

Troubled Waters in Ecotopia: Environmental Racism in Portland, Oregon

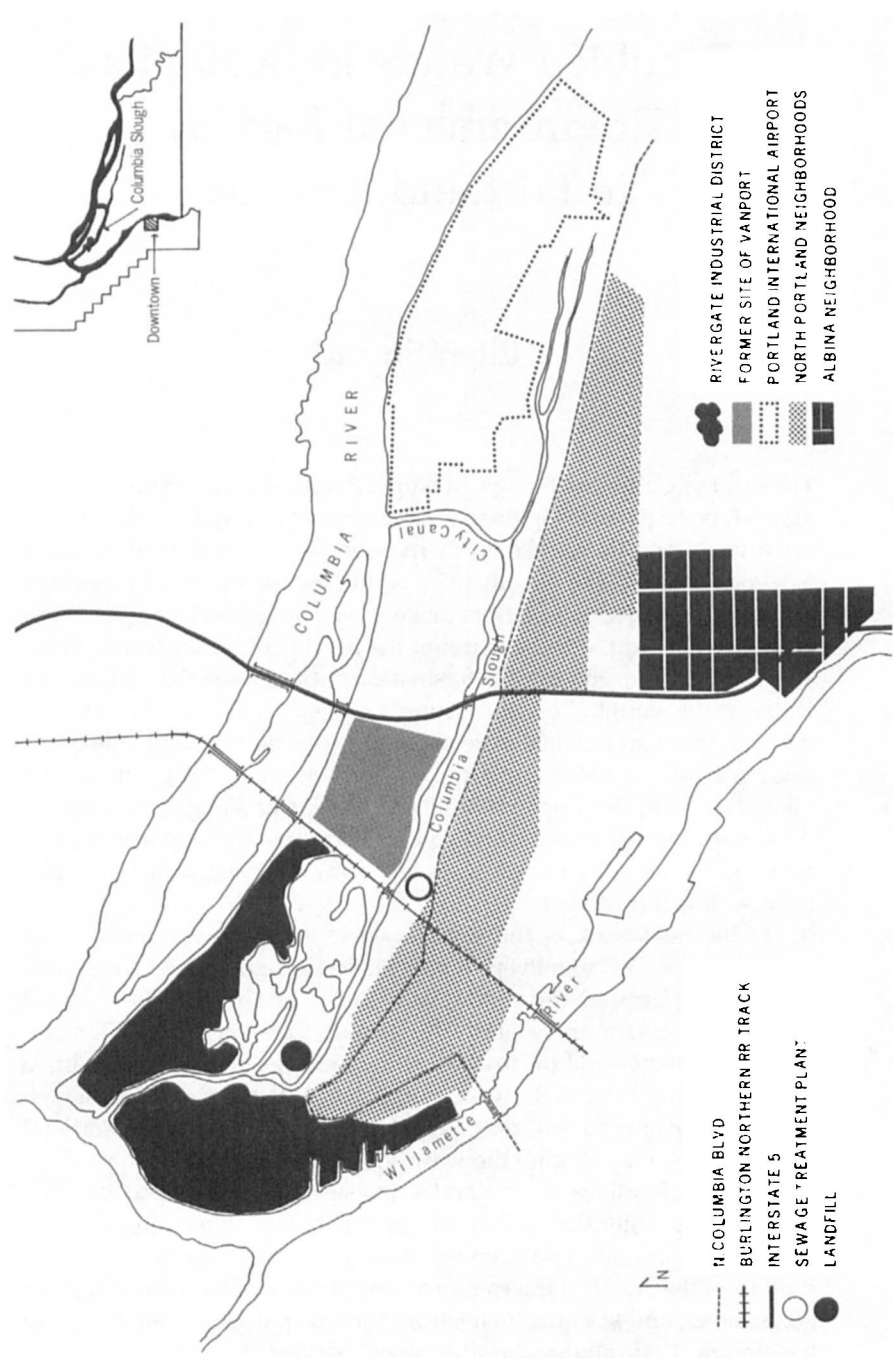
Ellen Stroud

Though the Columbia Slough in North Portland is easy to locate on a map—it is the narrow, eighteen-mile waterway just south of the Columbia River, along Portland's northern boundary—it is difficult to reach (see map).¹ The maze of industrial buildings, the tangle of highways, and the tall barbed wire fences make it hard to get a close look. But if you park next to the truck depot at the dead-end of Fourteenth Place, you can climb up the grassy, trash-strewn dike to see the still, murky water of the slough, Portland's most polluted waterway. You can see the high fence and barbed wire above the dike on the other side of the slough, which is about one hundred feet wide here. You can see the dike separating the upper slough and the lower slough, which were divided in the 1920s as a flood control measure. A pump station, surrounded by barbed wire, sits atop this dike, pumping water from east to west. It is a mini-dam.

On the near bank of the slough, across from the big metal pipes carrying the water from the pumping station, a sign declares the slough a hazard: "Warning: The Columbia Slough Is Polluted." The warning is printed in six languages—English, Spanish, Russian, Khmer, Vietnamese, and Laotian—and pictures drive the message home: don't swim in the water, don't drink the water, and don't eat the fish.² The slough water is toxic and poses a severe risk to members of the North Portland communities who, despite the warnings, fish here for food.

Millions of gallons of Portland's raw sewage are dumped into this slow-moving waterway each month, and more than two hundred industries along the slough have contributed to its contamination. De-icing fluid from the Portland International Airport, pesticides from farms and golf courses, and leaching toxins from a municipal landfill all drain into the slough. Toxic sludge lines the slough's floor.³

Local residents, environmentalists, city officials, and business leaders



The Columbia Slough and the North Portland Peninsula, Portland, Oregon. This map illustrates important locations on the North Portland Peninsula and along the lower Columbia Slough. Map by Maria Buhigas.

have long engaged in hotly contested debates about how to deal with the mess at the Columbia Slough. Headlines demonstrate that concern about the slough is nothing new. The Portland *Oregonian* reported a "Protest Against Columbia Slough Filth" in August of 1935. Thirty-five years later, in 1970, the *Oregon Journal* was telling "The Columbia Slough Story: 'Open Sewer' Poses Stinking Hazard." In 1993, headlines in the Portland *Oregonian* proclaimed, "Health Officials Report Finding PCBs in Fish," and "Slough Work Overdue." "City to Spend \$6.3 Million to Clean Up Slough," announced an article that December. Conditions had reached crisis level; according to environmentalists, six million dollars would barely get the cleanup started.⁴

But the slough was not always this filthy. Long-time North Portland resident John Bonebrake recalls the slough in the 1910s, before the dikes, the dams, the industry, and the sewage. "I remember it in my mind as a nice, little wavey slough," says Bonebrake, who was born in 1910. He tells of cottonwood trees lining the waterway, of a dozen or so smaller sloughs and marshes connecting it to the Columbia River. He tells of hunting owls and arrowheads and of fishing and swimming only a short walk from his childhood home. These days, Bonebrake says, "It's nothing but a stagnant, stale, smelly stream." He's not surprised that the slough has changed. After all, Portland has grown a lot since he was a child. But the slough's neighborhood could have been managed better, says Bonebrake. "It grew unwisely," he says. He charges that the city cut corners with sewage treatment and made too many concessions to polluters, favoring higher profits over a clean waterway.⁵

Environmental and community activists in Portland agree that the slough has been sacrificed to industry. Northwest Environmental Advocates, a Portland environmental group, charges that the city allowed the slough to become and remain polluted because the communities affected by the slough are primarily communities of color. According to Richard Brown, a community activist who works with Portland's Black United Front, many of the people who have fished for years for subsistence along the slough are African Americans and recent immigrants. Although the warning signs at the slough may now be discouraging people from eating the fish that they catch there, many of these same people live near the slough, and are therefore at continued risk of exposure to the toxins located there.⁶

The charge of environmental racism is persuasive. The slough is the most polluted waterway in Portland, and possibly in the state. And the neighborhoods along the slough have some of the highest percentages of African-American and recent immigrant residents of any neighborhoods in the state, a correlation which is consistent with national patterns. In recent years, community and environmental activists have

documented the fact that non-white people in the United States are significantly more likely than white Americans to live near toxic hazards, and the campaign against "environmental racism" and for "environmental justice" has gained momentum.⁷

The most influential study of the correlation between toxic wastes and minority communities has been a 1987 United Church of Christ report titled "Toxic Wastes in The United States: A National Report on the Racial and Socio-Economic Characteristics of Communities with Hazardous Waste Sites." This study, which is cited in most works on environmental racism and which spurred the United States Environmental Protection Agency (EPA) to examine its own practices, found that 80 percent or more of people of color in the United States live in communities that have hazardous waste facilities and uncontrolled toxic waste sites. In addition, the study found that the complexion of community residents was the best indicator of whether a toxic waste site would be found in that community, surpassing even socioeconomic status.⁸ Similarly, a 1992 study in the *National Law Journal* found that among those toxic waste sites that the EPA designated most urgently in need of being cleaned up, sites in minority neighborhoods were not cleaned up as quickly or as thoroughly as those in predominantly white areas.⁹

The connection between toxic pollution and poor and non-white communities has been widely accepted, not only by activists, but by government agencies as well. In 1992, the EPA published a study that found that "racial minority and low-income populations experience higher than average exposures to selected air pollutants, hazardous waste facilities, contaminated fish and agricultural pesticides." In 1994, President Bill Clinton issued an executive order requiring all federal agencies to draw up plans to ensure "environmental equity" in implementing programs.¹⁰ However, the history of this correlation between severe pollution and minority communities is extremely complex. There is not a single racist culprit, nor any one policy or type of policy which can be blamed. When I use the term "environmental racism" to describe what I have found at the Columbia Slough, I do not intend to imply specific, conscious racist action. Rather, I use the term to designate the geographic and social results of the many interwoven policies and ideas which have created such a striking correlation. Some of these policies and ideas have involved conscious racism; many have not. However, their combined result is discriminatory.

The most compelling discussion to date of the historical roots of environmental racism is that of historian Andrew Hurley, in *Environmental Inequalities: Class, Race and Industrial Pollution in Gary, Indiana, 1945-1980*. Hurley argues that in Gary, black residents are more likely than white residents to live near severe pollution because they have been

more dependent on polluting industries for jobs, and because racist policies and sentiments have restricted their access to housing in less toxic neighborhoods. In addition, Hurley indicts the environmental movement itself, arguing that activists in Gary succeeded not in cleaning up industry, but in reallocating pollution. Soot, which had been belched into Gary's air by local smokestacks, for example, was not eliminated. Rather, it was collected by scrubbers in the smokestacks, and then placed in a landfill. Toxins that had formerly been spread across all of Gary's neighborhoods were now concentrated in neighborhoods without the political clout to keep them out.¹¹

Similar processes have been at work at the Columbia Slough. Economic vulnerability, residential restrictions, and a lack of political clout have hampered the ability of North Portland residents to resist pollution in their neighborhoods or to choose to live in cleaner areas. However, the history of this discriminatory landscape cannot be entirely explained by racism in politics, housing, and employment. Rather, it is the result of many overlapping historical processes. The politics and geography of industrial location, wartime changes in Portland's population and economy, the limited goals and achievements of Oregon's environmental movement, and changing perceptions of the North Portland neighborhoods all contributed to the creation of the area's social and environmental landscapes. Since World War II, the land near the Columbia Slough has appeared on the cognitive map of many Portlanders as a throw-away place, an area best suited to industry and waste. That perception, which has a multiplicity of origins, is as much a cause as an effect of the environmental disaster at the slough. Portlanders in power thought the North Portland Peninsula was a disaster, and so it was.

Pollution was rampant at the Columbia Slough before the settlement of a significant minority population on the North Portland Peninsula. Moreover, the concerns of the slough's residential neighbors have long been subordinate to business interests in the area. However, when the area became identified with minority residents during World War II, the assault on the local environment intensified. For industrial developers, city planners and later, environmental activists, the association of the peninsula with African-American residents contributed to a perception of the area as degraded, and therefore as an appropriate place for further degradation.

In this article, I trace the history of the environmental degradation of the Columbia Slough since World War II, with particular attention to the lower slough and to the neighborhoods that run along it on the North Portland Peninsula. I argue that by the mid-1970s, at which time the environmental movement had gained considerable influence

elsewhere in Portland, and the minority population of the North Portland Peninsula was again on the rise, environmental activists, local politicians and many business owners considered the slough to be beyond hope as anything but a sewer channel. Portland environmentalists' willingness to sacrifice the slough in order to secure gains elsewhere, and civic leaders' vision of North Portland as a "natural" industrial site, a vision reinforced by ideas about who did and who should live in the area, profoundly shaped the peninsula. The result was a landscape of inequity.

THE CHANGING PENINSULA

Until the 1940s, the great majority of the people who lived on the North Portland Peninsula near the slough were working-class people of European ancestry. The jobs that accompanied the industry-friendly development of the peninsula, development which was encouraged by the area's proximity to the conjunction of the Willamette and Columbia Rivers, helped to maintain the respectable working-class reputation that the area had earned as early as the turn of the century. Like other waterfront areas in the early twentieth century, the North Portland Peninsula attracted industry because of the transportation and sewage disposal options that the waters offered.¹²

The first businesses along the Columbia Slough included slaughterhouses, stockyards, a meat packing plant, a dairy farm, a shingle company, and a lumber mill. Sewage from these businesses flowed directly into the slow-moving slough. In an attempt to increase the slough's current and flush the sewage more quickly downstream to the Willamette River, the city built a canal between the Columbia River and the slough in 1920, although the plan was never much of a success because the canal was repeatedly plugged by silt. In 1932, the City of Portland began operating a garbage dump on the marshy north bank of the slough, a site attractive because of the area's topography and its proximity to navigable water. Pollution was plaguing the waterway, as it was many waterways in industrializing cities. However, when wartime changes in demographics and industry transformed the image of the North Portland Peninsula, the slough came under a new, intensified industrial assault. Problems at the slough were no longer typical, but exceptional.¹³

The outbreak of World War II pushed Portland's already strained housing situation to a crisis. War industry workers flooding into Portland found few places to live. In response to the influx of workers, the city formed the Housing Authority of Portland in 1941, but the authority was slow in finding a solution for the problem. The first members of the authority were a real estate agent, a banker, a landlord, and a trade

union leader, each of whom was decidedly in favor of finding free market solutions to the housing crisis. Not surprisingly, they did not vigorously pursue public housing construction on the scale necessary to abate the crisis.¹⁴

In July of 1942, after months of deliberation, the Housing Authority finally authorized the construction of almost 5,000 new housing units, 93 percent of them located on the North Portland Peninsula. The North Portland area made sense for a number of reasons; open space was available for building, and the people in the housing developments would be close to war-time jobs in the factories along the Willamette and the Columbia. In addition, the character of peninsula neighborhoods was a factor. The *St. John's Review*, a North Portland newspaper, reported in March of 1942 that the projects were being planned "only in those districts where property values will not be hurt by the construction." Elite neighborhoods were not candidates for public housing.¹⁵

This modest start, however, came nowhere near satisfying the anticipated need for 32,000 new units in the Portland area. War industry owners, whose ability to step up production was limited by the availability of housing for workers, were frustrated with the slow pace of Portland's new Housing Authority.¹⁶ One of these owners took the housing business into his own hands. Henry J. Kaiser realized that the lack of housing in Portland was threatening his ability to recruit the army of workers that his war-time production schedule at his Oregon Shipbuilding Corporation factories demanded. Kaiser went straight to the federal government, and secured funding to build housing for his workers. Once the project was underway, the Housing Authority of Portland had little choice but to accept administration responsibilities for the project from the Federal Public Housing Authority, which oversaw the construction.¹⁷

In August of 1942, the Federal Public Housing Authority approved Kaiser's plan to build cheap wooden apartment buildings on 650 acres of lowlands near the Columbia Slough, just outside Portland city limits. Before the construction of Kaiserville, which was later renamed Vanport City, this area between the slough and the Columbia River had been marsh, pasture, and farmland. It was bounded on all four sides by dikes between fifteen and twenty-five feet high, which had kept the waters of both the slough and the river from flooding the farmland. To the south of Vanport was a dike built by the county drainage district in 1920 to manage the waters of the slough, and the dike to the north held back the waters of the Columbia River. Dikes to the east and west served the double purpose of keeping back water from the surrounding marshes and providing transportation routes. Denver Avenue, a link in the Seattle-Los Angeles highway, ran atop the eastern dike, and the

tracks of the Spokane, Portland & Seattle Railroad topped the dike to the west. People who lived in this walled city described the uneasy feeling of living in a place with no horizons.¹⁸

Kaiser shipyard workers began moving into Vanport apartments in December of 1942, just four months after construction had begun. By January of 1943, about 6,000 people were living in two-story, box-like apartment buildings on the former, though still muddy, wetland. By the end of March, 10,000 people called Vanport home. By early November of that year, the population had reached 39,000, making it Oregon's second largest city. The population remained near 40,000 until shipyard production waned at war's end. By July of 1946, the population had dropped to about 26,000 and was continuing to fall. After residency requirements were relaxed, allowing people who did not work at the shipyards to settle in Vanport, the post-war population finally stabilized at around 18,500. It remained at that level until the city was wiped out by flood in 1948. Despite its short life, Vanport had a dramatic effect on the image of the peninsula.¹⁹

Although the Housing Authority of Portland eventually administered sixteen different wartime housing projects, Vanport housed more people than those other projects combined.²⁰ Indeed, Vanport was not only Oregon's largest wartime housing complex; it was the largest in the nation. However, while the new city helped to alleviate Portland's wartime housing crisis, it did not solve Portland's housing problem. Neither Vanport nor the rest of the city's housing projects, with the exception of about five hundred units at the Columbia Villa and Dekum Court developments, were intended as permanent housing. Rather, they were built as temporary wartime accommodations. The Portland establishment, including the members of the Housing Authority, expected the war industry workers to head home once peace was declared. In fact, throughout the war, members of the Housing Authority of Portland maintained that all of the temporary housing sites, and Vanport in particular, would be most appropriately used as industrial sites after the war. Despite the housing crisis and the North Portland Peninsula's potential role in alleviating that crisis, industrial development remained the primary goal for the area. Indeed, the fact that public housing had been located on the peninsula seemed to accelerate rather than retard the push for industrial development. Politicians and planners argued that the kinds of people that public housing attracted demonstrated that public housing was not in the peninsula's best interest.²¹

During the war, the North Portland Peninsula acquired a reputation as an area of industry, housing projects, and black residents. The first two characterizations were accurate, but the third was not. Nevertheless, the identification of North Portland with African Americans contributed

to the perception of the area as blighted, suitable only for industry and for those who could not afford to live elsewhere. Many white city residents, politicians and businessmen were beginning to see North Portland as a throw-away zone.

Although North Portland was not a predominantly black area in the 1940s, the promise of jobs at Henry Kaiser's shipyards had attracted large numbers of African Americans to the Portland area for the first time, and many of them, along with many white migrants, found housing on the peninsula. In 1940, only 1,800 black people lived in Oregon. By 1944, that number had grown to about 15,000, with over one third living in Vanport.²² Though many white families moved out of Vanport at the war's end, most black families remained, in part because racist real estate practices and restrictions kept them from moving to many places in Portland.²³

Having African Americans as neighbors was a new experience for most Portlanders, and although African Americans never accounted for more than 28 percent of the population of Vanport, or more than 18 percent during the war years, the community quickly acquired a reputation as a "negro project." This was the first identification of the slough area with a minority population.²⁴

Initially, Vanport had been hailed as a "miracle" of city planning and public housing, with good cause. Community life was strong, the schools were integrated, and childcare was provided for the families of shipyard workers. The apartments were small but well-designed, and all vital services were provided within the walls of the city. In comparison with large federal wartime housing projects elsewhere in the country, living conditions and community life at Vanport were quite good, and racial conflicts were few. Nevertheless, almost immediately after it was built, residents, Portland leaders and federal officials began to criticize the development. The buildings were flimsy, heating was insufficient, and noise from the nearby factories was disturbing. In addition, officials fretted about the undefined but often cited "negro problem."²⁵

The Housing Authority of Portland was very worried about the "negro problem." As early as 1943, Housing Authority commissioners were regularly spending portions of their meetings anxiously discussing the "negro situation." They were concerned, among other issues, about Vanport events that they described as "mixed dances (negro & white)." The Vanport sheriff reported that the dances, in particular, "from a police standpoint, cannot be tolerated." Separate recreational facilities for black and white residents were considered, but the housing commissioners were concerned that federal rules against discrimination in housing projects might interfere with that plan. The authority was unable to decide on a solution.²⁶

By 1944, the authority was reporting "inter-agency concern with Vanport City and other racial problems." In May of 1944, Housing Authority Chairman C. M. Gartrell reported that "Vanport City was rapidly becoming known as a Negro project, which rumor should be stopped." At a meeting later that summer, the housing commissioners tried to decide what to do about the one thousand black families that were expected to arrive in Vanport soon, a number which would double the existing black population there. Commissioner C. A. Moores recommended that the authority draw up plans to deal with what could become a "housing emergency." When another authority member suggested placing "intelligent colored people, who understand the negro problem, on the staff of the authority," Executive Director Harry Freeman informed him that there were already two black police officers working in Vanport and two black people working on the project staff of the Housing Authority.²⁷ No official plans were drawn up to deal with what was seen as a potential crisis, but the authority proceeded to place the black arrivals in a segregated section of Vanport. The authority claimed that this was the only section in which vacancies were available, but black families complained that they had been passed over for vacancies in other areas.²⁸

In the years immediately following the war, as white families moved away and the black proportion of the population increased, Vanport's reputation as a black area intensified. Many Portland residents saw the housing development, unfairly and incorrectly, as a crime-ridden, black-dominated neighborhood. Indeed, as late as 1970, researchers reported in a demographic study done for the Center for Urban Education in Portland that "most" of Vanport's residents had been black, an assertion that was based on reputation, but not on fact. Because of its reputation as a "problem" area, few Portland residents who had not been living there were sorry to see it disappear in the flood of 1948. Indeed, by that time, many city officials and businessmen had spent years pushing to tear down the housing at Vanport and create an industrial park in its place.²⁹

As early as February of 1945, the Housing Authority of Portland was making plans for the destruction of Vanport. At a meeting that month, the commissioners agreed to vigorously pursue a plan "for post-war industrial development of Vanport City." Only Commissioner H. J. Detloff urged caution. He asked the commissioners to keep in mind "that the project is still 95 percent occupied."³⁰ Almost a year later, when Commissioner Moores stepped down from a one-year term as chairman because of heavy demands placed on him by his real estate business, he encouraged the Mayor to support the destruction of Vanport. "Speaking of Vanport," he wrote to Mayor Earl Riley in his letter of resignation,

"I am sure you know how emphatically I believe Vanport can be developed into one of the finest industrial districts in the country after the need for its housing facilities is ended. I hope you will call upon me at any time you feel I can assist toward such an objective." In the same letter, Moores re-emphasized the housing authority's predisposition toward private enterprise solutions to Portland's housing crisis by referring to his own business dealings. He wrote, "I might also add that the company with which I am proud to be associated, Commonwealth, Inc., feels that it has an important job to do in the housing field and hopes to finance the construction of several thousand homes during the next few years under private enterprise." The destruction of the homes at Vanport could only help business.³¹

As luck would have it, a flood did the job for the Housing Authority. May of 1948 brought heavy rains and particularly warm weather, both of which contributed to unusually high water levels in Oregon's rivers. On Memorial Day, the waters of the Columbia River, behind Vanport's northern dike, and Smith Lake, behind the western dike, were fifteen feet above the city floor. The waters in the Columbia Slough, to Vanport's south, were quickly rising, too. That morning, the sheriff's office assured Vanport residents that there was nothing to fear. But by late afternoon, the dikes had proved the sheriff wrong. Shortly after 4:00 P. M., floodwaters crashed through the railroad dike to the west, and a ten-foot wall of water careened through Vanport, sweeping buildings off their flimsy foundations, sending them reeling through town as residents rushed to escape. More than two thousand people were initially declared missing in the flood; fifteen people were confirmed as dead and another eighteen missing. The next day, the Denver Avenue dike to the east of Vanport gave way, and Vanport apartment buildings began floating through the breach toward the present-day site of the Portland Meadows Race Track.³²

The Columbia River had reclaimed its flood plain. Vanport was not rebuilt, and its eighteen thousand residents had to find housing elsewhere. White residents scattered throughout the city. Most black residents moved to Albina, a run-down part of town south of the North Portland Peninsula, just across the Willamette River from Portland's Central Business District. Historically, Albina had been a stop-over district for recent immigrants of European descent, and it held the most densely built housing in the city. The neighborhood was one of the few areas in Portland from which black people were not excluded by racist white homeowners and real estate agents, who employed tactics ranging from restrictive housing covenants to outright violence in order to exclude African Americans from most neighborhoods in the city. By the 1930s, Albina had become the center of Portland's small black commu-

nity, and when the flood destroyed Vanport, the development's black residents had little choice but to seek housing in that already overcrowded district. It was not until a fair housing law was passed in Oregon in 1959 that such residential segregation would be declared illegal. Until then, real estate agents were acting within the law when they followed the 1919 Portland Realty Board policy of refusing to sell property in "white" neighborhoods to African Americans.³³

Although black residents had left the North Portland Peninsula and would not move back there in large numbers until the 1960s, the area's reputation as a black neighborhood would continue to encourage the placement of industry there. The disappearance of this major housing project on the peninsula, coupled with the endurance of a reputation of blight, helped to clear the way for intensive industrial development nearby at a time when environmentalists were beginning to secure gains elsewhere in the city. The swampy and flood-prone Vanport site itself, however, never became an industrial site; instead, a park and a golf course occupy the land today.³⁴

In addition to changes in the social landscape, the flood brought dramatic changes to the physical environment. The canal that the city built in the 1920s between the slough and the Columbia River to create a stronger current in the slough had always been difficult to maintain. When the Vanport flood sealed the entrances to the canal once again, the city council and the Port of Portland decided not to bother unblocking it.³⁵ With the canal sealed, the slough was entirely cut off from Columbia River water, as it remains today. However, the fact that the current disappeared for good in the late 1940s did not cause a change in the amount of sewage and industrial waste dumped into the slough. It only slowed the sewage's trip down stream.

In the early 1950s, conditions of the slough became so bad that millworkers refused to handle logs that had traveled through the water. Meat-packing plant waste, hog ranch waste, and lumber and shingle mill waste would cling to the logs as they floated down the slough to the mills.³⁶ Related concerns drove many of the industries which relied on navigation of the slough to relocate in the early 1950s, and by 1965, all commercial traffic on the slough had stopped.³⁷ Industrial developers choosing sites near the slough after this point saw proximity to the waterway as a benefit not for transportation purposes, but rather for the disposal of wastes.

Until the 1950s, Portland's sewers dumped the city's waste, untreated, into the Willamette River and the Columbia Slough. In an attempt to clean up the local waterways, the City of Portland finally began building a sewage treatment plant in the late 1940s, which began operating in 1951. Unfortunately, this by no means solved the peninsula's sewage

although the evidence is clear that a large sum of money has been spent to make it." Among the complaints that Chamber of Commerce members and other critics raised with the city's attempts at zoning were the proximity of industrial zones to residential neighborhoods, and what they considered as an abundance of area, 40 percent of the city, open to apartments rather than exclusively set aside for single family homes.⁴³

In the 1950s, Portland city planners began to turn to strategies of "urban renewal" in order to plan for the city's future development and to fix what were seen as existing development problems. The Federal Housing Act of 1954 provided funds for cities for "urban renewal," which was defined as having three components: the prevention of the spreading of blight into "good" areas, the rehabilitation of areas which were somewhat blighted but redeemable, and the clearance and redevelopment of areas that were too bad to save.⁴⁴ Planners hoped to take advantage of the federal program to clear away what they saw as problem housing on the North Portland peninsula to make way for more industry. However, the homes in the area were not in poor enough condition to qualify. Nevertheless, as part of its overall "renewal" plan, the Portland Planning Commission slated part of the slough area for redevelopment for industry. The commission reported that the portion of the plan addressing the North Portland peninsula

may therefore require special consideration and perhaps deferment to a later date for action. Because the eventual change in land use to industrial is considered quite important to the long-range future of both the area itself and to St. Johns [the neighborhood at the very tip of the peninsula], no immediate action tending to prolong its residential life can be recommended.

Clearly, for this area, industrial development took priority over housing.⁴⁵

A significant component of Portland's urban renewal plan included decisions about where to allow industry within the city. Industry was considered a major cause of blight in residential neighborhoods, and therefore a blight removal and prevention plan had to pay close attention to the placement of industry. In analyzing areas to determine where industrial expansion was appropriate, the Planning Commission took many factors into account, including prior industrial development, traffic capacity, and the availability of land.⁴⁶

Other factors which the commission considered were indicated in a handwritten outline for a Planning Commission report on expanding the city's industrial sector. The report, the purpose of which was to provide recommendations for maintaining and improving industrial

woes. The plant, which provided for the treatment of much of Portland's sewage before discharging it into the Columbia River, contributed significantly to the improvement of the water quality of the slough and the rivers. However, the city placed the plant itself on the banks of the slough. The peninsula was still collecting the city's sludge.³⁸

Also, despite the new plant, not all sewage was treated before it reached the waterways. Although many of the industries which had been dumping their sewage into the slough began to send their sewage to the treatment plant, a number of businesses which were not connected to city sewers continued to send their waste into the slough. In addition, although the city sewers had been rerouted to the treatment plant, the plant was not always able to handle all the sewage sent there. When storm water mixed with the sewage, it exceeded the treatment plant's capacity. At these times, the sewers would overflow and the mixture of sewage and stormwater would spill over weirs, or gates, in the sewer pipes and fall into the Willamette and the slough. Such an occurrence, frequent in rainy Portland, is called a "combined sewer overflow" or "CSO." Although this arrangement was far superior to dumping all raw sewage directly into the water, CSOs were still a serious problem facing the slough.³⁹

Among the businesses which chose not to connect to the city sewer in the 1950s was the Pacific Meat Company. As late as 1970, Pacific Meat was dumping 150,000 gallons of blood and animal particles directly into the slough every day. Incredibly, the Oregon Department of Environmental Quality had given the company a permit to do just that. However, the *Oregonian* reported that the terms of the permit, which required some minimum treatment, were being violated.⁴⁰ The Multnomah County Health Department reported that the water near the meat processing plant was "a serious public health hazard." At the time, Multnomah County District Attorney Stanley Sharp asserted that other industries were also polluting the slough, but that "due to manpower limitations, we have to proceed from the worst polluters on down."⁴¹ According to the *Oregonian*, the company saved \$150,000 over fifteen years by avoiding sewer fees and dumping its sewage straight into the slough. In early 1971, after extensive public criticism, the Pacific Meat Company finally connected to the Portland city sewer.⁴²

Meanwhile, with the help of Portland real estate developers and city officials, many new industries were finding homes along the slough. After the end of the war, Portland civic leaders renewed their focus on city planning. In the early 1930s, the city had experimented with zoning regulations, but the results had been less than satisfactory. In 1935, for example, the Portland Chamber of Commerce complained that "no one seems to be sure what the Master Plan of Portland is, as of this date,

districts within the city and to recommend new sites, listed "housing condition and population characteristics" as factors to consider in industrial zoning and development decisions. The population characteristics the outline specifically called attention to were "stability," "income," and "non-white" status. The implication was that low-income minority neighborhoods were the most appropriate for industry. Other neighborhoods would be protected from industrial blight. This practice of placing industry in areas that were considered to be already blighted by industry and by demographics would continue throughout the 1970s and 1980s.⁴⁷

The impression left by Vanport that the peninsula was a "minority" area encouraged the siting of industry there. Among the businesses that opened along the slough in the post-war years were numerous metal production plants and chemical plants, a wood-treatment facility, and a construction materials plant, which contributed to the accumulation of lead, Pentachlorophenol (PCP), polychlorinated biphenyls (PCBs), cyanide, chromium, hydrochloric acid, dioxins and other pollutants in the slough. Ironically, by the time that African Americans returned to the North Portland Peninsula in substantial (though not majority) numbers, they were finding affordable housing in neighborhoods that had been devalued, and rendered toxic, in part by the idea that there were black residents living there.⁴⁸

ECOTOPIA AND THE SLOUGH

In the 1970s, Oregon began to acquire a reputation as "ecotopia," a place where the environmentalists were in charge and people lived in balance with nature. This is a reputation that has in large part endured until today. Oregon is associated with environmentalist governor Tom McCall, the bottle bill, the dramatic cleanup of the Willamette River, and a novel system of state-wide environmentally-sensitive land use planning. Yet, Oregon is also home to the environmental disaster of the Columbia Slough. The Columbia Slough, however, is not simply a forgotten waterway that missed the environmental fervor. Rather, it is a sacrificed waterway. The Willamette River cleanup was paid for, in part, by the filth of waterways like the slough and neighborhoods like those of the North Portland Peninsula.

Historian Carl Abbott writes that by the 1980s, Portland had gained "a reputation for strong-minded and environmentally sensitive metropolitan planning." Tom McCall, Oregon's governor from 1967 to 1974, was in large part responsible for this reputation.⁴⁹ During his first term as governor, McCall oversaw the creation of the Oregon Department of Environmental Quality and the concerted effort to clean up the Willamette River, which had been so polluted that fish suffocated in its waters. He also pushed through the five "B" bills, which "required

removal of billboards, reasserted public ownership of ocean beaches, set minimum deposits on beverage bottles and cans, allocated money for bicycle paths from highway revenues, and tied bonding for pollution abatement to the growth of total assessed values."⁵⁰

Perhaps the most dramatic environmental accomplishment of McCall's administration, however, was the establishment the Land Conservation and Development Commission in 1973, the job of which was to oversee local compliance with newly established state-wide land use planning goals. Among the goals, which were revised in 1974, were the preservation of farm land, the energy-efficient use of land, and the definition of urban growth boundaries to set limits on urban sprawl.⁵¹

The urban growth boundaries, in particular, changed the face of land use planning in Oregon. In the 1950s and 1960s, Oregon had been experiencing rapid suburban growth. Single family homes on large plots were eating away at the state's open space and at the land on which Oregon's farming and resource industries depended. The urban growth boundaries contained that sprawl by encouraging the intensive development of urban areas and by setting limits on development outside of the boundaries. Metropolitan growth began to be seen as an environmental disaster, and Oregonians wanted to protect against the peril of "Californication."⁵²

However, this was a conservationist plan, not a preservationist one. The main goal of limiting growth beyond the urban growth boundaries was not to preserve open space or wilderness, but to support "the vitality of the agricultural and forest industries."⁵³ In addition, as Abbott argues, the programs of this land use plan "protected middle and upper-class neighborhoods and residents and benefited the metropolitan economy. It is certainly true that the same programs neglected the needs of the poor and failed to share out the costs of growth equally."⁵⁴ Much like the urban renewal plans of the 1950s, this urban growth plan of the 1970s protected the environments of middle and upper-class neighborhoods, while promising the more intensive development of those areas which had already been degraded. The neighborhoods of the North Portland Peninsula fell into this latter category. As Abbott writes, "Oregonians in the twentieth century have liked what they have, and they have wanted rather smugly to protect it."⁵⁵ Those with little to protect, however, have continued to get the short end of the stick.

Although planners paid much attention to the regional economic and environmental aspects of metropolitan planning, they did not give much consideration to the different experiences that different groups would have under the new, environmentally sensitive plans.⁵⁶ Not all neighborhoods and not all people would find themselves in cleaner, more environmentally sound surroundings. The case of the Columbia

Slough and the neighborhoods of the North Portland Peninsula provide an example of how land use regulations affected different groups of people in different ways. At the slough, it is clear that land use regulations worked against the working-class and minority peoples who lived there. At a time when much of the state was being cleaned up, the Columbia Slough stagnated. The St. John's Landfill, which had been established on the banks of the slough in the 1930s and continued to collect Portland's solid wastes, leached toxins directly into the slough. Industries continued to dump sewage into the slough, and the Port of Portland continued to invite new industries to the area. The residents protested, but their complaints had little effect. This had become an industrial area, one of the few places in the state that was allowed to remain filthy, so that industry could thrive while the rest of the state was provided with a cleaner, healthier environment.⁵⁷

Plans for Tom McCall's Willamette River Greenway project set aside park and recreation areas and open space along the Willamette River and its tributaries. However, although the plan included substantial portions of many of the small waterways contributing to the Willamette, the slough was not among the beneficiaries of the project. The Columbia Slough was just outside of the Greenway boundaries, and was instead zoned for industry. This meant that the area near the slough would shoulder a much larger and more concentrated share of local industry and industrial pollution.⁵⁸

North Portland residents protested what they saw happening to their neighborhoods. In 1971, an article in the *Oregonian* quoted Oregon Marine Board director Robert Rittenhouse describing the Columbia Slough as "the rottenest stream in the Northwest." The same article explained that the Port of Portland saw the slough as "playing a key role" in the long-range industrial planning of the area, and hinted at the reason that the waterway was not being included in cleanup plans: "The slough is close to thousands of North Portlanders, many retired and with low incomes—people with little political power." The article went on to describe how many of the neighborhood people favored using the slough, not as a drainage or sewage canal, and not for navigation, but for recreation and for food. "Fish caught there in the past have supplemented the diet of some people with skimpy grocery budgets," the article reported.⁵⁹

However, in the early 1970s, the Port of Portland was not focusing on the slough as a neighborhood resource. Rather, it was concentrating on the possibilities for expanding industrial development in the slough area. Port officials argued that the slough was so filthy that more industrial development was really all the area was good for. The Port's primary question about the slough was how to best manage it for

industry, and that meant a choice between managing for flood control or managing for navigation. The Port, which was one of the more powerful of the many government agencies involved in planning for this area and which framed the terms of the debate for many of the other governmental participants, favored flood control. Cleaning the slough, though still discussed, began to be portrayed as a lofty but impractical goal.⁶⁰

Port of Portland General Manager George M. Baldwin proposed putting flood gates at the slough's mouth at the Willamette River. This would have closed the slough to navigation but offered more flood protection to the Rivergate Industrial Park (see map), development of which had begun in 1965, and which the Port hoped would become home to hundreds of industries. "Rivergate development offers so much opportunity for industry . . . It means so much more development than would be encouraged if the slough were opened to navigation," Baldwin said.⁶¹ Clearly, Baldwin advocated altering the slough in the interest of business.

When area industry owners responded that the slough should remain open for navigation and was a vital waterway for industry, Port officials argued that the slough's conditions were so bad that neither navigation nor recreational use were practical ideas. Jim Church, technical services manager for the Port, said the Port's field engineers had trouble navigating the slough in rowboats because of all the trash and debris. In addition, Church said, "There is evidence the bottom of the slough is filled from two to fifteen feet with manure." With the water already so fouled, the Port argued, the most sensible use of the slough was as a drainage ditch.⁶²

Other business owners argued that all that was needed to clean the slough was a good flush, which the Columbia River could provide if the city canal were reopened. Assistant Port Manager Adam Heineman disagreed, arguing that cleaning the slough by flushing it with Columbia River water would be impractical. "There's so much filth and pollution already in the slough it would take years for it to clean itself out naturally," he said. This debate continues today, with most environmentalists joining the anti-flushing faction. They argue, and sensibly so, that even if the canal could be kept open, which proved difficult in the 1920s, 1930s, and 1940s, flushing the slough would only send the filth further downstream.⁶³

The Oregon State Game Commission, in assessing the ecological impact of the Port's plan for the Columbia Slough area, wrote in approval that "concentrating, rather than scattering, industry and residential areas minimizes damage to wildlife by preserving natural habitat and open spaces. The public often comments about the lack of fish and

wildlife, yet thinks nothing of the adverse effect on wild animals from scattering houses and factories throughout our best habitat." Clearly, the North Portland area was being sacrificed so that the "best habitat," in other parts of the city and state, could be preserved.⁶⁴

Residents of the peninsula were not pleased with the proposals, and they resented the process by which those proposals had been reached. As early as 1971, area residents were upset that the public had had no part in the planning of a large industrial district on the peninsula.⁶⁵ By 1973, area agencies were finally beginning to solicit public participation in the decision-making processes. However, the agencies which requested public input often paid little attention to what residents actually said.

In response to public demands for participation in the decision making process, the Army Corps of Engineers held a public workshop in June of 1973 to try to form a citizens' advisory committee to provide input on decisions made about flood control in the area, but at the meeting, residents felt intimidated by the presence of members of so many government agencies. Members of the Army Corps of Engineers were joined at the meeting by representatives of the Port of Portland, the Columbia Region Association of Governments, the Multnomah County Planning Division, the Oregon State Marine Board, the Oregon State Water Resources Board, the City of Portland Parks Bureau, the U. S. General Accounting Office, the Bonneville Power Administration, and the Oregon State Highway Division. In addition, representatives from many area industries, including Union Pacific Railroad Company, Moar Lumber Company, and Upland Industries Corporation were there. The primary purpose of the meeting was supposed to be the solicitation of citizen involvement. However, fewer than half of the almost seventy people who filled out attendance cards after the meeting identified themselves as area homeowners, residents or members of neighborhood organizations.⁶⁶

The residents had barely been notified of the meeting, as Clifford Nelson observed:

I think the main reason [that more people aren't here at the meeting] is that where you advertise the average citizen never looks at; for example, I just found the article by happenstance and came over here. I found it down in the corner of the market reports. It seems to me that you should send the meeting notices to "Occupant." This would be better than putting it in the Daily Journal of Commerce. How many citizens read that newspaper?⁶⁷

Nor did residents feel welcome. Mary Runyon complained at the meeting, "The residents have been pushed around by various agencies and

the fact that there are so many agencies represented here tonight gives us the feeling we are being overpowered." Clifford Nelson agreed with her. "Many of the people who are doing so much talking do not live down here. Why is there so much talk if they do not live down here?" he asked. He was told by Joe Heidel of the Army Corps of Engineers that living in the area was no prerequisite to being interested in the slough.⁶⁸

The meeting was a confusing affair. The Corps of Engineers wanted to limit the topic of discussion to their area of jurisdiction, flood control, and the related issues of recreation, water quality improvement, and fish and wildlife habitat. However, area residents wanted to broaden the discussion. Their interests included public health, industrial zoning, proximity of housing to industry, and rights of property owners, among other issues. There was no clear sense of what the meeting was intended to accomplish, and many people were left irritated and confused. Bond Easily commented toward the end of the workshop, "I don't know what you have been talking about tonight." Virginia Monroe hoped to understand more when she read over the minutes of the meeting later. "When you send out the minutes of the meeting, would you please explain some of these terms you are using such as 'pondage?'" she asked.⁶⁹

At the end of the workshop, participants were asked to submit their names, addresses and areas of interest to the Corps of Engineers representatives, who would then coordinate committees to work on various topics. City documents show no indication of specific follow-up meetings, although the North Portland Citizen's Committee, a coalition of eight North Portland neighborhood associations, members of which had been at the Army Corps meeting, became more active in issues relating to the slough shortly after this workshop.⁷⁰

In October of 1974, the North Portland Citizen's Committee held a conference titled "North Peninsula Environment '74: Lakes, Lands & Livability." Sharon Roso, who compiled the conference report, had participated in the Army Corps workshop the previous year. This conference was designed specifically with the needs of the community residents in mind. The purpose of the conference, according to Roso, was "to find out agency plans for and needs of that area, and for local people and agency people to ask specific questions regarding lakes, land and livability, e.g., traffic generation and patterns, air quality outlook, recreational uses, noise generation, water quality, funding possibilities, recycling possibilities and mass transit potential." Among the agencies the committee invited to participate in the conference were the Corps of Engineers, the Port of Portland, the Portland Landfill, the Department of Environmental Quality (DEQ), the Multnomah County Planning Bu-

reau, the Portland Planning Bureau and the Columbia Region Association of Governments. The conference culminated with North Portland residents mapping their priorities for their environment, which they then presented to the various agencies.⁷¹

Water pollution was one of the citizens' primary concerns. Roso wrote in the conference report, "We believe no industry should be allowed to pollute, in any way, any of the water [in the] Willamette River, Columbia River, Columbia Slough, [or in] Smith or Bybee lakes. We feel the DEQ should make arrangements for cleanup of the Columbia Slough, and enforce a policy of no pollution there." Water quality was something the residents did not want to see compromised in any way.⁷²

The citizens were also highly concerned about air quality. "We feel the Port's marketing practices encourage polluting industries," Roso wrote. The citizens' requests made it clear that they felt as though their neighborhood was being used as a dumping ground. "Treat the North Portland Peninsula as a natural resource rather than as an area for dumping industry unwanted in cleaner areas, or a site for maximum development, or maximum profit," they requested of the Port. The area residents were also concerned with noise pollution and increased traffic through their area.⁷³

Among the specific requests outlined in the conference report were requests that the city engineer plan to eliminate the St. John's Landfill within the decade, and that the city and county planning bureaus avoid zoning the areas around the Columbia Slough for heavy industry. In addition, the area residents asked that the Department of Environmental Quality set and enforce strict air-quality standards. "We feel that the goal of the DEQ should be to improve the quality of the air shed for all time, not just so that new sources can foul it up to the same levels," the report asserts.⁷⁴

Almost all of the community's requests were ignored. The slough area was zoned for heavy industry, and the St. John's Landfill was kept open until it could hold no more garbage in 1991. The DEQ continued to issue permits to polluting industries, including industries which dumped factory waste directly into the slough. And the North Portland Peninsula remained a dumping ground for industry that no one wanted anywhere else. The planning bureaucracy handed down the decision to continue developing North Portland as a haven for heavy industry with little regard for the people living there.⁷⁵

City of Portland records describing citizen participation in neighborhood meetings in the 1970s offer no indication of the class or ethnicity of the area residents who attempted to influence planning decisions for North Portland. However, the fact that the 1973 meeting was not widely publicized suggests that those citizens who found out about the meeting

and made arrangements to attend were among the best-connected and most politically active members of the North Portland Peninsula community. The fact that even this group felt bullied by government agencies and ignored by the planning bureaucracy suggests the extent to which this predominantly working-class area was excluded from the decision-making processes affecting their community.

Also during the 1970s, the minority population of the peninsula was on the rise, as more African Americans and recent immigrants began to find housing in the neighborhoods near the slough. In 1950, when only 4 percent of Portland residents were classified as non-white in the federal census, the census tracts along the slough reported similar numbers. By 1970, in most of the census tracts along the lower Columbia Slough, the percentage of non-white residents was at least twice as high as the city-wide average.⁷⁶ In 1990, the census reported that the minority proportion of the population on the peninsula had continued to increase. That year, 7.6 percent of the residents of the Portland metropolitan area were classified as black, and 15 percent were classified as non-white. In contrast, in seven of the nine census tracts along the lower slough, 17 percent of the residents were classified as black and over 23 percent as non-white. One tract was 44 percent black and 51 percent non-white; another was 62 percent black and 67 percent non-white. By this time, fully one quarter of Portland's African-American residents lived in the immediate vicinity of the slough, and the proportion living in the old Albina district had significantly declined.⁷⁷

The decline in the number of African-American residents in the Albina district was due in part to urban renewal projects undertaken there during the 1950s and 1960s. Many Albina residents were displaced by the construction of the Portland Coliseum in the 1950s and by the construction of Interstate Five in the 1960s. Although a U. S. Supreme Court ruling had outlawed restrictive covenants in 1948, and Oregon state law had outlawed all discrimination in housing in 1959, many African Americans continued to face opposition when they sought housing in many Portland neighborhoods. Census statistics show that most African-American Portland residents found housing near the Albina district even after large blocks of housing were razed to make way for the sports arena and the highway. Historian Carl Abbott has pointed out that the center of Portland's African-American population has shifted to the north in recent decades, toward the Columbia Slough.⁷⁸

Indeed, houses closer to the slough were in better condition than many in the old Albina district, and census information suggests that a move from the Albina area to the neighborhoods of the North Portland Peninsula was a move up. In 1970, in the census tracts which had been the center of the old Albina district and which were still each over 40

percent black in 1970 (one tract was over 77 percent black), the median family income in 1969 was less than \$5,300. That same year, the median family income for the Portland Metropolitan Area as a whole was \$10,463. In the census tracts along the slough, where the black population was increasing, family incomes were closer to the city-wide median. In one of the tracts along the lower slough, the median family income was \$7,549; in each of the other tracts, the median was over \$8,000.⁷⁹ The 1990 census showed a similar pattern. That year, the median income for the Portland area as a whole was \$25,592. In the Albina tracts, the median income ranged from \$9,875 to \$17,108. Along the slough, the median income ranged from \$16,302 to \$29,219. Likewise, 1990 home values were significantly higher closer to the slough, though still well below the city-wide median.⁸⁰

In Portland, African Americans moving out of the old ghetto district in search of better homes have found those better homes in one of the most toxic areas of the city. As one drives north through the old Albina district and onto the North Portland Peninsula, the improvement in housing conditions is obvious. The homes are in better condition, there is more space between houses, and there are more and bigger lawns. The sewage and industrial filth that pollute the neighborhoods are not so visible at first glance. As in Gary, Indiana, better housing for many African Americans has meant worse water and worse air.⁸¹

The pollution and industrial development which have kept property values lower on the peninsula, which were in turn encouraged by assumptions about the types of people who did and should live in these neighborhoods, meant that relatively inexpensive housing was available here for African Americans looking for better housing, and for working-class white Portlanders, and for recent immigrants from Vietnam, Cambodia, Laos, Eastern Europe, Mexico and Central America. According to the 1990 census, half of the census tracts along the slough have significantly more recent immigrants than the city-wide average, and more people in those tracts speak no English at all. In one tract, almost 14 percent of the residents report speaking no English. As part of its recent campaign to educate people against eating fish caught in the Columbia Slough, the Portland Bureau of Environmental Services commissioned a survey which suggests that the majority of people who eat fish caught in the slough are recent immigrants.⁸²

It is not sufficient to say that low-income white and non-white Portlanders live near the slough because housing there is inexpensive due to its proximity to industry. A long history of development and zoning decisions coupled with discriminatory housing practices and inequitable environmental policies have created the North Portland landscape of the 1990s, in which the most toxic neighborhoods in the city also have

the highest proportion of minority residents. City planners, politicians, developers, real estate agents, home owners, landlords, and environmentalists have all contributed to the creation of the Portland landscape in which inexpensive housing is most accessible to working-class whites, African Americans, and recent immigrants in the most toxic part of the city.

POSTSCRIPT

Since the 1970s, intensive industrial development has remained the primary planning goal on the North Portland Peninsula, for which the development of the Columbia Corridor in the late 1980s is further evidence. The Columbia Corridor is a 16-mile-long, 1.5-mile-wide stretch of land along the south shore of the Columbia River. The Portland Development Commission echoed turn-of-the-century industrial boosters when it described the corridor, which includes most of the Columbia Slough, as "over 6,500 acres of vacant or underdeveloped industrial land."⁸³ The commission went on to describe the corridor as vital for the entire Portland metropolitan area because it contains "the vast majority of the potentially developable industrial land inventory." The commission promised that industry coming to the corridor would bring jobs and tax revenue to the city, and it pointed out that large parcels of land like those available in the corridor were available nowhere else in the city.⁸⁴

In 1988, the Portland Development Commission reported that it considered the western end of the Columbia Corridor, that part of the corridor on the North Portland Peninsula, as being particularly suited for heavy industry and manufacturing. Its reasons included characteristics of both the landscape and the population. In a report in which it explained its decision to encourage different kinds of development at different locations in the corridor, the commission evaluated distinct segments of the corridor for such criteria as freeway access, availability of large parcels of land, drainage, and landscaping. It also rated the available labor force at each site. On the peninsula, the commission rated the labor force "least skilled." This would contribute to the decision to locate business parks and commercial office space elsewhere. The low-skilled labor force, the commission implied, invited heavy industry.⁸⁵

In the quarter century since the residents of the North Portland Peninsula voiced their frustration at plans for their neighborhoods, the city and the Port have held dozens of meetings about pollution at the slough and development on the peninsula. Also during that time, Rivergate Industrial Park has become home to more than sixty manufacturing, distribution and warehousing businesses. The Port has added more than seventy million cubic yards of fill to the industrial park to

build it up and reduce the chance of flooding.⁸⁶ Whether the slough should be completely closed for better flood control or reopened for navigation remains a subject of controversy. Only in the past several years has cleaning the slough re-entered the debate at an official level. As late as the early 1990s, when public officials discussed a clean-up of the slough, it was often peripheral to discussion of development concerns.⁸⁷

Since 1972, the city and the Port have conducted more than forty studies of the slough, and they have debated at least eight different plans for altering its conditions. The plans have included various combinations of modifications to enhance flood control, navigation, and recreation. The proposals have ranged from plugging the slough at both ends and regulating the water level with pumps to reopening and widening the city canal and raising bridges above the slough to make way for large ships. Some plans, most notably the plans formulated since the mid 1980s, have included provisions for significantly improving the water quality in the slough. However, despite the fact that the city has spent more than twenty years and \$14 million studying this toxic waterway and talking with the area residents about the problems in their neighborhood, the slough remains an environmental disaster.

As the City of Portland has begun to recognize the environmental crisis of the Columbia Slough, it has begun to recognize that African Americans and recent immigrant groups have been bearing a disproportionate share of the burden of that crisis. In 1993, the activist lawyers of Portland's legal environmental group Northwest Environmental Advocates threatened to sue the city for violating the Federal Clean Water Act, and the city took notice. Since then, there has been progress.⁸⁸

In September of 1993, in response to the lawsuit threatened by Northwest Environmental Advocates in July of that year, the Portland City Council voted to spend \$125 million to eliminate all combined sewer overflows on the slough, which environmentalists and many city officials viewed as only the first step in an extensive and expensive cleanup project.⁸⁹ Heavy rains in 1996 and 1997 and the accompanying sewer overflows prompted repeated warnings about dangerous water and fish in the slough, and it wasn't until early 1998 that almost \$32 million in construction contracts were awarded to begin work on "the Big Pipe," a 3.5 mile long conduit intended to collect sewage and rainwater that would otherwise flow directly into the slough during storms.⁹⁰

But the sewers are only a part of the problem. Every time it rains, the raw sewage that flows into the slough is joined by polluted groundwater, industrial wastes, chemicals from the Portland Airport, and toxins leaching from the St. John's Landfill. Another study in the seemingly endless series of studies, this one released in 1997, argues that the slough is too

polluted to ever properly clean up. Meanwhile, the city continues to issue warnings about swimming and fishing in the slough, and people continue to fish there, and to swim.⁹¹

Ultimately, however, in focusing on water quality in the slough, city officials are focusing on a single piece of a larger problem. The intensive industrial development that plagues the peninsula continues, with no change of pace or development strategy in sight, and the people who live on the peninsula are still being exposed to a disproportionate share of the pollution these industries produce. Until the environmental crisis of the peninsula as a whole is addressed, and until the environment there is recognized as an integral part of Oregon's larger landscape, the situation is not likely to improve. In the fall of 1998, a Portland Bureau of Environmental Services web site listed among its long-term goals for the Columbia Slough "greater equity in who benefits from environmental protection actions."⁹² The goal is laudable, and elusive. Equity can only be possible when the many overlapping sources of inequity are recognized and addressed.

Notes

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1. A slough (pronounced "sloo") is a swampy waterway or marsh with very little current, if any.

2. Northwest Environmental Advocates, "Warning: The Columbia Slough is Polluted" [pamphlet] (Portland: Northwest Environmental Advocates, n.d.); "Posting the Sewer Next Door," *Portland Oregonian*, 10 December 1992, D8; "Beware of Tainted Waterways," *Portland Oregonian*, 9 September 1994, B5.

3. Columbia-Willamette River Watch, *Toxic Waters* [map]. 1:62,500 (Portland: Northwest Environmental Advocates, 1992); Joe Fitzgibbon, "Now-Ailing Slough Has Rich History," *Portland Oregonian*, 16 September 1993, 5.

4. "Protest Against Columbia Slough Filth," *Portland Oregonian*, 22 August 1935, 7; "The Columbia Slough Story: 'Open Sewer' Poses Stinking Hazard," *Oregon Journal* 16 December 1970, 6; Keri Brenner, "Health Officials Report Finding PCBs in Fish," *Portland Oregonian*, 3 November 1993, B2; "Slough Work Overdue" [editorial], *Portland Oregonian*, 28 October 1993, B8; Joe Fitzgibbon, "City to Spend \$6.3 Million to Clean Up Slough," *Portland Oregonian*, 30 December 1993, C2.

5. John Bonebrake, telephone interview by author, 5 May 1994, Portland, written record in possession of the author.

6. *Toxic Waters*; Henry Sessions, "Fishing in Polluted Waters" on "Crossroads" (a National Public Radio program) 14 May 1993; City of Portland, "Technical Memorandum on the Results of the Dry Weather Fish Consumption and Recreational Use Surveys," 1995, City of Portland Stanley Parr Archives and Records Center: unfilled report.

7. According to 1994 Portland School District records, for example, eight of the eleven Portland elementary schools located nearest the slough have minority enrollments well above the city average of 30.8 percent. One of the schools, Woodlawn

Elementary on Northeast 11th Avenue, had a 1994 minority enrollment of 79.3 percent, and five other area schools had minority enrollments of over 42 percent. *Toxic Waters*; Keri Brenner, "Columbia Slough: Troubled Waters," *Portland Oregonian*, 14 September 1993, B2; Portland Public Schools, "Enrollment Report" (Portland: Portland Public Schools, October 1994), 20–21; Susan Holton, "St. John's Neighborhood Offers the Atmosphere of a Small Town in the Midst of Oregon's Largest City," *Portland Oregonian*, 14 June 1992, H1; Bonnie Jean Souza, "Justice or Ecocide: The Challenge Facing the Environmental Movement and Opportunities for Organizing in the Pacific Northwest" (M.A. thesis, University of Oregon, 1992), 104; "Black Community Remains Small," *Portland Oregonian*, 24 November 1991, C1.

8. United Church of Christ Commission for Racial Justice, *Toxic Wastes and Race in The United States: A National Report on the Racial and Socio-Economic Characteristics of Communities with Hazardous Waste Sites* (New York: Public Data Access, 1987), xv–xvi, 16; Paul Mohai and Bunyan Bryant, "Race, Poverty and the Environment: The Disadvantaged Face Greater Risks," *EPA Journal* 18 (March–April 1992), 7.

9. Marianne Lavelle and Marcia Coyle, "Unequal Protection: The Racial Divide in Environmental Law," *National Law Journal* 15 (21 September 1992), S1.

10. *Ibid.*

11. Andrew Hurley, *Environmental Inequalities: Class, Race and Industrial Pollution in Gary, Indiana, 1945–1980* (Chapel Hill: University of North Carolina Press, 1995). See, for example, page 162.

12. E. Kimbark MacColl, *The Shaping of a City: Business and Politics in Portland, Oregon, 1885–1915* (Portland: Georgian Company Press, 1976), 460; *Sixteenth Census of the United States. Population and Housing Statistics of Census Tracts by Cities. Statistics for Census Tracts, Portland, Oregon* (Washington, D.C.: GPO, 1942), 13, 20; Portland Planning Commission, "St. John's Area: A Plan for the Development of a North Portland Community," April 1959. Contained in Minutes of Portland City Planning Commission, Vol. 16, Parr Archives. This Planning Commission report characterized the North Portland Peninsula as having a "predominance of manufacturing workers in its population." It went on to say that this peninsula had "always been a manufacturing community."

13. *St. John's Review*, 11 November 1904, 1; 8 July 1910, 1; 16 September 1910, 1; 30 August 1918, 1; Rowland and Fortiner, *Map of Portland and Vicinity* [map], 1:31,680 (Portland, Ore: The Company, c1908); *Portland Evening Telegram*, 5 August 1916, 20; 23 March 1920; 1 September 1928, 1; *Portland Oregonian*, 4 June 1966; American Map and Reproducing Company, *Map of Portland and Vicinity* [map]. ca. 1:24,000 ([Portland, Ore.?): The Company, c1912]; Carl Abbott, *Portland: Planning, Politics, and Growth in a Twentieth-Century City* (Lincoln: University of Nebraska Press, 1983), 68. Columbia-Willamette River Watch, *Toxic Waters*; City of Portland, "The Columbia Slough: Its History and Current Status," (1972), 2, Parr Archives, Section 7706-06, Location: 10-09-33/1, Folder 1/2; "City of Portland Columbia Slough Environmental Improvement Program, "Historical Summary," (1977) Parr Archives, Series 0462-02, Location: 16-04-01 Folder 1/27; City of Portland Bureau of Environmental Services, "Columbia Slough Planning Study Background Report," February 1989, 2-1.

14. "How Public Housing is Helping to Build A Better Portland," 2, City of Portland Stanley Parr Archives and Records Center: Series 0605-01, Housing Authority Reports and Studies; Location: 06-06-56, Folder 2/19; Abbott, *Portland*, 131, 136; Stuart McEl-derry, "Prelude to the Movement: Housing Discrimination and Civil Rights Activism in Portland" (Unpublished paper, June 1994), 7, 11; MacColl, *The Growth of a City*, 575.

15. "Report on a Proposed General Policy from a Program of Temporary Defense Housing for Portland," Portland: Housing Authority of Portland, 1942. Parr Archives, Series 0605-02, Location: 06-06-60, Folder 6/58; *St. John's Review*, 20 March 1942, 1.

16. Abbott, *Portland*, 132, 133; "National Housing Agency Federal Public Housing Authority War Housing Projects" (Portland: Housing Authority of Portland, 1944), Parr Archives, Series 2012-30, Location: 13-07-15/2, Folder 2/16.

17. Abbott, *Portland*, 133.

18. Ibid.; Manly Maben, *Vanport* (Portland: Oregon Historical Society Press, 1987), xii, 6, 7, 10, 31, 106; Bernard Raymond La Plante, "The Negro at Jefferson High School: A Historical Study of Racial Change" (Ph.D. diss., University of Oregon, 1970), 87. MacColl, *The Growth of a City*, 111, 578.

19. Maben, 18–21; La Plante, 87.

20. "National Housing Agency Federal Public Housing Authority War Housing Projects" (Portland: Housing Authority of Portland, 1944), Parr Archives, Series 2012-30, Location: 13-07-15/2, Folder 2/16.

21. Housing Authority of Portland Meeting Minutes, 4 May 1944, Parr Archives, Series 0605-02, Location: 06-06-58, Folder 4/17; Housing Authority of Portland Meeting Minutes, 15 February 1945, Parr Archives, Series 0605-02, Location: 06-06-58, Folder 4/26; MacColl, *Growth of a City*, 595; "National Housing Agency Federal Public Housing Authority War Housing Projects" (Portland: Housing Authority of Portland, 1944), Parr Archives and Records Center, Series 2012-30, Location: 13-07-15/2, Folder 2/16; Abbott, *Portland*, 157.

22. Maben, 87.

23. Ibid., 88; La Plante, 74; MacColl, *Growth of a City*, 269.

24. Abbott, *Portland*, 144, 157; Housing Authority of Portland Meeting Minutes, 18 May 1944, Parr Archives, Series 0605-02, Location: 06-06-58, Folder 4/17; Maben, 88.

25. Maben, 25–28, 31; Abbott, *Portland*, 142–3; MacColl, *Growth of a City*, 578.

26. Housing Authority of Portland Minutes, July 1943, Parr Archives, Series 0605-02, Location: 06-06-58, Folder 4/7; Housing Authority of Portland Minutes, 20 April 1944, Parr Archives, Series 0605-02, Location: 06-06-58, Folder 4/16; Housing Authority of Portland Minutes, 16 September 1943, Parr Archives, Series 0605-02, Location: 06-06-58, Folder 4/9; Maben, 89–90.

27. Housing Authority of Portland Minutes, 18 May 1944, Parr Archives, Series 0605-02, Location: 06-06-58, Folder 4/17; Housing Authority of Portland Minutes, 20 July 1944, Parr Archives, Series 0605-02, Location: 06-06-58 Folder 4/17; Maben, 91–94.

28. Housing Authority of Portland Minutes, 20 July 1944, Parr Archives, Series 0605-02, Location: 06-06-58, Folder 4/17; Housing Authority of Portland Minutes, 8 January 1948, Parr Archives, Series 0605-02, Location: 06-06-58, Folder 4/60; Maben, 94.

29. Abbott, *Portland*, 157; Housing Authority of Portland Minutes, 15 February 1945, Parr Archives, Series 0605-02, Location: 06-06-58, Folder 4/26; Jan Hickok, Kent Layden, and John Volkman, *Ethnicity in Portland 1850–1970: A Brief Demographic History* (Portland: Center for Urban Education, 1970), 10. This demographic study, which was funded by the U.S. Office of Education, contains no references and is presented entirely in essay form. It covers 120 years of Portland demographics in fourteen pages, with many typographical errors and no indication of where the demographic information was found. The inaccurate description of Vanport reads as follows: "Vanport suddenly had 40,000 inhabitants, most of whom were Black and who were recruited from other parts of the country to work for the Kaiser Shipbuilding Co."

30. Housing Authority of Portland Minutes, 15 February 1945, Parr Archives, Series 0605-02, Location: 06-06-58, Folder 4/26.

31. Letter from Housing Authority Chairman Chester Moores to Portland Mayor Earl Riley, 11 December 1945, entered in Housing Authority of Portland Minutes, 20 December 1945, Parr Archives, Series 0605-02, Location: 06-06-58, Folder 4/35.

32. Maben, 106, 113, 120–22.

33. Abbott, *Portland*, 23, 24. Stuart McElderry, "The Problem of the Color Line: Civil Rights and Racial Ideology in Portland, Oregon, 1944–1965," (Ph.D. diss., University of Oregon, 1998), 1, 57, 235, 238, 326.

34. La Plante, 93; American Automobile Association, *Street Map of Portland* [map]. ca. 1:40,550. ([San Jose, California]: H.M. Gousha, a division of Simon and Schuster, 1993).

35. City of Portland, "The Columbia Slough: Its History and Current Status," (1972), 2, Parr Archives, Series 7706-06, Location: 10-09-33/1, Folder 1/2; "City of

Portland Columbia Slough Environmental Improvement Program, "Historical Summary," (1977) Parr Archives, Series 0462-02, Location: 16-04-01 (folder 1/27); City of Portland Bureau of Environmental Services, "Columbia Slough Planning Study Background Report," February 1989, 2-1.

36. Barber, *Columbia Slough*, 10; Joe Fitzgibbon, "Now-Ailing Slough Has Rich History," *Portland Oregonian*, 16 September 1993, 5; League of Women Voters, "The Columbia Slough: A League Action Program to Rescue a Waterway," November 1972, Parr Archives, Series 7706-06, Location: 10-09-33, Folder 1/3.

37. City of Portland, "The Columbia Slough: Its History and Current Status," (1972), 2.

38. MacColl, *Growth of a City*, 546; *Portland Oregonian*, 7 October 1951, 21; League of Women Voters of Portland, "The Columbia Slough: A League Action Program to Rescue a Waterway," November 1972, Parr Archives, Series 7706-06, Location: 10-09-33, Folder 1/3.

39. Joe Fitzgibbon, "Now-Ailing Slough Has Rich History," *Portland Oregonian*, 16 September 1993, 5; *Toxic Waters*. CSOs still plague the slough. During the rainy season, 70 percent of the lower slough's flow comes from CSOs.

40. "County Demands State Hearing on Columbia Slough Pollution by Meatpacking Firm," *Portland Oregonian*, 20 November 1970, 18.

41. *Ibid.*

42. "Slaughterhouse to Use Sewers for Disposal of Plant Wastes," *Portland Oregonian*, 25 February 1971, 11.

43. Portland Chamber of Commerce, "Master Plan for Portland, Oregon," 1935. Parr Archives, Series 77-06-6, Location: 10-09-33, Folder 1/5; Robert Moses, "Portland Improvement" (New York: November 1943), 54-55, Parr Archives, Series 2012-35, Location 16-07-31/2, Folder 3/2 Location: 16-07-3 (3).

44. U.S. Housing and Home Finance Agency, "Urban Renewal: A New Way to End Slums and Blight" (Washington D.C.: GPO, December 1956). Parr Archives, Series 0604-03, Location: 11-02-30, Folder 3/25.

45. Portland Planning Commission, "Community Renewal Program: A Recommended Program for Portland, Oregon," September, 1967, 34, 37. Parr Archives, Series 2012-35, Location: 16-07-33, Folder 7/4.

46. Planning Commission, "Community Renewal Program Goals and Objectives" [1960s]. Parr Archives, Series 7706-15, Location: 10-10-14, Folder 3/2; Planning Commission, handwritten outline of report [1960s]. Parr Archives, Series 7706-15, Location: 10-10-14, Folder 3/2.

47. Planning Commission, handwritten outline of report [1960s]. Parr Archives, Series 7706-15, Location: 10-10-14, Folder 3/2. The Planning Commission was following a standard national convention by making investment and development decisions based on the perceived stability of neighborhoods. See Kenneth T. Jackson, *Crabgrass Frontier: The Suburbanization of the United States* (New York: Oxford University Press, 1985), Chapter 11, for a discussion of Federal Housing Administration redlining practices.

48. Columbia-Willamette River Watch, *Toxic Waters*; Oregon Department of Environmental Quality, Northwest Region, *Columbia Slough Total Maximum Daily Loads (TMDLs) For: Chlorophyll a, Dissolved Oxygen, pH, Phosphorus, Bacteria, DDE/DDT, PCBs, Pb, Dieldrin, and 2,3,7,8 TCDD*, (September 1988).

49. Abbott, *Portland*, 248-49.

50. *Ibid.*, 250-51; Brent Walth, *Fire At Eden's Gate: Tom McCall and the Oregon Story* (Portland: Oregon Historical Society Press, 1994), 327.

51. Abbott, *Portland*, 251-52.

52. *Ibid.*, 248, 250.

53. Carl Abbott, Deborah Howe, and Sy Adler, eds., *Planning the Oregon Way: A Twenty Year Evaluation* (Corvallis: Oregon State University Press, 1994), xv.

54. Abbott, *Portland*, 270.

55. Carl Abbott, "The Oregon Planning Style," in Abbott et al., *Planning the Oregon Way*, 209.

56. Carl Abbott et al., *Planning the Oregon Way*, xx.
57. League of Women Voters, "Solid Waste" [booklet] (Portland: League of Women Voters, 1972).
58. Royston, Hanamoto, Beck and Abey, Landscape Architects and Land Planners, *Willamette River Greenway: A Plan for the Conservation and Management of the Willamette River Greenway* (1975), 11, 27; Oregon Department of Transportation, State Parks Branch, *Proposal For the Willamette River Greenway* (Salem, Oregon: The Department, 1976).
59. Jim Kadera, "Polluted Columbia Slough Faces Clean-up Problems," *Portland Oregonian*, 1 August 1971, 11.
60. Kadera, "Polluted Columbia Slough Faces Clean-up Problems," *Portland Oregonian*, 1 August 1971, 11; Port Presses Plan to Close River Slough," *Portland Oregonian*, 22 May 1969, 32.
61. "Port Presses Plan to Close River Slough," *Portland Oregonian*, 22 May 1969, 32; MacColl, 190.
62. Ibid.; "Columbia Slough Flood Control Plan Receives Approval of County Board," *Portland Oregonian*, 1 May 1970, 29.
63. Ibid. Among the other proposals for cleaning the slough are capping the contaminated sediments on the slough floor, or removing the sediments from the slough and disposing of them elsewhere. See, for example, City of Portland Bureau of Environmental Services, "Clean River Works: Columbia Slough Watershed" [web page], accessed 3 October 1998 (<http://www.europa.com/environmentalservices/csw.htm>).
64. Quoted in "The Columbia Slough: Its History and Current Status," City of Portland Report, June 1972, Parr Archives, Series 7706-06, Location: 10-09-33/1, Folder 1/2.
65. Letter from Joan Binnenger, Topic Chairman, This Beleagured Earth study group, Portland Branch of the American Association of University Women, to Columbia Slough Environmental Task Force, 25 August 1972, Parr Archives: Series 7706-06, Location: 10-09-33/1, Folder 1/3.
66. "Rivergate-North Portland Survey Study Workshop Attendance", 1-9, Columbia School, Portland, 14 June 1973, Parr Archives, Series 7706-06, Location: 10-09-33/1, Folder 1/3.
67. "Rivergate-North Portland Survey Study Workshop Notes," 3; "Rivergate-North Portland Survey Study Workshop Attendance", 6, Columbia School, Portland, 14 June 1973, Parr Archives, Series 7706-06, Location: 10-09-33/1, Folder 1/3.
68. "Rivergate-North Portland Survey Study Workshop Notes," 3, 5, Columbia School, Portland, 14 June 1973, Parr Archives, Series 7706-06, Location: 10-09-33/1, Folder 1/3.
69. "Rivergate-North Portland Survey Study Workshop Notes," 1-10, Columbia School, Portland, 14 June 1973, Parr Archives, Series 7706-06, Location: 10-09-33/1, Folder 1/3.
70. "Rivergate-North Portland Survey Study Workshop Attendance", 6, 7; Sharon Roso, compiler, "North Peninsula Environment '74: Lakes, Lands & Livability—A North Portland Conference," (Portland: North Portland Citizen's Committee, 1974), 1, Parr Archives, Series 5000-1000-01, Location: 09-07-22, Folder 2/35; "Peninsula Neighbors OK Sensitivity Training," *Portland Oregonian*, 22 November 1991.
71. Sharon Roso, compiler, "North Peninsula Environment '74," 1.
72. Ibid., 11.
73. Ibid., 2, 3.
74. Ibid., 5, 6, 10.
75. "Cleanup Cost Estimated at Nearly \$1 Million," *Portland Oregonian*, 2 March 1994, B2; "Time Bomb, Time Capsule," 29 October 1992, 1; "Lawyer Says Settlement Covered Cost at Landfill," *Portland Oregonian*, 29 July 1992; Portland Development Commission, "Columbia Corridor Economic Analysis," November 1988, 45. Parr Archives, Series 044-02, Location: 17-03-38, Folder 4/28.

76. 1950 *United States Census of the Population, Portland Oregon: Census Tracts Vol. III, Chapter 63* (Washington, D.C.: GPO, 1952), 7–9; 1970 *United States Census of Population and Housing, Census Tracts No. 165, Portland-Oregon-Washington. Standard Metropolitan Statistical Area* (Washington, D.C.: GPO, 1972), P-7 to P-15.

77. 1990 *United States Census of Population and Housing, Characteristics for Census Tracts and Block Numbering Areas, Portland Oregon Primary Metropolitan Statistical Area* (Washington, D.C.: GPO, 1993), 118–122; Abbott, *Portland*, 128 (map); “Black Community Remains Small,” *Portland Oregonian*, 24 November 1991, C1; U.S. Bureau of the Census, *Census of Population and Housing, 1990: Summary Tape File 3 on CD-ROM* [machine-readable data files] (Washington: The Bureau [producer and distributor], 1992).

78. Abbott, *Portland*, 26; McElderry, “The Problem of the Color Line,” 235, 315, 325.

79. 1970 *United States Census of Population and Housing, Census Tracts No. 165, Portland-Oregon-Washington. Standard Metropolitan Statistical Area* (Washington D.C.: GPO, 1972), P-76 to P-87.

80. 1990 *United States Census of Population and Housing, Characteristics for Census Tracts and Block Numbering Areas, Portland Oregon Primary Metropolitan Statistical Area* (Washington, D.C.: GPO, 1993), 415–423.

81. See Hurley, *Environmental Inequalities*.

82. Adolfson Associates, “Technical Memorandum on the Results of the 1995 Fish Consumption and Recreational Use Surveys—Amendment No. 1” (Portland, OR: Adolfson Associates, 1995), 7.

83. Portland Development Commission, “City of Portland 1988/89 Overall Economic Development Strategy,” October 1988, 18. Parr Archives, Series 0455-02, Location: 17-03-39, Folder 5/5.

84. Portland Development Commission, “Columbia Corridor Economic Analysis,” November 1988, 45. Parr Archives, Series 044-02, Location: Folder 17-03-38 4/28.

85. *Ibid.*, 38, 44.

86. Aaron Ellis, Port of Portland Public Affairs Manager for Business Development, telephone interview by author, 19 May 1994, Portland, written record in possession of the author.

87. See, for example, City of Portland Bureau of Environmental Services, “Columbia Slough Planning Study Background Report,” February 1989.

88. Joe Fitzgibbon, “Slough’s Pits—City Sediments,” *Portland Oregonian*, 18 September 1993, E1.

89. *Ibid.*; Bonebrake interview; Barber, *Columbia Slough*, 22–23.

90. “Northwesterners Assess Damage as Swollen Rivers Begin to Recede,” *Houston Chronicle*, 13 February 1996, 12; Joe Fitzgibbon, “Officials Fear for Migrants Eating Fish,” *Portland Oregonian*, 21 July 1996, B1; “Agency Warns Swimmers to Avoid the River, Slough,” *Portland Oregonian*, 1 September 1997, B3; “Contracts of Nearly \$32 Million Awarded for Columbia Slough Work,” *Portland Oregonian*, 10 February 1998, C2; Joe Fitzgibbon, “Outings Will Show Best of Columbia Slough,” *Portland Oregonian*, 5 March 1998, 6; Maves, Norm Jr., “Summer Seems Absent as Rain Taxes Sewers, Sullies River,” *Portland Oregonian*, 25 June 1998, B5; “Chemicals From Airport Could Harm Fish in River,” letter to the editor, *Portland Oregonian*, 7 June 1998, E5.

91. Joe Fitzgibbon, “A Slough of Despond, Danger,” *Portland Oregonian*, 2 June 1997, B1; Joe Fitzgibbon, “Outings Will Show Best of Columbia Slough,” *Portland Oregonian*, 5 March 1998, 6.

92. City of Portland Bureau of Environmental Services, “Clean River Works: Columbia Slough Watershed” [web page], accessed 3 October 1998 (<http://www.europa.com/environmentalservices/csw.htm>).