanitation, October, 1891.

10,000 people into Lake Union."¹⁸ Once calculated out, Sparling concluded that "at least 1,500 pounds [of waste was] discharged into Lake Union per day" and that "until that district [was] properly sewered it will be difficult to prevent" contamination.¹⁹ Vital statistics supported Sparling's calculations. In the Lake Union district, comprising of the seventh and eighth wards, where there was no modernized sewer system typhoid fever flourished. However, in the fifth ward, which had a modern sewer system, typhoid declined by half. The Spring Hill Water Company supplied water to the seventh and eighth wards with water pulled from Lake Union. Statistics once again showed that the privately-owned companies failed to provide clean water.

Seattle entered into a city-wide debate for and against municipal-owned water. This pitted progressive physicians and officials against business elites. Most of Seattle's elites had a stake in private companies; therefore, they disapproved of city-owned water. Lack of money to build the city watershed was also a major problem. Capitalists sabotaged efforts and tried to block what they saw as a dangerous progressive initiative by purchasing the land the city wanted to use to create the watershed. Edward H. Ammidown, a New York financier, even "offered to develop a private system on Cedar River." In return, he would sell the water to the city. Most of Seattle's elites favored Ammidown's plan because control of water remained in the hands of private companies. However, the city council did not approve his plan. In fact, at least four practicing

¹⁸ Department of Health and Sanitation, December 31.1891

¹⁹ Ibid.

²⁰ Kit Oldham, "Seattle residents receive Cedar River water for the first time on January 10, 1901," *Historlink*, last modified October 17, 2014, accessed January 12, 2016, http://www.historylink.org/index.cfm?displaypage=output.cfm&file_id=10945.

physicians working for the Board of Health, made sure of it.²¹ The board approved cityowned water because they would have control over inspecting the watershed. This gave Thomson and his assistant George Cotterill time to form a solution to the financial problem of how to pay for the system.

Thomson looked to Spokane for a solution. Upon becoming a state on November 11, 1889, Washington State limited the funds cities could borrow. In 1890 and in 1892, Seattle had borrowed all the money they were entitled to under the Washington State Constitution due to rebuilding efforts after the fire. Spokane suffered the same fate as Seattle; fires had recently destroyed it as well. They needed new water systems, but they lacked funds.²² However, Spokane managed to get money for their water system. They purposed borrowing money against their un-built water system and once built, the company would pay back the loan. Essentially, they were going into debt with the promise of profit. In the Supreme Court of Washington, the case *Winston v. City of Spokane* approved Spokane's borrowing to build the water system.²³ Thomson used the case as an "alternative to the Ammidown plan."²⁴ He drafted Ordinance No. 3990 authorizing \$1.25 million in revenue bonds to build Cedar River Watershed.²⁵

²¹ John Lamb, *The Seattle Municipal Water Plant* (Seattle: Moulton Printing Company, 1914), 55 and Rockafellar, (Master Thesis, University of Washington, 1986), 43.

²² Ibid., 59.

²³ Winston v. City of Spokane, 12 Wash. 524 41 P.888 (1895), accessed March 12, 2016 from http://courts.mrsc.org/mc/courts/zwashreports/012WashReport/012WashReport0524.htm.

²⁴ Oldham, "Seattle residents."

²⁵ Ordinance 3990, October 23, 1895, Council Bill 483, Seattle Municipal Archives

Newspapers captured the battle between capitalists and progressives in the passing of the ordinance. Before the inauguration of the ordinance, the local municipalities had to approve it through a vote. Progressives made their arguments to gain approval for the city-owned watershed. The progressive Seattle Times, printed articles in favor of the watershed. The paper reminded readers of the great fire and the threat of another: "From Spokane Falls (which burned yesterday) comes another warning, aside from our own fire. No time should be lost in perfecting our water supply."²⁶ Along with warning of the fire, the Seattle Times communicated inability of private companies to protect the city from fire and to provide water for homes: "The Spring Hill Water Company has failed to keep up pressure enough to bring the water to your petitioners' houses more than one-third of the time ever since the great fire of June 6."27 If that did not convince readers, the paper printed consequences of the disease in the obituaries. The newspapers suggested a split in Seattle's demographics with Seattle Times readers favoring the city's plan. Populists and Progressives tended to favor city-owned water based on the belief it would be cheaper and better regulated.

Business elites actively opposed the plan. The *Post-Intelligencer* newspaper supported the private companies and printed articles against the ordinance and municipally-owned water. Bagley recalls the *Post-Intelligencer* calling supporters of the ordinance "crass-headed idiots." Business elites opposed the ordinance for "financial"

²⁶ Seattle Times, August 5, 1889.

²⁷ Seattle Times, August 8, 1889.

²⁸ Bagley, *History of Seattle*, 269.

reasons and . . . that the new idea of city owning public utilities was far out of line with accepted practice."²⁹ Editors claimed anyone who voted for the ordinance was a fool. In fact, the *Post-Intelligencer* admonished, "Republicans, Democrats and Populists, united perhaps for the first time in this city, in opposing with all their force" the ordinance.³⁰ However, there was no evidence to support this claim. On the day of the election, the *Post-Intelligencer* printed "Seattle to Choose Between Debt and Freedom."³¹ Capitalists argued against the city going into debt to build a watershed that private companies were perfectly capable of building. It was clear capitalists were going to oppose this plan as it posed a threat to business.

Progressive-minded Thomson found a formidable opponent in Republican Judge John J. McGilvra. The judge was staunchly opposed to the ordinance at first. McGilvra was well known in Seattle, and was "known as a man of unimpeachable integrity and sound opinion" according to historian Clarence Bagley. Having McGilva against the watershed was discouraging to most supporters. However, after a meeting with Thomson, Judge McGilvra changed his position and supported the watershed for reasons not clear. He even expressed his support in the newspapers. He became an indispensable ally. He organized individuals to speak on behalf of the ordinance at town hall meetings, and

²⁹ George Cotterill, "Revenue Bond" message to City Council in Mary McWilliams, *Seattle Water Department History* (Seattle: Dogwood Press, 1955) 61.

^{30 &}quot;A Popular Protest," Seattle Post-Intelligencer, December 8, 1895, accessed March 12, 2016 from Chronicling America: Historic American Newspapers. Lib. of Congress.
http://chroniclingamerica.loc.gov/lccn/sn83045604/1895-12-08/ed-1/seq-8/

³¹ "The Day of Election: Seattle to Choose Between Debt and Freedom," *Seattle Post-Intelligencer*, December 10, 1895, http://chroniclingamerica.loc.gov/lccn/sn83045604/1895-12-10/ed-1/seq-2/.

³² Bagley, *History of Seattle*, 269.

often paid expenses out of his own pocket. This drastic change in the Judge's position poses some questions. Did Thomson convince the Judge that municipal water would be better in the end? Or, did Thomson propose a deal that the Judge could not refuse? Attorney Christopher Bayley's book *Seattle Justice* suggests Seattle's politics and police were rife with corruption.³³ This would suggest that Judge McGilvra accepted a bribe or stood to gain somehow. Still, sources remained vague on what happened.

In the end, with the combined support from Judge McGilvra and the Board of Health, the city launched a successful campaign for city-owned water.³⁴ On December 10, 1895, with 2,656 votes in favor and 1,665 opposed, Seattle's watershed debate was over. The people approved the building of the Cedar River Watershed. Letters to the Mayor and City Council in favor of the city-owned water also claimed, "The City must own the land around its impounding reservoirs, and its source of supply, for sanitary purposes." In order to keep the water free of disease, the city had to control the land around the water to prevent any adulteration. The city bought 80,000 acres of land around the watershed to prevent contamination of the water. In 1916, reminiscing on the success of city-owned water, historian Clarence Bagley noted that Seattle was "the healthiest city

³³ Christopher T. Bayley, *Seattle Justice: The Rise and Fall of the Police Payoff System in Seattle* (Seattle: Sasquatch Books, 2015), 3.

³⁴ Bagley, *History of Seattle*, 269; "A Popular Protest," *Seattle Post-Intelligencer*, December 8, 1895, *Chronicling America: Historic American Newspapers*. Lib. of Congress.; "The Day of Election: Seattle to Choose Between Debt and Freedom," *Seattle Post-Intelligencer*, December 10, 1895, *Chronicling America: Historic American Newspapers*. Lib. of Congress. http://chroniclingamerica.loc.gov/lccn/sn83045604/1895-12-10/ed-1/seq-2/.

³⁵ Letter to Mayor and City Council, November 8, 1895, Seattle City Clerk's Office Comptroller File 973, Seattle Municipal Archive.

in the world due primarily to the excellence of her water."³⁶ In 1902, the construction of the watershed was complete with a series of dams, pipelines, and a basin to hold water. With city-owned water, the government assured citizens of low-cost clean water. *Plumber and Sanitary Engineer*, a national journal, praised Seattle's new municipally-owned system. In 1909, at the Alaska Yukon Pacific Exposition, Seattle's water system promoted Seattle's commitment to health and affordable water. This was a triumph for progressive engineer Thomson and the Board of Health; however, the threat of typhoid fever would continue to test the city.

The Health Department Takes Control

The watershed brought clean water to the city; officials took steps to prevent its contamination. Laws written in 1891 gave the Board of Health authority to regulate the watershed by enforcing rules to prevent contamination. In 1896, miners discovered gold in the Yukon. By 1897, as people hurried west joining the Klondike Gold Rush, a huge influx of prospectors stopped in Seattle to re-supply before heading off into the Yukon. Despite inadequate housing and crowding, a reliable water source kept typhoid fever at bay. Much of this was due to health officers patrolling the watershed. Additionally, advancements in medical knowledge were crucial to keeping disease out of Seattle. Contemporary state laws required physicians to stay abreast of advancements in medicine. Thus, the Board of Health closely regulated the watershed when it became

³⁶ Bagley, *History of Seattle*, 270.

common medical knowledge that a single typhoid patient could contaminate an entire city's water supply. In 1906, the Board of Health added watershed reports in their monthly health accounts. Thomson, a devoted supporter of public health, worked with the Board of Health to promote health in designing the city. In Thomson's memoires, he noted, "a city cannot maintain its reputation for health, even with an abundance of water, fuel, and light, unless it also maintains good sanitation. Our city is determined to maintain as perfect sanitation as the inventive mind of man can provide." Regulation was pivotal to preventing typhoid.

The creation of the Cedar River Watershed was not without casualties. The Cedar River was the ancestral home to five Native American tribes: the Upper Puyallup, the Duwamish, the Snoqualmie, Wenatchee, and Yakama. The Point Elliot Treaty in 1855 took that land by force, leaving the tribes only fishing rights. Article 5 of the Treaty stated, "The right of taking fish at usual and accustomed grounds and stations is further secured to said Indians." However, because fishing threatened the purity of the water by exposing it to humans, doctors regularly enforced restrictions that prevented fishing near the watershed. By 1901, the city restricted access to the watershed and diverted water from the river in direct violation of treaty rights. During this time, tribes were silenced. Seattle pushed tribes out of their ancestral homes, and the city appeared to have no

³⁷ Thomson, *That Man Thomson*, 130.

³⁸ Treaty of Point Elliot 1855, March 8, 1859, Treaty, accessed from http://www.goia.wa.gov/Treaties/Treaties/pointelliot.htm.

³⁹ Ibid.

problem violating treaty rights with tribes when it came to the overall health of Seattle's white community. Progressive reforms and modernity trumped treaty rights.⁴⁰

Typhoid Fever and the Alaska Yukon Pacific Exposition

By 1907, Seattle had developed a state-of-the-art sewer and water system.

Typhoid rates declined. However, in 1907, while the city advertised for the Alaska

Yukon Pacific Exposition, some citizens began "running a temperature, complaining of
abdominal pain, extreme lassitude and other symptoms" such as deliriousness—all of
which heralded the return of typhoid. Over one hundred people died. During this time,
city officials called on assistance from the public in the crusade to clean-up streets and
alleys. In describing the events leading up to the Alaska Yukon Pacific Exposition,
Bagley explained, "Every sanitary precaution was adopted to put the city in perfect health
conditions and keep it there." When typhoid fever threatened Seattle's reputation,

⁴⁰ In fact, it was not until 2006 when the Muckleshoot tribe and the city of Seattle ended a "legal dispute over the use of water in the Cedar River, making reparations for historical damage suffered by the tribe." Seattle increased water withdrawals from Cedar River, which would decrease the natural flow of the river. This hurt salmon production. In 2004, the city was forced to cap its water withdrawals. Also, the city gave the Muckleshoot tribe 1,400 acres of land; Information retrieved from Lisa Stifler, "City, tribe hope to settle Cedar River Issue," *Seattle Pi*, April 21, 2006.

⁴¹ Lucile McDonald, "Seattle's Triumph of Typhoid Fever," *Seattle Times*, April 9, 1961, accessed March 14, 2016 from University of Washington Libraries E-newspaper at http://guides.lib.uw.edu/research/news/enews.

⁴² Annual Reports for the Department of Health and Sanitation, series 1802-G6, box 1, Seattle Municipal Archives; Lucile McDonald, "Seattle's Triumph of Typhoid Fever," *Seattle Times*, April 9, 1961, accessed March 14, 2016 from University of Washington Libraries E-newspaper at http://guides.lib.uw.edu/research/news/enews.

⁴³ Bagley, *History of Seattle*, 336.

Health Commissioner James Crichton used scientific advancements to implement two campaigns against typhoid fever. Knowledge that flies could carry typhoid fever initiated the first campaign. Advances in bacteriology also linked typhoid fever to impure milk, leading to a second sanitation campaign in late 1907.

In 1907, Doctor James E. Crichton became the most important doctor and politician in Seattle. He arrived in Seattle in 1890 and was a member of the city council from the Queen Anne District. Using his position in the city council, he became an indispensable ally to the Health Department. Crichton was both progressive and capitalist. He had a "laissez-faire attitude towards the saloon and brothel districts," which made him a capitalist. 44 He saw brothels and saloons as a way to make a profit for the good of the city. But his progressive leanings manifested in health policies. When he was acting mayor in 1898, he passed health ordinances that regulated "city markets and bakeries, [inspected] the municipal milk supply, [restricted] stable permits, [taught] first aid to fire and police departments, and [instituted] compulsory smallpox vaccinations for school children."⁴⁵ It was under Crichton's leadership that Seattle became more progressive especially in creating more regulations in the name of health. He also helped to advertise Seattle as progressive, hospitable, and healthy in his Bulletin of the Department of Health and Sanitation. Doctor Crichton was a key player in advertising Seattle during the Alaska Yukon Pacific Exposition. 46

⁴⁴ Rockafellar, "Public Health in Progressive Seattle," 64.

⁴⁵ Ibid.

⁴⁶ The information about James Crichton comes from secondary sources. The historical record lacks information about him. The information was retrieved from Nancy Rockafellar's master thesis. However, she does not cite where she retrieved this information.

The *Bulletin* became the mouthpiece for advertising health. Here, Crichton spread his message on health. This gave him a platform to institute his public health campaign. In 1907, construction on the Cedar River pipeline number two began. During construction, water from the polluted Lake Washington supplied the city. Because advertisement for the Alaska Yukon Pacific Exposition was underway, officials did not consider the Cedar River Watershed as the problem when people contracted typhoid. With the city crowing about their modern amenities, nobody suspected tainted water caused the 1907 outbreak.

Dr. Crichton, through his *Bulletin*, reassured the public when news of new cases hit the papers. He claimed,

Of the one hundred cases, the evidence is reasonably clear that thirty-four contracted the disease outside the city; most of them in the lumber camps...Fourteen other cases are more doubtful as to the source of infection with the probabilities strong that the infection occurred outside the city. The probabilities strong that the infection occurred outside the city. While these claims cleared Seattle of responsibility, it still left fifty-four unexplained cases. Crichton masterfully placed blame on the victims—the poor. Blaming the poor was typical of progressive reform. Fifteen people who contracted the disease lacked screens on their doors and windows; consequently, this supposedly allowed flies to infect the families' food, which was how Crichton claimed they contracted typhoid. Five more cases were blamed on parental carelessness. A family of seven visited a house where a case of typhoid had recently occurred. The parents did not allegedly take precaution resulting in all five children contracting the disease. Of the thirty-two cases left, Dr.

⁴⁷ Health and Sanitation Bulletin, October 1908.

Crichton concluded was due to negligence.⁴⁸ Here, Crichton was referring to the city's acquisition of Ballard, West Seattle, and South Park. These locations lacked city water or the sewer system the rest of Seattle attained. In bold print, the doctor warned against flies: "Don't let them breed on your premises and keep them out of your house."⁴⁹

City officials instituted a massive "clean-up the city" campaign in 1907. Mayor John Miller sought to create "a spotless town," and he asked for everyone to help clean up. ⁵⁰ Photos illustrated in the *Bulletin* assisted in the crusade against flies. The photo explained that to save people's babies, homes, and people, everything must stay cleaned. In fact, one states, "Report your neighbors" if they did not keep their premises clean. The photos also reminded the public, "If you are careless or indifferent about them, and your children die, don't blame the Health Department." Just in case that did not convince the public, the *Bulletin* proved there was a price on people's lives; in fact, for every death, it imposed 7,500 dollars in taxes on a community. ⁵¹ The *Bulletin* suggested the financial burden on society should convince people to clean up their premises and prevent typhoid fever. ⁵²

The constant retrain that flies caused typhoid was the goal of the "Swat the Fly" campaign. Secondally, the goal was to stop typhoid fever. Because flies eat and multiple

⁴⁸ Health and Sanitation Bulletin, October 1908.

⁴⁹ Above information was retrieved from *Health and Sanitation Bulletin*, 1908.

⁵⁰ Bagley, *History of Seattle*, 527

⁵¹ Calculations based on the value of human life found 5,000 dollars lost in capital. While a person was sick, 2,500 dollars was lost in capital. This makes the total sum 7,500 when fatalities occur.

⁵² "Typhoid Fever Costly," *Health and Sanitation Bulletin*.

in waste, keeping homes clean was an affective technique in preventing flies that might carry typhoid. Chief entomologist of the United States, Leland Ossian Howard, aided this. Howard suggested changing the name of the common housefly to "Typhoid fly," which would "advertise the tiny assassin in his true colors." The Health Department invoked fear to motivate people to keep homes and streets cleaned. With the upcoming AYPE, the "Swat the Fly" campaign demonstrated officials' determination to present Seattle as modern and healthy. Cleaning up cities was a major aspect of the Progressive reform. Targeting the poor as causing disease was also common. Because the poor typically lived in small houses that were overcrowded, reformers targeted them.

While flies menaced society, another crisis arose involving impure milk. Food inspection was another major aspect of progressive reformer nationally. Muckracking informed the upper and middle class about unsanitary working conditions among the poor and political corruption. In many cases around the nation, muckracking journalists discovered "oversight of key industries affecting public health: meat packers, food processors, and makers of drugs and patent medicines." It was during this time that officials in Seattle began inspecting milk and other food products. They checked food products to make sure they were free of disease. During the typhoid epidemic in 1907, milk sheds in Seattle were regularly tested. Health reports gave details on the subject even though the city established a market inspector in 1891. Sanitation inspections included review of cleanliness of the barns, dairy houses, animals, and all the tools used to gather milk. Furthermore, inspectors could compel dairymen to give the inspectors the

⁵³ "The Typhoid Fly," *Health and Sanitation Bulletin*, July 1909.

dairymen's customer list. Also, bacteriologists made laboratory assessments. This included going to the farm or taking samples from distributing plants or wagons. If any inspector found anything wrong with the farm's sanitation or the milk's purity, police authority could be used to compel farmers to follow sanitation guidelines. Moreover, articles in the newspapers posted inspections made at dairies. This way an informed public could make the safest choice when buying milk.

In Seattle, officials pushed a health discourse in the media. In printing health reports, health suggestions, and even the creation of the *Bulletin* sent a clear message on what people should be doing to achieve the utmost good health. For example, the *Bulletin* and newspapers printed articles that targeted dairies and milk supplies. In doing so, Crichton looked to mothers to help shame dairies into pasteurizing their milk. At this time, farmers considered the pasteurization of milk as "new, suspect, and outrageously expensive." The newspaper *The Rancher* supported pasteurization of milk.

Newspapers' support would suggest that big dairy producers supported the measures because the expense of pasteurization would push out small dairies. Additionally, Crichton appealed to a mother's sense of duty to protect her child. He claimed loss of life from tainted milk was "unnecessary and shameful." He went on to implore mothers to help safeguard their babies by only buying pasteurized milk. To the businessmen, he implored them to spend the extra money and have their milk be inspected and processed

⁵⁵ Above information was paraphrased from, "Inspection of the Milk Supply: Its Object, Method, and Effect," *The Ranch*, June 15, 1909, http://chroniclingamerica.loc.gov/lccn/sn98047754/1909-06-15/ed-1/seq-10/; "Help the Milk Crusade," *The Seattle Star*, June 3, 1908 http://chroniclingamerica.loc.gov/lccn/sn87093407/1908-06-03/ed-1/seq-5/

⁵⁶ Leham, *The Road to Health*.

because, in the end, "a child's life cannot be measure in money values."⁵⁷ If that failed, then ordinances requiring milk inspections for sale succeeded in motivating businessmen to provide clean milk. In 1909, William Burton, Chief of Dairy Inspection Services of the New York City Department of Health, noted Seattle's advancement in pure milk,

One thing which did surprise me somewhat was to find that your health department is making a strong fight for good milk. I rather imagined that we had a monopoly on that sort of thing in the East, and it did me good to find a department which not only realizes the need of clean milk, but works day and night, at all hours, like a police force in the interests of clean milk.⁵⁸

Seattle led a successful campaign in stamping out milk products that caused typhoid fever. However, during the AYPE, typhoid still plagued fair goers.

Seattle's health officials suppressed typhoid fever outbreaks in 1907 and 1909. In fact, when one paper did mention a case, Commissioner Crichton blamed a local dairy. He blamed the Boehm Dairy for the outbreak they and two dozen neighbors and customers were infected. Commissioner Crichton also blamed two physicians who failed to report the outbreak. He concluded that the dairy was attracting flies: "The place swarmed with flies. The source of infection is plainly proven to be the cesspool at the Boehm home, and the means of carrying the disease between the shallow cesspool, where the sick room sewage was thrown, and the milk cooling in the open air, was the housefly." ⁵⁹

⁵⁷ Health and Sanitation Bulletin volume 1, 1908

⁵⁸ *Health and Sanitation Bulletin* volume 2, 7, 1909.

⁵⁹ *Post-Intelligencer*, December 2, 1909, Microfilm A329, Suzzallo and Allen Library, University of Washington.

The *Post-Intelligencer* and health reports never gave the outbreak the attention it warranted. Dr. Crichton explained that more than forty cases were "shipped into the city" from "outside origins." He continued to explain, "These patients are sent to local hospitals for treatment and thus the record counts against the city just as much as the cases originating here." Laws required physicians to report cases of typhoid fever as well as other communicable diseases, so when a patient was treated it did not matter where they were from.

Throughout the Alaska Yukon Pacific Exposition and advertising for the event, nobody looked at the possibility of water contamination because the purity of Cedar River was unquestionably a reliable source of clean water. In fact, health officers averted newspapers' attentions away from the water to ships carrying smallpox. It was not until after the AYPE, when the dismantling of the fairgrounds occurred, that Crichton and his colleagues realized there was a pipeline mix-up. To irrigate the fairgrounds, the city used over one million gallons of water a day. The fire chief, Harry Bringhurst, required water from Lake Washington be pumped into the reservoir to increase pressure. However, pipelines became crossed and instead of supplying drinking water from Cedar River, Lake Washington waters supplied the entire fair including the water fountains that supposedly gave "pure crystal clear mountain water" to fair goers at no charge. The consequences of this mistake was 511 cases of typhoid fever, about 200 came from

visitors visiting the Alaska Yukon Pacific Exposition. Sixty-one people died. One-third were tourists. ⁶⁰

Conclusion

The Alaska Yukon Pacific Exposition offered Seattle the opportunity to present itself to the nation. Business leaders, government officials, and health professionals wanted to advance Seattle as a modern metropolis. Health was one aspect that allowed officials to achieve this. Typhoid fever, as a case study, offers insight into the promotion of Seattle at the AYPE. Newspapers, bulletins, health reports, and histories written during the time period highlighted Seattle as healthier than other cities. Because the disease plagued the city in its early years, it forced the municipality to act. Both state-of-the-art sewer and water lines as well as two campaigns that illustrated Seattle's up-to-date medical knowledge, promoted Seattle as modern healthy city at the Alaska Yukon Pacific Exposition.

Sewer system failures explained the Department of Health's knowledge that human and animal waste caused disease. The building of new modern sewer systems was a huge outlay for the city. However, early advertisements in the 1880s demonstrated Seattle's commitment to health, so the city overcame financial burdens and built a

⁶⁰ Alan J. Stein, Paula Becker, and the HistoryLink.org Staff, *Washington's First World's Fair: Alaska-Yukon-Pacific Exposition A TimeLine History* (Seattle: History Ink in association with the University of Washington Press, 2009), 126.

modern system. The sewer system was on display at the Alaska Yukon Pacific Exposition to show the city's commitment to health and modernity.

Water is crucial for any city. Development of the Cedar River Watershed conveyed Seattle's commitment to pure potable water. Even though Thomson and the Board of Health realized they would provoke local agitation from private companies by creating a city-owned watershed, the threat of typhoid was large enough to overcome local disputes. Private corporations and financial elites staunchly opposed city-owned water. Regardless, Seattle citizens showed their commitment to ending typhoid fever and voted in favor of the city-run watershed.

The final stage of promoting health was the "Swat the Fly" and impure milk campaigns. These campaigns demonstrated changing medical knowledge. Officials knew water carried disease, but advances in technology proved milk and flies were vectors as well. With these campaigns, health officials stressed the importance of sanitation. The consequences of not following sanitary regulations could mean death. In fact, in 1907 physicians noted a lack of sanitation was cause of disease. This placed the blame on the individual instead of conditions in the city. Individuals failed to follow sanitation regulations, and they became sick as a result. The city blamed sick individuals for not complying with health and sanitation guidelines. Seattle officials dealt with typhoid fever in three ways: creating new sewers, fashioning a complex water system, and leading health campaigns against causes of disease. These improvements allowed them to bolster Seattle as healthy and modern at the Alaska Yukon Pacific Exposition.

CHAPTER III:

EXTERMINATE THE RAT: RACE, ASIAN IMMIGRANTS AND SEATTLE'S PUBLIC HEALTH CRISES, 1907-1909

In 1907, Seattleites and government officials were hard at work promoting Seattle to the nation and convincing tourists, diplomats, and officials to join them at the World's Fair in 1909. The city's goal was to promote business and encourage migration to Seattle. Articles proclaimed, "The greatest need of this Western country today is men, settlers of good substantial character and means." Seattle officials had an idea of the types of people they wanted to settle in the city: those who were able to contribute to the growing economy. However, disaster struck in the form of a bubonic plague outbreak in 1907. The plague forced physicians and governmental officials to respond quickly if they wanted to keep their city's healthy reputation intact for the upcoming AYPE. As noted in the *Northwest Medicine* journal, "The tide of immigration is setting more and more strongly toward this state; it will stop, at least, the desirable portion of it, if the plague that is here is allowed to spread." Advertisements actively promoted Seattle to the nation. In short, the plague threatened Seattle's reputation; consequently, no 'desirable' immigrant would move to a plague-ridden city. The same journal questioned, "If the

¹ J.R. Yocum, "The Medical Profession vs. the Plague," *Northwest Medicine* 5 (December, 1907): 339.

² Ibid.

disease is permitted to spread on Puget Sound, what will become of the Alaska-Yukon Exposition?"³ To save the city's future, officials needed to quickly eradicate the disease.

The promotion of Seattle as healthy and modern at the Exposition was key for why officials used germ theory instead of sticking with racial stereotypes associated with diseases. A key component of progressive modernity included proclaiming the city as racially tolerant. When the plague arrived in Seattle, unlike other cities, officials blamed rats not immigrants, for carrying the disease. Seattle papers openly criticized San Francisco, which had suffered from bubonic plague since 1901, for its blaming of Asians. Seattle fell victim to the plague while encouraging immigration, promoting trade, and health reform. In response, the city instituted an "Exterminate the Rat" campaign following progressive-era precedent, which allowed the officials to promote Seattle to the nation as a modern healthy city at the AYPE. Not casting blame on a racial minority was imperative to businessmen, who were busy promoting trade with China and Japan. San Francisco's folly gave Seattle the opportunity to present itself as progressive, meaning it was racially tolerant and medically advanced.

Yet some papers in Seattle were still quick to blame Asians when plague arrived in October. These papers showed that, lingering hostilities towards Asians remained. When plague entered Seattle, San Francisco officials had already initiated health campaigns against the disease. This allowed Seattle to copy their most efficient techniques and to avoid approaches that failed. Seattle's "Exterminate the Rat" campaign gave the city the opportunity to present themselves as medically progressive rather than appearing as reactionary bigots.

³ Yocum, "The Medical Profession vs. the Plague," 339.

The backdrop for this chapter is the AYPE. The Exposition was a point in Seattle's transition from a frontier town to an urban hub. In 1907, civic reputation and encouraging business growth concerned city leaders. Seattle businessmen promoted trade with China and Japan to stimulate trade. If the citizens of Seattle blamed people of Asian descent for disease, it would undermine that campaign. Executives branded Seattle the "Gateway to the Orient" during the exposition to advocate trade. Racial intolerance was detrimental to this. With an eye towards long-term growth and development, the Board of Health looked to germ theory for support. Germ theory led physicians to place blame on microbes carried by fleas and rats instead of people; thus, the city could work towards ending the plague, appear modern, and scientifically progressive all without casting racial blame.

Newspapers, health reports, and histories written by people living during the outbreak and AYPE tried to suppress racial intolerance. Clarence Bagley, noted Seattle historian, recalls how Seattle gracefully overcame racial hatred for the AYPE. These sources show official discourses versus the reality of the era. Racial intolerance did not fit the economic goals Seattle officials promoted at the AYPE. That was not to say the people in Seattle were enlightened, but rather that economic and political motives trumped racial animosity in government and business rhetoric. Seattleites, however, shared the same anti-Asian prejudices prevalent throughout the American West. In their minds, Chinese immigration threatened the livelihood of white working men. Following large-scale Chinese migrated to the Seattle area to work on the railroad. During the 1880s, anti-Chinese riots were common in Seattle. Mob mentality breached law and order

⁴ Bagley, *History of Seattle*, 477

as white men tried to forcibly remove Chinese from the city in 1886. The United States army had to quell rioting. Labor groups continually harassed Chinese and tried to expel them from the city.⁵ On February 8, 1886, the Washington Territorial Governor had to declare martial law to stem further violence in Seattle.⁶ Federal troops remained in the city for months. By the end of the riots, two hundred Chinese fled. In July, William H. Shoudy became mayor. He was a member of the People's Party, an anti-Chinese nativist group. Seattle fell into the hands of the people bent on an extra-legal anti-Chinese crusade. However, due to a depression and the city's remarkable growth, by 1887 the "dark days and troublous times had disappeared as if by magic" declared Bagley. Local municipalities tried to stem racial hatred, but that did not mean it was wholly eradicated. Anti-Chinese riots were common in western towns and cities from California to Colorado. Early reports of the plague in Seattle showed evidence of related racial intolerance, but then quickly such references disappeared from reports. The bubonic plague and the AYPE demonstrated how Seattle used racial tolerance to build-up the city's reputation. The plague and the Exposition exposed a progressive era racial discourse in the American West, which tempered racial animosity for the World's Fair.

Nancy Rockafellar, "Public Health in Progressive Seattle, 1876-1919," argued in her thesis that advancements in medical knowledge made Seattle more enlightened and therefore racially tolerant. This is partly true, as promoting modernity and health for the

⁵ Bagley, *History of Seattle*, 477.

⁶ Watson C. Squire, Proclamation, in Clarence Bagley *History of Seattle: From Earliest Settlement to the Present Time* Vol. 2 (Chicago: S.J. Clarke Publishing Company, 1916), 471-472

⁷ Bagley, *History of Seattle*, 477.

exposition played a large role in how officials dealt with the plague and other diseases.

But, they were tolerant not because they were enlightened, but because it helped advance a political and economic agenda dressed up as progressive reform. Governmental authorities presented Seattle as enlightened, healthy, and tolerant, by not blaming Asian immigrants for the plague and using a discourse of advanced medical knowledge to divert blame to the actual culprits, rats.

History of Anti-Chinese Attitudes and Its Connection to Disease

The American West in the nineteenth century had a long and sordid history of racial animosity. Aside from obvious and widespread anti-Indian sentiments and harshly brutal racism towards African-Americans, anti-Asian sentiments were equally widespread. The earliest conflicts surround labor. Fear that the Chinese would take their jobs because employers would pay them less, white American workers vented their anger and frustration on Asian immigrants. Persecution of the Chinese escalated in the 1880s after Congress passed the Chinese Exclusion Act, which prevented the Chinese from immigrating into the country.

Racial animosity towards people of Asian descent also played a major role in how Americans in the region viewed disease. Cities all over the United States blamed immigrants and the poor for disease, highlighting prevalent racial and social ideologies. For example, New York newspaper editors printed cartoons depicting the arrival of cholera to their city. The editors portrayed the disease as a human and distinctly foreign.

The character's clothes resembled Middle Eastern or Asian attire. Clearly, cholera was seen as a foreign threat. In further analysis of New York's response, historian Martin Gorsky explained, "Cholera is represented not simply as a global hazard for humanity, but rather as a national threat associated with immigrants." Typically, the poor and immigrants lived in sub-standard housing, overcrowded, and unsanitary conditions.

Disease thrived in such locations. It was not a huge leap for people to blame the poor and immigrants whenever disease epidemics occurred because of the "integral relation between poverty and disease" which racial hostilities characterize of the nineteenth-century. When San Francisco experienced a plague outbreak that whites blamed the Chinese was not a surprise.

San Francisco blamed its sizeable Asian community for plague. Many cities did the same. Anti-Chinese agitation peaked in the last decades of the century. In retrospect, historian Lee Frankel cited this as a time "of ignorance, of superstition, and even of violent bigotry and hatred." The myth of the Black Death being a Chinese disease evolved from epidemics that occurred in Yunnan Providence. In 1894, an outbreak spread from the Yunnan Providence to Canton and eventually Hong Kong. Deaths totaled near 200,000. In 1896, the epidemic reached Bombay. Some claimed the disease claimed 5.25

⁸ Martin Gorsky, "Public Health in the West since 1800: The Responses," *Public Health in History* (Berkshire: Open University Press, 2011), 53.

⁹ John Duffy, "Social Impact of Disease in the Late 19th Century," *Sickness & Health in America: Readings in the History of Medicine and Public Health* (Madison: University of Wisconsin Press, 1997), 423.

¹⁰ Lee Frankel, "Science and the Public Health," *American Journal of Public Health* 5, 4 (April, 1915): 281.

million lives.¹¹ Ironically, the plague came to China through trade with Europe. Once Europeans established trade with China, China quickly succumbed to diseases the country had been relatively isolated from. For westerners the Chinese themselves became the scapegoat. In fact, some believed the plague that spread in Europe between 1348 to 1351 had originated in China.¹² With epidemics persisting in China, people in the United States like those in Europe were quick to place blame Asians.

However, a change took place just after mid-century in how people viewed diseases. This was the development of germ theory. The theory helped scientists discover the cause of bubonic plague. Alexandre Yersin and Shibasaburo Kitasato isolated the plague bacillus during the 1894 epidemic in China. During this time, Yersin suggested rats played a key role in the transmission of the disease. Paul Simon and Waldemar Haffikine "confirmed rats were a key vector" in the Bombay outbreak in 1897. Fleas on rats carried the bacteria *Yersinia pestis*, which transmitted the disease to humans.

Three types of plague existed. Bubonic plague caused swelling in the lymph nodes and death occurred "usually within less than a week after the appearance of symptoms." The second and third type of plague were septicemic and pneumonic.

Septicemic ensued when the bacteria entered the blood stream, which led to septic shock. Pneumonic plague materialized when blood moved the bacteria into the lungs.

¹¹ Patricia Ebrey and Anne Walthall, *East Asia: A Cultural, Social, and Political History* (Boston: Wadsworth, Cengage Learning, 2014), 168; Rockafellar, "Public Health in Progressive Seattle," 68.

¹² Frankel, "Science and the Public Health," 281.

¹³ Myron J. Echenberg, "Pestis Redux: The Initial Years of the Third Bubonic Plague Pandemic, 1894-1901," *Journal of World History* 13, 2 (Fall, 2000), 437 accessed from http://muse.jhu.edu.ezp.lib.cwu.edu/article/18459/pdf.

Pneumonic plague's mortality rate is "nearly one hundred percent." Once one person was infected with pneumonic plague, the disease spread through coughs and sneezes. With this new scientific knowledge in mind, Seattle's Board of Health sought help from the Federal Government to implement a rat extermination campaign once evidence of the disease entered the city.

Germ theory explained that microorganisms caused disease. This idea changed who and what to blame for disease. Medical historian John Duffy has noted that germ theory showed the upper classes that "man's health was dependent to some extent on the health of his fellowman." While this did not eliminate blame placed on the poor or immigrants, it did offer a new way to approach disease prevention. Mainly through cleanliness, people hoped to prevent disease. This fit well with progressive agenda already underway. Using germ theory, Seattle physicians instituted an "exterminate the rat campaign," which demonstrated Seattle was a progressive city. It also illuminated how Seattleites worked to reduce racial tensions as the city advertised for the Alaska Yukon Pacific Exposition.

San Francisco as Model and Testing Ground for Plague

When plague entered San Francisco, the first response of city authorities was to deny its existence. Mayor Eugen Schmitz believed it would hurt the city's economy, so

¹⁴ The above information was retrieved from Gerard Tortora, Berdell R. Funke, and Christine L. Case, "Microbial Disease of the Cardiovascular and Lymphatic System," *Microbiology an Introduction* (San Francisco: Pearson Education, Inc, 2010), 648.

¹⁵ Duffy, "Social Impact of Disease," 424.

he refused to print health reports and vital statistics that confirmed it, and he removed members of the Board of Health who "persisted in the statement that plague existed in the city." Officials even fired bacteriologist Henry Anthon Lewis Ryfkogel when he found plague bacteria. In April 1901, when Surgeon General Walter Wyman wrote to Seattle's Board of Health warning them of plague in San Francisco, Schmitz issued statements denying its existence. Economics were driving the denial of the disease. In fact, shutting down San Francisco's ports would open the door for Seattle. The city was attempting to become the premier trade hub in the West, which included overshadowing other port cities.

San Francisco city officials discredited anyone claiming plague was in the city. A good example of this was Dr. Joseph James Kinyoun's smear campaign. Dr. Kinyoun worked for the Marine-Hospital Services as director of the Hygienic Laboratory. In this position, he routinely used quarantines as a preventative measure. ¹⁸ The smear campaign attempted to discredit him and his quarantine policies. Kinyoun quarantined all incoming vessels when he learned of infected ships bringing plague to Honolulu. ¹⁹ He also quarantined Chinatown and initiated a clean up the city campaign. However, officials claimed Kinyoun's "insolent and dangerous irresponsibility has placed the interest of

¹⁶ Frank Morton Todd, Eradicating Plague From San Francisco: Report of the Citizens' Health Committee and an Account of its Work (San Francisco: Press of C.A. Murdock & Co, 1909), 30 accessed from https://books.google.com/?hl=en.

¹⁷ Ibid., 30.

¹⁸ David M. Morens et al., *Dr. Joseph J. Kinyoun, Father of the National Institutes of Health* (Washington D.C: U.S. Department of Health and Human Services, 2012), 25 accessed from https://www.niaid.nih.gov/about/whoWeAre/history/josephJKinyoun/indispensableman/Documents/Kinyoun/Monograph.pdf.

¹⁹ David M. Morens et al., Dr. Joseph J. Kinyoun, 27.

California in jeopardy."²⁰ State and federal authorities dragged Kinyoun into court. This was lampooned in a cartoon and article printed in *The San Francisco Call* on June 19, 1900. In the cartoon, Kinyoun shrank away from disapproving looks from Judge William Marrow and city officials. The plague-carrying rats surrounding the doctor also shrank away. Dr. Kinyoun appeared to be crying as the heading of the paper claims, "Kinyoun Begs for Mercy in Court." (See figure 1). This paper made a mockery of Kinyoun's proper response to the situation. In the end, Kinyoun withdrew the quarantine and apologized for what the *San Francisco Call* termed his "outrageous actions."²¹ Meanwhile, disease spread through the city.



Figure 1. "Kinyoun Begs for Mercy in Court," San Francisco Call Newspaper, 1900. Courtesy of the California Digital Newspaper Collection, Center for Bibliographic Studies and Research, University of California, Riverside, http://cdnc.ucr.edu.

²⁰ The San Francisco Call, August 6, 1901, accessed from Chronicling America: Historic American Newspapers, Lib. Of Congress, March 20, 2016, http://chroniclingamerica.loc.gov/lccn/sn85066387/1901-08-06/ed-1/seq-6/ (hereafter cited as The San Francisco Call)

²¹ The San Francisco Call, June 19,1900.

A misinformation campaign and biased reporting on the plague all claimed bubonic plague was "A Long-Lived Falsehood."²² Other articles demanded the removal of the Board of Health because they were an "irresponsible, incompetent body, dangerous to the city."²³ In addition, the quarantine diverted trade northward to Puget Sound, which officials saw as depriving California of revenue.²⁴ When health officers tried to prevent epidemics from escalating, they were met with resistance by the government at every turn. Absolute denial continued until 1903. Officials racialized plague discourse characterizing it as "an Oriental disease, peculiar to rice-eaters." They also rationalized the disease as "a Mongolian or Hindu disease, and never attacked whites."²⁵ This contributed to State officials ignoring the disease. As a result, the white public earnestly believed they were safe from the contagion.

It was not until a medical convention held by the health boards from Eastern states threatened to place the entire city under quarantine, that San Francisco authorities actively took steps to eradicate the plague. The city began a massive "clean-up the streets" campaign centered on killing rats. Officials hoped by cleaning up garbage that attracted the rats, it would help eliminate the plague; however, most of their efforts remained centered in Chinatown showing the lingering racism surrounding attitudes towards the disease.

²² The San Francisco Call, June 19,1900.

²³ Ibid.

²⁴ David M. Morens et al., Dr. Joseph J. Kinyoun, 31.

²⁵ Todd, *Eradicating the Plague*, 30.

Following these campaigns, the city was largely plague-free until the 1906 earthquake. Yet the earthquake destroyed buildings, and subsequent fires added to the destruction. The wreckage became a haven for vermin. While rebuilding, the city once again afflicted with plague. In May of 1907, a white man died from the plague. A report claimed, "Plague was no longer a typically Asian disease, nor wholly a filthy disease, nor the peculiar affliction of vegetarians." Only after the plague began to affect the white population did San Francisco officials reach out for federal assistance. Around the same time, Seattle began its own battle with the plague.

Seattle and the Plague

When plague arrived in Seattle, officials realized they could not make the same mistakes San Francisco made, especially in blaming Asians. Seattle, after all, has actively trying to expand trade relations with Asia. Trade with China and Japan was crucial for the city's long-term economic development. Washington State's natural resources and Seattle's position made it ideal for trading lumber and coal to Asia. Blaming Asians for plague undermined the city's "Gateway to the Orient" campaign. Additionally, by denying the epidemic, San Franciscans allowed the plague to spread unchecked. A repeat of such a mistake would prove detrimental to Seattle's reputation as modern, healthful, and progressive.

²⁶ Todd, *Eradicating Plague*, 38.

In the 1907 advertisements for the AYPE, Seattle instituted a decidedly non-racial hygiene campaign. This was shown in how Seattle responded to plague in 1901 and 1903. The Board of Health received a letter from the Surgeon General suggesting the city take "proper measures for preventing [bubonic plague] spread, and [offered] assistance if deemed necessary." Seattle's Board of Health replied to the letter that "proper investigation would be made into all deaths among our Chinese population in the future." Yet here, as in San Francisco, the Board of Health still assumed plague would mostly infect their Chinese population. On May 8th of 1901, health officers investigated "the death of a Chinaman." The cause was actually tuberculosis, but health officers reported, "As no suspicion of plague existed... further investigation [is] deemed unnecessary." There was no serious investigation into the death of white men or women mentioned in Board of Health minutes. From 1901 until the outbreak in 1907, Seattle governmental official remained ambivalent. Officials were wary.

In 1903, the Board of Health sent health officer J.R. Booth to investigate San Francisco's "plague free" claim. This report clearly showed that despite professions to the contrary, Seattle's health officials believed the bubonic plague was still largely an Asian disease. In this report, Dr. Booth "paid special attention to the sanitary and hygienic conditions" in Chinatown.²⁹ Booth did not investigate any other parts of San Francisco. He surmised plague existed in Chinatown due to unsanitary conditions

²⁷ Minutes of Board of Health 1899-1904, May 8, 1901, box 1, folder 1 series 3200-01, retrieved from Seattle Municipal Archives (hereafter cited as Minutes of Board of Health).

²⁸ Ibid.

²⁹ J.R. Booth, "Report on Bubonic Plague in California," *Northwest Medicine* 1, (1903),186, accessed from University of Washington Health and Science library.

associated with Asian immigrant populations. Additionally, Booth concluded, "Our chief source of danger lies in our Oriental commerce. I would suggest…inspection of Chinatown, including the Japanese quarter."³⁰ This report blamed the illness on Asians.

City officials enforced burial regulations, but targeted only Asians. Port

Townsend's newspaper, *Morning Leader* reported that the burial of "the body of any

Asiatic" required a death certificate.³¹ If a family had a body buried without the death

certification, city officials charged a fifty-dollar fine on the family. The fine would rise to

one hundred dollars if the family were caught again. The goal was to prevent any deaths

caused by illnesses from going unreported; however, the city only required this from

Asian deaths. From 1901 to 1903, Seattle was quietly concerned that plague would come

from the Far East. However, this changed in 1907 when plague surfaced in Seattle. The

context of the Alaska Yukon Pacific Exposition framed the city's response.

Worried that plague would enter Seattle via infected ports, the Health Department ordered fumigation of all ships coming into the city. Newspaper articles reported the Marine Hospital Services and Health Department required "all vessels from Hawaii, the Philippines, and San Francisco" be fumigated with sulphur as officials found it effective in killing rats.³² Papers also reported ships quarantined for periods of two to eight days due to the incubation period of the disease.³³ By September, the Board of Health was

³⁰ Booth, "Report on Bubonic Plague in California."

³¹ The above information was retrieved from, "Proof that Sound is Alaska gateway to avoid the plague," *Morning Leader*, March 25,1903, accessed 3/28/2016, from University of Washington Digital Collection, http://digitalcollections.lib.washington.edu/cdm/ref/collection/ptleader/id/622.

³² "Vessels will be Fumigated," Seattle Times, August 25, 1907; Todd, Eradicating the Plague, 26.

³³ Ibid.

meeting regularly to discuss plague response measures. They began drafting ordinances relating to an outbreak.

In October, the first plague victim died in Seattle. Health Officer Dr. Frank S. Bourns investigated the death of Leong Seng, a Chinese immigrant living in the International District in Seattle.³⁴ Doctor Bourns and Marine Hospital Service Doctor J.M. White conducted laboratory tests, and they discovered Seng in fact died from bubonic plague. Panic ensued. Knee jerk racism led many to blame all Asians. In a Seattle Times article, some physicians blamed both the Chinese and Japanese. Even the Marine Hospital Service Doctor White claimed, "it is a fact that the disease is indigenous to Asian countries and is brought to and spread in this country by Asians—Chinese, Japanese, Hindus, and Others." His explanation echoed nativist concerns common in the era whom he concluded, the disease brought by Asians "shows the folly of encouraging Asian immigration: not to mention the fact that they are unassimilable with our people and consequently must forever remain in our midst as foreigners."³⁵ His sentiments echoed widespread West Coast xenophobia. White was not the only racist doctor: others made the same case. Other physicians spoke out against racist scapegoating. Doctor C.B. Ford, president of the Board of Health, attempted to quell such panic. He insisted a cleanup campaign would be most effective to prevent plague, as the "greatest source" of

³⁴ "Precaugtionary Measures Urged by Health Board," *Seattle Star*, October 21, 1907, *Chronicling America: Historic American Newspapers*. Lib. of Congress. http://chroniclingamerica.loc.gov/lccn/sn87093407/1907-10-21/ed-1/seq-1/ (hereafter cited as *Seattle Star*).

³⁵ Seattle Times, October 25, 1907.

disease was rats and "the fleas that they carry."³⁶ Doctor James Crichton, the well-known physician and politician, echoed this sentiment in his proclamation calling on people to kill rats and burn garbage. One physician reminded people that, "we have the best natural drainage system in the world, the best water . . . and one of the cleanest cities." Regardless, the doctor ended with a call to action promoting a "persistent and continued war" on rats and fleas.³⁷ Doctors who supported the rat campaign overshadowed the racist response against the Chinese and the Japanese in public discourse. This change in attitude was vital for the promotion of the Alaska Yukon Pacific Exposition. News outlets began echoing the non-racists sentiments. Progressives and capitalist alike aligned during the Exposition to support this position. Both worked in lock step to promote Seattle.

A few days after Seng died, Anglo patrolman Ernest Osborne and C.O. Eddy died of plague. ³⁸ Osborne's sisters Lida, Agnes, and sister-in-law Mary contracted the plague and died a few weeks later. The plague had manifested into the deadliest form, pneumonic plague. Racist scapegoating became impossible when three incidents had occurred in different areas of the city. Seng died in the International District, Osbornes in Rainier Heights, and Eddy in Green Lakes. ³⁹ This was quickly seized upon by Doctor S. F. Wiltsie in the *Seattle Times*. He pointed out that "the disease can be carried in clothing

³⁶ Seattle Times, October 25, 1907.

³⁷ Ibid.

³⁸ The newspaper article listing these people does not go into detail about who they are. Scott Osborn, a descend of William Alexander Osborn, the father of the dead Patrolman gave details about the deaths in the family in a website accessed April 23 2016, http://www.findagrave.com/cgi-bin/fg.cgi?page=gr&GRid=59394984.

³⁹ Seattle Star, October 28, 1907.

and there is no telling how many persons were subjected to contact with it."⁴⁰ The *Northwest Medical* journal likewise reminded the Seattle community that five white people died from the plague, and that they did not live in unsanitary and unhealthy conditions, and "moreover, they were not of the poorest classes by any means."⁴¹ The plague ignored race and class. While the initial reaction of plague was to blame Asians and the poor, the tone quietly and deliberately shifted through medical and public health discourse to blaming rats and fleas.

Other papers fell in line with the new message. Health and city officials united in presenting germ theory rationalization for the spread of plague instead of falling back on racial stereotypes. Crichton emphasized cooperation between health officers, the Chinese, and the Japanese population. Along those lines, the health department hired a Japanese physician and a Chinese rat inspector. Papers also stressed, "No drastic measures will be taken among the Asians and they need fear no arbitrary or unnecessary orders being issued against them." During this crisis, Chinese immigration into the city was not banned. While racist alarm briefly preceded the plague, Seattle newspapers promoted cooperation and rat eradication.

Yet, pneumonic plague remained a dangerous threat. Unlike San Francisco, whose officials had pretended the plague did not exist for three years, authorities quickly declared a medical emergency and received aid from the U.S. Public Health Services. A

⁴⁰ Seattle Times, October 25, 1907.

⁴¹ Yocum, "The Medical Profession vs. the Plague," 339

⁴² Seattle Times, October 24, 1907.

special emergency hospital was built. When infected rats were found, the bacteriologist recorded the location they were captured in and laid-out poison. Laws required all ships to have rat guards on anchors and mooring lines. These were "conical pieces of tin, about eighteen inches in diameter, placed on the lines so that a rat cannot pass them." Ship were also fumigated. Violation of these ordinances resulted in fines. According to historian Roy Nakashima and Priscilla Long, ordinance 17391 was the first rat proofing "enacted anywhere in the United States." In addition, a ten-cent bounty was placed on rats. *The Argus* noted, "If you see a lonesome rat loafing around the street, nail him. He ought to look good to you, for he is worth a dime." Health officials and the City Council funded \$2,000 for rat bounty and medical assistance received \$15,000. This produced a rat poison and trapping industry that assisted in eradicating the plague. Seattle had successfully armed itself against the plague by acting quickly.

Knowledge was key to eradicating the plague. The *Northwest Medical Journal* reminded private physicians of their duty to inform the public. Along with keeping their own homes rat and mice free, they were to instruct patients to do the same. Furthermore,

⁴³ Louis Zimmerman, "The War Against Bubonic Rats in Seattle," *The World To-Day: A Monthly Record of Human Progress* 16, (Chicago: The World To-Day company, 1909), 319 accessed from https://books.google.com/books?id=P2o5AQAAMAAJ&pg=PA317&dq=The+War+Against+Bubonic+Rat s+in+Seattle&hl=en&sa=X&ved=0ahUKEwiJzdGJx_DLAhXmsIMKHSmqDioQ6AEIIjAB#v=onepage&q=The%20War%20Against%20Bubonic%20Rats%20in%20Seattle&f=false.

⁴⁴ Roy Steven Nakashima, "Public Health Significance of Domestic Rats in Seattle, Washington" (Master thesis, University of Washington, 1980), 12-15; Priscilla Long, "Bubonic Plague kills a Seattle resident on October 19, 1907," HistoryLink, last modified December 4, 1998, accessed March 24, 2016, http://www.historylink.org/index.cfm?DisplayPage=output.cfm&file_id=418,

⁴⁵ *The Argus*, November 9, 1907, Microfilm A4096, University of Washington Suzzallo and Allen Library (hereafter cited as *The Argus*).

⁴⁶ Seattle Post-Intelligencer, October 24, 1907.

the article wrote, "So long as the board of health is working, let no physician criticize the work or its method to the public or the laity." Creating strong public support was vital to keeping the plague out of Seattle. Moreover, the city wanted the public to be in favor with the policies. Private physicians were key to achieving this. By using private physicians to promote general sanitation and a scientific response, they hoped the public would clean-up the city and realize that germs, not Asians, were the cause.

Newspapers were key in these efforts, but articles about disease were sporadic. Too much advertisement of the plague would hurt its reputation and cripple Seattle's growth. Regardless, businessmen were still worried. In December, they submitted a petition to the city council requesting an isolation hospital, "for the sake of humanity." These hospitals kept the sick off the streets. Seattle had to appear to have a healthy population for the exposition.

While the "Exterminating the Rat" campaign was moving along, the Board of Health increased their inspections. Cleaning-up the city was vital to prevent rats and plague but also to prepare the city for the Alaskan Yukon Pacific Exposition. Cooperation by the public assisted in this crusade. Historian Nancy Rockafellar noted, "Women's groups led the drive rising large sums of money to augment the work of the health department."

⁴⁷ Yocum, "The Medical Profession vs. The Plague," 341.

⁴⁸ Petition dated December 11,1907, Comptroller's file #33717, Seattle Municipal Archives.

⁴⁹ Rockafellar, "Public Health in Progressive Seattle," 93.

During this time, the Board of Health underwent a change to protect the organization from political intrigue. Minutes from the Board of Health reported an increase in sickness in the city jails. However, when health officers noted the unsanitary jail conditions, Mayor William Moore fired the entire Board of Health. The firing of the Board of Health was front-page news. The papers were very critical of the Mayor. Headlines read, "Moore's Petty Revenge stirs the city to Wrath and Disgust!" The Board of Health felt the jail was too unsanitary to continue being used. With this in mind, the Mayor fired them. Papers claimed, "Seattle feels that the action of the mayor has been inspired by a hope to obtain a board that will allow the jail building to be used."51 The entire front page was about Mayor Moore's blunder in firing the Board of Health. The firing of the Board of Health illuminated the problem of public oversight. This led to a change in Seattle's Health Department. Seattle implemented a health commissioner who would be elected for a five-year term and could only be removed by a vote of the city council. In 1908 when John F. Miller became Mayor, he appointed James Crichton as health commissioner. It was under Crichton's leadership that Seattle combated the plague.

⁵⁰ Seattle Time, October 11, 1907.

⁵¹ Ibid.

Conclusion

Seattle's fight against the plague was recorded in an article in *The World To-Day*, a progressive monthly magazine. Here, Seattle was praised for their success in its "struggle against disease." The article noted two diseases—the plague and typhoid fever. The eradication of rats and the "constant patrol and vigilance" applied to the Cedar watershed marked "earnest cooperation" people had in making "Seattle one of the healthiest cities in the country." Even in the midst of a plague and typhoid fever crises, the city was still advertising its healthfulness. In fact, these crises were an opportunity for Seattle to show the nation their quick and successful response to disease.

Seattle achieved this reputation by rallying the public to support their health campaigns. City officials, business leaders, medical professionals, and a majority of the public backed the Health Department when it came to cleaning-up the city. With advertisement for the AYPE underway, Seattle could not afford to make the same mistakes San Francisco made. Seattle had to be healthy and modern. While the plague was detrimental to its reputation, city health officials used the disease as an opportunity promote their modernity. Newspapers, bulletins, health reports and medical journals all supported a discourse that demonstrated Seattle, Washington was healthy and modern.

By not denying that plague had entered, officials were able to prevent the disease from gaining a foothold as it did in San Francisco. Using the Marine Hospital and the Federal U.S. Public Health Services, the city was equipped with a bacteriologists and

⁵² Zimmerman, "The War Against Bubonic Rats," 320.

laboratories to combat the disease. The city council was fully cooperative. Seattle's community came together to eradicate rats. By appropriating money for medical assistance, the city prevented an epidemic.

The plague highlighted racial hostilities in San Francisco, while Seattle's response was initially intolerance, newspapers quickly backed health officers with a counter narrative. Plague was transformed from an Asian disease to one caused by fleas and fetid rats. Physicians regularly reminded the public of this through newspapers and journals. During the plague scare, Seattle was praised across the nation by public health journals. The "Exterminate the Rat" campaign allowed Seattle to promote its modernity. This allowed them to recast Seattle as healthy and modern for the Alaska Yukon Pacific Exposition.

CHAPTER VI:

PRIMITIVE WILD PEOPLE AND INCUBATOR BABIES: IMPERIALISM, HEALTH,

AND SEATTLE'S ENTRANCE ON THE NATIONAL STAGE

By 1909, Seattle was becoming a bustling metropolis. Advertisement for the AYPE proclaimed Seattle as "Gateway to Alaska and the Orient." At the World's Fair, Seattle was promoting itself as the future premier city in the West. Emphasizing their ties to Alaska and Asia, city officials showcased international trade and the city's modernity to attract foreign business and investments. While Seattle was in the midst of breaking away from its identity as a frontier town, San Francisco, Los Angeles, and Portland were already well-established ports. In fact, Portland had hosted its own World's Fair just four years earlier in 1905, promoting its long history by linking the Fair to the Lewis and Clark centennial exposition. The big question for officials in Seattle was how to place Seattle on the same footing as these older, more historic western cities. In reality, the city was still only little better than an overgrown town. It largely lacked modern amenities and services.

Depending on which discourse historians focus on, the fair was either an event that placed Seattle on the map, or it was an overly ambitious, exploitative, and even racist event. Nancy Rockafellar has argued that the World's Fair played a role in advancing medical knowledge. I focus on how health was used to promote the city as modern in order to show the nation that Seattle was the premiere city in the West. To promote business, health progressives and capitalists worked together at the AYPE to prove

¹ Advertisement for the Alaska-Yukon-Pacific-Exposition, 1909, postcard, University of Washington digital Collections, http://content.lib.washington.edu/aypweb/index.html.

Seattle was modern. In doing so, Seattle hoped to become the leading city to facilitate United States economic imperialism in the Pacific.²

At the exposition, two major themes remained constant: imperialism and health. The discourse on imperialism demonstrates one way Seattle tried to elevate its standing in the West and prove it was modern. Since Secretary of State William Seward urged the United States to purchase Alaska in 1867 in order to gain access to Asian markets, the United States was actively engaged in imperialism throughout the Pacific in the last decades of the 1800s. From 1889 well into the 1900s, the United States acquired Samoa, Hawaii, Puerto Rico, the Philippines, and extended the influence of the United States throughout the Pacific. Its location on Puget Sound made Seattle the perfect jump off place to continue United States imperialism in the Pacific. It also connected Seattle to what was going on in the rest of the United States. Expanding the United States power and authority in the Pacific gave Seattle the opportunity to show its importance.

Imperialism also showed Seattle as modern. During the exposition, ethnographic villages were on display. These exhibits showed the people participating in the villages as primitive and wild. By doing this, Seattle clearly presented the United States as an imperial power and demonstrated American superiority. Officials juxaposed these exhibits with technological advances found in Seattle such as the incubator baby exhibit,

² These works present the fair in a positive light. Works done by Shauna O'Reilly and Brennan O'Reilly, *Images of America: Alaska Yukon Pacific Exposition*, (Charleston: Arcadia Publishing, 2009); Alan Stein and Paula Becker, *Washington's First World's Fair: Alaska Yukon Pacific Exposition*, (Seattle: History Ink & University of Washington press, 2009); George Frykman, "The Alaska-Yukon-Pacific Exposition, 1909" *Pacific Northwest Quarterly* 53 no. 3 (July 1962): 89-99; Cathy Lykes, "Modern Medicine Comes of Age," *Columbia* 23, no. 2 (Summer 2009): 14-20; Arthur Brown, "The Promotion of Emigration to Washington" *Pacific Northwest Quarterly* 36, no. 1 (January 1945): 3-17. On the other hand, other works Shelley Lee, "The Contradictions of Cosmopolitanism: Consuming the Orient at the Alaska-Yukon-Pacific Exposition and the International Potlatch Festival, 1909-1934" *Western Historical Quarterly* 38, (Autumn 2007): 277-302; Shelley Sang-Hee Lee, *Claiming the Oriental Gateway: Prewar Seattle and Japanese America* (Philadelphia: Temple University Press, 2011) present the fair as exploitive.

the Cedar River Watershed system, and sewers. By doing so Seattle drew a line between primitive people and modern advances found in Seattle.

Modern advances showcased the superiority of the United States, but also introduced visitors to Seattle's health, sanitation and hygiene reforms. For the fair, Seattle demonstrated modernity by displaying their emergency hospital and incubator babies. Water and sewer systems promoted Seattle's commitment to health by eradicating water borne diseases. In addition to exhibits, the entire fairgrounds underwent a beautification campaign to entice vistors to stay in the paradisiacal landscape. Health and beatuy were connected and by creating extensive landscapes Seattle presented itself as healthy to vistors.

Print advertisements were important in these promoting especially in generating broader interest for the AYPE. Beginning in 1907, Seattle published newspapers announcements for the AYPE. Advertisements such as pictures, article, postcards, and histories written by people living during this time illuminated what officials felt were important for the public to know about Seattle. "Clean-up" campaigns were a big part in preparing Seattle for the event. The city also focused on preventing disease. Food and water inspections were also prominent in progressive reforms. In addition to health, hygiene, and cleanliness, officials demonstrated that Seattle was the prime location to launch America's imperial projects in the Pacific.

Attracting Business to Seattle

While Seattle promoted itself as the key city in the West, other well-established ports controlled western trade. The purpose of advertisements, like the widely distributed postcard titled "Seattle, the Gateway to Alaska and the Orient," was to demonstrate Seattle's ties to Alaska and Asia. This became the official emblem of the AYPE. (See figure 2.)



Figure 2: Advertisement for Alaska Yukon Pacific Exposition, 1909. Photograph courtesy of University of Washington Libraries Special Collections, Seattle, Washington [UW22327, PH Coll 777].

Seattle's growth was tied to Alaska and the Klondike Gold Rush. In fact, merchants in 1897 proclaimed Seattle as "Gateway to the Gold Fields." It was in Seattle that prospectors equipped themselves before making the trip to the Yukon. In 1897 when the first gold seekers arrived to participate in the gold rush, Seattle merchants "outfitted hopeful miners with more than \$325,000 worth of goods." This included shipyards that built riverboats. Seattle also became the market for much of the Yukon's gold too; they

³ "A Short History of Seattle," Klondike Gold Rush – Seattle Unit National Park Service, accessed June 1, 2016, https://www.nps.gov/klse/learn/historyculture/index.htm.

⁴ Stein, Becker, & Historylink Staff, Washington's First World's Fair, 11.

exchanged "more than \$18 million in gold," in the city. ⁵ Exhibits at the Fair focused on the gold rush and emphasized Seattle's ties with Alaska.

The Fair logo also showed Seattle as a modern urban center, symbolizing a break from its frontier past. Brick and stone buildings instead of wood exemplified turn-of-the-century modernity. The streets were depicted as clean and wide. Its broad avenues however, were mostly result of the Great Fire, which burned downtown Seattle in 1889. This gave progressive city engineer Thomson the opportunity to rebuild the city.

Downtown hosted a hygienic climate; it was open and devoid of garbage and heaps of filth that plagued many cities and contributed to disease. Muckraking journalism helped in informing the public to do their part in keeping streets and homes clean. The Bulletin remained a vigilant reminder of babies "whose stomach and bowels have been almost ruined" because sanitation regulations were not enforced. Many of these articles targeted the death of babies or small children in the hopes of getting people to do their part in keeping the city clean.

The middle section of the postcard showed the official seal of the AYPE. It combined Seattle, Asia, and Alaska. Female figures represented friendship between the United States and Asia. However, racial distinctions were clearly drawn. The woman on the right held a train and offered her left hand out to the woman on the left who was clearly Asian dressed in a kimono and holding a ship. In the center, another woman holds out gold. She is wearing white, which represents the natural purity of the Alaska country. Historian Robert Rydell explained, ". . .a steamship, a gold nugget, and a railroad engine, thereby [suggested] the drive by the exposition promoters to link increased

⁵ Stein, Beck, & Historylink Staff, Washington's First World's Fair, 11.

industrialization with expanding markets and to develop new sources of natural wealth."⁶ The background itself reflected the abundance of natural resources. Historian George Frykman stated, "Washington was depicted as the Garden of Eden reincarnated."⁷ The postcard read at the bottom, "Seattle, the Gateway to Alaska and the Orient." Seattle claimed ownership over trade by positioning itself as the gate to commerce between West and East. This souvenir postcard was widely printed and handed out as was the three female emblem.

Within the AYPE was the Pay Streak route. Pay Streak is a mining term that means a streak in a streambed that contains gold or valuable materials. The Pay Streak was midway along the fairgrounds where people would visit different exhibits that sought to entertain and inform. The Pay Streak was strategically placed; people could not get around the Fair without walking along what was a mass of advertisements. Around the Pay Streak, people had access to food, free water, and cheap amusements. Exhibits along this route enticed fairgoers and encourage interest in Seattle's industries. They could observe Seattle's resources, businesses, and amenities.

Exhibits displaying lumber, minerals, and agriculture demonstrated Seattle's natural wealth. In addition, trade with the Pacific was clearly highlighted. Japan, China, Hawaii, and the Philippines created exhibits where they displayed their culture.⁸ The Alaska exhibits showcased gold, mining camps, fishing towns, Native Americans, and

⁶ Robert Rydell, "Visions of Empire: International Expositions in Portland and Seattle, 1905-1909," *Pacific Historical Review* 52, no. 1 (January 1983): 40.

⁷ Frykman, "The Alaska-Yukon-Pacific Exposition, 1909," 94.

⁸ Japanese and Chinese people living in Seattle created their own exhibits at the AYPE. The Philippines and Hawaiian exhibits were created by white Americans

"proved itself a land of tremendous agricultural resources." The Oriental Palace displayed "Asian silks." The AYPE hosted specific days where these countries and regions became center stage. They demonstrated culture, industry, and economic advantages. Chief of Publicity Frank Merrick stated,

Seattle has an unparalleled opportunity to render the United States and the Orient an inestimable service in increasing the commerce of the Pacific by teaching merchants and manufacturers of each section of the needs of the people of their respective markets, and how to secure and hold the business.¹¹

The goals of these days were to highlight markets and industry in order to get businesspersons interested in doing commerce. On these days, there would be special celebrations and even parades for that country. While these days were exploitative by showing economic advantages in dealing with these countries, Seattle used them to reinforce the city's international connections while linking itself with imperialism. In addition, these special days were a "convenient method for extending courtesies to visiting dignitaries." Everything along the Pay Streak enticed business and people to move to the city.

On the surface, having multiple ethnicities showcased at the Fair suggests the city was racially tolerant. However, these exhibits promoted the United States' imperialist aims and prevalent attitudes towards white supremacy. The exposition re-enforced American superiority over territories in the Pacific. Native Americans and Filipinos

⁹ Welford Beaton, "The Fair That Was Ready," Seattle and the Pacific Northwest: Washington, Oregon, California, Alaska, British Columbia, Yukon (Seattle: Seattle Publishing Company, 1909).

¹⁰ Shelley Sang-Hee Lee, *Claiming the Oriental Gateway: Prewar Seattle and Japanese America* (Philadelphia: Temple University Press, 2011), 52.

¹¹ Frank Merrick, Publicity material, p. 5, AYP file, in Lee, *Claiming the Oriental Gateway: Prewar Seattle and Japanese America*, 53.

¹² Frykman, "The Alaska-Yukon-Pacific Exposition, 1909," 95.

reminded Americans of the United States' role as conquerors of supposed "inferior" people. Indians were deemed a disappearing people, but whites kept their culture alive in order to show American superiority and progress by comparing modern technology with "primitive people." Historian Coll Thrush explained how these ethnographic exhibits presented a clear message, particularly when it came to Native Americans: "these Indians were our people—not in the sense of being *us*, of course, but in the sense of being *ours*." While presenting an domineering nature, Seattle clearly presented the United States as an imperial power. In relation, Seattle was the prime location from which to expand from the mainland into the Pacific.

The Pay Streak, and the AYPE in general, celebrated international connections but it maintained imperialist themes of white supremacy. Again, this was best seen in the ethnographic villages. The Igorrote Village exhibit featured the Bontoc tribes from the Philippines. Photographs from the Fair showed grass huts, people in traditional dress, and the people were derogatorily described as a "head hunting, dog-eating people." (See figure 3). To attract visitors, the sign on the entrance read "Primitive Wild People." Visitors witnessed ceremonial dances, "demonstrations of craft and toolmaking, native dress, and housing." In addition to the Igorrote village, the Fair also displayed an

¹³ At this time there was a big push to show Indians off especially with the closing of the Frontier. The Wild West show was a well-known example featuring Great Plains tribes.

¹⁴ Coll Thrush, *Native Seattle: Histories from the Crossing-Over Place* (Seattle: University of Washington Press, 2007), 119.

¹⁵ Manish Chalana, "The Pay Streak Spectacle: Representation of Race and Gender in the Amusement Quarters of the Alaska-Yukon-Pacific Exposition," *Pacific Northwest Quarterly* 100, no. 1 (Winter 2008/2009): 28; Pictures for the Igorrote Village exhibit can be seen at University of Washington Digital Library.

¹⁶ Shauna O'Reilly and Brennan O'Reilly, *Images of America: Alaska Yukon Pacific Exposition* (Charleston: Arcadia Publishing, 2009), 85.

"Oriental Village" and "Eskimo Village." In each, Fair officials demonstrated how primitive the cultures were compared to the cultural and technological advancements of Seattle the United States. This served a dual purpose. It reinforced the supremacy of American culture and juxtaposed primitive cultures with the industrialized modern age. Historian Manish Chalana explained, "ethnographic villages provided a contrast to the exhibits showcasing industrial advancements elsewhere in the Fair, projecting ideas of progress, civilization, savagery, and empire." Ethnographic villages provided sharp contrast to exhibits that promoted technological advancements such as the Incubator Baby exhibit.



Figure 3: "Igorrote Village Entrance, Alaska-Yukon-Pacific Exposition, Seattle, Washington, 1909." Photograph courtesy of University of Washington Libraries, Special Collections. [S.E. Meldrum AYPE Photograph Album. PH Coll 61]

Business and trade were key at the Alaska Yukon Pacific Exposition. Seattle tied itself to Alaska and Asia in order to entice the economic growth of Seattle. The Exposition was Seattle's entrance into the national stage. Historian Shelley Sang-Hee Lee made the argument that the AYPE clearly pushed for "ascendancy of western United States over the east." Showcasing the United States' imperialist's aims and Seattle's

¹⁷ Chalana, "The Pay Streak Spectacle," 35.

¹⁸ Lee, Claiming the Oriental Gateway, 51.

location within the Pacific was one way promoters sought to elevate Seattle to the forefront of America's imperialist project. Business elites were not the only ones promoting themselves at the exposition.

Promoting Progression and Health

Health had been a primary focus in Seattle since its formation. Much had to do with the role early doctors played in establishing the city, but also it was a way to make the city appealing. When typhoid threatened the city, the solution was a city-owned water system. Progressive reformers and capitalist interests started out pitted against each other; however, they came together over issues of cleanliness, health, and hygiene as the city grew. Changes to health policy had to occur if Seattle was to become the premier city in the West. And so these issues were front and center at the Alaska Yukon Pacific Exposition.

Starting in 1907, the city undertook a major "Clean Up the City" campaign. This included exterminating rats, flies, and public spitting. Campaigns targeting bubonic plague, typhoid fever, and tuberculosis were undertaken because these were all threats at the time. In 1908, city council strengthened the "no spitting" law in Seattle by increasing the fine from "one to twenty-five dollars." Articles in the *Seattle Star* instructed people that health laws would be enforced including the spitting ordinance. In one incident, a streetcar conductor claimed passengers who broke the anti-spitting law would "either

¹⁹ Cathy Lykes, "Modern Medicine Comes of Age," Columbia 23, no. 2 (Summer 2009):16.

have to clean up the car or submit to arrest."²⁰ While spitting was tied to tuberculosis, city officials did not want the unhealthy habit to be seen during the AYPE. By 1909, locals' homes were in the best condition. According to historian Clarence Bagley, the city adopted "every sanitary precaution" to "put the city in perfect health conditions" and kept there.²¹ When the Exposition opened in June 1909, "Seattle claimed to be the cleanest and the healthiest city in the nation," according to historian Cathy Lykes.²² This reflected progressive reforms that swept the nation, particularly in the East. Keeping up with progressive changes allowed people visiting Seattle to see it as equal to cities in the industrial heartland.

Along with the clean-up campaign, the city underwent a beautification campaign, another common progressive effort. During this time, beauty and health were interconnected. In order to alleviate fears over disease, the landscape was afforded so that it "accented the region's healthful climate and stress-free way of life." City officials believed by emphasizing landscape improvements, it would "improve the quality of life and health of the city's citizens." It would also be another way to "promote the region to the rest of the nation." With this in mind, officials hired the Olmsted Brothers to design the landscape for the Alaska Pacific Yukon Exposition. John Olmsted and his stepbrother

²⁰ "Would Enforce Anti-Spit Law," *The Seattle star* (Seattle, Wash.), 23 Oct. 1908. *Chronicling America: Historic American Newspapers*, Lib. of Congress. http://chroniclingamerica.loc.gov/lccn/sn87093407/1908-10-23/ed-1/seq-8/.

²¹ Bagley, *History of Seattle*, 336.

²² Lykes, "Modern Medicine Comes of Age," 15.

²³ Matthew Klingle, *Emerald City: An Environmental History of Seattle* (New Haven: Yale University Press, 2007), 157.

²⁴ Thaisa Way, "How 'Art Assists Nature' The Alaska-Yukon-Pacific Exposition in the Pacific Northwest Landscape," *Pacific Northwest Quarterly* 100, no. 1 (Winter 2008/2009): 13.

Frederick Law Olmstead Jr. were the sons of distinguished landscape architect Frederick Law Olmstead, Sr, and had continued the family business after his death. In creating the design for the Fair, the Olmstead brothers emphasized natural resources, wilderness, and recreation. Officials described this luscious landscape as Seattle's backyard. Seattle was to be a mix of modernity and wilderness. AYPE officials used landscape to promote health.

Advertising health and hygiene at the Fair culminated in the construction of the Emergency Hospital. Articles in newspapers promised the finest medical care for patrons. Photos of the Emergency Hospital and the equipment depicted Seattle as modern, up-to-date, and in line with advances made in eastern United States as well as in Europe. One room displayed surgical equipment, modern scientific instruments, and a cutting-edge x-ray machine. Health officials demonstrated how the x-ray machine worked and how it could assist physicians. Of course, accidents occurred at the Fair and some fairgoers required services at the hospital. Newspapers stressed how quick ambulance service was and how efficient hospital staff were.²⁵ Maintaining a healthy and modern appearance was critical.

The Board of Health exhibit also was an attraction at the Fair. At the cost of almost \$4,000, they showcased Seattle's commitment to health by advertising its modern water system, the Cedar River Watershed.²⁶ Cedar River was presented as a preventative health measure combating typhoid fever and other diseases. In fact, the city was so proud

²⁵ "Crowded Car Crashes Through Building; over two scores injured," *The Seattle star* (Seattle, Wash.), 24 Sept. 1909, *Chronicling America: Historic American Newspapers*. Lib. of Congress. http://chroniclingamerica.loc.gov/lccn/sn87093407/1909-09-24/ed-1/seq-1/>

²⁶ When converting this amount to currency in 2016 it equals to \$99,850.55. Health was placed above big expenditures. *Report of the Alaska-Yukon-Pacific Exposition Commission of the State of Washington* (Washington, 1909), 129.

of their water system they provided "free drinking fountains fed with fresh water from the Cedar River watershed," all around the fairgrounds.²⁷ Unfortunately, as noted earlier, the city pumped in water from polluted Lake Washington to meet increased demand. Crossed pipelines led to polluted water being supplied to guests resulting in 511 people contracting typhoid fever and the deaths of 61 fairgoers.²⁸ It was not until after the Fair, when deconstruction began that the city uncovered the pipeline mix up.

Along the Pay Streak, the Incubator Babies Exhibit offered people a chance to rest and observe French physician Alexandre Lion's incubator. Incubator babies were a common World's Fairs exhibit during the era, a testament to ingenious medical advances. It was also a way to sell the incubators to visiting physicians. The exhibit demonstrated how incubators saved premature babies. Inside the exhibit, people saw actual babies sleeping in incubators. Nurses and physicians attended them. The incubators pulled in air for ventilation and regulated internal temperature.²⁹ This exhibit was so successful many patrons made return visits to check in on the infants.

The *Seattle Star* advertised baby incubators with the heading "We Save the Lives of Babes." The advertisement invited people to observe "modern surgical appliances." Moreover, the poster advertised a hygienic nursery for children where parents, "for a

²⁷ Shauna O'Reilly and Brennan O'Reilly, *Images of Alaska Yukon Pacific Exposition*, 101.

²⁸ Alan Stein, Paula Becker, & Historylink Staff, Washington's First World's Fair, 126.

²⁹ Paula Becker, "Alaska-Yukon-Pacific Exposition (1901): Baby Incubator Exhibit and Café," *HistoryLink* (2009), accessed 5/3/2016 from http://www.historylink.org/index.cfm?DisplayPage=output.cfm&file id=8921.

³⁰ "We Save the Lives of Babes," *The Seattle Star* (Seattle, Wash.), 05 June 1909, *Chronicling America: Historic American Newspapers*, Lib. of Congress. http://chroniclingamerica.loc.gov/lccn/sn87093407/1909-06-05/ed-1/seq-5/

fee," read advertisements, could "leave their own infants while they visited the fair."³¹ They were advertising a safe sanitary place to drop children off, and parents would be assured their children would be taken care of. The advertisement targeted "tired mothers."³² Exhibits placed on the Pay Streak were instrumental in catching fairgoers attention. Incubator babies was one way health officials promoted Seattle as modern.

Officials also financed a state health exhibit. Displays included, according to Rockafellar, "model sewage disposal plants, graphic charts, statistics, and photographs, as well as a special unit for tuberculosis." By the time of the AYPE, Seattle had successfully prevented a plague epidemic, created a municipal owned watershed, and had a capable health department insulated from political intrigue. This helped bolster Seattle's modern and healthy image.

Conclusion

The Alaska Yukon Pacific Exposition provided the opportunity for Seattle to present itself to the nation. This World's Fair gave business, government, and health professions the chance to advertise and advance Seattle as an urban trade center. Health was just one aspect that officials employed, but it was an important one.

Early on, it appeared Seattle was going to be a battleground for progressive initiatives and capitalist's interest. However, that was not what happened. What started

³¹ Alan Stein, Paula Becker, & Historylink Staff, Washington's First World's Fair 81.

^{32 &}quot;We Save the Lives of Babes," *The Seattle Star* (Seattle, Wash.), 05 June 1909, *Chronicling America: Historic American Newspapers*, Lib. of Congress. http://chroniclingamerica.loc.gov/lccn/sn87093407/1909-06-05/ed-1/seq-5/

³³ Rockafellar, "Public Health in Progressive Seattle," 94.

out as a heated debate quickly morphed into the two interests working together to promote Seattle. With the creation of a municipally owned water supply, the watershed was regulated against impurities. Additionally, city leaders installed state of the art sewers that prevented pollution of water supplies. Moreover, health officials continued to educate the public on advances in health and sanitation. Medical advances also showed milk and flies to be vectors of disease, which led to regulations of the dairy industry and clean-up the city campaigns. When typhoid threatened Seattle's reputation, capitalists and progressives together solved the problem in order to promote Seattle as modern and healthy for the exposition.

The bubonic plague crisis uncovered racial discourse in Seattle. Physicians turned to germ theory to combat the plague in 1907. This prompted newspapers and health journals to praise Seattle's response to disease as modern and scientific. Seattle did not get mired in racial prejudices like San Francisco had; however, that did not mean Seattle was racially tolerant. In fact, when placing the plague incident in the larger historical context of the Alaska Yukon Pacific Exposition, the plague merely provided another opportunity to elevate the city's reputation. Understanding that rats and fleas caused the plague helped the city respond more efficiently to the disease. Moreover, Seattle was already in the midst of claiming it was the "Gateway to the Orient." Promoting trade and business relations with Asia was one of civic leaders' top priority. Racial animosity towards Asians thwarted this. The plague helped showcase Seattle as modern and racially tolerant at the AYPE.

The Alaska Yukon Pacific Exposition was the opportunity for Seattle to promote itself as the premier city on the West Coast to the nation. Endorsing business by

associating Seattle as the gateway to Alaska and Asia were constant themes throughout the Fair. However, health was also a constant theme. Beginning with the discovery of gold in the Yukon, Seattle officials began modernizing their city. The Cedar River watershed brought potable water to residents and eliminated typhoid fever. When epidemics occurred in 1907 and 1909, Seattle looked to progressive clean-up campaigns and milk regulations. The bubonic plague was a chance for Seattle to present the city as racially tolerant and modern. Health officials launched an aggressive rat removal campaign to end the threat of plague. All these campaigns were extravagantly linked to advertisement for the World's Fair. Hosting the AYPE prodded city and health officials to create and present Seattle as "the healthiest city." 34

³⁴ Bagley, *History of Seattle*, 348.

Bibliography

- "Great Seattle Fire," University of Washington Libraries Digital Collections, accessed 4/22/2016, http://web.archive.org/web/20070520045115/http://content.lib.washington.edu/seattle-fire/index.html.
- "Mayors of the City of Seattle." Seattle City Clerk. Accessed March 14, 2016. http://www.seattle.gov/cityarchives/seattle-facts/city-officials/mayors.
- "A Short History of Seattle." Klondike Gold Rush Seattle Unit National Park Service. Accessed June 1, 2016. https://www.nps.gov.
- To Create a Board of Health and Bureau of Vital Statistic, 1891. S.B. No. 28.1. Olympia: O.C. White State Printer, 1891.
- Alaska-Yukon-Pacific-Exposition, 1909. University of Washington Special Collections Library, Seattle WA.
- Bagley. Clarence B. *History of Seattle from the Earliest Settlement to the Present Time*. Chicago: The S.J. Clarke Publishing Company, 1916.
- Bayley, Christopher T. Seattle Justice: The Rise and Fall of the Police Payoff System in Seattle. Seattle: Sasquatch Books, 2015.
- Beaton, Welford. "The Fair that was Ready." Seattle and the Pacific Northwest: Washington, Oregon, California, Alaska, British Columbia, Yukon. Seattle: Seattle Publishing Company, 1909.
- Becker, Paula. "Alaska-Yukon-Pacific Exposition (1901): Baby Incubator Exhibit and Café." HistoryLink.com (2009). Accessed May 3, 2016. http://www.historylink.org/index.cfm?DisplayPage=output.cfm&file_id=8921.
- Becker, Paula. "Alaska-Yukon-Pacific Exposition (1909): Baby Incubator Exhibit and Café. HistoryLink (2009). Accessed May 3, 2016. http://www.historylink.org/index.cfm?DisplayPage=output.cfm&file_id=8921.
- Berner, Richard C, and Paul Dorpat. *Seattle 1900-1920: From Boomtown, Through Urban Turbulence, to Restoration*. Philadelphia: Charles Pr, 1991.
- Booth, J.R. "Report on the Bubonic Plague in California." *Northwest Medicine* 1, (1903): 186-190.
- Brown, Arthur. "The Promotion of Emigration to Washington, 1854-1909." *Pacific Northwest Quarterly* 36, 1 (1945): 3-17.
- Brown, George, and David Emory Shi. *America: A Narrative History*. New York: W.W. Norton & Company, 2013.

- Chalana, Manish. "The Pay Streak Spectacle: Representations of Race and Gender in the Amusement Quarters of the Alaska-Yukon-Pacific Exposition." *Pacific Northwest Quarterly* 100, no. 1 (Winter 2008/2009): 23-36.
- Clerk Office. Comptroller Files. Seattle Municipal Archives, Seattle WA.
- Clerk Office. Legislative database. Seattle Municipal Archives, Seattle WA.
- Clerk Office. Ordinance database. Seattle Municipal Archives, Seattle WA.
- Clerk's Office. Cedar River Watershed. Seattle Municipal Archives, Seattle WA.
- Clerk's Office. General Files, 1880-1905. Seattle Municipal Archives, Seattle WA.
- Dunning, Marcelle and Robert Heskett. "Disease Through the Century: Public Health Becomes Involved." *Saddlebags to Scanners: The First 100 Years of Medicine in Washington State*. Seattle: Washington State Medical Association Education & Research Foundation, 1989.
- Duffy, John. "Social Impact of Disease in the Late 19th Century." *Sickness & Health in America: Readings in the History of Medicine and Public Health.* Madison: University of Wisconsin Press, 1997.
- Ebrey, Patricia, and Anne Walthall. *East Asia: A Cultural, Social, and Political History*. Boston: Wadsworth Cengage Learning, 2014.
- Echenber, Myron J. "Pestis Redux: The Initial Years of the Third Bubonic Plague Pandemic, 1894-1901." *Journal of World History* 13, no. 2 (Fall 2000): 429-449. Accessed, March 30, 2016. http://muse.jhu.edu.ezp.lib.cwu.edu/article/18459/pdf.
- Findlay, John M. "Fair City: Seattle as Host of the 1909 Alaska-Yukon-Pacific Exposition." *Pacific Northwest Quarterly* 100, no. 1 (Winter 2008/2009): 3-11.
- Frankel, Lee. "Science and Public Health." *American Journal of Public Health* 5, no. 4 (April 1915): 281-289.
- Frykman, George. "The Alaska-Yukon-Pacific Exposition, 1909." *Pacific Northwest Quarterly* 53, 4 (July: 1962): 89-99.
- Furumota, Laurel. Review of Kimmel, Michael. *Manhood in America: A Cultural History*. H-Pol, H-Net Reviews (October, 1996). Accessed 8/1/2016 from http://www.h-net.org/reviews/showrev.php?id=656.
- Gorsky, Martin. "Public Health in the West since 1800: The Responses." *Public Health in History*. Berkshire: Open University Press, 2011.
- Health Department. Annual reports, 1884-1899. Seattle Municipal Archives, Seattle WA.
- Health Department. Board of Health Minutes, 1890-1911. Seattle Municipal Archives, Seattle WA.
- Health Department. Monthly reports, 1890-1901. Seattle Municipal Archives, Seattle WA.

- Herschensohn, Michael. "The Cultural and Historical Significance of the AYP Exposition." *Columbia: The Magazine of Northwest History* 23, 4 (Winter: 2009): 2-5.
- Higgins, David. "Sewerage and Health." *The Daily Intelligencer* [Seattle]. December 15, 1876. Accessed from *Chronicling America: Historic American Newspapers*. Lib. of Congress, March 12, 2016. http://chroniclingamerica.loc.gov/.
- Huisman, Frank and John Harley Warner (ed). *Locating Medical History: The Stories and Their Meanings*. Baltimore: John Hopkins University Press, 2004.
- Klingle, Matthew. *Emerald City: An Environmental History of Seattle*. New Haven: Yale University Press, 2007.
- Lamb, John. The Seattle Municipal Water Plant. Seattle: Moulton Printing Co, 1914.
- Lee, Shelley Sang-Hee. *Claiming the Oriental Gateway: Prewar Seattle and Japanese America*. Philadelphia: Temple University Press, 2011.
- ——. "The Contradictions of Cosmopolitanism: Consuming the Orient at the Alaska-Yukon-Pacific Exposition and the International Potlatch Festival, 1909-1934." *Western Historical Quarterly* 38, (Autumn: 2007): 277-302. Accessed February 20, 2016, http://whq.oxfordjournals.org/.
- Leham, Sanford P. *The Road to Health: A Short History of the Seattle King County Health Department.* Seattle: Seattle-King County Department of Public Health, 1954.
- Lykes, Cathy. "Modern Medicine Comes of Age." *Columbia: The Magazine of Northwest History* 23, 2 (Summer: 2009): 14-20.
- McDonald, Lucile. "Seattle's Triumph of Typhoid Fever." *Seattle Times*. April 9, 1961. ccessed March 14, 2016 from University of Washington Libraries E-newspaper at http://guides.lib.uw.edu/research/news/enews.
- McWilliams, Mary. Seattle Water Department History. Seattle: Dogwood Press, 1955.
- Minutes of the Medical Society of Washington Territory. Washington State Medical Society and WSMA, 1873-1909. University of Washington Special Collections Library, Seattle WA.
- Morens, David M et al. *Dr. Joseph J. Kinyoun, Father of National Instituted of Health*. Accessed, April 3, 2016. https://www.niaid.nih.gov/about/whoWeAre/history/josephJKinyoun/indispensableman/Documents/KinyounMonograph.pdf.
- Morning Leader, 1903.
- Nakashima, Roy Steven. "Public Health Significance of Domestic Rats in Seattle, Washington." Master's Thesis, University of Washington, 1980.
- Oldham, Kit. "Seattle residents receive Cedar River water for the first time on January 10, 1901." *Historlink*. Last modified October 17, 2014. Accessed January 12, 2016. http://www.historylink.org/index.cfm?displaypage=output.cfm&file_id=10945.

- O'Reilly, Shauna and Brennan O'Reilly. *Images of America: Alaska Yukon Pacific Exposition*. Charleston: Arcadia Publishing, 2009.
- Office of City Clerk. Health Officer Reports, 1900-1901. Seattle Municipal Archives, Seattle WA.
- Ravehold, Reimert T. "Historical Epidemiology and Grid Analysis of Epidemiologic Data." *National Center for Biotechnology Information* 52, no. 5, (1962): 776-790. Accessed March 14, 2016. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1522984/pdf/amjphnation00491-0050.pdf.
- Report of the Alaska-Yukon-Pacific Exposition Commissioner of the State of Washington. Washington, 1909.
- Rockafellar, Nancy. "Public Health in Progressive Seattle." Master Thesis, University of Washington, 1986.
- Rydell, Robert. "Visions of Empire: International Exposition in Portland and Seattle, 1905-1909." *Pacific Historical Review* 52, no. 1 (January 1983): 37-65.
- Seattle City Clerk. "Mayors of the City of Seattle." Accessed March 14, 2016. www.ci.seattle.wa.us/seattle/leg/clerk/mayors.htm.
- Seattle Post-Intelligencer, 1893-1909.
- Seattle Health Department. Biannual Reports of the Board of Health, 1903-1904. Seattle-King County Department of Public Health Annual Reports. King County Archives, Seattle WA.
- Seattle Health Department. Reports to the Seattle Health Department prior to 1901. Seattle-King County Department of Public Health Annual Reports. King County Archives, Seattle WA.
- Seattle Times, 1889-1909.
- Smith, Stephen. "The History of Public Health, 1871-1921." *American Public Health Association*. Accessed January 1, 2016, https://scholar.google.com/.
- Stein, Alan and Paula Becker. *Washington's First World Fair: Alaska Yukon Pacific Exposition*. Seattle: History Ink & University of Washington press, 2009.
- The Argus 1900-1909.
- The Bulletin of the Department of Health and Sanitation. University of Washington Special Collections Library, Seattle WA.
- The Ranch, 1900-1909.
- The San Francisco Call, 1900-1901.
- *The Seattle Star*, 1900-1909.
- Thomson, R.H. *That Man Thomson*. Seattle: University of Washington Press, 1950.

- Thrush, Coll. *Native Seattle: Histories from the Crossing-Over Place*. Seattle: University of Washington Press, 2007.
- Todd, Frank Morton. *Eradicating Plague from San Francisco: Report of the Citizens' Health Committee and an Account of its Work.* San Francisco: Press of C.A. Murdock & Co, 1909. Accessed April 2, 2016. https://books.google.com/?hl=en.
- Tortora, Gerard, Berdell R. Funke, and Christine L. Case. *Microbiology: An Introduction*. San Francisco: Pearson Education Inc, 2010.
- Treaty of Point Elliot 1855. March 8, 1859. Accessed March 13, 2016. http://www.goia.wa.gov/Treaties/Treaties/pointelliot.htm.
- Troesken, Warner and Rick Geddes. "Municipalizing American Waterworks, 1897-1915." *Journal of Law, Economics, & Organization* 19, no. 2 (October 2003): 373-400. Accessed April 22, 2016. http://www.jstor.org/stable/3555109.
- Washington State Constitution.
- Water Department. Water Department Historical Files. Seattle Municipal Archives, Seattle WA.
- Way, Thaisa. "How 'Art Assist Nature' The Alaska-Yukon-Pacific-Exposition in the Pacific Northwest Landscape." *Pacific Northwest Quarterly* 100, no. 1 (Winter 2008/2009): 12-22.
- Westman, Ragnar T., (ed). Fifty-Four Years of Health and Sanitation. Seattle-King County Department of Public Health Annual Reports. King County Archives, Seattle WA.
- Winston v. City of Spokane. 12 Wash. 524 41 P.888 (1895). Accessed March 12, 2016. http://courts.mrsc.org/mc/courts/zwashreports/012WashReport/012WashReport0524.htm.
- Yocum, J.R. "The Medical Profession vs. the Plague. *Northwest Medicine* 5, (December 1907): 338-342.
- Zimmerman, Louis. "The War Against Bubonic Rats in Seattle." *The World To-Day: A Monthly Record of Human Progress* 16. Chicago: The World To-Day Company, 1909. Accessed, April 1, 2016.
 - $https://books.google.com/books?id=P2o5AQAAMAAJ\&pg=PA317\&dq=The+War+Against+Bubonic+Rats+in+Seattle\&hl=en\&sa=X\&ved=0ahUKEwiJzdGJx_DLAhXmsIMKHSmqDioQ6AEIIjAB#v=onepage\&q=The%20War%20Against%20Bubonic%20Rats%20in%20Seattle&f=false.$