

SUBJECT INDEX

- Acoustics, *see* BLAST - ACOUSTICS
- Aerial photography, *see* REMOTE SENSING
- Agriculture, *see* BIOLOGY - FLORA - AGRICULTURE
- Animals, *see* BIOLOGY - FAUNA
- AREAL GEOLOGY (BEFORE 1980)**
- ASHLEY, R. P.; EVARTS, R. C., 1980, Geology and ore deposits of the St. Helens mining district, Washington [abstract].
- BATEMAN, A. F., 1951, Geology of dam sites on Lewis River, Washington.
- GILE, KATHARINE, 1903, Mount St. Helens.
- HAMMOND, P. E., 1973, Preliminary geologic map of the southern Cascade Range.
- HAMMOND, P. E., 1975, Preliminary geologic map and cross-sections with emphasis on Quaternary volcanic rocks, southern Cascade Mountains, Washington.
- HAMMOND, P. E., 1977, Reconnaissance geologic map and cross-sections of southern Cascade Range, Washington, latitude 46 degrees 30 minutes - 47 degrees 15 minutes N., longitude 120 degrees 45 minutes - 122 degrees 22.5 minutes W., scale 1:125,000 [abstract].
- HAMMOND, P. E., 1980, Reconnaissance geologic map and cross sections of southern Washington Cascade Range, latitude 45 degrees 30 minutes - 47 degrees 15 minutes N., longitude 120 degrees 45 minutes - 122 degrees 22.5 minutes W.
- HOUGLAND, EVERETT, 1935, A report on a geologic reconnaissance of the St. Helens mining district, Washington.
- HUNTING, M. T.; BENNETT, W. A. G.; LIVINGSTON, V. E., JR.; MOEN, W. S., COMPILERS, 1961, Geologic map of Washington.
- HYDE, J. H., 1970, Geologic setting of Merrill Lake and evaluation of volcanic hazards in the Kalama River valley near Mount St. Helens, Washington.
- HYDE, J. H., 1973, Late Quaternary volcanic stratigraphy, south flank of Mount St. Helens, Washington.*
- LAWRENCE, D. B., 1939, Continuing research on the flora of Mt. St. Helens.
- LAURENCE, HERBERT, 1954, Geological history of Mount St. Helens.
- LAWRENCE, D. B., 1954, Diagrammatic history of the northeast slope of Mt. St. Helens, Washington.
- SCHRIENER, ALEXANDER, 1977, General geology and selected base metal distributions in the southern Cascade Range, Washington.
- VERHOOGEN, JEAN, 1936, Geology of Mount St. Helens, Washington.
- VERHOOGEN, JEAN, 1937, Mount St. Helens—A recent Cascade volcano.
- ZAPFFE, CARL, 1912, The geology of the St. Helens mining district of Washington.
- AREAL GEOLOGY (1980)**
- CRISWELL, C. W., 1984, Mount St. Helens—Intra-eruption geologic map from x-band radar, 1310 & 1350 HRS PDT, May 18, 1980.
- FRITZ, W. J.; FISK, L. H.; HARRISON, SYLVIA, 1982, Mount St. Helens road log—A visit to the lower Toutle and Cowlitz River drainages to observe the sedimentology, transported trees, and other effects of mudflows resulting from the eruptions of May 18, 1980, and March 19, 1982.
- LIPMAN, P. W.; MULLINEAUX, D. R., EDITORS, 1981, The 1980 eruptions of Mount St. Helens, Washington.
- AREAL GEOLOGY (POST 1980)**
- EVARTS, R. C.; ASHLEY, R. P., 1984, Preliminary geologic map of the Spirit Lake quadrangle, Washington.
- FRITZ, W. J.; FISK, L. H.; HARRISON, SYLVIA, 1982, Mount St. Helens road log—A visit to the lower Toutle and Cowlitz River drainages to observe the sedimentology, transported trees, and other effects of mudflows resulting from the eruptions of May 18, 1980, and March 19, 1982.
- STAHL, C. F., 1983, Area of Mt. Saint Helens—Site of 1983 campout.
- TILFORD, NORMAN; KENT, RICHARD, 1981, Mount St. Helens and the geology of Lewis and Toutle Rivers.
- Avalanches, *see* MASS MOVEMENTS - AVALANCHES AND LANDSLIDES

* Throughout the Subject Index, an asterisk indicates multiple publications and/or abstracts with this authorship and title; see Bibliography for the full list of citations.

BEAN CREEK

- MARTINSON, H. A.; FINNERAN, S. D.; TOPINKA, L. J., 1984, Changes in channel geomorphology of six eruption-affected tributaries of the Lewis River, 1980-82, Mount St. Helens, Washington.
- MARTINSON, H. A.; HAMMOND, H. E.; MAST, W. W.; MANGO, P. D., 1986, Channel geometry and hydrologic data for six eruption-affected tributaries of the Lewis River, Mount St. Helens, Washington, water years 1983-84.

BIBLIOGRAPHIES

- BROWN, G. W., JR., 1983, Mount St. Helens and volcanic action—A computerized bibliography; 3rd edition.
- HARNLY, C. D.; TYCKOSON, D. A., 1981, Mount St. Helens, the 1980 eruptions—A bibliography.
- HARNLY, C. D.; TYCKOSON, D. A., 1984, Mount St. Helens—An annotated bibliography.
- RIGBY, J. G., 1981, Bibliographies of the geology and volcanic hazards of the Cascade Range volcanoes of Washington and Mount Hood, Oregon.

BIOLOGY [GENERAL WORKS]

- BOLDING, DICK, 1981, Surviving the blast.
- COLINVAUX, P. A., 1984, The blessed event at Mt. St. Helens—A scientist's view.
- COVILLE, F. V., 1903, Youngest of the Cascade snow peaks.
- CRAWFORD, R. L., 1981, Outline of major biological conclusions from 1980-81 Mount St. Helens eruptions.
- DEL MORAL, ROGER, 1981, Life returns to Mount St. Helens.
- FRANZ, E. H., 1980, Transients associated with initiation of the nitrogen cycle on volcanic debris during colonization by the "soil crust" biota.
- FRUCHTER, J. S.; ROBERTSON, D. E.; EVANS, J. C.; OLSEN, K. B.; LEPEL, E. A.; LAUL, J. C.; ABEL, K. H.; SANDERS, R. W.; JACKSON, P. O.; WOGMAN, N. S., ET AL, 1980, Mount St. Helens ash from the 18 May 1980 eruption—Chemical, physical, mineralogical, and biological properties.
- MOODY, U. L., 1982, Distribution and characterization of tephra from the May 18, 1980, Mt. St. Helens eruption in northern Idaho and western Montana.
- REYNOLDS, G. D.; BLISS, L. C., 1986, Micro-environmental investigations of tephra covered surfaces at Mount St. Helens.

SNEVA, F. A.; BRITTON, C. M.; MAYLAND, H. F.; BUCKHOUSE, JOHN; EVANS, R. A.; YOUNG, J. A.; VAVRA, MARTIN, 1982, Mt. St. Helens ash—Considerations of its fallout on rangelands.

TAVES, D. R., 1980, Fluoride distribution and biological availability in the fallout from Mount St. Helens, 18 to 21 May 1980.

U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY, 1980, Wildlife and plant community impacts.

BIOLOGY - FAUNA

FOSTER, J. H.; MYERS, W. L., JR., 1982, Ashfall effects on Columbia Basin wildlife.

FOSTER, J. H.; MYERS, W. L., JR.; TILLETT, W. E., 1980, The effects of Mount St. Helens ash deposits on fish and wildlife in central Washington—A preliminary report.

KARLSTROM, E. L., 1986, Amphibian recovery in the North Fork Toutle River debris avalanche area of Mount St. Helens.

MYERS, W. L., JR.; FOSTER, J. H.; TILLETT, W. E., 1981, Observations on the Mount St. Helens ashfall and wildlife in the Columbia Basin, Washington.

PETERSON, S. R., 1980, Summary of discussion group meeting on wildlife and fish.

PRESTON, R. L., 1980, Results of research on volcanic ash in farm livestock.

PRESTON, R. L.; MCGINNIS, J.; KINCAID, R. L.; MURDOCK, F. R.; MCREYNOLDS, W. E.; KOES, R. M.; HEINEMANN, W. W., 1982, Results of research on Mount St. Helens volcanic ash in farm livestock.

SHAW, GARY, 1980, Upstream fisheries and wildlife.

STAUBER, ERIC, 1980, Short-term effects on birds and wildlife.

U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY, 1980, Poultry—Bees—Livestock.

VOORHIES, M. R., 1982, Impact of Miocene ashfalls on vertebrate life in the Great Plains—Ancient analogues of Mount St. Helens [abstract].

BIOLOGY - FAUNA - AQUATIC

BOEHLERT, G. W.; MORGAN, J. B.; YOKLAVICH, M. M., 1983, Effects of volcanic ash and estuarine sediment on the early life history stages of the Pacific herring, *Clupea harengus pallasi*.

- CAMPBELL, K. P.; JOHNSON, S. R.; WOLNIAKOWSKI, K. U., 1982, A pilot study of potential phenolic contamination of fishes in the Columbia River and tributaries in the vicinity of Mount St. Helens; final report.
- CRAWFORD, B. A., 1986, Recovery of game fish populations impacted by the May 18, 1980 eruption of Mount St. Helens; Part II, Recovery of surviving fish populations within the lakes in the Mount Saint Helens National Volcanic Monument and adjacent areas.
- CRAWFORD, B. A., 1986, The recovery of surviving fish populations within the Mount St. Helens National Volcanic Monument and adjacent area.
- CURL, H. C., JR., 1980, Downstream fisheries.
- DURKIN, TERRY, 1980, Downstream fisheries.
- EVANS, DALE, 1980, Downstream fisheries.
- FAULCONER, LEE; MONGILLO, PAUL, 1981, Effects of Mt. St. Helens ashfall on three trout streams and Fumping Lake in the Yakima Basin, Washington.
- FUSTE, L. A., 1981, Effects of the Mount St. Helens eruption on the benthic fauna of the Toutle River, Muddy River, and Pine Creek drainage basins, Washington.
- GAMBLING, M. S.; GRIFFITH, J. S.; PLATTS, W. S., 1986, Response of trout populations in the St. Joe River drainage, Idaho, to Mount St. Helens tephra.
- GIBSON, FLASH; HANEGAN, J. L., 1982, Mount St. Helens—Its affects [sic] on the invertebrates of a small eastern Washington pond [abstract].
- HORNIG, C. E., 1984, Effects of Mt. St. Helens ashfall on aquatic insects.
- KENDRA, W. R., 1983, Effects of volcanic ash on the composition, abundance, and vertical distribution of benthic macroinvertebrates in Chatcolet Lake, Idaho.
- KIRN, R. A.; LEDGERWOOD, R. D.; JENSEN, A. L., 1986, Diet of subyearling Chinook salmon (*Oncorhynchus tshawytscha*) in the Columbia River estuary and changes effected by the 1980 eruption of Mount St. Helens.
- LANG, B. Z., 1982, Molluscan populations in a meadow pond before and after Mount St. Helens ashfall [abstract].
- LUCAS, R. E., 1986, Recovery of game fish populations impacted by the May 18, 1980 eruption of Mount St. Helens.
- MARTIN, D. J.; WASSERMAN, L. J.; JONES, R. P.; SALO, E. O., 1982, Effects of the eruption of Mount St. Helens on salmon populations and habitat of the Toutle River.
- MARTIN, D. J.; WASSERMAN, L. J.; JONES, R. P.; SALO, E. O., 1984, Effects of Mount St. Helens eruption on salmon populations and habitat in the Toutle River.
- PHINNEY, D. E., 1980, Observations on the effects of the Mt. St. Helens eruption on salmon populations and salmon culture facilities.
- PHINNEY, D. E., 1982, General overview of the immediate and longer-term effects of Mount St. Helens on the salmon resources.
- PHINNEY, D. E., 1982, Overview of the effects of the Mount St. Helens eruption on salmon populations.
- REDDING, J. M.; SCHRECK, C. B., 1982, Mount St. Helens ash causes sublethal stress responses in steelhead trout.
- REES, WILLIAM, 1981, Mt. St. Helens and the fish.
- SMITH, M. A.; WHITE, M. J., 1985, Observations on lakes near Mount St. Helens—Phytoplankton.
- STOBER, Q. J.; DINNEL, P. A.; SALO, E. O., 1980, The effects of suspended volcanic sediment on salmon passage and survival [abstract].
- STOBER, Q. J.; ROSS, B. D.; MELBY, C. L.; DINNEL, P. A.; JAGIELO, T. H.; SALO, E. O., 1982, Effect of suspended volcanic sediment on coho and Chinook salmon in the Toutle and Cowlitz Rivers.
- STOBER, Q. J.; ROSS, B. D.; MELBY, C. L.; DINNEL, P. A.; SALO, E. O., 1982, The tolerance of Coho salmon to suspended volcanic sediment.
- WASSERMAN, L. J., 1984, Rearing potential for Coho salmon (*Oncorhynchus kisutch*) in streams affected by the eruption of Mount St. Helens.
- WILZBACH, PEGGY; DUDLEY, T. L.; HALL, J. D., 1983, Recovery patterns in stream communities impacted by the Mt. St. Helens eruption.
- BIOLOGY - FAUNA - TERRESTRIAL**
- ADAMS, A. B.; HINCKLEY, K. E.; HINZMAN, C.; LEFFLER, S. R., 1986, Recovery of small mammals in three habitats in the northwest sector of the Mount St. Helens National Volcanic Monument.
- ADAMS, A. B.; LEFFLER, SANFORD, 1986, Insect recolonization of the northwest sector of the Mount St. Helens blast zone.
- AKRE, R. D., 1980, Effects of volcanic ash on insects.
- AKRE, R. D.; HANSEN, L. D.; REED, H. C., 1982, Effects of Mount St. Helens ash on hymenoptera [abstract].
- EDWARDS, J. S., 1986, Arthropods as pioneers—Recolonization of the blast zone on Mt. St. Helens.

- EDWARDS, J. S.; CRAWFORD, R. L.; SUGG, P. M.; PETERSON, M. A., 1986, Arthropod recolonization in the blast zone of Mount St. Helens.
- HAYWARD, J. L., JR., 1982, Effects of nest habitat, behavior, and volcanic ash on reproductive success in ring-billed and California gulls.
- HAYWARD, J. L., JR.; MILLER, D. E.; HILL, C. R., 1982, Volcanic ash fallout—Its impact on breeding gulls.
- MERRILL, E. H.; RAEDEKE, J.; KNUTSON, K. L.; TABER, R. D., 1986, Elk recolonization and population dynamics in the northwest portion of the Mount St. Helens blast zone.
- REES, J. R., 1982, Impacts of volcanic ashfall on waterfowl production at Turnbull National Wildlife Refuge [abstract].
- SCOTT, D. R., 1980, [Effects of volcanic ash on insects].
- SUGG, P. M., 1986, Arthropod populations at Mount St. Helens—Survival and revival.
- U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY, 1980, Poultry—Bees—Livestock.
- U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY, 1980, Volcanic ash could reduce insect populations . . . temporarily.
- BIOLOGY - FLORA**
- ADAMS, V. D.; ADAMS, A. B., 1982, Initial recovery of the vegetation on Mount St. Helens.
- ANDERSEN, D. C.; MACMAHON, J. A., 1985, Plant succession following the Mount St. Helens volcanic eruption—Facilitation by a burrowing rodent, *Thomomys talpoides*.
- BOSWORTH, D. A.; MCCABE, TIM, 1980, The regrowth of Mount Saint Helens—Fighting the threat of erosion.
- BRAATNE, J. H.; CHAPIN, D. M., 1986, Comparative water relations of four subalpine plants at Mount St. Helens.
- CARPENTER, S. E.; TRAPPE, J. M.; HUNT, G. A., 1982, Observations on fungal succession on recent volcanic deposits of Mount St. Helens [abstract].
- CHAPIN, D. M.; BRAATNE, J. H., 1986, Nutrient relations of subalpine plants native to Mount St. Helens.
- COCHRAN, V. L.; BEZDICEK, D. F.; ELLIOTT, L. F.; PAPENDICK, R. I., 1983, The effect of Mount St. Helens' volcanic ash on plant growth and mineral uptake.
- CROSS, A. T.; TAGGART, R. E., 1986, Distribution of plant detritus in deposits of the May, 1980 eruption of Mt. St. Helens and possible correlatives in Miocene Succor Creek beds, Oregon and Idaho [abstract].
- DALE, V. H., 1986, Plant recovery on the debris avalanche at Mount St. Helens.
- DEL MORAL, ROGER, 1983, Initial recovery of subalpine vegetation on Mount St. Helens, Washington.
- DEL MORAL, ROGER; CLAMPITT, C. A., 1985, Growth of native plant species on recent volcanic substrates from Mount St. Helens.
- DEL MORAL, ROGER; WOOD, D. M., 1986, Subalpine vegetation recovery five years after the Mount St. Helens eruptions.
- FRENZEN, P. M.; MEANS, J. E.; FRANKLIN, J. F.; KILSGAARD, C. W.; MCKEE, W. A.; SWANSON, F. J., 1986, Five years of plant succession on eleven major surface types affected by the 1980 eruptions of Mount St. Helens, Washington [abstract].
- HARRIS, ELAINE, 1984, The effect of ashfall from the May 18, 1980 eruption of Mount St. Helens on cryptogams.
- KILSGAARD, C. W., 1983, Recovery of streamside riparian vegetation at Mount St. Helens [abstract].
- KILSGAARD, C. W.; GREENE, S. E.; STAFFORD, S. G.; MCKEE, W. A., 1986, Recovery of riparian vegetation in the northeastern region of Mount St. Helens.
- KLOCK, G. O., 1981, A first-year evaluation of the erosion control seeding and fertilization near Mount St. Helens.
- KLOCK, G. O., 1982, Stabilizing ash-covered timberlands with erosion control seeding and fertilization.
- LAWRENCE, D. B., 1939, Continuing research on the flora of Mt. St. Helens.
- MACK, R. N., 1981, Initial effects of ashfall from Mount St. Helens on vegetation in eastern Washington and adjacent Idaho.
- MACMAHON, J. A., 1982, Mount St. Helens revisited.
- MCKNIGHT, D. M.; FEDER, G. L.; STILES, E. A., 1981, Effects on a blue-green alga of leachates of ash from the May 18 eruption.
- MCKNIGHT, D. M.; FEDER, G. L.; STILES, E. A., 1981, Toxicity of Mount St. Helens ash leachate to a blue-green alga.
- MCKNIGHT, D. M.; FEDER, G. L.; STILES, E. A., 1981, Toxicity of volcanic-ash leachate to a blue-green alga—Results of a preliminary bioassay experiment.
- MEANS, J. E.; MCKEE, W. A.; MOIR, W. H.; FRANKLIN, J. F., 1982, Natural revegetation of the northeastern portion of the devastated area.
- PARKER, R. A.; GADDY, A. J., 1983, Some effects of volcanic ash on plankton productivity.

- POTTMEYER, J. A., 1984, The effect of Mt. St. Helens tephra on the water relations and growth of *Verbascum thapsus* L.
- RAINIER NATIONAL BANK ECONOMICS DEPARTMENT, 1980, The economic impact of the eruptions of Mount St. Helens on agriculture.
- RUSSELL, KENELM, 1986, Revegetation trials in a Mount St. Helens eruption debris flow.
- SIEGEL, B. Z.; SIEGEL, S. M., 1982, Mercury content of *Equisetum* plants around Mount St. Helens one year after the major eruption.
- SIEGEL, S. M.; SIEGEL, B. Z., 1984, Regional differences in plant-soil mercury relations in *Equisetum*, *Plantago* and *Taraxacum*.
- SIEGEL, B. Z.; SIEGEL, S. M.; HORSKY, S. J., 1984, *Equisetum* plants and the cycling of mercury at Mount St. Helens.
- SWEDBERG, K. C., 1982, Effects of Mt. St. Helens' ash on populations of winter annual plants [abstract].*
- SWEDBERG, K. C., 1986, Effects of Mount St. Helens ash on plant populations of shallow stony soils.
- ZOBEL, D. B.; ANTOS, J. A., 1984, Recovery of understory plants buried for three growing seasons beneath volcanic tephra [abstract].
- #### BIOLOGY - FLORA - AGRICULTURE
- BOYD, L. L., 1980, Agricultural impacts discussion.
- COOK, R. J., 1980, Influence of the eruption of Mt. St. Helens on wheat diseases.
- COOK, R. J.; BARRON, J. C.; PAPENDICK, R. I.; WILLIAMS, G. J., III, 1981, Impact on agriculture of the Mount St. Helens eruptions.
- GOUGH, L. P.; PEARD, J. L., 1982, Effect of ash on wheat crops [abstract].
- GOUGH, L. P.; SEVERSON, R. C.; LICHTE, F. E.; PEARD, J. L.; TUTTLE, M. L.; PAPP, C. S. E.; HARMS, T. F.; SMITH, K. S., 1981, Ash-fall effects on the chemistry of wheat and the Ritzville soil series, eastern Washington.
- GOUGH, L. P.; SHACKLETTE, H. T.; PEARD, J. L.; PAPP, C. S. E., 1986, The chemistry of fruits and vegetables, Yakima River Valley, Washington, and the influence of the 1980 Mount St. Helens ash-fall episodes.
- LYONS, J. V., 1986, Agricultural impact and adjustment to the Mount St. Helens ashfall—Search for analogs.
- NUTT, G. W., 1980, Agriculture.
- RADWAN, M. A.; CAMPBELL, D. L., 1981, Mount St. Helens ash and mud—Chemical properties and effects on germination and establishment of trees and wildlife browse plants.
- U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY, 1980, Foodstuffs and volcanic ashfall.
- U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY, 1980, Volcanic ash advice to berry growers.
- #### BIOLOGY - FLORA - FORESTRY
- ANTOS, J. A.; ZOBEL, D. B., 1982, Snowpack modification of volcanic tephra effects on forest understory plants near Mount St. Helens.
- FRENZEN, P. M.; FRANKLIN, J. F., 1985, Establishment of conifers from seed on tephra deposited by the 1980 eruptions of Mount St. Helens, Washington.
- LAWRENCE, D. B., 1938, Trees on the march.
- MARTINSON, S. R., 1986, Differences in response to volcanic ashfall among Douglas-fir seedlings at genetic test plantations in western Washington.
- PRUITT, J. R.; EDGREN, JIM; HAMNER, BOB; HAUGEN, GORDON; HOWES, STEVE; PATTERSON, PETE; STEWARD, JOHN; SWANK, JERRY, 1980, Mount St. Helens emergency watershed rehabilitation report.
- PRUITT, J. R.; EDGREN, JIM; HAMNER, BOB; HAUGEN, GORDON; HOWES, STEVE; STEWARD, JOHN; SWANK, JERRY, 1981, Mount St. Helens emergency watershed rehabilitation report—1981 follow-up.
- ST. HELENS FOREST LANDS RESEARCH COOPERATIVE, 1980, Minutes of the Technical Needs Workshop, September 4 and 5, 1980, Tyee Motor Inn, Olympia, Washington.
- SLONIKER, E. V., 1986, Mount St. Helens volcano reforestation—May 18, 1980 to present.
- SNELL, J. A. K.; MAX, T. A.; SNELLGROVE, T. A., 1982, Breakage of timber and quantity of woody material damaged by eruption of Mount St. Helens.
- SNELLGROVE, T. A.; SNELL, J. A. K.; MAX, T. A., 1983, Damage to national forest timber on Mount St. Helens.
- TUCKER, D. G., 1980, Forestry.
- WINJUM, J. K., 1980, Revegetation of forest lands devastated by the eruption of Mount St. Helens [abstract].
- WINJUM, J. K., 1982, Mount St. Helens, 1980—The May eruptions and forest productivity [abstract].
- WINJUM, J. K., 1986, The western blast zone of Mount St. Helens—Forest recovery after five years [abstract].

WINJUM, J. K.; KEATLEY, J. E.; STEVENS, R. G.; GUTZWILER, J. R., 1986, Regenerating the blast zone of Mount St. Helens.

WINNER, W. E.; CASADEVALL, T. J., 1981, Fir leaves as thermometers during the May 18 eruption.

WINNER, W. E.; CASADEVALL, T. J., 1983, The effects of the Mount St. Helens eruption cloud on fir (*Abies* sp.) needle cuticles—Analysis with scanning electron microscopy.

BLAST

BOGOYAVLENSKAYA, G. E.; BRAITSEVA, O. A.; MELEKESTSEV, I. V.; KIRIYANOV, V. Y.; MILLER, C. DAN, 1985, Catastrophic eruptions of the directed-blast type at Mount St. Helens, Bezymianny and Shiveluch volcanoes.

CRANDELL, D. R.; HOBLITT, R. P., 1986, Lateral blasts at Mount St. Helens and hazard zonation.

EICHELBERGER, J. C.; HAYES, D. B., 1982, Magmatic model for the Mount St. Helens blast of May 18, 1980.

FISHER, R. V., 1986, Mt. St. Helens blast eruption.

GLICKEN, H. X.; FISHER, R. V., 1984, Interaction between the rockslide-debris avalanche and the lateral blast at Mount St. Helens, Washington [abstract].

HAMMOND, P. E., 1980, Mt. St. Helens blasts 400 m off its peak.

HAYES, D. B.; EICHELBERGER, J. C., 1981, Magmatic model for the Mt. St. Helens blast of May 18, 1980 [abstract].

HICKSON, C. J.; BARNES, W. C., 1986, The directed blast at Mount St. Helens, May 18, 1980—Surge or flow?

KIEFFER, S. W., 1980, The May 18 lateral "blast" at Mt. St. Helens—Preliminary mapping of effects in the devastated area and a model for multiphase fluid flow [abstract].

KIEFFER, S. W., 1981, Blast dynamics at Mount St. Helens on 18 May 1980.

KIEFFER, S. W., 1981, The blast at Mount St. Helens—What happened?

KIEFFER, S. W., 1981, Fluid dynamics of the May 18 blast at Mount St. Helens.

KIEFFER, S. W., 1981, The lateral blast of May 18 at Mount St. Helens—What happened? (and, did it happen at Bandai-san (1888), Lassen (1915), Bezymianny (1956), . . . , or Fuji-yama (1707)?) [abstract].

RICE, ALAN, 1985, The mechanism of the Mt. St. Helens eruption and speculations regarding Soret effects in planetary dynamics.

RICE, ALAN, 1986, Quench supersaturation and volcanic eruptions [abstract].

SISSON, T. W., 1982, Sedimentary characteristics of the airfall deposit produced by the major pyroclastic surge of May 18, 1980 at Mount St. Helens, Washington.

VORTMAN, L. J., 1980, Deduced physical characteristics of the May 18, 1980, eruption [abstract].

BLAST - ACOUSTICS

BANISTER, J. R., 1980, Calculation of the Mount St. Helens pressure wave [abstract].

BANISTER, J. R., 1984, Pressure wave generated by the Mount St. Helens eruption.

BATH, MARKUS, 1982, Atmospheric waves from Mount St. Helens.

BOLT, B. A.; TANIMOTO, TOSHIRO, 1981, Atmospheric oscillations after the May 18, 1980 eruption of Mount St. Helens.

DEWEY, J. M., 1985, The propagation of sound from the eruption of Mt. St. Helens on 18 May 1980.

DONN, W. L.; BALACHANDRAN, N. K., 1981, Mount St. Helens eruption of 18 May 1980—Air waves and explosive yield.

EISSLER, H. K.; KANAMORI, HIROO; HARKRIDER, DAVID, 1983, Air waves excited by explosive volcanic eruptions [abstract].

FAIRFIELD, C. M., 1980, OMSI Sound project—The acoustic effects of the Mount St. Helens eruption on May 18, 1980.

FAIRFIELD, C. M., 1982, The acoustic effects of the eruption of Mount St. Helens May 18, 1980.

KIEFFER, S. W., 1981, Mount St. Helens lateral blast—Explanation of acoustic observations [abstract].

KIEFFER, S. W., 1984, Acoustics of the May 18, 1980, lateral blast, Mount St. Helens [abstract].

LAWSON, JIM, 1980, Oklahoma observations of effects of May 18, 1980, eruption of Mount St. Helens.

MIKUMO, TAKESHI; BOLT, B. A., 1985, Excitation mechanism of atmospheric pressure waves from the Mount St. Helens eruption.*

OGAWA, TADAHIKO; KUMAGAI, HIROSHI; SINNO, KENJI, 1982, Ionospheric disturbances over Japan due to the 18 May 1980 eruption of Mount St. Helens.

REED, J. W., 1980, Air pressure waves from Mt. St. Helens eruptions [abstract].

RITSEMA, A. R., 1980, Observations of Mount St. Helens.

RITSEMA, A. R., 1983, Atmospheric pressure wave of Mount St. Helens eruption.

SAWADA, YOSHIHIRO; WAKUI, SENICHIRO; KOMIYA, MANABU, 1982, Atmospheric pressure waves generated by the May 18, 1980 eruption of Mount St. Helens.

Blast - Biological effects, *see* BIOLOGY

Blast - Deposits,

see

MASS MOVEMENTS - AVALANCHES AND LANDSLIDES

MASS MOVEMENTS - LAHARS AND MUDFLOWS

PYROCLASTIC FLOWS AND DEPOSITS

BLAST - THERMAL SURVEYS

BANKS, N. G.; CUTTER, B. E., 1981, Temperature estimates of the 1980 directed blast of Mount St. Helens, Washington, U.S.A., from thermal effects on trees and buried wood [abstract].

DAVIS, M. J.; GRAEBER, E. J.; HARRAH, L. A.; HAYES, D. B., 1980, Temperature estimates of May 18 eruption of Mount St. Helens made from observations of material response [abstract].

WINNER, W. E.; CASADEVALL, T. J., 1981, Fir leaves as thermometers during the May 18 eruption.

Botany, *see* BIOLOGY - FAUNA

BULGE

LIPMAN, P. W.; MOORE, J. G.; SWANSON, D. A., 1980, Bulging of the north flank of Mount St. Helens volcano before the 5/18 eruption—Geodetic data [abstract].

LIPMAN, P. W.; MOORE, J. G.; SWANSON, D. A., 1981, Bulging of the north flank before the May 18 eruption—Geodetic data.

BULL RUN WATERSHED

SHULTERS, M. V.; CLIFTON, D. G., 1980, Mount St. Helens ash fall in the Bull Run watershed, Oregon, March-April 1980.

SHULTERS, M. V.; CLIFTON, D. G., 1980, Mount St. Helens ash fall in the Bull Run watershed, Oregon, May-June 1980.

SHULTERS, M. V.; CLIFTON, D. G., 1981, Mount St. Helens volcanic-ash fall in the Bull Run watershed, Oregon, March-June 1980.*

Bumping Lake, *see* LAKES - BUMPING LAKE

Carbon dating, *see* GEOCHRONOLOGY

CASTLE CREEK

MCKNIGHT, D. M.; KLEIN, J. M.; WISSMAR, R. C., 1984, Changes in the organic material in lakes in the blast zone of Mount St. Helens, Washington.

MEYER, WILLIAM; SABOL, M. A.; GLICKEN, H. X.; VOIGHT, BARRY, 1985, The effects of ground water, slope stability, and seismic hazard on the stability of the South Fork Castle Creek blockage in the Mount St. Helens area, Washington.*

Castle Creek Lake,

see

LAKES - SOUTH FORK CASTLE CREEK LAKE

LAKES - WEST CASTLE CREEK LAKE

CASTLE ROCK, WASH.

PUBLIC WORKS, 1981, Submersible pumps help quell damage from Mt. St. Helens mudflow.

CAVES

BIRDSSL, MURA, 1980, Ape Cave.

BLOCK, ED; BLOCK, KATHY, 1980, A post-eruptive trip to Ape Cave and vicinity.

GREELEY, RONALD; HYDE, J. H., 1970, Lava tubes of Mount St. Helens, Washington [abstract].

GREELEY, RONALD; HYDE, J. H., 1972, Lava tubes of the cave basalt, Mount St. Helens, Washington.*

HALLIDAY, W. R., 1963, Features and significance of the Mount Saint Helens cave area.*

HALLIDAY, W. R., 1980, Initial 1980 post-eruption reconnaissance of the Mt. St. Helens cave area.

HALLIDAY, W. R., 1980, The Mount St. Helens cave area since the eruption—The first speleological visits.

HALLIDAY, W. R., 1980, Mount St. Helens in the ash—June, 1980.

HALLIDAY, W. R., 1980, Post-eruptive mudflow impact on the Mount St. Helens caves, Washington.

HALLIDAY, W. R., 1981, Additional speleological studies at Mount St. Helens, Washington, May 1981.

HALLIDAY, W. R., 1981, August 1981 Mount St. Helens cave studies.

HALLIDAY, W. R., 1981, Further observations of the effects of post-eruption phenomena on caves of Mount St. Helens, Washington.

HALLIDAY, W. R., 1981, Further studies in the Mount St. Helens caves—March 7 and 8, 1981.

- HALLIDAY, W. R., 1981, Impact of 1980 eruptions on the Mount St. Helens caves.
- HALLIDAY, W. R., 1981, Impact of post-eruptive mudflows on caves of the Cave Basalt Lava Flow, Mount St. Helens, Washington [abstract].
- HALLIDAY, W. R., 1981, The 1980 eruptions of Mount St. Helens—Spelean effects.
- HALLIDAY, W. R., 1981, November at Mt. St. Helens.
- HALLIDAY, W. R., 1981, November 1981 at Mount St. Helens.
- HALLIDAY, W. R., 1981, St. Helens—Observations January 10-11.
- HALLIDAY, W. R., 1982, Caves of Mount St. Helens and the impacts of the 1980 eruptions [abstract].*
- HALLIDAY, W. R., 1982, Impact of posteruption mudflows on the caves of the Cave Basalt Lava Flow of Mount St. Helens.
- HALLIDAY, W. R., 1982, Mount St. Helens, October 1982.*
- HALLIDAY, W. R., 1982, Mount St. Helens update.
- HALLIDAY, W. R., 1982, Recent studies on Mt. St. Helens.
- HALLIDAY, W. R., 1982, Risk assessment and risk acceptance on the Cave Basalt Lava Flow, Mount St. Helens, Washington.
- HALLIDAY, W. R., 1983, Ape Cave and the Mount St. Helens apes.
- HALLIDAY, W. R., 1983, Buried glacial ice and other complexities found in the Spirit Lake pseudokarst, Mount St. Helens, Washington.*
- HALLIDAY, W. R., 1983, Further observations on the Spirit Lake pseudokarst.*
- HALLIDAY, W. R., 1983, Mount St. Helens caves—December 5, 1982.
- HALLIDAY, W. R., 1983, Pseudokarst in the May 18, 1980, debris/pyroclastic flow of Mount St. Helens, Washington—Initial reconnaissances [abstract].
- HALLIDAY, W. R., 1983, Report of the NSS Mount St. Helens conservation task force for 1982.
- HALLIDAY, W. R., 1986, Caves and other pseudokarstic features of Mount St. Helens—1980-1985 observations.
- HYDE, J. H.; GREELEY, RONALD, 1971, Phreatic explosion in a lava tube [abstract].
- HYDE, J. H.; GREELEY, RONALD, 1973, Geological field trip guide, Mount St. Helens lava tubes, Washington.
- MAZAMA, 1903, The lava caves of St. Helens.
- MCLELLAN, P. M., 1952, Mount St. Helens cave.
- SCHMINKY, H. B., 1955, Trip to Lewis River and the lava tunnel.*
- SENGER, C. M., 1980, Observations on the cave basalt lava flow, Mt. St. Helens, 23-24 August 1980.
- SENGER, C. M., 1982, Mount St. Helens wanderings.
- U.S. FOREST SERVICE GIFFORD PINCHOT NATIONAL FOREST, [1979], A guide to the Mt. St. Helens lava caves area.
- Channel morphology, *see* RIVER MORPHOLOGY
- CHRONOLOGY AND HISTORY BEFORE 1980
- see also* GEOCHRONOLOGY
- BUZZETTI, BEATRICE, 1980, Historical and legendary information on the Mount St. Helens area.
- COOMBS, H. A., 1960, Catalogue of the active volcanoes and solfatara fields of the United States of America—Mt. St. Helens.
- CRANDELL, D. R., 1981, Pre-1980 eruptions of Mount St. Helens, Washington [abstract].
- DILLER, J. S., 1899, Latest volcanic eruptions on the Pacific coast.
- DRYER, T. J., 1980, First ascent of Mount St. Helens—The Dryer Party of 1853.
- FOLSON, M. M., 1970, Volcanic eruptions—The Pioneers' attitude on the Pacific coast from 1800 to 1875.
- HARRIS, S. L., 1980, Fire and ice—The Cascade volcanoes; revised edition.*
- HARRIS, S. L., 1986, The other Cascade volcanoes—Historic eruptions at Mount St. Helens' sister peaks.
- HOBLITT, R. P.; CRANDELL, D. R.; MULLINEAUX, D. R., 1980, Mount St. Helens eruptive behavior during the past 1,500 yr.
- HOPSON, C. A., 1971, Eruptive sequence at Mount St. Helens, Washington [abstract].
- HOPSON, C. A.; MELSON, W. G., 1980, Mount St. Helens eruptive cycles since 100 A.D. [abstract].
- HOPSON, C. A.; MELSON, W. G., 1984, Eruption cycles and plug-domes at Mount St. Helens [abstract].
- HYDE, J. H.; CRANDELL, D. R., 1972, Potential volcanic hazards near Mount St. Helens in southwestern Washington [abstract].
- JILLSON, W. R., 1917, The volcanic activity of Mount St. Helens and Mount Hood in historical time.
- KIVER, E. P., 1982, The Cascade volcanoes—Comparison of geologic and historic records.

- LAURENCE, HERBERT, 1954, Geological history of Mount St. Helens.
- MAJORS, H. M., 1980, Mount St. Helens series.*
- MAJORS, H. M.; MCCOLLUM, R. C., EDITORS, 1981, Mount St. Helens—The 1831 and 1835 eruptions.
- MAJORS, H. M.; MCCOLLUM, R. C., EDITORS, 1981, Mount St. Helens—The 1844-1857 eruptions.
- MULLINEAUX, D. R.; CRANDELL, D. R., 1981, The eruptive history of Mount St. Helens.
- MULLINEAUX, D. R.; HOBLITT, R. P.; CRANDELL, D. R., 1982, Studies of prehistoric activity [abstract].
- NELSON, C. M., 1980, Mt. St. Helens before May 18.
- SCHMINCKY, BRUCE, 1954, Records of eruptions of Mount St. Helens.
- STRONG, EMORY, 1969, Early accounts of the eruption of Mt. St. Helens.
- SWANSON, D. A., 1982, Volcanic studies in the Pacific Northwest, 1879-1979.

CHRONOLOGY OF THE 1980 ERUPTION ACTIVITY

- BEALS, H. K.; CLINE, SCOTT; KOLER, J. M., 1981, On the mountain's brink—A Forest Service history of the 1980 Mount St. Helens volcanic emergency.
- BOGOYAVLENSKAYA, G. E.; BRAITSEVA, O. A.; MELEKESTSEV, I. V.; KIRIYANOV, V. Y.; MILLER, C. DAN, 1985, Catastrophic eruptions of the directed-blast type at Mount St. Helens, Bezymianny and Shiveluch volcanoes.
- BURGER, R. W.; LANGSTON, C. A., 1985, Source mechanism of the May 18, 1980, Mount St. Helens eruption from regional surface waves.
- CHRISTIANSEN, R. L., 1980, The 1980 eruption of Mt. St. Helens—A summary of events and scientific findings [abstract].
- CHRISTIANSEN, R. L.; PETERSON, D. W., 1981, Chronology of the 1980 activity of Mount St. Helens, Washington [abstract].*
- CHRISTIANSEN, R. L.; PETERSON, D. W., 1981, Chronology of the 1980 eruptive activity.
- CHRISTIANSEN, R. L.; PETERSON, D. W., 1981, The 1980-81 activity and some results of monitoring and research at Mount St. Helens, U.S.A. [abstract].
- CRISWELL, C. W., 1983, Chronology, morphology and stratigraphy of pumiceous pyroclastic-flow deposits (ignimbrite) from Mount St. Helens on May 18, 1980 [abstract].
- CUMMANS, JOHN, 1981, Chronology of mudflows in the South Fork and North Fork Toutle River following the May 18 eruption.
- FOXWORTHY, B. L.; HILL, MARY, 1982, Volcanic eruptions of 1980 at Mount St. Helens—The first 100 days.
- HAMMOND, P. E., 1980, Mount Saint Helens box score—20 March to 20 April, 1980.
- HAMMOND, P. E., 1980, Mount Saint Helens box score—20 April to 19 May, 1980.
- HAMMOND, P. E., 1980, Mt. St. Helens update from Portland State University, Portland, Oregon.
- KELSO, LINDA; SHANGLE, R. D., 1980, Volcano—First seventy days, Mount St. Helens, 1980.
- KOROSEC, M. A., 1980, Mount St. Helens, May 18-19, 1980—A scenario.
- KOROSEC, M. A.; RIGBY, J. G.; STOFFEL, K. L., 1980, The 1980 eruption of Mount St. Helens, Washington; Part 1, March 20-May 19, 1980.
- MOORE, J. G.; RICE, C. J., 1981, Chronology and character of Mt. St. Helens explosive eruptive phase of May 18, 1980 [abstract].
- MOORE, J. G.; RICE, C. J., 1984, Chronology and character of the May 18, 1980, explosive eruptions of Mount St. Helens.
- PETERSON, D. W., 1981, An overview of activity at Mount St. Helens, Washington, since May 1980 [abstract].
- PETERSON, D. W., 1986, Mount St. Helens and the science of volcanology—A five year perspective.
- PETERSON, D. W., 1986, Summary of Mt. St. Helens activity, 1980-1986.
- RIGBY, J. G.; KOROSEC, M. A., 1980, Sequence of volcanic activity of Mount St. Helens, March 20-June 23, 1980.
- RONNHOLM, KEITH, 1981, Photographic documentation of the eruption of Mt. St. Helens, 8:32 am, May 18, 1980 [abstract].
- SMITHSONIAN INSTITUTION SCIENTIFIC EVENT ALERT NETWORK, 1980-1986, Mt. St. Helens volcano.
- TILLING, R. I., 1984, Eruptions of Mount St. Helens—Past, present, and future.
- TUREKIAN, K. K., 1982, The use of natural radionuclides as chronometers of volcanic processes—The Mt. St. Helens experiment [abstract].
- U.S. GEOLOGICAL SURVEY, 1980, Eruptions of Mount St. Helens volcano—The first month.

U.S. GEOLOGICAL SURVEY, 1980, Volcano log—Mount St. Helens 1980.

VOIGHT, BARRY, 1981, Time scale for the first moments of the May 18 eruption.

WHITMER, J. H., 1981, Mount St. Helens diary—March 27 to June 14, 1980.

WILCOX, R. E., 1980, Events preceding and during the May 18, 1980 major eruption of Mount Saint Helens volcano [abstract].

Clays, *see* VOLCANIC ASH - MINERALOGY

CLEARWATER CREEK

LISLE, T. E.; LEHRE, A. K.; MARTINSON, H. A.; MEYER, D. F.; NOLAN, K. M.; SMITH, R. D., 1983, Stream channel adjustments after the 1980 Mount St. Helens eruptions.

MARTINSON, H. A.; FINNERAN, S. D.; TOPINKA, L. J., 1984, Changes in channel geomorphology of six eruption-affected tributaries of the Lewis River, 1980-82, Mount St. Helens, Washington.

MARTINSON, H. A.; HAMMOND, H. E.; MAST, W. W.; MANGO, P. D., 1986, Channel geometry and hydrologic data for six eruption-affected tributaries of the Lewis River, Mount St. Helens, Washington, water years 1983-84.

CLIMATIC EFFECTS

ANDERSON, R. Y.; DEAN, W. E.; NUHFER, E. B.; GARDNER, J. V., 1984, Limits of sensitivity in Holocene climatic records from western North America [abstract].

DIEHL, K. M., 1982, Keine Klimaaenderung durch St.-Helens-Ausbruch [No climatic variations due to the eruption of Mount St. Helens].

FARMER, JUDITH; HARRIS, JULIE; CARSON, RICHARD, 1980, Mt St. Helens volcanic weatherbook.

KERR, R. A., 1981, Mount St. Helens and a climate quandary.

MASS, CLIFFORD; ROBOCK, ALAN, 1982, The short-term influence of the Mount St. Helens volcanic eruption on surface temperature in the northwest United States.

ROBOCK, ALAN, 1981, The Mount St. Helens volcanic eruption of 18 May 1980—Minimal climatic effect.

ROBOCK, ALAN; MASS, CLIFFORD, 1982, The Mount St. Helens volcanic eruption of 18 May 1980—Large short-term surface temperature effects.

TOON, O. B., 1982, Volcanoes and climate.

CLIMATIC EFFECTS OF VOLCANIC ASH

ACKERMAN, M.; LIPPENS, C., 1982, Forward scattering and backscattering of solar radiation by the stratospheric limb after Mount St. Helens eruption.

ACKERMAN, M.; LIPPENS, C.; LECHEVALLIER, M., 1980, Enhancement of forward and back scattering of solar radiation by the stratospheric limb after Mt. St. Helens eruption [abstract].

BURROUGHS, W. J., 1981, Mount St. Helens—A review.

CHENG, R. J., 1982, The mechanisms of fine particles generation and electrification during Mount St. Helens volcanic eruption.

CHUNG, Y.-S.; GALLANT, A. J.; FANAKI, FOUD; MILLAN, M. M., 1981, On the observations of Mount St. Helens volcanic emissions; research note.

CRITCHFIELD, H. J., 1982, Mount St. Helens and climatic change.*

CRITCHFIELD, H. J., 1982, Problems in the climatology of the 1980 Mount St. Helens eruptions.

DEEPAK, ADARSH, EDITOR, 1982, Atmospheric effects and potential climatic impact of the 1980 eruptions of Mount St. Helens.

DELUISI, J. J.; MENDONCA, B. G.; DUTTON, E. G.; BOX, M. A.; HERMAN, B. M., 1983, Radiative properties of the stratospheric dust cloud from the May 18, 1980, eruption of Mount St. Helens.

EDMAN, D. A.; SELIN, RICHARD, 1981, A note on the Mt. Saint Helens volcanic eruption.

FARMER, JUDITH; HARRIS, JULIE; CARSON, RICHARD, 1980, Mt St. Helens volcanic weatherbook.

FINK, J. H.; KRINSLEY, D. H.; GREELEY, RONALD, 1980, Explosive volcanism—A possible source for aggregate formation on Mars [abstract].

GADIAN, A. M.; DAVIES, D. R., 1981, A mathematical climate study on the effect of dust from the Mount St. Helens volcano eruption.

GOAD, J. H., JR., 1982, Atmospheric depolarization ratio decay after the eruption of Mount St. Helens [abstract].

HIRONO, M.; FUJIWARA, M.; SHIBATA, T.; KUGUMIYA, N., 1981, Lidar observations of volcanic clouds in the stratosphere over Fukuoka, caused by eruptions of Mt. St. Helens in May 1980.

HIRONO, M.; FUJIWARA, M.; SHIBATA, T.; KUGUMIYA, N., 1984, Lidar observations of atmospheric aerosols following the 1980 eruption of Mt. St. Helens; Part I.

- HOFMANN, D. J.; ROSEN, J. M., 1982, Balloon-borne observations of stratospheric aerosol and condensation nuclei during the year following the Mt. St. Helens eruption.
- HOFMANN, D. J.; ROSEN, J. M., 1982, Lidar and balloon-borne particle counter comparisons following the eruptions of Mt. St. Helens and Alaid [abstract].
- HOWARD, R. G., 1981, Attenuation of terrestrial solar radiation by the eruption of Mt. St. Helens.
- IWASAKA, YASUNOBU; HAYASHIDA, SACHIKO, 1981, The effects of the volcanic eruption of St. Helens on the polarization properties of stratospheric aerosols; Lidar measurement at Nagoya.
- KONDO, Y.; REITTER, R.; JAEGER, H.; TAKAGI, M., 1982, The effect of the Mt. St. Helens eruption on tropospheric and stratospheric ions.
- LAVER, J. D., 1982, Distribution of Mount St. Helens dust inferred from satellites and meteorological data.
- LEWIS, W. J., JR.; GRANT, M. C., 1981, Effect of the May-June Mount St. Helens eruptions on precipitation chemistry in central Colorado.
- LEZBERG, E. A.; OTTERSON, D. A.; ROBERTS, W. K.; PAPATHAKOS, L. C., 1982, Aircraft sampling of the sulfate layer near the tropopause following the eruption of Mount St. Helens.
- MCCORMICK, M. P., 1981, Monitoring Mount St. Helens.
- MICHALSKY, J. J.; KLECKNER, E. W.; STOKES, G. M., 1982, Mount St. Helens related aerosol properties from solar extinction measurements.
- NEWELL, R. E., 1983, Workshop on Mount St. Helens eruptions of 1980—Atmospheric effects and potential climatic impact.
- NEWELL, R. E.; DEEPAK, ADARSH, EDITORS, 1982, Mount St. Helens eruptions of 1980—Atmospheric effects and potential climatic impact; A workshop report.
- PHELAN, J. M., 1983, Volcanoes as a source of volatile trace elements in the atmosphere.*
- POLLACK, J. B., 1980, Climatic impact of the volcanic plumes of Mt. St. Helens [abstract].
- POSEY, CARL, 1980, Down to St. Helens inferno.
- PUESCHEL, R. F.; BARRETT, E. W.; PARUNGO, F. P.; WELLMAN, D. L.; NAGAMOTO, C. T., 1980, Phreatic effluents of Mt. St. Helens volcano—No detectable effects on cloud microstructure [abstract].
- PUESCHEL, R. F.; BARRETT, E. W.; STEARNS, L. S.; WELLMAN, D. L., 1981, Physical and optical/radiational properties of Mt. St. Helens volcanic eruption [abstract].
- QUINN, R. R., 1982, Variations in atmospheric circulation, Mount St. Helens eruptions, 1980.
- QUINN, R. R., 1986, Mount St. Helens ashfall and mesoscale climatic changes.
- REITTER, R.; JAEGER, H.; CARNUTH, W.; FUNK, W., 1980, Lidar observations of the Mount St. Helens eruption clouds over mid-Europe, May to July 1980.
- ROGERS, C. F.; HUDSON, J. G.; KOCHMOND, W. C., 1981, Measurements of cloud condensation nuclei in the stratosphere around the plume of Mount St. Helens.
- ROSE, W. I., JR.; HOFFMAN, M. F., 1982, The May 18, 1980, eruption of Mount St. Helens—The nature of the eruption, with an atmospheric perspective.
- ROSE, W. I., JR.; WUNDERMAN, R. L.; HOFFMAN, M. F.; GALE, LISA, 1983, A volcanologist's review of atmospheric hazards of volcanic activity—Fuego and Mount St. Helens.
- ROSEN, J. M.; HOFMANN, D. J., 1981, A comparison of the stratospheric aerosol effects of the volcanic eruptions of Alaid in 1981, Mt. St. Helens in 1980 and Fuego in 1974 [abstract].
- RYZNAR, EDWARD; WEBER, M. R.; HALLERON, T. S., 1982, Effects of the Mount St. Helens volcanic cloud on turbidity at Ann Arbor, Michigan.
- SCHNELL, R. C.; PUESCHEL, R. F.; WELLMAN, D. L., 1982, Ice nucleus characteristics of Mount St. Helens effluents.
- SEAR, C. B.; KELLY, P. M., 1980, Eruption of Mt. St. Helens—Effects on climate.
- SMITH, W. K., 1980, A plotting program for producing ashfall prediction maps from output of the NOAA forecast trajectory program—Application to and examples from the 1980 Mount St. Helens eruptions.
- TAYLOR, B. L., 1981, Mount St. Helens and climate change.
- ### COLDWATER CREEK
- FISHER, R. V., 1982, May 18, 1980 blast pyroclastic flow deposits, Mount St. Helens, Washington [abstract].
- PEREIRA, W. E.; ROSTAD, C. E.; TAYLOR, H. E.; KLEIN, J. M., 1980, Characterization of organic contaminants in environmental samples associated with Mount St. Helens, 1980 volcanic eruption.
- SMITH, W. K.; SCHUSTER, R. L.; SABOL, M. A., 1984, Stabilizing natural dams formed by the 1980 debris avalanche on Mount St. Helens [abstract].

COLUMBIA RIVER - BIOLOGY

see also LIMNOLOGY

CAMPBELL, K. P.; JOHNSON, S. R.; WOLNIAKOWSKI, K. U., 1982, A pilot study of potential phenolic contamination of fishes in the Columbia River and tributaries in the vicinity of Mount St. Helens; final report.

FREY, B. E.; LARA-LARA, J. R.; SMALL, L. F., 1983, Reduced rates of primary production in the Columbia River estuary following the eruption Mt. Saint Helens on 18 May 1980.

KENT, DAVE, 1980, Columbia River estuary.

KIRN, R. A.; LEDGERWOOD, R. D.; JENSEN, A. L., 1986, Diet of subyearling Chinook salmon (*Oncorhynchus tshawytscha*) in the Columbia River estuary and changes effected by the 1980 eruption of Mount St. Helens.

RIEDEL, G. R.; WILSON, S. L.; HOLTON, R. L., 1984, Trace metals in the Columbia River estuary following the 18 May 1980 eruption of Mount St. Helens.

COLUMBIA RIVER - ENGINEERING GEOLOGY

DUDLEY, HARRY, 1980, Marine activity.

KRESCH, D. L.; LAENEN, ANTONIUS, 1984, Preliminary estimate of possible flood elevations in the Columbia River at Trojan Nuclear Power Plant due to failure of debris dam blocking Spirit Lake, Washington.

LAWYER, D. E., 1980, Corps of Engineers response to the eruption of Mt. St. Helens.

LAWYER, D. E., 1980, Navigation and flooding.

RAINIER NATIONAL BANK ECONOMICS DEPARTMENT, 1980, The economic impact of the eruptions of Mount St. Helens, "The Columbia River and related waterways".

SIKONIA, W. G., 1985, Impact on the Columbia River of an outburst of Spirit Lake.

SLOTTA, L. S.; COBOS, C. R.; MUSTAIN, R. S., 1984, Shoaling of Port of Astoria, Oregon, by sediment from Mt. St. Helens eruption [abstract].

U.S. ARMY CORPS OF ENGINEERS, COMMITTEE ON CHANNEL STABILIZATION, 1985, Columbia-Cowlitz-Toutle Rivers, Washington, restoration subsequent to Mt. St. Helens eruption.

U.S. CONGRESS, HOUSE COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION, 1985, Mount St. Helens sediment control, Washington (Toutle, Cowlitz, and Columbia Rivers).

WASHINGTON DIVISION OF GEOLOGY AND EARTH RESOURCES, 1981, River cleanup continues.

COLUMBIA RIVER - LAHARS, MUDFLOWS AND STREAM SEDIMENTS

BAKER, E. T.; FEELY, R. A.; CURL, H. C., JR., 1981, Effect of Mount St. Helens volcanic activity on the turbidity of the Columbia River plume [abstract].

BRADLEY, J. B., 1984, Transition of a meandering river to a braided system due to high sediment concentration flows.

HAENI, F. P., 1982, Disposition of mudslide materials from Mount St. Helens [abstract].

HAENI, F. P., 1983, Sediment deposition in the Columbia and Lower Cowlitz Rivers, Washington-Oregon, caused by the May 18, 1980, eruption of Mount St. Helens.

HUBBELL, D. W.; LAENEN, J. M.; MCKENZIE, S. W., 1983, Characteristics of Columbia River sediment following the eruption of Mount St. Helens on May 18, 1980.

LAWYER, D. R., 1980, Navigation and flooding.

MOORE, P. A.; REESE, J. R., 1982, Sediment physical and chemical analyses on the Cowlitz and Columbia River subsequent to the 18 May 1980 Mt. St. Helens eruption.

ORWIG, C. E., 1981, Utilizing the National Weather Service's dynamic wave model on the lower Columbia River during the Mount Saint Helens event [abstract].

RAINIER NATIONAL BANK ECONOMICS DEPARTMENT, 1980, The economic impact of the eruptions of Mount St. Helens, "The Columbia River and related waterways".

RIEDEL, G. R.; WILSON, S. L.; HOLTON, R. L., 1984, Trace metals in the Columbia River estuary following the 18 May 1980 eruption of Mount St. Helens.

SLOTTA, L. S.; COBOS, C. R.; MUSTAIN, R. S., 1983, Shoaling of Port of Astoria, Oregon, by sediment from Mt. St. Helens eruption.*

Cowlitz Co.

Note: The 1980 eruption of Mount St. Helens impacted much of Cowlitz County. See specific aspects, e.g.

HYDROLOGY

MASS MOVEMENTS - AVALANCHES AND LANDSLIDES

MASS MOVEMENTS - LAHARS AND MUDFLOWS

VOLCANIC ASH - DISTRIBUTION

COWLITZ RIVER - BIOLOGY

see also LIMNOLOGY

PHINNEY, D. E., 1980, Observations on the effects of the Mt. St. Helens eruption on salmon populations and salmon culture facilities.

STOBER, Q. J.; ROSS, B. D.; MELBY, C. L.; DINNEL, P. A.; JAGIELO, T. H.; SALO, E. O., 1982, Effect of suspended volcanic sediment on coho and Chinook salmon in the Toutle and Cowlitz Rivers.

COWLITZ RIVER - ENGINEERING GEOLOGY

BRADLEY, J. B.; SIMPSON, D. P.; TEMKO, H. M., 1982, Estimates of Cowlitz-Toutle River system sedimentation.

BROWN, B. J.; THOMAS, W. A., 1982, Numerical model of sediment movement Cowlitz-Toutle Rivers, Washington.

BROWN, B. J.; THOMAS, W. A., 1983, Mt. St. Helens impact on Cowlitz River sedimentation.

COPLEN, L. E., 1981, A Mt. St. Helens story—The aftermath at Longview.

DUNNE, THOMAS; LEOPOLD, L. B., 1981, Flood and sedimentation hazards in the Toutle and Cowlitz River system as a result of the Mt. St. Helens eruption.

FAIRCHILD, L. H.; DUNNE, THOMAS, 1981, Prediction of future mudflow hazard on the Toutle and Cowlitz Rivers, Washington [abstract].

JENNINGS, M. E.; SCHNEIDER, V. R.; SMITH, P. E., 1981, Computer assessments of potential flood hazards from breaching of two debris dams, Toutle River and Cowlitz River systems.

JENNINGS, M. E.; SCHNEIDER, V. R.; SMITH, P. E., 1981, Emergency assessment of Mount St. Helens post-eruption flood hazards, Toutle and Cowlitz Rivers, Washington.

LAWYER, D. E., 1980, Corps of Engineers response to the eruption of Mt. St. Helens.

LAWYER, D. E., 1980, Navigation and flooding.

LETTENMAIER, D. P.; BURGES, S. J., 1981, Estimation of flood frequency changes in the Toutle and Cowlitz River basins following the eruption of Mt. St. Helens.

LOMBARD, R. E., 1986, Channel geometry, flood elevations, and flood maps, lower Toutle and Cowlitz Rivers, Washington, June 1980 to May 1981.

ORWIG, C. E.; MATHISON, J. M., 1982, Forecasting considerations in Mount Saint Helens affected rivers.

PUBLIC WORKS, 1981, Submersible pumps help quell damage from Mt. St. Helens mudflow.

U.S. ARMY CORPS OF ENGINEERS, COMMITTEE ON CHANNEL STABILIZATION, 1985, Columbia-Cowlitz-Toutle Rivers, Washington, restoration subsequent to Mt. St. Helens eruption.

U.S. CONGRESS, HOUSE COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION, 1985, Mount St. Helens sediment control, Washington (Toutle, Cowlitz, and Columbia Rivers).

WASHINGTON DIVISION OF GEOLOGY AND EARTH RESOURCES, 1981, River cleanup continues.

COWLITZ RIVER - GUIDEBOOKS

FRITZ, W. J.; FISK, L. H.; HARRISON, SYLVIA, 1982, Mount St. Helens road log—A visit to the lower Toutle and Cowlitz River drainages to observe the sedimentology, transported trees, and other effects of mudflows resulting from the eruptions of May 18, 1980, and March 19, 1982.

TILFORD, NORMAN; KENT, RICHARD, 1981, Mount St. Helens and the geology of Lewis and Toutle Rivers.

COWLITZ RIVER - HYDROLOGY

COWLITZ COUNTY DEPARTMENT OF COMMUNITY DEVELOPMENT, 1983, Toutle-Cowlitz watershed management plan.

ERICKSON, KAROL; LETTENMAIER, D. P.; BURGES, S. J., 1980, Assessment of runoff response changes in the upper Cowlitz River basin related to Mount St. Helens ash deposition [abstract].

HINDIN, ERVIN, 1983, Occurrence of organic compounds in water and stream sediments due to the Mt. St. Helens eruptions.

MOORE, P. A.; REESE, J. R., 1982, Sediment physical and chemical analyses on the Cowlitz and Columbia River subsequent to the 18 May 1980 Mt. St. Helens eruption.

VANONI, V. A., 1982, Comments on sedimentation problems resulting from the eruption of Mt. St. Helens.

COWLITZ RIVER - LAHARS, MUDFLOWS AND STREAM SEDIMENTS

BETHEL, J. P., 1981, Volcanic mudflow deposits in the Cowlitz River valley, Washington [abstract].

BRADLEY, J. B., 1981, Mt. St. Helens sediment transport—The first year [abstract].

BRADLEY, J. B., 1982, Cowlitz River basin sediment yields [abstract].

- BRADLEY, J. B., 1984, Transition of a meandering river to a braided system due to high sediment concentration flows.
- BRADLEY, J. B.; GRAHAM, J. D., 1983, Effects of high sediment concentrations on bedforms and river hydraulics [abstract].
- BRADLEY, J. B.; SIMPSON, D. P.; BURCH, B. H.; COLLISTER, J. L., 1982, Physical properties of Mt. St. Helens mudflow and sediment deposits.
- BRADLEY, J. B.; SIMPSON, D. P.; TEMKO, H. M., 1982, Estimates of Cowlitz-Toutle River system sedimentation.
- BROWN, B. J.; THOMAS, W. A., 1982, Numerical model of sediment movement Cowlitz-Toutle Rivers, Washington.
- BROWN, B. J.; THOMAS, W. A., 1983, Mt. St. Helens impact on Cowlitz River sedimentation.
- CUMMANS, JOHN, 1981, Mudflows resulting from the May 18, 1980, eruption of Mount St. Helens, Washington.*
- DINEHART, R. L., 1983, Patterns of sediment concentration in hyperconcentrated flows at Mount St. Helens, Washington [abstract].*
- DUNNE, THOMAS; LEOPOLD, L. B., 1981, Flood and sedimentation hazards in the Toutle and Cowlitz River system as a result of the Mt. St. Helens eruption.
- FAIRCHILD, L. H.; DUNNE, THOMAS, 1981, Prediction of future mudflow hazard on the Toutle and Cowlitz Rivers, Washington [abstract].
- FRITZ, W. J.; FISK, L. H.; HARRISON, SYLVIA, 1982, Mount St. Helens road log—A visit to the lower Toutle and Cowlitz River drainages to observe the sedimentology, transported trees, and other effects of mudflows resulting from the eruptions of May 18, 1980, and March 19, 1982.
- HAENI, F. P., 1982, Disposition of mudslide materials from Mount St. Helens [abstract].
- HAENI, F. P., 1983, Sediment deposition in the Columbia and Lower Cowlitz Rivers, Washington-Oregon, caused by the May 18, 1980, eruption of Mount St. Helens.
- HINDIN, ERVIN, 1983, Occurrence of organic compounds in water and stream sediments due to the Mt. St. Helens eruptions.
- LAWYER, D. E., 1980, Navigation and flooding.
- LOMBARD, R. E., 1982, Sediment deposition in the Cowlitz River.
- LOMBARD, R. E.; MILES, M. B.; NELSON, L. M.; KRESCH, D. L.; CARPENTER, P. J., 1981, Channel conditions in the Lower Toutle and Cowlitz Rivers resulting from the mudflows of May 18, 1980.
- LOMBARD, R. E.; MILES, M. B.; NELSON, L. M.; KRESCH, D. L.; CARPENTER, P. J., 1981, The impact of mudflows of May 18 on the lower Toutle and Cowlitz Rivers.
- MARTINSON, H. A.; MEYER, D. F.; JANDA, R. J., 1982, Storm-induced changes in channel morphology of mudflow-impacted streams [abstract].
- MOORE, P. A.; REESE, J. R., 1982, Sediment physical and chemical analyses on the Cowlitz and Columbia River subsequent to the 18 May 1980 Mt. St. Helens eruption.
- PHINNEY, D. E., 1980, Observations on the effects of the Mt. St. Helens eruption on salmon populations and salmon culture facilities.
- PUBLIC WORKS, 1981, Submersible pumps help quell damage from Mt. St. Helens mudflow.
- SCOTT, K. M., 1984, Flow transformations and textural variation in lahars at Mount St. Helens, Washington [abstract].
- U.S. ARMY CORPS OF ENGINEERS, COMMITTEE ON CHANNEL STABILIZATION, 1985, Columbia-Cowlitz-Toutle Rivers, Washington, restoration subsequent to Mt. St. Helens eruption.
- U.S. CONGRESS, HOUSE COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION, 1985, Mount St. Helens sediment control, Washington (Toutle, Cowlitz, and Columbia Rivers).
- VANONI, V. A., 1982, Comments on sedimentation problems resulting from the eruption of Mt. St. Helens.
- COWLITZ RIVER - PLANNING AND EMERGENCY RESPONSE**
- COWLITZ COUNTY DEPARTMENT OF COMMUNITY DEVELOPMENT, 1983, Toutle-Cowlitz watershed management plan.
- WARREN, G. H.; KAUFMAN, D. E.; HAMMOND, K. A., 1982, Come hell and high water—Mt. St. Helens and the federal response on the lower Cowlitz River.
- COWLITZ RIVER - RIVER MORPHOLOGY**
- see also RIVER MORPHOLOGY*
- BRADLEY, J. B., 1984, Transition of a meandering river to a braided system due to high sediment concentration flows.

BRADLEY, J. B.; GRAHAM, J. D., 1983, Effects of high sediment concentrations on bedforms and river hydraulics [abstract].

MARTINSON, H. A.; MEYER, D. F.; JANDA, R. J., 1982, Storm-induced changes in channel morphology of mudflow-impacted streams. [abstract].

CRAB CREEK

DATTA, BITHIN; LETTENMAIER, D. P.; BURGES, S. J., 1983, Assessment of changes in storm and seasonal runoff response of watersheds impacted by Mt. St. Helens ash deposition.

CRATER

see also DOME

ALPHA, T. R.; MOORE, J. G.; MORLEY, J. M.; JONES, D. R., 1981, Physiographic diagrams of Mount St. Helens, Washington, showing changes in its summit crater, summer 1980.

ALPHA, T. R.; MORLEY, J. M.; MYERS, BOBBIE; LEIGHLEY, T. A., 1982, Physiographic diagrams of Mount St. Helens, Washington showing changes in its summit crater, 1981.

ALPHA, T. R.; MYERS, BOBBIE, 1985, Physiographic diagrams of Mount St. Helens, Washington showing changes in its summit crater, 1983.

ALPHA, T. R.; MYERS, BOBBIE, 1986, Physiographic diagrams of Mount St. Helens, Washington, showing changes in its summit crater, 1984.

ANDERSON, L. A.; JOHNSON, D. J.; DZURISIN, DANIEL, 1983, Self-potential and VLF electromagnetic surveys at Mount St. Helens, Washington [abstract].

BEACH, G. L., 1985, Morphologic evolution of the Mount St. Helens crater area, Washington.

CHADWICK, W. W., JR.; SWANSON, D. A.; IWATSUBO, E. Y.; HELIKER, C. C., 1982, Deformation of the crater floor at Mount St. Helens [abstract].

DZURISIN, DANIEL; CASADEVALL, T. J., 1981, Morphologic evolution of the 18 May 1980 crater at Mount St. Helens.

DZURISIN, DANIEL; WESTPHAL, J. A.; JOHNSON, D. J., 1982, Automatic tilt measurements in the crater at Mount St. Helens, Washington [abstract].

EVANS, W. C.; BANKS, N. G.; WHITE, L. D., 1981, Analyses of gas samples from the summit crater.

HOPSON, C. A.; MELSON, W. G., 1982, Stratigraphy of Mount St. Helens 1980 crater walls [abstract].

ITO, YOSHIRO; KAWAKAMI, CHIKATAKA; SAITO, TERUO; ICHIKAWA, KO; HOSAKA, TETSUYA; HIRINCHS, CLANCY, 1981, Temperature of crater of Mount St. Helens on the 28th of July, 1980.

JOHNSON, D. J., 1982, Gravity changes in the crater of Mount St. Helens, Washington, April-September, 1982 [abstract].

MOORE, J. G.; LIPMAN, P. W.; SWANSON, D. A.; ALPHA, T.R., 1981, Growth of lava domes in the crater, June 1980-January 1981.

TOWLE, J. N., 1983, VLF electromagnetic investigations of the crater and central dome of Mount St. Helens, Washington.

Dams, *see* DEBRIS DAMS

Dating, *see* GEOCHRONOLOGY

Davis Lake, *see* LAKES - DAVIS LAKE

DEBRIS DAMS

BISSELL, V. C.; HUTCHEON, R. J., 1984, Forecasting and warning for Mt. St. Helens streams.

GLICKEN, H. X.; MEYER, WILLIAM; CARPENTER, P. J.; SABOL, M. A.; SWIFT, C. H., III; KRESCH, D. L., 1983, Actual and potential volcanic lake breakouts at Mount St. Helens, Washington [abstract].

HOLZER, T. L., 1986, Spirit Lake hazard evaluation.

JENNINGS, M. E.; SCHNEIDER, V. R.; SMITH, P. E., 1981, Computer assessments of potential flood hazards from breaching of two debris dams, Toutle River and Cowlitz River systems.

JENNINGS, M. E.; SCHNEIDER, V. R.; SMITH, P. E., 1981, Emergency assessment of Mount St. Helens post-eruption flood hazards, Toutle and Cowlitz Rivers, Washington.

JENNINGS, M. E.; SCHNEIDER, V. R.; SMITH, P. E., 1984, Mount St. Helens posteruption flood hazards [abstract].

JONES, BRONWEN, 1985, Tunnelling in North America's volcanic zone.

KRESCH, D. L., 1985, Spirit Lake dam-failure flood routing assessment.

KRESCH, D. L.; LAENEN, ANTONIUS, 1984, Preliminary estimate of possible flood elevations in the Columbia River at Trojan Nuclear Power Plant due to failure of debris dam blocking Spirit Lake, Washington.

LARSON, D. W.; U'REN, S. C., 1982, Effects of debris retaining structures on water quality of the Toutle River, Washington.

- MEYER, WILLIAM; CARPENTER, P. J., 1983, Filling of Spirit Lake, Washington, May 18, 1980, to July 31, 1982.
- MEYER, WILLIAM; SABOL, M. A.; GLICKEN, H. X.; VOIGHT, BARRY, 1985, The effects of ground water, slope stability, and seismic hazard on the stability of the South Fork Castle Creek blockage in the Mount St. Helens area, Washington.*
- MEYER, WILLIAM; SABOL, M. A.; SCHUSTER, R. L., 1986, Landslide dammed lakes at Mount St. Helens, Washington.
- PARSONS, M. R.; BEACH, G. L.; KEENAN, B. L.; ROSENFIELD, C. L., 1983, Drainage development in the lahar blockage area, Mt. St. Helens, Washington [abstract].
- RYAN, P. J.; ELDER, R. A.; GARDINER, S. R. M., 1984, Prediction of dam overtopping due to mudflows.
- SAGER, J. W.; CHAMBERS, D. R., 1986, Design and construction of the Spirit Lake outlet tunnel, Mount St. Helens, Washington.
- SCHNEIDER, V. R.; JENNINGS, M. E., 1980, Flood hazard assessments—Mt. St. Helens [abstract].
- SCHUSTER, R. L., 1985, Landslide dams in the western United States.
- SMITH, W. K.; SCHUSTER, R. L.; SABOL, M. A., 1984, Stabilizing natural dams formed by the 1980 debris avalanche on Mount St. Helens [abstract].
- STOCKTON, S. L., 1982, Design and performance of sediment stabilization projects on the Toutle River following the 18 May 1980 eruption of Mt. St. Helens.
- SWIFT, C. H., III; KRESCH, D. L., 1983, Mudflow hazards along the Toutle and Cowlitz Rivers from a hypothetical failure of Spirit Lake blockage.
- U.S. ARMY CORPS OF ENGINEERS, 1984, Alternative strategies for a permanent outlet for Spirit Lake near Mount St. Helens, Washington; final environmental impact statement.
- WASHINGTON DIVISION OF GEOLOGY AND EARTH RESOURCES, 1981, River cleanup continues.
- WILSON, R. C., 1981, Interactions between ground motion and ground failure.
- YOU'D, T. L., 1983, Liquefaction investigations.
- YOU'D, T. L.; WILSON, R. C., 1980, Stability of Toutle River blockage—Mt. St. Helens hazards investigations.
- YOU'D, T. L.; WILSON, R. C.; SCHUSTER, R. L., 1981, Stability of blockage in North Fork Toutle River.
- Dendrochronology, *see* GEOCHRONOLOGY
- Disaster planning,
see
EMERGENCY RESPONSE
GEOLOGIC HAZARDS
PLANNING
- DOME
see also CRATER
- ANDERSON, L. A.; JOHNSON, D. J.; DZURISIN, DANIEL, 1983, Self-potential and VLF electromagnetic surveys at Mount St. Helens, Washington [abstract].
- ANDERSON, S. W.; FINK, J. H., 1986, Rate-dependent formation of textures in the Mount St. Helens lava dome [abstract].
- BIRNIE, R. W.; HOLCOMB, R. T.; SWANSON, D. A.; LANGE, I. M., 1983, Infrared thermal survey of the lava dome, Mt. St. Helens [abstract].
- BRANTLEY, STEVEN, 1986, Two dome-building episodes at Mount St. Helens in 1984 and 1985 and their accompanying seismicity.
- BRANTLEY, STEVEN; TOPINKA, L. J., EDITORS, 1984, Volcanic studies at the U.S. Geological Survey's David A. Johnston Cascades Volcano Observatory, Vancouver, Washington.
- CASHMAN, K. V.; MARSH, B. D., 1984, Crystal-size spectra and kinetics of crystal growth in magma—II. Application [abstract].
- CASHMAN, K. V.; TAGGART, J. E., JR., 1983, Petrologic monitoring of 1981 and 1982 eruptive products from Mount St. Helens.
- DZURISIN, DANIEL, 1986, Recent eruptive activity, monitoring results and geophysical studies at Mount St. Helens, Washington [abstract].
- DZURISIN, DANIEL; DENLINGER, R. P., 1986, Systematic changes in magnetic field intensity over the growing lava dome at Mount St. Helens [abstract].
- FINK, J. H.; POLLARD, D. D.; DONNELL Y-NOLAN, J., 1982, Structural relationships among feeder dikes, silicic domes and ground cracks in the Medicine Lake highland and Mount St. Helens volcanoes [abstract].
- FRIEDMAN, J. D., 1982, Energy of domal evolution at Mount St. Helens, June 1980 through May 18, 1982 [abstract].
- FRIEDMAN, J. D.; FRANK, D. G.; KIEFFER, H. H., 1980, Infrared surveys of emerging dacite dome, Mount St. Helens volcano, Washington, during June 1980 [abstract].

- FRIEDMAN, J. D.; OLHOEFT, G. R.; JOHNSON, G. R.; FRANK, D. G., 1980, Heat content and thermal energy equivalent of the June 1980 dacite dome at Mount St. Helens, Washington [abstract].
- FRIEDMAN, J. D.; OLHOEFT, G. R.; JOHNSON, G. R.; FRANK, D. G., 1981, Heat content and thermal energy of the June dacite dome in relation to total energy yield, May-October 1980.
- HOLCOMB, R. T., 1984, Growth of the lava dome at Mount St. Helens since 1980 [abstract].
- IRVING, A. J.; RHODES, J. M.; SPARKS, J. W., 1980, Mt. St. Helens lava dome, pyroclastic flow and ash samples—Major and trace element chemistry [abstract].
- MOORE, J. G.; LIPMAN, P. W.; SWANSON, D. A.; ALPHA, T. R., 1981, Growth of lava domes in the crater, June 1980-January 1981.
- MURASE, TSUTOMU; MCBIRNEY, A. R.; MELSON, W. G., 1985, Viscosity of the dome of Mount St. Helens.
- NEWHALL, C. G.; MELSON, W. G., 1983, Explosive activity associated with the growth of volcanic domes.
- OLHOEFT, G. R.; REYNOLDS, R. L.; FRIEDMAN, J. D.; JOHNSON, G. R.; HUNT, G. R., 1981, Physical properties of the June 1980 dacite dome.
- PAINE, J. G., 1982, Crustal structure of volcanic arcs based on physical properties of andesites, volcaniclastic rocks, and inclusions in the Mt. St. Helens lava dome.
- RAEDEKE, L. D.; MATHEZ, E. A.; IRVING, A. J., 1980, Mt. St. Helens lava dome—Petrography and mineral chemistry [abstract].
- SWANSON, D. A., 1985, Graben formation, thrust faulting, and growth of the dacite dome, Mount St. Helens, Washington, May-June 1985 [abstract].
- SWANSON, D. A., 1986, Predicting dome growth at Mt. St. Helens using non-seismic techniques.
- SWANSON, D. A.; CHADWICK, W. W., JR.; IWATSUBO, E. Y.; HELIKER, C. C., 1982, Endogenous growth of the Mount St. Helens dacite dome [abstract].
- SWANSON, D. A.; HOLCOMB, R. T., 1985, Regularities in the growth of Mount St. Helens' dome [abstract].
- TAZIEFF, H., 1982, Domes de magma et domes de laves [Magma domes and lava domes].
- TOWLE, J. N., 1983, VLF electromagnetic investigations of the crater and central dome of Mount St. Helens, Washington.
- U.S. GEOLOGICAL SURVEY, 1983, Pelean spine at Mount St. Helens.

DREDGING

- BROWN, B. J.; THOMAS, W. A., 1982, Numerical model of sediment movement Cowlitz-Toutle Rivers, Washington.
- DUDLEY, HARRY, 1980, Marine activity.
- LAWYER, D. E., 1980, Corps of Engineers response to the eruption of Mt. St. Helens.
- LAWYER, D. E., 1980, Navigation and flooding.
- LOMBARD, R. E., 1986, Channel geometry, flood elevations, and flood maps, lower Toutle and Cowlitz Rivers, Washington, June 1980 to May 1981.
- PUBLIC WORKS, 1981, Submersible pumps help quell damage from Mt. St. Helens mudflow.
- RAYNOR, J. M., 1981, Mount St. Helens—One year later.
- STOCKTON, S. L., 1982, Design and performance of sediment stabilization projects on the Toutle River following the 18 May 1980 eruption of Mt. St. Helens.
- U.S. ARMY CORPS OF ENGINEERS, COMMITTEE ON CHANNEL STABILIZATION, 1985, Columbia-Cowlitz-Toutle Rivers, Washington, restoration subsequent to Mt. St. Helens eruption.
- U.S. ARMY CORPS OF ENGINEERS, PORTLAND DISTRICT, 1984, Mount St. Helens, Washington feasibility report and environmental impact statement, final; Volume 1, Main report.
- U.S. CONGRESS, HOUSE COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION, 1985, Mount St. Helens sediment control, Washington (Toutle, Cowlitz, and Columbia Rivers).
- WASHINGTON DIVISION OF GEOLOGY AND EARTH RESOURCES, 1981, River cleanup continues.

EARTHQUAKES AND SEISMOLOGY [GENERAL WORKS]

- CROSSON, R. S., 1981, Earthquake hazard evaluation in the Pacific Northwest.
- POLLARD, D. D., 1984, Volcanic tremor and hydrothermal wedging [abstract].
- WEAVER, C. S.; SMITH, S. W., 1981, The St. Helens seismic zone—A major crustal fault zone in western Washington [abstract].
- WEAVER, C. S.; SMITH, S. W., 1983, Regional tectonic and earthquake hazard implications of a crustal fault zone in southwestern Washington.

EARTHQUAKES AND SEISMOLOGY (BEFORE 1980)

GRANT, W. C.; WEAVER, C. S., 1986, Earthquakes near Swift Reservoir, Washington, 1958-1963—Seismicity along the southern St. Helens Seismic Zone.

NEUMANN, FRANK, 1961, New analytical methods reveal the pattern of seismic activity in western Washington.

UNGER, J. D.; MILLS, K. F., 1973, Earthquakes near Mount St. Helens, Washington.

WEAVER, C. S., 1976, Seismic events on Cascade volcanoes.*

WEAVER, C. S.; MALONE, S. D., 1974, Glacier sources for low frequency seismic events recorded at Mount St. Helens, volcano [abstract].

WEAVER, C. S.; MALONE, S. D., 1975, Preliminary report—Seismic sources observed in glacier ice at Mt. St. Helens, Washington [abstract].

WEAVER, C. S.; MALONE, S. D., 1976, Mt. Saint Helens seismic events—Volcanic earthquakes or glacial noises?

WEAVER, C. S.; MALONE, S. D.; SMITH, S. W., 1974, Anomalous seismic events on Cascade volcanoes [abstract].

EARTHQUAKES AND SEISMOLOGY (1980)

BURGER, R. W.; LANGSTON, C. A., 1985, Source mechanism of the May 18, 1980, Mount St. Helens eruption from regional surface waves.*

CROSSON, R. S.; ENDO, E. T.; MALONE, S. D.; NOSON, L. J.; WEAVER, C. S., 1980, Eruption of Mount St. Helens—Seismology.

ENDO, E. T.; MALONE, S. D.; NOSON, L. L.; WEAVER, C. S., 1981, Locations, magnitudes, and statistics of the March 30-May 18 earthquake sequence.

ENDO, E. T.; MALONE, S. D.; NOSON, L. L.; WEAVER, C. S., 1981, Seismicity of Mt. St. Helens 1980 to 1981 [abstract].

ENDO, E. T.; WEAVER, C. S.; MALONE, S. D.; MICHAELSON, C. A., 1980, Coda magnitudes of earthquakes associated with the 1980 eruptions of Mount Saint Helens [abstract].

FAIRCHILD, L. H., 1984, Initiation of the North Fork Toutle River lahar by liquefaction of debris avalanche deposits during the May 18, 1980 Mt. St. Helens eruption [abstract].

FEHLER, M. C., 1981, Spectral properties of pre-eruption earthquakes occurring at Mt. St. Helens volcano [abstract].

FEHLER, M. C., 1983, Joint determination of epicenters at Mount St. Helens [abstract].

FEHLER, M. C., 1983, Observations of volcanic tremor at Mount St. Helens volcano.*

FERRICK, M. G.; ST. LAWRENCE, W. F., 1984, Comment on "Observations of volcanic tremor at Mount St. Helens volcano" by Michael Fehler.

HOFSTETTER, ABRAHAM, 1984, Observations of volcanic tremor at Mt. St. Helens in April and May 1980.*

HOFSTETTER, ABRAHAM; MALONE, S. D., 1986, Observations of volcanic tremor at Mount St. Helens in April and May 1980.

KANAMORI, HIROO; GIVEN, J. W., 1981, Mechanism of Mt. St. Helens eruption determined from long-period surface waves [abstract].

KANAMORI, HIROO; GIVEN, J. W., 1982, Analysis of long-period seismic waves excited by the May 18, 1980 eruption of Mount St. Helens—A terrestrial monopole?

KANAMORI, HIROO; GIVEN, J. W., 1983, Lamb pulse observed in nature.*

KANAMORI, HIROO; GIVEN, J. W.; LAY, THORNE, 1984, Analysis of seismic body waves excited by the Mount St. Helens eruption of May 18, 1980.

KERR, R. A., 1981, Mount St. Helens—Volcanoes, quakes, and the connectedness of things.

LAWSON, JIM, 1980, Oklahoma observations of effects of May 18, 1980, eruption of Mount St. Helens.

MALONE, S. D., 1982, The Mount St. Helens eruptions—Seismic monitoring for eruption prediction.

MALONE, S. D., 1983, Volcanic earthquakes—Examples from Mount St. Helens.

MALONE, S. D.; ENDO, E. T.; WEAVER, C. S., 1980, Seismicity associated with the 1980 eruptions of Mount Saint Helens [abstract].

MALONE, S. D.; ENDO, E. T.; WEAVER, C. S.; RAMEY, J. W., 1981, Seismic monitoring for eruption prediction.

MALONE, S. D.; QAMAR, ANTHONY, 1984, Repetitive microearthquakes as the source for volcanic tremor at Mount St. Helens [abstract].

MALONE, S. D.; WEAVER, C. S.; ENDO, E. T., 1981, Seismic details of the May 18, 1980 cataclysmic eruption of Mount St. Helens [abstract].

- MALONE, S. D.; WEAVER, C. S.; ENDO, E. T.; NOSON, L. L., 1981, Seismic precursors to the eruptions of Mount St. Helens [abstract].
- MCNUTT, S. R.; BEAVAN, R. J., 1984, Patterns of earthquakes and the effect of solid earth and ocean load tides at Mount St. Helens prior to the May 18, 1980, eruption.
- NASSAU, K., 1981, Plates, quakes, volcanoes, and Mt. St. Helens—Part II, Earthquakes and related phenomena.
- NOSON, L. L.; MALONE, S. D.; ENDO, E. T.; WEAVER, C. S., 1981, Seismicity preceding the May 18 eruption of Mt. St. Helens [abstract].
- QAMAR, ANTHONY; RATHBUN, ANNE; LUDWIN, RUTH; CROSSON, R. S.; MALONE, S. D., 1986, Earthquake hypocenters in Washington and northern Oregon—1980.
- QAMAR, ANTHONY; ST. LAWRENCE, W. F.; MOORE, J. N.; KENDRICK, GEORGE, 1981, Earthquakes and ash eruptions at Mt. St. Helens [abstract].
- QAMAR, ANTHONY; ST. LAWRENCE, W. F.; MOORE, J. N.; KENDRICK, GEORGE, 1983, Seismic signals preceding the explosive eruption of Mount St. Helens, Washington, on 18 May 1980.
- SHEMETA, J. E.; WEAVER, C. S., 1986, Seismicity accompanying the May 18, 1980 eruption of Mount St. Helens, Washington.
- SHEMETA, J. E.; WEAVER, C. S.; GRANT, W. C., 1984, Details of the May 18, 1980 post-eruption seismicity at Mount St. Helens, Washington [abstract].
- TOKAREV, P. I., 1985, The prediction of large explosions of andesitic volcanoes.
- WEAVER, C. S., 1982, Tectonic influence on 1980 activity [abstract].
- WEAVER, C. S., 1986, Geothermal seismotectonic studies.*
- WEAVER, C. S.; ENDO, E. T.; MALONE, S. D., 1981, Seismic evidence for fault dominated magma transport at Mount St. Helens, Washington [abstract].
- WEAVER, C. S.; ENDO, E. T.; MALONE, S. D.; NOSON, L. L., 1981, Predicting Mt. St. Helens eruptions [abstract].
- WEAVER, C. S.; GRANT, W. C.; MALONE, S. D.; ENDO, E. T., 1981, Post-May 18 seismicity—Volcanic and tectonic implications.
- WEAVER, C. S.; MALONE, S. D.; ENDO, E. T.; NOSON, L. J., 1980, Seismicity pattern of the Mount Saint Helens eruptive sequence [abstract].
- ZOLLWEG, J. E.; JONIENTZ-TRISLER, CHRIS, 1984, A swarm of deep earthquakes at Mt. St. Helens, Washington, prior to the eruption of 18 May 1980 [abstract].
- EARTHQUAKES AND SEISMOLOGY (POST 1980)
- AMICK, D. C.; SNIDER, F. G., 1985, Seismicity associated with reservoirs impounded near Mount St. Helens [abstract].
- BAME, D. A., 1984, A source model for low frequency volcanic earthquakes.
- BAME, D. A.; CROSSON, R. S., 1984, A study of volcanic earthquakes in the Cascade Range of Washington [abstract].
- BEAULIEU, J. D.; PETERSON, N. V., 1981, Seismic and volcanic hazard evaluation of the Mount St. Helens area, Washington relative to the Trojan Nuclear Site, Oregon.*
- BRANTLEY, STEVEN, 1986, Two dome-building episodes at Mount St. Helens in 1984 and 1985 and their accompanying seismicity.
- CROSSON, R. S.; BAME, D. A., 1985, A spherical source model for low frequency volcanic earthquakes.
- CROSSON, R. S.; MALONE, S. D., 1984, Seismic hazard investigations in the Pacific Northwest.
- ENDO, E. T.; MALONE, S. D.; NOSON, L. L.; WEAVER, C. S., 1981, Seismicity of Mt. St. Helens 1980 to 1981 [abstract].
- FEHLER, M. C., 1985, Locations and spectral properties of earthquakes accompanying an eruption of Mount St. Helens.
- FEHLER, M. C.; CHOET, BERNARD, 1982, Operation of a digital seismic network on Mount St. Helens volcano and observations of long period seismic events that originate under the volcano.*
- FREMONT, M. J.; MALONE, S. D., 1985, High precision relative locations of earthquakes at Mount St. Helens, Washington [abstract].
- GRANT, W. C.; WEAVER, C. S., 1981, Post-eruption earthquake swarms at Mount St. Helens, Washington [abstract].
- GRANT, W. C.; WEAVER, C. S.; ZOLLWEG, J. E., 1984, The 14 February 1981 Elk Lake, Washington, earthquake sequence.
- HOLZER, T. L., 1986, Spirit Lake hazard evaluation.
- KERR, R. A., 1981, Mount St. Helens—Volcanoes, quakes, and the connectedness of things.

- MALONE, S. D., 1982, The Mount St. Helens eruptions—Seismic monitoring for eruption prediction.
- MALONE, S. D., 1983, Volcanic earthquakes—Examples from Mount St. Helens.
- MALONE, S. D.; BOYKO, CHRISTINA, 1983, Volcanic earthquakes, and the precursors to the 1981 eruptions of Mount St. Helens [abstract].*
- MALONE, S. D.; BOYKO, CHRISTINA; WEAVER, C. S., 1983, Seismic precursors to the Mount St. Helens eruptions in 1981 and 1982.
- MALONE, S. D.; PAVLIS, G. L., 1983, Velocity structure and relocation of earthquakes at Mount St. Helens [abstract].
- MALONE, S. D.; QAMAR, ANTHONY, 1984, Repetitive microearthquakes as the source for volcanic tremor at Mount St. Helens [abstract].
- MCCLURG, D. C.; MALONE, S. D., 1986, Coda-Q at Mt. St. Helens [abstract].
- NOWACK, ROBERT; AKI, KEIITI, 1982, The Gaussian beam synthetic seismogram for 2-D inhomogeneous media—Testing and application [abstract].
- NOWACK, ROBERT; AKI, KEIITI, 1984, The two-dimensional Gaussian beam synthetic method—Testing and application.
- ROHAY, A. C., 1981, P-wave residuals at Cascade volcanoes—Baker, Rainier and St. Helens [abstract].
- WEAVER, C. S., 1986, Geothermal seismotectonic studies.*
- WEAVER, C. S.; ENDO, E. T.; MALONE, S. D., 1981, Seismic evidence for fault dominated magma transport at Mount St. Helens, Washington [abstract].
- WEAVER, C. S.; GRANT, W. C., 1984, Seismic fault zones beneath Mount St. Helens, Washington [abstract].
- WEAVER, C. S.; SMITH, S. W., 1983, Regional tectonic and earthquake hazard implications of a crustal fault zone in southwestern Washington.
- WEAVER, C. S.; ZOLLWEG, J. E.; MALONE, S. D., 1983, Deep earthquakes beneath Mount St. Helens—Evidence for magmatic gas transport?*
- YOULD, T. L., 1983, Liquefaction investigations.
- ECOLOGY**
- ADAMS, A. B.; WALLACE, J. R.; JONES, J. T.; MCELROY, W. K., 1986, Plant ecosystem resilience following the 1980 eruptions of Mount St. Helens, Washington.
- BROWN, TONY, 1986, Life on a blasted island.
- DOUGLAS, JOHN, 1981, Mount Saint Helens—The ecology of a holocaust.
- ENGIBOUS, J. C.; BUSTAD, L. K.; KENNEDY, R. A.; KLOCK, G. O.; KLOSTERMEYER, E. C.; PRESTON, R. P., 1982, Impact of Mount St. Helens eruption on ecosystems.
- FRANKLIN, J. F.; MACMAHON, J. A.; SWANSON, F. J.; SEDELL, J. R., 1985, Ecosystem responses to the eruption of Mount St. Helens.
- FRANZ, E. H., 1986, Dynamic model of the volcanic landscape—Rationale and relationships to the theory of disturbance.
- MACMAHON, J. A., 1982, Mount St. Helens revisited.
- PARDO, RICHARD, 1980, Rehabilitating St. Helens.
- WASHINGTON STATE GAME DEPARTMENT, 1981, Mount St. Helens blast zone—Land management recommendations.
- ECONOMIC EFFECTS**
- BURKET, S. D.; FURLOW, E. P.; GOLDING, P. R.; GRANT, L. C.; LIPOVSKY, W. A.; LOPP, T. G., 1980, The economic effects of the eruption of Mt. St. Helens.
- DEACON, R. J.; REILLY, T. K.; THOMS, R. E., 1980, Preliminary field report of destruction caused by Mt. St. Helen's eruption [abstract].
- DILLMAN, J. J.; ROBERTS, M. L., 1982, The impact of the May 18 Mount St. Helens ashfall—Eastern Washington residents report on housing-related damage and cleanup.
- DILLMAN, R. D.; HINKLE, R. E.; KERR, R. L., 1981, High-altitude radar assessment of the damage caused by the volcanic eruption of Mount St. Helens.
- HALLAGAN, WILLIAM, 1982, Cost function estimates of ash clean-up [abstract].
- HINKLE, R. E.; PRILL, J. C.; PRUITT, J. R., 1981, Mount St. Helens quick response damage assessment using high-altitude infrared photography.
- KIENLE, C. F., 1982, Impacts of the Mount St. Helens eruption on industry.
- MACCREADY, J. S., 1982, Some economic consequences of the eruptions.
- MCLUCAS, G. B., 1980, Cleanup and disposal of Mount St. Helens ash in eastern Washington.
- MCLUCAS, G. B., 1981, Mount St. Helens ash—Properties and possible uses [abstract].
- MOEN, W. S.; MCLUCAS, G. B., 1981, Mount St. Helens ash—Properties and possible uses.

- MOEN, W. S.; MCLUCAS, G. B., 1982, Mount St. Helens ash, some properties and possible uses.
- MUNRO, STERLING, 1980, Electric power.
- NEWHALL, C. G., 1984, Semiquantitative assessment of changing volcanic risk at Mount St. Helens, Washington.
- RAINIER NATIONAL BANK ECONOMICS DEPARTMENT, 1980, The economic impact of the eruptions of Mount St. Helens—Conclusion.
- RAINIER NATIONAL BANK ECONOMICS DEPARTMENT, 1980, The economic impact of the eruptions of Mount St. Helens—Local government finances.
- RAINIER NATIONAL BANK ECONOMICS DEPARTMENT, 1980, The economic impact of the eruptions of Mount St. Helens on agriculture.
- RAINIER NATIONAL BANK ECONOMICS DEPARTMENT, 1980, The economic impact of the eruptions of Mount St. Helens on tourism.
- RAINIER NATIONAL BANK ECONOMICS DEPARTMENT, 1980, The economic impact of the eruptions of Mount St. Helens, "The Columbia River and related waterways".
- RAINIER NATIONAL BANK ECONOMICS DEPARTMENT, 1980, The economic implications of the eruption of Mount St. Helens.
- SCHUSTER, R. L., 1983, Engineering aspects of the 1980 Mount St. Helens eruptions.
- SHOREY, E. F.; ROTH, L. H.; RIECK, R. W., 1983, Mount St. Helens ash—Suitability for use as engineered fill.*
- U.S. CONGRESS, SENATE COMMITTEE ON APPROPRIATIONS, 1980, Disaster assistance Pacific Northwest—Mount Saint Helens eruption; hearing before the Committee on Appropriations.
- U.S. CONGRESS, SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION, 1980, Mount St. Helens impact.
- U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY, 1980, Economic factors.
- U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY, 1980, Insurance concerns.
- U.S. GENERAL ACCOUNTING OFFICE, 1982, Federal involvement in the Mount St. Helens disaster—Past expenditures and future needs; Report to the Congress of the United States by the Comptroller General.
- U.S. INTERNATIONAL TRADE COMMISSION, 1980, The economic effects of the eruptions of Mt. St. Helens.
- WASHINGTON DEPARTMENT OF COMMERCE AND ECONOMIC DEVELOPMENT, 1961, The case for manufacturing expanded shale lightweight aggregate from Washington resources.
- WHEELER, CHRIS, 1980, Oregon.
- Economic geology, *see* MINERAL RESOURCES
- Electrical surveys, *see* GEOPHYSICS - ELECTRICAL SURVEYS
- Elk Lake area, *see* MOUNT ST. HELENS SEISMIC ZONE
- EMERGENCY RESPONSE
- Note: Describes plans or actions to deal with potential or existant problems from eruption activity.
- see also*
- COWLITZ RIVER - PLANNING AND EMERGENCY RESPONSE
- GEOLOGIC HAZARDS
- PLANNING
- TOUTLE RIVER SYSTEM - PLANNING AND EMERGENCY RESPONSE
- ALLEN, J. E., 1982, Scientific access to Mount St. Helens, 1980 [abstract].
- AUSTEN, RUTH; KERR, J. W., 1986, Long Valley, California—The Mount St. Helens legacy.
- BARNES, REY, 1986, Broadcasting in the public necessity—Mount St. Helens 1980.
- BENTLEY, F. G., COMPILER, 1984, The mitigation of ashfall damage to public facilities—Lessons learned from the 1980 eruptions of Mount St. Helens, Washington.
- BOYD, L. L., 1980, Washington State University College of Agriculture facilities and faculty expertise.
- BROWN, J. J., 1982, Role of the U.S. Forest Service at Mount St. Helens.
- BROWN, W. L., 1980, A perspective on disaster-related research.
- BROWN, W. L., 1982, Areas of controversy.
- CHANAY, NEALE, 1980, Emergency measures.
- COLLIER, C. R.; MCGAVOCK, E. H.; MEYER, WILLIAM, 1980, Hydrologic surveillance and investigation in Mt. St. Helens area by Water Resources Division, U.S. Geological Survey [abstract].
- CUNNINGHAM, ALEX, MODERATOR, 1982, Panel discussion II—Emergency problems following the eruption.

- CURL, H. C., JR., 1980, Downstream fisheries.
- DUDLEY, HARRY, 1980, Marine activity.
- DURKIN, TERRY, 1980, Downstream fisheries.
- EDMONDSON, B. L., 1982, Impact of the eruptions on city government.
- EVANS, DALE, 1980, Downstream fisheries.
- GEISSLER, ERNEST, 1986, Inter-agency cooperation in a major emergency—Mount St. Helens, 1980 [abstract].
- GORDON, MEL, 1980, Concluding remarks.
- GORDON, MEL, 1980, Opening remarks.
- GORDON, MEL; PROCTOR, GEORGE, CHAIRMEN, 1980, The effects of the Mount St. Helens eruption on water resources—A forum held June 12, 1980.
- HALL, C. W., 1980, Capabilities for volcanic-ash related research.
- HALLAUER, W. G., 1980, Washington.
- HARRISON, R. D., 1982, Soil Conservation Service involvement in Mount St. Helens and impacted areas.
- HINKLE, R. E.; EAV, B. B.; PRILL, J. C.; JOHNSON, T. E.; DILLMAN, R. D., 1980, Mount St. Helens quick response damage assessment—Final report.
- HULL, A. N., 1980, Atmospheric events.
- HULL, A. N., 1982, Mount St. Helens—Hydrologic response by the National Weather Service and subsequent aftereffects [abstract].
- KARTEZ, J. D., 1982, Emergency planning implications of local governments' adaptive response to Mount St. Helens.*
- KARTEZ, J. D.; KELLEY, W. J. (BILL), 1982, Emergency planning and the adaptive local response to Mount St. Helens' eruption [abstract].
- KELLEY, W. J.; KARTEZ, J. D., 1986, Social response demands—Implications for disaster preparedness [abstract].
- KENT, DAVE, 1980, Columbia River estuary.
- KERR, J. W., 1980, Emergency measures.
- KERR, J. W., 1980, Mount St. Helens, May 18th, 1980—Learning the hard way.
- KERR, J. W., 1981, Mount St. Helens report—Emergency measures taken to meet crisis.
- LANGRAN, KENNETH; TERICH, THOMAS, 1982, Government response to the Mount St. Helens disaster—A study of perceptions and attitudes in the Longview-Kelso and Yakima areas.
- LAWYER, D. E., 1980, Navigation and flooding.
- LODATO, PAUL, 1980, Mount St. Helens—A different disaster.
- MAY, P. J., 1984, Recovering from catastrophe—Mount St. Helens and federal disaster relief policy.
- MILLER, C. D.; CRANDELL, D. R.; MULLINEAUX, D. R., 1984, Recommendations for volcanic-hazards assessments and land-use planning based on U.S. Geological Survey experiences during the 1980 eruptions of Mount St. Helens, State of Washington, U.S.A.
- MONTAGUE, JOHN, 1986, Mount St. Helens—Invaluable lessons in disaster planning, preparedness and resource allocation [abstract].
- MULLINEAUX, D. R., 1982, U.S. Geological Survey role at Mount St. Helens before and during early 1980—Geologic studies and coordination with public agencies.
- MUNRO, STERLING, 1980, Electric power.
- NELSON, LES, 1982, Local government's experience at Mount St. Helens.
- NIELSON, LYMAN, 1980, Water quality and municipal water supply.
- PETERSON, D. W., 1981, The role of the U.S. Geological Survey at Mount St. Helens [abstract].
- PETERSON, D. W., 1982, Operations of the U.S. Geological Survey at Mount St. Helens.
- PETERSON, D. W., 1986, Mount St. Helens and the science of volcanology—A five year perspective.
- PREUSSER, H. L. R., 1985, Der Ausbruch des Mount St. Helens 1980—Administrative Reaktionen und ihre raeumlichen Auswirkungen [The 1980 eruption of Mount St. Helens—Administrative reactions and their areal effect].
- PROCTOR, GEORGE, 1980, Introductory remarks.
- PRUITT, J. R.; EDGREN, JIM; HAMNER, BOB; HAUGEN, GORDON; HOWES, STEVE; PATTERSON, PETE; STEWARD, JOHN; SWANK, JERRY, 1980, Mount St. Helens emergency watershed rehabilitation report.
- REED, S. W., 1980, Idaho.
- ROWLEY, P. D.; HAIT, M. H., JR.; RUSSELL-ROBINSON, S. L.; BUCHANAN-BANKS, J. M.; CASHMAN, K. V., 1986, The role of the U.S. Geological Survey in providing information to news media about the 1980 eruptions of Mount St. Helens.
- SAARINEN, T. F.; SELL, J. L., 1985, Warning and response to the Mount St. Helens eruption.
- ST. HELENS FOREST LAND RESEARCH COOPERATIVE, 1982, Research associated with Mt. St. Helens and the volcanic eruptions of 1980.

ST. HELENS FOREST LAND RESEARCH COOPERATIVE, 1983, Scientific research associated with Mount St. Helens as of June 1983.

SCHEUNEMANN, A. C., 1980, Report to the Washington State University Conference on the Aftermath of Mt. St. Helens.

SHAW, GARY, 1980, Upstream fisheries and wildlife.

SOREM, R. K., 1980, Final report of the discussion group devoted to the geological aspects of the aftermath of the Mt. St. Helens eruption of May 18, 1980.

SORENSEN, J. H., 1981, Emergency response to Mount St. Helens' eruption—March 20 to April 10, 1980.

SORENSEN, J. H., 1982, Emergency planning for rare events—Some behavioral science lessons for volcano hazard management.

STEVENS, BOB, 1980, Emergency measures.

STEVENS, R. C., 1982, Volcano emergency involvement at the federal level.

STROH, J. R.; HARRISON, R. D., 1982, Soil Conservation Service involvement on watersheds affected by Mount St. Helens.

TAKAHASHI, TAMOTSU, 1981, Volcanic hazard phenomena and response of people due to the eruption of Mount St. Helens.

U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY, 1980, Network closeout.

U.S. GENERAL ACCOUNTING OFFICE, 1982, Federal involvement in the Mount St. Helens disaster—Past expenditures and future needs; Report to the Congress of the United States by the Comptroller General.

WARREN, G. H.; KAUFMAN, D. E.; HAMMOND, K. A., 1982, Come hell and high water—Mt. St. Helens and the federal response on the lower Cowlitz River.

WASHINGTON DEPARTMENT OF EMERGENCY SERVICES, 1980, State of Washington hazard mitigation report for the eruption of Mt. St. Helens; FEMA-623-DR-WA declared May 21, 1980.

ENGINEERING GEOLOGY

see also

COLUMBIA RIVER - ENGINEERING GEOLOGY

COWLITZ RIVER - ENGINEERING GEOLOGY

DEBRIS DAMS

DREDGING

FLOOD HAZARDS

GEOLOGIC HAZARDS

HYDROLOGY - IMPACTS OF THE ERUPTIONS ON WATER QUALITY TOUTLE RIVER SYSTEM - ENGINEERING GEOLOGY TUNNELS VOLCANIC ASH - ENGINEERING ASPECTS

HARRISON, R. D., 1982, Soil Conservation Service involvement in Mount St. Helens and impacted areas.

PATTERSON, P. V., 1981, Post May 18, 1980, rapid response engineering geology [abstract].

SCHUSTER, R. L., 1981, Effects of the eruptions on civil works and operations in the Pacific Northwest.

SCHUSTER, R. L., 1983, Engineering aspects of the 1980 Mount St. Helens eruptions.*

SCHUSTER, R. L., 1984, Engineering studies, May 1980 eruption, Mount St. Helens [abstract].

SCHUSTER, R. L.; MULLINEAUX, D. R., 1982, Engineering geologic aspects of volcanic activity [abstract].

U.S. ARMY CORPS OF ENGINEERS, PORTLAND DISTRICT, 1980, Mt. Saint Helens recovery operations, Cowlitz County, Washington, Columbia County, Oregon; draft environmental impact statement.

U.S. ARMY CORPS OF ENGINEERS, PORTLAND DISTRICT, 1980, Mt. Saint Helens recovery operations, Cowlitz County, Washington, Columbia County, Oregon; final environmental impact statement.

U.S. ARMY CORPS OF ENGINEERS, PORTLAND DISTRICT, 1984, Mount St. Helens, Washington feasibility report and environmental impact statement, final; Volume 1, Main report.

ENVIRONMENTAL IMPACT STATEMENTS

U.S. ARMY CORPS OF ENGINEERS, 1984, Alternative strategies for a permanent outlet for Spirit Lake near Mount St. Helens, Washington; final environmental impact statement.

U.S. ARMY CORPS OF ENGINEERS, PORTLAND DISTRICT, 1980, Mt. Saint Helens recovery operations, Cowlitz County, Washington, Columbia County, Oregon; draft environmental impact statement.

U.S. ARMY CORPS OF ENGINEERS, PORTLAND DISTRICT, 1980, Mt. Saint Helens recovery operations, Cowlitz County, Washington, Columbia County, Oregon; final environmental impact statement.

U.S. ARMY CORPS OF ENGINEERS, PORTLAND DISTRICT, 1984, Mount St. Helens, Washington feasibility report and environmental impact statement.*

U.S. FOREST SERVICE, 1981, Draft environmental impact statement—Mount St. Helens land management plan, Cowlitz, Lewis and Skamania Counties, Washington.

U.S. FOREST SERVICE, 1981, Final environmental impact statement—Mount St. Helens land management plan, Cowlitz, Lewis and Skamania Counties, Washington.

U.S. FOREST SERVICE, 1984, Mount St. Helens National Volcanic Monument, draft environmental impact statement, comprehensive management plan.

U.S. FOREST SERVICE, 1985, Mount St. Helens National Volcanic Monument, final environmental impact statement, comprehensive management plan.

Erosion

see

GEOMORPHOLOGY VOLCANIC ASH - EROSION

Eruption history

see

CHRONOLOGY AND HISTORY BEFORE 1980

CHRONOLOGY OF THE 1980 ERUPTION ACTIVITY

ERUPTION PREDICTION

BARTUSIAK, M. F., 1980, Lessons from the mountain—Mount St. Helen's spectacular show enables scientists to learn how to predict eruptions.

BEAULIEU, J. D.; PETERSON, N. V., 1981, Seismic and volcanic hazard evaluation of the Mount St. Helens area, Washington relative to the Trojan Nuclear Site, Oregon.*

BRANTLEY, STEVEN, 1985, Mount St. Helens study yields useful insights.

CARSON, R. J., 1983, Ground and aerial photography for monitoring and predicting volcanic activity, with emphasis on the 1980 eruption of Mount St. Helens, Washington.

CASADEVALL, T. J.; EWERT, J.; HARRIS, D. M.; ROSE, W. I., JR., 1982, Gas emissions and the prediction of eruptive behavior at Mount St. Helens, Washington [abstract].

CASADEVALL, T. J.; ROSE, W. I., JR.; GERLACH, T. M.; GREENLAND, L. P.; EWERT, J.; WUNDERMAN, R. L.; SYMONDS, R. B., 1983, Gas emissions and the eruptions of Mount St. Helens through 1982.

CHADWICK, W. W., JR.; SWANSON, D. A.; IWATSUBO, E. Y.; HELIKER, C. C., 1982, Deformation of the crater floor at Mount St. Helens [abstract].

CHADWICK, W. W., JR.; SWANSON, D. A.; IWATSUBO, E. Y.; HELIKER, C. C.; LEIGHLEY, T. A., 1983, Deformation monitoring at Mount St. Helens in 1981 and 1982.

CRANDELL, D. R., 1976, Volcanic-hazards studies in the Pacific Northwest—A progress report [abstract].

CRANDELL, D. R.; MULLINEAUX, D. R., 1978, Potential hazards from future eruptions of Mount St. Helens volcano, Washington.*

CRANDELL, D. R.; MULLINEAUX, D. R., 1975, Appraising volcanic hazards of the Cascade Range.

CRANDELL, D. R.; MULLINEAUX, D. R.; MILLER, C. D., 1979, Volcanic-hazards studies in the Cascade Range of the western United States.

CRANDELL, D. R.; MULLINEAUX, D. R.; RUBIN, MEYER, 1975, Mount St. Helens volcano—Recent and future behavior.*

CRANDELL, D. R.; WALDRON, H. H., 1969, Volcanic hazards in the Cascade Range.*

DECKER, R. W., 1980, Forecasting the 1980 eruption of Mount St. Helens—A review [abstract].

DECKER, R. W., 1981, The 1980 activity—A case study in forecasting volcanic eruptions.

DZURISIN, DANIEL, 1982, Value of remote tilt monitoring to eruption prediction at Mount St. Helens, Washington [abstract].

DZURISIN, DANIEL, 1986, Recent eruptive activity, monitoring results and geophysical studies at Mount St. Helens, Washington [abstract].

DZURISIN, DANIEL; WESTPHAL, J. A.; JOHNSON, D. J., 1983, Eruption prediction aided by electronic tiltmeter data at Mount St. Helens.

EARTH SCIENCE, 1985, Volcano yields data—Scientists gather earthquake-predicting information from five years of studying Mount St. Helens.

FINK, J. H.; POLLARD, D. D.; DONNELLY-NOLAN, J., 1982, Structural relationships among feeder dikes, silicic domes and ground cracks in the Medicine Lake highland and Mount St. Helens volcanoes [abstract].

HARNEY, THOMAS, 1980, Mount St. Helens' past gives inkling of the future.

IWATSUBO, E. Y.; SWANSON, D. A., 1986, Geodetic monitoring and ground deformation at Mount St. Helens, Washington [abstract].

- KERR, R. A., 1980, Mount St. Helens—An unpredictable foe.
- KERR, R. A., 1981, Mount St. Helens—Volcanoes, quakes, and the connectedness of things.
- KERR, R. A., 1982, The volcano behaves itself, sort of.
- KIEFFER, H. H.; FRANK, D. G.; FRIEDMAN, J. D., 1981, Thermal infrared surveys at Mount St. Helens—Observations prior to the eruption of May 18.
- LIPMAN, P. W.; MOORE, J. G.; SWANSON, D. A., 1980, Bulging of the north flank of Mount St. Helens volcano before the 5/18 eruption—Geodetic data [abstract].
- MALONE, S. D., 1982, The Mount St. Helens eruptions—Seismic monitoring for eruption prediction.
- MALONE, S. D., 1986, Predicting eruptions of Mt. St. Helens using seismic means.
- MALONE, S. D.; BOYKO, CHRISTINA, 1982, Volcanic earthquakes, and the precursors to the 1981 eruptions of Mount St. Helens [abstract].*
- MALONE, S. D.; BOYKO, CHRISTINA; WEAVER, C. S., 1983, Seismic precursors to the Mount St. Helens eruptions in 1981 and 1982.
- MALONE, S. D.; ENDO, E. T.; WEAVER, C. S.; RAMEY, J. W., 1981, Seismic monitoring for eruption prediction.
- MELSON, W. G., 1982, The cyclical nature of explosive volcanism—A petrological approach to volcano forecasting.
- MILLER, C. D.; MULLINEAUX, D. R.; CRANDELL, D. R., 1981, Hazards assessments at Mount St. Helens.
- MULLINEAUX, D. R.; CRANDELL, D. R., 1980, Effectiveness of volcanic hazards assessments at Mount St. Helens, Washington [abstract].
- MURRAY, T. L.; ENDO, E. T., 1986, BOB, a computer graphics tool for real-time integrated volcanic monitoring [abstract].
- NEWHALL, C. G., 1981, Probabilistic hazard assessment at Mount St. Helens [abstract].
- PEVEAR, D. R., 1980, Clay minerals in the 1980 Mt. St. Helens tephra—Possible use in predicting eruptions [abstract].
- POLLARD, D. D., 1984, Volcanic tremor and hydrothermal wedging [abstract].
- SATO, MOTOAKI; MCGEE, K. A.; CASADEVALL, T. J., 1981, Continuous monitoring of hydrogen at Mount St. Helens, Washington, U.S.A. [abstract].
- SOUTHER, J. G.; TILLING, R. I.; PUNONGBAYAN, R. S., 1984, Forecasting eruptions in the circum-Pacific.
- SWANSON, D. A., 1983, Forecasts and predictions [abstract].
- SWANSON, D. A., 1986, Measurements of ground deformation to forecast and predict eruptions [abstract].
- SWANSON, D. A.; CASADEVALL, T. J.; DZURISIN, DANIEL; HOLCOMB, R. T.; NEWHALL, C. G.; MALONE, S. D.; WEAVER, C. S., 1985, Forecasts and predictions of eruptive activity at Mount St. Helens, USA—1975–1984.
- SWANSON, D. A.; CASADEVALL, T. J.; DZURISIN, DANIEL; MALONE, S. D.; NEWHALL, C. G.; WEAVER, C. S., 1983, Predicting eruptions at Mount St. Helens, June 1980 through December 1982.
- SWANSON, D. A.; CASADEVALL, T. J.; DZURISIN, DANIEL; NEWHALL, C. G.; MALONE, S. D.; WEAVER, C. S., 1984, Forecasts and predictions of eruptions at Mount St. Helens, USA [abstract].
- SWANSON, D. A.; CHADWICK, W. W., JR.; IWATSUBO, E. Y.; HELIKER, C. C., 1982, Endogenous growth of the Mount St. Helens dacite dome [abstract].
- SWANSON, D. A.; HOLCOMB, R. T., 1982, Forecasting eruptions at Mount St. Helens by monitoring ground deformation [abstract].
- SWANSON, D. A.; HOLCOMB, R. T.; LIPMAN, P. W.; MOORE, J. G.; HELIKER, C. C.; IWATSUBO, E. Y., 1981, Monitoring ground deformation to forecast eruptions at Mount St. Helens [abstract].
- TOKAREV, P. I., 1984, On the prediction of the place, time and energy and of danger of large explosions of andesitic volcanoes.
- TOKAREV, P. I., 1985, The prediction of large explosions of andesitic volcanoes.
- U.S. GEOLOGICAL SURVEY, 1984, Mount St. Helens activity [abstract].
- WEAVER, C. S.; ENDO, E. T.; MALONE, S. D.; NOSON, L. L., 1981, Predicting Mt. St. Helens eruptions [abstract].
- WEAVER, C. S.; MALONE, S. D., 1976, Mt. Saint Helens seismic events—Volcanic earthquakes or glacial noises?
- WEAVER, C. S.; ZOLLWEG, J. E., 1983, Deep earthquakes and possible magmatic gas transport at Mount St. Helens, Washington [abstract].*
- WEAVER, C. S.; ZOLLWEG, J. E.; MALONE, S. D., 1983, Deep earthquakes beneath Mount St. Helens—Evidence for magmatic gas transport?
- WESSON, R. L., 1983, The eruption of Mount St. Helens—Entering the era of real-time geology.
- YAMAGUCHI, D. K., 1985, Tree-ring evidence for a two-year interval between recent prehistoric explosive eruptions of Mount St. Helens.

Fargher Lake, see LAKES - FARGHER LAKE

Fawn Lake, see LAKES - FAWN LAKE

Financial effects, see ECONOMIC EFFECTS

Findley Lake, see LAKES - FINDLEY LAKE

Fish, see BIOLOGY - FAUNA - AQUATIC

FLOOD HAZARDS

see also

ENGINEERING GEOLOGY GEOLOGIC HAZARDS

- BISSELL, V. C.; HUTCHEON, R. J., 1984, Forecasting and warning for Mt. St. Helens streams.
- BROWN, B. J.; THOMAS, W. A., 1983, Mt. St. Helens impact on Cowlitz River sedimentation.
- CARPENTER, P. J., 1982, New lakes of North Fork Toutle River—Mount St. Helens.
- CHILDEERS, DALLAS; CARPENTER, P. J., 1985, A warning system for hazards resulting from breaches of lake blockage, Mount St. Helens, Washington.
- CLARY, BRUCE; MACFADDEN, SANDRA; CEASE, RONALD, 1982, Floodplain management in the Mt. St. Helens watershed—Implications for local government.
- CUMMANS, J. E.; COLLIER, C. R., 1980, Mudflows, floods, and sediment deposition resulting from the May 18 eruption of Mt. St. Helens by Water Resources Division, U.S. Geological Survey [abstract].
- DUNNE, THOMAS; LEOPOLD, L. B., 1981, Flood and sedimentation hazards in the Toutle and Cowlitz River system as a result of the Mt. St. Helens eruption.
- HULL, A. N., 1980, Atmospheric events.
- JENNINGS, M. E.; SCHNEIDER, V. R.; SMITH, P. E., 1981, Computer assessments of potential flood hazards from breaching of two debris dams, Toutle River and Cowlitz River systems.
- JENNINGS, M. E.; SCHNEIDER, V. R.; SMITH, P. E., 1981, Emergency assessment of Mount St. Helens post-eruption flood hazards, Toutle and Cowlitz Rivers, Washington.
- KRESCH, D. L.; LAENEN, ANTONIUS, 1984, Preliminary estimate of possible flood elevations in the Columbia River at Trojan Nuclear Power Plant due to failure of debris dam blocking Spirit Lake, Washington.
- LAWYER, D. E., 1980, Corps of Engineers response to the eruption of Mt. St. Helens.

LETTENMAIER, D. P.; BURGES, S. J., 1981, Estimation of flood frequency changes in the Toutle and Cowlitz River basins following the eruption of Mt. St. Helens.

LOMBARD, R. E., 1982, Sediment deposition in the Cowlitz River.

LOMBARD, R. E., 1986, Channel geometry, flood elevations, and flood maps, lower Toutle and Cowlitz Rivers, Washington, June 1980 to May 1981.

MARTINSON, H. A.; HAMMOND, H. E.; MAST, W. W.; MANGO, P. D., 1986, Channel geometry and hydrologic data for six eruption-affected tributaries of the Lewis River, Mount St. Helens, Washington, water years 1983-84.

MEYER, WILLIAM; SABOL, M. A.; GLICKEN, H. X.; VOIGHT, BARRY, 1985, The effects of ground water, slope stability, and seismic hazard on the stability of the South Fork Castle Creek blockage in the Mount St. Helens area, Washington.

ORWIG, C. E.; MATHISON, J. M., 1982, Forecasting considerations in Mount Saint Helens affected rivers.

RAYNOR, J. M., 1981, Mount St. Helens—One year later.

SCHNEIDER, V. R.; JENNINGS, M. E., 1980, Flood hazard assessments—Mt. St. Helens [abstract].

SIKONIA, W. G., 1985, Impact on the Columbia River of an outburst of Spirit Lake.

STOCKTON, S. L., 1983, Engineering response to flood hazards created by the eruption of Mount St. Helens.

U.S. ARMY CORPS OF ENGINEERS, COMMITTEE ON CHANNEL STABILIZATION, 1985, Columbia-Cowlitz-Toutle Rivers, Washington, restoration subsequent to Mt. St. Helens eruption.

U.S. ARMY CORPS OF ENGINEERS, PORTLAND DISTRICT, 1984, Mount St. Helens, Washington feasibility report and environmental impact statement, final; Volume 1, Main report.

U.S. CONGRESS, HOUSE COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION, 1985, Mount St. Helens sediment control, Washington (Toutle, Cowlitz, and Columbia Rivers).

U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY, 1980, Flood hazard reduction in the vicinity of Mount St. Helens.

VACCARO, J. J., 1982, Toutle River basin rainfall-runoff sediment model.

WAITT, R. B., JR.; MACLEOD, N. S., 1983, Far-traveling snow avalanches and floods from minor explosive eruptions at snow-clad Mount St. Helens, Washington [abstract].

WITTEN, DON, 1985, Mt. St. Helens—Delayed action danger.

Forestry, see BIOLOGY - FLORA - FORESTRY

FUMAROLES

BARNES, IVAN, 1985, Mineral-water reactions in metamorphism and volcanism.

CHUAN, R. L.; ROSE, W. I., JR.; SYMONDS, R. B.; LICHTE, F. E.; KEITH, T. E. C., 1985, Particle flux in the Mt. St. Helens plume and fumaroles during a quiescent period in August 1985 [abstract].

FINNEGAN, D. L., 1984, The chemistry of trace elements and acidic species in fumarolic emissions.*

GERLACH, T. M.; CASADEVALL, T. J., 1986, Evaluation of gas data from high-temperature fumaroles at Mount St. Helens, 1980-1982.

GERLACH, T. M.; CASADEVALL, T. J., 1986, Fumarole emissions at Mount St. Helens volcano, June 1980 to October 1981—Degassing of a magma-hydrothermal system.

GERLACH, T. M.; CASADEVALL, T. J.; GREENLAND, L. P.; LE GUERN, FRANCOIS, 1982, Fumarole gases and magma degassing at Mount St. Helens, 1980-81 [abstract].

GRAEBER, E. J.; GERLACH, T. M.; HLAVA, P. F., 1982, Metal transport and deposition in high-temperature fumaroles at Mount St. Helens [abstract].

KEITH, T. E. C.; CASADEVALL, T. J.; JOHNSTON, D. A., 1981, Fumarole encrustations—Occurrence, mineralogy, and chemistry.

KEITH, T. E. C.; CASADEVALL, T. J.; JOHNSTON, D. A., 1984, Fumarolic incrustation at Mount St. Helens [abstract].

PHILLIPS, K. N., 1941, Fumaroles of Mount St. Helens and Mount Adams.

GENERAL WORKS

Note: Includes materials, whether scientific or popular works, which are overall descriptions of Mount St. Helens.

GENERAL WORKS (BEFORE 1980)

COOMBS, H. A., 1960, Catalogue of the active volcanoes and solfatara fields of the United States of America—Mt. St. Helens.

EKMAN, L. C., 1962, Scenic geology of the Pacific Northwest.

ELLIOTT, C. P., 1897, Mount St. Helens.

HALEY, DELPHINE, 1970, Washington's five volcanoes—Quiet but not extinct.

HAMMOND, P. E., 1974, The pulse of the Cascade volcanoes.

HARRIS, S. L., 1980, Fire and ice—The Cascade volcanoes; revised edition.*

HARRIS, S. L., 1986, The other Cascade volcanoes—Historic eruptions at Mount St. Helens' sister peaks.

JILLSON, W. R., 1917, The volcanic activity of Mount St. Helens and Mount Hood in historical time.

KIVER, E. P., 1982, The Cascade volcanoes—Comparison of geologic and historic records.

LAURENCE, HERBERT, 1954, Geological history of Mount St. Helens.

MAZAMA RESEARCH COMMITTEE, 1943, Aerial photographs of Mount St. Helens.

OTHBERG, K. L., 1973, "Friends of the Pleistocene" meet at Mount St. Helens.

PARRISH, J. L., 1906, Eruption of Mount St. Helens.

PARSONS, M. R., 1910, On Mount St. Helens with the Mazamas.

ROSS, E. L., 1903, First white woman on Mt. St. Helens.

STRONG, EMERGY, 1969, Early accounts of the eruption of Mt. St. Helens.

WASHINGTON DIVISION OF GEOLOGY AND EARTH RESOURCES, 1980, A pre-1980 eruption description of Mount St. Helens.

WILLIAMS, J. H., 1912, Guardians of the Columbia, Mount Hood, Mount Adams and Mount St. Helens.

GENERAL WORKS (1980 AND POST 1980)

AITKEN, CLARENE, 1980, Mt. St. Helens—Stalking a volcano.

ALLEN, J. E., 1981, Why do volcanoes erupt?

ARNOLD, SCOTT, 1984, Discovering Mount St. Helens—A guide to Mount St. Helens National Volcanic Monument.

AUSTIN, S. A., 1985, Modern catastrophic processes at Mount St. Helens and their implications for the stratigraphic record [abstract].

AYLESWORTH, T. G.; AYLESWORTH, V. L., 1983, The Mount St. Helens disaster—What we've learned.

BEALS, H. K.; CLINE, SCOTT; KOLER, J. M., 1981, On the mountain's brink—A Forest Service history of the 1980 Mount St. Helens volcanic emergency.

BEE, SUE, 1980, Volcano.

- BERNEX, RENE, 1980, Apres le reveil du mont Saint-Helens (U.S.A.) [After the awakening of Mount St. Helens (U.S.A.)].
- BODELLE, JACQUES, 1981, L'eruption du Mont St. Helens [The eruption of Mount St. Helens].
- BODELLE, JACQUES, 1981, L'eruption du Mont Saint-Helens—Quelles lecons en tirer? [The eruption of Mount St. Helens—What are the lessons learned?].
- BOIVIN, PIERRE; CAMUS, GUY; DE GOER, ALAIN; GOURGAUD, ALAIN; KIEFFER, GUY; MERGOIL, JEAN; VINCENT, P. M., 1980, Le reveil des volcans [Reawakening of volcanoes].
- CAHILL, TIM, 1980, Volcanoes of America—Fiery death, fiery birth.
- CANADIAN MINING JOURNAL, 1980, Mount St. Helens eruption—The first months.
- CASSIDY, J. J., CHAIRPERSON, 1980, Proceedings of Washington State University's conference on the aftermath of Mt. St. Helens, July 8-9, 1980.
- CHRISTIANSEN, R. L., 1980, Eruption of Mt. St. Helens—Volcanology.
- CHRISTIANSEN, R. L.; PETERSON, D. W., 1981, The 1980-81 activity and some results of monitoring and research at Mount St. Helens, U.S.A. [abstract].
- COBURN, JOANN, 1980, Mount St. Helens—Primed for explosion.
- COFFIN, H. G., 1983, Mount St. Helens and Spirit Lake.
- COLINVAUX, P. A., 1984, The blessed event at Mt. St. Helens—A scientist's view.
- CRANDELL, D. R.; MULLINEAUX, D. R., 1980, Mount St. Helens volcano.
- DEACON, R. J.; REILLY, T. K.; THOMS, R. E., 1980, Preliminary field report of destruction caused by Mt. St. Helen's eruption [abstract].
- DECKER, R. W.; DECKER, BARBARA, 1981, The eruptions of Mount St. Helens.
- DECKER, R. W.; DECKER, BARBARA, 1981, Volcanoes.
- DOHERTY, D. J.; LOWRIE, D. J., 1980, The early stages of the eruption of Mount St. Helens.
- FAIRCHILD, L. H., 1986, Mt. St. Helens—The first 6 years.
- FIKSDAL, A. J., 1981, The eruption of Mount St. Helens [abstract].
- FOXWORTHY, B. L.; HILL, MARY, 1983, Volcanoes of the Cascade Range in North America.
- GEIPEL, R., 1981, Mount St. Helens.
- GEOLOGICAL SOCIETY OF THE OREGON COUNTRY, 1980, Volcano.
- GODCHAUX, M. M., 1981, Mount St. Helens—Window into creation.
- GORDON, MEL, 1980, Concluding remarks.
- GORDON, MEL, 1980, Opening remarks.
- GRAUER, JACK, 1980, What next, Mount St. Helens?
- HAMMOND, P. E., 1980, Mt. St. Helens.
- HAMMOND, P. E., 1980, Mt. St. Helens adds fireworks in Cascades.
- HARRIS, S. L., 1980, Fire and ice—The Cascade volcanoes; revised edition.
- HICKSON, PAUL; HICKSON, C. J., 1980, We watched Mount St. Helens blow its top.
- KELLER, S. A. C., EDITOR, 1982, Mount St. Helens—One year later; Proceedings of a conference held at Eastern Washington University, May 18, 1981.
- KELLER, S. A. C., EDITOR, 1986, Mount St. Helens—Five years later.
- KELLER, S. A. C., EDITOR; AND OTHERS, 1981, Mount St. Helens—One year later; Abstracts and directory.
- KERR, R. A., 1982, The volcano behaves itself, sort of.
- KLUGE, P. F., 1980, Awesome message of Mt. St. Helens' mammoth eruption.
- LANSFORD, HENRY, 1981, Vulcan's chimneys—Subduction-zone volcanism.
- LOGAN, R. L.; MANSON, C. J., 1983, Mount St. Helens—Annotated index to video archives.
- MILLER, M. M., 1981, Mount St. Helens eruption.
- MOLENAAR, DEE, 1981, Oblique-view pictorial landform map—Souvenir of an eruption—Mount St. Helens country, Washington.
- NASSAU, K., 1981, Plates, quakes, volcanoes and Mt. St. Helens.*
- PASSERO, R. N., 1981, Environmental geology.
- PETERSON, D. W., 1981, An overview of activity at Mount St. Helens, Washington, since May 1980 [abstract].
- PETERSON, D. W., 1986, Mount St. Helens and the science of volcanology—A five year perspective.
- PETERSON, D. W., 1986, Summary of Mt. St. Helens activity, 1980-1986.
- PICARD, M. D., 1982, Exploding volcanoes.
- PROCHASKA, CAROL, 1981, Mount St. Helens—The aftermath of ash Sunday.
- REAM, L. R., 1983, Northwest volcanoes, a roadside geologic guide.
- REAM, L. R.; JACKSON, BOB, 1980, St. Helens.

- ROSENBAUM, J. G.; WAITT, R. B., JR., 1981, Summary of eyewitness accounts of the May 18 eruption.
- ROSENFELD, C. L., 1980, Observations on the Mount St. Helens eruption.
- ROSENFELD, C. L.; COOKE, ROBERT, 1982, Earthfire, the eruption of Mount St. Helens.
- ST. HELENS FOREST LAND RESEARCH COOPERATIVE, 1982, Research associated with Mt St. Helens and the volcanic eruptions of 1980.
- SAWADA, YOSHIHIRO, 1980, Volcanic eruption in the contiguous United States—The great eruption of Mt. St. Helens.
- SCHMINKE, H.-U., 1981, Die Mount-St.-Helens-eruptionen 1980 [The eruptions of Mount St. Helens in 1980].
- STEPHENS, JERRY, 1980, Geological occurrences.
- STOFFEL, D. B.; STOFFEL, K. L., 1980, Mt St. Helens seen close up on May 18.
- SUNSET MAGAZINE, 1983, Getting close to Mount St. Helens.
- THOMPSON, ROGER, 1983, Volcanoes.
- TILLING, R. I., 1980, A volcanologist's perspective.
- TILLING, R. I., 1981, Overview of Mount St. Helens volcanic eruption.
- TILLING, R. I., 1983, Monitoring active volcanoes.
- TILLING, R. I., 1984, Eruptions of Mount St. Helens—Past, present, and future.
- TOKAREV, P. I., 1981, Izverzheniya vulkana Sent-Khelens v marte-avguste 1980 g. [The St. Helens eruption in March-August 1980].
- U.S. GEOLOGICAL SURVEY, 1982, Volcanic rocks and processes, Mount St. Helens.
- U.S. GEOLOGICAL SURVEY, 1984, Cascades Volcano Observatory [abstract].
- VOGT, H.-H., 1981, St. Helens—Ein Vulkan erwacht [Mount St. Helens—A volcano wakes up].
- VOLCANO NEWS, 1985, Mt. St. Helens field workshop, 13-17 August 1984.
- WASHINGTON DIVISION OF GEOLOGY AND EARTH RESOURCES, 1981, Mount St. Helens fact sheet.
- GENERAL WORKS (1980) - PICTORIAL**
- BOLY, WILLIAM, 1980, Fire Mountain—The eruptions of Mount St. Helens.
- CAHILL, TIM, 1980, Volcanoes of America—Fiery death, fiery birth.
- COLUMBIAN, 1980, Mount St. Helens holocaust—A diary of destruction.
- DAILY NEWS STAFF; JOURNAL-AMERICAN STAFF, 1980, Volcano—The eruption of Mount St. Helens.
- DORAN, JEFFRY, 1980, Search on Mount St. Helens.
- EVERETT HERALD; WESTERN SUN, 1980, Mount St. Helens erupts.
- FINDLEY, ROWE, 1981, Mount St. Helens aftermath—The mountain that was—and will be.
- FINDLEY, ROWE, 1981, St. Helens, mountain with a death wish.
- GEO-Graphics, 1980, Mount St. Helens—Mountain of fire.
- HOLMES, K. L., 1980, Mount St. Helens—Lady with a past.
- IKENBERRY, LARRY, 1980, St. Helens—The changing mountain.
- KELSO, LINDA, 1980, Mount St. Helens and other volcanoes of the west.
- KELSO, LINDA; SHANGLE, R. D., 1980, Mount St. Helens volcano.
- KELSO, LINDA; SHANGLE, R. D., 1980, Volcano—First seventy days, Mount St. Helens, 1980.
- NOKES, J. R., 1980, Mount St. Helens—The volcano.
- PALMER, L. A., 1980, Mt. St. Helens—The volcano explodes.
- POSTREL, DANIEL; GUGGENHEIM, G. A., 1980, The lady awakens—Mount St. Helens, 1980.
- RADKE, L. F.; HOBBS, P. V., 1980, Observations (pictorial) of Mt. St. Helens in eruption [abstract].
- ROBERTS, DON; ROBERTS, DIANA, 1980, Mount St. Helens—The volcano of our time.
- RONNHOLM, KEITH, 1981, Photographic documentation of the eruption of Mt. St. Helens, 8:32 am, May 18, 1980 [abstract].
- ROSENFELD, C. L.; COOKE, ROBERT, 1982, Earthfire, the eruption of Mount St. Helens.
- SEDELL, J. R.; FRANKLIN, J. F.; SWANSON, F. J., 1980, Out of the ash.
- TIME-LIFE BOOKS, 1982, The cataclysm on St. Helens.
- WILLIAMS, CHUCK; ATKESON, RAY, 1980, Mount St. Helens—A changing landscape.

Geochemistry*see*

IGNEOUS PETROLOGY - GEOCHEMISTRY
 LAKES - GEOCHEMISTRY
 MASS MOVEMENTS - LAHARS AND
 MUDFLOWS - GEOCHEMISTRY
 VOLCANIC ASH - GEOCHEMISTRY
 VOLCANIC GASES - GEOCHEMISTRY
 VOLCANIC PLUME - GEOCHEMISTRY

GEOCHRONOLOGY*see also*

CHRONOLOGY AND HISTORY BEFORE
 1980
 CHRONOLOGY OF THE 1980 ERUPTIVE
 ACTIVITY

- BENNETT, J. T.; KRISHNASWAMI, S.; TUREKIAN, K. K.; MELSON, W. G.; HOPSON, C. A., 1982, The uranium and thorium decay series nuclides in Mt. St. Helens effusives.
- BRANTLEY, STEVEN; YAMAGUCHI, D. K.; CAMERON, KENNETH; PRINGLE, PATRICK, 1986, Tree-ring dating of volcanic deposits.
- COCHRAN, B. D., 1982, Preliminary petrography of primary and secondary, redeposited tephras from the 1980 Mount St. Helens eruption [abstract].
- COCHRAN, B. D., 1985, Age of late Quaternary surface ruptures along the Thousand Springs-MacKay segment of the Lost River Range fault system.
- CORMIE, A. B.; HUNTLEY, D. J.; NELSON, D. E., 1982, Identifying tephras by alpha counting.
- CORMIE, A. B.; NELSON, D. E., 1983, Energy-dispersive x-ray fluorescence analysis as a rapid method for identifying tephras.
- CRANDELL, D. R.; MULLINEAUX, D. R.; RUBIN, MEYER; SPIKER, ELLIOTT; KELLEY, M. L., 1981, Radiocarbon dates from volcanic deposits at Mount St. Helens, Washington.
- DAVIS, P. T., 1982, Tephrochronology, Davis Lake, southwest Washington [abstract].*
- DAVIS, P. T.; BARNOSKY, C. W.; STUIVER, MINZE, 1982, A 20,000 yr record of volcanic ashfalls, Davis Lake, southwestern Washington [abstract].
- DILLER, J. S., 1899, Latest volcanic eruptions on the Pacific coast.

- DUNBAR, N. W.; DAVIS, P. T.; MAROTTA, D. A., 1983, Wavelength-dispersive x-ray fluorescence analysis of Cascade Range tephras in lake sediments, SW Washington [abstract].
- FEDERMAN, A. N., 1983, Correlation of tephra layers on the Columbia River Plateau, south-central Washington [abstract].
- FRITZ, L. G.; HILTABRAND, R. R., 1972, Correlation of St. Helens, Mazama and Glacier Peak ashes using x-ray diffraction [abstract].
- HAMMOND, P. E.; KOROSEC, M. A., 1983, Geochemical analyses, age dates, and flow-volume estimates for Quaternary volcanic rocks, southern Cascade Mountains, Washington.
- HEUSSER, C. J.; HEUSSER, L. E., 1980, Sequence of pumiceous tephra layers and the late Quaternary environmental record near Mount St. Helens.
- JILLSON, W. R., 1917, New evidence of a recent volcanic eruption on Mt. St. Helens, Washington.
- KRISHNASWAMI, S.; BENNETT, J. T.; MONAGHAN, M.; TUREKIAN, K. K.; MELSON, W. G.; HOPSON, C. A., 1981, Uranium and thorium decay series nuclide concentrations in Mt. St. Helens eruptives [abstract].
- LAWRENCE, D. B., 1938, Trees on the march.
- LAWRENCE, D. B.; LAWRENCE, E. G., 1959, Radio-carbon dating of some events on Mount Hood and Mount St. Helens.
- MOODY, U. L., 1977, Correlation of flood deposits containing St. Helens set S ashes and the stratigraphic position of St. Helens set J and Glacier Peak ashes, central Washington [abstract].
- MULLINEAUX, D. R.; CRANDELL, D. R., 1960, Late Recent age of Mount St. Helens volcano, Washington.
- MULLINEAUX, D. R.; HYDE, J. H.; RUBIN, MEYER, 1972, Preliminary assessment of upper Pleistocene and Holocene pumiceous tephra from Mount St. Helens, southern Washington [abstract].
- MULLINEAUX, D. R.; WILCOX, R. E.; EBAUGH, W. F.; FRYXELL, ROALD; RUBIN, MEYER, 1977, Age of the last major scabland flood of eastern Washington, as inferred from associated ash beds of Mount St. Helens set S [abstract].
- PORTER, S. C., 1981, Use of tephrochronology in the Quaternary geology of the United States.
- SARNA-WOJCICKI, A. M., 1982, Tephrochronology of the western region.*
- SMITH, D. R.; LEEMAN, W. P., 1982, Mineralogy and phase chemistry of Mount St. Helens tephra sets W and Y as keys to their identification.

- SYMONS, T. W., 1882, The upper Columbia River and the Great Plain of the Columbia.
- WESTGATE, J. A., 1977, Identification and significance of late Holocene tephra from Otter Creek, southern British Columbia, and localities in west-central Alberta.
- WESTGATE, J. A.; GORTON, M. P., 1981, Correlation techniques in tephra studies.
- WILLIAMS, R. W.; GILL, J. B.; BRULAND, K. W., 1983, Th and U decay series nuclides in historic arc lavas from Java, Japan and Mt. St. Helens [abstract].
- WOLFE, J. A., 1961, Age of the Keechelus andesitic series of the Cascade Range, Washington.
- YAMAGUCHI, D. K., 1983, New tree-ring dates for recent eruptions of Mount St. Helens.*
- YAMAGUCHI, D. K., 1985, Tree-ring evidence for a two-year interval between recent prehistoric explosive eruptions of Mount St. Helens.
- YAMAGUCHI, D. K.; HOBLITT, R. P., 1986, Tree-ring dating of Mount St. Helens flowage deposits emplaced in the valley of the South Fork Toutle River Washington, during the past 350 years [abstract].

GEOLOGIC HAZARDS

see also

- DEBRIS DAMS
ENGINEERING GEOLOGY
FLOOD HAZARDS
MASS MOVEMENTS - LAHARS AND
MUDFLOWS

GEOLOGIC HAZARDS (BEFORE 1980)

- AUSTEN, RUTH; KERR, J. W., 1984, The Mount St. Helens/Long Valley caldera parallel.
- CRANDELL, D. R., 1976, Volcanic-hazards studies in the Pacific Northwest—A progress report [abstract].
- CRANDELL, D. R., 1981, Volcanic hazards.
- CRANDELL, D. R.; MULLINEAUX, D. R., 1975, Appraising volcanic hazards of the Cascade Range.
- CRANDELL, D. R.; MULLINEAUX, D. R., 1976, Potential hazards from future eruptions of Mount St. Helens volcano, Washington.
- CRANDELL, D. R.; MULLINEAUX, D. R., 1978, Potential hazards from future eruptions of Mount St. Helens volcano, Washington.
- CRANDELL, D. R.; MULLINEAUX, D. R.; MILLER, C. D., 1979, Volcanic-hazards studies in the Cascade Range of the western United States.

- CRANDELL, D. R.; MULLINEAUX, D. R.; RUBIN, MEYER, 1975, Mount St. Helens volcano—Recent and future behavior.*
- CRANDELL, D. R.; WALDRON, H. H., 1969, Volcanic hazards in the Cascade Range.*
- FOLSOM, M. M., 1970, Volcanic eruptions—The Pioneers' attitude on the Pacific coast from 1800 to 1875.
- HARRIS, S. L., 1986, The other Cascade volcanoes—Historic eruptions at Mount St. Helens' sister peaks.
- HYDE, J. H., 1970, Geologic setting of Merrill Lake and evaluation of volcanic hazards in the Kalama River valley near Mount St. Helens, Washington.
- HYDE, J. H.; CRANDELL, D. R., 1972, Potential volcanic hazards near Mount St. Helens in southwestern Washington [abstract].
- KIVER, E. P., 1976, Man and volcanoes in Washington State.
- MULLINEAUX, D. R., 1977, Volcanic hazards—Extent and severity of potential tephra hazard interpreted from layer Yn from Mount St. Helens, Washington [abstract].
- SWANSON, D. A., 1975, Original reports from the correspondents of the IAVCEI Working Group on Mitigation of Volcanic Disasters; U.S.A.
- WEST, D. O.; ALT, J. N., 1982, The assessment of volcanic hazards and the lessons learned from Mount St. Helens [abstract].
- GEOLOGIC HAZARDS (1980)**
- ALLARD, PATRICK, 1983, Facing hazards from the reawakening of dormant explosive volcanoes—The examples of Mt. St. Helens, El Chichon, and Galunggung in 1980-1982.
- AUSTEN, RUTH; KERR, J. W., 1984, The Mount St. Helens/Long Valley caldera parallel.
- AUSTEN, RUTH; KERR, J. W., 1986, Long Valley, California—The Mount St. Helens legacy.
- KERR, J. W., 1980, Mount St. Helens, May 18th, 1980—Learning the hard way.
- KERR, R. A., 1980, Mount St. Helens—An unpredictable foe.
- KLUGE, P. F., 1980, Awesome message of Mt. St. Helens' mammoth eruption.
- LODATO, PAUL, 1980, Mount St. Helens—A different disaster.
- MALIN, M. C.; SHERIDAN, M. F., 1981, Computer-assisted volcanic hazards mapping [abstract].

- MILLER, C. D.; CRANDELL, D. R.; MULLINEAUX, D. R., 1984, Recommendations for volcanic-hazards assessments and land-use planning based on U.S. Geological Survey experiences during the 1980 eruptions of Mount St. Helens, State of Washington, U.S.A.
- MILLER, C. D.; MULLINEAUX, D. R.; CRANDELL, D. R., 1981, Hazards assessments at Mount St. Helens.
- MILLER, C. D.; MULLINEAUX, D. R.; CRANDELL, D. R., 1981, Hazards assessments by the U.S. Geological Survey at Mount St. Helens volcano, Washington [abstract].
- MILLER, C. D.; MULLINEAUX, D. R.; CRANDELL, D. R., 1981, Volcanic-hazards evaluations by the U.S. Geological Survey before and during the 1980 eruptions of Mount St. Helens, Washington, U.S.A. [abstract].
- MULLINEAUX, D. R., 1981, Tephra hazards from Cascade Range volcanoes.
- MULLINEAUX, D. R.; CRANDELL, D. R., 1980, Effectiveness of volcanic hazards assessments at Mount St. Helens, Washington [abstract].
- NEWHALL, C. G., 1981, Probabilistic hazard assessment at Mount St. Helens [abstract].
- NEWHALL, C. G., 1982, A method for estimating intermediate- and long-term risks from volcanic activity, with an example from Mount St. Helens, Washington.
- U.S. CONGRESS, SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION, 1980, Mount St. Helens impact.
- U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY, 1980, Current volcanic hazards at Mount St. Helens, Washington.
- U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY, 1980, Volcanic hazard analysis.
- U.S. GEOLOGICAL SURVEY, 1982, Mount St. Helens eruptions—Monitoring and hazards assessment; Effects of the eruption; Analysis of hazards assessments; Posteruptive hazards of Spirit Lake [abstract].
- WASHINGTON DEPARTMENT OF EMERGENCY SERVICES, 1980, State of Washington hazard mitigation report for the eruption of Mt. St. Helens; FEMA-623-DR-WA declared May 21, 1980.
- WESSON, R. L., 1983, The eruption of Mount St. Helens—Entering the era of real-time geology.
- WEST, D. O.; ALT, J. N., 1981, The assessment of volcanic hazards and the lessons learned from Mount St. Helens [abstract].

GEOLOGIC HAZARDS (POST 1980)

- BEAULIEU, J. D.; PETERSON, N. V., 1981, Seismic and volcanic hazard evaluation of the Mount St. Helens area, Washington relative to the Trojan Nuclear Site, Oregon.*
- BEGET, J. E., 1981, Rates of eruption and volcanic hazards in the Washington Cascades [abstract].
- BRANTLEY, STEVEN, 1985, Mount St. Helens study yields useful insights.
- CHILDESS, DALLAS; CARPENTER, P. J., 1985, A warning system for hazards resulting from breaches of lake blockage, Mount St. Helens, Washington.
- NEWHALL, C. G., 1983, Anticipating volcanic hazards at Mount St. Helens, Washington.
- NEWHALL, C. G., 1984, Semiquantitative assessment of changing volcanic risk at Mount St. Helens, Washington.
- TILLING, R. I.; BAILEY, R. A., 1985, Volcano hazards program in the United States.
- Geologic hazards - Social aspects, *see* SOCIAL ASPECTS
- Geologic maps, *see* MAPS - GEOLOGIC GEOMORPHOLOGY
- see also*
- MASS MOVEMENTS - AVALANCHES AND LANDSLIDES
- MASS MOVEMENTS - LAHARS AND MUDFLOWS
- RIVER MORPHOLOGY
- VOLCANIC ASH - EROSION
- AUSTIN, S. A., 1985, Modern catastrophic processes at Mount St. Helens and their implications for the stratigraphic record [abstract].
- BANKS, N. G.; BENNETT, C. A.; SCHMIDT, J. M., 1978, Maps of photo lineaments and geomorphological features in the Spirit Lake quadrangle, Washington.
- BEACH, G. L., 1985, Morphologic evolution of the Mount St. Helens crater area, Washington.
- BEACH, G. L.; DZURISIN, DANIEL, 1984, Drainage evolution in the debris avalanche deposits near Mount St. Helens, Washington.
- DUNNE, THOMAS, 1983, Discussion at the U.S.-Japan symposium on erosion control on volcanoes.
- HALLIDAY, W. R., 1983, Buried glacial ice and other complexities found in the Spirit Lake pseudokarst, Mount St. Helens, Washington.

HALLIDAY, W. R., 1983, Further observations on the Spirit Lake pseudokarst.*

JAPAN PUBLIC WORKS RESEARCH INSTITUTE, 1983, Proceedings of the symposium on erosion control in volcanic areas, July 6-9, 1982 at Seattle and Vancouver, Washington.

JILLSON, W. R., 1921, Physiographic effects of the volcanism of Mt. St. Helens.

MALIN, M. C., 1984, Planetary geomorphology field studies—Washington and Alaska.

MOORE, J. G.; ALBEE, W. C., 1980, Topographic and structural changes of Mount St. Helens, March-July 1980—Photogrammetric data [abstract].

SWANSON, F. J.; JANDA, R. J., 1983, Summary of final discussions, symposium on erosion control in volcanic areas.

U.S. GEOLOGICAL SURVEY, 1980, Preliminary aerial photographic interpretative map showing features related to the May 18, 1980 eruption of Mount St. Helens, Washington.*

Geophysical maps, see MAPS - GEOPHYSICAL

GEOPHYSICS [GENERAL WORKS]

BRANTLEY, STEVEN; TOPINKA, L. J., EDITORS, 1984, Volcanic studies at the U.S. Geological Survey's David A. Johnston Cascades Volcano Observatory, Vancouver, Washington.

BURGER, R. W., 1984, Source mechanism of the May 18, 1980 St. Helens eruption from regional surface waves.

FRIEDMAN, J. D., 1982, Energy of domal evolution at Mount St. Helens, June 1980 through May 18, 1982 [abstract].

IWATSUBO, E. Y.; SWANSON, D. A., 1985, Electronic distance monitoring of Mount St. Helens and other Cascade volcanoes [abstract].

MOORE, G. K.; SHEEHAN, C. A., COMPILERS, 1981, Evaluation of radar imagery for geologic and cartographic applications; summary report of investigations.

ROSENFIELD, C. L., 1980, Remote sensing of the Mount St. Helens eruption, May 18, 1980.*

SPALL, HENRY, 1980, Continuous monitoring of Mount St. Helens volcano.

SWANSON, D. A., 1986, Predicting dome growth at Mt. St. Helens using non-seismic techniques.

SWANSON, D. A.; CASADEVALL, T. J.; DZURISIN, DANIEL; MALONE, S. D.; NEWHALL, C. G.; WEAVER, C. S., 1983, Predicting eruptions at Mount St. Helens, June 1980 through December 1982.

SWANSON, D. A.; LIPMAN, P. W.; MOORE, J. G.; HELIKER, C. C.; YAMASHITA, K. M., 1981, Geodetic monitoring after the May 18 eruption.

WALKER, G. P. L.; MCBROOME, L. A., 1983, Mount St. Helens 1980 and Mount Pelee 1902—Flow or surge?

Geophysics - Acoustics, see BLAST - ACOUSTICS

GEOPHYSICS - ELECTRICAL SURVEYS

ANDERSON, L. A.; JOHNSON, D. J.; DZURISIN, DANIEL, 1983, Self-potential and VLF electromagnetic surveys at Mount St. Helens, Washington [abstract].

COBB, W. E., 1980, Electric fields and lightning in the Mt. St. Helens volcanic cloud [abstract].

FRASER, D. C., 1983, Airborne electromagnetic surveys of the Cascade Range, western United States; with a preface by D. B. Hoover.

SCHULTZ, A.; BOOKER, J. R., 1981, Magnetotelluric study of Mt. St. Helens [abstract].

GEOPHYSICS - GRAVITY SURVEYS

BATH, MARKUS, 1982, Atmospheric waves from Mount St. Helens.

BONINI, W. E.; HUGHES, D. W.; DANES, Z. F., COMPILERS, 1974, Complete Bouguer gravity anomaly map of Washington.

BRAILE, L. W., 1970, The isostatic condition and crustal structure of Mount Saint Helens as determined from gravity data.

DANES, Z. F.; PHILLIPS, W. M., 1983, Complete Bouguer gravity anomaly map, Cascade Mountains, Washington.

DANES, Z. F.; PHILLIPS, W. M., 1983, Principal facts and discussion of terrain correction methods for the complete Bouguer gravity anomaly map of the Cascade Mountains, Washington.

DISHBERGER, D. M., 1983, Preparation of residual gravity maps for the southern Cascade Mountains, Washington using Fourier analysis.

EGGERS, A. A.; DANES, Z. F., 1981, Apparent short term gravity changes at Mount St. Helens, Washington [abstract].

EGGERS, A. A.; DANES, Z. F., 1981, Long term gravity changes at Mt. St. Helens, Washington [abstract].

GOMAN, T. G., 1964, Gravity survey of Mount St. Helens, Washington [abstract].

JACHENS, R. C.; SPYDELL, D. R.; PITTS, G. S.; DZURISIN, DANIEL; ROBERTS, C. W., 1980, Repeat gravity studies at Mount Saint Helens [abstract].

JACHENS, R. C.; SPYDELL, D. R.; PITTS, G. S.; DZURISIN, DANIEL; ROBERTS, C. W., 1981, Temporal gravity variations at Mount St. Helens, March-May 1980.

JOHNSON, D. J., 1982, Gravity changes in the crater of Mount St. Helens, Washington, April-September, 1982 [abstract].

RITSEMA, A. R., 1983, Atmospheric pressure wave of Mount St. Helens eruption.

GEOPHYSICS - MAGNETIC SURVEYS

ANDERSON, L. A.; JOHNSON, D. J.; DZURISIN, DANIEL, 1983, Self-potential and VLF electromagnetic surveys at Mount St. Helens, Washington [abstract].

BATH, MARKUS, 1982, Atmospheric waves from Mount St. Helens.

BOOKER, J. R.; AULD, D. R.; LAW, L. K., 1981, Geomagnetic induction data from Mt. St. Helens [abstract].

DAVIS, P. M.; PIERCE, D. R.; MCPHERRON, R. L.; DZURISIN, DANIEL; MURRAY, THOMAS; JOHNSTON, M. J. S.; MUELLER, R. J., 1984, A volcanomagnetic observation on Mount St. Helens, Washington.

DVORAK, J. J.; OKAMURA, A. T.; JOHNSTON, M. J. S.; MORTENSEN, C. E., 1981, Tiltmeter and magnetometer measurements at Mount St. Helens, Washington—1980-1981 [abstract].

DVORAK, J. J.; OKAMURA, A. T.; JOHNSTON, M. J. S.; MORTENSEN, C. E.; MUELLER, R. J.; FURUKAWA, BRUCE, 1984, Tiltmeter and magnetometer measurements at Mount St. Helens, Washington—1980-1981.

DZURISIN, DANIEL; DENLINGER, R. P., 1986, Systematic changes in magnetic field intensity over the growing lava dome at Mount St. Helens [abstract].

FINN, CAROL, 1985, A magnetic study of Mt. St. Helens, Washington [abstract].

FOUGERE, P. F.; TSACOYEANES, C. W., 1980, AFGL magnetometer observations on Mount St. Helens eruption.

FRASER, D. C., 1983, Airborne electromagnetic surveys of the Cascade Range, western United States; with a preface by D. B. Hoover.

HOBLITT, R. P., 1978, Emplacement mechanisms of unsorted and unstratified deposits of volcanic rock debris as determined from paleomagnetically-derived emplacement-temperature information.*

HOBLITT, R. P.; REYNOLDS, R. L.; LARSON, E. E., 1985, Suitability of nonwelded pyroclastic-flow deposits for studies of magnetic secular variation—A test based on deposits emplaced at Mount St. Helens, Washington, in 1980.

JOHNSTON, M. J. S.; DVORAK, J. J., 1981, The implications of tilt and magnetometer measurements at Mount St. Helens, Washington—1980-1981 [abstract].

JOHNSTON, M. J. S.; MUELLER, R. J.; DVORAK, J. J., 1981, Volcanomagnetic observations during eruptions, May-August 1980.*

JOHNSTON, M. J. S.; MUELLER, R. J.; MORTENSEN, C. E.; MYREN, D.; JONES, A.; KELLER, V., 1984, Tilt, strain, and magnetic measurements.

SCHULTZ, A.; BOOKER, J. R., 1981, Magnetotelluric study of Mt. St. Helens [abstract].

STEELE, W. K., 1981, Remanent magnetization of ash from the 18 May 1980 eruption of Mount St. Helens.*

STEELE, W. K., 1983, A preliminary catalog of remanent magnetization directions from Mount St. Helens tephra deposits [abstract].

TOWLE, J. N., 1982, Geomagnetic variations in the Cascades [abstract].

TOWLE, J. N., 1983, VLF electromagnetic investigations of the crater and central dome of Mount St. Helens, Washington.

U.S. GEOLOGICAL SURVEY, 1975, Aeromagnetic map for part of southwestern Washington.

U.S. GEOLOGICAL SURVEY, 1981, Aeromagnetic map of the Mt. Margaret area, Washington.

U.S. GEOLOGICAL SURVEY, 1981, Aeromagnetic map of the Mt. St. Helens area, Washington.

U.S. GEOLOGICAL SURVEY, 1982, Aeromagnetic map of Mt. St. Helens, Washington—Post May, 1980 eruption.

GEOPHYSICS - RADIOACTIVITY SURVEYS

ANDREWS, V. E., 1981, Airborne radiological sampling of Mount St. Helens plumes.

BENNETT, J. T.; KRISHNASWAMI, S.; TUREKIAN, K. K.; MELSON, W. G.; HOPSON, C. A., 1982, The uranium and thorium decay series nuclides in Mt. St. Helens effusives.

KRISHNASWAMI, S.; BENNETT, J. T.; MONAGHAN, M.; TUREKIAN, K. K.; MELSON, W. G.; HOPSON, C. A., 1981, Uranium and thorium decay series nuclide concentrations in Mt. St. Helens eruptives [abstract].

- KURODA, P. K.; ESSIEN, I. O.; SANDOVAL, D.-N., 1984, Fallout of uranium isotopes from the 1980 eruption of Mount St. Helens.
- LE CLOAREC, M. F.; LAMBERT, G.; LE ROULLEY, J. C.; ARDOUIN, B., 1986, Long-lived radon daughters in Mount St. Helens emissions—A size estimation of the magmatic reservoir.
- LEIFER, R.; HINCHLIFFE, L.; FISENNE, I.; FRANKLIN, H.; KNUTSON, E.; OLDEN, M.; SEDLACEK, W. A.; MROZ, E. J.; CAHILL, T., 1981, Measurements of the stratospheric plume from the Mount St. Helens eruption—Radioactivity and chemical composition.
- NEVISSI, A. E., 1984, Lead 210 and Polonium 210 in Mount St. Helens ash.
- OGREN, J. A.; CHARLSON, R. J.; RADKE, L. F.; DOMONKOS, S. F., 1981, Absorption of visible radiation by aerosols in the volcanic plume of Mount St. Helens.
- PETERSON, K. R., 1982, Deposition and dose from the May 18, 1980 eruption of Mount St. Helens.
- PUESCHEL, R. F.; BARRETT, E. W.; STEARNS, L. S.; WELLMAN, D. L., 1981, Physical and optical/radiational properties of Mt. St. Helens volcanic eruption [abstract].
- SOLDAT, J. K.; KATHREN, R. L.; CORLEY, J. P.; STRENDE, D. L., 1981, Radiation doses from Mount St. Helens 18 May 1980 eruption.
- WILLIAMS, R. W.; GILL, J. B.; BRULAND, K. W., 1983, Th and U decay series nuclides in historic arc lavas from Java, Japan and Mt. St. Helens [abstract].

GEOPHYSICS - SEISMIC SURVEYS

- BAME, D. A., 1984, A source model for low frequency volcanic earthquakes.
- ENDO, E. T.; MALONE, S. D.; NOSON, L. L.; WEAVER, C. S., 1981, Seismicity of Mt. St. Helens 1980 to 1981 [abstract].
- ENDO, E. T.; WEAVER, C. S.; MALONE, S. D.; MICHAELSON, C. A., 1980, Coda magnitudes of earthquakes associated with the 1980 eruptions of Mount Saint Helens [abstract].
- FREMONT, M. J.; MALONE, S. D., 1985, High precision relative locations of earthquakes at Mount St. Helens, Washington [abstract].
- LAWSON, JIM, 1980, Oklahoma observations of effects of May 18, 1980, eruption of Mount St. Helens.
- LEAVER, D.; WEAVER, C. S., 1981, Refraction studies of the Mt. St. Helens region [abstract].

MALONE, S. D., 1986, Predicting eruptions of Mt. St. Helens using seismic means.

MALONE, S. D.; ENDO, E. T.; WEAVER, C. S., 1980, Seismicity associated with the 1980 eruptions of Mount Saint Helens [abstract].

MALONE, S. D.; WEAVER, C. S.; ENDO, E. T.; NOSON, L. L., 1981, Seismic precursors to the eruptions of Mount St. Helens [abstract].

MCNUTT, S. R., 1981, Preliminary calculations of Mt. St. Helens b-values [abstract].

NOWACK, ROBERT; AKI, KEITI, 1982, The Gaussian beam synthetic seismogram for 2-D inhomogeneous media—Testing and application [abstract].

NOWACK, ROBERT; AKI, KEITI, 1984, The two-dimensional Gaussian beam synthetic method—Testing and application.

WEAVER, C. S., 1976, Seismic events on Cascade volcanoes.*

WEAVER, C. S.; MALONE, S. D., 1974, Glacier sources for low frequency seismic events recorded at Mount St. Helens, volcano [abstract].

WEAVER, C. S.; MALONE, S. D., 1975, Preliminary report—Seismic sources observed in glacier ice at Mt. St. Helens, Washington [abstract].

WEAVER, C. S.; MALONE, S. D.; ENDO, E. T.; NOSON, L. J., 1980, Seismicity pattern of the Mount Saint Helens eruptive sequence [abstract].

GEOPHYSICS - THERMAL SURVEYS

see also

BLAST - THERMAL SURVEYS GEOTHERMAL RESOURCES

BANKS, N. G.; CUTTER, B. E., 1981, Temperature estimates of the 1980 directed blast of Mount St. Helens, Washington, U.S.A., from thermal effects on trees and buried wood [abstract].

BANKS, N. G.; HOBLITT, R. P., 1981, Summary of temperature studies of 1980 deposits.

BANKS, N. G.; HOBLITT, R. P., 1981, Temperature studies of Mount St. Helens deposits, 1980, Washington, U.S.A. [abstract].

BARNES, IVAN; JOHNSTON, D. A.; EVANS, W. C.; PRESSER, T. S.; MARINER, R. H.; WHITE, L. D., 1981, Properties of gases and waters of deep origin near Mount St. Helens.

BLACKWELL, D. D.; STEELE, J. L.; SCHUSTER, J. E.; KOROSEC, M. A., 1980, The regional thermal setting of the Mt. St. Helens volcano [abstract].

- DAVIS, M. J.; GRAEBER, E. J.; HARRAH, L. A.; HAYES, D. B., 1980, Temperature estimates of May 18 eruption of Mount St. Helens made from observations of material response [abstract].
- DETHIER, D. P.; FRANK, D. G.; PEVEAR, D. R., 1981, Preliminary chemical analysis of thermal waters at Mount St. Helens, Washington [abstract].
- FRIEDMAN, J. D., 1982, Thermal energy at Mount St. Helens [abstract].
- FRIEDMAN, J. D.; FRANK, D. G., 1977, Thermal surveillance of active volcanoes using the LANDSAT-1 data collection system; Part III, Heat discharge from Mount St. Helens, Washington.
- FRIEDMAN, J. D.; FRANK, D. G., 1981, Aerial infrared mapping of thermal activity at Cascade Range volcanoes [abstract].
- FRIEDMAN, J. D.; FRANK, D. G.; KIEFFER, H. H., 1980, Infrared surveys of emerging dacite dome, Mount St. Helens volcano, Washington, during June 1980 [abstract].
- FRIEDMAN, J. D.; FRANK, D. G.; KIEFFER, H. H.; SAWATZKY, D. L., 1981, Thermal infrared surveys of the May 18 crater, subsequent lava domes, and associated volcanicic deposits.
- FRIEDMAN, J. D.; OLHOEFT, G. R.; JOHNSON, G. R.; FRANK, D. G., 1980, Heat content and thermal energy equivalent of the June 1980 dacite dome at Mount St. Helens, Washington [abstract].
- FRIEDMAN, J. D.; OLHOEFT, G. R.; JOHNSON, G. R.; FRANK, D. G., 1981, Heat content and thermal energy of the June dacite dome in relation to total energy yield, May-October 1980.
- FRIEDMAN, J. D.; OLHOEFT, G. R.; JOHNSON, G. R.; FRANK, D. G., 1984, Thermal energy yield of Mt. St. Helens [abstract].
- GINSBERG, I. W., 1982, Thermal infrared imagery of the Cascade Range volcanics.
- HARDEE, H. C., 1981, Thermal property measurements in a fresh pumice flow at Mt. St. Helens.
- HOBLITT, R. P.; BANKS, N. G.; RYAN, M. P.; ROSENBAUM, J. G.; DAVIS, M. J., 1980, Emplacement temperatures of Mt. St. Helens eruptive products [abstract].
- HOBLITT, R. P.; KELLOGG, K. S., 1979, Emplacement temperatures of unsorted and unstratified deposits of volcanic rock debris as determined by paleomagnetic techniques.*
- ITO, YOSHIRO; KAWAKAMI, CHIKATAKA; SAITO, TERUO; ICHIKAWA, KO; HOSAKA, TETSUYA; HIRINCHS, CLANCY, 1981, Temperature of crater of Mount St. Helens on the 28th of July, 1980.
- KIEFFER, H. H.; FRANK, D. G., 1980, Thermal infrared observations of Mt. St. Helens, March-May 1980 [abstract].
- KIEFFER, H. H.; FRANK, D. G.; FRIEDMAN, J. D., 1980, Thermal infrared observations of Mt. St. Helens [abstract].
- KIEFFER, H. H.; FRANK, D. G.; FRIEDMAN, J. D., 1981, Thermal infrared surveys at Mount St. Helens—Observations prior to the eruption of May 18.
- KIEFFER, H. H.; FRANK, D. G.; FRIEDMAN, J. D.; SAWATZKY, D. L., 1984, Aerial infrared surveys at Mount St. Helens, Washington [abstract].
- KIEFFER, H. H.; FRIEDMAN, J. D.; FRANK, D. G., 1984, Thermal-infrared surveys, Cascades volcanoes [abstract].
- KOROSEC, M. A.; SCHUSTER, J. E., 1980, Pre-eruption geothermal assessment activities at Mount St. Helens, Washington [abstract].
- MELSON, W. G.; HOPSON, C. A., 1981, Preeruption temperatures and oxygen fugacities in the 1980 eruptive sequence.
- PHILLIPS, K. N., 1941, Fumaroles of Mount St. Helens and Mount Adams.
- RYAN, M. P.; BANKS, N. G.; HOBLITT, R. P.; BLEVINS, J. Y. K., 1981, Thermal structure of Mount St. Helens, Washington, U.S.A., eruptive units; restoration of the emplacement temperatures and in-situ thermal diffusivities [abstract].
- ST. LAWRENCE, W. F.; QAMAR, ANTHONY; MOORE, J. N.; KENDRICK, GEORGE, 1980, A comparison of thermal observations of Mount St. Helens before and during the first week of the initial 1980 eruption.
- WINNER, W. E.; CASADEVALL, T. J., 1981, Fir leaves as thermometers during the May 18 eruption.

GEOPHYSICS - TILT SURVEYS

- BROWN, E. C., 1984, Tiltmeter analysis of Mount St. Helens, Skamania County, Washington.
- CHADWICK, W. W., JR.; SWANSON, D. A.; IWATSUBO, E. Y.; HELIKER, C. C.; LEIGHLEY, T. A., 1983, Deformation monitoring at Mount St. Helens in 1981 and 1982.
- DVORAK, J. J.; JOHNSTON, M. J. S.; OKAMURA, A. T., 1980, Tiltmeter measurements on Mount St. Helens [abstract].

DVORAK, J. J.; OKAMURA, A. T.; JOHNSTON, M. J. S.; MORTENSEN, C. E., 1981, Tiltmeter and magnetometer measurements at Mount St. Helens, Washington—1980-1981 [abstract].

DVORAK, J. J.; OKAMURA, A. T.; JOHNSTON, M. J. S.; MORTENSEN, C. E.; MUELLER, R. J.; FURUKAWA, BRUCE, 1984, Tiltmeter and magnetometer measurements at Mount St. Helens, Washington—1980-1981.

DVORAK, J. J.; OKAMURA, A. T.; MORTENSEN, C. E.; JOHNSTON, M. J. S., 1981, Summary of electronic tilt studies at Mount St. Helens.

DZURISIN, DANIEL, 1982, Value of remote tilt monitoring to eruption prediction at Mount St. Helens, Washington [abstract].

DZURISIN, DANIEL, 1986, Recent eruptive activity, monitoring results and geophysical studies at Mount St. Helens, Washington [abstract].

DZURISIN, DANIEL; JOHNSON, D. J.; WESTPHAL, J. A., 1981, Ground tilts during two recent eruptions of Mount St. Helens, Washington [abstract].

DZURISIN, DANIEL; WESTPHAL, J. A.; JOHNSON, D. J., 1982, Automatic tilt measurements in the crater at Mount St. Helens, Washington [abstract].

DZURISIN, DANIEL; WESTPHAL, J. A.; JOHNSON, D. J., 1983, Eruption prediction aided by electronic tiltmeter data at Mount St. Helens.

IWATSUBO, E. Y.; SWANSON, D. A., 1986, Geodetic monitoring and ground deformation at Mount St. Helens, Washington [abstract].

JOHNSON, A. G., 1981, Tilt measurements near Mount St. Helens [abstract].

JOHNSTON, M. J. S.; DVORAK, J. J., 1981, The implications of tilt and magnetometer measurements at Mount St. Helens, Washington—1980-1981 [abstract].

LIPMAN, P. W.; MOORE, J. G.; SWANSON, D. A., 1980, Bulging of the north flank of Mount St. Helens volcano before the 5/18 eruption—Geodetic data [abstract].

LIPMAN, P. W.; MOORE, J. G.; SWANSON, D. A., 1981, Bulging of the north flank before the May 18 eruption—Geodetic data.

SWANSON, D. A., 1986, Measurements of ground deformation to forecast and predict eruptions [abstract].

SWANSON, D. A.; HOLCOMB, R. T., 1982, Forecasting eruptions at Mount St. Helens by monitoring ground deformation [abstract].

SWANSON, D. A.; HOLCOMB, R. T.; LIPMAN, P. W.; MOORE, J. G.; HELIKER, C. C.; IWATSUBO, E. Y., 1981, Monitoring ground deformation to forecast eruptions at Mount St. Helens [abstract].

SWANSON, D. A.; LIPMAN, P. W.; MOORE, J. G.; HELIKER, C. C., 1980, Geodetic monitoring of Mount St. Helens after the May 18, 1980 eruption [abstract].

GEOTHERMAL RESOURCES

see also GEOPHYSICS - THERMAL SURVEYS

BEESON, M. H., 1981, Hydrothermal alteration in the Cascades.

BLACKWELL, D. D.; STEELE, J. L.; SCHUSTER, J. E.; KOROSEC, M. A., 1980, The regional thermal setting of the Mt. St. Helens volcano [abstract].

CLEMENT, W. V., 1985, Airborne video thermal infrared—Detection of geothermal areas on Mount St. Helens, Washington.

DETHIER, D. P.; FRANK, D. G.; PEVEAR, D. R., 1981, Preliminary chemical analysis of thermal waters at Mount St. Helens, Washington [abstract].

GRADY, T.; BROWN, R. L.; ADAMS, E.; SATO, A., 1982, An evaluation of heat flow and its geological implications on Mt. St. Helens.

HOLMES, JENNY; WAUGH, KATHLEEN, 1983, Targeting geothermal exploration sites in the Mount St. Helens area using soil mercury surveys.*

KIEFFER, H. H.; FRIEDMAN, J. D.; FRANK, D. G., 1984, Thermal-infrared surveys, Cascades volcanoes [abstract].

KOROSEC, M. A., 1981, Geothermal implications of the Mount St. Helens volcano [abstract].

KOROSEC, M. A.; SCHUSTER, J. E., 1980, Geothermal assessment of Mount St. Helens, Washington, 1979.

KOROSEC, M. A.; SCHUSTER, J. E., 1980, Pre-eruption geothermal assessment activities at Mount St. Helens, Washington [abstract].

PHILLIPS, K. N., 1941, Fumaroles of Mount St. Helens and Mount Adams.

SCHUSTER, J. E., 1981, A geothermal exploration philosophy for Mount St. Helens, (and other Cascade volcanoes?).

THOMPSON, J. M.; WHITE, L. D.; CASADEVALL, T. J.; MALEY, C. A.; KEITH, T. E. C., 1985, Hot springs depositing travertine at Mount St. Helens [abstract].

Gifford Pinchot National Forest

Note: The 1980 eruption of Mount St. Helens impacted much of the Gifford Pinchot National Forest (which includes most of Skamania County and the eastern part of Lewis County). See specific aspects, e.g.,

BLAST**HYDROLOGY****LAKES****MASS MOVEMENTS - AVALANCHES AND LANDSLIDES****MASS MOVEMENTS - LAHARS AND MUDFLOWS****GLACIER AND SNOW SURVEYS**

ANTOS, J. A.; ZOBEL, D. B., 1982, Snowpack modification of volcanic tephra effects on forest understory plants near Mount St. Helens.

BROWN, B. E., 1981, Effect of ashfall on snowmelt rate at Paradise, Mount Rainier, Washington [abstract].

BRUGMAN, M. M., 1980, Response dynamics of glaciers affected by the May 18, 1980, eruption of Mount St. Helens [abstract].

BRUGMAN, M. M., 1983, Glacio-volcanic interaction and isotopic composition of ice and runoff from Mount St. Helens [abstract].

BRUGMAN, M. M., 1984, Resurgence of a beheaded glacier on Mount St. Helens—Importance of water input in glacier fluctuations [abstract].

BRUGMAN, M. M.; MEIER, M. F., 1981, Response of glaciers to the eruptions of Mount St. Helens.

BRUGMAN, M. M.; POST, AUSTIN, 1981, Effects of volcanism on the glaciers of Mount St. Helens.

CROOK, A. G.; DAVIS, R. T.; MORELAND, R. E., 1981, Snow surveys and Mount Saint Helens.

DAVIS, R. T.; MARRON, J. K.; CROOK, A. G., 1982, Effects of Mount St. Helens eruptions on snowpack.

DRIEDGER, C. L., 1980, The effects of ash thickness on snow and firn ablation [abstract].

DRIEDGER, C. L., 1981, Effect of ash thickness on snow ablation.

GEHR, KEITH, 1967, Now they have names—The glaciers of Mt. St. Helens.

GRADY, T.; BROWN, R. L.; ADAMS, E.; SATO, A., 1982, An evaluation of heat flow and its geological implications on Mt. St. Helens.

LAWRENCE, D. B., 1941, The "Floating Island" lava flow of Mt. St. Helens.

MARRON, J. K.; DAVIS, R. T., 1982, Event reporting on Mount Saint Helens SNOTEL, flexibility for the future.

PLUMMER, F. G., 1893, A diagonal moraine.

TANGBORN, W. V.; LETTENMAIER, D. P., 1982, The impact of Mount St. Helens ash disposition on snowmelt.*

WAITT, R. B., JR.; PIERSON, T. C.; MACLEOD, N. S.; JANDA, R. J.; VOIGHT, BARRY; HOLCOMB, R. T., 1983, Eruption-triggered avalanche, flood, and lahar at Mount St. Helens—Effects of winter snowpack.

WEAVER, C. S., 1976, Seismic events on Cascade volcanoes.*

WEAVER, C. S.; MALONE, S. D., 1974, Glacier sources for low frequency seismic events recorded at Mount St. Helens, volcano [abstract].

WEAVER, C. S.; MALONE, S. D., 1975, Preliminary report—Seismic sources observed in glacier ice at Mt. St. Helens, Washington [abstract].

Gold, see MINERAL RESOURCES**Gravity surveys, see GEOPHYSICS - GRAVITY SURVEYS****GREEN RIVER**

COLLINS, B. D.; DUNNE, THOMAS; LEHRE, A. K., 1983, Erosion of tephra-covered hillslopes north of Mount St. Helens, Washington—May 1980-May 1981.

LEHRE, A. K.; COLLINS, B. D.; DUNNE, THOMAS, 1983, Post-eruption sediment budget for the North Fork Toutle River drainage, June 1980-June 1981.

LISLE, T. E.; LEHRE, A. K.; MARTINSON, H. A.; MEYER, D. F.; NOLAN, K. M.; SMITH, R. D., 1983, Stream channel adjustments after the 1980 Mount St. Helens eruptions.

GUIDEBOOKS

see also

COWLITZ RIVER - GUIDEBOOKS**STUDY GUIDES****TOUTLE RIVER SYSTEM - GUIDEBOOKS**

ARNOLD, SCOTT, 1984, Discovering Mount St. Helens—A guide to Mount St. Helens National Volcanic Monument.

CARSON, R. J., 1980, Ground and aerial field trips to Mount St. Helens, Washington [abstract].

ELLIOTT, C. P., 1897, Mount St. Helens.

- FRITZ, W. J.; FISK, L. H.; HARRISON, SYLVIA, 1982, Mount St. Helens road log—A visit to the lower Toutle and Cowlitz River drainages to observe the sedimentology, transported trees, and other effects of mudflows resulting from the eruptions of May 18, 1980, and March 19, 1982.
- GILBERTSON, GORDON, 1980, A post eruption field trip.
- GILCHRIST, F. G., 1954, G.S.O.C. field trip to Mount St. Helens.
- GILE, KATHARINE, 1903, Mount St. Helens.
- HYDE, J. H.; GREELEY, RONALD, 1973, Geological field trip guide, Mount St. Helens lava tubes, Washington.
- INTERNATIONAL ASSOCIATION FOR QUATERNARY RESEARCH, 1965, Guidebook for field conference J, Pacific Northwest.
- MAZAMA, 1903, The lava caves of Mt. St. Helens.
- PARSONS, M. R., 1910, On Mount St. Helens with the Mazamas.
- REAM, L. R., 1983, Northwest volcanoes, a roadside geologic guide.
- ROSS, E. L., 1903, First white woman on Mt. St. Helens.
- SCHMINKY, H. B., 1955, Trip to Lewis River and the lava tunnel.*
- SHANE, SCOTT, 1985, Discovering Mount St. Helens—A guide to the National Volcanic Monument.
- TILFORD, NORMAN; KENT, RICHARD, 1981, Mount St. Helens and the geology of Lewis and Toutle Rivers.
- WAITT, R. B., JR., 1984, Deposits and effects of devastating lithic pyroclastic density current from Mount St. Helens on 18 May 1980—Field guide for northeast radial.
- Hazards, *see GEOLOGIC HAZARDS*
- HEALTH EFFECTS**
- ADAMS, B. K., 1980, Mt. St. Helens ash in the eyes of a physician.
- ADAMS, B. K., 1980, Summary of group discussion on health aspects of Mt. St. Helens ashfall, July 9, 1980.
- ANALYTICAL CHEMISTRY, 1980, Controversy erupts over Mt. St. Helens ash.
- BERNSTEIN, R. S.; MCCAWLEY, M. A.; ATTFIELD, M. D.; GREEN, F.; DOLBERG, D. D.; BAXTER, P. J.; MERCHANT, J. A., 1982, Epidemiologic assessment of the risk for adverse pulmonary effects from persistent occupational exposures to Mount St. Helens volcanic ash (tephra).
- BROWN, W. L., 1982, Areas of controversy.
- BUSTAD, L. K., 1980, Biomedical effects of Mt. St. Helens ash (bases for our evaluations of its consequences).
- FARWELL, S. O.; GAGE, D. R.; JERNEGAN, M. F.; FELKEY, J. R., 1981, Inhalable particulate levels in northern Idaho from the initial eruptions of Mount St. Helens.
- GAGE, D. R., 1981, Basic and applied projects in analytical chemistry—I. The development of a sulfur specific detector for gas chromatography based on SO₂ fluorescences; II. The application of laser Raman spectrometry for the determination of quartz and cristobalite in Mount St. Helens volcanic ash.
- GAGE, D. R.; JERNEGAN, M. F.; FARWELL, S. O., 1982, Characterization and quantification of inhalable particulate volcanic ash from Mount St. Helens.*
- GLASS, M.; CAMPBELL, J.; LACROIX, S.; McDOWELL, M., 1986, Bacteriological water quality of Mount St. Helens impact zone, 1983 through February 1985 [abstract].
- GREEN, F. H. Y.; VALLYATHAN, VAL; MENTNECH, M. S.; TUCKER, J. H.; MERCHANT, J. A., 1981, Is volcanic ash a pneumoconiosis risk?
- MURPHY, S. A., 1981, Coping with stress following a natural disaster—The volcanic eruption of Mt. St. Helens.*
- SHORE, J. H.; TATUM, E. L.; VOLLMER, W. M., 1986, Mental health consequences of the Mount St. Helens disaster.
- TISON, D. L.; SEIDLER, R. J., 1983, Ecology and virulence of Legionnaire's Disease bacteria in aquatic habitats near Mt. St. Helens.
- U.S. ENVIRONMENTAL PROTECTION AGENCY, 1980, Mount St. Helens.
- U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY, 1980, Air quality monitoring network for volcanic ash.
- U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY, 1980, Center for Disease Control (CDC) community based health surveillance program (update).
- U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY, 1980, Foodstuffs and volcanic ashfall.
- U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY, 1980, Health and medical update.*
- U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY, 1980, Health surveys and analysis—Center for Disease Control (CDC—Surveillance program (update)).
- U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY, 1980, Management approaches to dust exposure control.

- U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY, 1980, The nature of Mount St. Helen's ash.
- U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY, 1980, Physical and chemical characteristics of the Mt. St. Helens deposits of May 18, 1980.
- U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY, 1980, Precautions in handling volcanic ash.
- U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY, 1980, Protecting children from volcanic ash-related health hazards.
- U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY, 1980, Research into the free crystalline silica content of Mount St. Helens ash.
- VOLLMER, W. M.; BUIST, A. S.; JOHNSON, L. R.; MCCAMANT, L. E.; BERNSTEIN, R. S., 1986, Long-term effect of low level exposure to volcanic ash on lung function.

History *see* CHRONOLOGY AND HISTORY BEFORE 1980

Human effects, *see* SOCIAL ASPECTS

HYDROLOGY

see also

- COWLITZ RIVER - HYDROLOGY
DEBRIS DAMS
DREDGING
FLOOD HAZARDS
LAKE SEDIMENTS
LAKES
LIMNOLOGY
RIVER MORPHOLOGY
STREAM SEDIMENTS
TOUTLE RIVER SYSTEM - HYDROLOGY

see also

Names of rivers, creeks, and watersheds

- BARNES, IVAN, 1985, Mineral-water reactions in metamorphism and volcanism.
- BARNES, IVAN; JOHNSTON, D. A.; EVANS, W. C.; PRESSER, T. S.; MARINER, R. H.; WHITE, L. D., 1981, Properties of gases and waters of deep origin near Mount St. Helens.
- BAROSS, J. A.; LILLEY, M. D.; GORDON, L. I., 1980, Microbially mediated production and consumption of trace gases including CH₄, H₂, and N₂O in 78 degree C seep waters on Mt. St. Helens [abstract].

BRANTLEY, STEVEN; TOPINKA, L. J., EDITORS, 1984, Volcanic studies at the U.S. Geological Survey's David A. Johnston Cascades Volcano Observatory, Vancouver, Washington.

BRUGMAN, M. M., 1983, Glacio-volcanic interaction and isotopic composition of ice and runoff from Mount St. Helens [abstract].

DETHIER, D. P.; FRANK, D. G.; PEVEAR, D. R., 1981, Chemistry of thermal waters and mineralogy of the new deposits at Mount St. Helens—A preliminary report.

THOMPSON, J. M.; WHITE, L. D.; CASADEVALL, T. J.; MALEY, C. A.; KEITH, T. E. C., 1985, Hot springs depositing travertine at Mount St. Helens [abstract].

HYDROLOGY - IMPACTS OF THE ERUPTIONS

COLLIER, C. R., 1980, Hydrologic effects.

COLLIER, C. R.; MCGAVOCK, E. H.; MEYER, WILLIAM, 1980, Hydrologic surveillance and investigation in Mt. St. Helens area by Water Resources Division, U.S. Geological Survey [abstract].

COWLITZ COUNTY DEPARTMENT OF COMMUNITY DEVELOPMENT, 1983, Toutle-Cowlitz watershed management plan.

DATTA, BITHIN; LETTENMAIER, D. P.; BURGES, S. J., 1983, Assessment of changes in storm and seasonal runoff response of watersheds impacted by Mt. St. Helens ash deposition.

ERICKSON, KAROL; LETTENMAIER, D. P.; BURGES, S. J., 1980, Assessment of runoff response changes in the upper Cowlitz River basin related to Mount St. Helens ash deposition [abstract].

FAIRCHILD, L. H.; WIGMSTA, M. S.; SMITH, J. D.; DUNNE, THOMAS, 1982, Application of hydrographs constructed for the May 18, 1980 mudflows on the Toutle River, Washington [abstract].

FLAHERTY, D. C., 1983, Mount St. Helens—The aftermath.

GORDON, MEL; PROCTOR, GEORGE, CHARMEN, 1980, The effects of the Mount St. Helens eruption on water resources—A forum held June 12, 1980.

GREENE, E. A., 1982, Characterization and movement of Mount St. Helens tephra on a high mountain lake watershed in northern Idaho.

HULL, A. N., 1982, Mount St. Helens—Hydrologic response by the National Weather Service and subsequent aftereffects [abstract].

KING, L. G.; PETERSON, D. A., 1982, Surface irrigation as affected by ash from Mount St. Helens.

- MANGELSDORF, P. C., JR.; SAYLES, F. L., 1984, Effect of Mt. St. Helens ash on seawater [abstract].
- MARTINSON, H. A.; HAMMOND, H. E.; MAST, W. W.; MANGO, P. D., 1986, Channel geometry and hydrologic data for six eruption-affected tributaries of the Lewis River, Mount St. Helens, Washington, water years 1983-84.
- MEIER, M. F.; CARPENTER, P. J.; JANDA, R. J., 1981, Hydrologic effects of Mount St. Helens' 1980 eruptions.
- PETERSON, D. A., 1982, Effects of fine volcanic ash on surface irrigation in central Washington.
- POST, AUSTIN; MEIER, M. F.; COLLIER, C. R., 1980, The eruptions of Mount St. Helens and their hydrologic effects—An overview [abstract].
- PRUITT, J. R.; EDGREN, JIM; HAMNER, BOB; HAUGEN, GORDON; HOWES, STEVE; PATTERSON, PETE; STEWARD, JOHN; SWANK, JERRY, 1980, Mount St. Helens emergency watershed rehabilitation report.
- PRUITT, J. R.; EDGREN, JIM; HAMNER, BOB; HAUGEN, GORDON; HOWES, STEVE; STEWARD, JOHN; SWANK, JERRY, 1981, Mount St. Helens emergency watershed rehabilitation report—1981 follow-up.
- SHULTERS, M. V.; CLIFTON, D. G., 1981, Mount St. Helens volcanic-ash fall in the Bull Run watershed, Oregon, March-June 1980.*
- TANGBORN, W. V.; LETTENMAIER, D. P., 1981, The impact of Mount St. Helens ash deposition on snowmelt.
- U.S. GEOLOGICAL SURVEY, 1982, Hydrologic effects of Mount St. Helens eruption [abstract].
- WASHINGTON WATER NEWS, 1981, Effects of the Mt. St. Helens eruptions of water resources.
- VANONI, V. A., 1982, Comments on sedimentation problems resulting from the eruption of Mt. St. Helens.
- HYDROLOGY - IMPACTS OF THE ERUPTIONS ON MUNICIPAL WATER SYSTEMS**
- COPLEN, L. E., 1981, A Mt. St. Helens story—The aftermath at Longview.
- DAY, T. G.; FISHER, J. E., 1980, Mt. St. Helens—How a wastewater plant coped with its aftermath.
- FUNK, W. H., 1980, Water quality and municipal operations discussion session summary.
- KISH, T., 1980, Mt. St. Helens' effects on Washington's treatment plants.
- NIELSON, LYMAN, 1980, Water quality and municipal water supply.
- PUBLIC WORKS, 1981, Submersible pumps help quell damage from Mt. St. Helens mudflow.
- SVINTH, DON, 1982, Effects on municipal and industrial water supplies in Cowlitz County.
- SWEET, H. R., 1981, Mt. St. Helens eruptive impacts to the Toutle community ground water supply [abstract].
- SWEET, H. R.; EDWARDS, J. E., 1983, Mount St. Helens eruptive impacts to the Toutle Community ground-water supply.
- U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY, 1980, Volcanic ash and your water supply.
- U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY, 1980, Volcanic ash effects on municipal water supply and sewage treatment plants.
- HYDROLOGY - IMPACTS OF THE ERUPTIONS ON WATER QUALITY**
- BONELLI, J. E.; TAYLOR, H. E., 1981, Impacts of Mount St. Helens eruption on hydrology and water quality.
- BONELLI, J. E.; TAYLOR, H. E.; KLEIN, J. M., 1982, Impact of Mount St. Helens eruption on hydrology and water quality.
- CAMPBELL, K. P.; JOHNSON, S. R.; WOLNIAKOWSKI, K. U., 1982, A pilot study of potential phenolic contamination of fishes in the Columbia River and tributaries in the vicinity of Mount St. Helens; final report.
- FUNK, W. H., 1980, Effects of ash fall out on eastern Washington lakes and the upper Spokane River.
- FUNK, W. H., 1980, Water quality and municipal operations discussion session summary.
- HINDIN, ERVIN, 1982, Rendering ash contaminated water potable [abstract].
- HINDIN, ERVIN, 1983, Occurrence of organic compounds in water and stream sediments due to the Mt. St. Helens eruptions.
- JUDAY, R. E.; KELLER, E. J., 1984, Effect of ash fallout on water quality in western Montana; final report.
- KLEIN, J. M., 1981, Some effects of the May 18 eruption of Mount St. Helens on river-water quality.
- KLEIN, J. M., 1984, Some chemical effects of the Mount St. Helens eruption on selected streams in the State of Washington.
- KLEIN, J. M.; TAYLOR, H. E., 1980, Mount St. Helens Washington, 1980 volcanic eruption; Part II, Chemical variations in surface waters affected by volcanic activity [abstract].

- LARSON, D. W.; U'REN, S. C., 1982, Effects of debris retaining structures on water quality of the Toutle River, Washington.
- MCKNIGHT, D. M.; PEREIRA, W. E.; CEAZAN, M. L., 1982, Characterization of dissolved organic materials in surface waters within the blast zone of Mount St. Helens, Washington.
- MOORE, P. A.; REESE, J. R., 1982, Sediment physical and chemical analyses on the Cowlitz and Columbia River subsequent to the 18 May 1980 Mt. St. Helens eruption.
- NAMMAH, H. A., 1983, Effect of Mount St. Helens ash on soil erosion and water quality.
- PEREIRA, W. E.; ROSTAD, C. E.; TAYLOR, H. E.; KLEIN, J. M., 1982, Characterization of organic contaminants in environmental samples associated with Mount St. Helens 1980 volcanic eruption.
- RIEDEL, G. R.; WILSON, S. L.; HOLTON, R. L., 1984, Trace metals in the Columbia River estuary following the 18 May 1980 eruption of Mount St. Helens.
- SIEBENMANN, K. F., 1982, Potential for groundwater contamination by phenols and PAH adsorbed onto Mount St. Helens ash/sediments.
- TURNEY, G. L.; KLEIN, J. M., 1982, Surface-water-quality data from selected sites in Washington affected by Mount St. Helens eruptions—March 27-September 30, 1980.
- WAGNER, RICHARD; WALKER, R. B., 1986, Mineral nutrient availability in some Mount St. Helens surface samples.
- WASHINGTON WATER RESEARCH CENTER, 1982, Proceedings from the conference, Mt. St. Helens—Effects on water resources; held October 7-8, 1981, Jantzen Beach, Oregon.
- WHITE, A. F.; BENSON, L. V.; PERRY, D. L., 1981, The influence of weathering of Mt. St. Helens ash on the chemistry of a small watershed, Iron Creek, Washington [abstract].
- #### IGNEOUS PETROLOGY (BEFORE 1980)
- BROGAN, P. F., 1952, Lava flow on St. Helens believed relatively new.
- CRANDELL, D. R.; MULLINEAUX, D. R., 1973, Pine Creek volcanic assemblage at Mount St. Helens, Washington.
- HOBLITT, R. P., 1984, Pre-1980 eruptions of Mount St. Helens, Washington [abstract].
- HYDE, J. H., 1973, Late Quaternary volcanic stratigraphy, south flank of Mount St. Helens, Washington.*
- JILLSON, W. R., 1917, New evidence of a recent volcanic eruption on Mt. St. Helens, Washington.
- JILLSON, W. R., 1921, Physiographic effects of the volcanism of Mt. St. Helens.
- LAURENCE, D. B., 1961, The Mt. St. Helens "Floating Island".
- LAWRENCE, D. B., 1941, The "Floating Island" lava flow of Mt. St. Helens.
- LEEMAN, W. P.; SMITH, D. R., 1982, Petrology of Quaternary volcanic rocks from Mount St. Helens and vicinity [abstract].
- LUEDKE, R. G.; SMITH, R. L.; RUSSELL-ROBINSON, S. L., 1983, Map showing distribution, composition, and age of late Cenozoic volcanoes and volcanic rocks of the Cascade Range and vicinity, northwestern United States.
- VERHOOGEN, JEAN, 1936, Geology of Mount St. Helens, Washington.
- VERHOOGEN, JEAN, 1937, Mount St. Helens—A recent Cascade volcano.
- WOLFE, J. A., 1961, Age of the Keechelus andesitic series of the Cascade Range, Washington.
- #### IGNEOUS PETROLOGY (1980 AND POST 1980)
- ANDERSON, S. W.; FINK, J. H., 1986, Rate-dependent formation of textures in the Mount St. Helens lava dome [abstract].
- CRISWELL, C. W., 1984, Depositional facies of the May 18, 1980 pumiceous pyroclastic-flow deposits at Mount St. Helens [abstract].
- LOGAN, R. L. (JOSH), 1981, Some petrographic characteristics of pumice from the 1980 Mount St. Helens pyroclastic flows.
- MELSON, W. G.; HOPSON, C. A., 1982, Petrologic model of the 1980-82 Mt. St. Helens magma chamber [abstract].
- PAINES, J. G., 1982, Crustal structure of volcanic arcs based on physical properties of andesites, volcaniclastic rocks, and inclusions in the Mt. St. Helens lava dome.
- WOHL, E. E.; NEAL, C. A., 1983, Frost shattering of pumice [abstract].
- #### IGNEOUS PETROLOGY - GEOCHEMISTRY (BEFORE 1980)
- COOMBS, H. A., 1960, Catalogue of the active volcanoes and solfatara fields of the United States of America—Mt. St. Helens.

- CRANDELL, D. R.; MULLINEAUX, D. R.; RUBIN, MEYER; SPIKER, ELLIOTT; KELLEY, M. L., 1981, Radiocarbon dates from volcanic deposits at Mount St. Helens, Washington.
- DRORY, ALISA; ULMER, G. C., 1974, Oxygen fugacity determinations for Cascadian andesites [abstract].
- GARCIA, M. O., 1977, Crystal clots, amphibole fractionation, and the evolution of calc-alkaline magmas [abstract].
- GARCIA, M. O.; JACOBSON, S. S., 1979, Crystal clots, amphibole fractionation and the evolution of calc-alkaline magmas.
- HAMMOND, P. E.; KOROSEC, M. A., 1983, Geochemical analyses, age dates, and flow-volume estimates for Quaternary volcanic rocks, southern Cascade Mountains, Washington.
- HOBLITT, R. P.; CRANDELL, D. R.; MULLINEAUX, D. R., 1980, Mount St. Helens eruptive behavior during the past 1,500 yr.
- HOBLITT, R. P.; KELLOGG, K. S., 1979, Emplacement temperatures of unsorted and unstratified deposits of volcanic rock debris as determined by paleomagnetic techniques.
- HOPSON, C. A., 1971, Cyclic eruption pattern at Mount St. Helens, Wash. [abstract].
- HOPSON, C. A., 1971, Eruptive sequence at Mount St. Helens, Washington [abstract].
- HOPSON, C. A., 1972, Origin of coherent and divergent lava suites at Quaternary andesitic volcanoes, Cascade Mountains [abstract].
- KRISHNASWAMI, S.; TUREKIAN, K. K.; BENNETT, J. T., 1984, The behavior of ^{232}Th and ^{238}U decay chain nuclides during magma formation and volcanism.
- MOORE, H. J.; ARTHUR, D. W. G.; SCHABER, G. G., 1978, Yield strengths of flows on the Earth, Mars, and Moon.
- PALLISTER, J. S.; HOBLITT, R. P., 1985, Magma mixing at Mount St. Helens [abstract].
- SMITH, D. R., 1984, The petrology and geochemistry of high Cascade volcanics in southern Washington—Mount St. Helens volcano and the Indian Heaven basalt field.*
- SMITH, D. R.; LEEMAN, W. P., 1982, Petrochemistry of pre-1980 volcanic rocks of Mount St. Helens [abstract].
- SMITH, D. R.; LEEMAN, W. P., 1985, Evidence against crystal fractionation in the generation of Mount St. Helens dacites [abstract].
- SMITH, D. R.; MATSUHISA, Y.; KURASAWA, H.; LEEMAN, W. P., 1983, Oxygen and strontium isotopic variations in Mount St. Helens eruptive products [abstract].
- WESTRICH, H. R.; EICHELBERGER, J. C., 1981, Volatile content and degassing behavior of silicic tephra and lava [abstract].
- WOLFE, S. P.; BORNHORST, T. J.; ROSE, W. I., JR., 1984, Abundance of gold and silver in fresh Quaternary calc-alkalic andesites [abstract].
- IGNEOUS PETROLOGY - GEOCHEMISTRY
(1980 AND POST 1980)
- CASHMAN, K. V.; MARSH, B. D., 1986, Crystal size distributions (CSDs) and crystallization of Mt. St. Helens 1980-1986 dacite [abstract].
- CASHMAN, K. V.; TAGGART, J. E., JR., 1982, Petrology of the 1981-1982 eruptive products of Mt. St. Helens, Washington [abstract].
- CASHMAN, K. V.; TAGGART, J. E., JR., 1983, Petrologic monitoring of 1981 and 1982 eruptive products from Mount St. Helens.
- DETHIER, D. P.; FRANK, D. G.; PEVEAR, D. R., 1981, Chemistry of thermal waters and mineralogy of the new deposits at Mount St. Helens—A preliminary report.
- DETHIER, D. P.; PEVEAR, D. R.; FRANK, D. G., 1981, Alteration of new volcanic deposits.
- FUKUYAMA, HIRO; SYKES, M. L.; HOLLOWAY, J. R., 1981, Pre-eruption H₂O content of 1980 Mt. St. Helens dacite [abstract].
- HALLIDAY, A. N.; FALICK, A. E.; DICKIN, A. P.; MACKENZIE, A. B.; STEPHENS, W. E.; HILDRETH, W., 1983, The isotopic and chemical evolution of Mount St. Helens.
- HARNEY, THOMAS, 1980, Mount St. Helens' past gives inkling of the future.
- HELIKER, C. C., 1985, Inclusions in the 1980-83 dacite of Mount St. Helens, Washington [abstract].*
- HOBLITT, R. P.; BANKS, N. G.; RYAN, M. P.; ROSENBAUM, J. G.; DAVIS, M. J., 1980, Emplacement temperatures of Mt. St. Helens eruptive products [abstract].
- HOBLITT, R. P.; KELLOGG, K. S., 1976, Emplacement temperatures of unsorted and unstratified deposits of volcanic rock debris as determined by paleomagnetic techniques [abstract].
- IRVING, A. J., 1986, Petrology and chemical composition of St. Helens magma.

- IRVING, A. J.; RHODES, J. M.; SPARKS, J. W., 1980, Mt. St. Helens lava dome, pyroclastic flow and ash samples—Major and trace element chemistry [abstract].
- KURASAWA, H.; LEEMAN, W. P.; SMITH, D. R., 1982, Sr isotopic studies of Mount St. Helens volcano [abstract].
- LIPMAN, P. W.; NORTON, D. R.; TAGGART, J. E., JR.; BRANDT, E. L.; ENGLEMAN, E. E., 1981, Compositional variations in 1980 magmatic deposits.
- LIPMAN, P. W.; SWANSON, D. A., 1981, Compositional variations in magmatic deposits from Mount St. Helens, Washington, 1980-1981 [abstract].
- LOGAN, R. L. (JOSH), 1981, Physical characteristics of the Mount St. Helens pyroclastic flow deposits [abstract].
- LOGAN, R. L., 1983, Temporal trends in the geochemistry and petrology of the Mount St. Helens pyroclastic flow deposits.
- MELSON, W. G., 1983, Monitoring the 1980-1982 eruptions of Mount St. Helens—Compositions and abundances of glass.
- MELSON, W. G.; HOPSON, C. A., 1981, Preeruption temperatures and oxygen fugacities in the 1980 eruptive sequence.
- MELSON, W. G.; HOPSON, C. A., 1982, Petrologic model of the 1980-82 Mt. St. Helens magma chamber [abstract].
- MERZBACHER, C. I., 1983, Water-saturated and undersaturated phase relations of the Mount St. Helens dacite magma erupted on May 18, 1980, and an estimate of the pre-eruptive water content.
- MERZBACHER, C. I.; EGGLER, D. H., 1983, Mount St. Helens dacite magmas of May 18, 1980—Phase relations and water content [abstract].
- MERZBACHER, C. I.; EGGLER, D. H., 1984, A magmatic geohyrometer—Application to Mount St. Helens and other dacitic magmas.
- MURASE, TSUTOMU; MCBIRNEY, A. R.; MELSON, W. G., 1985, Viscosity of the dome of Mount St. Helens.
- NEWMAN, S.; FINKEL, R. C.; MACDOUGALL, J. D., 1981, ^{238}U - ^{230}Th systematics of young volcanics [abstract].
- PEVEAR, D. R.; DETHIER, D. P.; FRANK, D. G., 1980, Thermal and hydrothermal alteration of new volcanic deposits at Mt. St. Helens, Washington [abstract].
- PEVEAR, D. R.; DETHIER, D. P.; FRANK, D. G., 1982, 1980 Mt. St. Helens eruption—Clay minerals and early-stage alteration.
- RAEDEKE, L. D.; MATHEZ, E. A.; IRVING, A. J., 1980, Mt. St. Helens lava dome—Petrography and mineral chemistry [abstract].
- RUSSELL-ROBINSON, S. L.; SMITH, R. L., 1983, Mount St. Helens—Minor-element variation of pumices and dome rocks from 1980 to 1982 [abstract].
- RUTHERFORD, M. J.; DEVINE, JOE, 1986, Experimental petrology of recent Mount St. Helens dacites—Amphibole, Fe-Ti oxides and magmas chamber conditions [abstract].
- RUTHERFORD, M. J.; SIGURDSSON, HARALDUR; CAREY, S. N., 1984, The May 18 eruption of Mount St. Helens—Melt composition and experimental phase equilibria [abstract].
- RUTHERFORD, M. J.; SIGURDSSON, HARALDUR; CAREY, S. N.; DAVIS, ANDREW, 1985, The May 18, 1980, eruption of Mount St. Helens; I, Melt composition and experimental phase equilibria.
- SMITH, D. R., 1984, The petrology and geochemistry of high Cascade volcanics in southern Washington—Mount St. Helens volcano and the Indian Heaven basalt field.*
- SWANSON, D. A.; CASADEVALL, T. J.; DZURISIN, DANIEL; MALONE, S. D.; NEWHALL, C. G.; WEAVER, C. S., 1983, Predicting eruptions at Mount St. Helens, June 1980 through December 1982.
- TUREKIAN, K. K., 1982, The use of natural radionuclides as chronometers of volcanic processes—The Mt. St. Helens experiment [abstract].
- WILLIAMS, R. W.; GILL, J. B.; BRULAND, K. W., 1983, Th and U decay series nuclides in historic arc lavas from Java, Japan and Mt. St. Helens [abstract].
- WOLFE, S. P., 1984, Au and Ag content in fresh Quaternary calc-alkalic andesites.
- IGNEOUS PETROLOGY - PHYSICAL MEASUREMENTS
- BANKS, N. G.; HOBLITT, R. P., 1981, Summary of temperature studies of 1980 deposits.
- BENNETT, J. T.; KRISHNASWAMI, S.; TUREKIAN, K. K.; MELSON, W. G.; HOPSON, C. A., 1982, The uranium and thorium decay series nuclides in Mt. St. Helens effusives.
- HOBLITT, R. P., 1978, Emplacement mechanisms of unsorted and unstratified deposits of volcanic rock debris as determined from paleomagnetically-derived emplacement-temperature information.*

HOBLITT, R. P.; BANKS, N. G.; RYAN, M. P.; ROSENBAUM, J. G.; DAVIS, M. J., 1980, Emplacement temperatures of Mt. St. Helens eruptive products [abstract].

HOBLITT, R. P.; KELLOGG, K. S., 1979, Emplacement temperatures of unsorted and unstratified deposits of volcanic rock debris as determined by paleomagnetic techniques.*

KUNTZ, M. A.; ROWLEY, P. D.; MACLEOD, N. S.; REYNOLDS, R. L.; MCBROOME, L. A.; KAPLAN, A. M.; LIDKE, D. J., 1981, Petrography and particle-size distribution of pyroclastic-flow, ash-cloud, and surge deposits.

PAINE, J. G.; CHRISTENSEN, N. I., 1981, Crustal structure in southwestern Washington—Implications from wave velocities in Mount St. Helens lava inclusions [abstract].

REDA, D. C.; HADLEY, G. R., 1986, Saturated permeability measurements on pumice and welded-tuffaceous materials.*

RYAN, M. P.; BANKS, N. G.; HOBLITT, R. P.; BLEVINS, J. Y. K., 1981, Thermal structure of Mount St. Helens, Washington, U.S.A., eruptive units; restoration of the emplacement temperatures and in-situ thermal diffusivities [abstract].

INDIAN HEAVEN AREA

SMITH, D. R., 1984, The petrology and geochemistry of high Cascade volcanics in southern Washington—Mount St. Helens volcano and the Indian Heaven basalt field.*

Insects, *see* BIOLOGY - FAUNA - TERRESTRIAL

IRON CREEK

WHITE, A. F.; BENSON, L. V.; PERRY, D. L., 1981, The influence of weathering of Mt. St. Helens ash on the chemistry of a small watershed, Iron Creek, Washington [abstract].

WHITE, A. F.; BENSON, L. V.; YEE, ANDY, 1986, Chemical weathering of the May 18, 1980, Mount St. Helens ash fall and the effect on the Iron Creek watershed, Washington.

KALAMA RIVER VALLEY

HYDE, J. H., 1970, Geologic setting of Merrill Lake and evaluation of volcanic hazards in the Kalama River valley near Mount St. Helens, Washington.

Lake Lenore, *see* LAKES - LAKE LENORE

LAKE SEDIMENTS

ANDERSON, R. Y.; NUHFER, E. B.; DEAN, W. E., 1984, Sinking of volcanic ash in uncompacted sediment in Williams Lake, Washington.

ANDERSON, R. Y.; NUHFER, E. B.; DEAN, W. E., 1985, Sedimentation in a blast-zone lake at Mount St. Helens, Washington—Implications for varve formation.

ANDERSON, R. Y.; NUHFER, E. B.; DEAN, W. E.; DELMASTRO, G. A., 1984, Sedimentology of Mt. St. Helens tephra at Merrill, Soap, and Williams Lakes, Washington, USA [abstract].

CRAWFORD, B. A., 1986, Recovery of game fish populations impacted by the May 18, 1980 eruption of Mount St. Helens; Part II, Recovery of surviving fish populations within the lakes in the Mount Saint Helens National Volcanic Monument and adjacent areas.

DAVIS, P. T., 1982, Tephrochronology, Davis Lake, southwest Washington [abstract].

DAVIS, P. T.; BARNOSKY, C. W.; STUIVER, MINZE, 1982, A 20,000 yr record of volcanic ashfalls, Davis Lake, southwestern Washington [abstract].

DUNBAR, N. W.; DAVIS, P. T.; MAROTTA, D. A., 1983, Wavelength-dispersive x-ray fluorescence analysis of Cascade Range tephras in lake sediments, SW Washington [abstract].

HEUSSER, C. J.; HEUSSER, L. E., 1980, Sequence of pumiceous tephra layers and the late Quaternary environmental record near Mount St. Helens.

PEREIRA, W. E.; ROSTAD, C. E.; TAYLOR, H. E.; KLEIN, J. M., 1982, Characterization of organic contaminants in environmental samples associated with Mount St. Helens 1980 volcanic eruption.

WISSMAR, R. C., 1982, Limnological features of lakes within the 18 May 1980 Mount St. Helens blast zone.

Lake Washington, *see* LAKES - LAKE WASHINGTON

Lakes - Biological aspects, *see* LIMNOLOGY

LAKES - BUMPING LAKE

FAULCONER, LEE; MONGILLO, PAUL, 1981, Effects of Mt. St. Helens ashfall on three trout streams and Bumping Lake in the Yakima Basin, Washington.

Lakes - Clark Co., Wash., *see* LAKES - FARGHER LAKE

LAKES - COLDWATER LAKE

- ANDERSON, R. Y.; NUHFER, E. B.; DEAN, W. E., 1985, Sedimentation in a blast-zone lake at Mount St. Helens, Washington—Implications for varve formation.
- MCKNIGHT, D. M.; KLEIN, J. M.; WISSMAR, R. C., 1984, Changes in the organic material in lakes in the blast zone of Mount St. Helens, Washington.
- MEYER, WILLIAM; SABOL, M. A.; SCHUSTER, R. L., 1986, Landslide dammed lakes at Mount St. Helens, Washington.
- SMITH, M. A.; WHITE, M. J., 1985, Observations on lakes near Mount St. Helens—Phytoplankton.

LAKES - COWLITZ CO., WASH.

see also

- LAKES - COLDWATER LAKE
 LAKES - FAWN LAKE
 LAKES - MCBRIDE LAKE
 LAKES - MERRILL LAKE
 LAKES - SILVER LAKE

CARPENTER, P. J., 1982, New lakes of North Fork Toutle River—Mount St. Helens.

CRAWFORD, B. A., 1986, Recovery of game fish populations impacted by the May 18, 1980 eruption of Mount St. Helens; Part II, Recovery of surviving fish populations within the lakes in the Mount Saint Helens National Volcanic Monument and adjacent areas.

DAHM, C. N.; BAROSS, J. A.; LILLEY, M. D.; WARD, A. K.; SEDELL, J. R., 1982, Lakes in the blast zone of Mt. St. Helens—Chemical and microbial responses following the May 18, 1980 eruption.

EMBREY, S. S.; DION, N. P., 1982, Effects of Mt. St. Helens eruption on nearby lakes in Washington [abstract].

WISSMAR, R. C., 1981, Dissolved organics and pH in lakes within Mt. St. Helens blast zone [abstract].

WISSMAR, R. C., 1982, Limnological features of lakes within the 18 May 1980 Mount St. Helens blast zone.

WISSMAR, R. C.; DEVOL, A. H.; NEVISSI, A. E.; SEDELL, J. R., 1982, Chemical changes of lakes within the Mount St. Helens blast zone.

LAKES - DAVIS LAKE

DAVIS, P. T., 1982, Tephrochronology, Davis Lake, southwest Washington [abstract].*

DAVIS, P. T.; BARNOSKY, C. W.; STUIVER, MINZE, 1982, A 20,000 yr record of volcanic ashfalls, Davis Lake, southwestern Washington [abstract].

LAKES - FARGHER LAKE

- HEUSSER, C. J.; HEUSSER, L. E., 1980, Sequence of pumiceous tephra layers and the late Quaternary environmental record near Mount St. Helens.

LAKES - FAWN LAKE

- DION, N. P.; EMBREY, S. S., 1981, Effects of Mount St. Helens eruption on selected lakes in Washington.

LAKES - FINDLEY LAKE

- DAHLGREN, RANDY, 1984, Impact of tephra perturbations on a forest soil in the *Abies amabilis* zone.

- GIBSON, FLASH; HANEGAN, J. L., 1982, Mount St. Helens—Its affects [sic] on the invertebrates of a small eastern Washington pond [abstract].

Lakes - Geochemistry, *see* LIMNOLOGY

Lakes - Grant Co., Wash.

see

LAKES - LAKE LENORE**LAKES - SOAP LAKE**

Lakes - King Co., Wash, *see* LAKES - LAKE WASHINGTON

LAKES - LAKE LENORE

- EDMONDSON, W. T.; LITT, A. H., 1984, Mt. St. Helens ash in lakes in the lower Grand Coulee, Washington State.*

LAKES - LAKE WASHINGTON

- DAVIS, P. T., 1982, Tephrochronology, Davis Lake, southwest Washington [abstract].*

Lakes - Lewis Co., Wash., *see* LAKES - DAVIS LAKE

LAKES - MCBRIDE LAKE

- SMITH, M. A.; WHITE, M. J., 1985, Observations on lakes near Mount St. Helens—Phytoplankton.

LAKES - MERRILL LAKE

- ANDERSON, R. Y.; NUHFER, E. B.; DEAN, W. E.; DELMASTRO, G. A., 1984, Sedimentology of Mt. St. Helens tephra at Merrill, Soap, and Williams Lakes, Washington, USA [abstract].

HYDE, J. H., 1970, Geologic setting of Merrill Lake and evaluation of volcanic hazards in the Kalama River valley near Mount St. Helens, Washington.

LAKES - META LAKE

SMITH, M. A.; WHITE, M. J., 1985, Observations on lakes near Mount St. Helens—Phytoplankton.

LAKES - NORTH COLDWATER LAKE

DAHM, C. N.; BAROSS, J. A.; LILLEY, M. D.; WARD, A. K.; SEDELL, J. R., 1982, Lakes in the blast zone of Mt. St. Helens—Chemical and microbial responses following the May 18, 1980 eruption.

EMBREY, S. S.; DION, N. P., 1982, Effects of Mt. St. Helens eruption on nearby lakes in Washington [abstract].

LAKES - RYAN LAKE

DAHM, C. N.; BAROSS, J. A.; LILLEY, M. D.; WARD, A. K.; SEDELL, J. R., 1982, Lakes in the blast zone of Mt. St. Helens—Chemical and microbial responses following the May 18, 1980 eruption.

DAHM, C. N.; BAROSS, J. A.; WARD, A. K.; LILLEY, M. D.; SEDELL, J. R., 1983, Initial effects of the Mount St. Helens eruption on nitrogen cycle and related chemical processes in Ryan Lake.

LAKES - ST. HELENS LAKE

DION, N. P.; EMBREY, S. S., 1981, Effects of Mount St. Helens eruption on selected lakes in Washington.

MCKNIGHT, D. M.; KLEIN, J. M.; WISSMAR, R. C., 1984, Changes in the organic material in lakes in the blast zone of Mount St. Helens, Washington.

LAKES - SILVER LAKE

PEREIRA, W. E.; ROSTAD, C. E.; TAYLOR, H. E.; KLEIN, J. M., 1980, Characterization of organic contaminants in environmental samples associated with Mount St. Helens, 1980 volcanic eruption.

LAKES - SKAMANIA CO., WASH.

see also

LAKES - COLDWATER LAKE

LAKES - META LAKE

LAKES - RYAN LAKE

LAKES - ST. HELENS LAKE

LAKES - SOUTH FORK CASTLE CREEK LAKE

LAKES - SPIRIT LAKE

BOLDING, DICK, 1981, Surviving the blast.

CRAWFORD, B. A., 1986, Recovery of game fish populations impacted by the May 18, 1980 eruption of Mount St. Helens; Part II, Recovery of surviving fish populations within the lakes in the Mount Saint Helens National Volcanic Monument and adjacent areas.

DION, N. P.; EMBREY, S. S., 1984, Effects of 1980 eruption of Mount St. Helens on selected lakes in Washington [abstract].

MCKNIGHT, D. M.; PEREIRA, W. E.; CEAZAN, M. L., 1982, Characterization of dissolved organic materials in surface waters within the blast zone of Mount St. Helens, Washington.

WISSMAR, R. C., 1981, Dissolved organics and pH in lakes within Mt. St. Helens blast zone [abstract].

WISSMAR, R. C., 1982, Limnological features of lakes within the 18 May 1980 Mount St. Helens blast zone.

WISSMAR, R. C.; DEVOL, A. H.; NEVISSI, A. E.; SEDELL, J. R., 1982, Chemical changes of lakes within the Mount St. Helens blast zone.

WISSMAR, R. C.; DEVOL, A. H.; STALEY, J. T.; SEDELL, J. R., 1982, Biological responses of lakes in the Mount St. Helens blast zone.

LAKES - SOAP LAKE

ANDERSON, R. Y.; NUHFER, E. B.; DEAN, W. E.; DELMASTRO, G. A., 1984, Sedimentology of Mt. St. Helens tephra at Merrill, Soap, and Williams Lakes, Washington, USA [abstract].

LAKES - SOUTH FORK CASTLE CREEK LAKE

DAHM, C. N.; BAROSS, J. A.; LILLEY, M. D.; WARD, A. K.; SEDELL, J. R., 1982, Lakes in the blast zone of Mt. St. Helens—Chemical and microbial responses following the May 18, 1980 eruption.

EMBREY, S. S.; DION, N. P., 1982, Effects of Mt. St. Helens eruption on nearby lakes in Washington [abstract].

MEYER, WILLIAM; SABOL, M. A.; SCHUSTER, R. L., 1986, Landslide dammed lakes at Mount St. Helens, Washington.

SMITH, M. A.; WHITE, M. J., 1985, Observations on lakes near Mount St. Helens—Phytoplankton.

SMITH, W. K.; SCHUSTER, R. L.; SABOL, M. A., 1984, Stabilizing natural dams formed by the 1980 debris avalanche on Mount St. Helens [abstract].

LAKES - SPIRIT LAKE

- COFFIN, H. G., 1983, Comment and reply on 'Erect floating stumps in Spirit Lake, Washington'; Reply.
- COFFIN, H. G., 1983, Erect floating stumps in Spirit Lake, Washington.
- COFFIN, H. G., 1983, Mount St. Helens and Spirit Lake.
- DAHM, C. N.; BAROSS, J. B.; LILLEY, M. D.; WARD, A. K.; SEDELL, J. R., 1981, Microbial and chemical responses of lakes in the blast zone of Mt. St. Helens, 1980 and 1981 [abstract].
- DAHM, C. N.; BAROSS, J. A.; LILLEY, M. D.; WARD, A. K.; SEDELL, J. R., 1982, Lakes in the blast zone of Mt. St. Helens—Chemical and microbial responses following the May 18, 1980 eruption.
- DION, N. P.; EMBREY, S. S., 1981, Effects of Mount St. Helens eruption on selected lakes in Washington.*
- EMBREY, S. S.; DION, N. P., 1982, Effects of Mt. St. Helens eruption on nearby lakes in Washington [abstract].
- FRITZ, W. J., 1983, Comment and reply on 'Erect floating stumps in Spirit Lake, Washington'; Comment.
- HALLIDAY, W. R., 1983, Further observations on the Spirit Lake pseudokarst.
- HOLZER, T. L., 1986, Spirit Lake hazard evaluation.
- JONES, BRONWEN, 1985, Tunnelling in North America's volcanic zone.
- KRESCH, D. L., 1985, Spirit Lake dam-failure flood routing assessment.
- LARSON, D. W.; DAHM, C. N., 1986, Observations on the limnological recovery of volcanically impacted Spirit Lake, Washington [abstract].
- LAWRENCE, D. B.; LAWRENCE, E. G., 1959, Radiocarbon dating of some events on Mount Hood and Mount St. Helens.
- MCKNIGHT, D. M., 1982, Fulvic acidlike substances from lakes near Mount St. Helens, Washington [abstract].
- MCKNIGHT, D. M.; KLEIN, J. M.; WISSMAR, R. C., 1984, Changes in the organic material in lakes in the blast zone of Mount St. Helens, Washington.
- MEYER, WILLIAM; CARPENTER, P. J., 1983, Filling of Spirit Lake, Washington, May 18, 1980, to July 31, 1982.
- MEYER, WILLIAM; SABOL, M. A.; SCHUSTER, R. L., 1986, Landslide dammed lakes at Mount St. Helens, Washington.
- PARSONS, M. R.; BEACH, G. L.; KEENAN, B. L.; ROSENFIELD, C. L., 1983, Drainage development in the lahar blockage area, Mt. St. Helens, Washington [abstract].
- PEREIRA, W. E.; ROSTAD, C. E.; TAYLOR, H. E.; KLEIN, J. M., 1980, Characterization of organic contaminants in environmental samples associated with Mount St. Helens, 1980 volcanic eruption.
- SAGER, J. W.; CHAMBERS, D. R., 1986, Design and construction of the Spirit Lake outlet tunnel, Mount St. Helens, Washington.
- SAGER, J. W.; GRIFFITHS, J. B.; FARGO, N. J., 1984, Spirit Lake outlet tunnel.
- SIKONIA, W. G., 1985, Impact on the Columbia River of an outburst of Spirit Lake.
- SMITH, M. A.; WHITE, M. J., 1985, Observations on lakes near Mount St. Helens—Phytoplankton.
- SWIFT, C. H., III; KRESCH, D. L., 1983, Mudflow hazards along the Toutle and Cowlitz Rivers from a hypothetical failure of Spirit Lake blockage.
- U.S. ARMY CORPS OF ENGINEERS, 1984, Alternative strategies for a permanent outlet for Spirit Lake near Mount St. Helens, Washington; final environmental impact statement.
- U.S. ARMY CORPS OF ENGINEERS, 1984, Spirit Lake outlet tunnel; design memorandum no. 1.
- WILSON, R. C., 1981, Interactions between ground motion and ground failure.
- LAKES - SPOKANE CO., WASH.,
see also
- LAKES - FINDLEY LAKE
LAKES - WILLIAMS LAKE
- FUNK, W. H., 1980, Effects of ash fall out on eastern Washington lakes and the upper Spokane River.
- LAKES - VENUS LAKE
- DION, N. P.; EMBREY, S. S., 1981, Effects of Mount St. Helens eruption on selected lakes in Washington.
- LAKES - WEST CASTLE CREEK LAKE
- MCKNIGHT, D. M., 1982, Fulvic acidlike substances from lakes near Mount St. Helens, Washington [abstract].

LAKES - WILLIAMS LAKE

- ANDERSON, R. Y.; NUHFER, E. B.; DEAN, W. E., 1984, Sinking of volcanic ash in uncompacted sediment in Williams Lake, Washington.
- ANDERSON, R. Y.; NUHFER, E. B.; DEAN, W. E.; DELMASTRO, G. A., 1984, Sedimentology of Mt. St. Helens tephra at Merrill, Soap, and Williams Lakes, Washington, USA [abstract].

Lakes - Yakima Co., Wash., see LAKES - BUMPING LAKE**Landfills, see VOLCANIC ASH - ENGINEERING ASPECTS****Landslide-induced dams, see DEBRIS DAMS****Landslides, see MASS MOVEMENTS - AVALANCHES AND LANDSLIDES****Lava tubes, see CAVES****LAWS AND LITIGATION**

- HUFFMAN, JAMES, 1986, Government tort liability for Mount St. Helens fury.
- TANAKA, J. M. C., 1985, Judge lets state off hook... but not Weyerhaeuser.
- TANAKA, J. M. C., 1986, The St. Helens trials—II.
- TANAKA, J. M. C., 1986, Volcano trial.
- U.S. CONGRESS, 1982, Public Law 97-243—An act to designate the Mount St. Helens National Volcanic Monument in the State of Washington, and for other purposes.

Legionnaire's Disease see HEALTH EFFECTS**LEWIS RIVER**

- BATEMAN, A. F., 1951, Geology of dam sites on Lewis River, Washington.
- CUMMANS, JOHN, 1981, Mudflows resulting from the May 18, 1980, eruption of Mount St. Helens, Washington.
- MARTINSON, H. A.; FINNERAN, S. D.; TOPINKA, L. J., 1984, Changes in channel geomorphology of six eruption-affected tributaries of the Lewis River, 1980-82, Mount St. Helens, Washington.

MARTINSON, H. A.; HAMMOND, H. E.; MAST, W. W.; MANGO, P. D., 1986, Channel geometry and hydrologic data for six eruption-affected tributaries of the Lewis River, Mount St. Helens, Washington, water years 1983-84.

RYAN, P. J.; ELDER, R. A.; GARDINER, S. R. M., 1984, Prediction of dam overtopping due to mudflows.

TILFORD, NORMAN; KENT, RICHARD, 1981, Mount St. Helens and the geology of Lewis and Toutle Rivers.

LIMNOLOGY

BAROSS, J. A.; DAHM, C. N.; WARD, A. K.; LILLEY, M. D.; SEDELL, J. R., 1982, Initial microbiological response in lakes to the Mt. St. Helens eruption.

BOLDING, DICK, 1981, Surviving the blast.

CRAWFORD, B. A., 1986, Recovery of game fish populations impacted by the May 18, 1980 eruption of Mount St. Helens; Part II, Recovery of surviving fish populations within the lakes in the Mount Saint Helens National Volcanic Monument and adjacent areas.

DAHM, C. N.; BAROSS, J. B.; LILLEY, M. D.; WARD, A. K.; SEDELL, J. R., 1981, Microbial and chemical responses of lakes in the blast zone of Mt. St. Helens, 1980 and 1981 [abstract].

DAHM, C. N.; BAROSS, J. A.; LILLEY, M. D.; WARD, A. K.; SEDELL, J. R., 1982, Lakes in the blast zone of Mt. St. Helens—Chemical and microbial responses following the May 18, 1980 eruption.

DAHM, C. N.; BAROSS, J. A.; WARD, A. K.; LILLEY, M. D.; SEDELL, J. R., 1983, Initial effects of the Mount St. Helens eruption on nitrogen cycle and related chemical processes in Ryan Lake.

DION, N. P.; EMBREY, S. S., 1981, Effects of Mount St. Helens eruption on selected lakes in Washington.*

EDMONDSON, W. T., 1984, Volcanic ash in lakes.

EDMONDSON, W. T.; LITT, A. H., 1984, Mt. St. Helens ash in lakes in the lower Grand Coulee, Washington State.*

EMBREY, S. S.; DION, N. P., 1982, Effects of Mt. St. Helens eruption on nearby lakes in Washington [abstract].

FAULCONER, LEE; MONGILLO, PAUL, 1981, Effects of Mt. St. Helens ashfall on three trout streams and Bumping Lake in the Yakima Basin, Washington.

FRENZEL, S. A., 1983, Effects of volcanic ash on the benthic environment of a mountain stream, northern Idaho.

FRENZEL, S. A., 1984, Effects of volcanic ash on aquatic environments in northern Idaho [abstract].

- FREY, B. E.; LARA-LARA, J. R.; SMALL, L. F., 1983, Reduced rates of primary production in the Columbia River estuary following the eruption Mt. Saint Helens on 18 May 1980.
- FUNK, W. H., 1980, Effects of ash fall out on eastern Washington lakes and the upper Spokane River.
- HAWKINS, C. P.; ANDERSON, N. H., 1982, Habitats and fauna—The aftermath of the Mount St. Helens eruption on stream systems [abstract].
- KENT, DAVE, 1980, Columbia River estuary.
- MCKNIGHT, D. M., 1982, Fulvic acidlike substances from lakes near Mount St. Helens, Washington [abstract].
- MCKNIGHT, D. M.; KLEIN, J. M.; WISSMAR, R. C., 1984, Changes in the organic material in lakes in the blast zone of Mount St. Helens, Washington.
- MCKNIGHT, D. M.; PEREIRA, W. E.; CEAZAN, M. L., 1982, Characterization of dissolved organic materials in surface waters within the blast zone of Mount St. Helens, Washington.
- MILLIGAN, J. M.; FALTER, C. M.; BRUSVEN, M. A.; AND OTHERS, 1983, In-stream distribution and hydraulic and ecological effects of volcanic ash from Mount St. Helens eruption.
- PEREIRA, W. E.; ROSTAD, C. E.; TAYLOR, H. E.; KLEIN, J. M., 1982, Characterization of organic contaminants in environmental samples associated with Mount St. Helens 1980 volcanic eruption.*
- RIEDEL, G. R.; WILSON, S. L.; HOLTON, R. L., 1984, Trace metals in the Columbia River estuary following the 18 May 1980 eruption of Mount St. Helens.
- SKILLE, J. M.; FALTER, C. M.; AND OTHERS, 1983, Fate, distribution and limnological effects of volcanic tephra in the St. Joe and Coeur d'Alene River deltas of Lake Coeur d'Alene, Idaho.
- SMITH, M. A.; WHITE, M. J., 1985, Observations on lakes near Mount St. Helens—Phytoplankton.
- STALEY, J. T.; LEHMICKE, L. G.; PALMER, F. E.; PEET, R. W.; WISSMAR, R. C., 1982, Impact of Mount St. Helens eruption on bacteriology of lakes in the blast zone.
- WELCH, E. B.; TOMASEK, M. D.; LAZOFF, S. B., 1982, Volcanic ashlayer effect on lake internal phosphorus loading.
- WISSMAR, R. C., 1981, Dissolved organics and pH in lakes within Mt. St. Helens blast zone [abstract].
- WISSMAR, R. C., 1982, Limnological features of lakes within the 18 May 1980 Mount St. Helens blast zone.
- WISSMAR, R. C.; DEVOL, A. H.; NEVISSI, A. E.; SEDELL, J. R., 1982, Chemical changes of lakes within the Mount St. Helens blast zone.
- WISSMAR, R. C.; DEVOL, A. H.; STALEY, J. T.; SEDELL, J. R., 1982, Biological responses of lakes in the Mount St. Helens blast zone.
- Machine effects, see VOLCANIC ASH - MACHINE EFFECTS**
- MAGMA CHAMBER**
- BAME, D. A., 1984, A source model for low frequency volcanic earthquakes.
- CAREY, S. N.; SIGURDSSON, HARALDUR, 1985, The May 18, 1980, eruption of Mount St. Helens; 2, Modeling of dynamics of the plinian phase.
- CASHMAN, K. V.; MARSH, B. D., 1984, Crystal-size spectra and kinetics of crystal growth in magma—II. Application [abstract].
- EICHELBERGER, J. C.; HAYES, D. B., 1982, Magmatic model for the Mount St. Helens blast of May 18, 1980.
- EWART, JAMES; VOIGHT, BARRY, 1980, Finite element deformation models of volcanoes [abstract].
- FINK, J. H.; POLLARD, D. D.; DONNELLY-NOLAN, J., 1982, Structural relationships among feeder dikes, silicic domes and ground cracks in the Medicine Lake highland and Mount St. Helens volcanoes [abstract].
- HAYES, D. B.; EICHELBERGER, J. C., 1981, Magmatic model for the Mt. St. Helens blast of May 18, 1980 [abstract].
- LE CLOAREC, M. F.; LAMBERT, G.; LE ROULLEY, J. C.; ARDOUIN, B., 1986, Long-lived radon daughters in Mount St. Helens emissions—A size estimation of the magmatic reservoir.
- LE CLOAREC, M. F.; LAMBERT, G.; LE ROULLEY, J. C.; ARDOUIN, B., 1986, Long-lived radon decay products in Mount St. Helens emissions—An estimation of the magma reservoir volume.
- MELSON, W. G.; HOPSON, C. A., 1982, Petrologic model of the 1980-82 Mt. St. Helens magma chamber [abstract].
- RICE, ALAN, 1985, The mechanism of the Mt. St. Helens eruption and speculations regarding Soret effects in planetary dynamics.
- RICE, ALAN, 1985, Popcorn magma [abstract].
- RICE, ALAN, 1986, Quench supersaturation and volcanic eruptions [abstract].

RUTHERFORD, M. J.; DEVINE, JOE, 1986, Experimental petrology of recent Mount St. Helens dacites—Amphibole, Fe-Ti oxides and magmas chamber conditions [abstract].

RUTHERFORD, M. J.; SIGURDSSON, HARALDUR; CAREY, S. N.; DAVIS, ANDREW, 1985, The May 18, 1980, eruption of Mount St. Helens; I, Melt composition and experimental phase equilibria.

SCANDONE, ROBERTO; MALONE, S. D., 1985, Magma supply, magma discharge and readjustment of the feeding system of Mount St. Helens during 1980.

Magnetic surveys, *see* GEOPHYSICS - MAGNETIC SURVEYS

MAPS - GEOLOGIC

BANKS, N. G.; BENNETT, C. A.; SCHMIDT, J. M., 1978, Maps of photo lineaments and geomorphological features in the Spirit Lake quadrangle, Washington.

CRANDELL, D. R.; MULLINEAUX, D. R., 1978, Potential hazards from future eruptions of Mount St. Helens volcano, Washington.*

CRISWELL, C. W.; ELSTON, W. E., 1985, Intra-eruption geologic map from an x-ray radar image during the May 18, 1980 eruption of Mount St. Helens, Washington.

EVARTS, R. C.; ASHLEY, R. P., 1984, Preliminary geologic map of the Spirit Lake quadrangle, Washington.

HAMMOND, P. E., 1973, Preliminary geologic map of the southern Cascade Range.

HAMMOND, P. E., 1975, Preliminary geologic map and cross-sections with emphasis on Quaternary volcanic rocks, southern Cascade Mountains, Washington.

HAMMOND, P. E., 1980, Reconnaissance geologic map and cross sections of southern Washington Cascade Range, latitude 45 degrees 30 minutes - 47 degrees 15 minutes N., longitude 120 degrees 45 minutes - 122 degrees 22.5 minutes W.

HUNTING, M. T.; BENNETT, W. A. G.; LIVINGSTON, V. E., JR.; MOEN, W. S., COMPILERS, 1961, Geologic map of Washington.

LIPMAN, P. W.; MULLINEAUX, D. R., EDITORS, 1981, The 1980 eruptions of Mount St. Helens, Washington.

LUEDKE, R. G.; SMITH, R. L.; RUSSELL-ROBINSON, S. L., 1983, Map showing distribution, composition, and age of late Cenozoic volcanoes and volcanic rocks of the Cascade Range and vicinity, northwestern United States.

SCHRIENER, ALEXANDER, 1977, General geology and selected base metal distributions in the southern Cascade Range, Washington.

VERHOOGEN, JEAN, 1936, Geology of Mount St. Helens, Washington.

VERHOOGEN, JEAN, 1937, Mount St. Helens—A recent Cascade volcano.

MAPS - GEOPHYSICAL

BONINI, W. E.; HUGHES, D. W.; DANES, Z. F., COMPILERS, 1974, Complete Bouguer gravity anomaly map of Washington.

DANES, Z. F.; PHILLIPS, W. M., 1983, Complete Bouguer gravity anomaly map, Cascade Mountains, Washington.

DISHBERGER, D. M., 1983, Preparation of residual gravity maps for the southern Cascade Mountains, Washington using Fourier analysis.

FRASER, D. C., 1983, Airborne electromagnetic surveys of the Cascade Range, western United States; with a preface by D. B. Hoover.

U.S. GEOLOGICAL SURVEY, 1975, Aeromagnetic map for part of southwestern Washington.

U.S. GEOLOGICAL SURVEY, 1981, Aeromagnetic map of the Mt. Margaret area, Washington.

U.S. GEOLOGICAL SURVEY, 1981, Aeromagnetic map of the Mt. St. Helens area, Washington.

U.S. GEOLOGICAL SURVEY, 1982, Aeromagnetic map of Mt. St. Helens, Washington—Post May, 1980 eruption.

MAPS - PHYSIOGRAPHIC DIAGRAMS

ALPHA, T. R., 1982, Physiographic diagrams of eruptive effects [abstract].

ALPHA, T. R., 1983, Physiographic diagrams of Mount St. Helens, Washington showing changes in its summit crater, 1982.

ALPHA, T. R.; MOORE, J. G., 1981, Physiographic diagrams of the May 18, 1980, landslide-eruption of Mount St. Helens, Washington.

ALPHA, T. R.; MOORE, J. G.; JONES, D. R., 1980, Sequential physiographic diagrams of Mount St. Helens, Washington, 1979-80.

ALPHA, T. R.; MOORE, J. G.; MORLEY, J. M.; JONES, D. R., 1980, Physiographic diagrams of Mount St. Helens and vicinity, Washington, 1980.

ALPHA, T. R.; MOORE, J. G.; MORLEY, J. M.; JONES, D. R., 1981, Physiographic diagrams of Mount St. Helens, Washington, showing changes in its summit crater, summer 1980.

ALPHA, T. R.; MORLEY, J. M., 1983, Comparative physiographic diagrams of Mount St. Helens, Washington, and Crater Lake, Oregon.

ALPHA, T. R.; MORLEY, J. M.; MYERS, BOBBIE; LEIGHLEY, T. A., 1982, Physiographic diagrams of Mount St. Helens, Washington showing changes in its summit crater, 1981.

ALPHA, T. R.; MYERS, BOBBIE, 1985, Physiographic diagrams of Mount St. Helens, Washington showing changes in its summit crater, 1983.

ALPHA, T. R.; MYERS, BOBBIE, 1986, Physiographic diagrams of Mount St. Helens, Washington, showing changes in its summit crater, 1984.

LAWRENCE, D. B., 1954, Diagrammatic history of the northeast slope of Mt. St. Helens, Washington.

MAPS - TOPOGRAPHIC

Note: The various standard topographic maps of the Mount St. Helens area prepared by the U.S. Geological Survey over the years have not been included in this index.

see also TOPOGRAPHY

ALBEE, W. C.; MOORE, J. G., 1981, Mapping Mount St. Helens [abstract].

BEACH, G. L., 1985, Morphologic evolution of the Mount St. Helens crater area, Washington.

HARDING, R. A., 1982, Aerial photos and maps of the event area [abstract].

JONES, P. G., 1982, Special 1:100,000-scale Mount St. Helens maps.*

JORDAN, RAYMOND; KIEFFER, H. H., 1981, Topographic changes at Mount St. Helens—Large-scale photogrammetry and digital terrain models.

JORDAN, RAYMOND; KIEFFER, H. H., 1982, Topographic map of Mount St. Helens, Washington, showing changes between April 11 and May 16, 1980.

MOLENAAR, DEE, 1981, Oblique-view pictorial landform map—Souvenir of an eruption—Mount St. Helens country, Washington.

MOORE, J. G.; ALBEE, W. C., 1981, Topographic and structural changes, March-July 1980—Photogrammetric data.

U.S. GEOLOGICAL SURVEY, 1980, Preliminary aerial photographic interpretative map showing features related to the May 18, 1980 eruption of Mount St. Helens, Washington.*

U.S. GEOLOGICAL SURVEY, 1984, Mount St. Helens mapping [abstract].

MASS MOVEMENTS - AVALANCHES AND LANDSLIDES

ALPHA, T. R.; MOORE, J. G., 1981, Physiographic diagrams of the May 18, 1980, landslide-eruption of Mount St. Helens, Washington.

AUSTIN, S. A., 1984, Rapid erosion at Mount St. Helens.

BRANTLEY, STEVEN; GLICKEN, H. X., 1986, Volcanic debris avalanches.

DUNNE, THOMAS, 1983, Introduction and welcome.

GLICKEN, H. X., 1982, Criteria for recognition of large volcanic debris avalanches [abstract].

GLICKEN, H. X., 1985, Deposits of large volcanic debris avalanches at Mount St. Helens and Mount Shasta volcanoes [abstract].

GLICKEN, H. X., 1986, Mt. St. Helens rockslide-debris avalanche.

GLICKEN, H. X.; FISHER, R. V., 1984, Interaction between the rockslide-debris avalanche and the lateral blast at Mount St. Helens, Washington [abstract].

GLICKEN, H. X.; JANDA, R. J.; VOIGHT, BARRY, 1980, Catastrophic landslide/debris avalanche of May 18, 1980, Mount St. Helens volcano [abstract].

GLICKEN, H. X.; VOIGHT, BARRY; JANDA, R. J., 1981, Rockslide-debris avalanche of May 18, 1980, Mount St. Helens volcano [abstract].

KERR, R. A., 1984, Landslides from volcanoes seen as common.

MEYER, WILLIAM; SABOL, M. A.; SCHUSTER, R. L., 1986, Landslide dammed lakes at Mount St. Helens, Washington.

NEWHALL, C. G., 1982, A prehistoric debris avalanche from Mount St. Helens [abstract].

SCHUSTER, R. L., 1984, Effects of landslides and mudflows associated with the May 1980 eruption of Mount St. Helens, northwestern U.S.A.

SCHUSTER, R. L.; CRANDELL, D. R., 1984, Catastrophic debris avalanches from volcanoes.

SIEBERT, LEE, 1984, Large volcanic debris avalanches—Characteristics of source areas, deposits, and associated eruptions.

UI, TADAHIDE, 1983, Volcanic dry avalanche deposits—Identification and comparison with nonvolcanic debris stream deposits.*

VOIGHT, BARRY; GLICKEN, H. X.; JANDA, R. J.; DOUGLASS, P. M., 1981, Catastrophic rockslide avalanche of May 18.

- VOIGHT, BARRY; JANDA, R. J.; GLICKEN, H. X.; DOUGLASS, P. M., 1983, Nature and mechanics of the Mount St. Helens rockslide-avalanche of 18 May 1980.
- VOIGHT, BARRY; JANDA, R. J.; GLICKEN, H. X.; DOUGLASS, P. M.; NOLAN, K. M.; HOBLITT, R. P., 1980, Catastrophic rockslide-avalanche of May 18, 1980, Mount St. Helens volcano, Washington [abstract].
- VORTMAN, L. J., 1980, Deduced physical characteristics of the May 18, 1980, eruption [abstract].
- WAITT, R. B., JR., 1980, Stratigraphic relations between deposits of lateral surge, debris flow, and catastrophic floodwater at Mount St. Helens, 18 May 1980 [abstract].
- WAITT, R. B., JR.; MACLEOD, N. S., 1983, Far-traveling snow avalanches and floods from minor explosive eruptions at snow-clad Mount St. Helens, Washington [abstract].
- WAITT, R. B., JR.; PIERSON, T. C.; MACLEOD, N. S.; JANDA, R. J.; VOIGHT, BARRY; HOLCOMB, R. T., 1983, Eruption-triggered avalanche, flood, and lahar at Mount St. Helens—Effects of winter snowpack.
- WILSON, R. C., 1981, Interactions between ground motion and ground failure.
- WINTERS, W. J.; KAYEN, R. E., 1985, Static and cyclic strength properties of Mount St. Helens debris avalanche and ash cloud materials.
- MASS MOVEMENTS - LAHARS AND MUDFLOWS [GENERAL WORKS]**
- BEACH, G. L., 1984, The 19 March 1982 eruption and lahar at Mount St. Helens—Implications for Martian outflow channels?
- BRANTLEY, STEVEN; POWER, JOHN; TOPINKA, L. J., 1985, Reports from the U.S. Geological Survey's Cascades Volcano Observatory at Vancouver, Washington.
- COFFIN, H. G., 1983, Comment and reply on 'Erect floating stumps in Spirit Lake, Washington'; Reply.
- COLLIER, C. R., 1980, Hydrologic effects.
- CRANDELL, D. R.; MULLINEAUX, D. R., 1973, Pine Creek volcanic assemblage at Mount St. Helens, Washington.
- CUMMANS, J. E.; COLLIER, C. R., 1980, Mudflows, floods, and sediment deposition resulting from the May 18 eruption of Mt. St. Helens by Water Resources Division, U.S. Geological Survey [abstract].
- DINEHART, R. L.; RITTER, J. R.; KNOTT, J. M., 1981, Sediment data for streams near Mount St. Helens, Washington—Volume 1, 1980 water-year data.
- DUNNE, THOMAS, 1983, Introduction and welcome.
- FAIRCHILD, L. H., 1986, Quantitative analysis of lahar hazard.
- FRITZ, W. J., 1983, Comment and reply on 'Erect floating stumps in Spirit Lake, Washington'; Comment.
- FRITZ, W. J.; HARRISON, SYLVIA, 1983, Giant armored mud boulder from the 1982 Mount St. Helens mudflows.*
- FRITZ, W. J.; HARRISON, SYLVIA, 1983, Sedimentary sequence from 1980 and 1982 Mount St. Helens sediment flows—A model for older volcaniclastic deposits [abstract].
- FRITZ, W. J.; HARRISON, SYLVIA, 1985, Transported trees from the 1982 Mount St. Helens sediment flows—Their use as paleocurrent indicators.
- FRITZ, W. J.; MOORE, J. N., 1981, Sedimentology of Mount St. Helens mud flows as related to the transport of trees [abstract].
- FRITZ, W. J.; OGREN, D. E., 1984, Clast orientations in the Mount St. Helens sediment flows [abstract].
- HALLIDAY, W. R., 1980, Post-eruptive mudflow impact on the Mount St. Helens caves, Washington.
- HALLIDAY, W. R., 1981, Impact of post-eruptive mudflows on caves of the Cave Basalt Lava Flow, Mount St. Helens, Washington [abstract].
- HYDE, J. H., 1975, Upper Pleistocene pyroclastic-flow deposits and lahars south of Mount St. Helens volcano, Washington.
- JANDA, R. J.; MEYER, D. F., 1985, Fluvial sedimentation following Quaternary eruptions of Mount St. Helens, Washington [abstract].
- JANDA, R. J.; NOLAN, K. M.; GLICKEN, H. X.; ABBOTT, L. S.; VOIGHT, BARRY, 1980, Processes responsible for massive river sedimentation following the May 18, 1980 eruption of Mt. St. Helens [abstract].
- JANDA, R. J.; SCOTT, K. M.; NOLAN, K. M.; MARTINSON, H. A., 1981, Lahar movement, effects, and deposits.
- MAJOR, J. J.; VOIGHT, BARRY, 1984, The Mount St. Helens southwest flank lahars of May 18, 1980—Flow dynamics, sedimentology, clast fabric [abstract].
- MAJOR, J. J.; VOIGHT, BARRY, 1986, Sedimentology and clast orientations of the 18 May 1980 southwest-flank lahars, Mount St. Helens, Washington.
- MARTINSON, H. A., 1982, Channel geomorphology, sediment movement, and channel changes of Pine and Muddy Rivers—Mount St. Helens.
- MEIER, M. F.; CARPENTER, P. J.; JANDA, R. J., 1981, Hydrologic effects of Mount St. Helens' 1980 eruptions.

- MULLINEAUX, D. R., 1960, Volcanic debris flows in western Washington.
- MULLINEAUX, D. R.; CRANDELL, D. R., 1962, Recent lahars from Mount St. Helens, Washington.
- PIERSON, T. C., 1984, Debris-flow monitoring at Mount St. Helens [abstract].
- PIERSON, T. C., 1986, Flow behavior of channelized debris flows, Mount St. Helens, Washington.
- POST, AUSTIN; MEIER, M. F.; COLLIER, C. R., 1980, The eruptions of Mount St. Helens and their hydrologic effects—An overview [abstract].
- RAYNOR, J. M., 1981, Mount St. Helens—One year later.
- SCHUSTER, R. L., 1981, Effects of the eruptions on civil works and operations in the Pacific Northwest.
- SCHUSTER, R. L., 1984, Effects of landslides and mudflows associated with the May 1980 eruption of Mount St. Helens, northwestern U.S.A.
- SCOTT, K. M., 1985, Origin, behavior, and sedimentology of catastrophic lahars at Mount St. Helens, Washington [abstract].
- SMITH, G. A., 1983, Giant armored mud boulder from the 1982 Mount St. Helens mudflows—Discussion.
- SMITH, R. D.; SMITH, G. A., 1983, Deposits of excessive sediment load floods in volcanic regions—A modern and an ancient example [abstract].
- SWIFT, C. H., III; KRESCH, D. L., 1983, Mudflow hazards along the Toutle and Cowlitz Rivers from a hypothetical failure of Spirit Lake blockage.
- TANAKA, J. M. C., 1981, Comparison of hypothetical and actual lahar impacts on public service delivery systems [abstract].
- WAITT, R. B., JR., 1980, Stratigraphic relations between deposits of lateral surge, debris flow, and catastrophic floodwater at Mount St. Helens, 18 May 1980 [abstract].
- WAITT, R. B., JR.; MACLEOD, N. S., 1983, Far-traveling snow avalanches and floods from minor explosive eruptions at snow-clad Mount St. Helens, Washington [abstract].
- WAITT, R. B., JR.; PIERSON, T. C.; MACLEOD, N. S.; JANDA, R. J.; VOIGHT, BARRY; HOLCOMB, R. T., 1983, Eruption-triggered avalanche, flood, and lahar at Mount St. Helens—Effects of winter snowpack.
- YURETICH, R. F.; FRITZ, W. J., 1981, Comment and reply on "Reinterpretation of the depositional environment of the Yellowstone 'fossil forests'" and "Stumps transported and deposited upright by Mount St. Helens mud flows".
- MASS MOVEMENTS - LAHARS AND MUDFLOWS - COLUMBIA RIVER
- BAKER, E. T.; FEELY, R. A.; CURL, H. C., JR., 1981, Effect of Mount St. Helens volcanic activity on the turbidity of the Columbia River plume [abstract].
- BRADLEY, J. B., 1984, Transition of a meandering river to a braided system due to high sediment concentration flows.
- HAENI, F. P., 1982, Disposition of mudslide materials from Mount St. Helens [abstract].
- HAENI, F. P., 1983, Sediment deposition in the Columbia and Lower Cowlitz Rivers, Washington-Oregon, caused by the May 18, 1980, eruption of Mount St. Helens.
- HUBBELL, D. W.; LAENEN, J. M.; MCKENZIE, S. W., 1983, Characteristics of Columbia River sediment following the eruption of Mount St. Helens on May 18, 1980.
- LAWYER, D. E., 1980, Navigation and flooding.
- MOORE, P. A.; REESE, J. R., 1982, Sediment physical and chemical analyses on the Cowlitz and Columbia River subsequent to the 18 May 1980 Mt. St. Helens eruption.
- ORWIG, C. E., 1981, Utilizing the National Weather Service's dynamic wave model on the lower Columbia River during the Mount Saint Helens event [abstract].
- RAINIERS NATIONAL BANK ECONOMICS DEPARTMENT, 1980, The economic impact of the eruptions of Mount St. Helens, "The Columbia River and related waterways".
- SLOTTA, L. S.; COBOS, C. R.; MUSTAIN, R. S., 1984, Shoaling of Port of Astoria, Oregon, by sediment from Mt. St. Helens eruption [abstract].
- U.S. CONGRESS, HOUSE COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION, 1985, Mount St. Helens sediment control, Washington (Toutle, Cowlitz, and Columbia Rivers).
- MASS MOVEMENTS - LAHARS AND MUDFLOWS - COWLITZ RIVER
- BETHEL, J. P., 1981, Volcanic mudflow deposits in the Cowlitz River valley, Washington [abstract].
- BRADLEY, J. B., 1981, Mt. St. Helens sediment transport—The first year [abstract].
- BRADLEY, J. B., 1982, Cowlitz River basin sediment yields [abstract].
- BRADLEY, J. B., 1984, Transition of a meandering river to a braided system due to high sediment concentration flows.

- BRADLEY, J. B.; GRAHAM, J. D., 1983, Effects of high sediment concentrations on bedforms and river hydraulics [abstract].
- BRADLEY, J. B.; SIMPSON, D. P.; BURCH, B. H.; COLLISTER, J. L., 1982, Physical properties of Mt. St. Helens mudflow and sediment deposits.
- BROWN, B. J.; THOMAS, W. A., 1983, Mt. St. Helens impact on Cowlitz River sedimentation.
- CUMMANS, JOHN, 1981, Mudflows resulting from the May 18, 1980, eruption of Mount St. Helens, Washington.*
- DINEHART, R. L., 1983, Patterns of sediment concentration in hyperconcentrated flows at Mount St. Helens, Washington [abstract].*
- DUNNE, THOMAS; LEOPOLD, L. B., 1981, Flood and sedimentation hazards in the Toutle and Cowlitz River system as a result of the Mt. St. Helens eruption.
- FAIRCHILD, L. H.; DUNNE, THOMAS, 1981, Prediction of future mudflow hazard on the Toutle and Cowlitz Rivers, Washington [abstract].
- FRITZ, W. J.; FISK, L. H.; HARRISON, SYLVIA, 1982, Mount St. Helens road log—A visit to the lower Toutle and Cowlitz River drainages to observe the sedimentology, transported trees, and other effects of mudflows resulting from the eruptions of May 18, 1980, and March 19, 1982.
- HAENI, F. P., 1982, Disposition of mudslide materials from Mount St. Helens [abstract].
- HAENI, F. P., 1983, Sediment deposition in the Columbia and Lower Cowlitz Rivers, Washington-Oregon, caused by the May 18, 1980, eruption of Mount St. Helens.
- HINDIN, ERVIN, 1983, Occurrence of organic compounds in water and stream sediments due to the Mt. St. Helens eruptions.
- LAWYER, D. E., 1980, Navigation and flooding.
- LOMBARD, R. E., 1982, Sediment deposition in the Cowlitz River.
- LOMBARD, R. E.; MILES, M. B.; NELSON, L. M.; KRESCH, D. L.; CARPENTER, P. J., 1981, Channel conditions in the Lower Toutle and Cowlitz Rivers resulting from the mudflows of May 18, 1980.
- LOMBARD, R. E.; MILES, M. B.; NELSON, L. M.; KRESCH, D. L.; CARPENTER, P. J., 1981, The impact of mudflows of May 18 on the lower Toutle and Cowlitz Rivers.
- MATHISON, J. M., 1981, Forecasting the Cowlitz River after the Mount Saint Helens eruption [abstract].
- MOORE, P. A.; REESE, J. R., 1982, Sediment physical and chemical analyses on the Cowlitz and Columbia River subsequent to the 18 May 1980 Mt. St. Helens eruption.
- PUBLIC WORKS, 1981, Submersible pumps help quell damage from Mt. St. Helens mudflow.
- SCOTT, K. M., 1984, Flow transformations and textural variation in lahars at Mount St. Helens, Washington [abstract].
- U.S. CONGRESS, HOUSE COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION, 1985, Mount St. Helens sediment control, Washington (Toutle, Cowlitz, and Columbia Rivers).
- VANONI, V. A., 1982, Comments on sedimentation problems resulting from the eruption of Mt. St. Helens.
- Mass Movements - Lahars and mudflows - Economic effects, see ECONOMIC EFFECTS**
- Mass movements - Lahars and mudflows - Geochemistry, see HYDROLOGY - IMPACTS OF THE ERUPTIONS ON WATER QUALITY**
- MASS MOVEMENTS - LAHARS AND MUDFLOWS - LEWIS RIVER**
- CUMMANS, JOHN, 1981, Mudflows resulting from the May 18, 1980, eruption of Mount St. Helens, Washington.
- MARTINSON, H. A.; FINNERAN, S. D.; TOPINKA, L. J., 1984, Changes in channel geomorphology of six eruption-affected tributaries of the Lewis River, 1980-82, Mount St. Helens, Washington.
- MARTINSON, H. A.; HAMMOND, H. E.; MAST, W. W.; MANGO, P. D., 1986, Channel geometry and hydrologic data for six eruption-affected tributaries of the Lewis River, Mount St. Helens, Washington, water years 1983-84.
- MASS MOVEMENTS - LAHARS AND MUDFLOWS - MUDDY RIVER**
- FINK, J. H.; GREELEY, RONALD, 1980, Mudflow studies on Mount St. Helens [abstract].
- MASS MOVEMENTS - LAHARS AND MUDFLOWS - PHYSICAL PROCESSES**
- BRADLEY, J. B.; SIMPSON, D. P.; BURCH, B. H.; COLLISTER, J. L., 1982, Physical properties of Mt. St. Helens mudflow and sediment deposits.
- CUMMANS, JOHN, 1981, Mudflows resulting from the May 18, 1980, eruption of Mount St. Helens, Washington.

- DUNNE, THOMAS; SMITH, J. D.; WIGMOSTA, M. S., 1983, Field evidence for the flow properties of the Toutle Valley mudflows.
- FAIRCHILD, L. H.; WIGMOSTA, M. S., 1983, Dynamic and volumetric characteristics of the 18 May 1980 lahars on the Toutle River, Washington.
- FINK, J. H.; GREELEY, RONALD, 1980, Mudflow studies on Mount St. Helens [abstract].
- FINK, J. H.; MALIN, M. C., 1980, Rheological properties of mudflows associated with recent eruptions of Mount St. Helens [abstract].
- FINK, J. H.; MALIN, M. C.; D'ALLI, R. E.; GREELEY, RONALD, 1981, Rheological properties of mudflows associated with the spring 1980 eruptions of Mount St. Helens volcano, Washington.
- HIGGINS, J. D.; NAIK, BIJAYANANDA; MILLS, S. V.; COPP, HOWARD; ROBERSON, J. A., 1983, The mechanics of mudflows.
- MOORE, P. A.; REESE, J. R., 1982, Sediment physical and chemical analyses on the Cowlitz and Columbia River subsequent to the 18 May 1980 Mt. St. Helens eruption.
- NAIK, BIJAYANANDA; RAO, N. S. L.; ROBERSON, J. A., 1982, Rheology of mudflows.
- PIERSON, T. C., 1983, Flow behavior of two major lahars triggered by the May 18, 1980 eruption of Mount St. Helens, Washington.
- PIERSON, T. C., 1985, Field techniques for measuring debris-flow dynamics.
- PIERSON, T. C., 1985, Initiation and flow behavior of the 1980 Pine Creek and Muddy River lahars, Mount St. Helens, Washington.
- RYAN, P. J.; ELDER, R. A.; GARDINER, S. R. M., 1984, Prediction of dam overtopping due to mudflows.
- SCOTT, K. M., 1985, Lahars and flow transformations at Mount St. Helens, Washington, U.S.A.
- SMITH, J. D.; DUNNE, THOMAS; FAIRCHILD, L. H., 1983, Flow properties of the Mt. St. Helens mudflow materials.
- SMITH, J. D.; WIGMOSTA, M. S.; DUNNE, THOMAS, 1983, Mechanical properties of the 1980 mudflow in the north fork of the Toutle River [abstract].
- WIGMOSTA, M. S., 1983, Rheology and flow dynamics of the Toutle debris flows from Mt. St. Helens.
- WIGMOSTA, M. S.; FAIRCHILD, L. H.; SMITH, J. D.; DUNNE, THOMAS; FLANIGAN, PETER, 1981, Field evidence for the dynamics of the Toutle River mudflows, May 18, 1980 [abstract].

MASS MOVEMENTS - LAHARS AND MUDFLOWS - PINE CREEK

- FINK, J. H.; GREELEY, RONALD, 1980, Mudflow studies on Mount St. Helens [abstract].

MASS MOVEMENTS - LAHARS AND MUDFLOWS - TOUTLE RIVER SYSTEM

- BRADLEY, J. B., 1981, Mt. St. Helens sediment transport—The first year [abstract].
- BRADLEY, J. B., 1982, Cowlitz River basin sediment yields [abstract].
- BRADLEY, J. B., 1984, Transition of a meandering river to a braided system due to high sediment concentration flows.
- BRADLEY, J. B.; SIMPSON, D. P.; BURCH, B. H.; COLLISTER, J. L., 1982, Physical properties of Mt. St. Helens mudflow and sediment deposits.
- CUMMANS, JOHN, 1981, Chronology of mudflows in the South Fork and North Fork Toutle River following the May 18 eruption.
- CUMMANS, JOHN, 1981, Mudflows resulting from the May 18, 1980, eruption of Mount St. Helens, Washington.*
- DINEHART, R. L., 1983, Patterns of sediment concentration in hyperconcentrated flows at Mount St. Helens, Washington [abstract].*
- DINEHART, R. L.; CULBERTSON, J. K., 1982, Sediment-discharge characteristics of the Toutle River following the Mount St. Helens eruption [abstract].
- DUNNE, THOMAS; LEOPOLD, L. B., 1981, Flood and sedimentation hazards in the Toutle and Cowlitz River system as a result of the Mt. St. Helens eruption.
- DUNNE, THOMAS; SMITH, J. D.; WIGMOSTA, M. S., 1983, Field evidence for the flow properties of the Toutle Valley mudflows.
- FAIRCHILD, L. H., 1984, Initiation of the North Fork Toutle River lahar by liquefaction of debris avalanche deposits during the May 18, 1980 Mt. St. Helens eruption [abstract].*
- FAIRCHILD, L. H., 1985, Lahars at Mount St. Helens, Washington.
- FAIRCHILD, L. H., 1986, Lahars on the Toutle River near Mt. St. Helens.
- FAIRCHILD, L. H.; DUNNE, THOMAS, 1981, Prediction of future mudflow hazard on the Toutle and Cowlitz Rivers, Washington [abstract].

- FAIRCHILD, L. H.; WIGMSTA, M. S., 1983, Dynamic and volumetric characteristics of the 18 May 1980 lahars on the Toutle River, Washington.
- FAIRCHILD, L. H.; WIGMSTA, M. S.; SMITH, J. D.; DUNNE, THOMAS, 1982, Application of hydrographs constructed for the May 18, 1980 mudflows on the Toutle River, Washington [abstract].
- FRITZ, W. J., 1980, Stumps transported and deposited upright by Mount St. Helens mud flows.
- FRITZ, W. J.; FISK, L. H.; HARRISON, SYLVIA, 1982, Mount St. Helens road log—A visit to the lower Toutle and Cowlitz River drainages to observe the sedimentology, transported trees, and other effects of mudflows resulting from the eruptions of May 18, 1980, and March 19, 1982.
- GILKEY, K. E., 1982, Sedimentology of debris flows generated during the 1980 eruption of Mount St. Helens [abstract].
- GILKEY, K. E., 1983, Sedimentology of the North Fork and South Fork Toutle River mudflows generated during the 1980 eruption of Mount St. Helens.
- GILKEY, K. E.; FAIRCHILD, L. H., 1982, Sedimentology of debris flows generated during the 1980 eruption of Mount St. Helens [abstract].
- HARRISON, SYLVIA; FRITZ, W. J., 1982, Depositional features of March 1982 Mount St. Helens sediment flows.
- HINDIN, ERVIN, 1983, Occurrence of organic compounds in water and stream sediments due to the Mt. St. Helens eruptions.
- JANDA, R. J.; SCOTT, K. M.; NOLAN, K. M.; MARTINSON, H. A., 1982, Lahars associated with the 1980 eruption of Mt. St. Helens [abstract].
- LAWYER, D. E., 1980, Navigation and flooding.
- LEHRE, A. K.; COLLINS, B. D.; DUNNE, THOMAS, 1982, Preliminary post-eruption sediment budget for the North Fork Toutle River drainage, June 1980-May 1981.
- LEHRE, A. K.; COLLINS, B. D.; DUNNE, THOMAS, 1983, Post-eruption sediment budget for the North Fork Toutle River drainage, June 1980-June 1981.
- LEHRE, A. K.; DUNNE, THOMAS; FAIRCHILD, L. H.; COLLINS, B. D., 1981, Erosion of sediments released by the 1980 eruptions of Mt. St. Helens [abstract].
- LOMBARD, R. E.; MILES, M. B.; NELSON, L. M.; KRESCH, D. L.; CARPENTER, P. J., 1981, Channel conditions in the Lower Toutle and Cowlitz Rivers resulting from the mudflows of May 18, 1980.
- LOMBARD, R. E.; MILES, M. B.; NELSON, L. M.; KRESCH, D. L.; CARPENTER, P. J., 1981, The impact of mudflows of May 18 on the lower Toutle and Cowlitz Rivers.
- MARTIN, D. J.; WASSERMAN, L. J.; JONES, R. P.; SALO, E. O., 1984, Effects of Mount St. Helens eruption on salmon populations and habitat in the Toutle River.
- MATHISON, J. M., 1981, Forecasting the Cowlitz River after the Mount Saint Helens eruption [abstract].
- MEYER, D. F.; JANDA, R. J., 1986, Sedimentation downstream from the 18 May 1980 North Fork Toutle River debris avalanche deposit, Mount St. Helens, Washington.
- MEYER, D. F.; JANDA, R. J.; MARTINSON, H. A., 1982, Initial and subsequent drainage basin and channel responses to the 1980 eruption of Mount St. Helens [abstract].
- MILLS, H. H., 1984, Clast orientation in Mount St. Helens debris-flow deposits, North Fork Toutle River, Washington.
- PEARSON, M. L., 1985, Geomorphological analysis of North Fork Toutle River, Washington—1980-1984.*
- PEARSON, M. L., 1986, Sediment yields from the debris avalanche for water years 1980-1983.
- PIERSON, T. C., 1982, Elevation profiles for mudflows in streams after the May 18 eruption of Mount St. Helens.
- PIERSON, T. C.; SCOTT, K. M., 1985, Downstream dilution of a lahar—Transition from debris flow to hyperconcentrated streamflow.*
- SCOTT, K. M., 1984, Flow transformations and textural variation in lahars at Mount St. Helens, Washington [abstract].
- SCOTT, K. M., 1985, Lahars and lahar-runout flows in the Toutle-Cowlitz River system, Mount St. Helens, Washington—Origins, behavior, and sedimentology.
- SCOTT, K. M., 1986, Lahars and lahar-runout flows in the Toutle-Cowlitz River system, Mount St. Helens, Washington—Magnitude and frequency.
- SMITH, J. D.; DUNNE, THOMAS; FAIRCHILD, L. H., 1983, Flow properties of the Mt. St. Helens mudflow materials.
- SMITH, J. D.; WIGMSTA, M. S.; DUNNE, THOMAS, 1983, Mechanical properties of the 1980 mudflow in the north fork of the Toutle River [abstract].
- STOCKTON, S. L., 1982, Design and performance of sediment stabilization projects on the Toutle River following the 18 May 1980 eruption of Mt. St. Helens.*

U.S. CONGRESS, HOUSE COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION, 1985, Mount St. Helens sediment control, Washington (Toutle, Cowlitz, and Columbia Rivers).

U.S. GEOLOGICAL SURVEY, 1982, Hydrologic effects of Mount St. Helens eruption [abstract].

VANONI, V. A., 1982, Comments on sedimentation problems resulting from the eruption of Mt. St. Helens.

WASHINGTON DIVISION OF GEOLOGY AND EARTH RESOURCES, 1980, Toutle River receives extensive damage.

WIGMOSTA, M. S., 1983, Rheology and flow dynamics of the Toutle debris flows from Mt. St. Helens.

WIGMOSTA, M. S.; FAIRCHILD, L. H.; SMITH, J. D.; DUNNE, THOMAS, 1981, Application of hydrographs constructed for the May 18, 1980 mudflows on the Toutle River, Washington [abstract].

WIGMOSTA, M. S.; FAIRCHILD, L. H.; SMITH, J. D.; DUNNE, THOMAS; FLANIGAN, PETER, 1981, Field evidence for the dynamics of the Toutle River mudflows, May 18, 1980 [abstract].

McBride Lake, *see* LAKES - MCBRIDE LAKE

MERCURY

HOLMES, JENNY; WAUGH, KATHLEEN, 1983, Targeting geothermal exploration sites in the Mount St. Helens area using soil mercury surveys.*

SIEGEL, B. Z.; SIEGEL, S. M., 1982, Mercury content of *Equisetum* plants around Mount St. Helens one year after the major eruption.

SIEGEL, S. M.; SIEGEL, B. Z., 1984, Regional differences in plant-soil mercury relations in *Equisetum*, *Plantago* and *Taraxacum*.

VAREKAMP, J. C.; BUSECK, P. R., 1981, Mercury emissions from Mount St. Helens during September 1980.

Merrill Lake, *see* LAKES - MERRILL LAKE

Meta Lake, *see* LAKES - META LAKE

MINERAL RESOURCES

ASHLEY, R. P.; EVARTS, R. C., 1980, Geology and ore deposits of the St. Helens mining district, Washington [abstract].

GILBERTSON, GORDON, 1980, A posteruption field trip.

HOUGLAND, EVERETT, 1935, A report on a geologic reconnaissance of the St. Helens mining district, Washington.

MOEN, W. S., 1977, St. Helens and Washougal mining districts of the southern Cascades of Washington.

SCHRIENER, ALEXANDER, 1977, General geology and selected base metal distributions in the southern Cascade Range, Washington.

WOLFE, S. P., 1984, Au and Ag content in fresh Quaternary calc-alkalic andesites.

WOLFE, S. P.; BORNHORST, T. J.; ROSE, W. I., JR., 1984, Abundance of gold and silver in fresh Quaternary calc-alkalic andesites [abstract].

ZAPFFE, CARL, 1912, The geology of the St. Helens mining district of Washington.

MINERALOGY

see also VOLCANIC ASH - MINERALOGY

GARCIA, M. O., 1977, Crystal clots, amphibole fractionation, and the evolution of calc-alkaline magmas [abstract].

GARCIA, M. O.; JACOBSON, S. S., 1979, Crystal clots, amphibole fractionation and the evolution of calc-alkaline magmas.

RICE, ALAN, 1986, Explosive volcanism—A source of shocked minerals at the K/T boundary? [abstract].

MOUNT ST. HELENS NATIONAL VOLCANIC MONUMENT

ADAMS, A. B.; HINCKLEY, K. E.; HINZMAN, C.; LEFFLER, S. R., 1986, Recovery of small mammals in three habitats in the northwest sector of the Mount St. Helens National Volcanic Monument.

ARNOLD, SCOTT, 1984, Discovering Mount St. Helens—A guide to Mount St. Helens National Volcanic Monument.

BALMER, D. G., 1984, Establishing the Mount St. Helens National Volcanic Monument.

CRAWFORD, B. A., 1986, Recovery of game fish populations impacted by the May 18, 1980 eruption of Mount St. Helens; Part II, Recovery of surviving fish populations within the lakes in the Mount Saint Helens National Volcanic Monument and adjacent areas.

CRAWFORD, B. A., 1986, The recovery of surviving fish populations within the Mount St. Helens National Volcanic Monument and adjacent area.

JOHNSON, K. R., CHAIRMAN; WAITT, R. B., JR., EDITOR; AND OTHERS, 1983, Interpretation and development program for Mount St. Helens National Volcanic Monument.

PREUSSER, H. L. R., 1986, Planning procedures on different levels for a protected area around Mount St. Helens.

SHANE, SCOTT, 1985, Discovering Mount St. Helens—A guide to the National Volcanic Monument.

U.S. CONGRESS, 1982, Public Law 97-243—An act to designate the Mount St. Helens National Volcanic Monument in the State of Washington, and for other purposes.

U.S. CONGRESS, HOUSE COMMITTEE ON AGRICULTURE, 1982, Mount St. Helens national volcanic area—Joint hearings... March 11, 1982, Washington D. C., April 3, 1982, Vancouver, Washington.

U.S. FOREST SERVICE, 1984, Mount St. Helens National Volcanic Monument, draft environmental impact statement, comprehensive management plan.

U.S. FOREST SERVICE, 1985, Mount St. Helens National Volcanic Monument, final environmental impact statement, comprehensive management plan.

MOUNT ST. HELENS SEISMIC ZONE

see also EARTHQUAKES AND SEISMOLOGY

BURGER, R. W.; LANGSTON, C. A., 1984, Source mechanism of the May 18, 1980 St. Helens eruption from regional surface waves [abstract].

GRANT, W. C.; WEAVER, C. S., 1986, Earthquakes near Swift Reservoir, Washington, 1958-1963—Seismicity along the southern St. Helens Seismic Zone.

GRANT, W. C.; WEAVER, C. S.; ZOLLWEG, J. E., 1984, The 14 February 1981 Elk Lake, Washington, earthquake sequence.

WEAVER, C. S.; GRANT, W. C., 1984, Seismic fault zones beneath Mount St. Helens, Washington [abstract].

WEAVER, C. S.; SMITH, S. W., 1981, The St. Helens seismic zone—A major crustal fault zone in western Washington [abstract].

WEAVER, C. S.; SMITH, S. W., 1983, Regional tectonic and earthquake hazard implications of a crustal fault zone in southwestern Washington.

MUDDY RIVER

CUMMANS, JOHN, 1981, Mudflows resulting from the May 18, 1980, eruption of Mount St. Helens, Washington.

FUSTE, L. A., 1981, Effects of the Mount St. Helens eruption on the benthic fauna of the Toutle River, Muddy River, and Pine Creek drainage basins, Washington.

LISLE, T. E.; LEHRE, A. K.; MARTINSON, H. A.; MEYER, D. F.; NOLAN, K. M.; SMITH, R. D., 1983, Stream channel adjustments after the 1980 Mount St. Helens eruptions.

MARTINSON, H. A.; FINNERAN, S. D.; TOPINKA, L. J., 1984, Changes in channel geomorphology of six eruption-affected tributaries of the Lewis River, 1980-82, Mount St. Helens, Washington.

MARTINSON, H. A.; HAMMOND, H. E.; MAST, W. W.; MANGO, P. D., 1986, Channel geometry and hydrologic data for six eruption-affected tributaries of the Lewis River, Mount St. Helens, Washington, water years 1983-84.

MARTINSON, H. A.; MEYER, D. F.; JANDA, R. J., 1982, Storm-induced changes in channel morphology of mudflow-impacted streams. [abstract].

PIERSON, T. C., 1985, Initiation and flow behavior of the 1980 Pine Creek and Muddy River lahars, Mount St. Helens, Washington.

Mudflows, *see MASS MOVEMENTS - LAHARS AND MUDFLOWS*

National Volcanic Monument, *see MOUNT ST. HELENS NATIONAL VOLCANIC MONUMENT*

North Coldwater Lake, *see LAKES - NORTH COLDWATER LAKE*

Nuclear facilities, *see TROJAN NUCLEAR SITE [OREGON]*

Petrology, *see IGNEOUS PETROLOGY*

Physiographic diagrams, *see MAPS - PHYSIOGRAPHIC DIAGRAMS*

Pictorial works, *see GENERAL WORKS (1980) - PICTORIAL*

PINE CREEK AND PINE CREEK BASIN

CUMMANS, JOHN, 1981, Mudflows resulting from the May 18, 1980, eruption of Mount St. Helens, Washington.

FUSTE, L. A., 1981, Effects of the Mount St. Helens eruption on the benthic fauna of the Toutle River, Muddy River, and Pine Creek drainage basins, Washington.

LISLE, T. E.; LEHRE, A. K.; MARTINSON, H. A.; MEYER, D. F.; NOLAN, K. M.; SMITH, R. D., 1983, Stream channel adjustments after the 1980 Mount St. Helens eruptions.

- MARTINSON, H. A.; FINNERAN, S. D.; TOPINKA, L. J., 1984, Changes in channel geomorphology of six eruption-affected tributaries of the Lewis River, 1980-82, Mount St. Helens, Washington.
- MARTINSON, H. A.; HAMMOND, H. E.; MAST, W. W.; MANGO, P. D., 1986, Channel geometry and hydrologic data for six eruption-affected tributaries of the Lewis River, Mount St. Helens, Washington, water years 1983-84.
- MARTINSON, H. A.; MEYER, D. F., 1983, Stream channel adjustments to 1980 lahars and subsequent storm-flow, Mount St. Helens [abstract].
- MARTINSON, H. A.; MEYER, D. F.; JANDA, R. J., 1982, Storm-induced changes in channel morphology of mudflow-impacted streams. [abstract].
- PIERSON, T. C., 1985, Initiation and flow behavior of the 1980 Pine Creek and Muddy River lahars, Mount St. Helens, Washington.
- PINE CREEK ASSEMBLAGE**
- CRANDELL, D. R.; MULLINEAUX, D. R., 1973, Pine Creek volcanic assemblage at Mount St. Helens, Washington.
- PLANNING**
- see also EMERGENCY RESPONSE*
- BALMER, D. G., 1984, Establishing the Mount St. Helens National Volcanic Monument.
- BRANTLEY, STEVEN, 1985, Mount St. Helens study yields useful insights.
- CAUGHLAN, C. A., 1981, Mt. St. Helens contingency plan.
- CLARY, BRUCE; MACFADDEN, SANDRA; CEASE, RONALD, 1982, Floodplain management in the Mt. St. Helens watershed—Implications for local government.
- COWLITZ COUNTY DEPARTMENT OF COMMUNITY DEVELOPMENT, 1983, Toutle-Cowlitz watershed management plan.
- CRANDELL, D. R.; HOBLITT, R. P., 1986, Lateral blasts at Mount St. Helens and hazard zonation.
- HULL, A. N., 1982, Mount St. Helens—The value of preparing a meteorological and hydrological contingency plan for a highly unlikely event—Volcanic eruption.
- JOHNSON, K. R., CHAIRMAN; WAITT, R. B., JR., EDITOR; AND OTHERS, 1983, Interpretation and development program for Mount St. Helens National Volcanic Monument.
- KARTEZ, J. D., [1982], Emergency planning implications of local governments' responses to Mount St. Helens.
- KELLEY, W. J.; KARTEZ, J. D., 1986, Social response demands—Implications for disaster preparedness [abstract].
- MILLER, C. D.; CRANDELL, D. R.; MULLINEAUX, D. R., 1984, Recommendations for volcanic-hazards assessments and land-use planning based on U.S. Geological Survey experiences during the 1980 eruptions of Mount St. Helens, State of Washington, U.S.A.
- OSMUND, ED, 1980, Mt. St. Helens contingency plan, April 1980.
- MONTAGUE, JOHN, 1986, Mount St. Helens—Invaluable lessons in disaster planning, preparedness and resource allocation [abstract].
- PREUSSER, H. L. R., 1986, Planning procedures on different levels for a protected area around Mount St. Helens.
- PRUITT, J. R.; EDGREN, JIM; HAMNER, BOB; HAUGEN, GORDON; HOWES, STEVE; PATTERSON, PETE; STEWARD, JOHN; SWANK, JERRY, 1980, Mount St. Helens emergency watershed rehabilitation report.
- PRUITT, J. R.; EDGREN, JIM; HAMNER, BOB; HAUGEN, GORDON; HOWES, STEVE; STEWARD, JOHN; SWANK, JERRY, 1981, Mount St. Helens emergency watershed rehabilitation report—1981 follow-up.
- TANAKA, J. M. C., 1981, Comparison of hypothetical and actual lahar impacts on public service delivery systems [abstract].
- U.S. ARMY CORPS OF ENGINEERS, 1983, A comprehensive plan for responding to the long-term threat created by the eruption of Mount St. Helens, Washington.
- U.S. ARMY CORPS OF ENGINEERS, PORTLAND DISTRICT, 1984, Mount St. Helens, Washington feasibility report and environmental impact statement.*
- U.S. CONGRESS, 1982, Public Law 97-243—An act to designate the Mount St. Helens National Volcanic Monument in the State of Washington, and for other purposes.
- U.S. CONGRESS, HOUSE COMMITTEE ON AGRICULTURE, 1982, Mount St. Helens national volcanic area—Joint hearings... March 11, 1982, Washington D. C., April 3, 1982, Vancouver, Washington.

U.S. FOREST SERVICE, 1981, Draft environmental impact statement—Mount St. Helens land management plan, Cowlitz, Lewis and Skamania Counties, Washington.

U.S. FOREST SERVICE, 1981, Final environmental impact statement—Mount St. Helens land management plan, Cowlitz, Lewis and Skamania Counties, Washington.

U.S. FOREST SERVICE, 1984, Mount St. Helens National Volcanic Monument, draft environmental impact statement, comprehensive management plan.

U.S. FOREST SERVICE, 1985, Mount St. Helens National Volcanic Monument, final environmental impact statement, comprehensive management plan.

U.S. GENERAL ACCOUNTING OFFICE, 1982, Federal involvement in the Mount St. Helens disaster—Past expenditures and future needs; Report to the Congress of the United States by the Comptroller General.

WASHINGTON DEPARTMENT OF EMERGENCY SERVICES, 1980, State of Washington hazard mitigation report for the eruption of Mt. St. Helens; FEMA-623-DR-WA declared May 21, 1980.

WESSON, R. L., 1983, The eruption of Mount St. Helens—Entering the era of real-time geology.

Plants, *see* BIOLOGY - FLORA

Plate tectonics, *see* STRUCTURAL GEOLOGY

Plume, *see* VOLCANIC PLUME

Prediction of eruption, *see* ERUPTION PREDICTION

PYROCLASTIC FLOWS AND DEPOSITS (BEFORE 1980)

CRANDELL, D. R.; MULLINEAUX, D. R., 1973, Pine Creek volcanic assemblage at Mount St. Helens, Washington.

CRANDELL, D. R.; MULLINEAUX, D. R.; RUBIN, MEYER; SPIKER, ELLIOTT; KELLEY, M. L., 1981, Radiocarbon dates from volcanic deposits at Mount St. Helens, Washington.

HOBLITT, R. P., 1978, Emplacement mechanisms of unsorted and unstratified deposits of volcanic rock debris as determined from paleomagnetically-derived emplacement-temperature information.*

HOBLITT, R. P.; KELLOGG, K. S., 1979, Emplacement temperatures of unsorted and unstratified deposits of volcanic rock debris as determined by paleomagnetic techniques.

HYDE, J. H., 1975, Upper Pleistocene pyroclastic-flow deposits and lahars south of Mount St. Helens volcano, Washington.

JILLSON, W. R., 1921, Physiographic effects of the volcanism of Mt. St. Helens.

VERHOOGEN, JEAN, 1936, Geology of Mount St. Helens, Washington.

VERHOOGEN, JEAN, 1937, Mount St. Helens—A recent Cascade volcano.

PYROCLASTIC FLOWS AND DEPOSITS (1980)

BEESON, D. L.; SELF, STEPHEN, 1985, Supercritical flow in pyroclastic flows [abstract].

BEESON, D. L.; SELF, STEPHEN; MCPHERSON, J. G., 1984, Mega cross-bedding in pyroclastic flow deposits—A product of high energy, high aggradation deposition on steep slopes [abstract].*

CRISWELL, C. W., 1983, Chronology, morphology and stratigraphy of pumiceous pyroclastic-flow deposits (ignimbrite) from Mount St. Helens on May 18, 1980 [abstract].

CRISWELL, C. W., 1984, Depositional facies of the May 18, 1980 pumiceous pyroclastic-flow deposits at Mount St. Helens [abstract].

CRISWELL, C. W.; ELSTON, W. E., 1982, Criteria for identifying pyroclastic flows on high- and low-resolution images—The Mount St. Helens pumice plain.

CRISWELL, C. W.; ELSTON, W. E., 1984, Chronology, morphology and stratigraphy of pumiceous pyroclastic-flow (ignimbrite) deposits from the eruption of Mount St. Helens on 5/18/83 [sic].

FISHER, R. V., 1982, May 18, 1980 blast pyroclastic flow deposits, Mount St. Helens, Washington [abstract].

FISHER, R. V., 1984, Blast deposit facies, Mount St. Helens [abstract].

FISHER, R. V., 1986, Systems of transport and deposition within pyroclastic surges—Evidence from Mount St. Helens, Washington [abstract].

HARDEE, H. C., 1981, Thermal property measurements in a fresh pumice flow at Mt. St. Helens.

HICKSON, C. J.; BARNES, W. C., 1981, Vector analysis of grain orientation in the May 18, 1980 'lateral blast' deposits at Mount St. Helens, with implications for the mechanism of flow [abstract].

HICKSON, C. J.; BARNES, W. C., 1982, The initial pyroclastic surge at Mount St. Helens and its deposits.

HICKSON, C. J.; BARNES, W. C., 1986, The directed blast at Mount St. Helens, May 18, 1980—Surge or flow?

- HICKSON, C. J.; HICKSON, PAUL; BARNES, W. C., 1982, Weighted vector analysis applied to surge deposits from the May 18, 1980 eruption of Mount St. Helens, Washington.
- HOBLITT, R. P., 1980, Observations of pyroclastic flows of July 22 and August 7, 1980, Mount St. Helens, Washington [abstract].
- HOBLITT, R. P., 1984, Observations bearing on the nature of the directed blast of May 18, 1980, at Mount St. Helens, Washington [abstract].
- HOBLITT, R. P., 1986, Observations of the eruptions of July 22 and August 7, 1980, at Mount St. Helens, Washington.
- HOBLITT, R. P.; BANKS, N. G.; RYAN, M. P.; ROSENBAUM, J. G.; DAVIS, M. J., 1980, Emplacement temperatures of Mt. St. Helens eruptive products [abstract].
- HOBLITT, R. P.; MILLER, C. D., 1984, Comments and reply on "Mount St. Helens 1980 and Mount Pelee 1902—Flow or surge?"; Comment.
- HOBLITT, R. P.; MILLER, C. D.; VALLANCE, J. W., 1981, Origin and stratigraphy of the deposit produced by the May 18 directed blast.
- HOBLITT, R. P.; REYNOLDS, R. L.; LARSON, E. E., 1985, Suitability of nonwelded pyroclastic-flow deposits for studies of magnetic secular variation—A test based on deposits emplaced at Mount St. Helens, Washington, in 1980.
- IRVING, A. J.; RHODES, J. M.; SPARKS, J. W., 1980, Mt. St. Helens lava dome, pyroclastic flow and ash samples—Major and trace element chemistry [abstract].
- KUNTZ, M. A.; ROWLEY, P. D.; MACLEOD, N. S.; REYNOLDS, R. L.; MCBROOME, L. A.; KAPLAN, A. M.; LIDKE, D. J., 1981, Petrography and particle-size distribution of pyroclastic-flow, ash-cloud, and surge deposits.
- LEHRE, A. K.; DUNNE, THOMAS; FAIRCHILD, L. H.; COLLINS, B. D., 1981, Erosion of sediments released by the 1980 eruptions of Mt. St. Helens [abstract].
- LOGAN, R. L. (JOSH), 1981, Some petrographic characteristics of pumice from the 1980 Mount St. Helens pyroclastic flows.
- LOGAN, R. L. (JOSH), 1982, Physical characteristics of the Mount St. Helens pyroclastic flow deposits [abstract].*
- LOGAN, R. L., 1983, Temporal trends in the geochemistry and petrology of the Mount St. Helens pyroclastic flow deposits.
- MACLEOD, N. S.; KUNTZ, M. A.; ROWLEY, P. D.; HOBLITT, R. P., 1980, Pyroclastic flows of the 1980 eruptions of Mount St. Helens, Washington [abstract].
- MALIN, M. C.; SHERIDAN, M. F., 1982, Computer-assisted mapping of pyroclastic surges.
- MILLER, C. D.; HOBLITT, R. P., 1980, Stratigraphy of deposits produced by the May 18, 1980, lateral blast at Mount St. Helens, Washington [abstract].
- MOORE, J. G., 1981, The pyroclastic surge of May 18, 1980, Mount St. Helens, Washington [abstract].
- MOORE, J. G.; SISSON, T. W., 1981, Deposits and effects of the May 18 pyroclastic surge.
- MOYER, T. C., 1982, Deposits of the phreatic-explosion pits of the 18 May, 1980 Mount St. Helens pyroclastic flows [abstract].
- MOYER, T. C.; SELF, STEPHEN; SYKES, M. L.; NEAL, C. A., 1982, Pyroclastic flow deposits of Mt. St. Helens, 1980-82—An evaluation of emplacement mechanisms [abstract].
- NEAL, C. A.; SELF, STEPHEN, 1982, Surface features of small volume pyroclastic flows, Mt. St. Helens [abstract].
- NEAL, C. A.; SELF, STEPHEN, 1982, Surface topography and emplacement mechanism of pyroclastic flows, Mt. St. Helens—Implications for interpretation of Martian volcanic terrains.
- POUGH, F. H., 1980, Nuee ardente eruptions and Mt. St. Helens.
- ROOTH, G. H., 1980, A personal account of a nuee ardente on Mount St. Helens during the eruption of May 18, 1980.
- ROWLEY, P. D.; KUNTZ, M. A.; MACLEOD, N. S., 1981, Pyroclastic-flow deposits.
- ROWLEY, P. D.; MACLEOD, N. S.; KUNTZ, M. A.; KAPLAN, A. M., 1985, Proximal bedded deposits related to pyroclastic flows of May 18, 1980, Mount St. Helens, Washington.
- SISSON, T. W.; MOORE, J. G., 1980, Deposits and effects of the May 18, 1980 Mount St. Helens pyroclastic surge [abstract].
- SYKES, M. L.; SELF, STEPHEN, 1981, Pyroclastic flows of Mt. St. Helens, Washington, May-July, 1980 [abstract].
- WAITT, R. B., JR., 1980, Stratigraphic relations between deposits of lateral surge, debris flow, and catastrophic floodwater at Mount St. Helens, 18 May 1980 [abstract].
- WAITT, R. B., JR., 1981, Devastating pyroclastic density flow and attendant air fall of May 18—Stratigraphy and sedimentology of deposits.
- WAITT, R. B., JR., 1984, Comments and reply on "Mount St. Helens 1980 and Mount Pelee 1902—Flow or surge?"; comment.

- WAITT, R. B., JR., 1984, Devastating pyroclastic density current and related vertical column of cataclysmic Mount St. Helens eruption, 18 May 1980.
- WAITT, R. B., JR.; DZURISIN, DANIEL, 1980, Stratigraphic framework of the 18 May 1980 eruption of Mount St. Helens [abstract].
- WALKER, G. P. L., 1984, Characteristics of dune-bedded pyroclastic surge bedsets.*
- WALKER, G. P. L.; MCBROOME, L. A., 1983, Mount St. Helens 1980 and Mount Pelee 1902—Flow or surge?
- WALKER, G. P. L.; MORGAN, L. A., 1984, Comments and reply on "Mount St. Helens 1980 and Mount Pelee—Flow or surge?"; Reply.
- WICHERSKI, B. P.; SWANSON, F. J.; SMITH, R. D., 1981, Erosion of 1980 deposits of Mount St. Helens [abstract].
- WILSON, LIONEL; HEAD, J. W., 1981, Morphology and rheology of pyroclastic flows and their deposits, and guidelines for future observations.
- PYROCLASTIC FLOWS AND DEPOSITS (POST 1980)**
- HALLIDAY, W. R., 1983, Further observations on the Spirit Lake pseudokarst.*
- MOYER, T. C.; SELF, STEPHEN; SYKES, M. L.; NEAL, C. A., 1982, Pyroclastic flow deposits of Mt. St. Helens, 1980-82—An evaluation of emplacement mechanisms [abstract].
- WAGNER, RICHARD; WALKER, R. B., 1986, Mineral nutrient availability in some Mount St. Helens surface samples.
- Quaternary,
- see
- GEOCHRONOLOGY**
VOLCANIC ASH - STRATIGRAPHY
- Radioactivity surveys, *see* GEOPHYSICS - RADIOACTIVITY SURVEYS
- Radiocarbon dating, *see* GEOCHRONOLOGY
- REMOTE SENSING**
- see also* GEOPHYSICS
- BIRNIE, R. W.; HOLCOMB, R. T.; SWANSON, D. A.; LANGE, I. M., 1983, Infrared thermal survey of the lava dome, Mt. St. Helens [abstract].
- BOHN, C. G.; BLY, B. G., 1981, Landsat observations of Mount St. Helens.
- CARSON, R. J., 1983, Ground and aerial photography for monitoring and predicting volcanic activity, with emphasis on the 1980 eruption of Mount St. Helens, Washington.
- CLEMENT, W. V., 1985, Airborne video thermal infrared—Detection of geothermal areas on Mount St. Helens, Washington.
- CRISWELL, C. W., 1984, Mount St. Helens—Intra-eruption geologic map from x-band radar, 1310 & 1350 HRS PDT, May 18, 1980 [abstract].
- CRISWELL, C. W.; ELSTON, W. E., 1982, Criteria for identifying pyroclastic flows on high- and low-resolution images—The Mount St. Helens pumice plain.
- CRISWELL, C. W.; ELSTON, W. E., 1985, Intra-eruption geologic map from an x-ray radar image during the May 18, 1980 eruption of Mount St. Helens, Washington.
- DILLMAN, R. D.; HINKLE, R. E.; KERR, R. L., 1981, High-altitude radar assessment of the damage caused by the volcanic eruption of Mount St. Helens.
- EDMAN, D. A.; SELIN, RICHARD, 1981, A note on the Mt. Saint Helens volcanic eruption.
- FORD, J. P.; REBILLARD, P., 1981, Examples of sequential radar images from Washington, Arizona, and Alaska.
- FRIEDMAN, J. D., 1982, Thermal energy at Mount St. Helens [abstract].
- FRIEDMAN, J. D.; FRANK, D. G., 1977, Thermal surveillance of active volcanoes using the LANDSAT-1 data collection system; Part III, Heat discharge from Mount St. Helens, Washington.
- FRIEDMAN, J. D.; FRANK, D. G., 1981, Aerial infrared mapping of thermal activity at Cascade Range volcanoes [abstract].
- FRIEDMAN, J. D.; FRANK, D. G.; KIEFFER, H. H., 1980, Infrared surveys of emerging dacite dome, Mount St. Helens volcano, Washington, during June 1980 [abstract].
- FRIEDMAN, J. D.; FRANK, D. G.; KIEFFER, H. H.; SAWATZKY, D. L., 1981, Thermal infrared surveys of the May 18 crater, subsequent lava domes, and associated volcanic deposits.
- GINSBERG, I. W., 1982, Thermal infrared imagery of the Cascade Range volcanics.
- HARDING, R. A., 1982, Aerial photos and maps of the event area [abstract].
- HARRIS, D. M.; ROE, ROBERT; ROSE, W. I., JR., 1980, Radar observations of the July 22 and August 7, 1980 eruptions of Mount St. Helens [abstract].

- HARRIS, D. M.; ROSE, W. I., JR.; ROE, ROBERT; THOMPSON, M. R., 1981, Radar observations of ash eruptions.
- HINKLE, R. E.; EAV, B. B.; PRILL, J. C.; JOHNSON, T. E.; DILLMAN, R. D., 1980, Mount St. Helens quick response damage assessment—Final report.
- HINKLE, R. E.; PRILL, J. C.; PRUITT, J. R., 1981, Mount St. Helens quick response damage assessment using high-altitude infrared photography.
- KIEFFER, H. H., 1981, Radar observations at Mount St. Helens [abstract].
- KIEFFER, H. H.; FRANK, D. G., 1980, Thermal infrared observations of Mt. St. Helens, March-May 1980 [abstract].
- KIEFFER, H. H.; FRANK, D. G.; FRIEDMAN, J. D., 1980, Thermal infrared observations of Mt. St. Helens [abstract].
- KIEFFER, H. H.; FRANK, D. G.; FRIEDMAN, J. D., 1981, Thermal infrared surveys at Mount St. Helens—Observations prior to the eruption of May 18.
- KIEFFER, H. H.; FRANK, D. G.; FRIEDMAN, J. D.; SAWATZKY, D. L., 1984, Aerial infrared surveys at Mount St. Helens, Washington [abstract].
- KRIMMEL, R. M.; POST, AUSTIN, 1981, Oblique aerial photography, March-October 1980.
- LAWRENCE, D. B., 1939, Continuing research on the flora of Mt. St. Helens.
- MAZAMA RESEARCH COMMITTEE, 1943, Aerial photographs of Mount St. Helens.
- MILLER, C. D.; HOBLITT, R. P., 1981, Volcano monitoring by closed-circuit television.
- MOORE, G. K.; SHEEHAN, C. A., COMPILERS, 1981, Evaluation of radar imagery for geologic and cartographic applications; summary report of investigations.
- MOORE, J. G.; ALBEE, W. C., 1981, Topographic and structural changes, March-July 1980—Photogrammetric data.
- NATURE, 1984, Latest view of Mount St. Helens.
- PREUSSER, H. L. R., 1984, Mount St. Helens—Anwendungsbereiche von Fernerkundungsverfahren [Mount St. Helens—The external scope of remote sensing].
- RICE, C. J., 1981, Satellite observations of the Mount St. Helens eruption of 18 May 1980.
- ROSE, W. I., JR.; HARRIS, D. M., 1980, Radar observations of ash clouds from the May 18, 1980 Mount St. Helens eruption [abstract].
- ROSENFIELD, C. L., 1980, Remote sensing of the Mount St. Helens eruption, May 18, 1980.*
- ROSENFIELD, C. L.; BEACH, G. L., 1983, Evolution of a drainage network—Remote sensing analysis of the North Fork Toutle River, Mount St. Helens, Washington.
- WELCH, R. I.; BOHN, C. G., 1981, Assessment of the Mount St. Helens devastated area by Landsat and U-2 aircraft data [abstract].
- WELCH, R. I.; BOHN, C. G.; ARVESEN, J. C.; BLY, B. G., 1982, Assessment of Mount St. Helens devastated area by Landsat and U-2 aircraft data.
- ### RIVER MORPHOLOGY
- BEACH, G. L.; DZURISIN, DANIEL, 1984, Drainage evolution in the debris avalanche deposits near Mount St. Helens, Washington.
- BEACH, G. L.; PARSONS, M. R.; PEARSON, M. L.; ROSENFIELD, C. L., 1984, Post-eruption geomorphology of the North Fork Toutle River Valley, in the vicinity of Mount St. Helens, Washington [abstract].
- BRADLEY, J. B., 1984, Transition of a meandering river to a braided system due to high sediment concentration flows.
- BRADLEY, J. B.; GRAHAM, J. D., 1983, Effects of high sediment concentrations on bedforms and river hydraulics [abstract].
- BRADLEY, J. B.; SIMPSON, D. P.; TEMKO, H. M., 1982, Estimates of Cowlitz-Toutle River system sedimentation.
- ERICKSON, KAROL; LETTENMAIER, D. P.; BURGES, S. J., 1980, Assessment of runoff response changes in the upper Cowlitz River basin related to Mount St. Helens ash deposition [abstract].
- LISLE, T. E.; LEHRE, A. K.; MARTINSON, H. A.; MEYER, D. F.; NOLAN, K. M.; SMITH, R. D., 1983, Stream channel adjustments after the 1980 Mount St. Helens eruptions.
- LOMBARD, R. E., 1986, Channel geometry, flood elevations, and flood maps, lower Toutle and Cowlitz Rivers, Washington, June 1980 to May 1981.
- LOMBARD, R. E.; MILES, M. B.; NELSON, L. M.; KRESCH, D. L.; CARPENTER, P. J., 1981, Channel conditions in the Lower Toutle and Cowlitz Rivers resulting from the mudflows of May 18, 1980.
- MARTINSON, H. A., 1982, Channel geomorphology, sediment movement, and channel changes of Pine and Muddy Rivers—Mount St. Helens.
- MARTINSON, H. A.; FINNERAN, S. D.; TOPINKA, L. J., 1984, Changes in channel geomorphology of six eruption-affected tributaries of the Lewis River, 1980-82, Mount St. Helens, Washington.

MARTINSON, H. A.; HAMMOND, H. E.; MAST, W. W.; MANGO, P. D., 1986, Channel geometry and hydrologic data for six eruption-affected tributaries of the Lewis River, Mount St. Helens, Washington, water years 1983-84.

MARTINSON, H. A.; MEYER, D. F., 1983, Stream channel adjustments to 1980 lahars and subsequent storm-flow, Mount St. Helens [abstract].

MARTINSON, H. A.; MEYER, D. F.; JANDA, R. J., 1982, Storm-induced changes in channel morphology of mudflow-impacted streams, [abstract].

MEYER, D. F.; JANDA, R. J., 1985, Erosional development of the North Fork Toutle debris avalanche deposit [abstract].

MEYER, D. F.; JANDA, R. J., 1986, Sedimentation downstream from the 18 May 1980 North Fork Toutle River debris avalanche deposit, Mount St. Helens, Washington.

MEYER, D. F.; NOLAN, K. M.; DODGE, J. E., 1986, Post-eruption changes in channel geometry of streams in the Toutle River drainage basin, 1980-82, Mount St. Helens, Washington.

PARSONS, M. R., 1984, Changes in tributary channel lengths in the North Fork Toutle River Basin [abstract].

PARSONS, M. R., 1985, Spatial and temporal changes in stream network topology—Post-eruption drainage, Mount St. Helens.*

PEARSON, M. L., 1985, Geomorphological analysis of North Fork Toutle River, Washington—1980-1984.*

PEARSON, M. L., 1986, Sediment yields from the debris avalanche for water years 1980-1983.

ROSENFIELD, C. L.; BEACH, G. L., 1983, Evolution of a drainage network—Remote sensing analysis of the North Fork Toutle River, Mount St. Helens, Washington.

Rivers - Biological effects, *see* LIMNOLOGY

Ryan Lake, *see* LAKES - RYAN LAKE

St. Helens Lake, *see* LAKES - ST. HELENS LAKE

St. Helens mining district, *see* MINERAL RESOURCES

Sediments

see

LAKE SEDIMENTS

MASS MOVEMENTS - AVALANCHES AND LANDSLIDES

MASS MOVEMENTS - LAHARS AND MUDFLOWS
SOILS
STREAM SEDIMENTS
VOLCANIC ASH

Seismic surveys, *see* GEOPHYSICS - SEISMIC SURVEYS

Seismology, *see* EARTHQUAKES AND SEISMOLOGY

SHULTZ CREEK

OLSON, C. G., 1981, Use of stratigraphy in studying erosion of recent tephra, Shultz Creek, Mt. St. Helens, Washington [abstract].

Silver, *see* MINERAL RESOURCES

Silver Lake, *see* LAKES - SILVER LAKE

Skamania Co.

Note: The 1980 eruption of Mount St. Helens impacted much of Skamania County. See specific aspects, e.g.:

HYDROLOGY
MASS MOVEMENTS - AVALANCHES AND LANDSLIDES
MASS MOVEMENTS - LAHARS AND MUDFLOWS
VOLCANIC ASH - DISTRIBUTION]

SMITH CREEK

CUMMANS, JOHN, 1981, Mudflows resulting from the May 18, 1980, eruption of Mount St. Helens, Washington.

MARTINSON, H. A.; FINNERAN, S. D.; TOPINKA, L. J., 1984, Changes in channel geomorphology of six eruption-affected tributaries of the Lewis River, 1980-82, Mount St. Helens, Washington.

MARTINSON, H. A.; HAMMOND, H. E.; MAST, W. W.; MANGO, P. D., 1986, Channel geometry and hydrologic data for six eruption-affected tributaries of the Lewis River, Mount St. Helens, Washington, water years 1983-84.

Snow surveys, *see* GLACIER AND SNOW SURVEYS

Soap Lake, *see* LAKES - SOAP LAKE

SOCIAL ASPECTS

- ANDERSON, JEREMY, 1982, Mount St. Helens May 18 ashfall—The human ecology of an unanticipated natural hazard.
- BEALS, H. K.; CLINE, SCOTT; KOLER, J. M., 1981, On the mountain's brink—A Forest Service history of the 1980 Mount St. Helens volcanic emergency.
- BROWN, W. L., 1982, Areas of controversy.
- DILLMAN, D. A.; SCHWALBE, M. L.; SHORT, J. F., JR., 1982, Communication behavior and social impacts following the May 18, 1980, eruption of Mount St. Helens.
- DILLMAN, D. A.; SHORT, J. F., JR., 1980, Social impacts of volcanic ash fallout on eastern Washington.
- DILLMAN, J. J.; ROBERTS, M. L., 1982, The impact of the May 18 Mount St. Helens ashfall—Eastern Washington residents report on housing-related damage and cleanup.
- DORAN, JEFFRY, 1980, Search on Mount St. Helens.
- GREENE, M. R.; PERRY, R. W.; LINDELL, M. K., 1980, The March, 1980 eruptions of Mt. St. Helens—Citizen perceptions of volcano hazard.
- GREENE, M. R.; PERRY, R. W.; LINDELL, M. K., 1981, The March 1980 eruptions of Mt. St. Helens—Citizen perceptions of volcano threat.
- KARTEZ, J. D.; KELLEY, W. J. (BILL), 1982, Emergency planning and the adaptive local response to Mount St. Helens' eruption [abstract].
- KELLEY, W. J.; KARTEZ, J. D., 1986, Social response demands—Implications for disaster preparedness [abstract].
- KENNEDY, T. L., 1980, Social sciences' research on Mt. St. Helens' ash—Planned and in progress.
- LANGRAN, KENNETH; TERICH, THOMAS, 1982, Government response to the Mount St. Helens disaster—A study of perceptions and attitudes in the Longview-Kelso and Yakima areas.
- LEONHARDY, FRANK, 1982, The impact of ashfalls on prehistoric peoples—May 18 as an analog [abstract].
- MURPHY, S. A., 1981, Coping with stress following a natural disaster—The volcanic eruption of Mt. St. Helens.*
- NEWHALL, C. G., 1984, Semiquantitative assessment of changing volcanic risk at Mount St. Helens, Washington.
- PERRY, R. W.; GREENE, M. R.; LINDELL, M. K., 1980, Human response to volcanic eruption—Mt. St. Helens, May 18, 1980.
- PERRY, R. W.; LINDELL, M. K., 1986, Twentieth century volcanicity at Mt. St. Helens—The routinization of life near an active volcano; final report.
- SAARINEN, T. F.; SELL, J. L., 1985, Warning and response to the Mount St. Helens eruption.
- SHORT, J. F., JR., 1980, Interest groups report—Social impacts.
- TAKAHASHI, TAMOTSU, 1981, Volcanic hazard phenomena and response of people due to the eruption of Mount St. Helens.
- TANAKA, J. M. C., 1986, The St. Helens trials—II.
- TANAKA, J. M. C., 1986, Volcano trial.
- WARREN, G. H.; KAUFMAN, D. E.; HAMMOND, K. A., 1982, Come hell and high water—Mt. St. Helens and the federal response on the lower Cowlitz River.
- WARRICK, R. A.; ANDERSON, JEREMY; DOWNING, THOMAS; LYONS, J. V.; RESSLER, JOHN; WARRICK, MARY; WARRICK, THEODORE, 1981, Four communities under ash—After Mount St. Helens.
- WASHINGTON DEPARTMENT OF EMERGENCY SERVICES, 1980, State of Washington hazard mitigation report for the eruption of Mt. St. Helens; FEMA-623-DR-WA declared May 21, 1980.

SOILS

see also VOLCANIC ASH - SOIL EFFECTS

- ANDERSON, A. C.; KUNKLE, MERRILL; SCHLÖTS, F. E.; KLAUSS, DON; LOUNSBURY, CLARENCE, 1956, Soil survey of Skamania County, Washington.
- BIRKELAND, P. W.; SHROBA, R. R., 1974, The status of the concept of Quaternary soil-forming intervals in the western United States.
- BORCHARDT, G. A., 1970, Neutron activation analysis for correlating volcanic ash soils.*
- CALL, W. A., 1974, Soil survey of Cowlitz area, Washington.
- LAWRENCE, D. B., 1938, Trees on the march.
- UGOLINI, F. C.; SLETTEN, R. S., 1982, A study of soil development of newly perturbed sites on Mt. St. Helens [abstract].
- WAGNER, RICHARD; WALKER, R. B., 1986, Mineral nutrient availability in some Mount St. Helens surface samples.
- South Fork Castle Creek Lake, *see LAKES - SOUTH FORK CASTLE CREEK LAKE*
- Spirit Lake, *see LAKES - SPIRIT LAKE*

Spirit Lake outlet tunnel, *see* TUNNELS

SQUAW CREEK

TURTON, D. J., 1982, Sediment transport in a small mountain stream draining a volcanic ash covered watershed in the Cascade foothills of southwestern Washington.

STRATIGRAPHY

see also VOLCANIC ASH - STRATIGRAPHY

AUSTIN, S. A., 1985, Modern catastrophic processes at Mount St. Helens and their implications for the stratigraphic record [abstract].

BORCHARDT, G. A., 1970, Neutron activation analysis for correlating volcanic ash soils.*.

CRANDELL, D. R.; MULLINEAUX, D. R.; RUBIN, MEYER; SPIKER, ELLIOTT; KELLEY, M. L., 1981, Radiocarbon dates from volcanic deposits at Mount St. Helens, Washington.

HICKSON, C. J.; BARNES, W. C., 1986, The directed blast at Mount St. Helens, May 18, 1980—Surge or flow?

HYDE, J. H., 1973, Late Quaternary volcanic stratigraphy, south flank of Mount St. Helens, Washington.*

MAJOR, J. J.; VOIGHT, BARRY, 1986, Sedimentology and clast orientations of the 18 May 1980 southwest-flank lahars, Mount St. Helens, Washington.

MILLER, C. D.; HOBLITT, R. P., 1980, Stratigraphy of deposits produced by the May 18, 1980, lateral blast at Mount St. Helens, Washington [abstract].

MULLINEAUX, D. R.; CRANDELL, D. R., 1960, Late Recent age of Mount St. Helens volcano, Washington.

ROWLEY, P. D.; MACLEOD, N. S.; KUNTZ, M. A.; KAPLAN, A. M., 1985, Proximal bedded deposits related to pyroclastic flows of May 18, 1980, Mount St. Helens, Washington.

WAITT, R. B., JR., 1980, Stratigraphic relations between deposits of lateral surge, debris flow, and catastrophic floodwater at Mount St. Helens, 18 May 1980 [abstract].

WOLFE, J. A., 1961, Age of the Keechelus andesitic series of the Cascade Range, Washington.

YAMAGUCHI, D. K.; HOBLITT, R. P., 1986, Tree-ring dating of Mount St. Helens flowage deposits emplaced in the valley of the South Fork Toutle River Washington, during the past 350 years [abstract].

STREAM SEDIMENTS, *see also* MASS MOVEMENTS - LAHARS AND MUDFLOWS

STREAM SEDIMENTS (1980)

BRADLEY, J. B., 1982, Cowlitz River basin sediment yields [abstract].

BRADLEY, J. B.; SIMPSON, D. P.; TEMKO, H. M., 1982, Estimates of Cowlitz-Toutle River system sedimentation.

COLLINS, B. D.; DUNNE, THOMAS; LEHRE, A. K., 1982, Sediment influx to the Toutle River from erosion of tephra, May 1980-May 1981.

COLLINS, B. D.; DUNNE, THOMAS; LEHRE, A. K., 1983, Erosion of tephra-covered hillslopes north of Mount St. Helens, Washington—May 1980-May 1981.

DINEHART, R. L.; CULBERTSON, J. K., 1982, Sediment-discharge characteristics of the Toutle River following the Mount St. Helens eruption [abstract].

DINEHART, R. L.; RITTER, J. R.; KNOTT, J. M., 1981, Sediment data for streams near Mount St. Helens, Washington—Volume 1, 1980 water-year data.

DUNNE, THOMAS, 1983, Introduction and welcome.

FAIRCHILD, L. H.; WIGMSTA, M. S.; SMITH, J. D.; DUNNE, THOMAS, 1982, Application of hydrographs constructed for the May 18, 1980 mudflows on the Toutle River, Washington [abstract].

FREY, B. E.; LARA-LARA, J. R.; SMALL, L. F., 1983, Reduced rates of primary production in the Columbia River estuary following the eruption Mt. Saint Helens on 18 May 1980.

INVERSO, G. A., 1982, The scour, transport and deposition of Mt. St. Helens ash in a laboratory setting—A model.

JANDA, R. J.; MEYER, D. F., 1985, Fluvial sedimentation following Quaternary eruptions of Mount St. Helens, Washington [abstract].

LEHRE, A. K.; COLLINS, B. D.; DUNNE, THOMAS, 1982, Preliminary post-eruption sediment budget for the North Fork Toutle River drainage, June 1980-May 1981.

MOORE, P. A.; REESE, J. R., 1982, Sediment physical and chemical analyses on the Cowlitz and Columbia River subsequent to the 18 May 1980 Mt. St. Helens eruption.

PEARSON, M. L., 1986, Geomorphological analysis of North Fork Toutle River, Washington—1980-1984 [abstract].

PEARSON, M. L.; ROSENFIELD, C. L., 1985, Geomorphic approach to sediment yields on the North Fork Toutle River, Washington 1980-1984 [abstract].

PEREIRA, W. E.; ROSTAD, C. E.; TAYLOR, H. E.; KLEIN, J. M., 1982, Characterization of organic contaminants in environmental samples associated with Mount St. Helens 1980 volcanic eruption.

U.S. ARMY CORPS OF ENGINEERS, COMMITTEE ON CHANNEL STABILIZATION, 1985, Columbia-Cowlitz-Toutle Rivers, Washington, restoration subsequent to Mt. St. Helens eruption.

VACCARO, J. J., 1982, Toutle River basin rainfall-runoff sediment model.

VANONI, V. A., 1982, Comments on sedimentation problems resulting from the eruption of Mt. St. Helens.

STREAM SEDIMENTS (POST 1980)

BRADLEY, J. B., 1981, Mt. St. Helens sediment transport—The first year [abstract].

BRADLEY, J. B., 1986, Hydraulics and bed material transport at high fine suspended sediment concentrations.*

BRADLEY, J. B.; SIMPSON, D. P.; BURCH, B. H.; COLLISTER, J. L., 1982, Physical properties of Mt. St. Helens mudflow and sediment deposits.

BRADLEY, J. B.; SIMPSON, D. P.; TEMKO, H. M., 1982, Estimates of Cowlitz-Toutle River system sedimentation.

BROWN, B. J.; THOMAS, W. A., 1982, Numerical model of sediment movement Cowlitz-Toutle Rivers, Washington.

COLLINS, B. D.; DUNNE, THOMAS; LEHRE, A. K., 1982, Sediment influx to the Toutle River from erosion of tephra, May 1980-May 1981.

DINEHART, R. L., 1986, Sediment data for streams near Mount St. Helens, Washington—Volume 2, Water years 1981-83.

DINEHART, R. L.; CULBERTSON, J. K., 1982, Sediment-discharge characteristics of the Toutle River following the Mount St. Helens eruption [abstract].

DUNNE, THOMAS, 1983, Introduction and welcome.

HEALY, M. J.; CARSON, BOBB, 1983, Dispersal rates of Mount St. Helens ash across the Washington continental shelf—1980-1981 [abstract].

JANDA, R. J.; MEYER, D. F., 1985, Fluvial sedimentation following Quaternary eruptions of Mount St. Helens, Washington [abstract].

LEHRE, A. K.; COLLINS, B. D.; DUNNE, THOMAS, 1982, Preliminary post-eruption sediment budget for the North Fork Toutle River drainage, June 1980-May 1981.

MARTINSON, H. A.; FINNERAN, S. D.; TOPINKA, L. J., 1984, Changes in channel geomorphology of six eruption-affected tributaries of the Lewis River, 1980-82, Mount St. Helens, Washington.

MARTINSON, H. A.; MEYER, D. F., 1983, Stream channel adjustments to 1980 lahars and subsequent storm-flow, Mount St. Helens [abstract].

MARTINSON, H. A.; MEYER, D. F.; JANDA, R. J., 1982, Storm-induced changes in channel morphology of mudflow-impacted streams. [abstract].

PEARSON, M. L., 1986, Geomorphological analysis of North Fork Toutle River, Washington—1980-1984 [abstract].

PEARSON, M. L., 1986, Sediment yields from the debris avalanche for water years 1980-1983.

PEARSON, M. L.; ROSENFIELD, C. L., 1985, Geomorphic approach to sediment yields on the North Fork Toutle River, Washington 1980-1984 [abstract].

SLOTTA, L. S.; COBOS, C. R.; MUSTAIN, R. S., 1983, Shoaling of Port of Astoria, Oregon, by sediment from Mt. St. Helens eruption.

TURTON, D. J., 1982, Sediment transport in a small mountain stream draining a volcanic ash covered watershed in the Cascade foothills of southwestern Washington.

Stream sediments - Biological aspects, see BIOLOGY

STRUCTURAL GEOLOGY

BANKS, N. G.; BENNETT, C. A.; SCHMIDT, J. M., 1978, Maps of photo lineaments and geomorphological features in the Spirit Lake quadrangle, Washington.

BRAILE, L. W., 1970, The isostatic condition and crustal structure of Mount Saint Helens as determined from gravity data.

HOLDEN, J. C., 1980, Mount St. Helens—The geophysics of volcanoes.

LANSFORD, HENRY, 1981, Vulcan's chimneys—Subduction-zone volcanism.

MOORE, J. G.; ALBEE, W. C., 1980, Topographic and structural changes of Mount St. Helens, March-July 1980—Photogrammetric data [abstract].

NASSAU, K., 1981, Plates, quakes, volcanoes, and Mt. St. Helens—Part I, Plate tectonics.

NASSAU, K., 1981, Plates, quakes, volcanoes, and Mt. St. Helens—Part II, Earthquakes and related phenomena.

PAINES, J. G., 1982, Crustal structure of volcanic arcs based on physical properties of andesites, volcaniclastic rocks, and inclusions in the Mt. St. Helens lava dome.

PAINES, J. G.; CHRISTENSEN, N. I., 1981, Crustal structure in southwestern Washington—Implications from wave velocities in Mount St. Helens lava inclusions [abstract].

- SWANSON, D. A., 1985, Graben formation, thrust faulting, and growth of the dacite dome, Mount St. Helens, Washington, May-June 1985 [abstract].
- WEAVER, C. S., 1982, Tectonic influence on 1980 activity [abstract].
- WEAVER, C. S., 1986, Geothermal seismotectonic studies.*
- WEAVER, C. S.; ENDO, E. T.; MALONE, S. D., 1981, Seismic evidence for fault dominated magma transport at Mount St. Helens, Washington [abstract].
- WEAVER, C. S.; SMITH, S. W., 1981, The St. Helens seismic zone—A major crustal fault zone in western Washington [abstract].
- WEAVER, C. S.; SMITH, S. W., 1983, Regional tectonic and earthquake hazard implications of a crustal fault zone in southwestern Washington.
- YEATS, R. S.; ROSENFELD, C. L., 1981, NW- and NE-trending fracture system at Mt. St. Helens volcano, Washington [abstract].

STUDY GUIDES

see also GUIDEBOOKS

- CHRISTMAN, R. A., 1982, Ashfall in Washington—Courtesy of Mount St. Helens.
- NATIONAL ASSOCIATION OF GEOLOGY TEACHERS, 1982, The eruption of Mount St. Helens.
- SEESHOLTZ, D. H., 1982, Mount St. Helens, a once in a lifetime interpretive opportunity [abstract].
- WASHINGTON EDUCATIONAL SERVICE DISTRICT 112, 1980, Mount St. Helens classroom activities—Elementary.
- WASHINGTON EDUCATIONAL SERVICE DISTRICT 112, 1980, Mount St. Helens classroom activities—Secondary.

SWIFT CREEK

- MARTINSON, H. A.; FINNERAN, S. D.; TOPINKA, L. J., 1984, Changes in channel geomorphology of six eruption-affected tributaries of the Lewis River, 1980-82, Mount St. Helens, Washington.
- MARTINSON, H. A.; HAMMOND, H. E.; MAST, W. W.; MANGO, P. D., 1986, Channel geometry and hydrologic data for six eruption-affected tributaries of the Lewis River, Mount St. Helens, Washington, water years 1983-84.

SWIFT CREEK ASSEMBLAGE

- HYDE, J. H., 1975, Upper Pleistocene pyroclastic-flow deposits and lahars south of Mount St. Helens volcano, Washington.

SWIFT RESERVOIR

- RYAN, P. J.; ELDER, R. A.; GARDINER, S. R. M., 1984, Prediction of dam overtopping due to mudflows.

Tectonics, *see* STRUCTURAL GEOLOGY

Tephra,

see

PYROCLASTIC FLOWS AND DEPOSITS VOLCANIC ASH

Tephrochronology, *see* GEOCHRONOLOGY

Thermal surveys

see

BLAST - THERMAL SURVEYS GEOPHYSICS - THERMAL SURVEYS GEOTHERMAL RESOURCES

Thorium, *see* GEOCHRONOLOGY

Tilt surveys, *see* GEOPHYSICS - TILT SURVEYS

Topographic maps, *see* MAPS - TOPOGRAPHIC
TOPOGRAPHY

see also MAPS - TOPOGRAPHIC

- DENLINGER, R. P.; JOHNSON, D. J.; DZURISIN, DANIEL, 1983, Bulk density of Mount St. Helens volcano [abstract].

- JILLSON, W. R., 1921, Physiographic effects of the volcanism of Mt. St. Helens.

- MCALISTER, E. H., 1903, Report on the altitude of St. Helens.

- MOORE, J. G.; ALBEE, W. C., 1980, Topographic and structural changes of Mount St. Helens, March-July 1980—Photogrammetric data [abstract].

- NEAL, C. A.; SELF, STEPHEN, 1982, Surface topography and emplacement mechanism of pyroclastic flows, Mt. St. Helens—Implications for interpretation of Martian volcanic terrains.

VERHOOGEN, JEAN, 1936, Geology of Mount St. Helens, Washington.

VERHOOGEN, JEAN, 1937, Mount St. Helens—A recent Cascade volcano.

TOUTLE RIVER SYSTEM - BIOLOGY

see also LIMNOLOGY

FUSTE, L. A., 1981, Effects of the Mount St. Helens eruption on the benthic fauna of the Toutle River, Muddy River, and Pine Creek drainage basins, Washington.

KARLSTROM, E. L., 1986, Amphibian recovery in the North Fork Toutle River debris avalanche area of Mount St. Helens.

LUCAS, R. E., 1986, Recovery of game fish populations impacted by the May 18, 1980 eruption of Mount St. Helens.

MARTIN, D. J.; WASSERMAN, L. J.; JONES, R. P.; SALO, E. O., 1982, Effects of the eruption of Mount St. Helens on salmon populations and habitat of the Toutle River.

MARTIN, D. J.; WASSERMAN, L. J.; JONES, R. P.; SALO, E. O., 1984, Effects of Mount St. Helens eruption on salmon populations and habitat in the Toutle River.

PHINNEY, D. E., 1980, Observations on the effects of the Mt. St. Helens eruption on salmon populations and salmon culture facilities.

PHINNEY, D. E., 1982, General overview of the immediate and longer-term effects of Mount St. Helens on the salmon resources.

STOBER, Q. J.; ROSS, B. D.; MELBY, C. L.; DINNEL, P. A.; JAGIELO, T. H.; SALO, E. O., 1982, Effect of suspended volcanic sediment on coho and Chinook salmon in the Toutle and Cowlitz Rivers.

TOUTLE RIVER SYSTEM - ENGINEERING GEOLOGY

BRADLEY, J. B.; SIMPSON, D. P.; TEMKO, H. M., 1982, Estimates of Cowlitz-Toutle River system sedimentation.

BROWN, B. J.; THOMAS, W. A., 1982, Numerical model of sediment movement Cowlitz-Toutle Rivers, Washington.

CARPENTER, P. J., 1982, New lakes of North Fork Toutle River—Mount St. Helens.

JENNINGS, M. E.; SCHNEIDER, V. R.; SMITH, P. E., 1981, Computer assessments of potential flood hazards from breaching of two debris dams, Toutle River and Cowlitz River systems.

JENNINGS, M. E.; SCHNEIDER, V. R.; SMITH, P. E., 1981, Emergency assessment of Mount St. Helens post-eruption flood hazards, Toutle and Cowlitz Rivers, Washington.

LAWYER, D. E., 1980, Corps of Engineers response to the eruption of Mt. St. Helens.

LAWYER, D. E., 1980, Navigation and flooding.

LETTERMAIER, D. P.; BURGES, S. J., 1981, Estimation of flood frequency changes in the Toutle and Cowlitz River basins following the eruption of Mt. St. Helens.

LOMBARD, R. E., 1986, Channel geometry, flood elevations, and flood maps, lower Toutle and Cowlitz Rivers, Washington, June 1980 to May 1981.

ORWIG, C. E.; MATHISON, J. M., 1982, Forecasting considerations in Mount Saint Helens affected rivers.

PARSONS, M. R.; BEACH, G. L.; KEENAN, B. L.; ROSENFIELD, C. L., 1983, Drainage development in the lahar blockage area, Mt. St. Helens, Washington [abstract].

SCHUSTER, R. L., 1985, Landslide dams in the western United States.

STOCKTON, S. L., 1982, Design and performance of sediment stabilization projects on the Toutle River following the 18 May 1980 eruption of Mt. St. Helens.*

STOCKTON, S. L., 1983, Engineering response to flood hazards created by the eruption of Mount St. Helens.

SWIFT, C. H., III; KRESCH, D. L., 1983, Mudflow hazards along the Toutle and Cowlitz Rivers from a hypothetical failure of Spirit Lake blockage.

U.S. ARMY CORPS OF ENGINEERS, COMMITTEE ON CHANNEL STABILIZATION, 1985, Columbia-Cowlitz-Toutle Rivers, Washington, restoration subsequent to Mt. St. Helens eruption.

U.S. CONGRESS, HOUSE COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION, 1985, Mount St. Helens sediment control, Washington (Toutle, Cowlitz, and Columbia Rivers).

VACCARO, J. J., 1982, Toutle River basin rainfall-runoff sediment model.

WASHINGTON DIVISION OF GEOLOGY AND EARTH RESOURCES, 1981, River cleanup continues.

WILSON, R. C., 1981, Interactions between ground motion and ground failure.

YOUD, T. L.; WILSON, R. C., 1980, Stability of Toutle River blockage—Mt. St. Helens hazards investigations.

YOUD, T. L.; WILSON, R. C.; SCHUSTER, R. L., 1981, Stability of blockage in North Fork Toutle River.

TOUTLE RIVER SYSTEM - GUIDEBOOKS

FRITZ, W. J.; FISK, L. H.; HARRISON, SYLVIA, 1982, Mount St. Helens road log—A visit to the lower Toutle and Cowlitz River drainages to observe the sedimentology, transported trees, and other effects of mudflows resulting from the eruptions of May 18, 1980, and March 19, 1982.

TILFORD, NORMAN; KENT, RICHARD, 1981, Mount St. Helens and the geology of Lewis and Toutle Rivers.

TOUTLE RIVER SYSTEM - HYDROLOGY

DATTA, BITHIN; LETTENMAIER, D. P.; BURGES, S. J., 1983, Assessment of changes in storm and seasonal runoff response of watersheds impacted by Mt. St. Helens ash deposition.

HINDIN, ERVIN, 1983, Occurrence of organic compounds in water and stream sediments due to the Mt. St. Helens eruptions.

U.S. GEOLOGICAL SURVEY, 1982, Hydrologic effects of Mount St. Helens eruption [abstract].

VANONI, V. A., 1982, Comments on sedimentation problems resulting from the eruption of Mt. St. Helens.

TOUTLE RIVER SYSTEM - LAHARS, MUDFLOWS AND STREAM SEDIMENTS

BRADLEY, J. B., 1981, Mt. St. Helens sediment transport—The first year [abstract].

BRADLEY, J. B., 1982, Cowlitz River basin sediment yields [abstract].

BRADLEY, J. B., 1984, Transition of a meandering river to a braided system due to high sediment concentration flows.

BRADLEY, J. B.; SIMPSON, D. P.; BURCH, B. H.; COLLISTER, J. L., 1982, Physical properties of Mt. St. Helens mudflow and sediment deposits.

BRADLEY, J. B.; SIMPSON, D. P.; TEMKO, H. M., 1982, Estimates of Cowlitz-Toutle River system sedimentation.

BROWN, B. J.; THOMAS, W. A., 1982, Numerical model of sediment movement Cowlitz-Toutle Rivers, Washington.

COLLINS, B. D.; DUNNE, THOMAS; LEHRE, A. K., 1982, Sediment influx to the Toutle River from erosion of tephra, May 1980-May 1981.

COLLINS, B. D.; DUNNE, THOMAS; LEHRE, A. K., 1983, Erosion of tephra-covered hillslopes north of Mount St. Helens, Washington—May 1980-May 1981.

CUMMANS, JOHN, 1981, Chronology of mudflows in the South Fork and North Fork Toutle River following the May 18 eruption.

CUMMANS, JOHN, 1981, Mudflows resulting from the May 18, 1980, eruption of Mount St. Helens, Washington.*

DINEHART, R. L., 1983, Patterns of sediment concentration in hyperconcentrated flows at Mount St. Helens, Washington [abstract].*

DINEHART, R. L.; CULBERTSON, J. K., 1982, Sediment discharge characteristics of the Toutle River following the Mount St. Helens eruption [abstract].

DUNNE, THOMAS; LEOPOLD, L. B., 1981, Flood and sedimentation hazards in the Toutle and Cowlitz River system as a result of the Mt. St. Helens eruption.

DUNNE, THOMAS; SMITH, J. D.; WIGMSTA, M. S., 1983, Field evidence for the flow properties of the Toutle Valley mudflows.

FAIRCHILD, L. H., 1984, Initiation of the North Fork Toutle River lahar by liquefaction of debris avalanche deposits during the May 18, 1980 Mt. St. Helens eruption [abstract].*

FAIRCHILD, L. H.; DUNNE, THOMAS, 1981, Prediction of future mudflow hazard on the Toutle and Cowlitz Rivers, Washington [abstract].

FAIRCHILD, L. H.; WIGMSTA, M. S., 1983, Dynamic and volumetric characteristics of the 18 May 1980 lahars on the Toutle River, Washington.

FAIRCHILD, L. H.; WIGMSTA, M. S.; SMITH, J. D.; DUNNE, THOMAS, 1982, Application of hydrographs constructed for the May 18, 1980 mudflows on the Toutle River, Washington [abstract].

FRITZ, W. J.; FISK, L. H.; HARRISON, SYLVIA, 1982, Mount St. Helens road log—A visit to the lower Toutle and Cowlitz River drainages to observe the sedimentology, transported trees, and other effects of mudflows resulting from the eruptions of May 18, 1980, and March 19, 1982.

GILKEY, K. E., 1982, Sedimentology of debris flows generated during the 1980 eruption of Mount St. Helens [abstract].

HINDIN, ERVIN, 1983, Occurrence of organic compounds in water and stream sediments due to the Mt. St. Helens eruptions.

LAWYER, D. E., 1980, Navigation and flooding.

LEHRE, A. K.; COLLINS, B. D.; DUNNE, THOMAS, 1982, Preliminary post-eruption sediment budget for the North Fork Toutle River drainage, June 1980-May 1981.

- LEHRE, A. K.; COLLINS, B. D.; DUNNE, THOMAS, 1983, Post-eruption sediment budget for the North Fork Toutle River drainage, June 1980-June 1981.
- LEHRE, A. K.; DUNNE, THOMAS; FAIRCHILD, L. H.; COLLINS, B. D., 1981, Erosion of sediments released by the 1980 eruptions of Mt. St. Helens [abstract].
- LOMBARD, R. E.; MILES, M. B.; NELSON, L. M.; KRESCH, D. L.; CARPENTER, P. J., 1981, Channel conditions in the Lower Toutle and Cowlitz Rivers resulting from the mudflows of May 18, 1980.
- LOMBARD, R. E.; MILES, M. B.; NELSON, L. M.; KRESCH, D. L.; CARPENTER, P. J., 1981, The impact of mudflows of May 18 on the lower Toutle and Cowlitz Rivers.
- MARTIN, D. J.; WASSERMAN, L. J.; JONES, R. P.; SALO, E. O., 1982, Effects of the eruption of Mount St. Helens on salmon populations and habitat of the Toutle River.
- MARTIN, D. J.; WASSERMAN, L. J.; JONES, R. P.; SALO, E. O., 1984, Effects of Mount St. Helens eruption on salmon populations and habitat in the Toutle River.
- MARTINSON, H. A.; MEYER, D. F., 1983, Stream channel adjustments to 1980 lahars and subsequent storm-flow, Mount St. Helens [abstract].
- MARTINSON, H. A.; MEYER, D. F.; JANDA, R. J., 1982, Storm-induced changes in channel morphology of mudflow-impacted streams. [abstract].
- MEYER, D. F.; JANDA, R. J., 1985, Erosional development of the North Fork Toutle debris avalanche deposit [abstract].
- MEYER, D. F.; JANDA, R. J.; MARTINSON, H. A., 1982, Initial and subsequent drainage basin and channel responses to the 1980 eruption of Mount St. Helens [abstract].
- MILLS, H. H., 1984, Clast orientation in Mount St. Helens debris-flow deposits, North Fork Toutle River, Washington.
- PARSONS, M. R.; BEACH, G. L.; KEENAN, B. L.; ROSENFIELD, C. L., 1983, Drainage development in the lahar blockage area, Mt. St. Helens, Washington [abstract].
- PEARSON, M. L., 1985, Geomorphological analysis of North Fork Toutle River, Washington—1980-1984.*
- PEARSON, M. L.; ROSENFIELD, C. L., 1985, Geomorphic approach to sediment yields on the North Fork Toutle River, Washington 1980-1984 [abstract].
- PHINNEY, D. E., 1980, Observations on the effects of the Mt. St. Helens eruption on salmon populations and salmon culture facilities.
- PIERSON, T. C., 1982, Elevation profiles for mudflows in streams after the May 18 eruption of Mount St. Helens.
- PIERSON, T. C.; SCOTT, K. M., 1985, Downstream dilution of a lahar—Transition from debris flow to hyperconcentrated streamflow.*
- SMITH, J. D.; DUNNE, THOMAS; FAIRCHILD, L. H., 1983, Flow properties of the Mt. St. Helens mudflow materials.
- SMITH, J. D.; WIGMOSTA, M. S.; DUNNE, THOMAS, 1983, Mechanical properties of the 1980 mudflow in the north fork of the Toutle River [abstract].
- STOBER, Q. J.; ROSS, B. D.; MELBY, C. L.; DINNEL, P. A.; JAGIELO, T. H.; SALO, E. O., 1982, Effect of suspended volcanic sediment on coho and Chinook salmon in the Toutle and Cowlitz Rivers.
- STOCKTON, S. L., 1982, Design and performance of sediment stabilization projects on the Toutle River following the 18 May 1980 eruption of Mt. St. Helens.*
- SWIFT, C. H., III; KRESCH, D. L., 1983, Mudflow hazards along the Toutle and Cowlitz Rivers from a hypothetical failure of Spirit Lake blockage.
- U.S. CONGRESS, HOUSE COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION, 1985, Mount St. Helens sediment control, Washington (Toutle, Cowlitz, and Columbia Rivers).
- U.S. GEOLOGICAL SURVEY, 1982, Hydrologic effects of Mount St. Helens eruption [abstract].
- VACCARO, J. J., 1982, Toutle River basin rainfall-runoff sediment model.
- VANONI, V. A., 1982, Comments on sedimentation problems resulting from the eruption of Mt. St. Helens.
- WIGMOSTA, M. S., 1983, Rheology and flow dynamics of the Toutle debris flows from Mt. St. Helens.
- WIGMOSTA, M. S.; FAIRCHILD, L. H.; SMITH, J. D.; DUNNE, THOMAS, 1981, Application of hydrographs constructed for the May 18, 1980 mudflows on the Toutle River, Washington [abstract].
- WIGMOSTA, M. S.; FAIRCHILD, L. H.; SMITH, J. D.; DUNNE, THOMAS; FLANIGAN, PETER, 1981, Field evidence for the dynamics of the Toutle River mudflows, May 18, 1980 [abstract].
- TOUTLE RIVER SYSTEM - PLANNING AND EMERGENCY RESPONSE**
- COWLITZ COUNTY DEPARTMENT OF COMMUNITY DEVELOPMENT, 1983, Toutle-Cowlitz watershed management plan.

TOUTLE RIVER SYSTEM - RIVER MORPHOLOGY

see also RIVER MORPHOLOGY

BEACH, G. L.; PARSONS, M. R.; PEARSON, M. L.; ROSENFELD, C. L., 1984, Post-eruption geomorphology of the North Fork Toutle River Valley, in the vicinity of Mount St. Helens, Washington [abstract].

BRADLEY, J. B., 1984, Transition of a meandering river to a braided system due to high sediment concentration flows.

LISLE, T. E.; LEHRE, A. K.; MARTINSON, H. A.; MEYER, D. F.; NOLAN, K. M.; SMITH, R. D., 1983, Stream channel adjustments after the 1980 Mount St. Helens eruptions.

LOMBARD, R. E., 1986, Channel geometry, flood elevations, and flood maps, lower Toutle and Cowlitz Rivers, Washington, June 1980 to May 1981.

LOMBARD, R. E.; MILES, M. B.; NELSON, L. M.; KRESCH, D. L.; CARPENTER, P. J., 1981, Channel conditions in the Lower Toutle and Cowlitz Rivers resulting from the mudflows of May 18, 1980.

MARTINSON, H. A.; MEYER, D. F., 1983, Stream channel adjustments to 1980 lahars and subsequent storm-flow, Mount St. Helens [abstract].

MARTINSON, H. A.; MEYER, D. F.; JANDA, R. J., 1982, Storm-induced changes in channel morphology of mudflow-impacted streams. [abstract].

MEYER, D. F.; JANDA, R. J., 1985, Erosional development of the North Fork Toutle debris avalanche deposit [abstract].

MEYER, D. F.; JANDA, R. J.; MARTINSON, H. A., 1982, Initial and subsequent drainage basin and channel responses to the 1980 eruption of Mount St. Helens [abstract].

PARSONS, M. R., 1984, Changes in tributary channel lengths in the North Fork Toutle River Basin [abstract].

PEARSON, M. L., 1985, Geomorphological analysis of North Fork Toutle River, Washington—1980-1984.*

ROSENFELD, C. L.; BEACH, G. L., 1983, Evolution of a drainage network—Remote sensing analysis of the North Fork Toutle River, Mount St. Helens, Washington.

TOUTLE, WASH.

SWEET, H. R., 1981, Mt. St. Helens eruptive impacts to the Toutle community ground water supply [abstract].

SWEET, H. R.; EDWARDS, J. E., 1983, Mount St. Helens eruptive impacts to the Toutle Community ground-water supply.

TROJAN NUCLEAR SITE [OREGON]

BEAULIEU, J. D.; PETERSON, N. V., 1981, Seismic and volcanic hazard evaluation of the Mount St. Helens area, Washington relative to the Trojan Nuclear Site, Oregon.*

KRESCH, D. L.; LAENEN, ANTONIUS, 1984, Preliminary estimate of possible flood elevations in the Columbia River at Trojan Nuclear Power Plant due to failure of debris dam blocking Spirit Lake, Washington.

TUNNELS

JONES, BRONWEN, 1985, Tunnelling in North America's volcanic zone.

SAGER, J. W.; CHAMBERS, D. R., 1986, Design and construction of the Spirit Lake outlet tunnel, Mount St. Helens, Washington.

SAGER, J. W.; GRIFFITHS, J. B.; FARGO, N. J., 1984, Spirit Lake outlet tunnel.

U.S. ARMY CORPS OF ENGINEERS, 1984, Spirit Lake outlet tunnel; design memorandum no. 1.

Uranium, *see* GEOCHRONOLOGY

VANCOUVER, WASH.

SHOREY, E. F.; ROTH, L. H.; RIECK, R. W., 1983, Mount St. Helens ash—Suitability for use as engineered fill.

Vehicle effects, *see* VOLCANIC ASH - MACHINE EFFECTS

Venus Lake, *see* LAKES - VENUS LAKE

VIDEO STUDIES

LOGAN, R. L.; MANSON, C. J., 1983, Mount St. Helens—Annotated index to video archives.

MILLER, C. D.; HOBLITT, R. P., 1981, Volcano monitoring by closed-circuit television.

VOLCANIC ASH [GENERAL WORKS]

HALL, C. W., 1980, Capabilities for volcanic-ash related research.

PROCHASKA, CAROL, 1981, Mount St. Helens—The aftermath of ash Sunday.

QAMAR, ANTHONY; ST. LAWRENCE, W. F.; MOORE, J. N.; KENDRICK, GEORGE, 1981, Earthquakes and ash eruptions at Mt. St. Helens [abstract].

Volcanic ash - Biological aspects, *see* BIOLOGY

Volcanic ash - Climatic effects, *see* CLIMATIC EFFECTS OF VOLCANIC ASH

Volcanic ash - Disposal, *see* VOLCANIC ASH - ENGINEERING ASPECTS

VOLCANIC ASH - DISTRIBUTION (BEFORE 1980)

DAVIS, P. T., 1982, Tephrochronology, Davis Lake, southwest Washington [abstract].*

DAVIS, P. T.; BARNOSKY, C. W.; STUIVER, MINZE, 1982, A 20,000 yr record of volcanic ashfalls, Davis Lake, southwestern Washington [abstract].

FEDERMAN, A. N., 1983, Correlation of tephra layers on the Columbia River Plateau, south-central Washington [abstract].

FOLEY, L. L., 1983, Chronology of loess deposits and paleosols, southeastern Washington [abstract].

JUVIGNE, ETIENNE; PORTER, S. C., 1985, Mineralogical variations within two widespread tephra layers from Cascade Range volcanoes, U.S.A.

MULLINEAUX, D. R.; HYDE, J. H.; RUBIN, MEYER, 1975, Widespread late glacial and postglacial tephra deposits from Mount St. Helens volcano, Washington.

MULLINEAUX, D. R.; WILCOX, R. E.; EBAUGH, W. F.; FRYXELL, ROALD; RUBIN, MEYER, 1977, Age of the last major scabland flood of eastern Washington, as inferred from associated ash beds of Mount St. Helens set S [abstract].

NIMLOS, T. J.; ZUURING, HANS, 1982, The distribution and thickness of volcanic ash in Montana.

PARRISH, J. L., 1906, Eruption of Mount St. Helens.

SMITH, H. W.; OKAZAKI, ROSE, 1982, Downwind tephra from Mount St. Helens before 1980 [abstract].*

STRADLING, D. F.; KIVER, E. P., 1982, Depositional environments of late Pleistocene Mount St. Helens ash in the northeastern channeled scablands of the Columbia intermontane [abstract].*

STRADLING, D. F.; KIVER, E. P., 1986, The significance of volcanic ash as a stratigraphic marker for the late Pleistocene in northeastern Washington.

WESTGATE, J. A., 1977, Identification and significance of late Holocene tephra from Otter Creek, southern British Columbia, and localities in west-central Alberta.

VOLCANIC ASH - DISTRIBUTION (1980 AND POST 1980)

ACKERMAN, M.; LIPPENS, C.; LECHEVALLIER, M., 1980, Volcanic material from Mount St. Helens in the stratosphere over Europe.

ACORD, J. E., 1980, Montana.

ANDERSON, R. Y.; DEAN, W. E.; NUHFER, E. B.; GARDNER, J. V., 1984, Limits of sensitivity in Holocene climatic records from western North America [abstract].

ANDERSON, R. Y.; NUHFER, E. B.; DEAN, W. E., 1984, Sinking of volcanic ash in uncompacted sediment in Williams Lake, Washington.

ANDERSON, R. Y.; NUHFER, E. B.; DEAN, W. E.; DELMASTRO, G. A., 1984, Sedimentology of Mt. St. Helens tephra at Merrill, Soap, and Williams Lakes, Washington, USA [abstract].

BROWN, L. A., 1980, Mount St. Helens ash fallout impact assessment report.

BURGGRAF, D. R.; THIEBEN, S. E.; WHITE, H. J.; THOMPSON, GREG; FEIBEL, CRAIG, 1981, The October 16, 1980 eruption of Mount Saint Helens—Characteristics of tephra from near Cougar, Washington [abstract].

CAREY, S. N., 1982, Studies on the generation, dispersal and deposition of tephra in the marine and terrestrial environment.

CAREY, S. N.; SIGURDSSON, HARALDUR, 1982, Influence of particle aggregation on deposition of distal tephra from the May 18, 1980, eruption of Mount St. Helens volcano.

CAREY, S. N.; SIGURDSSON, HARALDUR, 1982, Particle aggregation and a fallout model for May 18, 1980 Mount St. Helens ash [abstract].

CHRISTMAN, R. A., 1982, Ashfall in Washington—Courtesy of Mount St. Helens.

CHUNG, Y.-S.; GALLANT, A. J.; FANAKI, FOUD; MILLAN, M. M., 1981, On the observations of Mount St. Helens volcanic emissions; research note.

COCHRAN, B. D., 1982, Preliminary petrography of primary and secondary, redeposited tephras from the 1980 Mount St. Helens eruption [abstract].

CRABTREE, J.; KITCHEN, M., 1984, The long-range travel and dispersion of the plume from the Mount St. Helens volcano.

D'ALTORIO, ALFONSO; VISCONTI, GUIDO, 1981, Lidar detection of volcanic aerosols in the atmosphere following the Mount St. Helens eruption.

- DAHLGREN, RANDY, 1984, Impact of tephra perturbations on a forest soil in the *Abies amabilis* zone.
- DANIELSEN, E. F., 1981, Trajectories of the Mount St. Helens eruption plume.
- DANIELSEN, E. F., 1982, Mount St. Helens plume dispersion based on trajectory analyses.
- DATTA, BITHIN; LETTENMAIER, D. P.; BURGES, S. J., 1983, Assessment of changes in storm and seasonal runoff response of watersheds impacted by Mt. St. Helens ash deposition.
- DAY, T. G.; FISHER, J. E., 1980, Mt. St. Helens—How a wastewater plant coped with its aftermath.
- DELUISI, J. J.; MENDONCA, B. G.; HANSON, K. J., 1982, Measurements of stratospheric aerosol over Mauna Loa, Hawaii, and Boulder, Colorado.
- EDMONDSON, W. T.; LITT, A. H., 1984, Mt. St. Helens ash in lakes in the lower Grand Coulee, Washington State.*
- FARLOW, N. H.; SNETSINGER, K. G.; OBERBECK, V. R.; FERRY, G. V.; POLKOWSKI, GEORGE; HAYES, D. M., 1982, Time variations of aerosols in the stratosphere following Mount St. Helens eruptions.
- FAULCONER, LEE; MONGILLO, PAUL, 1981, Effects of Mt. St. Helens ashfall on three trout streams and Bumping Lake in the Yakima Basin, Washington.
- FOLSOM, M. M., 1986, Mount St. Helens tephra on range and forest lands of eastern Washington—Local erosion and redeposition.
- FOLSOM, M. M.; QUINN, R. R., 1980, Ash from the May 18, 1980 eruption of Mount St. Helens.
- FOSTER, J. H.; MYERS, W. L., JR., 1982, Ashfall effects on Columbia Basin wildlife.
- FOSTER, J. H.; MYERS, W. L., JR.; TILLETT, W. E., 1980, The effects of Mount St. Helens ash deposits on fish and wildlife in central Washington—A preliminary report.
- GIBSON, FLASH; HANEGAN, J. L., 1982, Mount St. Helens—Its affects [sic] on the invertebrates of a small eastern Washington pond [abstract].
- GODCHAUX, M. M., 1981, Mount St. Helens—Window into creation.
- GOLDIN, ALAN, 1982, Influence of volcanic ash from the May 18, 1980 eruption of Mount St. Helens on the properties of soils.
- GREENE, E. A., 1982, Characterization and movement of Mount St. Helens tephra on a high mountain lake watershed in northern Idaho.
- HARTZ, K. E.; BHAGAT, S. K.; STARLIN, L. A.; MOTT, H. V.; KRIVANEK, K. R., 1984, Attenuation of leachate generated from co-disposal of volcanic ash and solid waste.
- HEALY, M. J.; CARSON, BOBB, 1983, Dispersal rates of Mount St. Helens ash across the Washington continental shelf—1980-1981 [abstract].
- HINKLEY, TODD, 1980, Tracing the continuing fallout of Mt. St. Helens ash by precise measurement of a suite of major, minor and trace metals of geologic interest [abstract].
- HINKLEY, TODD; LICHTE, F. E.; TAYLOR, H. E.; SMITH, K. S., 1980, Composition of ash and its leachates from Mount St. Helens [abstract].
- HIRONO, M.; FUJIWARA, M.; SHIBATA, T.; KUGUMIYA, N., 1981, Lidar observations of volcanic clouds in the stratosphere over Fukuoka, caused by eruptions of Mt. St. Helens in May 1980.
- HIROSE, K.; DOKIYA, Y.; SUGIMURA, Y., 1982, Aerosol Zn—As an indicator of long range transport of volcanic ejecta of Mt. St. Helens.
- HOBBS, P. V.; HEGG, D. A.; RADKE, L. F., 1983, Resuspension of volcanic ash from Mount St. Helens.
- HOFMANN, D. J.; ROSEN, J. M., 1980, Balloon-borne aerosol measurements following the eruption of Mt. St. Helens [abstract].
- HOFMANN, D. J.; ROSEN, J. M., 1982, Balloon-borne observations of stratospheric aerosol and condensation nuclei during the year following the Mt. St. Helens eruption.
- HOOPER, P. R.; HERRICK, I. W.; LASKOWSKI, E. R., 1980, Mount St. Helen's ashfall on Pullman, Washington, May 18-19th, 1980 [abstract].
- HOOPER, P. R.; HERRICK, I. W.; LASKOWSKI, E. R.; KNOWLES, C. R., 1980, Composition of the Mount St. Helens ashfall in the Moscow-Pullman area on 18 May 1980.
- HOPKINS, A. T.; BRIDGMAN, C. J., 1985, A volcanic ash transport model and analysis of Mount St. Helens ashfall.
- HORNIG, C. E., 1984, Effects of Mt. St. Helens ashfall on aquatic insects.
- IWASAKA, YASUNOBU; HAYASHIDA, SACHIKO, 1981, The effects of the volcanic eruption of St. Helens on the polarization properties of stratospheric aerosols; Lidar measurement at Nagoya.
- JUDAY, R. E.; KELLER, E. J., 1984, Effect of ash fallout on water quality in western Montana; final report.

- JUVIGNE, ETIENNE; SHIPLEY, SUSAN, 1983, Distribution of the heavy minerals in the downwind tephra lobe of the May 18, 1980 eruption of the Mount St. Helens (Washington, USA).
- KENDRA, W. R., 1983, Effects of volcanic ash on the composition, abundance, and vertical distribution of benthic macroinvertebrates in Chatcolet Lake, Idaho.
- KING, L. G.; PETERSON, D. A., 1982, Surface irrigation as affected by ash from Mount St. Helens.
- KNOWLES, C. R., 1980, Electron microprobe analysis of Mount St. Helens ash deposited at Moscow, Idaho [abstract].
- KONDO, Y.; REITTER, R.; JAEGER, H.; TAKAGI, M., 1982, The effect of the Mt. St. Helens eruption on tropospheric and stratospheric ions.
- KOPPE, R. K., 1980, Airborne particle levels resulting from the May 18 eruption of Mt. St. Helens [abstract].
- KUHN, P. M.; HAUGHNEY, L. C.; INNIS, R. C., 1980, Long wave stratospheric transmission of Mount St. Helens ejecta [abstract].
- LAULAINEN, N. S., 1982, Ash loading and insolation at Hanford, Washington, during and after the eruption of Mount St. Helens.
- LAVER, J. D., 1982, Distribution of Mount St. Helens dust inferred from satellites and meteorological data.
- LAWSON, JIM, 1980, Oklahoma observations of effects of May 18, 1980, eruption of Mount St. Helens.
- LEE, S. C.; SALEH, A. I.; BANAVALI, A. D.; JONOODY, L.; KURODA, P. K., 1985, Beryllium-7 deposition at Fayetteville, Arkansas, and excess polonium-210 from the 1980 eruption of Mount St. Helens; Note.
- LEFRERE, JACQUES; PELOD, JACQUES; CAHEN, CLAUDE; FLAMANT, PIERRE; MEGIE, GERARD, 1981, Augmentation de l'aerosol stratospherique mesure par sondage laser a l'Observatoire de Haute-Provence apres l'eruption volcanique du Mont Saint-Helens [Increased stratospheric aerosols measured by laser sounding at the Haute-Provence Observatory, after the eruption of Mount St. Helens].
- LENOBLE, J.; PRUVOST, P.; BROGNIEZ, C., 1984, SAGE satellite observations of stratospheric aerosols from Mount St. Helens eruption—A two-wavelength analysis.
- LERFALD, GORDON, 1982, Mount St. Helens dust veil observed at Boulder, Colorado, by optical techniques.
- LEWIS, W. J., JR.; GRANT, M. C., 1981, Effect of the May-June Mount St. Helens eruptions on precipitation chemistry in central Colorado.
- LILLIE, J. T.; CROSS, R. W.; FECHT, K. R.; LAST, G. V.; LONG, P. E.; PRICE, S. M.; REIDEL, S. P.; TALLMAN, A. M., 1982, Preservation and composition of May 18, 1980, Mount St. Helens ash in eastern Washington [abstract].*
- MACK, R. N., 1981, Initial effects of ashfall from Mount St. Helens on vegetation in eastern Washington and adjacent Idaho.
- MACLEOD, N. S., 1984, Recent and ancient ash-cloud deposits in the Cascade Range [abstract].
- MANGELSDORF, P. C., JR.; SAYLES, F. L., 1984, Effect of Mt. St. Helens ash on seawater [abstract].
- MATHEWS, L. A.; ROQUEMORE, G. R.; ST. AMAND, P.; GIBSON, J. P., 1982, An incursion of dust in the southwestern United States from April 1980 eruptions of Mount St. Helens.
- MCCORMICK, M. P., 1981, Lidar measurements of Mount St. Helens effluents.
- MCCORMICK, M. P., 1982, Ground-based and airborne measurements of the Mount St. Helens stratospheric effluents.
- MCLUCAS, G. B., 1980, Cleanup and disposal of Mount St. Helens ash in eastern Washington.
- MEIXNER, F. X.; GEORGII, H.-W.; OCKELMANN, G., 1980, Eruption des Vulkans Mount St. Helens—Nachweis der stratosphaerischen rauchfahne ueber Europa.
- MEIXNER, F. X.; GEORGII, H.-W.; OCKELMANN, G.; JAEGER, H.; REITTER, R., 1981, The arrival of the Mount St. Helens eruption cloud over Europe.
- MILLIGAN, J. M.; FALTER, C. M.; BRUSVEN, M. A.; AND OTHERS, 1983, In-stream distribution and hydraulic and ecological effects of volcanic ash from Mount St. Helens eruption.
- MOODY, U. L., 1982, Distribution and characterization of tephra from the May 18, 1980, Mt. St. Helens eruption in northern Idaho and western Montana.*
- MOODY, U. L.; FOSBERG, MAYNARD; FALEN, ANITA, 1982, Soil preparation and chemical properties—A progress report [abstract].
- MYERS, W. L., JR.; FOSTER, J. H.; TILLETT, W. E., 1981, Observations on the Mount St. Helens ashfall and wildlife in the Columbia Basin, Washington.
- O'CONNOR, D. J., 1981, Observations of the Mt. St. Helens ash cloud over the Atlantic Ocean.
- OBERBECK, V. R.; FARLOW, N. H.; FONG, W.; SNETSINGER, K. G.; FERRY, G. V.; HAYES, D. M., 1982, Mount St. Helens aerosol evolution.

- OTHBERG, K. L.; BRECKENRIDGE, R. M., 1982, Baseline depositional environments of Mount St. Helens ash in northern Idaho [abstract].*
- PETERSON, D. A., 1982, Effects of fine volcanic ash on surface irrigation in central Washington.
- QUINN, R. R., 1982, Variations in atmospheric circulation, Mount St. Helens eruptions, 1980.*
- QUINN, R. R.; FOLSOM, M. M., 1980, The downwind distribution of Mt. St. Helens ash, May 18th eruption.
- REED, S. W., 1980, Idaho.
- REITER, R.; JAEGER, H.; CARNUTH, W.; FUNK, W., 1980, Lidar observations of the Mount St. Helens eruption clouds over mid-Europe, May to July 1980.
- ROOKE, J. M., 1981, Ash examined by new means in England.
- ROSE, W. I., JR.; HOFFMAN, M. F., 1980, Distal ashes of the May 18, 1980 eruption of Mt. St. Helens [abstract].
- ROSE, W. I., JR.; WUNDERMAN, R. L.; HOFFMAN, M. F.; GALE, LISA, 1983, A volcanologist's review of atmospheric hazards of volcanic activity—Fuego and Mount St. Helens.
- ROSEN, J. M.; HOFMANN, D. J., 1980, Balloon-borne condensation nuclei measurements following the eruption of Mt. St. Helens [abstract].
- ROSEN, J. M.; HOFMANN, D. J., 1982, Dustsonde measurements of the Mount St. Helens volcanic dust cloud over Wyoming.
- RYZNAR, EDWARD; WEBER, M. R.; HALLERON, T. S., 1982, Effects of the Mount St. Helens volcanic cloud on turbidity at Ann Arbor, Michigan.
- SAKURAGI, Y.; MEASON, J. L.; KURODA, P. K., 1983, Uranium and plutonium isotopes in the atmosphere.
- SARNA-WOJCICKI, A. M.; SHIPLEY, SUSAN; WAITT, R. B., JR.; DZURISIN, DANIEL; HAYS, W. H.; DAVIS, J. O.; WOOD, S. H.; BATERIDGE, THOMAS, 1980, Areal distribution, thickness, and volume of downwind ash from the May 18, 1980 eruption of Mount St. Helens.
- SARNA-WOJCICKI, A. M.; SHIPLEY, SUSAN; WAITT, R. B., JR.; DZURISIN, DANIEL; WOOD, S. H., 1981, Areal distribution, thickness, mass, volume, and grain size of air-fall ash from the six major eruptions of 1980.
- SARNA-WOJCICKI, A. M.; WAITT, R. B., JR., 1980, Areal distribution, thickness, and composition of volcanic ash erupted from Mount St. Helens on May 18, 1980 [abstract].
- SARNA-WOJCICKI, A. M.; WAITT, R. B., JR.; WOODWARD, M. J.; SHIPLEY, SUSAN; RIVERA, JOSE, 1981, Premagnetic ash erupted from March 27 through May 14, 1980—Extent, mass, volume, and composition.
- SAVAGE, W. Z., 1982, Computer program for ashfall trajectories [abstract].
- SCHERBEL, PAUL, 1980, Wyoming.
- SCHULTZ, D. J.; PUMROY, C. E., 1981, Size and shape characteristics of volcanic ash as an indicator of distance from the source [abstract].
- SEDLACEK, W. A.; MROZ, E. J.; GLADNEY, E. S.; HEIKEN, G. H.; LEIFER, R., 1980, Stratospheric sampling of the plume from the May 18, 1980 eruption of Mt. St. Helens [abstract].
- SEHMEL, G. A., 1982, Ambient airborne solids concentrations including volcanic ash at Hanford, Washington, sampling sites subsequent to the Mount St. Helens eruption.
- SHIPLEY, SUSAN, 1983, Erosional modification of the downwind tephra lobe of the 18 May 1980 eruption of Mount St. Helens, Washington.
- SHIPLEY, SUSAN, 1984, Redistribution of the Mount St. Helens ash with time [abstract].
- SHULTERS, M. V.; CLIFTON, D. G., 1981, Mount St. Helens volcanic-ash fall in the Bull Run watershed, Oregon, March-June 1980.*
- SISSON, T. W., 1982, Sedimentary characteristics of the airfall deposit produced by the major pyroclastic surge of May 18, 1980 at Mount St. Helens, Washington.
- SMITH, J. L.; OWENS, E. J.; MCNEAL, B. L., 1982, Effects of volcanic ash on soil nitrogen mineralization and accompanying CO₂ production.
- SMITH, R. D., 1985, Sediment routing in a small watershed in the blast zone at Mount St. Helens, Washington [abstract].
- SMITH, W. K., 1980, A plotting program for producing ashfall prediction maps from output of the NOAA forecast trajectory program—Application to and examples from the 1980 Mount St. Helens eruptions.
- SOREM, R. K., 1980, Some geological aspects of the ash fallout in Pullman and vicinity [abstract].
- STARK, N. M.; ESSIG, D. A., 1985, Nutrient release from Mount St. Helens volcanic ash and retention by western Montana soil.
- SWEDBERG, K. C., 1986, Effects of Mount St. Helens ash on plant populations of shallow stony soils.
- SWINEHART, J. B., 1982, Mount St. Helens—A view from the High Plains [abstract].

TAGGART, J. E., JR.; WAHLBERG, J. S.; TAYLOR, H. E., 1980, X-ray spectrometric major-element analyses of tephra samples from the May 18, 1980 eruption of Mt. St. Helens—Samples collected from Washington, Idaho, and Montana.

TALLMAN, A. M.; CROSS, R. W.; FECHT, K. R.; LAST, G. V.; LILLIE, J. T.; LONG, P. E.; PRICE, S. M.; REIDEL, S. P., 1980, Volcanic ash distribution, composition, and preservation site studies in eastern Washington—Mount St. Helens eruption, May 18, 1980 [abstract].

TAVES, D. R., 1980, Fluoride distribution and biological availability in the fallout from Mount St. Helens, 18 to 21 May 1980.

U.S. GEOLOGICAL SURVEY, 1982, Transport of ash from Mount St. Helens eruption [abstract].

WARRICK, R. A.; ANDERSON, JEREMY; DOWNING, THOMAS; LYONS, J. V.; RESSLER, JOHN; WARRICK, MARY; WARRICK, THEODORE, 1981, Four communities under ash—After Mount St. Helens.

WASHINGTON DIVISION OF GEOLOGY AND EARTH RESOURCES, 1980, Mount St. Helens ash fall distribution.

ZIELINSKI, R. A.; SAWYER, M. B., 1980, Size and shape measurements of ash particles from the May 18, 1980 eruption of Mount St. Helens.

Volcanic ash - Economic effects, *see* ECONOMIC EFFECTS

Volcanic ash - Emergency response, *see* EMERGENCY RESPONSE

VOLCANIC ASH - ENGINEERING ASPECTS

see also ENGINEERING GEOLOGY

BENTLEY, F. G., COMPILER, 1984, The mitigation of ashfall damage to public facilities—Lessons learned from the 1980 eruptions of Mount St. Helens, Washington.

HARTZ, K. E.; BHAGAT, S. K.; STARLIN, L. A.; MOTT, H. V.; KRIVANEK, K. R., 1984, Attenuation of leachate generated from co-disposal of volcanic ash and solid waste.

SHOREY, E. F.; ROTH, L. H.; RIECK, R. W., 1983, Mount St. Helens ash—Suitability for use as engineered fill.*

U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY, 1980, Ash particles and home clean-up problems—Advice from the University of Idaho.

U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY, 1980, Controlling blowing dust from volcanic ash.

U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY, 1980, Electric/electronic protection—Commercial and major systems.

U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY, 1980, Volcanic ash effects on municipal water supply and sewage treatment plants.

VOLCANIC ASH - EROSION (1980)

see also GEOMORPHOLOGY

BOSWORTH, D. A.; MCCABE, TIM, 1980, The regrowth of Mount Saint Helens—Fighting the threat of erosion.

COLLINS, B. D., 1984, Erosion of tephra from the 1980 eruption of Mount St. Helens.

COLLINS, B. D., 1986, Erosion of sediments released by the 1980 eruption.

COLLINS, B. D.; DUNNE, THOMAS, 1986, Erosion of tephra from the 1980 eruption of Mount St. Helens.

COLLINS, B. D.; DUNNE, THOMAS; LEHRE, A. K., 1982, Sediment influx to the Toutle River from erosion of tephra, May 1980-May 1981.

COLLINS, B. D.; DUNNE, THOMAS; LEHRE, A. K., 1983, Erosion of tephra-covered hillslopes north of Mount St. Helens, Washington—May 1980-May 1981.

FIKSDAL, A. J., 1982, Infiltration rates of undisturbed and disturbed Mount St. Helens tephra deposits.*

FOLSOM, M. M., 1986, Mount St. Helens tephra on range and forest lands of eastern Washington—Local erosion and redeposition.

GREENE, E. A., 1982, Characterization and movement of Mount St. Helens tephra on a high mountain lake watershed in northern Idaho.

HINKLEY, TODD; SMITH, K. S., 1982, Leachate chemistry of the tephra from the May 18 1980 eruption of Mount St. Helens [abstract].

LEAVESLEY, G. H.; LICHTY, R. W.; LUSBY, G. C., 1980, Infiltration and erosion characteristics of Mount St. Helens volcanic ash [abstract].

LEHRE, A. K.; DUNNE, THOMAS; FAIRCHILD, L. H.; COLLINS, B. D., 1981, Erosion of sediments released by the 1980 eruptions of Mt. St. Helens [abstract].

OLSON, C. G., 1981, Use of stratigraphy in studying erosion of recent tephra, Shultz Creek, Mt. St. Helens, Washington [abstract].

- SHIPLEY, SUSAN, 1983, Erosional modification of the downwind tephra lobe of the 18 May 1980 eruption of Mount St. Helens, Washington.
- SHIPLEY, SUSAN, 1984, Postdepositional changes in Mount St. Helens ash [abstract].
- SHIPLEY, SUSAN, 1984, Redistribution of the Mount St. Helens ash with time [abstract].
- SMITH, D. B.; ZIELINSKI, R. A.; TAYLOR, H. E., 1982, Leaching characteristics of ash from the May 18, 1980, eruption of Mount St. Helens volcano, Washington.*
- SMITH, D. B.; ZIELINSKI, R. A.; TAYLOR, H. E.; SAWYER, M. B., 1983, Leaching characteristics of ash from the May 18, 1980, eruption of Mount St. Helens volcano, Washington.
- SMITH, R. D., 1985, Sediment routing in a small watershed in the blast zone at Mount St. Helens, Washington [abstract].
- STROH, J. R.; HARRISON, R. D., 1982, Soil Conservation Service involvement on watersheds affected by Mount St. Helens.
- SWANSON, F. J.; COLLINS, B. D.; DUNNE, THOMAS; WICHERSKI, B. P., 1983, Erosion of tephra from hillslopes near Mt. St. Helens and other volcanoes.
- WHITE, A. F.; BENSON, L. V.; PERRY, D. L., 1981, The influence of weathering of Mt. St. Helens ash on the chemistry of a small watershed, Iron Creek, Washington [abstract].
- WICHERSKI, B. P.; SWANSON, F. J.; SMITH, R. D., 1982, Erosion of 1980 deposits of Mount St. Helens [abstract].*
- VOLCANIC ASH - EROSION (POST 1980)**
- CARPENTER, S. E.; TRAPPE, J. M.; HUNT, G. A., 1982, Observations on fungal succession on recent volcanic deposits of Mount St. Helens [abstract].
- COLLINS, B. D., 1984, Erosion of tephra from the 1980 eruption of Mount St. Helens.
- COLLINS, B. D.; DUNNE, THOMAS, 1986, Erosion of tephra from the 1980 eruption of Mount St. Helens.
- COLLINS, B. D.; DUNNE, THOMAS; LEHRE, A. K., 1982, Sediment influx to the Toutle River from erosion of tephra, May 1980-May 1981.
- COLLINS, B. D.; DUNNE, THOMAS; LEHRE, A. K., 1983, Erosion of tephra-covered hillslopes north of Mount St. Helens, Washington—May 1980-May 1981.
- FIKSDAL, A. J., 1981, Infiltration rates of undisturbed and disturbed Mount St. Helens tephra deposits.
- FOLSOM, M. M., 1986, Mount St. Helens tephra on range and forest lands of eastern Washington—Local erosion and redeposition.
- KLOCK, G. O., 1981, A first-year evaluation of the erosion control seeding and fertilization near Mount St. Helens.
- KLOCK, G. O., 1982, Stabilizing ash-covered timberlands with erosion control seeding and fertilization.
- SWANSON, F. J.; COLLINS, B. D.; DUNNE, THOMAS; WICHERSKI, B. P., 1983, Erosion of tephra from hillslopes near Mt. St. Helens and other volcanoes.
- TURTON, D. J., 1982, Sediment transport in a small mountain stream draining a volcanic ash covered watershed in the Cascade foothills of southwestern Washington.
- WHITE, A. F.; BENSON, L. V.; YEE, ANDY, 1986, Chemical weathering of the May 18, 1980, Mount St. Helens ash fall and the effect on the Iron Creek watershed, Washington.
- VOLCANIC ASH - GEOCHEMISTRY (BEFORE 1980)**
- BORCHARDT, G. A., 1970, Neutron activation analysis for correlating volcanic ash soils.*
- BORCHARDT, G. A.; HARWARD, M. E.; SCHMITT, R. A., 1971, Correlation of volcanic ash deposits by activation analysis of glass separates.
- CRANDELL, D. R.; MULLINEAUX, D. R.; RUBIN, MEYER; SPIKER, ELLIOTT; KELLEY, M. L., 1981, Radiocarbon dates from volcanic deposits at Mount St. Helens, Washington.
- DUDAS, M. J.; HARWARD, M. E.; SCHMITT, R. A., 1973, Identification of dacitic tephras by activation analysis of their primary mineral phenocrysts.
- FEDERMAN, A. N., 1983, Correlation of tephra layers on the Columbia River Plateau, south-central Washington [abstract].
- FRITZ, L. G.; HILTABRAND, R. R., 1972, Correlation of St. Helens, Mazama and Glacier Peak ashes using x-ray diffraction [abstract].
- JUVIGNE, ETIENNE; PORTER, S. C., 1985, Mineralogical variations within two widespread tephra layers from Cascade Range volcanoes, U.S.A.
- MULLINEAUX, D. R., 1986, Summary of pre-1980 tephra-fall deposits erupted from Mount St. Helens, Washington State, USA.
- MULLINEAUX, D. R.; HYDE, J. H.; RUBIN, MEYER, 1972, Preliminary assessment of upper Pleistocene and Holocene pumiceous tephra from Mount St. Helens, southern Washington [abstract].

- MULLINEAUX, D. R.; HYDE, J. H.; RUBIN, MEYER, 1975, Widespread late glacial and postglacial tephra deposits from Mount St. Helens volcano, Washington.
- NORGREN, J. A.; BORCHARDT, G. A.; HARWARD, M. E., 1970, Mt. St. Helens Y ash in northeastern Oregon and south central Washington [abstract].
- OKAZAKI, ROSE; SMITH, H. W.; GILKESEN, R. A.; FRANKLIN, J. F., 1972, Correlation of West Blacktail ash with pyroclastic Layer T from the 1800 A.D. eruption of Mount St. Helens.
- SMITH, D. R.; LEEMAN, W. P., 1980, Mineralogy of high-temperature pumiceous tephras from Mount St. Helens [abstract].
- SMITH, D. R.; LEEMAN, W. P., 1982, Mineralogy and phase chemistry of Mount St. Helens tephra sets W and Y as keys to their identification.
- SMITH, H. W.; OKAZAKI, ROSE; KNOWLES, C. R., 1975, Electron microprobe analysis as a test of the correlation of West Blacktail ash with Mount St. Helens pyroclastic Layer T.
- SMITH, H. W.; OKAZAKI, ROSE; KNOWLES, C. R., 1977, Electron microprobe analysis of glass shards from tephra assigned to Set W, Mount St. Helens, Washington.
- VOLCANIC ASH - GEOCHEMISTRY (1980 AND POST 1980).**
- ANALYTICAL CHEMISTRY, 1980, Controversy erupts over Mt. St. Helens ash.
- ANDREWS, V. E., 1981, Airborne radiological sampling of Mount St. Helens plumes.
- BARRINGER, A. R.; LETT, R.; RICE, ALAN; CZVEKUS, W., 1982, LASERTRACE analysis—A review of methodology and its application to Mt. St. Helen's ash and marine geology [abstract].
- BURGGRAF, D. R.; THIEBEN, S. E.; WHITE, H. J.; THOMPSON, GREG; FEIBEL, CRAIG, 1981, The October 16, 1980 eruption of Mount Saint Helens—Characteristics of tephra from near Cougar, Washington [abstract].
- CADLE, R. D.; HEIDT, L. E., 1982, A comparison of constituents of Mount St. Helens eruption clouds with those of some other volcanoes.
- CAREY, S. N., 1982, Studies on the generation, dispersal and deposition of tephra in the marine and terrestrial environment.
- CHUAN, R. L.; WOODS, D. C., 1980, Comparison of aerosols from eruptions of Santiaguito, Guatemala and St. Helens [abstract].
- CRONN, D. R., 1980, Gas analyses of airborne samples from St. Helens eruption plume [abstract].
- CRONN, D. R.; NUTMAGUL, WINAI, 1982, Characterization of trace gases in 1980 volcanic plumes of Mt. St. Helens.
- DAHLGREN, RANDY, 1984, Impact of tephra perturbations on a forest soil in the *Abies amabilis* zone.
- DARZI, MICHAEL; ALISTAIR, C. D. L., 1980, Aerosol particle size distributions of elemental composition in the Mount St. Helens plume before, during, and after the May 18 and 25, 1980 eruptions [abstract].
- DAVIS, B. L.; JOHNSON, L. R.; GRIFFIN, D. T.; PHILLIPS, W. R.; STEVENS, R. K.; MAUGHN, DAVID, 1981, Quantitative analysis of Mt. St. Helens ash by x-ray diffraction and x-ray fluorescence spectrometry.
- DAY, T. G.; FISHER, J. E., 1980, Mt. St. Helens—How a wastewater plant coped with its aftermath.
- FARLOW, N. H.; OBERBECK, V. R.; SNETSINGER, K. G.; FERRY, G. V.; POLKOWSKI, GEORGE; HAYES, D. M., 1981, Size distributions and mineralogy of ash particles in the stratosphere from eruptions of Mount St. Helens.
- FARLOW, N. H.; OBERBECK, V. R.; SNETSINGER, K. G.; POLKOWSKI, GEORGE; HAYES, D. M., 1980, Mount St. Helens volcanic materials in the stratosphere [abstract].
- FARLOW, N. H.; SNETSINGER, K. G.; OBERBECK, V. R.; FERRY, G. V.; POLKOWSKI, GEORGE; HAYES, D. M., 1982, Time variations of aerosols in the stratosphere following Mount St. Helens eruptions.
- FARWELL, S. O.; GAGE, D. R., 1981, Crystalline silica in Mount St. Helens ash.
- FARWELL, S. O.; GAGE, D. R.; JERNEGAN, M. F.; FELKEY, J. R., 1981, Inhalable particulate levels in northern Idaho from the initial eruptions of Mount St. Helens.
- FRIEND, J. P.; BANDY, A. R.; MOYERS, J. L.; ZOLLER, W. H.; STOIBER, R. E.; TORRES, A. L.; ROSE, W. I., JR.; MCCORMICK, M. P.; WOODS, D. C., 1982, Research on atmospheric volcanic emissions—An overview.
- FYFE, W. S.; KRONBERG, B. I.; BROWN, J. R.; LEONARDOS, O. H., 1981, Mount St. Helens manna [abstract].
- FRUCHTER, J. S.; ROBERTSON, D. E.; EVANS, J. C.; OLSEN, K. B.; LEPEL, E. A.; LAUL, J. C.; ABEL, K. H.; SANDERS, R. W.; JACKSON, P. O.; WOGMAN, N. S., ET AL, 1980, Mount St. Helens ash from the 18 May 1980 eruption—Chemical, physical, mineralogical, and biological properties.

- GAGE, D. R., 1981, Basic and applied projects in analytical chemistry—I. The development of a sulfur specific detector for gas chromatography based on SO₂ fluorescences; II. The application of laser Raman spectrometry for the determination of quartz and cristobalite in Mount St. Helens volcanic ash.
- GAGE, D. R.; JERNEGAN, M. F.; FARWELL, S. O., 1982, Characterization and quantification of inhalable particulate volcanic ash from Mount St. Helens.
- GANDRUD, B. W.; LAZRUS, A. L., 1981, Filter measurements of stratospheric sulfate and chloride in the eruption plume of Mount St. Helens.
- GOLDIN, ALAN, 1982, Influence of volcanic ash from the May 18, 1980 eruption of Mount St. Helens on the properties of soils.
- GOUGH, L. P.; SHACKLETTE, H. T.; PEARD, J. L.; PAPP, C. S. E., 1986, The chemistry of fruits and vegetables, Yakima River Valley, Washington, and the influence of the 1980 Mount St. Helens ash-fall episodes.
- HADLEY, W. D., 1980, The minerals of Mt. St. Helens.
- HARTLEY, J. N.; BEAUCHAMP, R. H.; DANIEL, J. L.; SHADE, J. W., 1981, Application of advanced process mineralogic techniques for characterization of Mt. St. Helens volcanic ash.
- HARTZ, K. E.; BHAGAT, S. K.; STARLIN, L. A.; MOTT, H. V.; KRIVANEK, K. R., 1984, Attenuation of leachate generated from co-disposal of volcanic ash and solid waste.
- HINDIN, ERVIN, 1981, Treatment of Mount St. Helens volcanic ash suspensions by plain sedimentation, coagulation, and flocculation.
- HINKLEY, TODD, 1980, Tracing the continuing fallout of Mt. St. Helens ash by precise measurement of a suite of major, minor and trace metals of geologic interest [abstract].
- HINKLEY, TODD; LICHTE, F. E.; TAYLOR, H. E.; SMITH, K. S., 1980, Composition of ash and its leachates from Mount St. Helens [abstract].
- HINKLEY, TODD; SMITH, K. S., 1982, Leachate chemistry of the tephra from the May 18 1980 eruption of Mount St. Helens [abstract].
- HIROSE, K.; DOKIYA, Y.; SUGIMURA, Y., 1982, Aerosol Zn—As an indicator of long range transport of volcanic ejecta of Mt. St. Helens.
- HOBBS, P. V.; RADKE, L. F.; HEGG, D. A.; ELTGROTH, M. W.; TUELL, J. P., 1980, Airborne observations of the emissions from Mt. St. Helens, March 28-August 28, 1980 [abstract].
- HOBBS, P. V.; RADKE, L. F.; HEGG, D. A.; ELTGROTH, M. W.; TUELL, J. P., 1980, Comparisons between airborne measurements of the volcanic emissions from Mt. St. Augustine 1976 and Mt. St. Helens 1980 [abstract].
- HOFFER, J. M., 1986, Comparison of the major eruptions at Mount St. Helens May 18, 1980 and El Chichon, March 28-April 4, 1982.
- HOFFER, J. M.; HOFFER, R. L., 1986, Chemical composition of the May 18, 1980 Mount St. Helens tephra and the underlying soil—Changes from July 1980 to May 1981.
- HOFFER, J. M.; HOFFER, R. L.; SHANNON, W. H., 1981, Geochemistry of tephra, May 18, 1980 eruption Mount St. Helens, Washington [abstract].
- HOFFER, J. M.; HOFFER, R. L.; SHANNON, W. M., 1981, Tephra from the May 18, 1980 eruption of Mt. St. Helens, Washington [abstract].
- HOFFER, J. M.; HOFFER, R. L.; SHANNON, W. M., 1982, Preliminary analyses of the composition and texture May 18, 1980, Mount St. Helens tephra.
- HOOPER, P. R.; HERRICK, I. W.; LASKOWSKI, E. R., 1980, Mount St. Helen's ashfall on Pullman, Washington, May 18-19th, 1980 [abstract].
- HOOPER, P. R.; HERRICK, I. W.; LASKOWSKI, E. R.; KNOWLES, C. R., 1980, Composition of the Mount St. Helens ashfall in the Moscow-Pullman area on 18 May 1980.
- HUGHES, S. S., 1981, Trace element analyses of Mount St. Helens pumice and separated phases [abstract].
- IKRAMUDDIN, MOHAMMED; DIGBY, S. J. M.; BUEHLER, A. R., 1982, Chemical composition of the Mount St. Helens ash from the 18 May eruption.*
- INN, E. C. Y.; VEDDER, J. F.; CONDON, E. P.; O'HARA, DEAN, 1981, Gaseous constituents in the plume from eruptions of Mount St. Helens.
- IRVING, A. J.; RHODES, J. M.; SPARKS, J. W., 1980, Mt. St. Helens lava dome, pyroclastic flow and ash samples—Major and trace element chemistry [abstract].
- ISHIZAKI, HIROYUKI; TU, A. T., 1982, Laser Raman spectroscopic analysis of Mount St. Helens ash from the May 18, 1980 eruption.
- JUDAY, R. E.; KELLER, E. J., 1984, Effect of ash fallout on water quality in western Montana; final report.
- JUVIGNE, ETIENNE; SHIPLEY, SUSAN, 1983, Distribution of the heavy minerals in the downwind tephra lobe of the May 18, 1980 eruption of the Mount St. Helens (Washington, USA).
- KISH, T., 1980, Mt. St. Helens' effects on Washington's treatment plants.

- KLEIN, J. M., 1984, Some chemical effects of the Mount St. Helens eruption on selected streams in the State of Washington.
- KNOWLES, C. R., 1980, Electron microprobe analysis of Mount St. Helens ash deposited at Moscow, Idaho [abstract].
- KURODA, P. K.; ESSIEN, I. O.; SANDOVAL, D.-N., 1984, Fallout of uranium isotopes from the 1980 eruption of Mount St. Helens.
- LAZRUS, A. L., 1981, Sulfur and halogen compounds in the Mt. St. Helens eruptions [abstract].
- LEE, S. C.; SALEH, A. I.; BANAVALI, A. D.; JONOBY, L.; KURODA, P. K., 1985, Beryllium-7 deposition at Fayetteville, Arkansas, and excess polonium-210 from the 1980 eruption of Mount St. Helens; Note.
- LEZBERG, E. A.; OTTERSON, D. A.; ROBERTS, W. K.; PAPATHAKOS, L. C., 1982, Aircraft sampling of the sulfate layer near the tropopause following the eruption of Mount St. Helens.*
- LILLIE, J. T.; CROSS, R. W.; FECHT, K. R.; LAST, G. V.; LONG, P. E.; PRICE, S. M.; REIDEL, S. P.; TALLMAN, A. M., 1982, Preservation and composition of May 18, 1980, Mount St. Helens ash in eastern Washington [abstract].*
- LOFGREN, J. L.; GOBLE, G. J., 1982, Analysis of Mount St. Helens volcanic ash by x-ray diffraction.
- MANGELSDORF, P. C., JR.; SAYLES, F. L., 1984, Effect of Mt. St. Helens ash on seawater [abstract].
- MCCORMICK, M. P., 1981, Monitoring Mount St. Helens.
- MCKNIGHT, D. M.; FEDER, G. L.; STILES, E. A., 1981, Toxicity of volcanic-ash leachate to a blue-green alga—Results of a preliminary bioassay experiment.
- MCLUCAS, G. B., 1980, Petrology of current Mount St. Helens tephra.
- MELSON, W. G., 1982, The cyclical nature of explosive volcanism—A petrological approach to volcano forecasting.
- MELSON, W. G.; HOPSON, C. A.; KIENLE, C. F., 1980, Petrology of tephra from the 1980 eruption of Mount St. Helens [abstract].
- MILLAN, M. M.; GALLANT, A. J.; FANAKI, FOUAD, 1981, Spectroscopic measurement of SO₂ volcanic emissions [abstract].
- MOEN, W. S.; MCLUCAS, G. B., 1981, Mount St. Helens ash—Properties and possible uses.
- MOEN, W. S.; MCLUCAS, G. B., 1982, Mount St. Helens ash, some properties and possible uses.
- MOODY, U. L., 1982, Distribution and characterization of tephra from the May 18, 1980, Mt. St. Helens eruption in northern Idaho and western Montana.*
- MOODY, U. L.; FOSBERG, MAYNARD; FALEN, ANITA, 1981, Soil physical and chemical properties—A progress report [abstract].
- NEHRING, N. L.; JOHNSTON, D. A., 1981, Use of ash leachates to monitor gas emissions.
- NEVISSI, A. E., 1984, Lead 210 and Polonium 210 in Mount St. Helens ash.
- PATTERSON, E. M., 1981, Measurements of the imaginary part of the refractive index between 300 and 700 nanometers for Mount St. Helens ash.
- PEREIRA, W. E.; ROSTAD, C. E., 1983, Terpenoid marker compounds derived from biogenic precursors in volcanic ash from Mount St. Helens, Washington.
- PEREIRA, W. E.; ROSTAD, C. E., 1984, Geochemical studies of organic carbon associated with volcanic ash from Mount St. Helens, Washington.
- PEREIRA, W. E.; ROSTAD, C. E.; TAYLOR, H. E., 1980, Mount St. Helens, Washington, 1980 volcanic eruption—Characterization of organic compounds in ash samples.
- PEREIRA, W. E.; ROSTAD, C. E.; TAYLOR, H. E.; KLEIN, J. M., 1982, Characterization of organic contaminants in environmental samples associated with Mount St. Helens 1980 volcanic eruption.*
- PEVEAR, D. R., 1980, Clay minerals in the 1980 Mt. St. Helens tephra—Possible use in predicting eruptions [abstract].
- PEVEAR, D. R.; DETHIER, D. P.; FRANK, D. G., 1981, Clay mineralogy of air-fall, pyroclastic-flow, and related deposits from the 1980 eruptions of Mount St. Helens, Washington [abstract].
- PEVEAR, D. R.; DETHIER, D. P.; FRANK, D. G., 1982, Clay minerals in the 1980 deposits from Mount St. Helens.
- PHELAN, J. M., 1983, Volcanoes as a source of volatile trace elements in the atmosphere.
- PHELAN, J. M.; FINNEGAR, D. L.; BALLANTINE, D. S.; ZOLLER, W. H.; HART, M. A.; MOYERS, J. L., 1982, Airborne aerosol measurements in the quiescent plume of Mount St. Helens—September, 1980.
- POLLACK, J. B., 1981, Measurements of the volcanic plumes of Mount St. Helens in the stratosphere and troposphere—Introduction.
- RADKE, L. F.; HOBBS, P. V.; ELTGROTH, M. W.; HEGG, D. A., 1980, Preliminary airborne observations of the Mt. St. Helens eruptions.

- RADWAN, M. A.; CAMPBELL, D. L., 1981, Mount St. Helens ash and mud—Chemical properties and effects on germination and establishment of trees and wildlife browse plants.
- RASMUSSEN, R. A.; KHALIL, M. A. K.; PENKETT, S. A.; CASADEVALL, T. J., 1981, Analysis of trace gases from Mt. St. Helens volcanic ash [abstract].
- RICE, L.; DASH, J., 1981, TEM studies of crystalline minerals in Mt. St. Helens ash.
- ROOKE, J. M., 1981, Ash examined by new means in England.
- ROSEN, J. M.; HOFMANN, D. J., 1980, Balloon-borne condensation nuclei measurements following the eruption of Mt. St. Helens [abstract].
- RUTHERFORD, M. J.; SIGURDSSON, HARALDUR; CAREY, S. N.; DAVIS, ANDREW, 1985, The May 18, 1980, eruption of Mount St. Helens; I, Melt composition and experimental phase equilibria.
- SAKURAGI, Y.; MEASON, J. L.; KURODA, P. K., 1983, Uranium and plutonium isotopes in the atmosphere.
- SARNA-WOJCICKI, A. M.; MEYER, C. E.; WOODWARD, M. J.; LAMOTHE, P. J., 1981, Composition of air-fall ash erupted on May 18, May 25, June 12, July 22, and August 7.
- SARNA-WOJCICKI, A. M.; WAITT, R. B., JR., 1980, Areal distribution, thickness, and composition of volcanic ash erupted from Mount St. Helens on May 18, 1980 [abstract].
- SCARFE, C. M.; FUJII, T.; HARRIS, D. M., 1982, Mineralogy and geochemistry of pumice from 19 March 1982 eruption of Mount St. Helens [abstract].
- SCHEIDEGGER, K. F.; FEDERMAN, A. N.; TALLMAN, A. M.; LILLIE, J. T., 1981, Temporal variations in the glass chemistry, mineralogy and grain size distribution of tephra from the 18 May eruption of Mt. St. Helens [abstract].
- SCHNELL, R. C.; MILLER, S. W., 1980, Ice nucleus content of Mount St. Helens plume ash [abstract].
- SCLAR, C. B.; CARSON, BOBB, 1980, Mineralogical and physical characteristics of selected samples of volcanic ash from the May 18, 1980 eruption of Mount St. Helens, Washington.
- SEDLACEK, W. A.; HEIKEN, G. H.; MROZ, E. J.; GLADNEY, E. S.; PERRIN, D. R.; LEIFER, R.; FISENNE, I.; HINCHCLIFFE, L.; CHUAN, R. L., 1982, Physical and chemical characteristics of Mount St. Helens airborne debris.
- SEDLACEK, W. A.; MROZ, E. J.; GLADNEY, E. S.; HEIKEN, G. H.; LEIFER, R., 1980, Stratospheric sampling of the plume from the May 18, 1980 eruption of Mt. St. Helens [abstract].
- SHULTERS, M. V.; CLIFTON, D. G., 1980, Mount St. Helens ash fall in the Bull Run watershed, Oregon, March-April 1980.
- SHULTERS, M. V.; CLIFTON, D. G., 1980, Mount St. Helens ash fall in the Bull Run watershed, Oregon, May-June 1980.
- SHULTERS, M. V.; CLIFTON, D. G., 1980, Mount St. Helens volcanic-ash fall in the Bull Run watershed, Oregon, March-June 1980.
- SIEBENMANN, K. F., 1982, Potential for groundwater contamination by phenols and PAH adsorbed onto Mount St. Helens ash/sediments.
- SIEGEL, B. Z.; SIEGEL, S. M., 1982, Mercury content of Equisetum plants around Mount St. Helens one year after the major eruption.
- SKILLE, J. M.; FALTER, C. M.; AND OTHERS, 1983, Fate, distribution and limnological effects of volcanic tephra in the St. Joe and Coeur d'Alene River deltas of Lake Coeur d'Alene, Idaho.
- SMITH, D. B.; ZIELINSKI, R. A.; TAYLOR, H. E., 1982, Leaching characteristics of ash from the May 18, 1980, eruption of Mount St. Helens volcano, Washington.*
- SMITH, D. B.; ZIELINSKI, R. A.; TAYLOR, H. E.; SAWYER, M. B., 1983, Leaching characteristics of ash from the May 18, 1980, eruption of Mount St. Helens volcano, Washington.
- SMITH, D. R., 1980, The mineralogy and phase chemistry of silicic tephras erupted from Mount St. Helens volcano, Washington.
- SMITH, J. L.; OWENS, E. J.; MCNEAL, B. L., 1982, Effects of volcanic ash on soil nitrogen mineralization and accompanying CO₂ production.
- SOREM, R. K., 1980, Some geological aspects of the ash fallout in Pullman and vicinity [abstract].
- STERN, R. J.; ITO, EMI, 1980, Incompatible element and ⁸⁷Sr/⁸⁶Sr composition of Mt. St. Helens ash.
- STOIBER, R. E.; WILLIAMS, S. N.; MALINCONICO, L. L.; JOHNSTON, D. A.; CASADEVALL, T. J., 1981, Mt. St. Helens—Evidence of increased magmatic gas component.
- SUNG, F. C.; NEVISSI, A. E.; DEWALLE, F. B., 1982, Water-soluble constituents of Mount St. Helens ash.
- TAGGART, J. E., JR.; LICHTE, F. E.; WAHLBERG, J. S., 1981, Methods of analysis of samples using x-ray fluorescence and induction-coupled plasma spectroscopy.

- TAGGART, J. E., JR.; WAHLBERG, J. S.; TAYLOR, H. E., 1980, X-ray spectrometric major-element analyses of tephra samples from the May 18, 1980 eruption of Mt. St. Helens—Samples collected from Washington, Idaho, and Montana.
- TALLMAN, A. M.; CROSS, R. W.; FECHT, K. R.; LAST, G. V.; LILLIE, J. T.; LONG, P. E.; PRICE, S. M.; REIDEL, S. P., 1980, Volcanic ash distribution, composition, and preservation site studies in eastern Washington—Mount St. Helens eruption, May 18, 1980 [abstract].
- TAVES, D. R., 1980, Fluoride distribution and biological availability in the fallout from Mount St. Helens, 18 to 21 May 1980.
- TAYLOR, H. E.; KLEIN, J. M., 1980, Mount St. Helens Washington, 1980 volcanic eruption, Part 1, Chemical composition of volcanic ash [abstract].
- TAYLOR, H. E.; LICHTE, F. E., 1980, Chemical composition of Mount St. Helens volcanic ash.
- THOMAS, ELLEN; VAREKAMP, J. C.; BUSECK, P. R., 1980, Zinc enrichment in the early 1980 phreatic ashes of Mount St. Helens, Washington [abstract].
- THOMAS, ELLEN; VAREKAMP, J. C.; BUSECK, P. R., 1982, Zinc enrichment in the phreatic ashes of Mt. St. Helens, April 1980.
- TURCO, R. P.; TOON, O. B.; WHITTEN, R. C.; HAMILL, P.; KEESEE, R. G., 1983, The 1980 eruptions of Mount St. Helens—Physical and chemical processes in the stratospheric clouds.
- TURCO, R. P.; TOON, O. B.; WHITTEN, R. C.; HAMILL, P.; KEESEE, R. G.; INN, E. C. Y., 1980, Mount St. Helens—Chemistry in volcanic eruption clouds [abstract].
- TURCO, R. P.; TOON, O. B.; WHITTEN, R. C.; KEESEE, R. G.; HAMILL, P., 1982, Simulation studies of the physical and chemical processes occurring in the stratospheric clouds of the Mount St. Helens eruptions of May and June 1980.
- U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY, 1980, Management approaches to dust exposure control.
- U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY, 1980, The nature of Mount St. Helen's ash.
- U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY, 1980, Physical and chemical characteristics of the Mt. St. Helens deposits of May 18, 1980.
- U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY, 1980, Research into the free crystalline silica content of Mount St. Helens ash.
- U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY, 1980, Volcanic ash and your water supply.
- VAREKAMP, J. C.; THOMAS, ELLEN; GERMANI, MARK; BUSECK, P. R., 1986, Particle geochemistry of volcanic plumes of Etna and Mount St. Helens.
- VOSSLER, TERI; ANDERSON, D. L.; ARAS, N. K.; PHELAN, J. M.; ZOLLER, W. H., 1981, Trace element composition of the Mount St. Helens plume—Stratospheric samples from the 18 May eruption.
- WAGNER, RICHARD; WALKER, R. B., 1986, Mineral nutrient availability in some Mount St. Helens surface samples.
- WESCHLER, C. J., 1984, Sulfur dioxide content of Mount St. Helens' ash.
- WHITE, A. F.; BENSON, L. V.; YEE, ANDY, 1986, Chemical weathering of the May 18, 1980, Mount St. Helens ash fall and the effect on the Iron Creek watershed, Washington.
- WIGHTMAN, J. P., 1982, XPS analysis of Mount St. Helens ash.
- WIGHTMAN, J. P.; BECK, BETTY; KANG, YOONOK, 1981, Mount St. Helens—The volcano and the ash [abstract].
- WOZNIAK, K. C.; HUGHES, S. S.; TAYLOR, E. M., 1980, Chemical analyses of Mount St. Helens pumice and ash.
- Volcanic ash - Geologic hazards, see GEOLOGIC HAZARDS**
- Volcanic ash - Geochronology, see GEOCHRONOLOGY**
- VOLCANIC ASH - GEOPHYSICS**
- GARMAN, J. E.; STEELE, W. K., 1986, Experiments on the acquisition of remanent magnetization by airfall volcanic ash [abstract].
- HARDEE, H. C., 1981, Thermal property measurements in a fresh pumice flow at Mt. St. Helens.
- OGREN, J. A.; CHARLSON, R. J.; RADKE, L. F.; DOMONKOS, S. F., 1981, Absorption of visible radiation by aerosols in the volcanic plume of Mount St. Helens.
- PETERSON, K. R., 1982, Deposition and dose from the May 18, 1980 eruption of Mount St. Helens.
- PUESCHEL, R. F.; BARRETT, E. W.; STEARNS, L. S.; WELLMAN, D. L., 1981, Physical and optical/radiational properties of Mt. St. Helens volcanic eruption [abstract].
- SAKURAGI, Y.; MEASON, J. L.; KURODA, P. K., 1983, Uranium and plutonium isotopes in the atmosphere.

SOLDAT, J. K.; KATHREN, R. L.; CORLEY, J. P.; STRENCE, D. L., 1981, Radiation doses from Mount St. Helens 18 May 1980 eruption.

STEELE, W. K., 1981, Remanent magnetization of ash from the 18 May 1980 eruption of Mount St. Helens.*

STEELE, W. K., 1981, Remanent magnetization of Mount St. Helens ash of 18 May 1980—A preliminary report [abstract].

STEELE, W. K., 1983, A preliminary catalog of remanent magnetization directions from Mount St. Helens tephra deposits [abstract].

SMITH, G. A.; SMITH, R. D., 1985, Specific gravity characteristics of recent volcaniclastic sediment—Implications for sorting and grain size analysis.

Volcanic ash - Glacier and snow effects, *see* GLACIER AND SNOW SURVEYS

Volcanic ash - Health effects, *see* HEALTH EFFECTS

Volcanic ash - Hydrologic impacts, *see* HYDROLOGY

VOLCANIC ASH - MACHINE EFFECTS

COPLEN, L. E., 1981, A Mt. St. Helens story—The aftermath at Longview.

DAY, T. G.; FISHER, J. E., 1980, Mt. St. Helens—How a wastewater plant coped with its aftermath.

FUNK, W. H., 1980, Water quality and municipal operations discussion session summary.

HYDE, G. M., 1980, Buildings and equipment aspects.

KISH, T., 1980, Mt. St. Helens' effects on Washington's treatment plants.

U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY, 1980, Advice for farmers from Washington State University—Tractors and water pumps.

U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY, 1980, Aviation considerations.

U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY, 1980, Driving and vehicle maintenance in heavy ash areas.

U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY, 1980, Farm equipment 'ash' maintenance.

U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY, 1980, Vehicle maintenance guidelines.

U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY, 1980, Volcanic ash effects on municipal water supply and sewage treatment plants.

VOLCANIC ASH - MINERALOGY (BEFORE 1980)

see also MINERALOGY

MULLINEAUX, D. R., 1986, Summary of pre-1980 tephra-fall deposits erupted from Mount St. Helens, Washington State, USA.

MULLINEAUX, D. R.; HYDE, J. H.; RUBIN, MEYER, 1972, Preliminary assessment of upper Pleistocene and Holocene pumiceous tephra from Mount St. Helens, southern Washington [abstract].

MULLINEAUX, D. R.; HYDE, J. H.; RUBIN, MEYER, 1975, Widespread late glacial and postglacial tephra deposits from Mount St. Helens volcano, Washington.

SMITH, D. R.; LEEMAN, W. P., 1980, Mineralogy of high-temperature pumiceous tephras from Mount St. Helens [abstract].

SMITH, D. R.; LEEMAN, W. P., 1982, Mineralogy and phase chemistry of Mount St. Helens tephra sets W and Y as keys to their identification.

VOLCANIC ASH - MINERALOGY (1980 AND POST 1980)

COCHRAN, B. D., 1981, Preliminary petrography of primary and secondary, redeposited tephras from the 1980 Mount St. Helens eruption [abstract].

DAVIS, P. T., 1982, Tephrochronology, Davis Lake, southwest Washington [abstract].

FARLOW, N. H.; SNETSINGER, K. G.; OBERBECK, V. R.; FERRY, G. V.; POLKOWSKI, GEORGE; HAYES, D. M., 1982, Time variations of aerosols in the stratosphere following Mount St. Helens eruptions.

FRUCHTER, J. S.; ROBERTSON, D. E.; EVANS, J. C.; OLSEN, K. B.; LEPEL, E. A.; LAUL, J. C.; ABEL, K. H.; SANDERS, R. W.; JACKSON, P. O.; WOGMAN, N. S., ET AL, 1980, Mount St. Helens ash from the 18 May 1980 eruption—Chemical, physical, mineralogical, and biological properties.

GAGE, D. R.; FARWELL, S. O., 1981, Laser Raman spectrometry for the determination of crystalline silica polymorphs in volcanic ash.

HARTLEY, J. N.; BEAUCHAMP, R. H.; DANIEL, J. L.; SHADE, J. W., 1981, Application of advanced process mineralogic techniques for characterization of Mt. St. Helens volcanic ash.

HUGHES, S. S., 1981, Trace element analyses of Mount St. Helens pumice and separated phases [abstract].

- JUVIGNE, ETIENNE; SHIPLEY, SUSAN, 1983, Distribution of the heavy minerals in the downwind tephra lobe of the May 18, 1980 eruption of the Mount St. Helens (Washington, USA).
- MCLUCAS, G. B., 1980, Petrology of current Mount St. Helens tephra.
- MELSON, W. G., 1982, The cyclical nature of explosive volcanism—A petrological approach to volcano forecasting.
- MELSON, W. G.; HOPSON, C. A.; KIENLE, C. F., 1980, Petrology of tephra from the 1980 eruption of Mount St. Helens [abstract].
- MOODY, U. L., 1982, Distribution and characterization of tephra from the May 18, 1980, Mt. St. Helens eruption in northern Idaho and western Montana.*
- MOODY, U. L.; FOSBERG, MAYNARD; FALEN, ANITA, 1982, Soil preparation and chemical properties—A progress report [abstract].
- NORDLIE, B. E.; THIEBEN, S. E.; BURGGRAF, D. R., 1983, Total magmatic volatile phase compositions, pressures and temperatures determined from coexisting pyrrhotite-Fe, Ti oxide assemblages [abstract].
- PEVEAR, D. R., 1980, Clay minerals in the 1980 Mt. St. Helens tephra—Possible use in predicting eruptions [abstract].
- PEVEAR, D. R.; DETHIER, D. P.; FRANK, D. G., 1980, Thermal and hydrothermal alteration of new volcanic deposits at Mt. St. Helens, Washington [abstract].
- PEVEAR, D. R.; DETHIER, D. P.; FRANK, D. G., 1981, Clay mineralogy of air-fall, pyroclastic-flow, and related deposits from the 1980 eruptions of Mount St. Helens, Washington [abstract].
- PEVEAR, D. R.; DETHIER, D. P.; FRANK, D. G., 1982, Clay minerals in the 1980 deposits from Mount St. Helens.
- PEVEAR, D. R.; DETHIER, D. P.; FRANK, D. G., 1982, 1980 Mt. St. Helens eruption—Clay minerals and early-stage alteration.
- RICE, L.; DASH, J., 1981, TEM studies of crystalline minerals in Mt. St. Helens ash.
- SCARFE, C. M.; FUJII, T.; HARRIS, D. M., 1982, Mineralogy and geochemistry of pumice from 19 March 1982 eruption of Mount St. Helens [abstract].
- SCHEIDECKER, K. F.; FEDERMAN, A. N.; TALLMAN, A. M., 1982, Compositional heterogeneity of tephras from the 1980 eruptions of Mount St. Helens.
- SCHEIDECKER, K. F.; FEDERMAN, A. N.; TALLMAN, A. M.; LILLIE, J. T., 1981, Temporal variations in the glass chemistry, mineralogy and grain size distribution of tephra from the 18 May eruption of Mt. St. Helens [abstract].
- SCLAR, C. B.; CARSON, BOBB, 1980, Mineralogical and physical characteristics of selected samples of volcanic ash from the May 18, 1980 eruption of Mount St. Helens, Washington.
- SISSON, T. W., 1982, Sedimentary characteristics of the airfall deposit produced by the major pyroclastic surge of May 18, 1980 at Mount St. Helens, Washington.
- SMITH, D. R., 1980, The mineralogy and phase chemistry of silicic tephras erupted from Mount St. Helens volcano, Washington.
- THOMAS, ELLEN; VAREKAMP, J. C.; BUSECK, P. R., 1980, Zinc enrichment in the early 1980 phreatic ashes of Mount St. Helens, Washington [abstract].
- ### VOLCANIC ASH - PHYSICAL MEASUREMENTS
- ACKERMAN, M.; LIPPENS, C.; LECHEVALLIER, M., 1980, Volcanic material from Mount St. Helens in the stratosphere over Europe.
- BRAZIER, S.; SPARKS, R. S. J.; CAREY, S. N.; SIGURDSSON, HARALDUR; WESTGATE, J. A., 1983, Bimodal grain size distribution and secondary thickening in air-fall ash layers.
- BROWN, R.; FYFE, W. S.; BANCROFT, G. M., 1981, Semi-quantitative surface analysis of Mt. St. Helens ash by x-ray photoelectron spectroscopy (XPS).
- CADLE, R. D.; HEIDT, L. E., 1982, A comparison of constituents of Mount St. Helens eruption clouds with those of some other volcanoes.
- CAHILL, T. A.; BARONE, J. B.; KUSKO, BRUCE; ASHBAUGH, L. L., 1980, Size-composition profiles of airborne fine particulate matter from Mt. St. Helens [abstract].
- CAREY, S. N., 1984, Studies on the generation, dispersal and deposition of tephra in the marine and terrestrial environment [abstract].
- CAREY, S. N.; SIGURDSSON, HARALDUR, 1982, Influence of particle aggregation on deposition of distal tephra from the May 18, 1980, eruption of Mount St. Helens volcano.
- CHENG, R. J., 1982, The mechanisms of fine particles generation and electrification during Mount St. Helens volcanic eruption.
- CORMIE, A. B.; HUNTERLY, D. J.; NELSON, D. E., 1982, Identifying tephras by alpha counting.

- CORMIE, A. B.; NELSON, D. E., 1983, Energy-dispersive x-ray fluorescence analysis as a rapid method for identifying tephras.
- CORNWELL, EARL; CORNWELL, MARY, 1981, Gift of ash from Mount St. Helens.
- D'ALTORIO, ALFONSO; VISCONTI, GUIDO, 1981, Lidar detection of volcanic aerosols in the atmosphere following the Mount St. Helens eruption.
- DARZI, MICHAEL; ALISTAIR, C. D. L., 1980, Aerosol particle size distributions of elemental composition in the Mount St. Helens plume before, during, and after the May 18 and 25, 1980 eruptions [abstract].
- DAVIS, B. L.; JOHNSON, L. R.; GRIFFIN, D. T.; PHILLIPS, W. R.; STEVENS, R. K.; MAUGHN, DAVID, 1981, Quantitative analysis of Mt. St. Helens ash by x-ray diffraction and x-ray fluorescence spectrometry.
- DAVIS, P. T., 1982, Tephrochronology, Davis Lake, southwest Washington [abstract].
- DELUISI, J. J.; MENDONCA, B. G.; DUTTON, E. G.; BOX, M. A.; HERMAN, B. M., 1983, Radiative properties of the stratospheric dust cloud from the May 18, 1980, eruption of Mount St. Helens.
- DELUISI, J. J.; MENDONCA, B. G.; HANSON, K. J., 1982, Measurements of stratospheric aerosol over Mauna Loa, Hawaii, and Boulder, Colorado.
- DUNBAR, N. W.; DAVIS, P. T.; MAROTTA, D. A., 1983, Wavelength-dispersive x-ray fluorescence analysis of Cascade Range tephras in lake sediments, SW Washington [abstract].
- FARLOW, N. H.; OBERBECK, V. R.; SNETSINGER, K. G.; FERRY, G. V.; POLKOWSKI, GEORGE; HAYES, D. M., 1981, Size distributions and mineralogy of ash particles in the stratosphere from eruptions of Mount St. Helens.
- FARLOW, N. H.; OBERBECK, V. R.; SNETSINGER, K. G.; POLKOWSKI, GEORGE; HAYES, D. M., 1980, Mount St. Helens volcanic materials in the stratosphere [abstract].
- FARWELL, S. O.; GAGE, D. R.; JERNEGAN, M. F.; FELKEY, J. R., 1981, Inhalable particulate levels in northern Idaho from the initial eruptions of Mount St. Helens.
- FINK, J. H.; KRINSLEY, D. H.; GREELEY, RONALD, 1980, Explosive volcanism—A possible source for aggregate formation on Mars [abstract].
- FRUCHTER, J. S.; ROBERTSON, D. E.; EVANS, J. C.; OLSEN, K. B.; LEPEL, E. A.; LAUL, J. C.; ABEL, K. H.; SANDERS, R. W.; JACKSON, P. O.; WOGMAN, N. S., ET AL, 1980, Mount St. Helens ash from the 18 May 1980 eruption—Chemical, physical, mineralogical, and biological properties.
- GAGE, D. R.; JERNEGAN, M. F.; FARWELL, S. O., 1982, Characterization and quantification of inhalable particulate volcanic ash from Mount St. Helens.*
- GOLDIN, ALAN, 1982, Influence of volcanic ash from the May 18, 1980 eruption of Mount St. Helens on the properties of soils.
- HARRIS, D. M.; ROE, ROBERT; ROSE, W. I., JR., 1980, Radar observations of the July 22 and August 7, 1980 eruptions of Mount St. Helens [abstract].
- HARRIS, D. M.; ROSE, W. I., JR., 1983, Estimating particle sizes, concentrations, and total mass of ash in volcanic clouds using weather radar.
- HARRIS, D. M.; ROSE, W. I., JR.; ROE, ROBERT; THOMPSON, M. R., 1981, Radar observations of ash eruptions.
- HINDIN, ERVIN, 1981, Treatment of Mount St. Helens volcanic ash suspensions by plain sedimentation, coagulation, and flocculation.
- HIRONO, M.; FUJIWARA, M.; SHIBATA, T.; KUGUMIYA, N., 1984, Lidar observations of atmospheric aerosols following the 1980 eruption of Mt. St. Helens; Part I.
- HOBBS, P. V.; HEGG, D. A.; RADKE, L. F., 1983, Resuspension of volcanic ash from Mount St. Helens.
- HOBBS, P. V.; RADKE, L. F.; ELTGROTH, M. W.; HEGG, D. A., 1981, Airborne studies of the emissions from the volcanic eruptions of Mount St. Helens.
- HOBBS, P. V.; RADKE, L. F.; HEGG, D. A.; ELTGROTH, M. W.; TUELL, J. P., 1980, Airborne observations of the emissions from Mt. St. Helens, March 28-August 28, 1980 [abstract].
- HOBBS, P. V.; RADKE, L. F.; HEGG, D. A.; ELTGROTH, M. W.; TUELL, J. P., 1980, Comparisons between airborne measurements of the volcanic emissions from Mt. St. Augustine 1976 and Mt. St. Helens 1980 [abstract].
- HOFFER, J. M., 1986, Comparison of the major eruptions at Mount St. Helens May 18, 1980 and El Chichon, March 28-April 4, 1982.
- HOFFER, J. M.; HOFFER, R. L.; SHANNON, W. M., 1982, Preliminary analyses of the composition and texture May 18, 1980, Mount St. Helens tephra.

- HOFMANN, D. J.; ROSEN, J. M., 1980, Balloon-borne aerosol measurements following the eruption of Mt. St. Helens [abstract].
- INVERSO, G. A., 1982, The scour, transport and deposition of Mt. St. Helens ash in a laboratory setting—A model.
- KENT, G. S., 1982, Lidar measurements of effluents from the Soufriere and Mount St. Helens volcanoes.
- KENT, G. S., 1982, SAGE measurements of Mount St. Helens volcanic aerosols.
- KOPPE, R. K., 1980, Airborne particle levels resulting from the May 18 eruption of Mt. St. Helens [abstract].
- KRINSLEY, D. H.; FINK, J. H.; GREELEY, RONALD, 1980, Explosive volcanism—Possible source of aggregate formation on Mars [abstract].
- KUHN, P. M.; HAUGHNEY, L. C.; INNIS, R. C., 1980, Long wave stratospheric transmission of Mount St. Helens ejecta [abstract].
- KUNTZ, M. A.; ROWLEY, P. D.; MACLEOD, N. S.; REYNOLDS, R. L.; MCBROOME, L. A.; KAPLAN, A. M.; LIDKE, D. J., 1981, Petrography and particle-size distribution of pyroclastic-flow, ash-cloud, and surge deposits.
- LANGFORD, S. A., 1982, Refractive-index profile of a tephra sample from the 18 May 1980 eruption of Mt. St. Helens.
- LAULAINEN, N. S., 1982, Ash loading and insolation at Hanford, Washington, during and after the eruption of Mount St. Helens.
- LAVER, J. D., 1982, Distribution of Mount St. Helens dust inferred from satellites and meteorological data.
- LEFRERE, JACQUES; PELOU, JACQUES; CAHEN, CLAUDE; HAUCHECORNE, A.; FLAMANT, PIERRE, 1981, Lidar survey of the post Mt. St. Helens stratospheric aerosol at Haute Provence Observatory.
- LENOBLE, J.; PRUVOST, P.; BROGNIEZ, C., 1984, SAGE satellite observations of stratospheric aerosols from Mount St. Helens eruption—A two-wavelength analysis.
- LERFALD, GORDON, 1982, Mount St. Helens dust veil observed at Boulder, Colorado, by optical techniques.
- LOFGREN, J. L., 1981, Analysis of volcanic ash from Mount St. Helens by x-ray diffraction [abstract].
- LOFGREN, J. L.; GOBLE, G. J., 1982, Analysis of Mount St. Helens volcanic ash by x-ray diffraction.
- MATHEWS, L. A.; ROQUEMORE, G. R.; ST. AMAND, P.; GIBSON, J. P., 1982, An incursion of dust in the southwestern United States from April 1980 eruptions of Mount St. Helens.
- MCCORMICK, M. P., 1981, Lidar measurements of Mount St. Helens effluents.
- MCCORMICK, M. P., 1981, Monitoring Mount St. Helens.
- MCCORMICK, M. P., 1982, Ground-based and airborne measurements of the Mount St. Helens stratospheric effluents.
- MOODY, U. L., 1983, Distribution and characterization of tephra from the May 18, 1980, Mt. St. Helens eruption in northern Idaho and western Montana [abstract].
- MOODY, U. L.; FOSBERG, MAYNARD; FALEN, ANITA, 1981, Soil physical and chemical properties—A progress report [abstract].
- MOODY, U. L.; FOSBERG, MAYNARD; FALEN, ANITA, 1982, Soil preparation and chemical properties—A progress report [abstract].
- OBERBECK, V. R.; FARLOW, N. H.; FONG, W.; SNETSINGER, K. G.; FERRY, G. V.; HAYES, D. M., 1982, Mount St. Helens aerosol evolution.
- OTHBERG, K. L.; BRECKENRIDGE, R. M., 1982, Baseline depositional environments of Mount St. Helens ash in northern Idaho [abstract].*
- PARRISH, J. L., 1906, Eruption of Mount St. Helens.
- PATTERSON, E. M., 1981, Measurements of the imaginary part of the refractive index between 300 and 700 nanometers for Mount St. Helens ash.
- RADKE, L. F.; HOBBS, P. V.; ELTGROTH, M. W.; HEGG, D. A., 1980, Preliminary airborne observations of the Mt. St. Helens eruptions.
- ROGERS, C. F.; HUDSON, J. G.; KOCHMOND, W. C., 1981, Measurements of cloud condensation nuclei in the stratosphere around the plume of Mount St. Helens.
- ROSE, W. I., JR.; CHUAN, R. L.; WOODS, D. C., 1982, Small particles in plumes of Mount St. Helens.
- ROSE, W. I., JR.; HOFFMAN, M. F., 1980, Distal ashes of the May 18, 1980 eruption of Mt. St. Helens [abstract].
- ROSEN, J. M.; HOFMANN, D. J., 1980, Balloon-borne condensation nuclei measurements following the eruption of Mt. St. Helens [abstract].
- ROSEN, J. M.; HOFMANN, D. J., 1982, Dustsonde measurements of the Mount St. Helens volcanic dust cloud over Wyoming.
- SARNA-WOJCICKI, A. M., 1982, Tephrochronology of the western region.*
- SARNA-WOJCICKI, A. M.; SHIPLEY, SUSAN; WAITT, R. B., JR.; DZURISIN, DANIEL; HAYS, W. H.; DAVIS, J. O.; WOOD, S. H.; BATERIDGE, THOMAS, 1980, Areal distribution, thickness, and volume of downwind ash from the May 18, 1980 eruption of Mount St. Helens.

- SARNA-WOJCICKI, A. M.; SHIPLEY, SUSAN; WAITT, R. B., JR.; DZURISIN, DANIEL; WOOD, S. H., 1981, Areal distribution, thickness, mass, volume, and grain size of air-fall ash from the six major eruptions of 1980.
- SARNA-WOJCICKI, A. M.; WAITT, R. B., JR.; WOODWARD, M. J.; SHIPLEY, SUSAN; RIVERA, JOSE, 1981, Premagnetic ash erupted from March 27 through May 14, 1980—Extent, mass, volume, and composition.
- SCHEIDECKER, K. F.; FEDERMAN, A. N.; TALLMAN, A. M., 1982, Compositional heterogeneity of tephras from the 1980 eruptions of Mount St. Helens.
- SCHULTZ, D. J.; PUMROY, C. E., 1981, Size and shape characteristics of volcanic ash as an indicator of distance from the source [abstract].
- SCLAR, C. B.; CARSON, BOBB, 1980, Mineralogical and physical characteristics of selected samples of volcanic ash from the May 18, 1980 eruption of Mount St. Helens, Washington.
- SEDLACEK, W. A.; HEIKEN, G. H.; MROZ, E. J.; GLADNEY, E. S.; PERRIN, D. R.; LEIFER, R.; FISENNE, L.; HINCHCLIFFE, L.; CHUAN, R. L., 1982, Physical and chemical characteristics of Mount St. Helens airborne debris.
- SEDLACEK, W. A.; MROZ, E. J.; GLADNEY, E. S.; HEIKEN, G. H.; LEIFER, R., 1980, Stratospheric sampling of the plume from the May 18, 1980 eruption of Mt. St. Helens [abstract].
- SEHMEL, G. A., 1982, Ambient airborne solids concentrations including volcanic ash at Hanford, Washington, sampling sites subsequent to the Mount St. Helens eruption.*
- SHIPLEY, SUSAN, 1983, Erosional modification of the downwind tephra lobe of the 18 May 1980 eruption of Mount St. Helens, Washington.
- SOREM, R. K., 1980, Some geological aspects of the ash fallout in Pullman and vicinity [abstract].
- SOREM, R. K., 1982, Volcanic ash clusters—tephra rafts and scavengers.
- THOMAS, L.; CHALONER, C. P.; BHATTACHARYYA, S. K., 1981, Laser-radar measurements in southern England of aerosols from Mount St. Helens.
- TURCO, R. P.; TOON, O. B.; WHITTEN, R. C.; HAMILL, P.; KEESEE, R. G., 1983, The 1980 eruptions of Mount St. Helens—Physical and chemical processes in the stratospheric clouds.
- TURCO, R. P.; TOON, O. B.; WHITTEN, R. C.; KEESEE, R. G.; HAMILL, P., 1982, Simulation studies of the physical and chemical processes occurring in the stratospheric clouds of the Mount St. Helens eruptions of May and June 1980.
- U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY, 1980, Physical and chemical characteristics of the Mt. St. Helens deposits of May 18, 1980.
- WIGHTMAN, J. P., 1982, XPS analysis of Mount St. Helens ash.
- WOODS, D. C.; CHUAN, R. L., 1980, Characterization of stratospheric aerosols in eruption plumes from Mt. St. Helens [abstract].
- ZIELINSKI, R. A.; SAWYER, M. B., 1980, Size and shape measurements of ash particles from the May 18, 1980 eruption of Mount St. Helens.
- Volcanic ash - Social aspects, see SOCIAL ASPECTS**
- VOLCANIC ASH - SOIL EFFECTS**
- see also SOILS*
- BROWN, L. A., 1980, Mount St. Helens ash fallout impact assessment report.
- DAHLGREN, RANDY, 1984, Impact of tephra perturbations on a forest soil in the *Abies amabilis* zone.
- ENGIBOUS, J. C., 1980, Results of research and analysis of volcanic ash from Mt. St. Helens.
- ENGIBOUS, J. C.; BUSTAD, L. K.; KENNEDY, R. A.; KLOCK, G. O.; KLOSTERMEYER, E. C.; PRESTON, R. P., 1982, Impact of Mount St. Helens eruption on ecosystems.
- FYFE, W. S.; KRONBERG, B. I.; BROWN, J. R.; LEONARDOS, O. H., 1982, Mount St. Helens manna [abstract].
- GOLDIN, ALAN, 1982, Influence of volcanic ash from the May 18, 1980 eruption of Mount St. Helens on the properties of soils.
- GOUGH, L. P.; SEVERSON, R. C.; LICHTE, F. E.; PEARD, J. L.; TUTTLE, M. L.; PAPP, C. S. E.; HARMS, T. F.; SMITH, K. S., 1981, Ash-fall effects on the chemistry of wheat and the Ritzville soil series, eastern Washington.
- HOFFER, J. M.; HOFFER, R. L., 1986, Chemical composition of the May 18, 1980 Mount St. Helens tephra and the underlying soil—Changes from July 1980 to May 1981.
- KING, L. G.; PETERSON, D. A., 1982, Surface irrigation as affected by ash from Mount St. Helens.

- MOLNAU, MYRON; SAXTON, K. E.; MCCOOL, D. K., 1980, Infiltration characteristics of volcanic ash covered soils [abstract].
- MOODY, U. L.; FOSBERG, MAYNARD; FALEN, ANITA, 1982, Soil preparation and chemical properties—A progress report [abstract].
- NAMMAH, H. A., 1983, Effect of Mount St. Helens ash on soil erosion and water quality.
- NUTT, G. W., 1980, Agriculture.
- PETERSON, D. A., 1982, Effects of fine volcanic ash on surface irrigation in central Washington.
- SMITH, J. L.; OWENS, E. J.; MCNEAL, B. L., 1982, Effects of volcanic ash on soil nitrogen mineralization and accompanying CO₂ production.*
- STARK, N. M.; ESSIG, D. A., 1985, Nutrient release from Mount St. Helens volcanic ash and retention by western Montana soil.
- STROH, J. R.; HARRISON, R. D., 1982, Soil Conservation Service involvement on watersheds affected by Mount St. Helens.
- U.S. SOIL CONSERVATION SERVICE, 1980, Mount St. Helens ash fallout impact assessment report.
- WINTERS, W. J.; KAYEN, R. E., 1985, Static and cyclic strength properties of Mount St. Helens debris avalanche and ash cloud materials.
- VOLCANIC ASH - STRATIGRAPHY (BEFORE 1980)**
- see also STRATIGRAPHY*
- BORCHARDT, G. A., 1970, Neutron activation analysis for correlating volcanic ash soils.*.
- BORCHARDT, G. A.; HARWARD, M. E.; SCHMITT, R. A., 1971, Correlation of volcanic ash deposits by activation analysis of glass separates.
- CRANDELL, D. R.; MULLINEAUX, D. R., 1973, Pine Creek volcanic assemblage at Mount St. Helens, Washington.
- DAVIS, J. O., 1985, Correlation of late Quaternary tephra layers in a long pluvial sequence near Summer Lake, Oregon.
- DAVIS, P. T.; BARNOSKY, C. W.; STUIVER, MINZE, 1982, A 20,000 yr record of volcanic ashfalls, Davis Lake, southwestern Washington [abstract].
- DUDAS, M. J.; HARWARD, M. E.; SCHMITT, R. A., 1973, Identification of dacitic tephras by activation analysis of their primary mineral phenocrysts.
- FEDERMAN, A. N., 1983, Correlation of tephra layers on the Columbia River Plateau, south-central Washington [abstract].
- FOLEY, L. L., 1983, Chronology of loess deposits and paleosols, southeastern Washington [abstract].
- FRITZ, L. G.; HILTABRAND, R. R., 1972, Correlation of St. Helens, Mazama and Glacier Peak ashes using x-ray diffraction [abstract].
- HEUSSER, C. J.; HEUSSER, L. E., 1980, Sequence of pumiceous tephra layers and the late Quaternary environmental record near Mount St. Helens.
- HYDE, J. H., 1973, Late Quaternary volcanic stratigraphy, south flank of Mount St. Helens, Washington.*
- JUVIGNE, ETIENNE; PORTER, S. C., 1985, Mineralogical variations within two widespread tephra layers from Cascade Range volcanoes, U.S.A.
- MOODY, U. L., 1977, Correlation of flood deposits containing St. Helens set S ashes and the stratigraphic position of St. Helens set J and Glacier Peak ashes, central Washington [abstract].
- MULLINEAUX, D. R., 1964, Extensive recent pumice lapilli and ash layers from Mount St. Helens volcano, southern Washington [abstract].
- MULLINEAUX, D. R., 1977, Volcanic hazards—Extent and severity of potential tephra hazard interpreted from layer Yn from Mount St. Helens, Washington [abstract].
- MULLINEAUX, D. R., 1986, Summary of pre-1980 tephra-fall deposits erupted from Mount St. Helens, Washington State, USA.
- MULLINEAUX, D. R.; HYDE, J. H.; RUBIN, MEYER, 1972, Preliminary assessment of upper Pleistocene and Holocene pumiceous tephra from Mount St. Helens, southern Washington [abstract].
- MULLINEAUX, D. R.; HYDE, J. H.; RUBIN, MEYER, 1975, Widespread late glacial and postglacial tephra deposits from Mount St. Helens volcano, Washington.
- MULLINEAUX, D. R.; WILCOX, R. E.; EBAUGH, W. F.; FRYXELL, ROALD; RUBIN, MEYER, 1977, Age of the last major scabland flood of eastern Washington, as inferred from associated ash beds of Mount St. Helens set S [abstract].
- NORGREN, J. A.; BORCHARDT, G. A.; HARWARD, M. E., 1970, Mt. St. Helens Y ash in northeastern Oregon and south central Washington [abstract].
- OKAZAKI, ROSE; SMITH, H. W.; GILKESON, R. A.; FRANKLIN, J. F., 1972, Correlation of West Blacktail ash with pyroclastic Layer T from the 1800 A.D. eruption of Mount St. Helens.
- PORTER, S. C., 1981, Use of tephrochronology in the Quaternary geology of the United States.

- SARNA-WOJCICKI, A. M.; CHAMPION, D. E.; DAVIS, J. O., 1983, Holocene volcanism in the conterminous United States and the role of silicic volcanic ash layers in correlation of latest-Pleistocene and Holocene deposits.
- SMITH, D. R.; LEEMAN, W. P., 1982, Mineralogy and phase chemistry of Mount St. Helens tephra sets W and Y as keys to their identification.
- SMITH, H. W.; OKAZAKI, ROSE; KNOWLES, C. R., 1975, Electron microprobe analysis as a test of the correlation of West Blacktail ash with Mount St. Helens pyroclastic Layer T.
- SMITH, H. W.; OKAZAKI, ROSE; KNOWLES, C. R., 1977, Electron microprobe analysis of glass shards from tephra assigned to Set W, Mount St. Helens, Washington.
- STRADLING, D. F.; KIVER, E. P., 1982, Depositional environments of late Pleistocene Mount St. Helens ash in the northeastern channeled scablands of the Columbia intermontane [abstract].
- STRADLING, D. F.; KIVER, E. P., 1986, The significance of volcanic ash as a stratigraphic marker for the late Pleistocene in northeastern Washington.
- WESTGATE, J. A., 1977, Identification and significance of late Holocene tephra from Otter Creek, southern British Columbia, and localities in west-central Alberta.
- WESTGATE, J. A.; GORTON, M. P., 1981, Correlation techniques in tephra studies.
- VOLCANIC ASH - STRATIGRAPHY (1980)**
- BRAZIER, S.; SPARKS, R. S. J.; CAREY, S. N.; SIGURDSSON, HARALDUR; WESTGATE, J. A., 1983, Bimodal grain size distribution and secondary thickening in air-fall ash layers.
- COCHRAN, B. D., 1982, Preliminary petrography of primary and secondary, redeposited tephras from the 1980 Mount St. Helens eruption [abstract].
- SARNA-WOJCICKI, A. M.; CHAMPION, D. E.; DAVIS, J. O., 1983, Holocene volcanism in the conterminous United States and the role of silicic volcanic ash layers in correlation of latest-Pleistocene and Holocene deposits.
- SIGURDSSON, HARALDUR; CAREY, S. N., 1980, Stratigraphy of air-fall tephra from the May 18 explosive eruption of Mt. St. Helens volcano [abstract].
- WAITT, R. B., JR., 1981, Devastating pyroclastic density flow and attendant air fall of May 18—Stratigraphy and sedimentology of deposits.
- WAITT, R. B., JR.; DZURISIN, DANIEL, 1980, Stratigraphic framework of the 18 May 1980 eruption of Mount St. Helens [abstract].

- WAITT, R. B., JR.; DZURISIN, DANIEL, 1981, Proximal air-fall deposits from the May 18 eruption—Stratigraphy and field sedimentology.
- WAITT, R. B., JR.; HANSEN, V. L.; SARNA-WOJCICKI, A. M.; WOOD, S. H., 1981, Proximal air-fall deposits of eruptions between May 24 and August 7, 1980—Stratigraphy and field sedimentology.
- Volcanic ash - Tephrochronology, see GEOCHRONOLOGY**
- Volcanic ash - Vehicle effects, see VOLCANIC ASH - MACHINE EFFECTS**
- VOLCANIC GASES - GEOCHEMISTRY (1980)**
- ACKERMAN, M.; LIPPENS, C.; LECHEVALLIER, M., 1980, Volcanic material from Mount St. Helens in the stratosphere over Europe.
- ANDREWS, V. E., 1981, Airborne radiological sampling of Mount St. Helens plumes.
- BANDY, A. R.; MOROULIS, P. J.; WILNER, L. A.; TORRES, A. L., 1982, Estimates of the fluxes of NO, SO₂, H₂S, CS₂, and OCS from Mt. St. Helens deduced from in situ plume concentration measurements.
- BARNES, IVAN, 1985, Mineral-water reactions in metamorphism and volcanism.
- BARNES, IVAN; JOHNSTON, D. A.; EVANS, W. C.; PRESSER, T. S.; MARINER, R. H.; WHITE, L. D., 1981, Properties of gases and waters of deep origin near Mount St. Helens.
- BAROSS, J. A.; LILLEY, M. D.; GORDON, L. I., 1980, Microbially mediated production and consumption of trace gases including CH₄, H₂, and N₂O in 78 degree C seep waters on Mt. St. Helens [abstract].
- CADLE, R. D.; HEIDT, L. E., 1980, Gas chromatographic determination of some constituents of volcanic gases [abstract].
- CADLE, R. D.; HEIDT, L. E., 1982, A comparison of constituents of Mount St. Helens eruption clouds with those of some other volcanoes.
- CASADEVALL, T. J.; GREENLAND, L. P., 1981, The chemistry of gases emanating from Mount St. Helens, May-September, 1980.
- CASADEVALL, T. J.; JOHNSTON, D. A.; HARRIS, D. M.; ROSE, W. I., JR.; MALINCONICO, L. L.; STOIBER, R. E.; BORNHORST, T. J.; WILLIAMS, S. N.; AND OTHERS, 1981, SO₂ emission rates at Mount St. Helens from March 29 through December, 1980.

- CASADEVALL, T. J.; JOHNSTON, D. A.; HARRIS, D. M.; STOIBER, R. E.; WILLIAMS, S. N.; MALINCONICO, L. L., 1980, Variations of SO₂ and CO₂ emission rates at Mount St. Helens, March 29 to July 22, 1980 [abstract].
- CASADEVALL, T. J.; JOHNSTON, D. A.; STOIBER, R. E.; MALINCONICO, L. L.; WILLIAMS, S. N., 1980, SO₂ monitoring at Mount Saint Helens [abstract].
- CHUAN, R. L.; WOODS, D. C., 1980, Comparison of aerosols from eruptions of Santiaguito, Guatemala and St. Helens [abstract].
- CHUAN, R. L.; WOODS, D. C.; MCCORMICK, M. P., 1981, Characterization of aerosols from eruptions of Mount St. Helens.
- CRONN, D. R., 1980, Gas analyses of airborne samples from St. Helens eruption plume [abstract].
- CRONN, D. R.; NUTMAGUL, WINAI, 1982, Characterization of trace gases in 1980 volcanic plumes of Mt. St. Helens.
- EADIE, W. J.; DAVIS, W. E.; ALKEZWEENY, A. J., 1980, Regional air quality impacts of SO₂ and H₂S emissions from Mount St. Helens [abstract].
- EVANS, W. C.; BANKS, N. G.; WHITE, L. D., 1981, Analyses of gas samples from the summit crater.
- FINNEGAR, D. L., 1984, The chemistry of trace elements and acidic species in fumarolic emissions.*
- FRIEND, J. P.; BANDY, A. R.; MOYERS, J. L.; ZOLLER, W. H.; STOIBER, R. E.; TORRES, A. L.; ROSE, W. I., JR.; MCCORMICK, M. P.; WOODS, D. C., 1982, Research on atmospheric volcanic emissions—An overview.
- GANDRUD, B. W.; LAZRUS, A. L., 1981, Filter measurements of stratospheric sulfate and chloride in the eruption plume of Mount St. Helens.
- GERLACH, T. M.; CASADEVALL, T. J., 1986, Evaluation of gas data from high-temperature fumaroles at Mount St. Helens, 1980-1982.
- GERLACH, T. M.; CASADEVALL, T. J., 1986, Fumarole emissions at Mount St. Helens volcano, June 1980 to October 1981—Degassing of a magma-hydrothermal system.
- HARRIS, D. M.; ROSE, W. I., JR., 1985, Pre-eruption CO₂ emissions during magma ascent beneath Mount St. Helens [abstract].
- HARRIS, D. M.; ROSE, W. I., JR.; BORNHORST, T. J.; CASADEVALL, T. J., 1980, Variations of SO₂ and CO₂ emission rates at Mount St. Helens July 22 to August 29, 1980 [abstract].
- HARRIS, D. M.; SATO, MOTOAKI, 1980, CO₂ emission rates at Mount St. Helens by airborne plume measurements [abstract].
- HARRIS, D. M.; SATO, MOTOAKI; CASADEVALL, T. J.; ROSE, W. I., JR.; BORNHORST, T. J., 1981, Emission rates of CO₂ from plume measurements.
- HOBBS, P. V., 1983, Volcanic sulfur.
- HOBBS, P. V.; RADKE, L. F.; HEGG, D. A.; ELTGROTH, M. W.; TUELL, J. P., 1980, Airborne observations of the emissions from Mt. St. Helens, March 28-August 28, 1980 [abstract].
- HOBBS, P. V.; RADKE, L. F.; HEGG, D. A.; ELTGROTH, M. W.; TUELL, J. P., 1980, Comparisons between airborne measurements of the volcanic emissions from Mt. St. Augustine 1976 and Mt. St. Helens 1980 [abstract].
- HOWARD, B.; MESEREAU, A.; MARIANI, PATRICIA, 1980, Analysis of gas samples from Mount St. Helens.
- HUEBERT, B. J., 1980, Sulfur and chlorine in the phreatic Mt. St. Helens fume [abstract].
- INN, E. C. Y.; VEDDER, J. F.; CONDON, E. P.; O'HARA, DEAN, 1980, Gaseous constituents in the eruption plumes of Mount St. Helens at stratospheric altitudes [abstract].
- INN, E. C. Y.; VEDDER, J. F.; CONDON, E. P.; O'HARA, DEAN, 1981, Gaseous constituents in the plume from eruptions of Mount St. Helens.
- INN, E. C. Y.; VEDDER, J. F.; CONDON, E. P.; O'HARA, DEAN, 1982, Precursor gases of aerosols in the Mount St. Helens eruption plumes at stratospheric altitudes.
- KERR, J. B.; EVANS, W. F. J.; MATEER, C. L., 1982, Measurements of SO₂ in the Mount St. Helens debris.
- KURODA, P. K.; LIOU, J. C. H.; BANAVALI, A. D.; AKRIDGE, J. D.; BURCHFIELD, L. A., 1984, Polonium-210 fallout from the 1980 eruption of Mount St. Helens and the mystery cloud of 1982.
- LAZRUS, A. L., 1981, Sulfur and halogen compounds in the Mt. St. Helens eruptions [abstract].
- LEIFER, R.; HINCHLIFFE, L.; FISENNE, I.; FRANKLIN, H.; KNUTSON, E.; OLDEN, M.; SEDLACEK, W. A.; MROZ, E. J.; CAHILL, T., 1981, Measurements of the stratospheric plume from the Mount St. Helens eruption—Radioactivity and chemical composition.
- LEZBERG, E. A.; OTTERSON, D. A.; ROBERTS, W. K.; PAPATHAKOS, L. C., 1982, Aircraft sampling of the sulfate layer near the troposphere following the eruption of Mount St. Helens.*

- MILLAN, M. M.; GALLANT, A. J.; CHUNG, Y.-S.; FANAKI, FOUAD, 1985, COSPEC observation of Mt. St. Helens volcanic SO₂ eruption cloud of 18 May 1980 over southern Ontario.
- MILLAN, M. M.; GALLANT, A. J.; FANAKI, FOUAD, 1981, Spectroscopic measurement of SO₂ volcanic emissions [abstract].
- MURCRAY, D. G.; MURCRAY, F. J.; BARKER, D. B.; MASTENBROOK, H. J., 1981, Changes in stratospheric water vapor associated with the Mount St. Helens eruption.
- NEHRING, N. L.; JOHNSTON, D. A., 1981, Use of ash leachates to monitor gas emissions.
- PHELAN, J. M.; FINNEGAR, D. L.; BALLANTINE, D. S.; ZOLLER, W. H.; HART, M. A.; MOYERS, J. L., 1982, Airborne aerosol measurements in the quiescent plume of Mount St. Helens—September, 1980.
- POLLACK, J. B., 1981, Measurements of the volcanic plumes of Mount St. Helens in the stratosphere and troposphere—Introduction.
- RADKE, L. F.; HOBBS, P. V.; ELTGROTH, M. W.; HEGG, D. A., 1980, Preliminary airborne observations of the Mt. St. Helens eruptions.
- RASMUSSEN, R. A.; KHALIL, M. A. K.; DALLUGE, R. W.; PENKETT, S. A.; JONES, B., 1982, Carbonyl sulfide and carbon disulfide from the eruptions of Mount St. Helens.
- RASMUSSEN, R. A.; KHALIL, M. A. K.; PENKETT, S. A.; CASADEVALL, T. J., 1981, Analysis of trace gases from Mt. St. Helens volcanic ash [abstract].
- SATO, MOTOAKI; MCGEE, K. A., 1981, Continuous monitoring of hydrogen on the south flank of Mount St. Helens.
- SATO, MOTOAKI; MCGEE, K. A.; CASADEVALL, T. J., 1981, Continuous monitoring of hydrogen at Mount St. Helens, Washington, U.S.A. [abstract].
- SEDLACEK, W. A.; MROZ, E. J.; GLADNEY, E. S.; HEIKEN, G. H.; LEIFER, R., 1980, Stratospheric sampling of the plume from the May 18, 1980 eruption of Mt. St. Helens [abstract].
- STOIBER, R. E.; WILLIAMS, S. N.; MALINCONICO, L. L., 1980, Mount St. Helens, Washington, 1980 volcanic eruption—Magmatic gas component during the first 16 days.
- STOIBER, R. E.; WILLIAMS, S. N.; MALINCONICO, L. L.; JOHNSTON, D. A.; CASADEVALL, T. J., 1981, Mt. St. Helens—Evidence of increased magmatic gas component.
- SUTTON, A. J.; MCGEE, K. A.; CASADEVALL, T. J., 1986, Gas emissions studies at Mount St. Helens [abstract].
- TURCO, R. P.; TOON, O. B.; WHITTEN, R. C.; HAMILL, P.; KEESEE, R. G., 1983, The 1980 eruptions of Mount St. Helens—Physical and chemical processes in the stratospheric clouds.
- VAREKAMP, J. C.; BUSECK, P. R., 1980, Plume analyses and mercury flux at Mount St. Helens, Washington [abstract].
- VAREKAMP, J. C.; BUSECK, P. R., 1981, Mercury emissions from Mount St. Helens during September 1980.
- VOLCANIC GASES - GEOCHEMISTRY (POST 1980)**
- BARNES, IVAN, 1982, Volatiles of Mount St. Helens and their origins.
- BARNES, IVAN, 1985, Mineral-water reactions in metamorphism and volcanism.
- BERNARD, ALAIN; LE GUERN, FRANCOIS, 1986, Condensation of volatile elements in high-temperature gases of Mount St. Helens.
- CASADEVALL, T. J.; EWERT, J.; HARRIS, D. M.; ROSE, W. I., JR., 1982, Gas emissions and the prediction of eruptive behavior at Mount St. Helens, Washington [abstract].
- CASADEVALL, T. J.; EWERT, J.; SYMONDS, R. B., 1982, Gas emissions and 1981-1982 activity at Mount St. Helens, Washington [abstract].
- CASADEVALL, T. J.; ROSE, W. I., JR.; GERLACH, T. M.; GREENLAND, L. P.; EWERT, J.; WUNDERMAN, R. L.; SYMONDS, R. B., 1983, Gas emissions and the eruptions of Mount St. Helens through 1982.
- CASADEVALL, T. J.; ROSE, W. I., JR.; GREENLAND, L. P.; EWERT, J.; WUNDERMAN, R. L., 1981, Gas emissions from Mount St. Helens, Washington—Constraints on a model for behavior of magma in the near-surface environment [abstract].
- CHUAN, R. L.; ROSE, W. I., JR.; SYMONDS, R. B.; LICHTE, F. E.; KEITH, T. E. C., 1985, Particle flux in the Mt. St. Helens plume and fumaroles during a quiescent period in August 1985 [abstract].
- CIONI, R.; CORAZZA, E., 1986, Mount St. Helens gases, September 1981 [abstract].
- FINNEGAR, D. L., 1984, The chemistry of trace elements and acidic species in fumarolic emissions.*

- GERLACH, T. M.; CASADEVALL, T. J., 1986, Evaluation of gas data from high-temperature fumaroles at Mount St. Helens, 1980-1982.
- GERLACH, T. M.; CASADEVALL, T. J., 1986, Fumarole emissions at Mount St. Helens volcano, June 1980 to October 1981—Degassing of a magma-hydrothermal system.
- GERLACH, T. M.; CASADEVALL, T. J.; GREENLAND, L. P.; LE GUERN, FRANCOIS, 1982, Fumarole gases and magma degassing at Mount St. Helens, 1980-81 [abstract].
- HOFMANN, D. J.; ROSEN, J. M., 1982, Balloon-borne observations of stratospheric aerosol and condensation nuclei during the year following the Mt. St. Helens eruption.
- LE CLOAREC, M. F.; LAMBERT, G.; LE ROULLEY, J. C.; ARDOUIN, B., 1986, Long-lived radon decay products in Mount St. Helens emissions—An estimation of the magma reservoir volume.
- MARTINI, MARINO; CELLINI LEGITTIMO, PAOLA, 1982, Acid and condensable constituents in fumarolic gases of Usu (Japan) and Mount St. Helens (U.S.A.).
- ROSE, W. I., JR.; SYMONDS, R. B.; CHARTIER, T.; STOKES, J. B.; BRANTLEY, STEVEN, 1985, Simultaneous experiments with two correlation spectrometers at Kilauea and Mount St. Helens [abstract].
- SATO, MOTOAKI; MCGEE, K. A.; CASADEVALL, T. J., 1981, Continuous monitoring of hydrogen at Mount St. Helens, Washington, U.S.A. [abstract].
- SATO, MOTOAKI; MCGEE, K. A.; SUTTON, A. J., 1984, Hydrogen monitoring, Cascade volcanoes [abstract].
- SUTTON, A. J.; MCGEE, K. A.; CASADEVALL, T. J., 1986, Gas emissions studies at Mount St. Helens [abstract].
- VAREKAMP, J. C.; BUSECK, P. R., 1985, Mercury from volcanic and geothermal sources [abstract].
- VOLCANIC GASES - PHYSICAL MEASUREMENTS**
- CIONI, R.; CORAZZA, E., 1986, Mount St. Helens gases, September 1981 [abstract].
- HOBBS, P. V.; RADKE, L. F.; ELTGROTH, M. W.; HEGG, D. A., 1981, Airborne studies of the emissions from the volcanic eruptions of Mount St. Helens.
- KENT, G. S., 1982, SAGE measurements of Mount St. Helens volcanic aerosols.
- POUGH, F. H., 1980, Nuee ardente eruptions and Mt. St. Helens.
- SATO, MOTOAKI; MCGEE, K. A.; FURUKAWA, BRUCE, 1980, Continuous hydrogen monitoring at Mount St. Helens [abstract].
- TURCO, R. P.; TOON, O. B.; WHITTEN, R. C.; HAMILL, P.; KEESEE, R. G., 1983, The 1980 eruptions of Mount St. Helens—Physical and chemical processes in the stratospheric clouds.
- VOLCANIC PLUME [GENERAL WORKS]**
- FRIEND, J. P.; BANDY, A. R.; MOYERS, J. L.; ZOLLER, W. H.; STOIBER, R. E.; TORRES, A. L.; ROSE, W. I., JR.; MCCORMICK, M. P.; WOODS, D. C., 1982, Research on atmospheric volcanic emissions—An overview.
- HOBLITT, R. P., 1986, Observations of the eruptions of July 22 and August 7, 1980, at Mount St. Helens, Washington.
- HULL, A. N., 1980, Atmospheric events.
- VOLCANIC PLUME - GEOCHEMISTRY**
- ANDREWS, V. E., 1981, Airborne radiological sampling of Mount St. Helens plumes.
- BANDY, A. R.; MOROULIS, P. J.; WILNER, L. A.; TORRES, A. L., 1982, Estimates of the fluxes of NO, SO₂, H₂S, CS₂, and OCS from Mt. St. Helens deduced from in situ plume concentration measurements.
- CHUAN, R. L.; ROSE, W. I., JR.; SYMONDS, R. B.; LICHTE, F. E.; KEITH, T. E. C., 1985, Particle flux in the Mt. St. Helens plume and fumaroles during a quiescent period in August 1985 [abstract].
- CRONN, D. R., 1980, Gas analyses of airborne samples from St. Helens eruption plume [abstract].
- HARRIS, D. M.; SATO, MOTOAKI, 1980, CO₂ emission rates at Mount St. Helens by airborne plume measurements [abstract].
- HARRIS, D. M.; SATO, MOTOAKI; CASADEVALL, T. J.; ROSE, W. I., JR.; BORNHORST, T. J., 1981, Emission rates of CO₂ from plume measurements.
- INN, E. C. Y.; VEDDER, J. F.; CONDON, E. P.; O'HARA, DEAN, 1980, Gaseous constituents in the eruption plumes of Mount St. Helens at stratospheric altitudes [abstract].
- INN, E. C. Y.; VEDDER, J. F.; CONDON, E. P.; O'HARA, DEAN, 1981, Gaseous constituents in the plume from eruptions of Mount St. Helens.
- LAZRUS, A. L., 1981, Sulfur and halogen compounds in the Mt. St. Helens eruptions [abstract].

- LEIFER, R.; HINCHLIFFE, L.; FISENNE, I.; FRANKLIN, H.; KNUTSON, E.; OLDEN, M.; SEDLACEK, W. A.; MROZ, E. J.; CAHILL, T., 1981, Measurements of the stratospheric plume from the Mount St. Helens eruption—Radioactivity and chemical composition.
- NEVISSI, A. E., 1984, Lead 210 and Polonium 210 in Mount St. Helens ash.
- OGREN, J. A.; CHARLSON, R. J.; RADKE, L. F.; DOMONKOS, S. F., 1981, Absorption of visible radiation by aerosols in the volcanic plume of Mount St. Helens.
- PATTERSON, E. M., 1981, Measurements of the imaginary part of the refractive index between 300 and 700 nanometers for Mount St. Helens ash.
- PHELAN, J. M., 1985, Volcanoes as a source of volatile trace elements in the atmosphere [abstract].
- PHELAN, J. M., 1983, Volcanoes as a source of volatile trace elements in the atmosphere.
- PHELAN, J. M.; FINNEGAR, D. L.; BALLANTINE, D. S.; ZOLLER, W. H.; HART, M. A.; MOYERS, J. L., 1982, Airborne aerosol measurements in the quiescent plume of Mount St. Helens—September, 1980.
- POLLACK, J. B., 1980, Climatic impact of the volcanic plumes of Mt. St. Helens [abstract].
- POLLACK, J. B., 1981, Measurements of the volcanic plumes of Mount St. Helens in the stratosphere and troposphere—Introduction.
- ROGERS, C. F.; HUDSON, J. G.; KOCMOND, W. C., 1981, Measurements of cloud condensation nuclei in the stratosphere around the plume of Mount St. Helens.
- ROSE, W. I., JR.; CHUAN, R. L.; WOODS, D. C., 1982, Small particles in plumes of Mount St. Helens.
- SCHNELL, R. C.; MILLER, S. W., 1980, Ice nucleus content of Mount St. Helens plume ash [abstract].
- SEDLACEK, W. A.; MROZ, E. J.; GLADNEY, E. S.; HEIKEN, G. H.; LEIFER, R., 1980, Stratospheric sampling of the plume from the May 18, 1980 eruption of Mt. St. Helens [abstract].
- THOMAS, ELLEN; VAREKAMP, J. C., 1982, Volcanic particles from gas plumes of basaltic and calc-alkaline volcanoes [abstract].
- TURCO, R. P.; TOON, O. B.; WHITTEN, R. C.; HAMILL, P.; KEESEE, R. G.; INN, E. C. Y., 1980, Mount St. Helens—Chemistry in volcanic eruption clouds [abstract].
- TURCO, R. P.; TOON, O. B.; WHITTEN, R. C.; KEESEE, R. G.; HAMILL, P., 1982, Simulation studies of the physical and chemical processes occurring in the stratospheric clouds of the Mount St. Helens eruptions of May and June 1980.
- VAREKAMP, J. C.; BUSECK, P. R., 1980, Plume analyses and mercury flux at Mount St. Helens, Washington [abstract].
- VOSSLER, TERI; ANDERSON, D. L.; ARAS, N. K.; PHELAN, J. M.; ZOLLER, W. H., 1981, Trace element composition of the Mount St. Helens plume—Stratospheric samples from the 18 May eruption.
- VOLCANIC PLUME - PHYSICAL MEASUREMENTS AND TRAJECTORY (1980)**
- BANISTER, J. R., 1984, Pressure wave generated by the Mount St. Helens eruption.
- BASS, R. C.; BANISTER, J. R., 1980, Dusty gas flow calculations [abstract].
- CAREY, S. N.; SIGURDSSON, HARALDUR, 1985, The May 18, 1980, eruption of Mount St. Helens; 2, Modeling of dynamics of the plinian phase.
- COBB, W. E., 1980, Electric fields and lightning in the Mt. St. Helens volcanic cloud [abstract].
- CRABTREE, J.; KITCHEN, M., 1984, The long-range travel and dispersion of the plume from the Mount St. Helens volcano.
- DANIELSEN, E. F., 1981, Trajectories of the Mount St. Helens eruption plume.
- DANIELSEN, E. F., 1982, Mount St. Helens plume dispersion based on trajectory analyses.
- DELUISI, J. J.; MENDONCA, B. G.; DUTTON, E. G.; BOX, M. A.; HERMAN, B. M., 1983, Radiative properties of the stratospheric dust cloud from the May 18, 1980, eruption of Mount St. Helens.
- DRAZLER, R. R., 1981, Observing and forecasting motions of volcanic emissions shortly after the initial Mt. St. Helens eruption.
- HARRIS, D. M.; ROE, ROBERT; ROSE, W. I., JR., 1980, Radar observations of the July 22 and August 7, 1980 eruptions of Mount St. Helens [abstract].
- PHELAN, J. M.; FINNEGAR, D. L.; BALLANTINE, D. S.; ZOLLER, W. H.; HART, M. A.; MOYERS, J. L., 1982, Airborne aerosol measurements in the quiescent plume of Mount St. Helens—September, 1980.
- ROSE, W. I., JR.; HARRIS, D. M., 1980, Radar observations of ash clouds from the May 18, 1980 Mount St. Helens eruption [abstract].
- SPARKS, R. S. J.; MOORE, J. G.; RICE, C. J., 1986, The initial giant umbrella cloud of the May 18th, 1980, explosive eruption of Mount St. Helens.

TURCO, R. P.; TOON, O. B.; WHITTEN, R. C.; KEESEE, R. G.; HAMILL, P., 1982, Simulation studies of the physical and chemical processes occurring in the stratospheric clouds of the Mount St. Helens eruptions of May and June 1980.

WOODS, D. C.; CHUAN, R. L., 1980, Characterization of stratospheric aerosols in eruption plumes from Mt. St. Helens [abstract].

Volcanism, *see* specific aspects of Mount St. Helens volcanism, e.g., EARTHQUAKES AND SEISMOLOGY, MASS MOVEMENTS, VOLCANIC ASH, etc.

Water quality, *see* HYDROLOGY - IMPACTS OF THE ERUPTIONS ON WATER QUALITY

Water supplies, *see* HYDROLOGY - IMPACTS OF THE ERUPTIONS ON MUNICIPAL WATER SYSTEMS

West Castle Creek Lake, *see* LAKES - WEST CASTLE CREEK LAKE

Williams Lake, *see* LAKES - WILLIAMS LAKE

LIST OF SUBJECT HEADINGS

- Acoustics, *see* BLAST — ACOUSTICS
- Aerial photography, *see* REMOTE SENSING
- Agriculture, *see* BIOLOGY — FLORA — AGRICULTURE
- Animals, *see* BIOLOGY — FAUNA
- AREAL GEOLOGY (BEFORE 1980)
- AREAL GEOLOGY (1980)
- AREAL GEOLOGY (POST 1980)
- Avalanches, *see* MASS MOVEMENTS — AVALANCHES AND LANDSLIDES
- BEAN CREEK
- BIBLIOGRAPHY
- BIOLOGY [GENERAL WORKS]
- BIOLOGY — FAUNA
- BIOLOGY — FAUNA — AQUATIC
- BIOLOGY — FAUNA — TERRESTRIAL
- BIOLOGY — FLORA
- BIOLOGY — FLORA — AGRICULTURE
- BIOLOGY — FLORA — FORESTRY
- BLAST
- BLAST — ACOUSTICS
- Blast — Biological effects, *see* BIOLOGY
- Blast — Deposits,
- see*
- MASS MOVEMENTS — AVALANCHES AND LANDSLIDES
- MASS MOVEMENTS — LAHARS AND MUDFLOWS
- PYROCLASTIC FLOWS AND DEPOSITS
- BLAST — THERMAL SURVEYS
- Botany, *see* BIOLOGY — FAUNA
- BULGE
- BULL RUN WATERSHED
- Bumping Lake, *see* LAKES — BUMPING LAKE
- Carbon dating, *see* GEOCHRONOLOGY
- CASTLE CREEK
- Castle Creek Lake,
- see*
- LAKES — SOUTH FORK CASTLE CREEK LAKE
- LAKES — WEST CASTLE CREEK LAKE
- CASTLE ROCK, WASH.
- CAVES
- Channel morphology, *see* RIVER MORPHOLOGY
- CHRONOLOGY AND HISTORY BEFORE 1980
- see also* GEOCHRONOLOGY
- CHRONOLOGY OF THE 1980 ERUPTION ACTIVITY
- Clays, *see* VOLCANIC ASH — MINERALOGY
- CLEARWATER CREEK
- CLIMATIC EFFECTS
- CLIMATIC EFFECTS OF VOLCANIC ASH
- COLDWATER CREEK
- Coldwater Lake, *see* LAKES — COLDWATER LAKE
- COLUMBIA RIVER — BIOLOGY
- see also* LIMNOLOGY
- COLUMBIA RIVER — ENGINEERING GEOLOGY
- COLUMBIA RIVER — LAHARS, MUDFLOWS AND STREAM SEDIMENTS

Cowlitz Co.

Note: The 1980 eruption of Mount St. Helens impacted much of Cowlitz County. See specific aspects, e.g.:

HYDROLOGY

MASS MOVEMENTS — AVALANCHES AND LANDSLIDES
MASS MOVEMENTS — LAHARS AND MUDFLOWS
VOLCANIC ASH — DISTRIBUTION

COWLITZ RIVER — BIOLOGY

see also LIMNOLOGY

COWLITZ RIVER — ENGINEERING GEOLOGY

COWLITZ RIVER — GUIDEBOOKS

COWLITZ RIVER — HYDROLOGY

COWLITZ RIVER — LAHARS, MUDFLOWS AND STREAM SEDIMENTS

COWLITZ RIVER — PLANNING AND EMERGENCY RESPONSE

COWLITZ RIVER — RIVER MORPHOLOGY

see also RIVER MORPHOLOGY

CRAB CREEK

CRATER

see also DOME

Dams, *see* DEBRIS DAMSDating, *see* GEOCHRONOLOGYDavis Lake, *see* LAKES — DAVIS LAKE

DEBRIS DAMS

Dendrochronology, *see* GEOCHRONOLOGY

Disaster planning,

see

EMERGENCY RESPONSE
GEOLOGIC HAZARDS
PLANNING

DOME

see also CRATER

DREDGING

EARTHQUAKES AND SEISMOLOGY
[GENERAL WORKS]

EARTHQUAKES AND SEISMOLOGY (BEFORE 1980)

EARTHQUAKES AND SEISMOLOGY (1980)

EARTHQUAKES AND SEISMOLOGY (POST 1980)

ECOLOGY

ECONOMIC EFFECTS

Economic geology, *see* MINERAL RESOURCES

Electrical surveys, *see* GEOPHYSICS — ELECTRICAL SURVEYS

Elk Lake area, *see* MOUNT ST. HELENS SEISMIC ZONE

EMERGENCY RESPONSE

Note: Describes plans or actions to deal with potential or existant problems from eruption activity.

see also

COWLITZ RIVER — PLANNING AND EMERGENCY RESPONSE
GEOLOGIC HAZARDS
PLANNING
TOUTLE RIVER SYSTEM — PLANNING AND EMERGENCY RESPONSE

ENGINEERING GEOLOGY

see also

COLUMBIA RIVER — ENGINEERING GEOLOGY
COWLITZ RIVER — ENGINEERING GEOLOGY
DEBRIS DAMS
DREDGING
FLOOD HAZARDS
GEOLOGIC HAZARDS
HYDROLOGY — IMPACTS OF THE ERUPTIONS ON WATER QUALITY

- TOUTLE RIVER SYSTEM — ENGINEERING GEOLOGY
TUNNELS
VOLCANIC ASH — ENGINEERING ASPECTS
- ENVIRONMENTAL IMPACT STATEMENTS
- Erosion
- see*
- GEOMORPHOLOGY
VOLCANIC ASH — EROSION
- Eruption history
- see*
- CHRONOLOGY AND HISTORY BEFORE 1980
CHRONOLOGY OF THE 1980 ERUPTION ACTIVITY
- ERUPTION PREDICTION
- Fargher Lake, *see* LAKES — FARGHER LAKE
- Fawn Lake, *see* LAKES — FAWN LAKE
- Financial effects, *see* ECONOMIC EFFECTS
- Findley Lake, *see* LAKES — FINDLEY LAKE
- Fish, *see* BIOLOGY — FAUNA — AQUATIC
- FLOOD HAZARDS
- see also*
- ENGINEERING GEOLOGY
GEOLOGIC HAZARDS
- Forestry, *see* BIOLOGY — FLORA — FORESTRY
- FUMAROLES
- GENERAL WORKS
- Note: Includes materials, whether scientific or popular works, which are overall descriptions of Mount St. Helens.
- GENERAL WORKS (BEFORE 1980)
GENERAL WORKS (1980 AND POST 1980)
GENERAL WORKS (1980) — PICTORIAL
Geochemistry
- see*
- IGNEOUS PETROLOGY —
GEOCHEMISTRY
LAKES — GEOCHEMISTRY
MASS MOVEMENTS — LAHARS AND MUDFLOWS — GEOCHEMISTRY
VOLCANIC ASH — GEOCHEMISTRY
VOLCANIC GASES — GEOCHEMISTRY
VOLCANIC PLUME — GEOCHEMISTRY
- GEOCHRONOLOGY
- see also*
- CHRONOLOGY AND HISTORY BEFORE 1980
CHRONOLOGY OF THE 1980 ERUPTIVE ACTIVITY
- GEOLOGIC HAZARDS
- see also*
- DEBRIS DAMS
ENGINEERING GEOLOGY
FLOOD HAZARDS
MASS MOVEMENTS — LAHARS AND MUDFLOWS
- GEOLOGIC HAZARDS (BEFORE 1980)
GEOLOGIC HAZARDS (1980)
GEOLOGIC HAZARDS (POST 1980)
- Geologic hazards — Social aspects, *see* SOCIAL ASPECTS
- Geologic maps, *see* MAPS — GEOLOGIC

GEOMORPHOLOGY

see also

MASS MOVEMENTS — AVALANCHES AND LANDSLIDES
 MASS MOVEMENTS — LAHARS AND MUDFLOWS
 RIVER MORPHOLOGY
 VOLCANIC ASH — EROSION

Geophysical maps, *see* MAPS — GEOPHYSICAL

GEOPHYSICS [GENERAL WORKS]

Geophysics — Acoustics, *see* BLAST — ACOUSTICS

GEOPHYSICS — ELECTRICAL SURVEYS

GEOPHYSICS — GRAVITY SURVEYS

GEOPHYSICS — MAGNETIC SURVEYS

GEOPHYSICS — RADIOACTIVITY SURVEYS

GEOPHYSICS — SEISMIC SURVEYS

GEOPHYSICS — THERMAL SURVEYS

see also

BLAST — THERMAL SURVEYS
 GEOTHERMAL RESOURCES

GEOPHYSICS — TILT SURVEYS

GEOTHERMAL RESOURCES

see also GEOPHYSICS — THERMAL SURVEYS

Gifford Pinchot National Forest

Note: The 1980 eruption of Mount St. Helens impacted much of the Gifford Pinchot National Forest (which includes most of Skamania County and the eastern part of Lewis County). See specific aspects, e. g.,

BLAST
 HYDROLOGY
 LAKES
 MASS MOVEMENTS — AVALANCHES AND LANDSLIDES
 MASS MOVEMENTS — LAHARS AND MUDFLOWS

GLACIER AND SNOW SURVEYS

Gold, *see* MINERAL RESOURCESGravity surveys, *see* GEOPHYSICS — GRAVITY SURVEYS

GREEN RIVER

GUIDEBOOKS

see also

COWLITZ RIVER — GUIDEBOOKS
 STUDY GUIDES
 TOUTLE RIVER SYSTEM — GUIDEBOOKS

Hazards, *see* GEOLOGIC HAZARDS

HEALTH EFFECTS

History, *see* CHRONOLOGY AND HISTORY BEFORE 1980Human effects, *see* SOCIAL ASPECTS

HYDROLOGY

see also

COWLITZ RIVER — HYDROLOGY
 DEBRIS DAMS
 DREDGING
 FLOOD HAZARDS
 LAKE SEDIMENTS
 LAKES
 LIMNOLOGY
 RIVER MORPHOLOGY
 STREAM SEDIMENTS
 TOUTLE RIVER SYSTEM — HYDROLOGY

see also

Names of rivers, creeks, and watersheds

HYDROLOGY — IMPACTS OF THE ERUPTIONS

HYDROLOGY — IMPACTS OF THE ERUPTIONS ON MUNICIPAL WATER SYSTEMS

HYDROLOGY — IMPACTS OF THE ERUPTIONS ON WATER QUALITY

IGNEOUS PETROLOGY (BEFORE 1980)

IGNEOUS PETROLOGY (1980 AND POST 1980)

IGNEOUS PETROLOGY — GEOCHEMISTRY
(BEFORE 1980)

IGNEOUS PETROLOGY — GEOCHEMISTRY
(1980 AND POST 1980)

IGNEOUS PETROLOGY — PHYSICAL
MEASUREMENTS

INDIAN HEAVEN AREA

Insects, *see* BIOLOGY — FAUNA —
TERRESTRIAL

IRON CREEK

KALAMA RIVER VALLEY

Lake Lenore, *see* LAKES — LAKE LENORE

LAKE SEDIMENTS

Lake Washington, *see* LAKES — LAKE
WASHINGTON

Lakes — Biological aspects, *see* LIMNOLOGY

LAKES — BUMPING LAKE

Lakes — Clark Co., Wash., *see* LAKES —
FARGHER LAKE

LAKES — COLDWATER LAKE

LAKES — COWLITZ CO., WASH.

see also

LAKES — COLDWATER LAKE

LAKES — FAWN LAKE

LAKES — MCBRIDE LAKE

LAKES — MERRILL LAKE

LAKES — SILVER LAKE

LAKES — DAVIS LAKE

LAKES — FARGHER LAKE

LAKES — FAWN LAKE

LAKES — FINDLEY LAKE

Lakes — Geochemistry, *see* LIMNOLOGY

Lakes — Grant Co., Wash.

see

LAKES — LAKE LENORE

LAKES — SOAP LAKE

Lakes — King Co., Wash., *see* LAKES — LAKE
WASHINGTON

LAKES — LAKE LENORE

LAKES — LAKE WASHINGTON

Lakes — Lewis Co., Wash., *see* LAKES —
DAVIS LAKE

LAKES — MCBRIDE LAKE

LAKES — MERRILL LAKE

LAKES — META LAKE

LAKES — NORTH COLDWATER LAKE

LAKES — RYAN LAKE

LAKES — ST. HELENS LAKE

LAKES — SILVER LAKE

LAKES — SKAMANIA CO., WASH.

see also

LAKES — COLDWATER LAKE

LAKES — META LAKE

LAKES — RYAN LAKE

LAKES — ST. HELENS LAKE

LAKES — SOUTH FORK CASTLE CREEK
LAKE

LAKES — SPIRIT LAKE

LAKES — SOAP LAKE

LAKES — SOUTH FORK CASTLE CREEK
LAKE

LAKES — SPIRIT LAKE

LAKES — SPOKANE CO., WASH.

see also

LAKES — FINDLEY LAKE

LAKES — WILLIAMS LAKE

LAKES — VENUS LAKE

LAKES — WEST CASTLE CREEK LAKE

LAKES — WILLIAMS LAKE

Lakes — Yakima Co., Wash., *see* LAKES — BUMPING LAKE

Landfills, *see* VOLCANIC ASH — ENGINEERING ASPECTS

Landslide-induced dams, *see* DEBRIS DAMS

Landslides, *see* MASS MOVEMENTS — AVALANCHES AND LANDSLIDES

Lava tubes, *see* CAVES

LAWS AND LITIGATION

Legionnaire's Disease *see* HEALTH EFFECTS

LEWIS RIVER

LIMNOLOGY

Machine effects, *see* VOLCANIC ASH — MACHINE EFFECTS

MAGMA CHAMBER

Magnetic surveys, *see* GEOPHYSICS — MAGNETIC SURVEYS

MAPS — GEOLOGIC

MAPS — GEOPHYSICAL

MAPS — PHYSIOGRAPHIC DIAGRAMS

MAPS — TOPOGRAPHIC

Note: The various standard topographic maps of the Mount St. Helens area prepared by the U.S. Geological Survey over the years have not been included in this index.

see also TOPOGRAPHY

MASS MOVEMENTS — AVALANCHES AND LANDSLIDES

MASS MOVEMENTS — LAHARS AND MUDFLOWS [GENERAL WORKS]

Mass movements — Lahars and mudflows — Biological effects, *see* BIOLOGY

MASS MOVEMENTS — LAHARS AND MUDFLOWS — COLUMBIA RIVER

MASS MOVEMENTS — LAHARS AND MUDFLOWS — COWLITZ RIVER

Mass Movements — Lahars and mudflows — Economic effects, *see* ECONOMIC EFFECTS

Mass movements — Lahars and mudflows — Geochemistry, *see* HYDROLOGY — IMPACTS OF THE ERUPTIONS ON WATER QUALITY

MASS MOVEMENTS — LAHARS AND MUDFLOWS — LEWIS RIVER

MASS MOVEMENTS — LAHARS AND MUDFLOWS — MUDDY RIVER

MASS MOVEMENTS — LAHARS AND MUDFLOWS — PHYSICAL PROCESSES

MASS MOVEMENTS — LAHARS AND MUDFLOWS — PINE CREEK

MASS MOVEMENTS — LAHARS AND MUDFLOWS — TOUTLE RIVER SYSTEM

McBride Lake, *see* LAKES — MCBRIDE LAKE

MERCURY

Merrill Lake, *see* LAKES — MERRILL LAKE

Meta Lake, *see* LAKES — META LAKE

MINERAL RESOURCES

MINERALOGY

see also VOLCANIC ASH — MINERALOGY

MOUNT ST. HELENS NATIONAL VOLCANIC MONUMENT

MOUNT ST. HELENS SEISMIC ZONE

see also EARTHQUAKES AND SEISMOLOGY

MUDDY RIVER

Mudflows, *see* MASS MOVEMENTS — LAHARS AND MUDFLOWS

National Volcanic Monument, *see* MOUNT ST. HELENS NATIONAL VOLCANIC MONUMENT

North Coldwater Lake, *see* LAKES — NORTH COLDWATER LAKE

Nuclear facilities, *see* TROJAN NUCLEAR SITE [OREGON]

Petrology, *see* IGNEOUS PETROLOGY

Physiographic diagrams, *see* MAPS — PHYSIOGRAPHIC DIAGRAMS

Pictorial works, *see* GENERAL WORKS (1980) — PICTORIAL

PINE CREEK AND PINE CREEK BASIN

PINE CREEK ASSEMBLAGE

PLANNING

see also EMERGENCY RESPONSE

Plants, *see* BIOLOGY — FLORA

Plate tectonics, *see* STRUCTURAL GEOLOGY

Plume, *see* VOLCANIC PLUME

Prediction of eruption, *see* ERUPTION PREDICTION

PYROCLASTIC FLOWS AND DEPOSITS (BEFORE 1980)

PYROCLASTIC FLOWS AND DEPOSITS (1980)

PYROCLASTIC FLOWS AND DEPOSITS (POST 1980)

Quaternary,

see

GEOCHRONOLOGY

VOLCANIC ASH — STRATIGRAPHY

Radioactivity surveys, *see* GEOPHYSICS — RADIOACTIVITY SURVEYS

Radiocarbon dating, *see* GEOCHRONOLOGY

REMOTE SENSING

see also GEOPHYSICS

RIVER MORPHOLOGY

Rivers — Biological effects, *see* LIMNOLOGY

Ryan Lake, *see* LAKES — RYAN LAKE

St. Helens Lake, *see* LAKES — ST. HELENS LAKE

St. Helens mining district, *see* MINERAL RESOURCES

Sediments

see

LAKE SEDIMENTS

MASS MOVEMENTS — AVALANCHES AND LANDSLIDES

MASS MOVEMENTS — LAHARS AND MUDFLOWS

SOILS

STREAM SEDIMENTS

VOLCANIC ASH

Seismic surveys, *see* GEOPHYSICS — SEISMIC SURVEYS

Seismology, *see* EARTHQUAKES AND SEISMOLOGY

SHULTZ CREEK

Silver, *see* MINERAL RESOURCES

Silver Lake, *see* LAKES — SILVER LAKE

Skamania Co.

Note: The 1980 eruption of Mount St. Helens impacted much of Skamania County. See specific aspects, e.g.:

HYDROLOGY

MASS MOVEMENTS — AVALANCHES AND LANDSLIDES

MASS MOVEMENTS — LAHARS AND MUDFLOWS

VOLCANIC ASH — DISTRIBUTION

SMITH CREEK

Snow surveys, *see* GLACIER AND SNOW SURVEYS

Soap Lake, *see* LAKES — SOAP LAKE

SOCIAL ASPECTS

SOILS

see also VOLCANIC ASH — SOIL EFFECTS

- South Fork Castle Creek Lake, *see* LAKES — SOUTH FORK CASTLE CREEK LAKE
- Spirit Lake, *see* LAKES — SPIRIT LAKE
- Spirit Lake outlet tunnel, *see* TUNNELS
- SQUAW CREEK
- STRATIGRAPHY
- see also* VOLCANIC ASH — STRATIGRAPHY
- STREAM SEDIMENTS, *see also* MASS MOVEMENTS — LAHARS AND MUDFLOWS
- STREAM SEDIMENTS (1980)
- STREAM SEDIMENTS (POST 1980)
- Stream sediments — Biological aspects, *see* BIOLOGY
- STRUCTURAL GEOLOGY
- STUDY GUIDES
- see also* GUIDEBOOKS
- SWIFT CREEK
- SWIFT CREEK ASSEMBLAGE
- SWIFT RESERVOIR
- Tectonics, *see* STRUCTURAL GEOLOGY
- Tephra,
- see*
- PYROCLASTIC FLOWS AND DEPOSITS
- VOLCANIC ASH
- Tephrochronology, *see* GEOCHRONOLOGY
- Thermal surveys
- see*
- BLAST — THERMAL SURVEYS
- GEOPHYSICS — THERMAL SURVEYS
- GEOTHERMAL RESOURCES
- Thorium, *see* GEOCHRONOLOGY
- Tilt surveys, *see* GEOPHYSICS — TILT SURVEYS
- Topographic maps, *see* MAPS — TOPOGRAPHIC
- TOPOGRAPHY
- see also* MAPS — TOPOGRAPHIC
- TOUTLE RIVER SYSTEM — BIOLOGY
- see also* LIMNOLOGY
- TOUTLE RIVER SYSTEM — ENGINEERING GEOLOGY
- TOUTLE RIVER SYSTEM — GUIDEBOOKS
- TOUTLE RIVER SYSTEM — HYDROLOGY
- TOUTLE RIVER SYSTEM — LAHARS, MUDFLOWS AND STREAM SEDIMENTS
- TOUTLE RIVER SYSTEM — PLANNING AND EMERGENCY RESPONSE
- TOUTLE RIVER SYSTEM — RIVER MORPHOLOGY
- see also* RIVER MORPHOLOGY
- TOUTLE, WASH.
- TROJAN NUCLEAR SITE (OREGON)
- TUNNELS
- Uranium, *see* GEOCHRONOLOGY
- VANCOUVER, WASH.
- Vehicle effects, *see* VOLCANIC ASH — MACHINE EFFECTS
- Venus Lake, *see* LAKES — VENUS LAKE
- VIDEO STUDIES
- VOLCANIC ASH (GENERAL WORKS)
- Volcanic ash — Biological aspects, *see* BIOLOGY
- Volcanic ash — Climatic effects, *see* CLIMATIC EFFECTS OF VOLCANIC ASH
- Volcanic ash — Disposal, *see* VOLCANIC ASH — ENGINEERING ASPECTS

VOLCANIC ASH — DISTRIBUTION (BEFORE 1980)

VOLCANIC ASH — DISTRIBUTION (1980 AND POST 1980)

Volcanic ash — Economic effects, *see* ECONOMIC EFFECTS

Volcanic ash — Emergency response, *see* EMERGENCY RESPONSE

VOLCANIC ASH — ENGINEERING ASPECTS

see also ENGINEERING GEOLOGY

VOLCANIC ASH — EROSION (1980)

see also GEOMORPHOLOGY

VOLCANIC ASH — EROSION (POST 1980)

VOLCANIC ASH — GEOCHEMISTRY (BEFORE 1980)

VOLCANIC ASH — GEOCHEMISTRY (1980 AND POST 1980)

Volcanic ash — Geologic hazards, *see* GEOLOGIC HAZARDS

Volcanic ash — Geochronology, *see* GEOCHRONOLOGY

VOLCANIC ASH — GEOPHYSICS

Volcanic ash — Glacier and snow effects, *see* GLACIER AND SNOW SURVEYS

Volcanic ash — Health effects, *see* HEALTH EFFECTS

Volcanic ash — Hydrologic impacts, *see* HYDROLOGY

VOLCANIC ASH — MACHINE EFFECTS

VOLCANIC ASH — MINERALOGY (BEFORE 1980)

see also MINERALOGY

VOLCANIC ASH — MINERALOGY (1980 AND POST 1980)

VOLCANIC ASH — PHYSICAL MEASUREMENTS

Volcanic ash — Social aspects, *see* SOCIAL ASPECTS

VOLCANIC ASH — SOIL EFFECTS

see also SOILS

VOLCANIC ASH — STRATIGRAPHY (BEFORE 1980)

see also STRATIGRAPHY

VOLCANIC ASH — STRATIGRAPHY (1980)

Volcanic ash — Tephrochronology, *see* GEOCHRONOLOGY

Volcanic ash — Vehicle effects, *see* VOLCANIC ASH — MACHINE EFFECTS

VOLCANIC GASES — GEOCHEMISTRY (1980)

VOLCANIC GASES — GEOCHEMISTRY (POST 1980)

VOLCANIC GASES — PHYSICAL MEASUREMENTS

VOLCANIC PLUME [GENERAL WORKS]

VOLCANIC PLUME — GEOCHEMISTRY

VOLCANIC PLUME — PHYSICAL MEASUREMENTS AND TRAJECTORY (1980)

Volcanism, *see* specific aspects of Mount St. Helens volcanism, e.g., EARTHQUAKES AND SEISMOLOGY, MASS MOVEMENTS, VOLCANIC ASH, etc.

Water quality, *see* HYDROLOGY — IMPACTS OF THE ERUPTIONS ON WATER QUALITY

Water supplies, *see* HYDROLOGY — IMPACTS OF THE ERUPTIONS ON MUNICIPAL WATER SYSTEMS

West Castle Creek Lake, *see* LAKES — WEST CASTLE CREEK LAKE

Williams Lake, *see* LAKES — WILLIAMS LAKE