

Waite R. Osterkamp, 1502 East Magee, Tucson, AZ 85718-7524

CURRENT POSITION:

Research Hydrologist Emeritus, Geomorphology and Sediment Transport, National Research Program, Water Resources Discipline, USGS, 1955 E. 6th Street, Suite 115, Tucson AZ 85719; affiliated with Southwest Watershed Research Center, Agricultural Research Service, USDA, Tucson, AZ; Adjunct Professor, University of Arizona, Tucson, AZ; Adjunct Professor, University of Denver, Denver, CO.

EDUCATION:

University of Arizona, Ph.D., 12-76, Geology/Hydrology
University of Arizona, M.S., 6-70, Geology/Hydrology
University of Colorado, B.A., 6-63, Chemistry
University of Colorado, B.A., 6-61, Geology

EXPERIENCE:

Project Chief, Sediment Impacts from Disturbed Lands, National Research Program, WRD, USGS, 1980-2008, Emeritus 2008-present; Adjunct Professor, University of Arizona, 1996-present; Adjunct Professor, University of Denver, 1995-present; Visiting Scientist, Agricultural Research Service, Tucson AZ, 1991-93; Research Advisor, Geomorphology and Sediment Transport Discipline, NRP, WRD, USGS, 1991-92 and 2002-2004; Adjunct Professor of Geology, George Mason University, Fairfax, VA, 1984-87; Hydrologic and geomorphic studies, USGS, Lawrence, KS, 1974-80; Hydrologic and geologic studies, USGS, Tucson, AZ, 1971-74; Teaching Assoc., University of Arizona, 1970-71; Research Assist., University of Arizona, 1969-70; Water-quality studies, USGS, Helena, MT, 1966-68; Hydrologic and geologic studies on public lands, USGS, 1961-66.

AWARDS

Outstanding Dissertation Advisor 2004 and 2005, School of Natural Resources, University of Arizona
USDI STAR Award, 2004
USDI Meritorious Service, 2002
Rincon Institute Community Conservation Award, 1997
USDA Certificate of Appreciation, WEPP Core Team, 1989

AFFILIATIONS AND SELECTED ACTIVITIES:

Board of Directors, The Research Ranch Foundation, 2006-present; Vice President, Science, 2008-present
Geological Society of America (Fellow)
Quaternary Geology and Geomorphology Division (Management Board, 1993-95)

Hydrogeology Division
Geological Society of Washington
British Geomorphological Research Group
International Association of Hydrological Sciences
 Convenor, Symposium H1, "Effects of Scale on Interpretation and Management of
 Sediment and Water Quality" (XXI General Assembly, International Union of Geodesy
 and Geophysics, July 1995, Boulder, CO)
International Association of Sedimentologists
American Association for the Advancement of Science
American Geomorphological Field Group
American Geophysical Union
Binghamton Geomorphology Symposium Steering Committee
 Co-convenor, "Biogeomorphology" (Oct., 1995 symposium, Charlottesville, VA)
American Quaternary Association
Working Group--"Environmental Change and Society", U. S. National Committee for
International
 Union of Quaternary Research
International Union of Geological Sciences
 Scientific Committee on Problems of the Environment, Science Advisory Committee
 Working Group, "Geo-indicators"
 Chapter author, "Reclamation of Drastically Disturbed Lands", American Society of
 Agronomy and American Society for Surface Mining and Reclamation
Consultant, Department of Justice and U. S. Fish and Wildlife Service, litigation for the
 adjudication of water, Snake River, Idaho
Science Advisory Panel, The Rincon Institute/National Park System, Tucson, Arizona

BIBLIOGRAPHY

- Osterkamp, W. R., 1968, Occurrence of ground water in the Judith River Formation, north-Central Montana: U. S. Geological Survey Hydrologic Investigations Atlas HA-308.
- _____, 1973, Map showing depth to water in wells in the Tucson area, Arizona, 1972: U. S. Geological Survey Miscellaneous Geologic Investigations Map I-844-D.
- _____, 1973, Ground-water recharge in the Tucson area, Arizona: U. S. Geological Survey Miscellaneous Geologic Investigations Map I-844-E.
- _____, 1973, Map showing distribution of recoverable ground water in the Tucson area, Arizona: U. S. Geological Survey Miscellaneous Geologic Investigations Map I-844-F.
- _____, 1973, Map showing depth to water in wells in the Phoenix area, Arizona, 1972: U. S. Geological Survey Miscellaneous Geologic Investigations Map I-845-D.
- _____, 1974, Map showing ground-water velocities in the uppermost saturated alluvial deposits of the Tucson area, Arizona: U. S. Geological Survey Miscellaneous Geologic

Investigations Map I-844-K .

- _____, 1974, Chemical quality of ground water for public supply in the Phoenix area, Arizona: U. S. Geological Survey Miscellaneous Geologic Investigations Map I-845-F.
- Osterkamp, W. R., and Laney, R.L., 1974, Map showing chemical quality of ground water for public supply in the Tucson area, Arizona: U. S. Geological Survey Miscellaneous Geologic Investigations Map I-844-I.
- Osterkamp, W. R., 1976, Variation and causitive factors of sediment yields in the Arkansas River basin, Kansas: Proceedings, Third Federal Inter-Agency Sedimentation Conference, p. I-59 to I-70.
- Osterkamp, W. R., and Ross, P. P., 1976, Map showing distribution of recoverable ground water in the Phoenix area, Arizona: U. S. Geological Survey Miscellaneous Geologic Investigations Map I-845-K.
- Osterkamp, W. R., 1977, Fluvial sediment in the Arkansas River basin, Kansas: Kansas Water Resources Board Bulletin 19, 91 p.
- Osterkamp, W. R., and Hedman, E. R., 1977, Variation of width and discharge for natural high-gradient stream channels: Water Resources Research, v. 13, no. 2, p. 256-258.
- Osterkamp, W. R., 1977, Effect of channel material on width-discharge relations for perennial streams, with emphasis on streams in Kansas--a progress report: U. S. Geological Survey Open-File Report 77-38, 42 p.
- _____, 1977, Effect of channel sediment on width-discharge relations, with emphasis on streams in Kansas: Kansas Water Resources Board Bulletin 21, 25 p.
- _____, 1978, Gradient, discharge, and particle-size relations of alluvial channels of Kansas, with observations on braiding: American Journal of Science, v. 278, p. 1253-1268.
- Osterkamp, W. R., McNellis, J. M., and Jordan, P. R., 1978, Guidelines for the use of structural versus regression analysis in geomorphic studies: U. S. Geological Survey Water-Resources Investigations 78-135, 22 p.
- Osterkamp, W. R., 1979, Bed- and bank-material sampling procedures at channel-geometry sites: *In*: Proceedings, National Conference on Quality Assurance of Environmental Measurements, Denver, Colorado, 1978, p. 86-89: Information Transfer, Silver Springs, MD.
- _____, 1979, Variation of alluvial-channel width with discharge and character of sediment: U. S. Geological Survey Water-Resources Investigations 79-15, 11 p.
- _____, 1979, Invariant power functions as applied to fluvial geomorphology, *In*: Rhodes, D. D.,

and Williams, G. P. (eds.), Adjustments of the fluvial system: Kendall/Hunt Publishing Co., p. 33-54.

- Osterkamp, W. R., and Hedman, E. R., 1979, Discharge estimates in surface-mine areas using channel-geometry techniques: Proceedings, Symposium on surface mining hydrology, sedimentology, and reclamation, OES Publications, University of Kentucky, Lexington, Kentucky, p. 43-49.
- Osterkamp, W. R., 1980, Sediment-morphology relations of alluvial channels: Proceedings, Symposium on Watershed Management, American Society of Civil Engineers, Boise, Idaho, v. 1, p. 188-199.
- Osterkamp, W. R., and Wiseman, A. G., 1980, Particle-size analyses of bed and bank material from channels of the Missouri River basin: U. S. Geological Survey Hydrologic Data Open-File Report 80-429, 31 p.
- Osterkamp, W. R., and Hedman, E. R., 1981, Channel geometry of regulated streams in Kansas as related to mean discharge, 1970-1980: Kansas Water Office Technical Report 15, 56 p.
- _____. 1981, Bimodal particle-size distributions and sorting processes of alluvial-channel banks, *In*: Müller, A. (ed.), Particle Motion and Sediment Transport; Measurement Techniques and Experimental Results: Proceedings, International Association for Hydraulic Research Workshop, Rapperswil, Switzerland, April 6-8, 1981, p. 52-1 to 52.5.
- _____, 1982, Perennial-streamflow characteristics related to channel geometry and sediment in Missouri River basin: U. S. Geological Survey Professional Paper 1242, 37 p.
- Osterkamp, W. R., Hedman, E. R., and Wiseman, A. G., 1982, Geometry, basin-characteristic, discharge, and particle-size data from gaged stream-channel sites, western United States: U. S. Geological Survey Hydrologic Data Open-File Report 82-93, 56 p.
- Osterkamp, W. R., Curtis, R. E., Jr., and Crowther, H. G., 1982, Sediment and channel-geometry investigations for the Kansas River Bank-Stabilization Study: U. S. Geological Survey Water-Resources Investigations Open-File Report 81-128, 72 p.
- Lane, L. J., Chang, H. H., Graf W. L., Grissinger, E. H., Guy, H. P., Osterkamp, W. R., Parker, Gary, and Trimble, S. W., 1982 Relations between morphology of small streams and sediment yield: Task Committee Report to Hydraulics Division, American Society of Civil Engineers, Proceedings, Journal Hydraulics Division, v. 108, HY 11, p. 1328-1365.
- Hedman, E. R., and Osterkamp, W. R., 1982, Streamflow characteristics related to channel geometry of streams in western United States: U. S. Geological Survey Water-Supply Paper 2193, 17 p.
- Osterkamp, W. R., and Harrold, P. E., 1982, Dynamics of alluvial channels--a process model, *In*: Modeling Components of Hydrologic Cycle: Proceedings, International Symposium on Rainfall-Runoff Modeling, Water Resources Publications, Littleton, Colorado, p. 283-

- Osterkamp, W. R., Lane, L. J., and Foster, G.R., 1983, An analytical treatment of channel-morphology relations: U. S. Geological Survey Professional Paper 1288, 21 p.
- Osterkamp, W. R., and Hupp, C. R., 1984, Geomorphic and vegetative characteristics along three Northern Virginia streams: Geological Society of America Bulletin, v. 95, p. 1093-1101.
- Osterkamp, W. R., Carey, W. P., Hupp, C. R., and Bryan, B. A., 1984, Movement of tractive sediment from disturbed lands: Proceedings, Water for Resource Development, American Society of Civil Engineers, Hydraulics Division, Coeur d'Alene, Idaho, p. 59-63.
- Osterkamp, W. R., and Wood, W. W., 1984, Development and escarpment retreat of the Southern High Plains: Proceedings, Ogallala Aquifer Symposium II, Texas Tech University Water Resources Center, Lubbock, Texas, p. 177-193.
- Wood, W. W., and Osterkamp, W. R., 1984, Playa lake basins on the Southern High Plains of Texas, U.S.A.: a hypothesis for their development: Proceedings, Ogallala Aquifer Symposium II, Texas Tech University Water Resources Center, Lubbock, Texas, p. 304-311.
- _____, 1984, Recharge to the Ogallala Aquifer from playa lake basins on the Llano Estacado (an outrageous proposal?): Proceedings, Ogallala Aquifer Symposium II, Texas Tech University Water Resources Center, Lubbock, Texas, p. 337-349.
- Hupp, C. R., and Osterkamp, W. R., 1985, Bottomland vegetation distribution along Passage Creek, Virginia, in relation to fluvial landforms: Ecology, v. 66, no. 3, p. 670-681.
- Osterkamp, W. R., Hupp, C. R., and Blodgett, J. C., 1986, Magnitude and frequency of debris flows, and areas of hazard on Mount Shasta, northern California: U. S. Geological Survey Professional Paper 1396-C, 21 p., 1 pl.
- Osterkamp, W. R., and Costa, J. E., 1986, Denudation rates in selected debris-flow basins: Proceedings, Fourth Federal Inter-Agency Sedimentation Conference, Las Vegas, Nevada, v. 1, p. 4-91 to 4-99.
- Osterkamp, W. R., Carey, W. P., and Hupp, C. R., 1987, Sediment impacts from coal mining, northeast Tennessee, *In*: Glysson, G. D. (ed.), Proceedings, U. S. Geological Survey Advanced Seminar on Sedimentation: U. S. Geological Survey Circular 953, p. 30-32.
- Hupp, C. R., and Osterkamp, W. R., 1987, Geobotanical evidence of debris flows on Mt. Shasta, California, *In*: Glysson, G. D. (ed.), Proceedings, U. S. Geological Survey Advanced Seminar on Sedimentation: U.S. Geological Survey Circular 953, p. 12-16.
- Osterkamp, W. R., and Hupp, C. R., 1987, Dating and interpretation of debris flows by geologic and botanical methods at Whitney Creek gorge, Mount Shasta, California, *In*: Costa, J. E.,

- and Wieczorek, G. F. (eds), Debris flows/avalanches: process, recognition, and mitigation: Geological Society of America Reviews in Engineering Geology, v. 7, p. 157-163.
- Hupp, C. R., Osterkamp, W. R., and Thornton, J. L., 1987, Dendrogeomorphic evidence and dating of debris flows on Mount Shasta, northern California: U. S. Geological Survey Professional Paper 1396-B, 39 p.
- Osterkamp, W. R., Fenton, M. M., Gustavson, T. C., Hadley, R. F., Holliday, V. T., Morrison, R. B., and Toy, T. J., 1987, Great Plains, *In*: Graf, W. L. (ed.), Geomorphic systems of North America: Geological Society of America, Centennial Special Volume 2, Boulder, Colorado, p. 163-210.
- Osterkamp, W. R., and Costa, J. E., 1987, Changes accompanying an extraordinary flood on a sand-bed stream, *In*: Mayer, L., and Nash, D. (eds.), Catastrophic flooding: Allen & Unwin, Boston, p. 201-224.
- Osterkamp, W. R., and Wood, W. W., 1987, Playa-lake basins on the Southern High Plains of Texas and New Mexico: Part I. Hydrologic, geomorphic, and geologic evidence for their development: Geological Society of America Bulletin, v. 99, p. 215-223.
- Wood, W. W., and Osterkamp, W. R., 1987, Playa-lake basins on the Southern High Plains of Texas and New Mexico: Part II. A hydrologic model and mass-balance arguments for their development: Geological Society of America Bulletin, v. 99, p. 224-230.
- Osterkamp, W. R., 1989, Fluvial processes in river engineering (book review): EOS, Transactions, American Geophysical Union, v. 70, no. 4, p. 51.
- Osterkamp, W. R., Hack, J. T., Hupp, C. R., Olson, C. G., and Sherwood, W. C., 1989, Geomorphology and plant ecology of the Shenandoah Valley; Field Trip Guidebook T350, 28th International Geological Congress: American Geophysical Union, Washington, D. C., 18 p.
- Osterkamp, W. R. (compiler), 1989, A tribute to John T. Hack by his friends and colleagues, *In*: Tinkler, Keith (ed.), History of geomorphology from James Hutton to John Hack: Allen & Unwin, Boston, p. 283-291.
- Osterkamp, W. R., 1989, Sediment storage and movement on the Southern High Plains of Texas as indicated by beryllium-ten, *In*: Sediment and the environment: International Association of Hydrological Sciences Publication No. 184, p. 173-182.
- _____, 1990, Gentry Playa: origin by hydrologic processes, *In*: Gustavson, T. C. (ed.), Tertiary and Quaternary stratigraphy and vertebrate paleontology of parts of northwestern Texas and eastern New Mexico: Bureau of Economic Geology Guidebook 24, The University of Texas at Austin, p. 32-35.

- _____, 1990, Seepage weathering and sapping of the Southern High Plains escarpments, Texas and New Mexico, *In: Higgins, C. G., and Coates, D. R. (eds.), Groundwater geomorphology; the role of subsurface water in earth-surface processes and landforms: Geological Society of America Special Paper 252, Boulder, Colorado, p. 300-305.*
- Osterkamp, W. R., Emmett, W. W., and Leopold, L. B., 1990, The Vigil Network, a reviving of interest: *Eos, Transactions, American Geophysical Union, v. 71, no. 12, p. 338.*
- _____, 1991, The Vigil Network: a means of observing landscape change in drainage basins: *International Association of Hydrological Sciences Journal, v. 36, no. 3, p. 281-294.*
- Osterkamp, W. R., and Parker, R. S., 1991, Sediment monitoring in the United States: *Proceedings, Fifth Federal Inter-Agency Sedimentation Conference, Las Vegas, Nevada, p. 1-15 to 1-23.*
- Lane, L. J., and Osterkamp, W. R., 1991, Estimating upland recharge in the Yucca Mountain area: *Irrigation and Drainage Proceedings, American Society of Civil Engineers, Honolulu, HI, p. 170-176.*
- Waythomas, C. E., Jarrett, R. D., and Osterkamp, W. R., 1991, Late Quaternary fluvial activity and climate variability in Colorado Front Range foothills and piedmont: *Paleoenvironments, v. 8, p. 122-124.*
- Osterkamp, W. R., 1992, Hydrological research basins and the environment (Book review): *Hydrological Sciences Journal, International Association of Hydrological Sciences, v. 37, no. 3.*
- Osterkamp, W. R., Day, T. J., and Parker, R. S., 1992, A sediment-monitoring program for North America, *In: Bogen, Jim, Walling, D. E., and Day, T. J. (eds.), Erosion and sediment transport monitoring programmes in river basins: International Association of Hydrological Sciences Publication No. 210, p. 391-396.*
- Osterkamp, W. R., and Emmett, W. W., 1992, The Vigil Network--long-term monitoring to assess landscape changes, *In: Bogen, Jim, Walling, D. E., and Day, T. J. (eds.), Erosion and sediment transport monitoring programmes in river basins: International Association of Hydrological Sciences Publication No. 210, p. 397-404.*
- Osterkamp, W. R., and Hupp, C. R., 1992, Memorial to John T. Hack, 1913-1991: *Geological Society of America Memorials, 1992, Boulder, Colorado, p. 59-61.*
- Simanton, J. R., Osterkamp, W. R., and Renard, K. G., 1993, Sediment yield in a semiarid basin: sampling equipment impacts, *In: Hadley, R. F., and Mizuyama, Takahisa, eds., Sediment problems: strategies for monitoring, prediction, and control: International Association of Hydrological Sciences Publication No. 217. p. 3-9.*
- Toy, T. J., Osterkamp, W. R., and Renard, K. G., 1993, Prediction by regression and intra-range

- data scatter in surface-process studies: *Environmental Geology*, v. 22, p. 121-128.
- Lane, L. J., Nichols, M. H., Hernandez, M., and Osterkamp, W. R., 1994, Variability in discharge, stream power, and particle-size distributions in ephemeral-stream channel systems, *In*: Olive, L. J., Loughran, R. J., and Kesby, J. A., eds., *Variability in stream erosion and sediment transport: International Association of Hydrological Sciences Publication No. 224*, p. 335-342.
- Osterkamp, W. R., Lane, L. J., and Savard, C. S., 1994, Recharge estimates using a geomorphic/distributed-parameter simulation approach, *Amargosa River Basin: Water Resources Bulletin*, v. 30, no. 3, p. 493-507.
- Osterkamp, W. R., and Toy, T. J., 1994, The healing of disturbed hillslopes by gully gravure: *Geological Society of America Bulletin*, v. 106, p. 1233-1241.
- Osterkamp, W. R., 1995, River aesthetics--a Janus perspective, *In*: Skinner, B. J., and Porter, S. C., *The Blue Planet: John Wiley & Sons, New York*, p. 246-247.
- Parker, R. S., and Osterkamp, W. R., 1995, Identifying trends in sediment discharge from alterations in upland land use, *In*: Osterkamp, W. R., ed., *Effects of scale on interpretation and management of sediment and water quality: International Association of Hydrological Sciences Publication No. 226*, p. 207-213.
- Osterkamp, W. R., Lane, L. J., and Menges, C. M., 1995, Techniques of ground-water recharge estimates in arid/semiarid areas, with examples from Abu Dhabi: *Journal of Arid Environments*, v. 31, p. 349-369.
- Toy, T. J., and Osterkamp, W. R., 1995, The applicability of RUSLE to geomorphic studies: *Journal of Soil and Water Conservation*, v. 50, no. 5, p. 498-503.
- Osterkamp, W. R., Hupp, C. R., and Schening, M. R., 1995, Little River revisited -- thirty-five years after Hack and Goodlett: *Geomorphology*, v. 13, p. 1-20.
- Osterkamp, W. R., ed., 1995, *Effects of scale on interpretation and management of sediment and water quality: International Association of Hydrological Sciences Publication No. 226*, IAHS Press, Wallingford, Oxfordshire, UK, 301 p.
- Osterkamp, W. R., and Schumm, S. A., 1996, Geo-indicators for river and river-valley monitoring, *In*: Berger, A. R., and Iams, W. J. (eds.), *Geoindicators: assessing rapid environmental changes in earth systems: A. A. Balkema Publishing, Rotterdam*, p. 83-100.
- Hupp, C. R., and Osterkamp, W. R., 1996, Riparian vegetation and fluvial geomorphic processes: *Geomorphology*, v. 14, p. 277-295.
- Friedman, J. M., Osterkamp, W. R., and Lewis, W. M., Jr., 1996, The role of vegetation and bed-

- level fluctuations in the process of channel narrowing: *Geomorphology*, v. 14, p. 341-351.
- Toy, T. J., and Osterkamp, W. R., 1996, The prospect of gully gravure on reclaimed hillslopes: *Proceedings, Annual Meeting, American Society for Surface Mining and Reclamation*, Knoxville, TN, p. 781-786.
- Osterkamp, W. R., and Hupp, C. R., 1996, Chapter 17, The evolution of geomorphology, ecology, and other composite sciences, *In: Thorn, Colin, and Rhoads, Bruce (eds.), The scientific nature of geomorphology*, p. 415-441: John Wiley & Sons Ltd., New York, 481 p.
- Hupp, C. R., Osterkamp, W. R., and Howard, A. D. (eds.), 1996, *Biogeomorphology, terrestrial and freshwater systems*: Elsevier, Amsterdam, 347 p.
- Osterkamp, W. R., and Morton, R. A., 1996, Environmental impacts of urbanization and mining: an international project on global change: *GSA Today*, v. 6, no. 7, p. 14-15, 26.
- Friedman, J. M., Osterkamp, W. R., and Lewis, W. M., Jr., 1996, Channel narrowing and vegetation development following a Great Plains flood: *Ecology*, v. 77, no. 7, p. 2167-2181.
- Blodgett, J. C., Poeschel, K. R., and Osterkamp, W. R., 1996, Characteristics of debris flows of noneruptive origin on Mount Shasta, northern California: U. S. Geological Survey Open-File Report 96-144, 27 p.
- Osterkamp, W. R., and Toy, T. J., 1997, Geomorphic considerations for erosion prediction: *Environmental Geology*, v. 29, no. 3/4, p. 152-157.
- Osterkamp, W. R., and Morton, R. A., 1997, Global impacts of mining and urbanization on fluvial and coastal systems -- the San Juan case study: *GSA Today*, v. 7, no. 7, p. 13-15.
- Osterkamp, W. R., and Friedman, J. M., 1998, Research considerations for biogeomorphology: U. S. Geological Survey WEBB Site www.rvares.er.usgs.gov/osw/workshop/.
- Osterkamp, W. R., 1998, Processes of fluvial-island formation, with examples from Plum Creek, Colorado, and Snake River, Idaho: *Wetlands*, v. 18, no. 4, p. 530-545.
- Osterkamp, W. R., Heilman, P., and Lane, L. J., 1998, Economic considerations of a continental sediment-monitoring program: *International Journal of Sediment Research*, v. 13, no. 4, p. 12-24.
- Friedman, J. M., Osterkamp, W. R., Scott, M. L., and Auble, G. T., 1998, Downstream effects of dams: regional patterns in the Great Plains: *Wetlands*, v. 18, no. 4, p. 619-633.
- Toy, T. J., and Osterkamp, W. R., 1999, The stability of rock-veneered hillslopes: *International*

Journal of Sediment Research, v. 14, no. 3, p. 63-73.

- Osterkamp, W. R., 1999, Runoff and sediment yield from proxy records: upper Animas Creek Basin, New Mexico: U. S. Department of Agriculture Forest Service Research Paper RMRS-RP-18, 50 p.
- Orr, Tade, and Osterkamp, W. R., 1999, Vigil Network data now online: Eos Transactions, American Geophysical Union, v. 80, no. 31, p. 346.
- Osterkamp, W. R., and Friedman, J. M., 2000, The disparity between extreme rainfall events and rare floods -- with emphasis on the semiarid American West: Hydrological Processes, v. 14, no. 16-17, p. 2817-2829.
- Osterkamp, W. R., 2000, Geoindicators for river and river-valley monitoring in the humid tropics: Program and Abstracts, 31st International Geological Congress, Rio de Janeiro.
- Johnson, W. C., Osterkamp, W. R., Engstrom, D. R., and Shapley, M. D., 2000, Using tree rings, lake sediments, and ancient shorelines to reconstruct past climate and lake levels for Day County, South Dakota: Task 3 Final Report, Day County Risk Assessment Study, Federal Emergency Management Agency, Region VIII, South Dakota State University, Brookings, 29 p.
- Osterkamp, W. R., and Joseph, W. L., 2000, Chapter 8, Climatic and hydrologic factors, p. 193-215, *In*: Barnhisel, R. I., Darmody, R. G., and Daniels, W. L. (eds.), Reclamation of drastically disturbed lands: American Society of Agronomy, 1082 p.
- Osterkamp, W. R., 2000, Earth-surface processes, materials use, and urban development – a case study of the San Juan metropolitan area, northeastern Puerto Rico, *In*: Scanlon, K. M., and Briere, P. R. (eds.), Puerto Rico Marine Sediments, Terrestrial and Seafloor Imagery, and Tectonic Interpretations: U. S. Geological Survey Open-File Report 00-006 (CD).
- Osterkamp, W. R., Johnson, W. C., and Dixon, M. D., 2001, Biophysical gradients related to channel islands, middle Snake River, Idaho, *In* Dorava, J., Palcsak, B., Fitzpatrick, F., and Montgomery, D. (eds.), Geomorphic Processes and Riverine Habitat: American Geophysical Union, Washington, D. C., 253 p.
- Lopes, V. L., Osterkamp, W. R., and Bravo-Espinosa, Miguel, 2001, Evaluation of selected bedload equations under transport- and supply-limited conditions: Proceedings, Seventh Federal Interagency Sedimentation Conference, March 25 to 29, Reno, NV, p. I-192 to I-198.
- Semmens, D. J., and Osterkamp, W. R., 2001, Dam removal and reservoir erosion modeling: Zion Reservoir, Little Colorado River, AZ: Proceedings, Seventh Federal Interagency Sedimentation Conference, March 25 to 29, 2001, Reno, NV, p. IX-72 to IX-79.
- Osterkamp, W. R., and Gray, J. R., 2001, U. S. Geological Survey programs and investigations

related to soil and water conservation: *International Journal of Sediment Research*, v. 16, no. 3, p. 421-429.

Osterkamp, W. R., 2001, Seasons of drought and flood: what does the future hold?, *In* Berger, A. R., and Liverman, D. G. (eds.), *Geoindicators for Ecosystem Monitoring in Parks and Protected Areas: Review Reports in Ecosystem Science, Report 018*, Parks Canada, Halifax, Nova Scotia, p. 32-36.

Osterkamp, W. R., 2002, Geoindicators for river and river-valley monitoring in the humid tropics: *Environmental Geology*, v. 42, no. 7, p. 725-735.

Gray, J. R., Osterkamp, W. R., and Xu, Jianhua, 2002, Effects of water use, diversion, regulation, and conservation on sediment transport in China's Yellow River, with comparisons from the United States: *Proceedings, 12th International Soil Conservation Organization Conference*, May 26-31, 2002, Beijing, Peoples' Republic of China, p. 565-569.

Heilman, P., and Osterkamp, W. R., 2002, Management considerations for a continental-scale sediment-monitoring program. *Proceedings of the 2nd International Conference on Multiple Objective Decision Support Systems for Land, Water, and Environmental Management (MODSS:99)*, 1-6 August, 1999, Brisbane, Australia, Lawrence, P. A., and Robinson, J. (eds.), Queensland Department of Natural Resources and Mines, Australia, 2002, Report QNRM02143, ISBN 0 7345 2668 7, 13 p.

Gray, J. R., Osterkamp, W. R., Christiansen, Scott, and Sprigg, W. A., 2003, Formation of the Sino-US Centers for Soil and Water conservation and Environmental Protection: *International Journal of Sediment Research Special Issue on Sediment Transport and Environmental Studies*, v. 18, no. 2, p. 248-252.

Briggs, Mark, and Osterkamp, W. R., 2003, Developing recovery plans for riparian ecosystems: *Southwest Hydrology*, v. 2, no. 2, p. 18-19.

Briggs, Mark, and Osterkamp, W. R., 2003, Important concepts for riparian recovery: *Southwest Hydrology*, v. 2, no. 2, p. 26.

Gray, J. R., Osterkamp, W. R., and Xu, Jianhua, 2003, Effects of water management on sediment transport in China's Yellow River, with comparisons from the United States: *International Journal of Sediment Research Special Issue on Sediment Transport and Environmental Studies*, v. 18, no. 2, p. 285-290.

Gonzales-Bonorino, Gustavo, Osterkamp, W. R., and Colombo Piñol, 2003, An averaging procedure for applying the Revised Universal Soil Loss Equation (RUSLE) to disturbed mountain watersheds: *Geogaceta*, v. 33, p. 51-54.

Bravo-Espinosa, Miguel, Osterkamp, W. R., and Lopes, V. L., 2003, Bedload transport in alluvial channels: *Journal of Hydraulic Engineering*, American Society of Civil

- Engineers, v. 129, no. 10, p. 783-795.
- Osterkamp, W. R., and Gray, J. R., 2003, A proposed international watershed research network: Proceedings, First Interagency Conference on Research in the Watersheds, Benson, AZ, October 27-30, 2003, p. 292-295.
- Osterkamp, W. R., and Lane, L. J., 2003, Ground-water recharge estimates in arid areas using channel morphology and a simulation model, In Alsharhan, A. S., and Wood, W. W., (eds.), *Water Resources Perspectives – Evaluation, Management, and Policy*: Elsevier, The Netherlands, p. 281-286.
- Osterkamp, W. R., and Gray, J. R., 2003, Hazard mitigation related to water and sediment fluxes in the Yellow River Basin, China, based on comparable basins of the United States: Proceedings, International Yellow River Forum on River Management, Vol. II, Oct. 21-24, 2003, Zhengzhou, Henan Province, China: The Yellow River Conservancy Publishing House, p. 465-473.
- Semmens, D. J., Goodrich, D. C., and Osterkamp, W. R., 2003, Simulating channel geomorphic change in semi-arid watersheds: Proceedings, First Interagency Conference on Research in the Watersheds, Benson, AZ, October 27-30, 2003, p. 434.
- Osterkamp, W. R., 2004, Bankfull discharge, In Goudie, A. S. (ed.), *Encyclopedia of Geomorphology*: Routledge, London, p. 52-54.
- Gonzales-Bonorino, Gustavo, and Osterkamp, W. R., 2004, Applying RUSLE 2.0 on burned-forest lands – an appraisal: *Journal of Soil and Water Conservation*, v. 59, no. 1, p. 36-42.
- Bravo-Espinosa, Miguel, Osterkamp, W. R., and Lopes, V. L., 2004, Transporte de sedimentos en corrientes naturales: revisión técnica de ecuaciones empíricas de predicción del arrastre de sedimentos de fondo: *Terra*, v. 22, p. 377-386.
- Osterkamp, W. R., Heilman, Philip, and Gray, J. R., 2004, An invitation to participate in a North American sediment-monitoring network: *Eos, Transactions, American Geophysical Union*, v. 85, no. 40, p. 386, 388.
- Shapley, M. D., Johnson, W. C., Engstrom, D. R., and Osterkamp, W. R., 2005, Late Holocene flooding and drought in the northern Great Plains, reconstructed from tree rings, lake sediments, and ancient shorelines: *The Holocene*, v. 15, no. 1, p. 29-41.
- Osterkamp, W. R., and Morton, R. A., 2005, Mining of coastal materials, In Schwartz, M. L. (ed.), *Encyclopedia of Coastal Science*: Springer, Dordrecht, The Netherlands, p. 645-647.
- Osterkamp, W. R. 2005, Fluvial islands, In Trimble, S. A. (ed.), *Encyclopedia of Water Science*: Taylor & Francis, New York, 4 p.

- Osterkamp, W. R., Toy, T. J., and Lenart, M. T. 2006, Development of partial rock veneers by root throw in a subalpine setting: *Earth Surface Processes and Landforms*, v. 31, no. 1, p. 1-14.
- Mendoza, M. E., Bocco, G., Bravo, M., Lopez-Granados, E., and Osterkamp, W. R., 2006, Predicting water surface fluctuation of continental lakes – a RS and GIS based approach in central Mexico: *Water Resources Management*, v. 20, p. 291-311.
- Lopes, V. L., Osterkamp, Waite R., and Bravo-Espinosa, Miguel, 2007, A method for improving predictions of bed-load sediment transport to reservoirs: *Lakes & Reservoirs: Research and Management*, v. 12, p. 59-72.
- Osterkamp, W. R., Gray, J. R., Laronne, J. B., and Martin, J. R., 2007, Structure and composition of a watershed-scale sediment information network: *International Journal of Sediment Research*, v. 22, no. 3, p. 238-246.
- Gray, J. R., and Osterkamp, W. R., 2007, Vision for a worldwide fluvial-sediment information network: Keynote Lecture, *Proceedings of the 10th International Symposium on River Sedimentation*, Moscow, Russia, August 1-4, 2007, v. I, p. 43-54.
- Gray, J. R., Laronne, J. B., and Osterkamp, W. R., 2007, Bedload Research International Cooperative: *Proceedings of the 10th International Symposium on River Sedimentation*, Moscow, Russia, August 1-4, 2007, v. III, p. 120-126.
- Osterkamp, W. R., 2008, Annotated definitions of selected geomorphic terms, and related terms of hydrology, sedimentology, soil science, climatology, and ecology: *U. S. Geological Survey Open-file Report 2008-1217*, 49 p.
- Osterkamp, W. R., and Marlow, J. E., 2008, Southern Arizona's native grasslands: understanding and valuing their ecosystem services: *The Research Ranch Foundation and The Sonoran Institute*, Tucson, AZ, 4 p.
- Osterkamp, W. R., and Marlow, J. E., 2008, Water, Conservation, and Exurban Development in Semiarid Grasslands of Southwestern North America – Impacts on Biodiversity and Ecosystem Services: *The Research Ranch Foundation in collaboration with The Sonoran Institute*, Tucson, AZ, 36 p.
- Osterkamp, W. R., 2008, Geology, soils, and geomorphology of the Walnut Gulch Experimental Watershed, Tombstone, Arizona: *Journal of the Arizona-Nevada Academy of Science*, v. 40, no. 2, p. 136-154.
- Lundstrom, Scott, Paces, James, Iles, Derric, Cowman, Tim, Schultz, Layne, and Osterkamp, W. R., 2008, Nature and timing of the latest Wisconsin advance of the James River lobe, South Dakota: relations to geologic mapping at its southern limit: *Program and Abstracts, Quaternary Ice Sheet-Ocean Interactions and Landscape Responses, Biennial Meeting XX, American Quaternary Association*.

