

Research Department  
Federal Reserve  
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## Graying of the Northwest?

Mother Nature in the form of an unpredictable volcano may play a major role in shaping the economic future of the Pacific Northwest and its more than 7 million inhabitants. Human, plant and animal life in Washington, Oregon, Idaho and parts of Montana have all been affected to some degree by three major eruptions of Mount St. Helens between mid-May and mid-June. And no one can tell for certain when the volcano will cease its ash-spewing and mud-flowing activity. On one earlier occasion, the mountain came to life in 1832 and continued to erupt for 25 years.

The Portland-Vancouver area, 50 miles southwest of Mt. St. Helens, and Spokane, about 175 miles to the northeast, have been the principal urban centers affected by the powdery but abrasive gray ash. In contrast, the Northwest's largest metropolitan area, Seattle-Tacoma, has escaped with only a minor dusting.

Precise damage estimates are difficult to come by, but losses of timber and crops, plus cleanup costs, might yet approach \$3 billion. Even so, short-term damage to agriculture and to the health of residents living in the paths of the ash fallout hasn't been nearly as bad as originally forecast. The real questions arise about the long-term impact.

Private and public officials are worried about the disappearance of tourists and industrial jobs, budget drains on small communities unable to cope with large natural disasters, flood threats on pumice-clogged rivers, and the prolonged effects of continued eruptions on mechanical machinery and even on the quality of life.

### Industry and tourism

In the past decade, the Pacific Northwest's population has grown at a faster rate than the nation's. Clean air and water, beautiful mountains, and a fine climate all contributed to the

region's accelerated growth while it continued its successful transition from such cyclical activities as forest products and agriculture to a more diversified economy. This involved creating jobs in white-collar occupations, the wholesale and retail trades and light manufacturing, while reducing the number of agricultural workers. At the same time, international trade boomed in Pacific Basin markets, the aerospace industry rebounded from its 1970 low, and high-technology firms came flowing into the region.

The Northwest has had much success in recent years in attracting the high-technology software companies which require a clean, dust-free environment. By some estimates, the electronics industry could account for one out of every four new manufacturing jobs created in Oregon in coming years. But now, the area's attractiveness has been damaged because of the threat from Mount St. Helens—for example, with a major semiconductor manufacturer postponing plans to build a \$70-million plant employing 2,000 persons in Vancouver.

The region's ash showers, along with the nationwide recession, have triggered a falloff in the key tourist industry. Some resort areas report business as being 20 to 50 percent below that of last year, with some convention bookings cancelled heading into the busy summer season. Public and private agencies, however, have leaped into action to resuscitate the tourist industry. Governor Dixy Lee Ray of Washington has formed an emergency task force to design an "ash-free" advertising campaign. Washington, Oregon and Idaho are working through the Northwest Regional Commission to dispel the image of being covered by volcanic ash.

### Farm prospects

Agriculture, with its \$2.5-billion annual output in Washington, has been affected in

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varying degrees by the eruptions. Irrigation pumps in ash-silted rivers have been damaged, along with some harvesting machinery. About 15 to 20 percent of Washington's winter-wheat crop was flattened by the ash storms, and harvest time is approaching. In eastern Washington's wheat-growing areas, farmers are plowing the ash into their fallow summer fields despite warnings of possible wind erosion. Yet some farmers claim that the white sun-reflecting ash tends to keep the soil temperature down and thus preserves the moisture.

The prime apple-producing Yakima Valley, lying directly in the path of the initial ash fallout, originally appeared to have weathered the ashfall with minimal damage, but there have been alarming reports recently of excessive apple "drops." Yakima's apple crop this year may fall about 20 percent to 20 million bushels. The eruptions affected at least 10,000 of the state's 85,000 acres of apple trees, according to the chairman of the Washington State Apple Commission.

In contrast, Yakima Valley cherries are ripening and unaffected. Growers expect a cherry pick equal to last year's record crop. This is all to the good, because Japan has increased its order of fresh cherries from the Northwest by 33 percent this year.

On the transportation front, some worries had surfaced about the blockage of the Columbia River, the main conduit to foreign markets for many Northwest products, including 85 percent of Washington's wheat crop. The river had been blocked by mud slides after the first eruption, but the Army Corps of Engineers is now deepening the channel to Portland and other grain ports to allow passage of ships with a 36-foot draft. Meanwhile, most of the export-import activity on the river has been diverted to other ports. Army engineers estimate overall damage to major waterways at \$219 million. And a severe flood threat remains for the lower Cowlitz River, which joins the Columbia at Longview.

The fish industry was hit hard by the eruptions and mud flows. In the Toutle River, a prime steelhead stream near the volcano, all aquatic life was destroyed and recovery will take many years. In addition, salmon-spawning grounds were wiped out in the Toutle and Cowlitz rivers, with heavy impact on future runs. Approximately 70 million fingerling fish were destroyed in mudflows covering hatcheries on the Toutle River and its tributaries.

#### **Alfalfa, hops and timber**

The first cutting of alfalfa was hit heavily by the shower of ash, so that hay losses accounted for more than half of the agricultural damage in central Washington. Affected farmers are plowing under their damaged alfalfa crops, while other farmers farther away from the volcano are hoping to salvage something from the second and third cuttings. As dairymen and cattlemen scramble for an already short supply of feed, alfalfa is expected to rise to \$130 a ton, compared to an anticipated price of about \$100 a ton prior to the eruption.

Beer-drinkers also might be affected if the ash damages the region's small but important hop industry. Hops are leafy herbs growing on vines that give beer its distinctive taste. Washington state alone produces 72 percent of the hops used by the nation's brewers, and hop growers are anxiously waiting for the crop to mature to determine whether the ash has affected the herb's acid content.

Losses to the timber industry initially had been estimated at about \$500 million because of the two billion board feet of Douglas fir blown down by St. Helens' strongest blast. About half of the 44,000 acres of fallen timber is located in the Gifford Pinchot National Forest, and the remainder is owned by the state of Washington and Weyerhaeuser Company. However, the Department of Natural Resources believes that 85 to 90 percent of that timber can be salvaged, providing roads and bridges are restored to allow access to the devastated woodland. A big problem facing timber salvagers will be the effects of

ash on log-cutting machinery and tree-hauling vehicles.

#### **Finance and government**

Many financial institutions have seen their operations disrupted by the fine airborne ash. Following the first eruption, many banks near the mountain were forced to close for up to three days, or to curtail operating hours. Following the second eruption, the fine volcanic ash jammed many automated teller machines in eastern Washington and in the Portland area, causing damage to card readers, printers, magnetic stripes on cards and internal circuitry. Looking to the future, the Washington Banking Department is considering requiring financial institutions to provide for safekeeping of duplicate bank records, and to provide for temporary sharing of quarters in disaster areas.

The fine ash played havoc with many municipal sewage and water systems by clogging filters. As a precaution, new filters were installed over the air intakes of the Trojan nuclear plant near Rainier, Oregon, to forestall damage to that facility. The silt damage to municipal sewage and water-treatment plants created a major financial burden for some communities. "Many of the smaller communities in the path of the ashfall have really taken a bath," said a spokesman for Washington's Office of Financial Management. "Two to three years of their budgets are being used for cleanup, repairs and replacements of vital mechanical systems."

Reflecting this situation, many bond buyers have become wary about investing in the securities of communities affected by the eruptions. As a result, interest rates on such issues have risen one-quarter to one-half percentage point above normal levels. The eventual cost could be considerable, because each quarter-point rise means a \$1.5-million increase in interest paid on a \$30-million bond with a 25-year life.

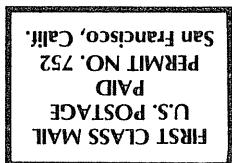
#### **Paying for the cleanup**

To help the Northwest dig out of the ash, the House Appropriations Committee has approved \$898 million in aid to the state of Washington, local governments and private enterprise. The Senate Appropriations Committee, chaired by Senator Warren G. Magnuson of Washington, is considering similar disaster funding. Magnuson has called the proposed appropriation "a down payment . . . a first installment."

While the disaster areas are still feeling the impact of the eruptions, rebuilding has begun. Substantial employment could be generated by cleanup activities, and restoration should generate considerable investment in some local economies. The ash itself may prove beneficial in improving soil quality in much of the affected farm area. There is even talk in Washington, D.C., of designating the devastated area around Mount St. Helens as a national park and "tourist attraction." At the same time, everyone is keeping an eye on Mount St. Helens and wondering in what future direction Mother Nature may tend to go.

A preliminary report of the "Oregon 2000" Commission in January 1979 has proved prophetic. "Long-term trends, plus the predictably unexpected, should warn us that we ought to be prepared for better coping with decline (whether prolonged and chronic or short-term and traumatic) . . . While describing the present is full of difficulties, predicting the future is an impossibility. Long-range forecasts only turn out to be accurate by accident. Most often predictions of the future are done by pretending things will continue into the future as they have behaved in the past. Usually, projections also assume there will be no major surprises—such as war, depression or earthquakes." To that, we can add volcanic eruptions.

**Ronald Supinski**



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### BANKING DATA—TWELFTH FEDERAL RESERVE DISTRICT (Dollar amounts in millions)

Selected Assets and Liabilities Large Commercial Banks	Amount Outstanding 6/11/80	Change from 6/4/80	Change from year ago	
			Dollar	Percent
Loans (gross, adjusted) and investments*	136,297	— 144	8,945	7.0
Loans (gross, adjusted) — total#	114,748	— 165	10,337	9.9
Commercial and industrial	32,893	51	2,035	6.6
Real estate	46,422	68	8,493	22.4
Loans to individuals	23,718	— 63	1,459	6.6
Securities loans	1,176	— 108	— 294	— 20.0
U.S. Treasury securities*	6,373	139	— 1,338	— 17.4
Other securities*	15,176	— 118	— 54	— 0.4
Demand deposits — total#	43,023	— 978	102	0.2
Demand deposits — adjusted	31,240	661	— 130	— 0.4
Savings deposits — total	27,183	146	— 2,831	— 9.4
Time deposits — total#	64,087	175	14,118	28.3
Individuals, part. & corp.	55,123	318	13,983	34.0
(Large negotiable CD's)	22,894	352	6,026	35.7
Weekly Averages of Daily Figures	Week ended 6/11/80	Week ended 6/4/80	Comparable year-ago period	
Member Bank Reserve Position				
Excess Reserves (+)/Deficiency (-)	110	82	7	
Borrowings	1	10	165	
Net free reserves (+)/Net borrowed(-)	109	72	— 159	

\* Excludes trading account securities.

# Includes items not shown separately.

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