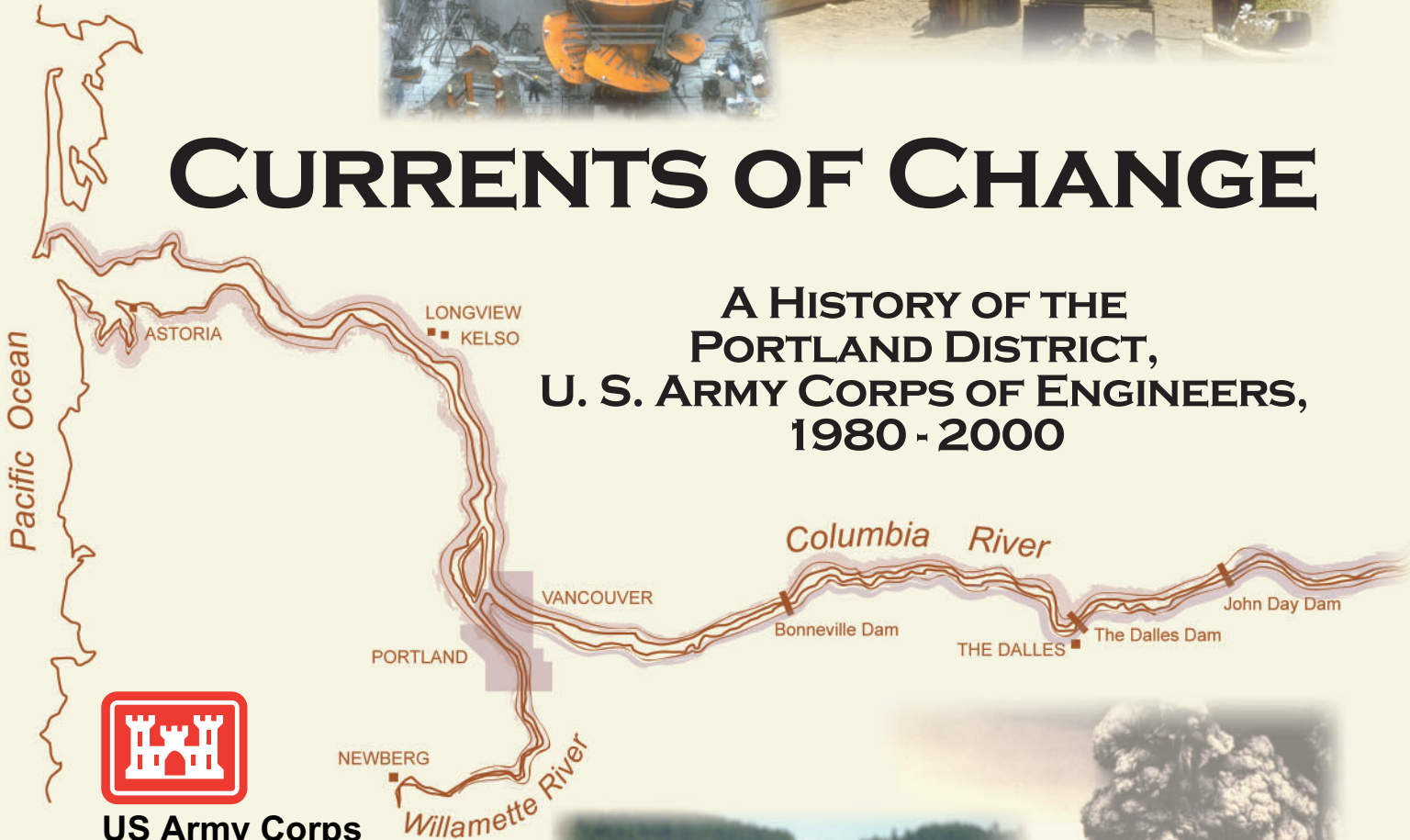




# CURRENTS OF CHANGE

A HISTORY OF THE  
PORTLAND DISTRICT,  
U. S. ARMY CORPS OF ENGINEERS,  
1980 - 2000

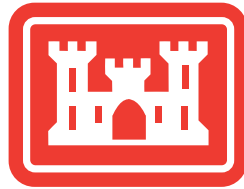


**US Army Corps  
of Engineers**®  
Portland District



# **CURRENTS OF CHANGE**

**A HISTORY OF THE PORTLAND DISTRICT,  
U.S. ARMY CORPS OF ENGINEERS,  
1980-2000**



**TODD JENNINGS  
LISA MIGHETTO  
JILL SCHNAIBERG**

**PORTLAND DISTRICT  
U.S. ARMY CORPS OF ENGINEERS  
2003**

# THIS BOOK IS DEDICATED TO THE EMPLOYEES OF THE PORTLAND DISTRICT

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TODD JENNINGS

LISA MIGHETTO

JILL SCHNAIBERG

HISTORICAL RESEARCH ASSOCIATES, INC., SEATTLE





# U.S. ARMY CORPS OF ENGINEERS MILESTONES

- 1962** - ROGUE RIVER BASIN PROJECT AUTHORIZED, INCLUDING ELK CREEK DAM
- 1966 - NATIONAL HISTORIC PRESERVATION ACT
- 1970 - NATIONAL ENVIRONMENTAL POLICY ACT
- 1972 - FEDERAL WATER POLLUTION CONTROL ACT
- 1973 - ENDANGERED SPECIES ACT
- 1974 - ARCHAEOLOGICAL AND HISTORIC PRESERVATION ACT
- 1977 - CLEAN WATER ACT
- 1978 - PUBLIC LAW 95-269 ESTABLISHES THE MINIMUM DREDGE FLEET
- 1980** - MOUNT ST. HELENS ERUPTS
- 1980 - COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT (CERCLA)



COL TERENCE J. CONNELL  
1979 - 1982



COL ROBERT L. FRIEDENWALD  
1982 - 1985



ELK CREEK DAM PROJECT



MOUNT ST. HELENS  
ERUPTION  
MAY 18TH, 1980

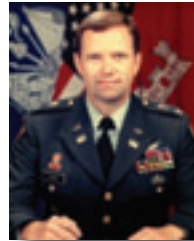


# HISTORICAL TIMELINE

1983 - BONNEVILLE SECOND POWERHOUSE COMPLETED  
 1985 - TUNNEL AT SPIRIT LAKE COMPLETED  
 1986 - HAMILTON ISLAND CLEANUP BEGINS  
 1986 - SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT  
 1989 - SEDIMENT RETENTION STRUCTURE COMPLETED WITH CLEAN-UP  
 1989 - ALASKA OIL SPILL, CORPS DREDGES ASSIST  
 1990 - WATER RESOURCES DEVELOPMENT ACT  
 1990 - NATIVE AMERICAN GRAVES AND REPATRIATION ACT  
 1991 - DISTRICT OFFICES MOVE TO NEW SITE AT RDP



COL GARY R. LORD  
1985-1988



COL CHARLES E. COWAN  
1988-1991



BONNEVILLE SECOND POWERHOUSE COMPLETION

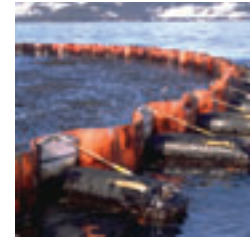


TBM BREAKING THROUGH THE SPIRIT LAKE TUNNEL



ARTIST SKETCH OF THE ROBERT DUNCAN PLAZA BUILDING, NEW OFFICE SPACE FOR THE PORTLAND DISTRICT

DREDGE YAQUINA REMOVING OIL FROM THE BAY IN ALASKA



MOUNT ST. HELENS SRS COMPLETED





1991 - SEVERAL SPECIES OF PACIFIC SALMON LISTED AS THREATENED AND ENDANGERED IN COLUMBIA RIVER BASIN

1992 - HAMILTON ISLAND LISTED AS A SUPERFUND SITE

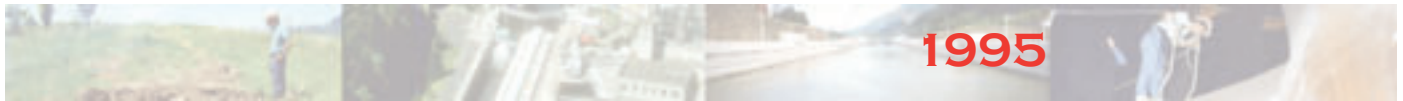
1993 - DREDGED MATERIAL LISTED AS A SUPERFUND SITE AUTHORIZED

1993 - BONNEVILLE NAVIGATION LOCK OPENS TO COMMERCIAL TRAFFIC

1994 - BONNEVILLE ORIGINAL POWERHOUSE REHABILITATION BEGINS

1995 - COLUMBIA RIVER CHANNEL DEEPENING STUDY INITIATED

1995 - HAMILTON ISLAND DELISTED AS A SUPERFUND SITE



1995



COL CHARLES A.W. HINES  
1991 - 1994



COL. TIMOTHY L. WOOD  
1994 - 1996

PACIFIC SALMON ON THE ENDANGERED SPECIES LIST



COHO



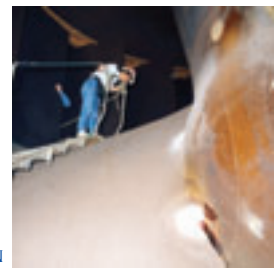
SOCKEYE



CHINOOK



HAMILTON ISLAND SUPERFUND SITE CLEANUP



BONNEVILLE POWERHOUSE REHABILITATION

BONNEVILLE NAVIGATION LOCK OPEN FOR TRAFFIC







# HISTORICAL TIMELINE

**1996** - RECORD RAINFALLS; WILLAMETTE FLOODS AND THREATENS PORTLAND

**1996** - WATER RESOURCES DEVELOPMENT ACT

**1997** - CORPS AND DEPARTMENT OF ENVIRONMENTAL QUALITY SIGN AGREEMENT PLACING BRADFORD ISLAND IN THE DEQ'S VOLUNTARY CLEANUP PROGRAM

**1999** - ADDITIONAL LISTINGS OF PACIFIC SALMON SPECIES AS THREATENED AND ENDANGERED

**1999** - WORK BEGINS ON AMAZON CREEK WETLANDS PROJECT

**2000** - EPA LISTS PORTLAND HARBOR ON WILLAMETTE RIVER, INCLUDING U.S. MOORINGS, AS SUPERFUND SITE



COL. ROBERT T. SLUSAR  
1996 - 1999



COL. RANDALL J. BUTLER  
1999 - 2002



FLOOD OF 1996

SALMON ADDED TO ENDANGERED SPECIES LIST



CHUM



STEELHEAD



US MOORINGS, PART OF THE SUPERFUND SITE



AMAZON CREEK WETLANDS PROJECT





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# FOREWORD

The U.S. Army Corps of Engineers has been a strong presence in the Pacific Northwest since 1871. The Portland District's influence in the region is explained in William F. Willingham's book, *Army Engineers and the Development of Oregon: A History of the Portland District U.S. Army Corps of Engineers* (1983). It is my pleasure to introduce this update to the history of the Portland District, focusing on the years 1980–2000.

*Currents of Change* highlights the District's work in the traditional missions of navigation and hydropower. It also illustrates the Corps' newer missions, including recreation, responding to emergencies, regulating wetlands, and environmental restoration, while describing how the District incorporated new technologies and maintained a skilled and dedicated workforce.

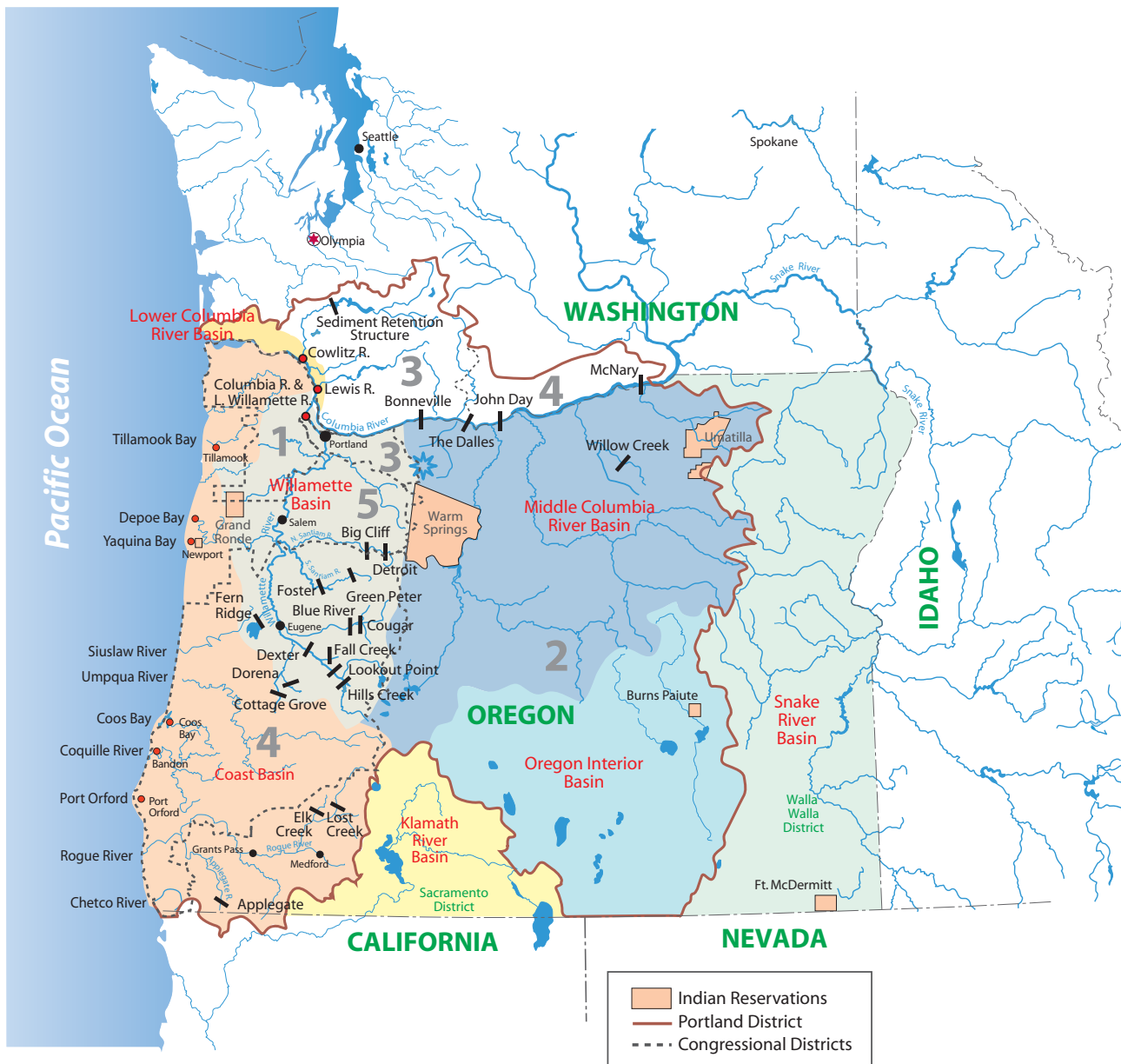
A century ago residents in the Pacific Northwest would have been astonished at the region's current focus on environmental issues. Our nation's values and priorities have changed considerably during the last 20 years, requiring new responses from Congress, policy makers, and federal agencies. *Currents of Change* demonstrates how the Portland District adapted to these rapid changes, while continuing to serve the region's residents and an increasing number and diversity of interests.

It is difficult to imagine a more exciting period in our District's history. The years 1980-2000 include several monumental events – including the eruption of Mount St. Helens and the listings of endangered salmon under the Endangered Species Act – developments that will shape the region for years to come. As *Currents of Change* shows, the Portland District remains a very important force in the region's history.

The employees of the Portland District have played an essential role – and this is their story. *Currents of Change* reminds us of all we have accomplished during the last 20 years, as we look forward to the possibilities and opportunities that lie ahead in the 21<sup>st</sup> century.

A handwritten signature in black ink that reads "Randall J. Butler". The signature is written in a cursive, flowing style.

RANDALL J. BUTLER  
COLONEL, U.S. ARMY CORPS OF ENGINEERS  
DISTRICT ENGINEER  
2002



# Portland District

US Army Corps  
of Engineers®  
Portland District





# INTRODUCTION

*“We’re at the cutting edge of so many environmental issues, dealing with hydropower, fish, and tribal and treaty rights.”*

*Colonel Eric T. Mogren, Deputy Division Engineer, Northwestern Division, 2001*

*“The rivers have made Portland.”*

*Carl Abbott, Greater Portland: Urban Life and Landscape in the Pacific Northwest, 2001*



## ENGINEERING IN THE ENVIRONMENTAL ERA

The story of the Portland District is closely linked to the rivers of Oregon and southwestern Washington. All of the U.S. Army Corps of Engineers' (Corps) districts have distinctive characters – and Portland's is shaped by its location in the Columbia River Basin, the largest river system in the West. As William F. Willingham demonstrated in his book, *Army Engineers and the Development of Oregon: A History of the Portland District U.S. Army Corps of Engineers* (1983), the Corps was instrumental in developing the early commerce of the Pacific Northwest, which depended heavily on the region's water routes. The Portland District, established in 1871, improved navigation on the Columbia and Willamette rivers during the late 19<sup>th</sup> century, allowing

for passage of ships and barges. The Corps also strengthened maritime commerce by building jetties along the coast and by dredging, often in areas where rivers emptied into the sea. In the 20<sup>th</sup> century, the agency's missions expanded to include flood control, irrigation, hydropower, and recreation, and the Portland District constructed large multipurpose dams along the Columbia River, as well as a series of smaller dams along the Willamette River. These projects provided inexpensive electricity, spurring industrial development and population growth in the Pacific Northwest through the end of the century. The following history continues the story presented in Willingham's book, focusing on the period 1980-2000.

While the District's work remained centered on the region's rivers and coastlines, new themes emerged during this period. These included a growing national concern for environmental protection, which influenced every aspect



of the District's work in the late 20<sup>th</sup> century. During the last three decades, some Americans came to appreciate the importance of ecosystems, biodiversity, and water quality in a way that differed considerably from the nation's earlier interest in conservation. The environmental movement resulted in a growing number of regulations as well as directives from Congress in the 1970s and 1980s, many of which affected the Corps. Although the agency continued to serve older missions – such as navigation, flood control, irrigation, and hydropower – its emphasis gradually shifted to new initiatives during the years 1980-2000.

By the late 20<sup>th</sup> century, the Corps had adopted an environmental mission, and the rivers and coastlines of Oregon and southwestern Washington had become the focus of the District's new environmental work. The nature of this work developed throughout the decades, as the Corps moved from an initial mere compliance with the new regulations to becoming actively engaged in the protection of water quality, restoration of wetlands, and cleanup of hazardous waste sites. In some instances, the District began looking to non-structural solutions to traditional problems such as flooding.

While the environmental movement influenced all districts in the Corps, the issues that it sparked became especially significant in Portland. The most visible of these involved the endangered salmon and steelhead populations that depended on rivers and streams located in the District. As protection of endangered species became a concern of increasing prominence, the District devoted considerable resources to researching and updating fish-passage facilities at its dams. Few issues proved more controversial or more profoundly affected operations at Corps dams. A myriad of competing interests converged here, including tribes, federal and state agencies, commercial and recreational fishers, barge operators, farmers, environmental groups, and



a growing number of industries and residents that demanded electricity. “We’re at the cutting edge of so many environmental issues,” observed Colonel Eric T. Mogren, Deputy Division Engineer of the Northwestern Division, “dealing with hydropower, fish, and tribal and treaty rights.”<sup>1</sup>

Colonel Mogren also pointed out that responding to environmental concerns brought a need for coordination among various interests, which quickly became a complex process. In his estimation, the Corps has been one of the leaders in collaboration and partnering with other agencies regarding environmental issues. “That’s what the Corps is,” he explained. “We are problem-solvers.” While historically the problems confronting the agency had been technical and structural in nature, recent “key environmental challenges facing the nation and the region” have required the engineers to adopt new approaches.<sup>2</sup>

In describing the District's distinctive personality, many employees during the late 20<sup>th</sup> century noted the strong influence of the environmental movement.<sup>3</sup> Western Oregon has long been associated with environmental values, and popular portrayals have depicted the region as a place of natural beauty, abundant wildlife, and advocacy for protection.<sup>4</sup> District personnel were affected by

their location – and many of them resided in Oregon and southwestern Washington by strong preference. “We live here as well as work here”, explained Davis Moriuchi, Deputy District Engineer for Project Management, noting his attachment to his community.<sup>5</sup>

## THE WATER RESOURCES DEVELOPMENT ACT OF 1986

The Water Resources Development Act of 1986 (WRDA-86) represented another significant trend affecting the District's work during the period 1980-2000. This legislation marked a major shift in the nation's attitude toward water resources planning. According to historian Martin Reuss, the statute directed non-federal interests to accept more of the financial and management burdens of water resources management and required water resources projects to have a sound economic basis. Furthermore, its passage reflected a widespread agreement that environmental considerations were integral to water resources planning.<sup>6</sup>

Although historically the federal government had responsibility for managing the nation's water resources, by the 1960s and 1970s that role had come under scrutiny.



During this period, Americans became increasingly skeptical toward the federal government, including the Corps. The public's suspicions were based on the belief that "the federal bureaucracy was bloated and inefficient, that ill-conceived government spending contributed to the nation's economic decline, that too much was being done at the national level, and, in the words of Ronald Reagan, that government was 'taxing away the American way of life.'" The public was also influenced by the growing environmental movement, and, for the first time, many Americans were more interested in the recreation and environmental components of water resources projects than in irrigation, navigation, or flood control.<sup>8</sup>

In 1976, President Jimmy Carter based his campaign, in part, on a commitment to challenging traditional water resources projects. Already in July 1975, his campaign office issued a press release stating his position that "the Army Corps of Engineers ought to get out of the dam building business." Carter declared, "I personally believe that we have built enough dams in this country and will be extremely reluctant as president to build any more." On a larger scale, he vowed to protect the natural environment, asserting that "the federal government can and must play a significant role in the preservation of natural areas and resources."<sup>9</sup> Following up on his campaign pledge, President Carter reviewed hundreds of federal water resource projects, producing a "hit list" of proposed dams.<sup>10</sup>

During this period, Corps leaders became anxious about the agency's future. Federal funding of large reservoir projects had peaked in the 1960s, and, whereas in the 19<sup>th</sup> century states and localities had sought financial assistance for water resources projects from the federal government, it was now the federal government that sought economic aid from non-federal interests. In 1984, for the first time in the agency's history, operation and maintenance expenditures exceeded construction expenditures.<sup>11</sup>

While attitudes toward large federal water projects were shifting, there was a simultaneous need to rehabilitate or replace an aging water resources infrastructure. By the mid-1970s the nation was faced with approximately 3,000 dams in need of repair, and many navigation locks were deteriorated or were too small for modern shipping. The challenge was to find a way to eliminate questionable projects while still responding to legitimate water resources needs.<sup>12</sup> "The Corps' personnel, water resources mission, and very existence were brought into question," Reuss explained. "The agency needed a water resources bill, and cost sharing was the key."<sup>13</sup>

Eventually, Congress passed a water resources bill. On November 17, 1986, President Ronald Reagan passed the first major water resources legislation since 1970 – the WRDA-86. While President Carter had addressed both the environmental and economic impact of federal water resource projects, Reagan was concerned with cutting federal spending. Reducing the federal budget was part of Reagan's effort to incorporate federalist values into American government. The concept of federalism, which dated back to the earliest days of the republic, was reconceived in the second half of the 20<sup>th</sup> century as "new federalism." According to historian Samuel Beer, Reagan's version of federalism sought to cut back the welfare state and to restore the free market.<sup>14</sup> As President Reagan, in his first inaugural address, stated, "Government is not the solution to our problem. Government is the problem."<sup>15</sup> Later in the address he added that it was his intent "to curb the size and the influence of the federal establishment and to demand recognition of the distinction between the powers granted to the federal government and those reserved to the states or to the people."<sup>16</sup>

Reagan's election to the presidency reflected, in part, the public's desire to see reduced taxes and government spending. During the 1980s, there was an increasing

emphasis on lowering the federal budget. The Corps was not immune to this trend, and the agency experienced considerable pressure to shrink its costs. It was during this period, for example, that the majority of the Corps' dredging work was transferred to private industry. The WRDA-86 was also part of the movement to decrease the federal government's costs.

The passage of the act had an immediate effect on the Corps' operations. Most significantly, the statute changed the funding of civil works projects. It established new cost-sharing requirements for the planning, construction, and operation and maintenance of projects for navigation, flood control, and other purposes. It also established national and local user fees, ensuring that non-federal interests would play a role in planning, financing, and maintaining water projects.<sup>17</sup>

The non-federal share of navigation project costs increased dramatically with WRDA-86. The act reflected a general agreement that non-federal interests – such as states, port authorities, commercial navigation companies, and local communities – should accept more of the financial and management burdens of projects. During the construction of navigation channels, for example, local interests were asked to pay from 10-50 percent of project costs, depending on the depth of the channel. To recover their share of the costs, the law allowed ports to levy port or harbor dues. In addition, non-federal sponsors were required to provide necessary lands, easements, rights-of-way, relocations, and dredged material disposal areas required for the project. WRDA-86 also authorized funding of specific modifications to the inland waterway system with one-half of the costs from the Inland Waterways Trust Fund. Furthermore, the statute imposed cost sharing on flood control projects. For the first time, local interests were required to contribute funds for reservoirs, levees, floodwalls, and channels, as the act mandated that they pay





at least 25 percent of the project's construction costs and 100 percent of the maintenance costs.<sup>18</sup>

WRDA-86 continued to de-emphasize the construction of federal water projects. Although work continued on projects authorized before passage of the act, Congress had authorized few new starts for Corps water resource projects in the 10-year period from 1976-1986. With the WRDA-86, Congress took a further step and deauthorized \$11.3 billion worth of Corps' projects. Although the act called for the study or construction of 270 new projects, it subjected them to the new cost sharing rules and to more rigorous mitigation requirements.<sup>19</sup>

Ten years after the passage of the WRDA-86, President Bill Clinton signed the Water Resources Development Act of 1996 (WRDA-96). This legislation authorized new studies and construction projects for the Corps, as well as changed existing laws. Overall, however, the act continued the trend toward reducing federal costs through a variety of arrangements. WRDA-96, for example, raised the contribution of non-federal sponsors of Corps' flood control and environmental restoration projects, from 25 to 35 percent. It also increased the use of private industry hopper dredges, by requiring the agency to set aside an additional one million cubic yards of material for private dredging companies.<sup>20</sup>

The passage of the WRDA-86 expressed a tension between those who believed that an adequate transportation system was a national responsibility benefiting the nation's entire economy, and those who insisted that beneficiaries and users should bear a substantial portion of a project's cost. Many hoped that the cost-sharing provisions of the bill would give the Corps a new credibility by making local and state interests weigh the costs and benefits of a project more carefully. "The cost-sharing formulas can't guarantee that every new water project will be worth the price," *The New York Times* suggested. "But they will force state and local interests to

weigh the costs against the benefits more conscientiously and to foot part of the bill for mistakes."<sup>21</sup> As Reuss pointed out, WRDA-86 challenged federal and non-federal interests as never before "to work together to develop projects that are economically, environmentally, and socially responsible."<sup>22</sup> This legislation brought a new context to the Portland District's work.

## CHANGES IN THE WORK ENVIRONMENT

By the 1980s, the era of large-scale water resources development had passed, and the Portland

District's focus had moved to smaller environmental projects. This shift in the nature of the agency's work was also reflected in the workplace. One significant trend during the late 20<sup>th</sup> century was an increasing business orientation among District personnel and a new approach to customers. "We became more cost conscious," recalled David Beach, Operations Manager, "and more aware of time commitments."<sup>23</sup> The adoption of project management was part of this process. Historically, Corps districts functioned on a "stovepipe" model, with projects passing from one area – planning, engineering, construction, operations – to the next, each with its own manager. Under that system, no







single person assumed responsibility for budgets or delivery schedules. To increase efficiency, the Corps adopted the model of a single project manager who oversaw each job from concept through completion, much like a business model from the private sector. This new approach emphasized teamwork, cost control, and timeliness – and it signaled a major change for many long-term employees accustomed to the older system.

In addition to changes in business practices, the Corps recognized the need for reorganization during the 1980s. Proceeding on a piecemeal basis, this process extended into the 1990s – and it affected the Portland District in a number of ways. As a result of division realignment, for example, the Portland District became part of the new Northwestern Division, much larger in size and scope than the older North Pacific Division. The

Portland District also closed some of its project and area offices during this period. While these changes demonstrated the Corps' longstanding ability to adapt to changing national and regional conditions, they affected the morale of District personnel.

An additional development included incorporation of new and rapidly changing technology, which proved to be a process with mixed results. Changes in technology affected the District's financial accounting systems and brought significant changes to the Engineering and Construction Division. Staffing and budgeting became increasing concerns, and like many businesses in the private sector, the District faced the challenge of recruiting and retaining new employees.

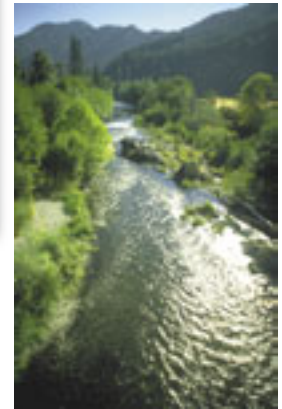
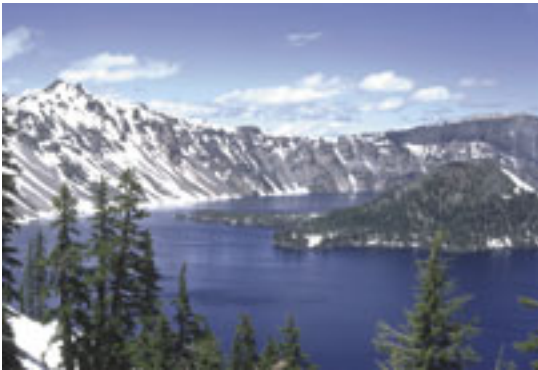
## THE GEOGRAPHY AND CLIMATE OF THE PORTLAND DISTRICT

The Portland District's boundaries cover 79,405 square miles in western and central Oregon and 8,740 square miles in southwestern Washington. The District encompasses five geographic regions: Coast Basin, Willamette Basin, Oregon Interior Basin, Middle Columbia River Basin, and Lower Columbia River Basin. This varied and complex landscape provides a unique set of challenges and opportunities for the District.

The first of these regions, the Coast Basin, draws thousands of visitors each year, who come for the scenery and recreational opportunities. This region encompasses a variety of natural features, including the watersheds



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of the Umpqua, Coquille, and Rogue rivers, as well as several short coastal streams. On the coast, visitors encounter Oregon's beaches, estuaries, and bays. Moving inland, they discover the ridges, peaks, and river valleys of the interior. This region of the Coast Basin is also home to several mountain chains. These range from the rugged, hilly Coast Range to the massive Klamath Mountains, which attain heights of 7,500 feet. The region's climate is varied; annual precipitation fluctuates from 60 inches on the coast to more than 100 inches on the slopes of the Coast Range. The population of the Coast Basin is unevenly distributed, with the majority of the area's residents making their home along the coast or in one of the basin's towns or cities. The basin's economy is closely tied to the region's natural resources; logging, farming, fishing, and recreation are the dominant industries.<sup>24</sup>

Home to approximately two-thirds of Oregon's population, the Willamette Basin is a heavily

populated region. It includes the eastern slope of the northern Coast Range, the Willamette Valley, and the western slope of the northern Cascade Range. Several natural features make this area attractive to residents. In the valley the moderate rainfall, mild temperatures, low elevations, gently undulating surfaces, and good soils are conducive to agriculture, and many types of crops are cultivated. Adding to the Basin's popularity, the valley is also a corridor that provides several transportation routes connecting Oregon with western Washington and California. Finally, both the Coast Range and the Cascades provide the valley with water, timber, and recreational opportunities.<sup>25</sup>

The Oregon Interior Basin is one of the driest parts of the state. Large areas of Harney County, for example, receive less than 10 inches of precipitation each year, and, with the exception of the higher elevations, the remainder of the region has less than 20 inches. While these lower areas are semiarid, the

higher elevations are subhumid and can support many types of trees. Due to its aridity, the region is more thinly populated than other parts of the state. Most of the people live in clusters, based on the availability of water.<sup>26</sup>

Uniting the last two regions – the Middle and Lower Columbia River Basins – is the mighty Columbia River. The Columbia is the nation's second largest river, in terms of water flow, and its largest producer of hydropower. It is also the location of some of the District's most visible projects, including John Day, The Dalles, and Bonneville dams. Beginning in the Canadian Rockies, this river flows a distance of 1,270 miles to the Pacific Ocean and drains 258,000 square miles. Although it became the focal point of controversy and contention in the late





20<sup>th</sup> century, geographically it served as a unifying element. “More than any other physical feature it knits the disparate elements in the Pacific Northwest together,” suggested historian Carlos Schwantes, “crossing desert, high plains, wheat fields, cattle ranges, and grassland as it threads its way between mountains to the sea.” Over time, that this river has been “a vital transportation link and highway of history, a source of irrigation water and hydroelectric power,” ...and dramatic "regional symbol.”<sup>27</sup>

The Middle Columbia River Basin encompasses a large section of the Columbia River, as well as lands both north and south of the river. The primary land use in the region is agriculture. The north side of the Columbia River supports one of the most productive fruit and vegetable

regions in the United States, while directly south of the river, in Oregon, wheat production dominates.<sup>28</sup> The area also includes sections of the Blue Mountains, which consist of many small mountain ranges or ridges with intervening plateaus, canyons, and basins. Land uses in the Blue Mountains vary with altitude and water supply. The basins and lower valleys are generally irrigated, with hay being the primary crop. The lower foothills are grazed or dry-farmed, often for wheat. Logging occurs in the ponderosa pine forests, while recreation is the major land use in the highest elevations. The Middle Columbia River Basin's climate is semiarid to subhumid, with the heaviest precipitation – about 20 inches – occurring on the lower slopes of the Cascade Range and the Blue Mountains. The least rainfall is

near the Columbia River, east of The Dalles, where the average is less than 10 inches.<sup>29</sup>

The Lower Columbia River Basin traces the Columbia River from east of Portland to its outlet in the Pacific Ocean. It also includes a small section of southwestern Washington and the Cascade Mountains. The region's forested slopes have made it home to a number of logging operations. While a good deal of the District's work focuses on the Columbia River, the Cascade Mountains have become one of the most prominent features of this region. The Cascades, which extend throughout much of Oregon and Washington, are volcanic in origin – a fact that was made prominent by the eruption of Mount St. Helens in 1980. The Cowlitz River, which originates on Mt. Rainier, drains an



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area of approximately 2,480 square miles. Included in the Cowlitz River Basin is the Toutle River Basin, which drains 512 square miles and received the major impact from the eruption.<sup>30</sup>

While the physical landscape dictates much of the Corps' work, the District is also influenced by its location in Portland. As the only major river port in the western United States, Portland's position proved to be a crucial component of its success. "The rivers have made Portland," noted Carl Abbott, a professor of urban studies at Portland State University.<sup>31</sup> Situated near the confluence of the Willamette and the Columbia rivers, this was "the city that gravity built."<sup>32</sup> In addition to being an integral part of the city's economic life, local rivers also contribute to Portlanders' sense of place. Residents visit Portland's rivers to bird-watch, fish, and hike. City festivals congregate on the banks of rivers, and undeveloped riverside land has become "cherished open space."<sup>33</sup>

The importance of rivers and other natural spaces to city residents hints at one of Portland's most prominent characteristics – its "creative cohabitation of country and city." Abbott described how the city's use of two very different emblems symbolized its character as a community. One was the blue heron, adopted as an official city

symbol in 1986. According to Abbott, "This graceful bird that thrives in the riverside marshes wending through the metropolis seemed a natural mascot to Mayor Bud Clark, who enjoyed early morning canoe trips along the Willamette River." The other emblem was a large copper statue of "Portlandia," which looks over the downtown bus mall and represents civic life and commerce. Thus, Portlanders cherish both their natural heritage as well as their urban accomplishments. Abbott asserts that, "this careful balance between environmentalism and urbanism introduces one of the several creative tensions that have shaped the character of Portland over the past generation."<sup>34</sup> Two additional icons associated with Portland

– Mount Hood and the rose – further demonstrate the blending of the wild and the cultivated in the city.<sup>35</sup>

An additional characteristic identified by Abbott was the "small-town feel" of Portland. While Seattle was "frantic, congested, and fast paced" – a "New York with coffee" – Portland remained "comfortable, low key, willing to take some time to enjoy its surroundings." Portland's downtown featured inviting public spaces and short, walkable blocks, preserving a "human scale."<sup>36</sup> Many Corps employees agreed with this assessment of Portland, adding that the relaxed atmosphere extended to the District. While the District maintained more than 1,000 employees during the period 1980-







2000, many described a close-knit atmosphere and camaraderie with their co-workers.<sup>37</sup>

This book explains how the District responded to the physical landscape of Oregon and southwestern Washington, and how its personnel adapted to new values and a changing work environment during the period 1980-2000. It is organized into seven chapters. The first of these describes Civil Works, explaining how the District's missions regarding hydropower, flood control, and recreation continued into the late 20<sup>th</sup> century. Chapter Two concerns the District's navigational mission, including its dredging activities and channel deepening projects. Chapter Three addresses the District's environmental and regulatory work, analyzing the incorporation of new values into the Corps' mission, while Chapter Four discusses endangered species issues, particularly salmon, and how they brought significant changes to the District and the region. The readiness component of the Corps' mission is examined in Chapter Five, which describes the District's extensive efforts in

the recovery following the Mount St. Helens eruption. This chapter also explores the District's response to the Alaska Oil Spill, Flood of 1996, and other disasters. Chapter Six details the considerable changes in the District's business practices and workplace, addressing the changing political environment, increased partnering and cost sharing, and Corps reorganization. This chapter also examines the District's leadership development programs and recruitment and retention programs. The final chapter discusses the District's adaptations to new technology.





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The Multnomah Building,  
Portland, OR.



The headquarters for the Portland District moved to One Oak Plaza from the Multnomah Building in 1991. The name of the new building was later changed to Robert Duncan Plaza.

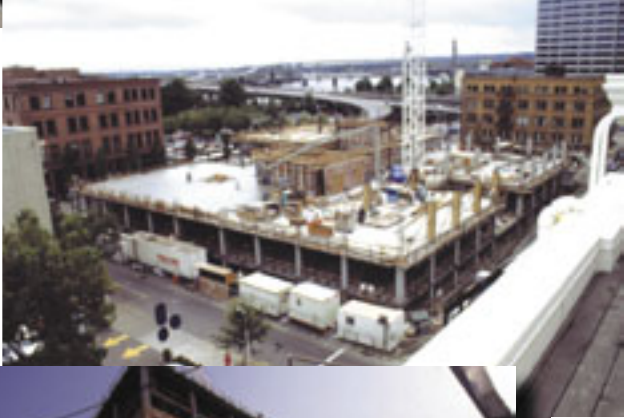




Artist's concept of the Robert Duncan Plaza building.



The construction of the Robert Duncan Plaza building, the new home for Portland District Corps of Engineers.





# ENDNOTES

<sup>1</sup> Col. Eric T. Mogren, Interview with Lisa Mighetto, Portland, Oregon, May 7, 2001. Hereafter cited as Mogren Interview.

<sup>2</sup> Mogren Interview.

<sup>3</sup> See, for example, Davis Moriuchi, Interview with Lisa Mighetto, Portland, Oregon, June 15, 2001 and Doug A. Clarke, Interview with Lisa Mighetto, Portland, Oregon, June 15, 2001.

<sup>4</sup> See, for example, Ernest Callenbach, *Ecotopia* (Berkeley: Banyan Tree Books, 1975).

<sup>5</sup> Davis Moriuchi, Interview with Lisa Mighetto, Portland, Oregon, June 15, 2001.

<sup>6</sup> Martin Reuss, *Reshaping National Water Politics: The Emergence of the Water Resources Development Act of 1986* (Fort Belvoir, VA: U.S. Army Corps of Engineers, Institute for Water Resources, 1991), p. 1.

<sup>7</sup> Martin Reuss, *Reshaping National Water Politics: The Emergence of the Water Resources Development Act of 1986* (Fort Belvoir, VA: U.S. Army Corps of Engineers, Institute for Water Resources, 1991), p. 37.

<sup>8</sup> Martin Reuss, *Reshaping National Water Politics: The Emergence of the Water Resources Development Act of 1986* (Fort Belvoir, VA: U.S. Army Corps of Engineers, Institute for Water Resources, 1991), pp. 35-36.

<sup>9</sup> Jeffery K. Stine, "Environmental Policy During the Carter Presidency," in *The Carter Presidency: Policy Choices in the Post-New Deal Era* (Lawrence, Kansas: University Press of Kansas, 1998), p. 182.

<sup>10</sup> Stine, *The Carter Presidency: Policy Choices in the Post-New Deal Era*, p. 187.

<sup>11</sup> Martin Reuss, *Reshaping National Water Politics: The Emergence of the Water Resources Development Act of 1986* (Fort Belvoir, VA: U.S. Army Corps of Engineers, Institute for Water Resources, 1991), pp. 30, 36-37, 46.

<sup>12</sup> Martin Reuss, *Reshaping National Water Politics: The Emergence of the Water Resources Development Act of 1986* (Fort Belvoir, VA: U.S. Army Corps of Engineers, Institute for Water Resources, 1991), pp. 38-39.

<sup>13</sup> Martin Reuss, *Reshaping National Water Politics: The Emergence of the Water Resources Development Act of 1986* (Fort Belvoir, VA: U.S. Army Corps of Engineers, Institute for Water Resources, 1991), p. 46.

<sup>14</sup> Samuel Beer in Timothy Conlan, *New Federalism: Intergovernmental Reform from Nixon to Reagan* (Washington, D.C.: The Brookings Institution, 1988), p. xiii.

<sup>15</sup> Timothy Conlan, *New Federalism: Intergovernmental Reform from Nixon to Reagan* (Washington, D.C.: The Brookings Institution, 1988), p. 1.

<sup>16</sup> Conlan, *New Federalism: Intergovernmental Reform from Nixon to Reagan*, p. 97.

<sup>17</sup> Martin Reuss, *Reshaping National Water Politics: The Emergence of the Water Resources Development Act of 1986* (Fort Belvoir, VA: U.S. Army Corps of Engineers, Institute for Water Resources, 1991), pp. 196-199.

<sup>18</sup> United States Department of Interior web site, accessed at <http://www.doi.gov/oepec/wetlands2/v2ch4.html>, on June 1, 2001.

<sup>19</sup> United States Department of Interior web site, accessed at <http://www.doi.gov/oepec/wetlands2/v2ch4.html>, on June 1, 2001.

<sup>20</sup> U.S. Army Corps of Engineers, Portland District, "President Signs 1996 Water Resources Development Act," October 21, 1996, News Release, accessed at <https://www.nwp.usace.army.mil/pa/info/wrda.html>, on June 1, 2001.

<sup>21</sup> *New York Times*, November 22, 1986, p. 30 as quoted in Martin Reuss, *Reshaping National Water Politics: The Emergence of the Water Resources Development Act of 1986* (Fort Belvoir, VA: U.S. Army Corps of Engineers, Institute for Water Resources, 1991), p. 199.

<sup>22</sup> Martin Reuss, *Reshaping National Water Politics: The Emergence of the Water Resources Development Act of 1986* (Fort Belvoir, VA: U.S. Army Corps of Engineers, Institute for Water Resources, 1991), p. 199.

<sup>23</sup> David C. Beach, Interview with Lisa Mighetto, Portland, Oregon, June 12, 2001. Hereafter cited as Beach Interview.

<sup>24</sup> Samuel N. Dicken and Emily F. Dicken, *Oregon Divided: A Regional Geography* (Portland, Oregon: Oregon Historical Society, 1982), pp. 16, 39, 77.

<sup>25</sup> Dicken, *Oregon Divided: A Regional Geography*, p. 42.

<sup>26</sup> Dicken, *Oregon Divided: A Regional Geography*, p. 133.





# ENDNOTES

<sup>27</sup> Carlos Arnaldo Schwantes, *The Pacific Northwest: An Interpretive History* (Lincoln, Nebraska: University of Nebraska Press, 1989), p. 13.

<sup>28</sup> *Virtual Atlas of the Pacific Northwest*, accessed at [http://www.evergreen.edu/user/virtatpnw/SUBRGNS/columbia/gorge\\_body.html](http://www.evergreen.edu/user/virtatpnw/SUBRGNS/columbia/gorge_body.html), on June 1, 2001.

<sup>29</sup> Dicken, *Oregon Divided: A Regional Geography*, pp. 98, 105, 115, 138.

<sup>30</sup> United States Geological Survey, accessed at [http://vulcan.wr.usgs.gov/Volcanoes/MSH/Hydrology/Drainages/Cowlitz/description\\_cowlitz.html](http://vulcan.wr.usgs.gov/Volcanoes/MSH/Hydrology/Drainages/Cowlitz/description_cowlitz.html), on June 1, 2001.

<sup>31</sup> Carl Abbott, *Greater Portland: Urban Life and Landscape in the Pacific Northwest* (Philadelphia: University of Pennsylvania Press, 2001), p. 29.

<sup>32</sup> Schwantes, *The Pacific Northwest: An Interpretive History*, p. 236.

<sup>33</sup> Abbott, *Greater Portland: Urban Life and Landscape in the Pacific Northwest*, p. 61.

<sup>34</sup> Abbott, *Greater Portland: Urban Life and Landscape in the Pacific Northwest*, p. 3.

<sup>35</sup> Abbott, *Greater Portland: Urban Life and Landscape in the Pacific Northwest*, p. 17.

<sup>36</sup> Abbott, *Greater Portland: Urban Life and Landscape in the Pacific Northwest*, p. 39.

<sup>37</sup> Beach Interview; Miguel Jiminez, Interview with Lisa Mighetto, Portland, Oregon, June 13, 2001; Diana C. Brimhall, Interview with Lisa Mighetto, Portland, Oregon, June 13, 2001.