

Cunningham et al. Environmental Science: A Global Concern 11e  
Further readings for Chapter 18. (Water Pollution)

Aiyuk, S., et al. 2004. "Removal of carbon and nutrients from domestic wastewater using a low investment, integrated treatment concept" *Water Research* 38 (13): 3031-3042. An integrated, low-cost waste water treatment design may be suitable for developing countries.

Alaska Department of Environmental Conservation. 1993. *The Exxon Valdez Oil Spill: Final Report, State of Alaska Response. Biological damage assessment of America's biggest oil spill.*

Allen, G.H. and R.A. Gearheart (eds). 1988. *Proceedings of a conference on wetlands for wastewater treatment and resource enhancement.* Humboldt State University. Wetlands offer low-cost but effective wastewater treatment.

Allen-Gil, S.M., et al. 1997. "Organochlorine Pesticides and Polychlorinated Biphenyls (PCBs) in Sediments and Biota from Four US Arctic Lakes," *Arch Environ Contem Toxicol.* 33 (4): 378-387.

Anderson, D. M. 1994. "Red tides," *Scientific American* 271 (2): 52-62. Blooms of toxic microorganisms seem to have increased in near-shore waters.

Andresen, J.A., et al. 2004. "Organophosphorus flame retardants and plasticisers in surface waters" *Science of the Total Environment* 332 (1-3): 155-166. The Ruhr River is polluted with a variety of persistent organic pollutants, mostly from sewage effluents.

Andrew T. Campbell and Peter Wallis. 2002. "The effect of UV irradiation on human-derived *Giardia lamblia* cysts". *Water Research* 36 (4): 963-969. UV can inactivate up to 99% of the *Giardia* cysts in water.

Ashton, D., et al. 2004. "Investigating the environmental transport of human pharmaceuticals to streams in the United Kingdom." *Science of the Total Environment.* 133 (1-3): 167-184. This study suggests that most sewage treatment plants in England and Wales are likely to be routinely discharging small quantities of pharmaceuticals with endocrine hormone disrupting activity into UK rivers.

Atlas, Ronald M. and Carl E. Cerniglia. 1995. "Bioremediation of petroleum pollutants." *Bioscience* 45: 332-338. Discusses biological methods for cleaning up oil spills.

Ayres, Gene. 2003. "Rocket Fuel in Our Food" *Worldwatch* 16 (6): 12-20. Toxic perchlorates have been dumped into ground and surface waters and are now contaminating food supplies.

Balducci, C., et al. 2001. "Macrofauna impact on *Ulva rigida* C. Ag. Production and relationship with environmental variables in the lagoon of Venice." *Marine*

Environmental Research 52(1): 27-49. Fertilizer runoff from surrounding farmlands has produced severe eutrophication in the shallow lagoon of Venice.

Barbash, Jack E. and Elizabeth A. Resek. 1997. *Pesticides in Ground Water: Distribution, Trends and Governing Factors*. Lewis Publishers. A comprehensive look at water pollution by pesticides.

Batisse, M. (June) 1990. "Probing the Future of the Mediterranean Basin," *Environment* 32 (5): 4-14. Describes the Mediterranean Blue Plan for international cooperation in cleaning up this sea.

Beman, J. M., et al. 2005. "Agricultural runoff fuels large phytoplankton blooms in vulnerable areas of the ocean." *Nature* 434: 211-214. Nitrogen-deficient areas of the tropical and subtropical oceans are acutely vulnerable to fertilizer runoff. By 2050 up to half of all runoff from developing countries will be upstream from such areas.

Benjamin, Mark M. 2002. *Water Chemistry* McGraw-Hill Co. An accessible text for students of water.

Berry, J. P. et al. 2002. "Are Pfiesteria species toxicogenic? Evidence against production of ichthyotoxins by Pfiesteria shumwayae". *Proceedings of the National Academy of Sciences*, published online, doi10.1073/pnas.172221699 (2002). Evidence suggests that lethal algae nibble fish to death rather than poison them.

Bowie, P. 2000. "No Act of God," *The Amicus Journal* 21 (4): 16-21 A graphic description of the effects of Hurricane Floyd in North Carolina.

Boyd, G. R., et al. 2004. "Pharmaceuticals and personal care products (PPCPs) and endocrine disrupting chemicals (EDCs) in stormwater canals and Bayou St. John in New Orleans, Louisiana, USA." *Science of the Total Environment*. 222 (1-3): 137-148. Environmental estrogens were found in low levels in stormwater canals and recreational urban waterways in New Orleans.

Bragg, J. R., et al. 1994. "Effectiveness of bioremediation for the Exxon Valdez oil spill. *Nature* 386: 413-418. Bioremediation was less damaging than physical methods of beach cleaning.

Brivio, P.A., C. Giardino, and E. Zilioli. 2001. "Validation of satellite data for quality assurance in lake monitoring applications" *The Science of the Total Environment*: 268(1): 3-18. Lead article in a special issue on assessing water quality by remote sensing.

Burkholder, JoAnn M. 1999. "The Lurking Perils of Pfiesteria." *Scientific American* 281 (2): 42-49. A frightening account of how this single-celled aquatic organism kills fish and harms people.

Chakravarty, S. , et al. 2001. "Removal of arsenic from groundwater using low cost ferruginous manganese ore" *Water Research* 36 (3): 625-632. Arsenic in groundwater is a very serious problem in Bengal. A low cost solution is suggested for removing this pollutant.

Chen, D., Weavers, L. K. & Walker, H. W. 2002. "Using ultrasound to reduce ceramic membrane fouling by silica particles". Presented at the 2002 National Meeting of the American Chemical Society, Orlando, USA. High-energy bubbles scour municipal water filters.

Cho, B.H., et al. 1997. "Laboratory-scale Bioremediation of Oil-contaminated soil of Kuwait with Soil Amendment Materials," *Chemosphere* 35 (7): 1599-1611. An example of how bioremediation can help clean up pollutants.

Chowdhury, A. M. R. 2004. "Arsenic Crisis in Bangladesh." *Scientific American* 291 (2): 86-92. Arsenic in drinking water wells in South Asia is the largest known case of mass poisoning in history.

Clarke, E. and A.H. Baldwin. 2002. "Responses of wetland plants to ammonia and water level" *Ecological Engineering*. 18 (3): 257 – 264. Some ammonia is a fertilizer; too much is poison.

Colburn, T., and R. Liroff. 1990. "Toxics in the Great Lakes," *EPA Journal* 16 (6): 5-9. Although this report is now dated, it's important to know what conditions were.

Cronin, John and Robert F. Kennedy. 1999 *The Riverkeepers: Two Activists Fight to Reclaim Our Environment as a Basic Human Right*. Scribners. A stirring tale of activism and organizing to protect the Hudson River.

Davis, Tony. 2009 "Non-navigable River Blues." *High Country News* Feb 2, 2009. P 14-18. The protection of ephemeral streams and intermittent waterways is an important issue for the western U.S.

Davison, W. et al. 1995. "Controlled reversal of lake acidification by treatment with phosphate fertilizer," *Nature* 377: 650-655. Artificial eutrophication can help neutralize acidification.

de-Bashan, L.E., et al. 2004. "Microalgae growth-promoting bacteria as "helpers" for microalgae: a novel approach for removing ammonium and phosphorus from municipal wastewater." *Water Research* 38 (2): 466-474. Biofilms can be useful in tertiary waste water treatment.

Dobb, Edwin. 2000. "New life in a death trap." *Discover* December 2000: 86-93. Bioremediation may offer a way to remove toxic metals from the deadly Berkeley Pit in Butte, Montana.

Economy, Elizabeth C. 2004, *The River Runs Black*. Cornell University Press. A sobering account of China's environmental problems.

Eggermont, H. and D. Verschuren. 2003. "Impact of soil erosion in disturbed tributary drainages on the benthic invertebrate fauna of Lake Tanganyika, East Africa." *Biological Conservation* 113 (1): 99-109. Siltation is a leading cause of aquatic ecosystem damage.

Fairlee, J.R., et al 1997. "Biodegradation of Groundwater Pollutants by a Combined Culture of *Mycobacterium vaccae* and a *Rhodococcus* sp.," *Canadian Journal of Microbiology* 43 (9): 841-846. In vitro bioremediation by microbes.

Fischhoff, B. 1991. "Report from Poland: Science and Politics in the Midst of Environmental Disaster." *Environment* 33 (2): 12-18. Although conditions have improved, it's instructive to realize how bad pollution was in Eastern Europe.

Forster, D. L. 2000. "Public policies and private decisions: Their impacts on Lake Erie water quality and farm economy." *Journal of Soil and Water Conservation* 309: 322-326. Conservation tillage can reduce erosion and improve water quality.

Gardner, Gary. 1998 "Human Waste: Pollutant or Resource?" *World Watch Journal* 11 (1): 28-33. It's too valuable to throw away, too toxic to throw around. What to do?

Gibbs, W. W. 1999. "Not Cleaning Up," *Scientific American* 280 (2): 39-40. High-pressure steam injection can remove pollutants from underground aquifers faster than conventional methods.

Gleick, P. 1993. *Water in Crisis*. Island Press. This collection of essays by leading specialists looked the state of the world's fresh water. In most places conditions are even more desperate now.

Goldman CR. 2000. Four decades of change in two subalpine lakes. *Verh Internat Verin Limnol* 27: 7-26. A study of eutrophication in Lake Tahoe

Goldstein, b. 1991. "the Folly of the Exxon Valdez Cleanup." *Earth Island Journal* 6 (1): 30-33. The expensive and highly publicized steam-cleaning of beaches in Prince William Sound wasn't as effective as allowing nature to metabolize the oil.

Grant, S. B et al. 2001. "Generation of Enterococci bacteria in a coastal saltwater marsh and its impact on surf zone water quality". *Environmental Science and Technology* 35: 2407 - 2416. Artificial wetlands could dirty water rather than clean it.

Grantham, B. A., et al. 2004. "Upwelling-driven nearshore hypoxia signals ecosystem and oceanographic changes in the northeast Pacific" *Nature* 429: 749-754. Abnormally low dissolved-oxygen levels are caused by anomalously strong flow of subarctic water into the California Current System, killing fish and other marine life.

Gräslund, Sara and Bengt-Erik Bengtsson 2001. "Chemicals and biological products used in south-east Asian shrimp farming, and their potential impact on the environment a review" *The Science of the Total Environment* 280 (1-3): 93-131. A wide variety of chemicals and biological products are used to treat the water and sediment of ponds in south-east Asian shrimp farming. These chemicals pose a serious risk to surface and ground water and need better regulation and management.

Hanson, P. C., et al. 2006. "Lake Dissolved Inorganic Carbon And Dissolved Oxygen: Changing Drivers From Days To Decades." *Ecological Monographs*: Vol. 76, No. 3, pp. 343–363. Dissolved inorganic carbon and dissolved oxygen concentrations depend on many factors in addition to ecosystem metabolism, such as water temperature, gas exchange with the atmosphere, abiotic chemical reactions, and inputs in precipitation, groundwater, and surface water.

Harvell, C. D., et al. 1999. "Emerging Marine Diseases-Climate Links and Anthropogenic Factors," *Science (US)* 285: 1505-1510. September 3, 1999. Pollution and global warming are causing new examples of marine diseases.

Harvey, C. F. et al. 2002. "Arsenic mobility and groundwater extraction in Bangladesh." *Science* 298: 1602-1404. Millions of people are at risk of arsenic poisoning from well water.

Havens, K.J., L.M. Varnell, B.D. Watts. 2002. "Maturation of a constructed tidal marsh relative to two natural reference tidal marshes over 12 years" *Ecological Engineering*. 18 (3): 305 – 315. Can engineered marshes replace the real thing?

He, Jianzhong et al. 2003. "Detoxification of vinyl chloride to ethene coupled to growth of an anaerobic bacterium" *Nature* 424: 62–65. A novel bacterium that destroys vinyl chloride as part of its energy metabolism raises the prospect of effective bioremediation for contaminated water reservoirs.

Helle, I.D., et al. 1998. "Long-Term Growth Enhancement of Baldcypress (*Taxodium distichum*) from Municipal Wastewater Application," *Environmental Management* 22 (1): 119-127. Trees can effectively remove aquatic pollutants.

Hernando, M.D., et al. 2003. "Combined toxicity effects of MTBE and pesticides measured with *Vibrio fischeri* and *Daphnia magna* bioassays." *Water Research* 37 (17): 4091-4098. Methyl-tert-butyl ether (MTBE), a fuel oxygenate commonly added to gasoline enhances the toxicity of several common water contaminants.

Hill, Marquita K. 2004. *Understanding Environmental Pollution* 2<sup>nd</sup> ed. Cambridge University Press. An basic introduction to air and water pollution.

Hobbie, J. 2000. *Estuarine Science*. Island Press. An overview of the importance of and threats to estuaries.

Horn, O. et al. 2004. "Plasticizer metabolites in the environment." *Water Research* 38 (17): 3693-3698. Plasticizers are ubiquitous in the environment. Many of these compounds aren't toxic, but their metabolites are. This research shows how bacteria partially break down plasticizers.

Jain, C.K. 2004. "Metal fractionation study on bed sediments of River Yamuna, India." *Water Research* 38 (3): 569-578. In some places, so much metal has accumulated in sediments that it could be considered an ore.

Jokela, J.P.Y., R.H. Kettunen, K.M. Sormunen, and J.A. Rintala. 2002. "Biological nitrogen removal from municipal landfill leachate: low-cost nitrification in biofilters and laboratory scale in-situ denitrification." *Water Research* 36 (16):4079-4087. Biofilters can be effective ways to remove pollutants.

Jordan, L. A., Devitt, D. A., Morris, R. L. & Neumann, D. S. 2001 Foliar damage to ornamental trees sprinkler-irrigated with reuse water. *Irrigation Science*, (advanced online publication) DOI: 10.1007/s00271-001-0050-y). Recycled waste water may contain salt concentrations that damage sensitive plant species.

Kamat, P. V., Huehn, R. & Nicolaescu, R. 2002. "A 'sense and shoot' approach for photocatalytic degradation of organic contaminants in water". *Journal of Physical Chemistry B* 106: 788-794, (2002). A new method for decontaminating water is photocatalytic oxidation: the burning-up of organic molecules in air, stimulated by a light-sensitive catalyst.

Katsoyiannis, I.A. and A.I. Zouboulis. 2004. "Application of biological processes for the removal of arsenic from groundwaters." *Water Research* 38 (1): 17-26 Bioremediation can be effective in water pollution clean-up.

Kennish, Michael J. 1999. *Estuary Restoration and Maintenance: The National Estuary Program*. CRC Press. Looks at estuary values, marine pollution, and restoration efforts.

Kindler, J., and S. F. Linter. 1993. "An Action Plan to Clean Up the Baltic," *Environment* 35 (8): 6-14. Industrial and municipal waste discharge, agricultural runoff, and weak circulation patterns have made this one of the world's most polluted seas. The disappearance of East-West political barriers, however, opened opportunities for new national cooperation and cleanup.

Kolpin, D. W., et al. 2002. "Pharmaceuticals, hormones, and other organic wastewater contaminants in U.S. streams, 1999-2000: A national reconnaissance." *Environmental Science and Technology* 36: 1202-1211. Life-altering chemicals are getting into our water supplies.

Kolpin, D.W., et al. 1996. "Occurrence of Selected Pesticides and Their Metabolites in Near-Surface Aquifers of the Midwestern United States," *Environmental Science and*

Technology 30 (1): 335-340. A survey of groundwater pollution in the corn and soybean belt.

Lettmann, C., Hinrichs, H. & Maier, W. 2001. "Combinatorial discovery of new photocatalysts for water purification with visible light." *Angewandte Chemie (International Edition)* 40: 3160 - 3164. Metal compounds absorb sunlight and break down water pollutants.

Lewis, Ricki. 2001. "PCB Dilemma: Government, industry, and public debate dredging vs. bioremediation in the Hudson River" *The Scientist* 15[6]:1-5, Mar. 19, 2001. An interesting debate about natural bioremediation, dredging, and risk assessment.

Malle, Karl-Geert. 1996. "Cleaning up the River Rhine," *Scientific American* 274 (1): 70-79. International cooperation has cleaned up this important river significantly.

Meharg, Andrew. 2005. *Venomous Earth*. Macmillan Science Pub. How arsenic in Bengali groundwater caused the world's worst mass poisoning.

Melville, W. K. & Matusov, P. 2002. "Distribution of breaking waves at the ocean surface." *Nature* 417: 58- 63. As ocean waves break, they trap air pollutants and carry them into the water, where they remain.

Michael Neumann et al. 2002. "The significance of entry routes as point and non-point sources of pesticides in small streams" *Water Research* 36 (4): 835-842. Compares sewage outfall and farmyard runoff in Germany.

Mitsch, William J., et al. 2001. "Reducing nitrogen loading to the Gulf of Mexico from the Mississippi River Basin: Strategies to counter a persistent ecological problem." *BioScience* 51: 373-388. Massive changes in land use will be needed to eliminate the hypoxic "dead zone" that forms every summer in the Gulf.

Montague, Peter. 1998. "Drugs in the Water." *Rachael's Environment & Health Weekly* #614. A sobering revelation of how pharmaceutical drugs given to people and domestic animals end up in rivers and lakes, contributing to the spread of drug-resistant micro-organisms.

Murdock, J., et al. 2004. "Interactions between flow, periphyton, and nutrients in a heavily impacted urban stream: implications for stream restoration effectiveness" *Ecological Engineering* 22 (3): 197-207. Urban stream restoration is a very complex task due largely to the interactions between the physical, chemical, and biological stream components.

Ofiara, Douglas D. and Joseph J. Seneca. 2001. *Economic Losses from Marine Pollution*. Island Press. A handbook for assessing losses from pollution.

Ott, Riki. 2004. *Sound Truth and Corporate Myth: The Legacy of the EXXON Valdez Oil Spill*. Dragonfly Sisters Press. A scathing account of the causes and effects of the Exxon Valdez oil spill.

Papa, E., et al. 2004. "Screening the leaching tendency of pesticides applied in the Amu Darya Basin (Uzbekistan)" *Water Research* 38 (16): 3485-3494. The area around the Aral Sea was declared a World Disaster Zone in 1991 because of excessive irrigation and pesticide use. This study examines the leaching of pesticides into surface waters.

Patterson, K. L. et al. 2002. "The etiology of white pox, a lethal disease of the Caribbean elkhorn coral, *Acropora palmata*." *Proceedings of the National Academy of Sciences*, (2002). Human gut bacteria have been found associated with white pox disease, which has killed up to 90% of all the elkhorn coral in the Caribbean.

Peglar, M.T., et al. 2004. "Identification of amoebae implicated in the life cycle of *Pfiesteria* and *Pfiesteria*-like dinoflagellates." *Journal of Eukaryotic Microbiology* 51 (5): 542-552. Molecular analysis suggests that amoeboid forms previously identified as *Pfiesteria* are really an unrelated species of *Korotnevela*.

Peles, J.D., et al. 1996. "Metal Uptake by Agricultural Plant Species Grown in Sludge-Amended Soil Following Ecosystem Restoration Practices," *Bulletin of Environmental Contamination and Toxicology* 57 (6): 917-923. Bioremediation can be economical and effective.

Perry, James A. and Elizabeth Vanderklein. 1996. *Water Quality: Management of a Natural Resource*. Island Press. An excellent introduction to international water quality issues.

Pestana, M.H.D. and M.L.L. Formoso. 2003. "Mercury contamination in Lavras do Sul, south Brazil: a legacy from past and recent gold mining." *The Science of the Total Environment*. 307 (1-3): 125-140. Mercury released from mining operations poisons miners and their environment.

Pickett, S. T. A., et al. 2001. *Urban Ecological Systems: Linking Terrestrial Ecological, Physical, and Socioeconomic Components of Metropolitan Areas*. *Annual Review of Ecology and Systematics* 32: 127-157.

Pozos, N., et al. 2004. "UV disinfection in a model distribution system: biofilm growth and microbial community" *Water Research* 38 (13): 3083-3091. UV pretreatment helps the action of biofilms in water treatment.

Rabalais, Nancy N., et al. 2002. "Hypoxia in the Gulf of Mexico, a.k.a. The dead zone." *Annual Review of Ecology and Systematics* 33: 235-263,

Rainbow, P. S. and G. Blackmore. 2001. "Barnacles as biomonitors of trace metal availabilities in Hong Kong coastal waters: changes in space and time." *Marine*



Environmental Research 51 (5): 441-463. Shellfish, which filter water for nutrients, can be useful bioindicators of environmental quality.

Raloff, Janet. 1998. "Drugged waters." Science News 153: 187-189. Sewage effluents release dangerously high levels of pharmaceuticals into our surface waters.

Raloff, Janet. 2001. "Macho waters." Science News 159: 8-10. Some river pollution results in endocrine hormone-disrupting steroid compounds.

Rana, T., et al. 2004. "Toxic effects of pulp and paper-mill effluents on male reproductive organs and some systemic parameters in rats." Environmental Toxicology and Pharmacology 18 (1): 1-7. Mill effluents are shown in a laboratory test to effect male reproductive development.

Reimann, C. and D. Banks. 2004. "Setting action levels for drinking water: Are we protecting our health or our economy (or our backs!)" Science of the Total Environment 332 (1-3): 13-21. A European view of drinking water quality issues.

Reinthaler, F.F., et al. 2003. "Antibiotic resistance of E. coli in sewage and sludge." Water Research. 37 (8): 1685-1690. Bacterial antibiotic resistance is an increasing problem.

Rivlin, Michael. 1998. "Muddy Waters," The Amicus Journal 19 (4): 30-37. What should we do about water pollution?

Sampat, Payal. 2000. "Groundwater Shock: The Polluting of the World's Major Freshwater Stores." Worldwatch Magazine 13 (1): 14-25, January/February, 2000.

Sampson, Martin W. 1995. "Black Sea Environmental Cooperation: Three tracks and the first year of action," International Studies Association. The politics of environmental protection in a turbulent region.

Santschi, P. H. et al. 2001. "Historical contamination of PAHs, PCBs, DDTs, and heavy metals in Mississippi River Delta, Galveston Bay and Tampa Bay sediment cores." Marine Environmental Research 52 (1): 51-79. Analysis of contaminant accumulation in marine sediments reveal how changing land use patterns affect runoff and coastal pollution.

Sarkar, S., et al. 2005. "Well-head arsenic removal units in remote villages of Indian subcontinent: Field results and performance evaluation." Water Research 39 (10): 2196 – 2206. Filters can help alleviate the world's worst water pollution problem.

Schneider, Paul. 1997. "Clear Progress," Audubon 99 (5): 36. The successes of the Clean Water Act are unmistakable, but there is more to be done.

Skaare, J.U., et al. 1994. Mercury and selenium in arctic and coastal seals off the coast of Norway,” *Environmental Pollution* 85 (2): 153-158. High levels of toxic metals are found in marine mammals far from industrial sources.

Smith, Allan H., et al. 2000. “Contamination of drinking-water by arsenic in Bangladesh: a public health emergency,” *Bulletin of the World Health Organization* 2000: 78 (9): 1093-1103. Estimates that between 35 and 77 million people are at risk of arsenic poisoning in Bangladesh.

Steinfeld, Carol. 1997 “Phytoremediation,” in *Environmental Encyclopedia* 2nd ed., William P. Cunningham et al. eds. Detroit, MI: Gale Research.

Steinmann, C.R., et al. 2003. “A combined system of lagoon and constructed wetland for an effective wastewater treatment.” *Water Research* 37 (9): 2035-2042.

Swannell, R.P., et al. 1996. “Field Evaluations of Marine Oil Spill Bioremediation,” *Microbiology Review* 60 (2): 342-365.

Syversen, Nina and Marianne Bechmann. 2004. “Vegetative buffer zones as pesticide filters for simulated surface runoff” *Ecological Engineering* 22 (3): 175-184. Vegetated buffer zones between agricultural land and surface waters have proved to be effective filters for sediments and sediment-bound nutrients.

Tamburri, M. N., et al. 2002. “Ballast water deoxygenation can prevent aquatic introductions while reducing ship corrosion.” *Biological Conservation* 103: 331-341, (2002). Bubbling nitrogen gas through bilge water can reduce corrosion and also stop the spread of alien organisms in ship ballast water.

Tollefsen, K. -E. 2002. “Interaction of estrogen mimics, singly and in combination, with plasma sex steroid-binding proteins in rainbow trout (*Oncorhynchus mykiss*),” *Aquatic Toxicology* 56 (3): 215-225

Van der Leeden, F., et al., (eds.) 1990. *The Water Encyclopedia*. Island Press. A thorough explanation of water sources, cycles, compartments, uses, quality, pollution, management, laws, treaties, and agencies.

Viessman, W. and M. Hammer. 2004. *Water Supply and Pollution Control* 7<sup>th</sup> ed. Prentice Hall. A technical book on hydraulics and waste water management.

Vogelbein, W. K. et al. 2002. “*Pfiesteria shumwayae* kills fish by micropredation not exotoxin secretion”. *Nature* 418: 967–970. Evidence suggests that lethal algae nibble fish to death rather than poison them

Webb, S. R., et al. 2005. “Etiology of ulcerative lesions of Atlantic menhaden (*Brevoortia tyrannus*) from James River, Virginia.” *Parasitology Research* Aug. 16 PMID 16133297. Suggests that parasites other than *Pfiesteria* are responsible for fish kills.

Williams, Ted. 1999. "Lessons from Lake Apopka." *Audubon* 101 (4): 64-73. A sad story of how flooding of pesticide-contaminated farmlands killed thousands of wading birds in a Florida wildlife refuge.

Whitall, D., et al. 2004. "Evaluation of management strategies for reducing nitrogen loadings to four US estuaries" *Science of the Total Environment* 333 (1-3): 25-36. In urban areas, wastewater treatment gave the biggest reduction in N inputs to estuaries. In rural areas, managing agricultural activities was most effective.

Whitfield, John. 2003. "How to clean a beach." *Nature* 422: 464-466. Decades of experience add to our knowledge of how to clean up oil spills.

Woodwell, George M. 1977. "Recycling sewage through plant communities." *American Scientist* 65: 556-560. Low-cost disposal of sewage effluent.

Yang, Shinwoo and Kenneth Carlson. 2003. "Evolution of antibiotic occurrence in a river through pristine, urban and agricultural landscapes ." *Water Research* 37 (19): 4645-4656. Antibiotics are released into surface waters from both agricultural and urban sources.

Zhao, X., et al. 2002. "Elimination of cadmium trace contaminations from drinking water" *Water Research* 36 (4): 851-858. Cadmium is one of the most serious contaminants in the Chinese water supply. It can be removed by absorption on anion exchangers.