

REFERENCES

- Alley, W.M., 2002, Some Reflections on the Sustainability of Water Resources: *in* Gerhard, L.C., Leahy, P.P., and Yannocone, V.J., Jr., Sustainability of energy and water through the 21st century—Proceedings of the Arbor Day Farm Conference, October 8-11, 2000: Kansas Geological Survey Special Publication, p. 81-87.
- American Society of Civil Engineers, “2003 Progress Report,” <http://www.asce.org/reportcard/index.cfm?reaction=full&page=6>.
- Barbour, M.T., J.B. Stribling, and J.R. Karr. 1995. Multimetric Approach for Establishing Biocriteria and Measuring Biological Condition. Pages 63-77 in Davis, W.S. and T.P. Simon (editors). *Biological Assessment and Criteria. Tools for Water Resource Planning and Decision Making*. Lewis Pub, Boca Raton, FL.
- Bartolino, J.R., and Cunningham, W.L., 2003, Ground-water Depletion Across the Nation: U.S. Geological Survey Fact Sheet 103-03, 4 p.
- Bloomquist, W and R. Schlager. 2005. Political pitfalls of integrated watershed management. *Society and Natural Resources* 18 (2): 101-117 2005.
- Douglas, E.M., Vogel, R.M., and Kroll, C.N., 2000, Trends in Floods and Low Flows in the United States—impact of spatial correlation: *Journal of Hydrology*, v. 240, p. 90-105.
- Gerritsen, J. 1995. Additive biological indices for resource management. *J. No. Am. Benthol. Soc.* 14L 451-457.
- Hammond, A., Adriaanse, A., Rodenburg, E., Bryant, D., and Woodward, R. 1995. *Environmental Indicators*. World Resources Institute, Washington, DC.
- The H. John Heinz III Center for Science, Economics and the Environment, *The State of the Nation’s Ecosystems*, Washington DC., September 2002
- Hutson, S.S., Barber, N.L., Kenny, J.F., Linsey, K.S., Lumia, D.S., and Maupin, M.A., 2004, *Estimated Use of Water in the United States in 2000: U.S. Geological Survey Circular 1268*, 46 p.
- James, R.T., J. Martin, T. Wool, and P.F. Wang. 1997. A Sediment Resuspension and Water Quality Model of Lake Okeechobee. *JAWRA* 33:1-20.
- Kemmis, Daniel. 2000. “Learning to think like a region.” *High Country News*, April 10, 2000.
- Kenneth D. Frederick, “America’s Water Supply: Status and Prospects for the Future,” *Consequences*, Vol. 1, No. 1, Spring 1995.

Lane, M.E., Kirshen, P.H., and Vogel, R.M., 1999, Indicators of Impacts of Global Climate Change on U.S. Water Resources: *Journal of Water Resources Planning and Management*, v. 125, no. 4, p. 194-204.

Lins, H.F., and Slack, J.R., 1999, Streamflow Trends in the United States: *Geophysical Research Letters*, v. 26, no. 2, p. 227-230.

McCabe, G.J., and Wolock, D.M., 2002, A Step Increase in Streamflow in the Conterminous United States: *Geophysical Research Letters*, v. 29, no. 24, 2185.

Minnesota Water Priorities 2003-2005: A Biennial Report of the Environmental Quality Board, Minnesota Environmental Quality Board, St. Paul, Minnesota, February 2003, p.7-9.

Moote, Elizabeth and Thomas Koontz. 2003. A Typology of Collaborative Watershed Groups: Citizen-Based, Agency-Based, and Mixed Partnerships. *Society and Natural Resources*. 16:451–460, 2003.

National Academy of Sciences. 1999. *New Strategies for America's Watersheds*. Washington, DC: National Academy Press.

[Robert L. Kellogg](#), Susan Wallace, and Klaus Alt (retired), Natural Resources Conservation Service and Don W. Goss, Potential Priority Watersheds for Protection of Water Quality from Nonpoint Sources Related to Agriculture. Poster Presentation at the 52nd Annual SWCS Conference. Toronto, Ontario, Canada, July 22-25, 1997 (Revised October 7, 1997) Texas Agricultural Experiment Station, Temple, Texas.

Rogers, Peter. 1996. *America's Water: Federal Roles and Responsibilities*. Boston: MIT Press.

Roy, S.B., Ricci, P.F., Summers, K.V., Chung, C.-F., and Goldstein, R.A., 2005, Evaluation of the Sustainability of Water Withdrawals in the United States, 1995-2025; *Journal of the American Water Resources Association*, 41(5):1091-1108, October 2005

Ruddy, B.C., and Hitt, K.J., 1990, Summary of Selected Characteristics of Large Reservoirs in the United States and Puerto Rico, U.S. Geological Survey Open-File

Shmagin, B. and Kanivetsky, R., 2002, System Analysis to Estimate Subsurface Flow: From Global Level to State of Minnesota: *Environmental Geology*, v.42, no. 2-3, p. 259-269.

Solley, W.B., Pierce, R.R., and Perlman, H.A., 1998, Estimated Use of Water in the United States in 1995: U.S. Geological Survey Circular 1200, 71 p.

Taylor, C.J., and Alley, W.M., 2002, Ground-water-level monitoring and the importance of long-term water-level data: U.S. Geological Survey Circular 1217, 68 p.

U. S. Bureau of Reclamation, 2005, Dams and reservoirs data web: information and data available online at <http://www.usbr.gov/dataweb/dams/index.html>

U.S. Army Corps of Engineers, 2005, National inventory of dams: information and data available online at <http://crunch.tec.army.mil/nid/webpages/nid.cfm>

U.S. Department of Agriculture, Agricultural Resources and Environmental Indicators, Agricultural Handbook No. (AH722), February 2003, Chapter 2.1, page 1, <http://www.ers.usda.gov/publications/arei/ah722/>.

U.S. Department of Agriculture, Natural Resources Conservation Service, Washington, D.C. Summary Report: 1997 National Resources Inventory (Revised December 2000),

U.S. Environmental Protection Agency, Office of Wastewater Management, 2005, Water permitting 101: accessed on the internet at <http://www.epa.gov/npdes/pubs/101pape.pdf>, September 22, 2005.

U.S. Environmental Protection Agency, Office of Water, 2001, Protecting the Nation's waters through effective NPDES permits—A strategic plan, FY 2001 and beyond: accessed on the internet at <http://www.epa.gov/npdes/pubs/strategicplan.pdf>, September 22, 2005.

U.S. EPA, Drinking Water Infrastructure Needs Survey and Assessment: Third Report to Congress, June 2005, p. 24 and 27.

U.S. EPA, FACTOIDS: Drinking Water and Ground Water Statistics for 2004.

U.S. EPA. 2001. National Coastal Condition Report. United States Environmental Protection Agency. Office of Research and Development and Office of Water. EPA 620/R-01/005. Washington, D.C.

U.S. EPA. 2003. Draft Report on the Environment. Technical Document. US Environmental Protection Agency. Office of Research and Development and the Office of Environmental Regulation. EPA 600-R-03-050. Washington, D.C.

U.S. EPA. 2004. National Coastal Condition Report II. United States Environmental Protection Agency. Office of Research and Development and Office of Water. EPA 620/R-03/002. Washington, D.C.

U.S. Geological Survey, 1984, National Water Summary 1983—Hydrologic Events and Issues:

U.S. Geological Survey Water-Supply Paper 2250.

U.S. Geological Survey Circular 1223, 34 p.

U.S. Geological Survey, 2004, Estimated Use of Water in the United States County-level Data for 2000: data available at: <http://water.usgs.gov/watuse/data/2000/index.html>.

U.S. Geological Survey, 2005a, National Streamflow Information Program: program information and data available online at <http://water.usgs.gov/nsip/>.

U.S. Geological Survey, 2005b, Ground-water Climate Response Network: Information and Data available online at <http://groundwaterwatch.usgs.gov/>

U.S. Geological Survey, Report to Congress, Concepts for National Assessment of Water Availability and Use, U.S. Geological Survey Circular 1223, August 2002, <http://water.usgs.gov/pubs/circ/circ1223/html/cover.html>.

Vorosmarty, C.J., Green, Pamela, Salisbury, Joseph, and Lammers, R.B., 2000, Global Water Resources—Vulnerability from Climate Change and Population Growth: Science, v. 289, p. 284-288.

World Commission on Environment and Development. 1987. Our Common Future. Oxford, UK: Oxford University Press.

http://www.chesapeakebay.net/wshed_directory.htm

<http://www.ctic.purdue.edu/kyw>

<http://www.dep.state.pa.us/dep/deputate/watermgmt/WC/Subjects/WSNoteBks/shedtable.htm>

http://www.rivernetnetwork.org/library/index.cfm?doc_id=116

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