Aadland, Luther P. 1993. Stream habitat types: their fish assemblages and relationship to flow. North American Journal of Fisheries Management 13 (4): 790-805.

Aadland, L.P., C.M. Cook, M.T. Negus, H.G. Drewes, and C.S. Anderson. 1991. Microhabitat preferences of selected stream fishes and a community-oriented approach to instream flow assessments. Section of Fisheries, Minnesota Department of Natural Resources, St. Paul, MN.

Aadland, L., Waltner, C., Negus, M.T., Drews, H.,... 1989. Microhabitat criteria for selected stream fishes and methodological considerations for instream flow studies in Minnesota.: St. Paul, Minnesota Department of Natural Resources Technical Report

Adams, J.B., G.C. Bate, T.D. Harrison, P. Huizinga, S. Taljaard, L. van Niekerk, E.E. Plumstead, A.K. Whitfield, and T.H. Wooldridge. 2002. A method to assess the freshwater inflow requirements of estuaries and application to the Mtata Estuary, South Africa. Estuaries 25 (6B): 1382-1393.

Adams, J.B., W.T. Knoop, and G.C. Bate. 1992. The distribution of estuarine macrophytes in relation to freshwater. Botanica Marina 35: 69-75.

Adams, J.B. and M.M.B. Talbot. 1992. The influence of river impoundment on the estuarine seagrass *Zostera capensis* Setchall. Botanica Marina 35: 69-75.

Adams, W.M. 1992. Wasting the Rain: Rivers, People, and Planning in Africa. Earthscan Publications, London.

Addley, R.C. 1993. A mechanistic approach to modeling habitat needs of drift-feeding salmonids. Masters thesis, Department of Civil and Environmental Engineering, Utah State University, Logan, Utah.

Aebischer, N.J., P.A. Robertson, and R.E. Kenward. 1993. Compositional analysis of habitat use from animal radio-tracking data. Ecology 74: 1313-1325.

Aho, J.M., Anderson, C.S., and Terrell, J.W. 1986. Habitat suitability index models and instream flow suitability curves: redbreast sunfish. Washington, D.C.: U.S. Fish and Wildlife Service (Biological Report 82 [10.119]).

Alabaster, John S. 1970. River flow and upstream movement and catch of migratory salmonids. Journal of Fish Biology 2: 1-13.

Alber, M. 2002. A conceptual model of estuarine freshwater inflow management. Estuaries 25 (6B): 1246-1261.

Alber, M., and J.E. Sheldon. 1999. Use of a date-specific method to examine variability in the flushing times of Georgia estuaries. Estuaries, Coastal and Shelf Science 49: 469-482.

Aleem, A.A. 1972. Effect of river outflow management on marine life. Marine Biology 15: 200-208.

Alexander, H.D., and K.H. Dunton. 2002. Freshwater inundation effects on emergent vegetation of a hypersaline salt marsh. Estuaries 25 (6B): 1426-1435.

Alfredsen, K., W. Marchand, T.H. Bakken, and A. Harby. 1997. Application and comparison of computer models quantifying impacts of river regulation on fish habitat. In: Brodh, E., D.K. Lysne, N. Flatabo, and E. Helland-Hansen, eds. Proceedings of the 3rd international conference hydropower '97 - Trondheim/Norway 30 June-2 July 1997. A.A. Balkema Publishers, Rotterdam/Brookfield.

Allan, J.D., D.L. Erickson, and J. Fay. 1997. The influence of catchment land use on stream integrity across multiple spatial scales. Freshwater Biology 37: 149-162.

Allanson, B.R., and G.H.L. Read. 1995. Further comment on the response of Eastern Cape Province estuaries to variable freshwater inflows. Southern African Journal of Aquatic Science 21: 56-70.

Allee, B.A. 1974. Spatial requirements and behavioral interactions of juvenile coho salmon (*Oncorhynchus kisutch*) and steelhead trout (*Salmo gairdneri*). Doctoral dissertation, University of Washington, Seattle.

Allen, M.A. 2000. Seasonal microhabitat use by juvenile spring chinook salmon in the Yakima River basin, Washington. Rivers 7 (4): 314-332.

Allison, S.K. 1996. Recruitment and establishment of salt marsh plants following disturbance by flooding. American Midland Naturalist 136: 232-247.

Ambuhl, Von Heins. 1959. The significance of flow as an ecological factor. (Transl. By John DeWitt, Humboldt State College, Arcata, California.)

American Rivers, Friends of the Earth, and Trout Unlimited. 1999. Dam Removal Success Stories: Restoring Rivers Through Selective Removal of Dams That Don't Make Sense. Washington, D.C.

Ames, J. 1983. Salmon stock interactions in Puget Sound: a preliminary look. Pages 84-95 in: M.A. Miller (ed.). Southeast Alaska coho salmon research and management review and planning workshop, May 18-19, 1982. Alaska Dept. Fish and Game, Juneau.
Ames, J., and H. Beecher. 1995. Recommended spawning flows for Cedar River sockeye salmon: with a review of spawning distribution and flood risk studies. A report to the Cedar River Instream Flow Committee. Washington Department of Fish and Wildlife, Olympia. 108 pp.

Ames, J., and H. Beecher. 2001. Incorporating flood risk into controlled flow regimes for Pacific salmon: An example using Cedar River sockeye salmon. Report #FPT 01-13. Washington Department of Fish and Wildlife, Olympia. 123 pp.

Amoros, C. 1991. Changes in side-arm connectivity and implications for river system management. Rivers 2: 105-112.

Amoros, C., A.L. Roux, J.L. Reygrobellet, J.P. Bravard, and G. Pautou. 1987. A method for applied ecological studies of fluvial hydrosystems. Regulated Rivers Research & Management 1: 17-38.

Anderson, D.H. 1995. Microcrustacean growth and production in a forested floodplain swamp. Dissertation, University of Alabama, Tuscaloosa, Alabama, USA.

Anderson, H.W. 1976. Fire effects on water supply, floods, and sedimentation. Proceedings, Tall Timbers Fire Ecology Conference 15: 249-260.

Anderson, P.C., T.B. Hardy, and C.M.U. Neale. 1993. Application of multispectral videography for the delineation of riverine depths and mesoscale hydraulic features. *In*: Neale, C.M.U. (Ed.), Proceedings of the 14th Biennial Workshop on Color Photography and Videography for Resource Monitoring. Utah State University, Logan, Utah, May 25-28, 1993.

Anderson, R.M., and Nehring, R.B. 1985. Impacts of stream discharge on trout rearing and recruitment in the South Platte River, Colorado. Pp. 59-64 in: Olson, F.W., White, R.G., and Hamre, R.H. (Eds.), Proceedings of the Symposium on Small Hydropower and Fisheries. American Fisheries Society, Bethesda.

Andrew, F.J., and G.H. Green. 1960. Sockeye and pink salmon production in relation to proposed dams in the Fraser River system. Internat. Pac. Salmon Fish. Comm., Bull. 11. 257 p.

Andrews, E.D. 1980. Effective and bankfull discharges of streams in the Yampa River basin, Colorado and Wyoming. Journal of Hydrology 46: 311-330.

Andrews, E.D., and J.M. Nankervis. 1995. Effective discharge and design of channel maintenance flows for gravel-bed rivers. Pp. 151-164 in: J.E. Costa, A.J. Miller, K.W. Potter, and P.R. Wilcock (eds.), Natural and Anthropogenic Influences in Fluvial Geomorphology, Geophysical Monograph 89, American Geophysical Union.

Angermeier, P.L. 1987. Spatiotemporal variation in habitat selection by fishes in small Illinois streams. Pp 52-60 in: W.J. Matthews and D.C. Heins (eds) Community and evolutionary ecology of North American stream fish. University of Oklahoma Press, Norman.

Angermeier, P.L. 1992. Predation by rock bass on other stream fishes: experimental effects of depth and cover. Environmental Biology of Fishes 34: 171-180.

Angermeier, P.L., and J.R. Karr. 1984. Relationships between woody debris and fish habitat in a small warmwater stream. Transactions of the American Fisheries Society 113: 716-726.

Angermeier, P.L., and I.J. Schlosser. 1989. Species-area relationships for stream fishes. Ecology 70 (5): 1450-1462.

Annear, T., I. Chisholm, H. Beecher, A. Locke, P. Aarestad, N. Burkhart, C. Coomer, C. Estes, J. Hunt, R. Jacobson, G. Jobsis, J. Kauffman, J. Marshall, K. Mayes, C. Stalnaker, and R. Wentworth. 2002. Instream Flows for Riverine Resource Stewardship. Instream Flow Council, Cheyenne, WY.

Annear, T.C., and A.L. Conder. 1984. Relative bias of several fisheries instream flow methods. North American Journal of Fisheries Management 4 (4B): 531-539.

Antonnson, T., and S. Gudjonsson. 2002. Variability in timing and characteristics of Atlantic salmon smolt in Icelandic rivers. Transactions of the American Fisheries Society 131 (4): 643-655.

Ardisson, P.-L., and E. Bouget. 1997. A study of the relationship between freshwater runoff and benthic abundance: A scale-oriented approach. Estuarine, Coastal and Shelf Science 45: 535-545.

Armitage, P.D. 1978. Downstream changes in the composition, numbers and biomass of bottom fauna below Cow Green Reservoir and in an unregulated .... Hydrobiologia 58: 145-156.

Armour, C.L. and J.G. Taylor. 1991. Evaluation of the Instream Flow Incremental Methodology by the U.S. Fish and Wildlife Service field users. Fisheries 16 (5): 36-43.

Armstrong, J.D., and S.W. Griffiths. 2001. Density-dependent refuge use among over-wintering wild Atlantic salmon juveniles. Journal of Fish Biology 58: 1524-1530.

Armstrong N.E. 1982. Responses of Texas estuaries to freshwater inflows, p. 103-120 in: V. Kennedy (ed.), Estuarine Comparisons. Academic Press, New York.

Arndt, S.K.A., R.A. Cunjak, and T.J. Benfey. 2002. Effect of summer floods and spatial-temporal scale on growth and feeding of juvenile Atlantic salmon in two New Brunswick streams. Transactions of the American Fisheries Society 131 (4): 607-622.

Arscott, D.B., K. Tockner, and J.V. Ward. 2001. Thermal heterogeneity along a braided floodplain river (Tagliamento River, northeastern Italy). Canadian Journal of Fisheries and Aquatic Sciences 58 (12): 2359-2373.

Arthington, A.H. 1998. Brisbane River trial of a flow restoration methodology (FLOWRESM). Pp. 35-50 in: A.H. Arthington and J.M. Zalucki, eds., Water for the Environment: Recent Approaches to Assessing and Providing Environmental Flows. AWWA, Brisbane.

Arthington, A.H., J.M. King, J.H. O'Keefe, S.E. Bunn, J. Day, B.J. Pusey, B.R. Bluhdorn, and R. Tharme. 1992. Development of an holistic approach for assessing environmental flow

requirements of riverine ecosystems. Pp. 69-76 in: J.J. Pilgrim and B.P. Hooper (eds.), Water Allocation for the Environment. The Centre for Water Policy Research, University of New England, Armidale.

Arthington, A.H., and R. Lloyd. 1998. Logan River trial of the building block methodology for assessing environmental flow requirements. Griffith University, Queensland, Australia.

Arthington, A.H., and B.J. Pusey. 1993. In-stream flow management in Australia: methods, deficiencies and future directions. Australian Biology 6: 52-60.

Arthington, A.H., and B.J. Pusey. In press (2003). Flow restoration and protection in Australian rivers. River Res. Appl. 19

Arthington, A.H., and J.M. Zalucki. 1998. Comparative evaluation of environmental flow assessment techniques: Review of methods. Occasional Paper 25/98. Land and Water Resources Research and Development Corporation, Canberra.

Asplund, K.T., and M.T. Gooch. 1988. Geomorphology and the distributional ecology of Fremont cottonwood (*Populus fremontii*) in a desert riparian canyon. Desert Plants 9 (1): 17-27.

Auble, G.T., J.M. Friedman, and M.L. Scott. 1994. Relating riparian vegetation to present and future streamflows. Ecological Applications 4 (3): 544-554.

Ault, T.R., and R.W.G. White. 1994. Effects of habitat structure and the presence of brown trout on the population density of *Galaxias truttaceus* in Tasmania, Australia. Transactions of the American Fisheries Society 123: 939-949.

Baber, M.J., D.L. Childers, K.J. Babbitt, and D.H. Anderson. 2002. Controls on fish distribution and abundance in temporary wetlands. Canadian Journal of Fisheries and Aquatic Sciences 59 (9): 1441-1450.

Bachman, R.A. 1984. Foraging behavior of free-ranging wild and hatchery brown trout in a stream. Transactions of the American Fisheries Society 113 (1): 1-32.

Bain, M.B. 1995. Habitat at the local scale: multivariate patterns for stream fishes. Bull.Fr. Peche Piscic 337/338/339: 165-177.

Bain, M.B., and J.M. Boltz. 1989. Regulated streamflow and warmwater stream fish: A general hypothesis and research agenda. Washington, D.C.: USFWS (Biological Report 89 [18]).

Bain, M.B., and J.T. Finn. 1982. An alternative approach to assessing habitat suitability for stream fish. Pp. 77-98 in: M.B. Bain, et al. (Eds.), An evaluation of methodologies for assessing the effects of flow fluctuation ... FWS/OBB3 82/63

Bain, M.B., and J.T. Finn. 1988. Streamflow regulation and fish community structure. Ecology 69 (2): 382-392.

Bain, M.B., and J.T. Finn. 1991. Analysis of microhabitat use by fish: investigator effect and investigator bias. Rivers 2 (1): 57-65.

Bain, M.B., J.T. Finn, and H.E. Booke. 1985. Quantifying stream substrate for habitat analysis studies. North American Journal of Fisheries Management 5: 499-506.

Bain, M.B., J.T. Finn, and H.E. Booke. 1988. Streamflow regulation and fish community structure. Ecology 69: 382-392.

Bain, M.B., J.T. Finn, L.J. Gerardi, Jr., M.R. Ross, and W.P. Saunders, Jr. 1982. An evaluation of methodologies for assessing the effects of flow fluctuations on stream fish. U.S. Fish and Wildlife Service Biological Report 82 (63): 1-199.

Bain, M.B., and V.T. Travnichek. 2000. Assessing impacts and predicting restoration benefits of flow alterations in rivers developed for hydroelectric power production. Pages B543-B552 in: M. Leclerc, H. Capra, S. Valentin, A. Boudreault, and Y. Cote, eds. Proceedings of the second IAHR symposium on habitat hydraulics, Ecohydraulics 2000. Institute National de la Recherche Scientifique-Eau, Ste-Foy, Quebec, Canada.

Baird, D., and J.J. Heymans. 1996. Assessment of ecosystem changes in response to freshwater inflow to the Kromme River estuary, St. Francis Bay, South Africa: a network analysis approach. Water SA 22: 307-318.

Baker, E.A., and T.G. Coon. 1997. Development and evaluation of alternative habitat suitability criteria for brook trout. Transactions of the American Fisheries Society 126 (1): 65-75.

Baker, J.A., K.J. Killgore, and R.L. Kasul. Aquatic habitats and fish communities in the lower Mississippi River. Reviews in Aquatic Sciences 3: 313-356.

Baker, V.R. 1977. Stream channel response to floods with examples from central Texas. Geological Society of America Bulletin 88: 1057-1071.

Baker, V.R., and D.F. Ritter. 1975. Competence of rivers to transport coarse bedload material. Geol. Soc. Am. Bull. 86: 975-978.

Baker, W.L. 1990. Climatic and hydrologic effects on the regeneration of *Populus angustifolia* James along the Animas River, Colorado. Journal of Biogeography 17 (1): 59-73.

Bakkala, R.G. 1970. Synopsis of biological data on the chum salmon *Oncorhynchus keta* (Walbaum) 1792. U.S. Fish Wildl. Serv., Cir. 315. 89 p.

Baldes, R.J. 1969. Microhabitat velocity occupied by trout. M.S. thesis, Colorado State University, Fort Collins. 33 pp.

Baldes, R.J., and R.E. Vincent. 1969. Physical parameters of microhabitats occupied by brown trout in an experimental flume. Transactions of the American Fisheries Society 98 (2): 230-238.

Baldrige, J.E., and D. Amos. 1981. A technique for determining fish habitat suitability criteria: a comparison between habitat utilization and availability. Pages 251-258 in N.B. Armantrout, editor. Acquisition and utilization of aquatic habitat inventory information. Proceedings of a symposium, Portland, Oregon. American Fisheries Society, Western Division, Bethesda.

Baldwin, D.S., and A.M. Mitchell. 2000. The effects of drying and re-flooding on the sediment and soil nutrient dynamics of lowland river-floodplain systems: a synthesis. Regulated Rivers: Research and Management 16: 457-467.

Baltz, D.M., and P.B. Moyle. 1984. Segregation by species and size class of rainbow trout (*Salmo gairdneri*) and Sacramento sucker (*Catostomus occidentalis*)... Environmental Biology of Fishes 10: 101-110.

Baltz, D.M., B. Vondracek, L.R. Brown, and P.B. Moyle. 1987. Influence of temperature on microhabitat choice by fishes in a California stream. Transactions of the American Fisheries Society 116 (1): 12-20.

Baltz, D.M., B. Vondracek, L.R. Brown, and P.B. Moyle. 1991. Seasonal changes in microhabitat selection by rainbow trout in a small stream. Transactions of the American Fisheries Society 120 (2): 166-176.

Bancroft, J.S., and P. Turchin. 2003. An experimental test of fragmentation and loss of habitat with *Oryzaephilus surinamensis*. Ecology 84 (7): 1756-1767.

Banks, J.W. 1969. A review of the literature on the upstream migration of adult salmonids. Journal of Fish Biology 1: 85-136.

Baran, P., M. Delacoste, R. Dauba, J.-M. Lascaux, and A. Belaud. 1995. Effects of reduced flow on brown trout populations downstream of dams in the French Pyrenees. Regulated Rivers: Research and Management 10: 347-361.

Barbier, E.B., and J.H. Thompson. 1998. The value of water: Floodplain versus large-scale irrigation benefits in northern Nigeria. Ambio 27: 434-440.

Bardonnet, A., P. Gaudin, and H. Persat. 1991. Microhabitats and downstream migration of young grayling (*Thymallus thymallus* L.). Freshwater Biology 26: 365-376.

Barinaga, M. 1996. A recipe for river recovery? Science 273: 1648-1650.

Barnard, S., R.J. Wyatt, and N.J. Milner. 1995. The development of habitat models for stream salmonids, and their application to fisheries management. Bull. Fr. Peche Piscic.337/338/339: 375-385.

Barrett, P.J., and O.E. Maughan. 1994. Habitat preferences of introduced smallmouth bass in a central Arizona stream. North American Journal of Fisheries Management 14 (1): 112-118.

Baron, J.S., N.L. Poff, P.L. Angermeier, C.N. Dahm, P.H. Gleick, N.G. Hairston, R.B. Jackson, C.A. Johnston, B.D. Richter, and A.D. Steinman. 2002. Meeting ecological and societal needs for freshwater. Ecological Applications 12: 1247-1260.

Bart, H.L., Jr. 1989. Fish-habitat association in an Ozark stream. Environmental Biology of Fishes 24: 173-186.

Bartholow, J.M., J.L. Laake, C.B. Stalnaker, and S.C. Williamson. 1993. A salmonid population model for evaluating alternative flow regimes. Rivers 4 (2): 265-279.

Bartholow, J., and W. Slauson; B. Parsons and W. Hubert. 1990. Questions on habitat preference. North American Journal of Fisheries Management 10 (3): 362-363.

Bartholow, J.M., and T.J. Waddle. 1995. The search for an optimum flow regime using a salmon population model. Pp. 331-339 in: J.J. Cassidy, ed. Waterpower '95: proceedings of the international conference on hydropower. American Society of Civil Engineers, New York.

Bartsch, N., C.P. Gubala, and T.B. Hardy. 1996. Determining habitat criteria for the endangered fountain darter through aquatic habitat mapping and hydrologic modeling. *In*: Proceedings of the 2nd International Symposium on Habitat Hydraulics. June 1996, Quebec, Canada. B251-B262

Bartz, B. 1990. Sources of uncertainty and effect on interpretation of results in the development of instream flows for fisheries habitat. Master's thesis, Utah State University, Logan.

Bate, G.C., and J.B. Adams. 2000. The effects of a single freshwater release into the Kromme estuary: Overview and interpretation for the future. Water SA 26: 329-332.

Bateman, D.S., and H.W. Li. 2001. Nest site selection by reticulate sculpin in two streams of different geologies in the central Coast Range of Oregon. Transactions of the American Fisheries Society 130 (5): 823-832.

Baxter, C.V., C.A. Frissell, and F.R. Hauer. 1999. Geomorphology, logging roads, and the distribution of bull trout spawning in a forested river basin: implications for management and conservation. Transactions of the American Fisheries Society 128: 854-867.

Baxter, C.V., and F.R. Hauer. 2000. Geomorphology, hyporheic exchange, and selection of spawning habitat by bull trout (*Salvelinus confluentus*). Canadian Journal of Fisheries and Aquatic Sciences 57 (7): 1470-1481.

Baxter, J.S., and J.D. McPhail. 1996. Bull trout spawning and rearing habitat requirements: summary of the literature. Province of British Columbia, Fisheries Technical Circular 98, Victoria.

Baxter, J.S., and J.D. McPhail. 1997. Diel microhabitat preferences of juvenile bull trout in an artificial stream channel. North American Journal of Fisheries Management 17 (4): 975-980.

Baxter, J.S., and J.D. McPhail. 1999. The influence of redd site selection, groundwater upwelling, and over-winter incubation temperature on survival of bull trout (*Salvelinus confluentus*) from egg to alevin. Canadian Journal of Fisheries and Aquatic Sciences 77: 1233-1239.

Bayley, P.B. 1988. Factors affecting growth rates of young tropical floodplain fishes: seasonality and density-dependence. Environmental Biology of Fishes 21: 127-142.

Bayley, P.B. 1991. The flood pulse advantage and the restoration of river-floodplain systems. Regulated Rivers: Research and Management 6: 75-86.
Bayley, P.B. 1995. Understanding large river-floodplain ecosystems. BioScience 45: 153-158.

Bayley, P.B., and M. Petrere, Jr. 1989. Amazon fisheries: assessment method, current status and management options. Pp. 385-398 in: Dodge, D.P. (Ed.) Proceedings of the International Large Rivers Symposium. Can. Special Publ. Fish. Aquatic Sciences 106.

Beacham. T.D. 1988. A genetic analysis of early development in pink (*Oncorhynchus gorbuscha*) and chum salmon (*O. keta*) at three different temperatures. Genome 30:89-96.

Beacham, T.D. 1993. Competition between juvenile pink (*Oncorhynchus gorbuscha*) and chum salmon (*Oncorhynchus keta*) and its effect on growth and survival. Canadian Journal of Zoology 71: 1270-1274.

Beacham, T.D., and C.B. Murray. 1987b. Adaptive variation in body size, age, morphology, egg size and development biology of chum salmon (*Oncorhynchus keta*) in British Columbia. Canadian Journal of Fisheries and Aquatic Sciences 44: 244-261.

Beacham, Terry D., and Clyde B. Murray. 1990. Temperature, egg size, and development of embryos and alevins of five species of Pacific salmon: a comparative analysis. Transactions of the American Fisheries Society 119 (6): 927-945.

Beamish, F.W.H. 1980. Swimming performance and oxygen consumption of the charrs. Pp. 739-748 in: Balon, E.K. (Ed.), Charrs, salmonid fishes of the genus *Salvelinus*. Dr. W. Junk, The Hague, The Netherlands.

Beamish, R.J., Neville, Thompson, Harrison, and St. John. 1994. A relationship between Fraser River discharge and interannual production of Pacific herring in the Strait of Georgia. Canadian Journal of Fisheries and Aquatic Sciences 51 (12): 2843-2855.

Beard, T.D., Jr., and R.F. Carline. 1991. Influence of spawning and other stream habitat features on spatial variability of wild brown trout. Transactions of the American Fisheries Society 120 (6): 711-722.

Beasley, C.A., and J.E. Hightower. 2000. Effects of a low-head dam on the distribution and characteristics of spawning habitat used by striped bass and American shad. Transactions of the American Fisheries Society 129 (6): 1316-1330.

Bebars, M.I., and G.Lasserre. 1983. Analysis of the Egyptian marine and lagoon fisheries from 1962-1976, in relation to the construction of the Aswan Dam (completed in 1969). Oceanologica Acta 6: 417-426.

Bechera, J.A., M. Leclerc, L. Belzile, and P. Boudreau. 1994. A numerical method for modeling the dynamics of the spawning habitat of landlocked salmon. Proceedings of the 1st International Symposium on Habitat Hydraulics. August 18-20, 1994. Trondheim, Norway.

Becker, C.D., D.A. Neitzel, and D.H. Fickieson. 1982. Effects of dewatering on chinook salmon redds: tolerance of four developmental phases to daily dewaterings. Transactions of the American Fisheries Society 111 (5): 624-637.

Becker, C.D., D.A. Neitzel, and C.S. Abernethy. 1983. Effects of dewatering on chinook salmon redds: tolerance of four developmental phases to one-time dewatering. North American Journal of Fisheries Management 3: 373-382.

Beebe, J.T. 1996. Fluid speed variability and the importance to manage fish habitat in rivers. Regulated Rivers: Research and Management 12: 63-79.

Beecher, H.A. 1981. Instream flows and steelhead production in western Washington. Proceedings of the Western Association of Fish and Wildlife Agencies: 395-410. Kalispell, Montana.

Beecher, H.A. 1987. Simulating trout feeding stations in instream flow models. Pages 71-82 in J.F. Craig and J.B. Kemper, editors. Regulated Streams: Advances in Ecology. Plenum Press, New York and London.

Beecher, H.A. 1990. Standards for instream flow. Rivers 1 (2): 97-109.

Beecher, H.A. 1991. PHABSIM in Hawaii. Rivers 2 (1): 79-82.

Beecher, H.A. 1992. Assessing instream flow needs in plunge pools. Unpublished paper presented March 25, Pacific Fishery Biologists, annual meeting, Blaine, Washington.

Beecher, H.A. 1995. Comparison of preference curves and habitat utilization curves based on simulated habitat use. Rivers 5 (2): 109-120.

Beecher, H.A., B.A. Caldwell, J.P. Carleton, D. Catterson, R. Willms, and T.H. Johnson. ms. Development and evaluation of composite depth and velocity preferences of steelhead parr in Washington streams.

Beecher, H.A., B.A. Caldwell, and S.B. DeMond. 2002. Evaluation of depth and velocity preferences of juvenile coho salmon in Washington streams. North American Journal of Fisheries Management 22 (3): 785-795.

Beecher, H.A., J.P. Carleton, and T.H. Johnson. 1995. Utility of depth and velocity preferences for predicting steelhead parr distribution at different flows. Transactions of the American Fisheries Society 124: 935-938.

Beecher, H.A., J.P. Carleton, and T.H. Johnson. 1997. Testing the independence of microhabitat preferences and flow: response to comments. Transactions of the American Fisheries Society 126 (3): 541-542.

Beecher, H.A., T.H. Johnson, and J.P. Carleton. 1993. Predicting microdistributions of steelhead parr from depth and velocity criteria: Test of an assumption of the Instream Flow Incremental Methodology. Canadian Journal of Fisheries and Aquatic Sciences 50 (11): 2380-2387.

Beechie, T.J., E. Beamer, and L. Wasserman. 1994. Estimating coho salmon rearing habitat and smolt production losses in a large river basin, and implications for restoration. North American Journal of Fisheries Management 14: 797-811.

Beechie, T.J., and T.H. Sibley. 1997. Relationships between channel characteristics, woody debris, and fish habitat in northwest Washington streams. Transactions of the American Fisheries Society 126: 217-229.

Beeman, J.W., D.W. Rondorf, J.C. Faler, and 3 others. 1991. Assessment of smolt condition for travel time analysis. U.S. Dept. of Energy, BPA, Annual Report 1990, Division of Fish & Wildlife.

Beer, W.N., and J.J. Anderson. 2001. Effect of spawning day and temperature on salmon emergence: interpretations of a growth model for Methow River chinook. Canadian Journal of Fisheries and Aquatic Sciences 58 (5): 943-949.

Beland, K.F., R.M. Jordan, and A.L. Meister. 1982. Water depth and velocity preference of spawning Atlantic salmon in Maine rivers. North American Journal of Fisheries Management 2 (1): 11-13.

Bell, E., W.G. Duffy, and T.D. Roelofs. 2001. Fidelity and survival of juvenile coho salmon in response to a flood. Transactions of the American Fisheries Society 130 (3): 450-458.

Benech, V., and M. Penaz. 1995. An outline of lateral fish migrations in the central delta of the Niger River, Mali. Hydrobiologia 303: 149-157.

Benke, A.C. 1990. A perspective on America's vanishing streams. Journal of the North American Benthological Society 9: 77-88.

Benke, A.C., I. Chaubey, G.M. Ward, and E.L. Dunn. 2000. Flood pulse dynamics of an unregulated river floodplain in the southeastern U.S. coastal plain. Ecology 81 (10): 2730-2741.
Benson, N.G. 1953. The importance of ground water to trout populations in the Pigeon River, Michigan. Transactions of the North American Wildlife Conference 18: 269-281.

Benson, N.G. 1955. Observations on anchor ice in a Michigan trout stream. Ecology 36: 529-530.

Benson, N.G. 1981. The freshwater inflow to estuaries issue. Fisheries 6 (5): 8-10.

Benstead, J.P., J.G. March, C.M. Pringle, and F.S. Scatena. 1999. Effects of a low-head dam and water abstractions on migratory tropical stream biota. Ecological Applications 9: 656-668.

Berejikian, B.A., W.T. Fairgrieve, P. Swanson, and E.P. Tezak. 2003. Current velocity and injection of GnRHa affect reproductive behavior and body composition of captively reared offspring of wild chinook salmon (*Oncorhynchus tshawytscha*). Canadian Journal of Fisheries and Aquatic Sciences 60 (6): 690-699.

Berg, N.H. 1994. Ice in stream pools in California's central Sierra Nevada: spatial and temporal variability and reduction in trout habitat availability. North American Journal of Fisheries Management 14: 372-384.

Berggren, T.J, and M.J. Filardo. 1993. An analysis of variables influencing the migration of juvenile salmonids in the Columbia River Basin. North American Journal of Fisheries Management 13 (1): 48-63.

Berube, P., M. Leclerc, and L. Belzile. 2002. Presentation of an ecohydrological method for determining the conservation flow for fish habitats in Quebec's rivers (Canada). Proceedings of the 4th IAHR Int. Symposium on Ecohydraulics, Capetown, South Africa.

Beschta, R.L. 1990. Effects of fire on water quantity and quality. Pp. 219-232 in: J.D. Walstad, S.R. Radosevich, and D.V. Sandberg (eds.), Natural and prescribed fire in Pacific Northwest forests. Oregon State University Press, Corvallis.

Beschta, R.L., and W.J. Jackson. 1979. The intrusion of fine sediments into a stable gravel bed. J. Fish. Research Board of Canada 36: 204-210.

Beschta, R.L., and W.S. Platts. 1986. Morphological features of small streams: significance and function. Water Res. Bull. 22: 369-379.

Bestgen, K.R. 1997. Interacting effects of physical and biological processes on recruitment of Colorado squawfish. Ph.D. dissertation, Colorado State University, Fort Collins.

Bevelhimer, M.S. 1996. Relative importance of temperature, food, and physical structure to habitat choice by smallmouth bass in laboratory experiments. Transactions of the American Fisheries Society 125 (2): 274-283.

Biggs, B.J.F., D.G. Goring, and V.I. Nikora. 1998. Subsidy and stress responses of stream periphyton to gradients of water velocity as a function of community growth form. Journal of Phycology 34: 598-607.

Binns, N.A., and F.M. Eiserman. 1977. A predictive model for quantification of fluvial trout habitat. Journal of the Colorado-Wyoming Academy of Science 9(1): 8-9.

Binns, N.A., and F.M. Eiserman. 1979. Quantification of fluvial trout habitat in Wyoming. Transactions of the American Fisheries Society 108 (3): 215-228.

Bischoff, A., and C. Wolter. 2001. The flood of the century on the River Oder: effects on the 0+ fish community and implications for floodplain restoration. Regulated Rivers: Research and Management 17: 171-190.

Bishop, A.B., T.B. Hardy, and B.D. Glabou. 1990. Analyzing instream flow trade-offs for small hydropower development. Rivers 1: 173-182.

Bisson, P.A., J.L. Nielsen, R.A. Palmason, and L.E. Grove. 1982. A system of naming habitat types in small streams, with examples of habitat utilization by salmonids during low streamflow. Pp. 62-73 in: N.B. Armantrout (ed), Acquisition and utilization of aquatic habitat inventory information. American Fisheries Society, Western Division, Bethesda, Maryland.

Bisson, P.A., K. Sullivan, and J.L. Nielsen. 1988. Channel hydraulics, habitat use, and body form of juvenile coho salmon, steelhead, and cutthroat trout in streams. Transactions of the American Fisheries Society 117 (3): 262-273.

Biswell, H.N., and A.M. Schultz. 1958. Effects of vegetation removal on spring flow. California Fish and Game 44 (3): 211-230.

Bjornn, T.C. 1971. Trout and salmon movements in two Idaho streams related to temperature, food, stream flow, cover and population density. Transactions of the American Fisheries Society 100: 423-438.

Bjornn, T.C., and D.W. Reiser. 1991. Habitat requirements of salmonids in streams. Pp. 83-138 in: W.R. Meehan (ed.) Influences of forest and rangeland management on salmonid fishes and their habitats. American Fisheries Society Special Publication 19, Bethesda, Maryland.

Bleed, A.S. 1987. Limitations of concepts used to determine instream flow requirements for habitat maintenance. Water Res. Bull. 23: 1173-1178.
Blinn, D.W., J.P. Shannon, L.E. Stevens, and J.P. Carder. 1995. Consequences of fluctuating discharge for lotic communities. Journal of the American Benthological Society 14: 233-248.

Blumberg, A.F., and G.L. Mellor. 1980. A coastal ocean numerical model. Pp. 203-214 in: J. Sundermann and K.P. Holz (editors), Mathematical Modeling of Estuarine Physics, Proceedings of the International Symposium, Hamburg, 24-26 August 1978. Springer-Verlag, Berlin.

Blumberg, A.F., and G.L. Mellor. 1987. A description of a three-dimensional coastal circulation model. Pp. 1-16 in: N.S. Heaps (editor), Three-dimensional coastal ocean models. American Geophysical Union, Washington, D.C.

Bohlin, T. 1977. Habitat selection and intercohort competition of juvenile sea-trout (*Salmo trutta*). Oikos 29: 112-117.

Bohlin, T., C. Dellefors, U. Faremo, and A. Johlander. 1994. The energetic equivalence hypothesis and the relation between population density and body size in stream-living salmonids. American Naturalist 143: 478-493.

Boisclair, D. 2001. Fish habitat modeling: from conceptual framework to functional tools. Canadian Journal of Fisheries and Aquatic Sciences 58 (1): 1-9.

Bonneau, J.L., and D.L. Scarnecchia. 1998. Seasonal and diel changes in habitat use by juvenile bull trout (*Salvelinus confluentus*) and cutthroat trout (*Oncorhynchus clarki*) in a mountain stream. Canadian Journal of Zoology 76: 783-790.

Boon, P.J. 1988. The impact of river regulation on invertebrate communities in the U.K. Regulated Rivers: Research and Management 2: 389-409.

Boon, P.J. 1993. Distribution, abundance and development of trichoptera larvae in the River North Tyne following the commencement of hydro... Regulated Rivers: Research and Management 8: 211-224.

Borchardt, D. 1993. Effects of flow and refugia on drift loss of benthic macroinvertebrates: implications for habitat restoration in lowland streams. Freshwater Biology 29: 221-227.

Bornman, T.G., J.B. Adams, and G.C. Bate. 2002. Freshwater requirements of a semi-arid supratidal and floodplain saltmarsh. Estuaries 25 (6B): 1394-1405.

Bosch, J.M., and J.D. Hewlett. 1982. A review of catchment experiments to determine the effect of vegetation changes on water, yield and evaporation. J. Hydrol. 55: 3-23.

Boss, S.M., and J.S. Richardsom. 2002. Effects of food and cover on the growth, survival, and movement of cutthroat trout (*Oncorhynchus clarki*) in coastal streams. Canadian Journal of Fisheries and Aquatic Sciences 59 (6): 1044-1053.

Boudreau, P., G. Bourgeois, M. Lecleerc, A. Boudreault, and L. Belzile. 1996. Two-dimensional habitat model validation based on spatial fish distribution: application to juvenile Atlantic salmon of Moisie River (Quebec, Canada). *In*: Ecohydraulics 2000: Proceedings of the 2nd International Symposium on Habitat Hydraulics, Quebec, Que., June 1996. Edited by M. Leclerc et al. INRS-Eau, Quebec, Que. Pp. B365-380.

Boulton, A.J. 1989. Over-summering refuges of aquatic macroinvertebrates in two intermittent streams in central Victoria. Transactions of the Royal Society of South Australia 113: 23-34.

Boulton, A.J., S. Findlay, P. Marmonier, E.H. Stanley, and H.M. Valett. 1998. The functional significance of the hyporheic zone in streams and rivers. Annu. Rev. Ecol. Syst. 29: 59-81.

Boulton, A.J., and P.S. Lake. 1992. The ecology of two intermittent streams in Victoria, Australia. III. Temporal changes in faunal composition. Freshwater Biology 27: 123-138.

Boulton, A.J., and L.N. Lloyd. 1992. Flooding frequency and invertebrate emergence from dry floodplain sediments of the River Murray, Australia. Regul. Rivers Res. Manag. 7: 137-151.

Boulton, A.J., C.G. Peterson, N.B. Grimm, and S.G. Fisher. 1992. Stability of an aquatic macroinvertebrate community in a multiyear hydrologic disturbance regime. Ecology 73: 2192-2207.

Bourgeois, G., R.A. Cunjak, D. Caissie, and N. El-Jabi. 1996. A spatial and temporal evaluation of PHABSIM in relation to measured density of juvenile Atlantic salmon in a small stream. North American Journal of Fisheries and Aquatic Science 16 (1): 154-166.

Boussu, M.F. 1954. Relationship between trout populations and cover on a small stream. Journal of Wildlife Management 18: 229-239.

Bovee, K.D. 1978. Probability-of-use criteria for the family Salmonidae. Instream Flow Information Paper No. 4. Washington, D.C.: U.S. Fish and Wildlife Service (FWS/OBS-78/07).

Bovee, K.D. 1978. The incremental method of assessing habitat potential for coolwater species, with management implications. American Fisheries Society Special Publication 11: 340-346.

Bovee, K.D. 1982. A guide to stream habitat analysis using the instream flow incremental methodology. Instream Flow Information Paper No. 12. U.S. Fish and Wildlife Service, FWS/OBS-82/26, Washington, D.C.

Bovee, K.D. 1985. Evaluation of the effects of hydropeaking on aquatic macroinvertebrates using PHABSIM. Pp. 236-241 in: F.W. Olson, R.G. White, and R.H. Hamre (eds.), Proceedings of the Symposium on Small Hydropower and Fisheries. American Fisheries Society, Bethesda, Maryland.

Bovee, K.D. 1986. Development and evaluation of habitat suitability criteria for use in the Instream Flow Incremental Methodology. Instream Flow Information Paper No. 21. U.S. Fish and Wildlife Service, Biological Report 86 (7), Washington, D.C.

Bovee, K.D. 1988. Use of the Instream Flow Incremental Methodology to evaluate influences of microhabitat variability on trout populations. Presented at annual meeting, Western Division, American Fisheries Society, Albuquerque, New Mexico, July 10-13.

Bovee, K.D. 1995. A comprehensive overview of the Instream Flow Incremental Methodology. National Biological Service, Fort Collins, Colorado. 322 pp.

Bovee, K.D. 1996. Perspectives on two-dimensional river habitat models: the PHABSIM experience. Pp. B149-B162 in: M. Leclerc, H. Capra, S. Valentin, A. Boudreault, and Y. Cote. Editors. Ecohydraulics 2000, 2nd International Symposium on Habitat Hydraulics, Quebec. INRS-Eau, co-published with FQSA, IAHR/AIRH.

Bovee, K.D., and T. Cochnauer. 1977. Development and evaluation of weighted criteria, probability-of-use curves for instream flow assessments; fisheries. Instream Flow Information Paper No. 3. U.S. Fish and Wildlife Service, FWS/OBS-77/63, Washington, D.C.

Bovee, K.D., B.L. Lamb, J.M. Bartholow, C.D. Stalnaker, J. Taylor, and J. Henriksen. 1998. Stream habitat analysis using the Instream Flow Incremental Methodology. U.S. Geological Survey, Biological Resources Division, Information and Technical Report USGS/BRD-1998-0004. viii+131 pp.

Bovee, K.D., and R.T. Milhous. 1978. Hydraulic simulation in instream flow studies: theory and technique. Instream Flow Information Paper 5, U.S. Fish and Wildlife Service FWS/OBS-78/33.

Bovee, K.D., T.J. Newcomb, and T.G. Coon. 1994. Relations between habitat variability and population dynamics of bass in the Huron River, Michigan. National Biological Survey Biological Report 21. 63 pp.

Bovee, K.D., and M.L. Scott. 2002. Implications of flood pulse restoration for *Populus* regeneration on the upper Missouri River. River Research and Applications 18 (3): 287-298.

Bovee, K., and J.R. Zuboy, editors. 1988. Proceedings of a workshop on the development and evaluation of habitat suitability criteria. U.S. Fish and Wildlife Service, Biological Report 88 (11), Washington, D.C.

Bowen, M.D. 1996. Habitat selection and movement of a stream-resident salmonid in a regulated river and tests of four bioenergetic optimization models. Dissertation. Utah State University, Logan, Utah, USA.

Bowen, Z.H. 1996. Relations between fishes and habitat in the Tallapoosa River system, Alabama. Ph.D. dissertation, Auburn University, Auburn, Alabama. 109 pp.

Bowen, Z.H., M.C. Freeman, and K.D. Bovee. 1998. Evaluation of generalized habitat criteria for assessing impacts of altered flow regimes on warmwater fishes. Transactions of the American Fisheries Society 127 (3): 455-468.

Bowen, Z.H., K.D. Bovee, and T.J. Waddle. 2003. Effects of flow regulation on shallow-water habitat dynamics and floodplain connectivity. Transactions of the American Fisheries Society 132 (4): 809-823.

Bowlby, J.N., and J.C. Roff. 1986. Trout biomass and habitat relationships in southern Ontario streams. Transactions of the American Fisheries Society 115 (4): 503-514.

Bozek, Michael A. 1990. Generality of habitat models for the Colorado River cutthroat trout fry and the influence of adults on habitat choice and.... Ph.D. dissertation, University of Wyoming, Laramie, Wyoming. 200 pp.

Bozek, M.A., and W.A. Hubert. 1992. Segregation of resident trout in streams as predicted by three habitat dimensions. Canadian Journal of Zoology 70: 886-890.

Bozek, M.A., and F.J. Rahel. 1991. Assessing habitat requirements of young Colorado River cutthroat trout using macrohabitat and microhabitat approaches. Transactions of the American Fisheries Society 120 (5): 571-581.

Bozek, M.A., and F.J. Rahel. 1992. Generality of microhabitat suitability models for young Colorado River cutthroat trout (*Oncorhynchus clarki pleuriticus*) across sites and among years in Wyoming streams. Canadian Journal of Fisheries and Aquatic Sciences 49 (3): 552-564.

Braaten, P.J., P.D. Dey, and T.C. Annear. 1997. Development and evaluation of bioenergetic-based suitability criteria for trout. Regulated Rivers: Research and Management 13: 345-356.

Braaten, P.J., and C.S. Guy. 1999. Relations between physicochemical factors and abundance of fishes in tributary confluences of the lower channelized Missouri River. Transactions of the American Fisheries Society 128 (6): 1213-1221.

Braddock, J.C. 1945. Some aspects of the dominance-subordination relationship in fish. Physiological Zoology 18: 176-195.

Bradford, M.J. 1994. Trends in the abundance of chinook salmon (*Oncorhynchus tshawytscha*) of the Nechako River, British Columbia. Canadian Journal of Fisheries and Aquatic Sciences 51 (4): 965-973.

Bradford, M.J., G.C. Taylor, J.A. Allen, and P.S. Higgins. 1995. An experimental study of the stranding of juvenile coho salmon and rainbow trout during rapid flow decreases under winter ... North American Journal of Fisheries Management 15 (2): 473-479.

Bradley, C.E., and D.G. Smith. 1984. Meandering channel response to altered flow regime: Milk River, Alberta, and Montana. Water Resources Research 20: 1913-1920.

Bradley, C.E., and D.G. Smith. 1986. Plains cottonwood recruitment and survival on a prairie meandering river floodplain, Milk River, southern Alberta and northern Montana. Canadian Journal of Botany 64: 1433-1442.

Bramblett, R.G., and R.G. White. 2001. Habitat use and movements of pallid and shovelnose sturgeon in the Yellowstone and Missouri Rivers in Montana and North Dakota. Transactions of the American Fisheries Society 130 (6): 1006-1025.

Bravard, J.P., C. Amoros, and G. Pautou. 1986. Impact of civil engineering works on the successions of communities in a fluvial system. Oikos 47: 92-111.

Bravender, B.A., and C.S. Shirvell. 1989. Depth, velocity, and substrate measurements of Pacific salmon habitat at three streamflows in Kloiya Creek, B.C., 1984-1 Can. Data Rep. Fish. Aquat. Sci. No. 758. 67 pp.

Bray, K.E. 1966. Habitat models as tools for evaluating historic change in the St. Marys River. Canadian Journal of Fisheries and Aquatic Sciences 53 (Suppl. 1): 88-98.

Brayshaw, J.D. 1966. The effect of river discharge on inland fisheries. Pp. 102-118 in: P.C.G. Isaac (editor), Symposium on River Management. McLaren, London.

Breck, S.W., K.R. Wilson, and D.C. Anderson. 2003. Beaver herbivory and its effect on cottonwood trees: Influence of flooding along matched regulated and unregulated rivers. Rivers Research and Applications 19 (1): 43-58.

Bremm, D.J. 1988. Comparison of stream velocity simulations for the IFG-4 model three-flow, one-flow, and no-velocity options. M.S. thesis, Humboldt State University, Arcata, California. 54 pp.

Bremset, G. 2000. Seasonal and diel changes in behaviour, microhabitat use and preferences by young pool-dwelling Atlantic salmon, *Salmo salar*, and brown trout, *Salmo trutta*. Environmental Biology of Fishes 59: 163-179.

Brenkman, S.J. 1998. Factors influencing spawning migration of bull trout (Salvelinus confluentus) in the North Fork Skokomish River, Olympic National Park, Washington. M.S. thesis, Oregon State University, Corvallis. 92 pp.

Brenkman, S.J., G.L. Larson, and R.E. Gresswell. 2001. Spawning migration of lacustrine-adfluvial bull trout in a natural area. Transactions of the American Fisheries Society 130 (5): 981-987.

Brett, J.R., and N.R. Glass. 1973. Metabolic rates and critical swimming speeds of sockeye salmon (*Oncorhynchus nerka*). Journal of the Fisheries Research Board of Canada 30: 379-387.

Brizga, S.O., A.H. Arthington, B.J. Pusey, M.J. Kennard, S.J. Mackay, G.L. Werren, N.M. Craigie, and S.J. Choy. 2002. Benchmarking, a "top-down" methodology for assessing environmental flows in Australian rivers. *In*: Proceedings of International Conference on Assessing Environmental Flows for Rivers. Southern Waters Consulting, Cape Town, South Africa.

Brock, D.A. 2001. Nitrogen budget for low and high freshwater inflows, Nueces estuary, Texas. Estuaries 24: 509-521.

Brooker, M.P. 1981. The impact of impoundments on the downstream fisheries and general ecology of rivers. Adv. Appl. Ecol. 6: 91-152.

Brooker, M.P., and R.J. Hemsworth. 1978. The effect of the release of an artificial discharge of water on invertebrate drift in the R. Wye, Wales. Hydrobiologia 59: 155-163.

Brouder, M.J. 2001. Effects of flooding on recruitment of roundtail chub, *Gila robusta*, in a southwestern river. Southwestern Naturalist 46: 302-310.

Brousseau, C.S., and G.A. Goodchild. 1989. Fisheries and yields in the Moose River basin, Ontario. Pp. 145-158 in: D.P. Dodge (editor), Proceedings of the International Large River Symposium. Can. Spec. Publ. Fish. Aquatic Sci. 106.

Browder, J.A. 1985. Relationship between pink shrimp production on the Tortugas grounds and water flow patterns in the Florida Everglades. Bulletin of Marine Science 37: 839-856.

Browder, J.A., and D. Moore. 1981. A new approach to determining the quantitative relationship between fishery production and the flow of fresh water to estuaries, p. 403-430 in: R. Cross and D. Williams (eds.), Proceedings of the National Symposium on Freshwater Inflow to Estuaries, FWS/OBS-81/04. U.S. Fish and Wildlife Service, Office of Biological Services, Washington, D.C.

Browder, J.A., Z. Zein-Eldin, M.M. Criales, M.B. Robblee, S. Wong, T.L. Jackson, and D. Johnson. 2002. Dynamics of pink shrimp (*Farfantepenaeus duorarum*) recruitment potential in relation to salinity and temperature in Florida Bay. Estuaries 25 (6B): 1355-1371.

Brown, D.E., C.J. Lowe, and F. Hausler. 1977. Southwestern riparian communities: their biotic importance and management in Arizona... U.S. Forest Service Gen. Tech. Report RM-43: 201-211. Symposium.

Brown, J.K. 1990. Effects of fire on streams. Pp. 106-110 in: F. Richardson and R.H. Hamre (eds), Wild Trout IV: proceedings of the symposium. Trout Unlimited, Arlington, Virginia.

Brown, L.R., and A.M. Brasher. 1995. Effect of predation by Sacramento squawfish (*Ptychocheilus grandis*) on habitat choice of California roach (*L. s.*) and rainbow trout (*Oncorhynchus mykiss*) in artificial ... Canadian Journal of Fisheries and Aquatic Sciences 52 (8): 1639-1646.

Brown, L.R., and T. Ford. 2002. Effects of flow on the fish communities of a regulated California river: implications for managing native fishes. River Research and Applications 18 (4): 331-342.

Brown, L.R., and P.B. Moyle. 1991. Changes in habitat and microhabitat partitioning within an assemblage of stream fishes in response to predation by Sacramento squawfish (*Ptychocheilus grandis*). Canadian Journal of Fisheries and Aquatic Sciences 48 (5): 849-856.

Brown, R.S., and W.C. Mackay. 1995. Fall and winter movements of and habitat use by cutthroat trout in the Ram River, Alberta. Transactions of the American Fisheries Society 124 (6): 873-885.

Brown, R.S., G. Power, and S. Beltaos. 2001. Winter movements and habitat use of riverine brown trout, white sucker, and common carp in relation to flooding and ice break-up. Journal of Fish Biology 59: 1126-1141.

Brown, S.K., K.R. Buja, S.H. Jury, M.E. Monaco, and A. Banner. 2000. Habitat suitability index models for eight fish and invertebrate species in Casco and Sheepscot bays, Maine. North American Journal of Fisheries Management 20: 408-435.

Brunke, M., and T. Gonser. 1997. The ecological significance of exchange processes between rivers and groundwater. Freshwater Biol. 37: 1-33.

Brussock, P.P., A.V. Brown, and J.C. Dixon. 1985. Channel form and stream ecosystem models. Water Res. Bull. 21: 859-866.

Brusven, M.A., W.R. Meehan, and J.F. Ward. 1986. Summer use of simulated undercut banks by juvenile chinook salmon in an artificial Idaho channel. North American Journal of Fisheries Management 6 (1): 32-37.

Bugert, R.M. 1985. Microhabitat selection of juvenile salmonids in response to stream cover alteration and predation. M.S. thesis, University of Idaho, Moscow, Idaho. 95 pp.

Bugert, R.M., and T.C. Bjornn. 1991. Habitat use by steelhead and coho salmon and their responses to predators and cover in laboratory streams. Transactions of the American Fisheries Society 120 (4): 486-493.

Bugert, R.M., T.C. Bjornn, and W.R. Meehan. 1991. Summer habitat use by young salmonids and their responses to cover and predators in a small southeast Alaska stream. Transactions of the American Fisheries Society 120 (4): 474-485.

Bulger, A.J., B.P. Hayden, M.E. Monaco, D.M. Nelson, and M.G. McCormick-Ray. 1993. Biologically-based estuarine salinity zones derived from multivariate analysis. Estuaries 16: 311-322.

Bult, T.P., S.C. Riley, R.L. Haedrich, R.J. Gibson, and J. Heggenes. 1999. Density-dependent habitat selection by juvenile Atlantic salmon (*Salmo salar*) in experimental riverine habitats. Canadian Journal of Fisheries and Aquatic Sciences 56:1298-1306.

Bunn, S.E., and A.H. Arthington. 2002. Basic principles and ecological consequences of altered flow regimes for aquatic biodiversity. Environmental Management 30: 492-507.

Bunt, C.M., S.J. Cooke, C. Katapodis, and R.S. McKinley. 1999. Movement and summer habitat of brown trout (*Salmo trutta*) below a pulsed discharge hydroelectric generating station. Regulated Rivers: Research and Management 15: 395-403.

Burner, C.J. 1951. Characteristics of spawning nests of Columbia River salmon. Fishery Bulletin 52: 95-110.

Burns, J.W. 1971. The carrying capacity for juvenile salmonids in some northern California streams. California Fish and Game 57 (1): 44-57.

Burt, D.W., and J.H. Mundie. 1986. Case histories of regulated stream flow and its effects on salmonid populations. Canadian Technical Report of Fisheries and Aquatic Sciences 1477: 98 pp.

Burton (Barton?), R.A., and T.A. Wesche. 1974. Relationship of duration flows and selected watershed parameters to the standing crop estimates of trout populations. Water Resources Research Institute, University of Wyoming, Water Resources Series Number 52, Laramie, Wyoming.

Bustard, D.R., and D.W. Narver. 1975. Preferences of juvenile coho salmon (*Oncorhynchus kisutch*) and cutthroat trout (*Salmo clarki*) relative to simulated alteration of winter habitat. Journal of the Fisheries Research Board of Canada 32: 681-687.

Bustard, D.R., and D.W. Narver. 1975. Aspects of the winter ecology of juvenile coho salmon (*Oncorhynchus kisutch*) and steelhead trout (*Salmo gairdneri*). Journal of the Fisheries Research Board of Canada 32: 667-680.

Buttle, J.M. 1994. Hydrological response to reforestation in the Ganaraska River basin, southern Ontario. Can. Geogr. 38: 240-253.

Buttle, J.M. 1996. Identifying hydrological responses to basin restoration: an example from southern Ontario. Pp. 5-13 in: J.J. McDonnell, J.B. Stribling, L.R. Neville, and D.J. Leopold, eds., Watershed restoration management: physical, chemical, and biological considerations. American Water Resources Association, Herndon, Virginia.

Buttle, J.M., and R.A. Metcalfe. 2000. Boreal forest disturbance and streamflow response, northeastern Ontario. Canadian Journal of Fisheries and Aquatic Sciences 57 (Suppl 2): 5-18.

Byers, C.R., R.K. Steinhorst, and P.R. Krausman. 1984. Clarification of a technique for analysis of utilization-availability data. Journal of Wildlife Management 48: 1050-1053.

Cada, G.F., M.D. Deacon, S.V. Mitz, and M.S. Bevelheimer. 1993. Review of information pertaining to the effect of water velocity on the survival of juvenile salmon and steelhead in the Columbia River basin. Northwest Power Planning Council, Portland, Oregon.

Cada, G.F., M.D. Deacon, S.V. Mitz, and M.S. Bevelheimer. 1995. Effects of water velocity on the survival of downstream-migrating juvenile salmon and steelhead: a review with emphasis on the Columbia River. Reviews in Fisheries Science 5: 131-183.

Caissie, D., and N. El-Jabi. 1995. Comparison and regionalization of hydrologically-based instream flow techniques in Atlantic Canada. Canadian Journal of Civil Engineering 22: 235-246.

Caldwell, J.E., and C. Gowan. 1988. The role of professional judgment in the development of category I criteria curves. Pages 91-101 in: Bovee, K., and J.R. Zuboy, editors. Proceedings of a workshop on the development and evaluation of habitat suitability criteria. U.S. Fish and Wildlife Service, Biological Report 88 (11), Washington, D.C.

Calkins, D.J. 1989. Winter habitats of Atlantic salmon, brook trout, brown trout and rainbow trout - a literature review. U.S. Army Corps of Engineers, Cold Regions Research and Engineering Laboratory, Special Report 89-34 (October 1989): 9 p.

Calkins, D.J. 1993. Physical effects of river ice. Pp. 4-6 in: T.D. Prowse and N.C. Gridley, editors. Environmental aspects of river ice. National Hydrology Research Institute, Science Report 5, Saskatoon, Saskatchewan.

Camargo, J.A. 1993. Dynamic stability of hydropsychid guilds along a regulated stream: the role of competitive interactions versus environ... Regulated Rivers: Research and Management 8: 29-40.

Camargo, J.A., and D. Garcia de Jalon. 1990. The downstream impacts of the Burgomillodo Reservoir, Spain. Regulated Rivers: Research and Management 5: 305-317.

Campbell, E.A. 1998. Influence of streamflow and predators on habitat choice by trout. Dissertation. University of California, Davis, California, USA.

Campbell, R.F., and B.R. Eddy. 1988. Verification of habitat utilization criteria for juvenile fall chinook in the North Fork of the Lewis River, Washington. Pages 364-389 in: K. Bovee and J.R. Zuboy, editors. Proceedings of a workshop on the development and evaluation of habitat suitability criteria. U.S. Fish and Wildlife Service Biological Report 88 (11). 407 pp.

Campbell, R.F., and J.H. Neuner. 1985. Seasonal and diurnal shifts in habitat utilized by resident rainbow trout in western Washington Cascade Mountain streams. Pages 39-48 in F.W. Olson, R.G. White, and R.H. Hamre, editors. Proceedings of the Symposium on Small Hydropower and Fisheries. American Fisheries Society, Bethesda .

Capone, T.A., and J.A. Kushlan. 1991. Fish community structure in dry-season stream pools. Ecology 72 (3): 983-992.

Capra, H., P. Breil, and Y. Souchon. 1995. A new tool to interpret magnitude and duration of fish habitat variations. Regulated Rivers: Research and Management 10: 281-289.

Cardinale, B.J., M.A. Palmer, C.M. Swan, S. Brooks, and N.L. Poff. The influence of substrate heterogeneity on biofilm metabolism in a stream ecosystem. Ecology 83 (2): 412-422.

Carriquiry, J.D., and A. Sanchez. 1999. Sedimentation in the Colorado River Delta and upper Gulf of California after nearly a century of discharge loss. Marine Geology 158: 125-145.

Carline, R.F. 1980. Features of successful spawning site development for brook trout in Wisconsin ponds. Transactions of the American Fisheries Society 109: 453-457.

Carline, R.F., and B.J. McCullough. 2003. Effects of floods on brook trout populations in the Monongahela National Forest, West Virginia. Transactions of the American Fisheries Society 132 (5): 1014-1020.

Carling, P.A. 1987. Bed stability in gravel streams, with reference to stream regulation and ecology. Pp. 321-347 in: K.S. Richards (ed), River channels: environment and process. Basil Blackwell, Oxford, U.K.

Carling, P.A., and C.P. McMahon. 1987. Natural siltation of brown trout (*Salmo trutta*) spawning gravels during low-flow conditions. Pp. 229-244 in: J.F. Craig and B.J. Kemper, editors. Regulated streams: advances in ecology. Plenum Press, New York.

Carstens, T. 1966. Experiments with supercooling and ice formation in flowing water. Geofysiske Publikasjoner 26: 3-18.

Carter, J.G., R.A. Valdez, R.J. Ryel, and V.A. Lamarra. 1985. Fisheries habitat dynamics in the upper Colorado River. J. of Freshwater Ecol. 3: 249-264.

Carter, R.W., and I.E. Anderson. 1963. Accuracy of current meter measurements. Journal of the Hydraulics Division, American Society of Civil Engineers 89 (HY4): 105-115.

Casado, C., D. Garcia de Jalon, Del Olmo, Barcelo, Menee... 1989. The effect of an irrigation and hydroelectric reservoir on its downstream communities. Regulated Rivers: Research and Management 4: 275-284.

Casterlin, M.E., and W.W. Reynolds. 1978. Habitat selection by bluegill sunfish, *Lepomis macrochirus*. Hydrobiologia 59: 75-79.

Castleberry, D.T., J.J. Cech, Jr., D.C. Erman, D.H. Hankin, M. Healy, G.M. Kondolf, M. Mangel, M. Mohr, P.B. Moyle, J. Nielsen, T.P. Speed, and J.G. Williams. 1996. Uncertainty and instream flow standards. Fisheries 21 (8): 20-21.

Cattaneo, F., G. Carrel, N. Lamouroux, and P. Breil. 2001. Relationship between hydrology and cyprinid reproductive success in the lower Rhone at Montelimar, France. Arch. Hydrobiol. 151: 427-450.

Cattaneo, F., N. Lamouroux, P. Breil, and H. Capra. 2002. The influence of hydrological and biotic processes on brown trout (*Salmo trutta*) population dynamics. Canadian Journal of Fisheries and Aquatic Sciences 59 (1): 12-22.

Cavendish, M.G., and M.I. Duncan. 1986. Use of the Instream Flow Incremental Methodology: a tool for negotiation. Environmental Impact Assessment Review 6: 347-363.

Cedergren, H.R. 1989. Seepage, drainage, and flow nets. John Wiley & Sons, New York.

Cederholm, C.J., R.E. Bilby, P.A. Bisson, T.W. Bumstead, B.R. Fransen, W.J. Scarlett, and J.W. Ward. 1997. Response of juvenile coho salmon and steelhead to placement of large woody debris in a coastal Washington stream. North American Journal of Fisheries Management 17 (4): 947-963.

Chambers, P.A., E.E. Prepas, H.R. Hamilton, and Both. 1991. Current velocity and its effect on aquatic macrophytes in flowing waters. Ecological Applications 1 (3): 249-257.

Champion, P.D., and C.C. Tanner. 2001. Seasonality of macrophytes and interaction with flow in a New Zealand lowland stream. Hydrobiologia 441: 1-12.
Chan, T.U., and D.P. Hamilton. 2001. The effect of freshwater flow on the succession and biomass of phytoplankton in a seasonal estuary. Marine and Freshwater Research 52: 869-884.

Chan, T.U., and D.P. Hamilton. 2001. The effect of freshwater flow on the succession and biomass of phytoplankton in a seasonal estuary. Marine and Freshwater Research 52: 869-884.

Chan, T.U., D.P. Hamilton, B.J. Robson, B.R. Hodges, and C. Dallimore. 2002. Impacts of hydrological changes on phytoplankton succession in the Swan River, Western Australia. Estuaries 25 (6B): 1406-1415.

Chanton, J., and F.G. Lewis. 1999. Plankton and dissolved inorganic carbon isotopic composition in a river-dominated estuary: Apalachicola Bay, Florida. Estuaries 22: 575-583.

Chanton, J., and F.G. Lewis. 2002. Examination of coupling between primary and secondary production in a river-dominated estuary: Apalachicola Bay, Florida, U.S.A. Limnology and Oceanography 47(3): 683-697.

Chapin, D.M., R.L. Beschta, and H.W. Shen. 2002. Relationship between flood frequencies and riparian plant communities in the upper Klamath Basin, Oregon. Journal of the American Water Resources Association 38: 603-617.

Chapman, D.W. 1966. Food and space as regulators of salmonid populations in streams. American Naturalist 100 (913): 345-357.

Chapman, D.W., and T.C. Bjornn. 1969. Distribution of salmonids in streams, with special reference to food and feeding. Pages 153-176 in T.G. Northcote, editor. Symposium on salmon and trout in streams. H.R. MacMillan Lectures in Fisheries, University of British Columbia, Vancouver.

Chapman, D.W., and E. Knudsen. 1980. Channelization and livestock impacts on salmonid habitat and biomass in western Washington. Transactions of the American Fisheries Society 109 (4): 357-363.

Chapman, D.W., and K.P. McLeod. Development of criteria for fine sediment in the Northern Rockies Ecoregion. Don Chapman Consultants, Work Assignment 2-73, Final Report, Boise, Idaho.

Chapman, D.W., D.E. Weitkamp, T.L. Welsh, M.B. Bell, and T.H. Schadt. 1986. Effects of river flow on the distribution of chinook salmon redds. Transactions of the American Fisheries Society 115: 537-547.

Charpentier, B., and A. Morin. 1994. Effect of current velocity on ingestion rates of black fly larvae. Canadian Journal of Fisheries and Aquatic Sciences 51: 1615-1619.

Chauvet, E., and H. Decamps. 1989. Lateral interactions in a fluvial landscape: the River Garonne, France. J. of the N. Am. Benth. Soc. 8: 9-17.

Chebanov, N.A. 1986. Factors controlling spawning success in pink salmon, *Oncorhynchus gorbuscha*. J. Ichthyology. 26: 69-78.

Cheng, J.D. 1989. Streamflow changes after clear-cut logging of a pine beetle infested watershed in southern British Columbia, Canada. Water. Resour. Res. 25: 449-456.

Cheslak, E.F., and J.C. Garcia. 1988. An evaluation of the effects of various smoothing and curve-fitting techniques on the accuracy of suitability functions. U.S. Fish and Wildlife Service Biological Report 88 (11): 259-286.

Cheslak, E.F., and A.S. Jacobson. 1990. Integrating the Instream Flow Incremental Methodology with a population response model. Rivers 1 (4): 264-288.

Chien, N. 1985. Changes in river regime after the construction of upstream reservoirs. Earth Surface Processes and Landforms 10: 143-159.

Chigbu, P. 2000. Population Biology of Longfin Smelt and Aspects of the Ecology of Other Major Planktivorous Fishes in Lake Washington. Journal of Freshwater Ecology; 15(4): 543-557.

Chisholm, I.M., W.A. Hubert, and T.A. Wesche. 1987. Winter stream conditions and use of habitat by brook trout in high-elevation Wyoming streams. Transactions of the American Fisheries Society 116 (2): 176-184.

Chow, V.T. 1959. Open channel hydraulics. McGraw-Hill, New York.

Christensen, J.D., M.E. Monaco, R.J. Livingston, G. Woodsum, T.A. Battista, C.J. Klein, B. Galperin, and W. Huang. 1998. Potential impacts of freshwater inflow on Apalachicola Bay,

Florida oyster (*Crassostrea virginica*) populations: coupling hydrologic and biological models. NOAA/NOS Strategic Environmental Assessments Division Report, Silver Spring, Maryland. 58 pp.

Church, M. Channel morphology and typology. Pp. 126-143 in: P. Calow and G.E. Petts, eds. The rivers handbook: hydrological and ecological principles. Blackwell, Oxford.

Church, M. 1995. Geomorphic response to river flow regulation: case studies and time-scales. Regulated Rivers 11: 3-22.

Ciborowski, J.J.H., and D.A. Craig. 1989. Factors influencing dispersion of larval black flies (Diptera: Simuliidae): effects of current velocity and food concentration. Canadian Journal of Fisheries and Aquatic Sciences 46: 1329-1341.

Clancy, C.G. 1988. Effects of dewatering on spawning Yellowstone cutthroat trout in tributaries to the Yellowstone River, Montana. P. 37 in: R.E. Gresswell (editor), Status and management of interior stocks of cutthroat trout. American Fisheries Society Symposium 4, Bethesda, Maryland.

Clapp, D.F., R.D. Clark, Jr., and J.S. Diana. 1990. Range, activity, and habitat of large, free-ranging brown trout in a Michigan stream. Transactions of the American Fisheries Society 119 (6): 1022-1034.

Clark, R.A. 1992. Influence of stream flows and stock size on recruitment of the Arctic grayling (*Thymallus arcticus*) in the Chena River, Alaska. Canadian Journal of Fisheries and Aquatic Sciences 49 (5): 1027-1034.

Clarkson, R.W., and J.R. Wilson. 1995. Trout biomass and stream habitat relationships in the White Mountains area, east-central Arizona. Transactions of the American Fisheries Society 124 (4): 599-612.

Clary, W.P. 1999. Stream channel and vegetation responses to late spring cattle grazing. Journal of Range Management 52: 218-227.

Clausen, B., and B.J.F. Biggs. 1997. Relationship between benthic biota and hydrological indices in New Zealand streams. Freshwater Biology 38: 327-342.
Cloern, J.E. 1984. Temporal dynamics and ecological significance of salinity stratification in an estuary (South San Francisco Bay, USA). Oceanologica Acta 7: 137-141.

Cloern, J.E., A.E. Alpine, B.E. Cole, R.L.J. Wong, J.F. Arthur, and D.M. Ball. 1983. River discharge controls phytoplankton dynamics in the northern San Francisco Bay estuary. Estuarine, Coastal and Shelf Science 16: 415-429.

Clothier, W.D. 1954. Effect of water reductions on fish movement in irrigation diversions. Journal of Wildlife Management 118: 150-160.

Coats, R.N., and T.O. Miller. 1981. Cumulative silvicultural impacts on watersheds: a hydrological and regulatory dilemma. Environmental Management 5: 147-160.

Cobb, D.G., T.D. Galloway, and J.F. Flannagan. 1992. Effects of discharge and substrate stability on density and species composition of stream insects. Canadian Journal of Fisheries and Aquatic Sciences 49: 1788-1795.

Cobb, S.P., and J.R. Clark. 1981. Aquatic habitat studies on the lower Mississippi River, river mile 480-530. Report 2, aquatic habitat mapping. Misc. Paper E-80-1. United States Army Corps of Engineers, Waterways Experimental Station, Vicksburg, Mississippi.

Coble, D.W. 1961. Influence of water exchange and dissolved oxygen in redds on survival of steelhead trout embryos. Transactions of the American Fisheries Society 90 (4): 469-474.

Coccoli, H.A. 1996. Effects of springtime flow alteration on side channel habitat in the Green River. M.S. thesis, Department of Civil Engineering, University of Washington, Seattle. 78 pp.

Coe, T.A. 2001. Contrasting discharge patterns, juvenile salmonid use, and fish community structure in off-channel floodplain habitats, Queets River, Washington. Master's thesis, University of Washington, Seattle.

Collings, M.R. 1974. Generalization of spawning and rearing discharges for several Pacific salmon species in western Washington. U.S. Geological Survey Open File Report, Tacoma.

Collings, R.M., R.W. Smith, and G.T. Higgins. 1972. The hydrology of four streams in western Washington as related to several Pacific salmon species. U.S. Geological Survey Water Supply Paper 1968. 109 pp.

Collier, K.J. 2002. Effects of flow regulation and sediment flushing on instream habitat and benthic invertebrates in a New Zealand river influenced by a volcanic eruption. River Research and Applications 18 (3): 213-226.

Collier, K.J., and M.D. Wakelin. 1996. Instream habitat use by blue duck (*Hymenolaimus malacorhynchos*) in a New Zealand river. Freshwater Biology 35: 277-287.

Collier, M., R.H. Webb, and J.C. Schmidt. 1996. Dams and rivers: Primer on the downstream effects of dams. U.S. Geological Survey Circular 1126, Denver.

Colonnello, G., and E. Medina. 1998. Vegetation changes induced by dam construction in a tropical estuary: the case of the Manamo River, Orinoco Delta (Venezuela). Plant Ecology 139: 145-154.

Conder, A.L., and T.C. Annear. 1987. Test of weighted usable area estimates derived from a PHABSIM model for instream flow studies on trout streams. North American Journal of Fisheries Management 7 (3): 339-350.

Conlin, D.J., Jr., S.P. Canton, J.W. Chadwick, and W.J., Miller. 1995. Habitat suitability curves for selected fish species in the central Platte River, Nebraska. Rivers 5 (4): 250-266.

Connor, W.P., H.L. Burge, and D.H. Bennett. 1998. Detection of subyearling chinook salmon at a Snake River dam: implications for summer flow augmentation. North American Journal of Fisheries Management 18: 530-536.

Connor, W.P., H.L. Burge, J.R. Yearsley, and T.C. Bjornn. 2003. The influence of flow and temperature on survival of wild subyearling fall chinook salmon in the Snake River. North American Journal of Fisheries Management 23: 362-375.

Connor, W.P., R.K. Steinhorst, and H.L. Burge. 2003. Migrational behavior and rate of seaward movement of wild subyearling fall chinook salmon in the Snake River. North American Journal of Fisheries Management 23: 414-430.

Constantz, J. 1998. Interaction between stream temperature, streamflow, and groundwater exchanges in alpine streams. Water Resour. Res. 34: 1609-1615.

Contor, C.R. 1989. Winter day and night habitat utilization and behavior of juvenile rainbow trout in the Henrys Fork of the Snake River, Idaho. M.S. thesis, Idaho State University, Pocatello.

Cook, E.R., and G.C. Jacoby. 1983. Potomac River since 1730 as reconstructed by tree rings. Journal of Climate and Applied Meteorology 22 (10): 1659-1672.

Coon, T. 1987. Responses of benthic riffle fishes to variations in stream discharge and temperature. Pp. 77-85 in: W.J Matthews and D.C. Heins (eds.) Community and evolutionary ecology of North American stream fishes. Oklahoma Press, Norman.
Cooper, A.C. 1965. The effect of transported stream sediments on the survival of sockeye and pink salmon eggs and alevins. International Pacific Salmon Committee Bulletin 18.

Cooper, C.O., and T.A. Wesche. 1976. Stream channel modification to enhance trout habitat under low flow conditions. Water Res. Inst., Office of Water Res. Tech., Washington, D.C. Rept. No. SER-58 117 pp.

Cooper, S.D., S. Diehl, K.Kratz, and O. Sarnelle. 1998. Implications of scale for patterns and processes in stream ecology. Australian Journal of Ecology.

Coops, H., N. Geilen, and G. van der Velde. 1999. Helophyte zonation in two regulated estuarine areas of the Netherlands: Vegetation analysis and relationships with hydrological factors. Estuaries 22: 657-668.

Cope, O.B. 1957. The choices of spawning sites by cutthroat trout. Proceedings of the Utah Academy of Sciences, Arts and Letters 34: 73-79.

Copeland, B.J. 1966. Effects of decreased river flow on estuarine ecology. Journal of the Water Pollution Control Federation 38 (11): 1831-1839. (University of Texas, Institute of Marine Science, Port Aransas , Texas)

Copp, G.H. 1989. The habitat diversity and fish reproductive function of floodplain ecosystems. Environmental Biology of Fishes 26: 1-27.

Copp, G.H. 1992. Comparative microhabitat use of cyprinid larvae and juveniles in a lotic floodplain channel. Environmental Biology of Fishes 33: 181-193.

Corning, R.V. 1970. Water fluctuation, a detrimental influence on trout streams. Annual Conference of the Southeastern Association of Game and Fish Commissioners (23): 431-454.

Cortes, R.M.V, M.T. Ferreira, S.V. Oliveira, and D. Oliveira. 2002. Macroinvertebrate community structure in a regulated river segment with different flow conditions. River Research and Applications 18 (2): 367-382.

Costa, J.E., and J.E. O'Connor. 1995. Geomorphically effective floods. Pp. 45-56 in: J.E. Costa, A.J. Miller, K.W. Potter, and P.R. Wilcock, eds. Natural and anthropogenic influences in fluvial geomorphology. Geophysical Monograph 89.

Cowx, I.G., W.O. Young, and J.M. Helawell. 1984. The influence of drought on the fish and invertebrate populations of an upland stream in Wales. Freshwater Biology 14: 165-177.

Craig, D.A., and M.M. Galloway. 1987. Hydrodynamics of larval black flies. Pages 171-185 in: K.C. Kim and R.W. Merritt, editors. Black flies. Pennsylvania State University, State College, Pennsylvania, USA.

Cramer, S.P. 1997. Use of managed pulses in flow to stimulate outmigration of juvenile salmon. Pp. 563-568 in: S.Y. Wang and T. Carstens, eds. Environmental and coastal hydraulics: protecting the aquatic habitat. Proceedings of theme B, water for a changing global community, 27th Congress of the International Association for Hydraulic Research. American Society of Civil Engineers, New York.

Crance, J.H. 1984. Habitat suitability index models and instream flow suitability curves: inland stocks of striped bass. U.S. Fish and Wildlife Service FWS/OBS-82/10.85. 61 pp.

Crance, J.H. 1987. Habitat suitability index curves for paddlefish, developed by the Delphi technique. North American Journal of Fisheries Management 7 (1): 123-130.

Crecco, V.A., and T. Savoy. 1984. Effects of hydrographic fluctuations on the year-class strength of American shad (*Alosa sapidissima*) in the Connecticut River. Canadian Journal of Fisheries and Aquatic Sciences 41: 1216-1223.

Crisp, D.T., and P.A. Carling. 1989. Observations on siting, dimensions, and structure of salmonid redds. Journal of Fish Biology 34: 119-134.

Crisp, D.T., and M.A. Hurley. 1991a. Stream channel experiments on downstream movement of recently emerged trout, *Salmo trutta* L., and salmon, *S. salar* L. - I. Effect of four different water velocity treatments upon dispersal rate. Journal of Fish Biology 39: 347-361.

Crisp, D.T., and M.A. Hurley. 1991b. Stream channel experiments on downstream movement of recently emerged trout, *Salmo trutta* L., and salmon, *S. salar* L. - II. Effects of constant and changing velocities and of day and night upon dispersal rate. Journal of Fish Biology 39: 363-370.

Crisp, D.T., R.H.K. Mann, and P.R. Cubby. 1983. Effects of regulation of the River Tees upon fish populations below Cow Green Reservoir. Journal of Applied Ecology 20: 371-386.

Crome, F.H.J., and S.M. Carpenter. 1988. Plankton community cycling and recovery after drought - dynamics in a basin on a flood plain. Hydrobiologia 164: 193-211.

Cross, F.B., and R.E. Moss. 1987. Historic changes in fish communities and aquatic habitats in plains streams of Kansas. (Chapter 20), pp. 155-165 in: W.J. Matthews and D.C. Heins (eds) Community and evolutionary ecology of North American stream fishes. University of Oklahoma Press, Norman.

Cross, R.D., and D.L. Williams. 1981. Proceedings of the National Symposium on Freshwater Inflow to Estuaries. U.S. Fish and Wildlife Service, Office of Biological Services. FWS/OBS-81-04. 2 Vol.

Crouch, G.L. 1979. Changes in the vegetation complex of a cottonwood ecosystem on the South Platte River. Great Plains Agricultural Council 91: 19-22.

Crowder, D.W. 2002. Reproducing and quantifying spatial flow patterns of ecological importance with two-dimensional hydraulic models. Ph.D. dissertation, Virginia Polytechnic Institute and State University. Blacksburg, VA. 158 pp. (http:// scholar.lib.vt.edu/theses/available/etd-11152002-161130).

Crowder, D.W., and P. Diplas. 2000. Using two-dimensional hydrodynamic models at scales of ecological importance. J. Hydrol. 230 (3-4): 172-191.

Crowder, D.W., and P. Diplas. 2000. Evaluating spatially explicit metrics of stream energy gradients using hydrodynamic model simulations. Canadian Journal of Fisheries and Aquatic Sciences 57: 1497-1507.

Crowder, D.W., and P. Diplas. 2002. Assessing changes in watershed flow regimes with spatially explicit hydraulic models. Journal of the American Water Resources Association 38 (2): 397-408.

Crowder, D.W., and P. Diplas. 2002. Vorticity and circulation: spatial metrics for evaluating flow complexity in stream habitats. Canadian Journal of Fisheries and Aquatic Sciences 59 (4): 633-645.

Culp, J.M., G.J. Scrimgeour, and G.D. Townsend. 1996. Simulated fine woody debris accumulations in a stream increase rainbow trout fry abundance. Transactions of the American Fisheries Society 125: 472-479.

Cunjak, R.A. 1986. Winter habitat of northern leopard frogs, *Rana pipiens*, in a southern Ontario stream. Canadian Journal of Zoology 64: 255-257.

Cunjak, R.A. 1988. Behaviour and microhabitat of young Atlantic salmon (*Salmo salar*) during winter. Canadian Journal of Fisheries and Aquatic Sciences 45: 2156-2160.

Cunjak, R.A. 1996. Winter habitat of selected stream fishes and potential impacts from land-use activity. Canadian Journal of Fisheries and Aquatic Sciences 53 (Suppl. 1): 267-282.

Cunjak, R.A., and J.M. Green. 1993. Habitat utilization by brook char (*Salvelinus fontinalis*) and rainbow trout (*Salmo gairdneri*) in Newfoundland streams. Canadian Journal of Zoology 61: 1214-1219.

Cunjak, R.A. , and G. Power. 1986. Winter habitat utilization by stream resident brook trout (*Salvelinus fontinalis*) and brown trout (*Salmo trutta*). Canadian Journal of Fisheries and Aquatic Sciences 43: 1970-1981.

Cunjak, R.A. , and G. Power. 1987. The feeding and energetics of stream resident trout in winter. Journal of Fish Biology 31: 493-511.

Cunjak, R.A. , and G. Power. 1987. Cover use by stream-resident trout in winter: a field experiment. North American Journal of Fisheries Management 7: 539-544.

Cunjak, R.A., T.D. Prowse, and D.L. Parrish. 1998. Atlantic salmon (Salmo salar) in winter: "the season of parr discontent"? Canadian Journal of Fisheries and Aquatic Sciences 55 (Suppl. 1): 161-180.

Curet, T. 1993. Habitat use, food habits, and the influence of predation on subyearling chinook salmon in Lower Granite Reservoir, Washington. Master's thesis. University of Idaho, Moscow.

Curry, R.A., and D.L.G. Noakes. 1995. Groundwater and the selection of spawning sites by brook trout (*Salvelinus fontinalis*). Canadian Journal of Fisheries and Aquatic Sciences 52 (8): 1733-1740.

Curry, R.A., J. Gehrels, D.L.G. Noakes, and R. Swainson. 1994. Effects of river flow fluctuations on groundwater discharge through brook trout, *Salvelinus fontinalis*, spawning and incubation habitat. Hydrobiologia 277: 121-134.

Curry, R.A., D.L.G. Noakes, and G.E. Morgan. 1995. Groundwater and the incubation and emergence of brook trout (*Salvelinus fontinalis*). Canadian Journal of Fisheries and Aquatic Sciences 52 (8): 1741-1749.

Curtis, B. 1959. Changes in a river's physical characteristics under substantial reductions in flow due to hydroelectric diversion. California Fish and Game 45: 181-188.

Curtis, G.L., J.S. Ramsey, and D.L. Scarnecchia. 1997. Habitat use and movements of shovelnose sturgeon in pool 13 of the upper Mississippi River during extreme low flow conditions. Environmental Biology of Fishes 50: 175-182.

Cushman, R.M. 1985. Review of ecological effects of rapidly varying flows downstream from hydroelectric facilities. North American Journal of Fisheries Management 5: 330-339.

Dahl, J., and L.A. Greenberg. 1998. Effects of fish predation and habitat type on stream benthic communities. Hydrobiologia 361: 67-76.

Dambacher, J.M., M.W. Buktenica, and G.L. Larson. 1992. Distribution, abundance, and habitat utilization of bull trout and brook trout in Sun Creek, Crater Lake National Park, Oregon. Pages 30-36 in: P.J. Howell and D.V. Buchanan, editors. Proceedings of the Gearhart Mountain bull trout workshop. American Fisheries Society, Oregon Chapter, Corvallis.

Danehy, R.J. 1994. Geomorphic, hydrologic, and hydraulic determinants of fish and macroinvertebrates in a small watershed. Ph.D. thesis, SUNY College of Environmental Science and Forestry, Syracuse, NY. 158 pp.

Dare, M.R. 2001. Habitat use and movement by two trout species during winter under experimental flow regimes in a regulated river. Doctoral dissertation. University of Wyoming, Laramie.

Dare, M.R., and W.A. Hubert. 2000. Precision and interpretation of data collected using a new measurement technique for microhabitat features at fish locations determined by radio telemetry. Freshwater Ecology 15: 29-38.

Dare, M.R., W.A. Hubert, and K.G. Gerow. 2002. Changes in habitat availability and habitat use and movements by two trout species in response to declining discharge in a regulated river during winter. North American Journal of Fisheries Management 22 (3): 917-928.

Dare, M.R., W.A. Hubert, and J.S. Meyer. 2001. Influence of stream flow on hydrogen sulfide concentrations and distributions of two trout species in a Rocky Mountains tailwater. North American Journal of Fisheries Management 21 (4): 971-975.

Dauble, D.D., T.P. Hanrahan, D.R. Geist, and M.J. Parsley. 2003. Impacts of the Columbia River hydroelectric system on main-stem habitats of fall Chinook salmon. North American Journal of Fisheries Management 23 (3): 641-659.

Dauble, D.D., R.L. Johnson, and A.P. Garcia. 1999. Fall chinook salmon spawning in the tailraces of lower Snake River hydroelectric projects. Transactions of the American Fisheries Society 128 (4): 672-679.

David, B.O., and G.P. Closs. 2002. Behavior of a stream-dwelling fish before, during, and after high-discharge events. Transactions of the American Fisheries Society 131 (4): 762-771.

Davies, P.E. 1991. Temporal and spatial variability in stream brown trout recruitment in Tasmania - the effects of hydrology. Page 101 in: D.A. Hancock, editor. Proceedings No. 16 of the Australian Society of Fish Biology workshop: recruitment processes. Department of Primary Industries and Energy, Bureau of Rural Resources, Australian Government Publishing Service, Canberra.

Davis, J.A., and L.A. Barmuta. 1989. An ecologically useful classification of mean and near-bed flows in streams and rivers. Freshwater Biology 21: 271-282.

Davison, W. 1997. The effects of exercise training on teleost fish, a review of recent literature. Comp. Biochem. Physiol. A Comp. Physiol. 117: 67-75.

Day, Jr., J.W., C.W. Madden, R.R. Twilley, R.F. Shaw, B.A. McKef, M.J. Dagg, D.L. Childers, R.C. Raynie, and L.J. Rouse. 1994. The influence of Atchafalaya River discharge on Fourleague Bay, Louisiana (USA), p. 151-160. In: K.R. Dyer and R.J. Orth (eds.). Changes in fluxes in estuaries: Implications from science to management. Olsen and Olsen, Fredensborg, Denmark.

Deacon, J.E. 1961. Fish populations, following a drought, in the Neosho and Marais des Cygnes rivers in Kansas. University of Kansas Publications of the Museum of Natural History 13: 359-427.

Deegan, L.A., H.E. Golden, C.J. Harvey, and B.J. Peterson. 1999. Influence of environmental variability on the growth of age-0 and adult arctic grayling. Transactions of the American Fisheries Society 128 (6): 1163-1175.

DeGraaf, D.A., and L.H. Bain. 1986. Habitat use by and preferences of juvenile Atlantic salmon in two Newfoundland rivers. Transactions of the American Fisheries Society 115 (5): 671-681.

Delisle, G.E. 1962. Water velocities tolerated by spawning kokanee salmon. California Fish and Game 48: 77-78.

Delucchi, C.M. 1988. Comparison of community structure among streams with different temporal flow regimes. Canadian Journal of Zoology 66: 578-586.

Dettman, D.H. 1977. Habitat selection, daytime behavior and factors influencing distribution and abundance of rainbow trout (*Salmo gairdneri*). M.S. thesis, University of California, Davis. 47 pp.

DeVries, P. 1997. Riverine salmonid egg burial depths: review of published data and implication for scour studies. Canadian Journal of Fisheries and Aquatic Sciences 54 (8): 1685-1698.

DeWald, L. and M.A. Wilzbach. 1992. Interactions between native brook trout and hatchery brown trout: effects on habitat use, feeding, and growth. Transactions of the American Fisheries Society 121: 287-296.

Diana, J.S., J.P. Hudson, and R.D. Clark, Jr. 2004. Movement pattern of large brown trout in the mainstream Au Sable River, Michigan. Transactions of the American Fisheries Society 133 (1): 34-44.

DiCenzo, V.J., and M.C. Duval. 2002. Importance of reservoir inflow in determining white bass year-class strength in three Virginia reservoirs. North American Journal of Fisheries Management 22 (2): 620-626.

Dill, L.M. 1983. Adaptive flexibility in the foraging behavior of fishes. Canadian Journal of Fisheries and Aquatic Sciences 40 (4): 398-408.

Dill, W.A., W.D. Kelley, and J.C. Fraser. 1975. Water and land use development and the aquatic environment, problems, and solutions. FAO Fish. Tech. Pap. 141.

Dill, L.M., R.C. Ydenberg, and A.H.G. Fraser. 1981. Food abundance and territory size in juvenile coho salmon (*Oncorhynchus kisutch*). Canadian Journal of Zoology 59 (9): 1801-1809.

Docompo, L., and B.G. de Bikuna. 1993. The Basque method for determining instream flows in Northern Spain. Rivers 4: 293-311.

Dodge, D.P., and H.R. MacCrimmon. 1971. Environmental influences on extended spawning of rainbow trout (*Salmo gairdneri*). Transactions of the American Fisheries Society 100 (2): 312-318.

Doering, P.H., R.H. Chamberlain, K.M. Donohue, and A.S. Steinman. 1999. Effect of salinity on the growth of *Vallisneria americana* Michx. from the Caloosahatchee estuary, Florida. Florida Scientist 62: 89-105.

Doering, P.H., R.H. Chamberlain, and D.E. Haunert. 2002. Using submerged aquatic vegetation to establish minimum and maximum freshwater inflows to the Caloosahatchie estuary, Florida. Estuaries 25 (6B): 1343-1354.

Doledec, S., and D. Chessel. 1989. Rhythmes saisonniers et composonantes stationnelles en milieu aquatique. II. Prise en compte et elimination d'effets dans un tableau faunistique. Acta Oecol. Oecol. Gen. 10: 207-232.

Dolloff, C.A. 1986. Seasonal population characteristics and habitat use by juvenile coho salmon in a small southeast Alaska stream. Transactions of the American Fisheries Society 116: 829-838.

Dolloff, C.A., P.A. Flebbe, and M.D. Owen. 1994. Fish habitat and fish populations in a southern Appalachian watershed before and after Hurricane Hugo. Transactions of the American Fisheries Society 123: 668-678.

Dolloff, C.A., and G.H. Reeves. 1990. Microhabitat partitioning among stream-dwelling juvenile coho salmon (*Oncorhynchus kisutch*) and Dolly Varden (*Salvelinus malma*). Canadian Journal of Fisheries and Aquatic Sciences 47 (12): 2297-2306.

Dompier, D., and J.R. Woodworth. 1980. Rehabilitation of salmonid fish streams through storage. Pp. 86-93 in: W. King, et al. (Eds.), Proceedings of Wild Trout II. Trout Unlimited, Vienna, Virginia, and Federation of Fly Fishermen, El S...

Dose, J.J., and B.D. Roper. 1994. Long-term changes in low-flow channel widths within the South Umpqua watershed, Oregon. Water Resources Bulletin 30 (6): 993-1000.

Downes, B.J., T.J. Entwisle, and P. Reich. 2003. Effects of flow regulation on disturbance frequencies and in-channel bryophytes and macroalgae in some upland streams. River Research and Applications 19 (1): 27-42.

Downes, B.J., and M.J. Keough. 1998. Scaling of colonization processes in streams: parallels and lessons from marine hard substrata. Australian Journal of Ecology 23: 8-26.

Downton, M.W., and K.A. Miller. 1998. Relationships between Alaskan salmon catch and North Pacific climate on interannual and interdecadal time scales. Canadian Journal of Fisheries and Aquatic Sciences 55: 2255-2265.

Drinkwater, K.F., and K.T. Frank. 1994. Effects of river regulation and diversion on marine fish and invertebrates. Aquatic Conservation: Freshwater and Marine Ecosystems 4: 135-151.

Dube, S., A.P. Plamondon, and R.L. Rothwell. 1995. Watering-up after clear-cutting on forested wetlands of the St. Lawrence Lowlands. Water Resour. Res. 31: 1741-1750.

Dudgeon, D. 1993. The effects of spate-induced disturbance, predation and environmental complexity on macroinvertebrates in a tropical stream. Freshwater Biology 30: 189-197.

Dudgeon, D. 2000. Large-scale hydrological changes in tropical Asia: Prospects for riverine biodiverstiy. BioScience 50 Dudgeon, D. : 793-806.

Dudgeon, D. 2000. The ecology of tropical Asian rivers and streams in relation to biodiversity conservation. Annual Review of Ecological Systems 31: 239-263.

Dudley, R.G. 1979. Changes in growth and size distribution of *Saratherodon macrochir* and *Saratherodon andersoni* from the Kafue Gorge Dam. J. Fish Biology 36: 14: 205-223.

Dugger, K.M., M.R. Ryan, D.L. Galat, R.B. Renken, and J.W. Smith. 2002. Reproductive success of the interior least tern (*Sterna antillarum*) in relation to hydrology on the lower Mississippi River. River Research and Applications 18 (2): 97-106.

Dumont, H.J. 1986. Zooplankton of the Niger River system. Pp. 49-51 *in*: B.R. Davies and K.F. Walker, eds., The ecology of river systems. Dr. W. Junk Publishers, Dordrecht, The Netherlands.

Dunbrack, R.L., and L.M. Dill. 1983. A model of size dependent surface feeding in a stream dwelling salmonid. Environmental Biology of Fishes 8: 203-216.

Dunham, J.B., B.S. Cade, and J.W. Terrell. 2002. Influences of spatial and temporal variation on fish-habitat relationships defined by regression quantiles. Transactions of the American Fisheries Society 131 (1): 86-98.

Dunham, J.B., and G.L. Vinyard. 1997. Incorporating stream level variability into analyses of site level fish habitat relationships: some cautionary examples. Transactions of the American Fisheries Society 126: 323-329.

Dussault, C. 1995. Utilisation de l'habitat, croissance, condition, survie apparente et deplacements de l'omble de fontaine (*Salvelinus fontinalis*) et du saumon atlantique (*Salmo salar*) en sympatrie. Thesis. University of Quebec, Trois-Rivieres, Quebec, Canada.

Dykaar, B.B., and P.J. Wiggington, Jr. 2000. Floodplain formation and cottonwood colonization patterns on the Willamette River, Oregon, USA. Environmental Management 25: 87-104.

Dynesius, M., and C. Nilsson. 1994. Fragmentation and flow regulation of river systems in the northern third of the world. Science 266: 753-762.

EA Engineering, Science, and Technology, Inc. 1986. Instream flow methodologies. Research project 2194-2, completion report, Electric Power Research Institute, Palo Alto, California.

Easterbrooks, J.A. 1981. Response of rainbow and cutthroat to depth reductions in simulated stream channels. M.S. thesis, University of Idaho.

Edmundson, E.H., F.H. Everest, and D.W. Chapman. 1968. Permanence of station in juvenile chinook salmon and steelhead trout in two Idaho streams. Journal of the Fisheries Research Board of Canada. 25: 1453-1469.

Edwards, E.A., H. Li, and C.B. Schreck. 1983. Habitat suitability index models: longnose dace. U.S. Fish and Wildlife Service Report FWS/OBS-82/10.33. Washington, D.C.

Egglishaw, H.J., and P.E. Shackley. 1985. Factors governing the production of juvenile salmon in Scottish streams. Journal of Fish Biology 27: 27-33.

Elliott, J.M. 1984. Growth, size, biomass and production of young migratory trout *Salmo trutta* in a Lake District stream, 1966-1983. Journal of Animal Ecology 53 (3): 979-994.

Elliott, J.M. 1990. Mechanisms responsible for population regulation in young migratory trout, *Salmo trutta*. III. The role of territorial behaviour. Journal of Animal Ecology 59: 803-818.

Elliott, J.M. 1993. A 25-year study of production of juvenile sea trout, Salmo trutta, in an English Lake District stream. Can. Spec. Publ. Fish. Aquat. Sci. No. 118. Pp. 109-122.

Elliott, J.M. 1994. Quantitative ecology and the brown trout. Oxford University Press, Oxford, UK.

Elliott, J.M. 2000. Pools as refugia for brown trout during two summer droughts: trout responses to thermal and oxygen stress. Journal of Fish Biology 56: 938-948.

Elliott, J.M., M.A. Hurley, and J.A. Elliott. 1997. Variable effects of droughts on the density of a sea-trout *Salmo trutta* population over 30 years. Journal of Applied Ecology 34: 1229-1238.

Elliott, S.R., T.A. Coe, J.M. Helfield, and R.J. Naiman. 1998. Spatial variation in environmental characteristics of Atlantic salmon (*Salmo salar*) rivers. Canadian Journal of Fisheries and Aquatic Sciences 55 (Suppl. 1): 267-280.

Elser, A.A. 1968. Fish populations in a trout stream in relation to major habitat zones and channel alterations. Transactions of the American Fisheries Society 97: 389-397.

Elwood, J.W., and T.F. Waters. 1969. Effects of floods on food consumption and production rates of a stream brook trout population. Transactions of the American Fisheries Society 98: 253-262.

Emery, A.R., A.H. Berst, and K. Kodaira. 1972. Under-ice observations of wintering sites of leopard frogs. Copeia 1972 (1): 123-126.

Enders, E.C., D. Boisclair, and A.G. Roy. 2003. The effect of turbulence on the cost of swimming for juvenile Atlantic salmon (*Salmo salar*). Canadian Journal of Fisheries and Aquatic Sciences 60 (9): 1149-1160.

Englund, R.E. 1991. Winter habitat selection of cutthroat trout (*Oncorhynchus clarki*) in a large regulated river. Master's thesis. Logan: Utah State University.

EPRI. 1986. Instream flow methodologies. Final Report, EA-4819 Research Project 2194-2, Electrical Power Research Institute, Palo Alto, CA.

Erman, D.C., E.D. Andrews, and M. Yoder-Williams. 1988. Effects of winter floods on fishes of the Sierra Nevada. Canadian Journal of Fisheries and Aquatic Sciences 45: 2195-2200.

Erman, D.C., and G.R. Leidy. (Or 1975)1969. Downstream movement of rainbow trout fry in a tributary of Sagehen Creek, under permanent and intermittent flow. Transactions of the American Fisheries Society 104 (3): 467-473.

Essington, T.E., P.W. Sorensen, and D.G. Paron. 1998. High rate of redd superimposition by brook trout (*Salvelinus fontinalis*) and brown trout (*Salmo trutta*) in a Minnesota stream cannot be explained by habitat availability alone. Canadian Journal of Fisheries and Aquatic Sciences 55 (10): 2310-2316.

Estes, C.C. 1984. Evaluation of methods for recommending instream flows to support spawning salmon. M.S. thesis, Washington State University, Pullman.

Estes, C.C., and J.F. Orsborn. 1986. Review and analysis of methods for quantifying instream flow requirements. Water Resources Bulletin 22 (3): 389-398.

Estevez, E.D. 2000. Matching salinity metrics to estuarine seagrasses for freshwater inflow management, chapter 22. In: S.A. Bortone (ed.). Seagrasses: Monitoring, ecology, physiology and management. CRC Press, Boca Raton, Florida.

Estevez, E.D. 2002. Review and assessment of biotic variables and analytical methods used in estuarine inflow studies. Estuaries 25 (6B): 1291-1303.

Evans, E.C., and G.E. Petts. 1997. Hyporheic temperature patterns within riffles. Hydrol. Sci. J. 42: 199-213.

Everest, F.H. 1969. Habitat selection of juvenile chinook salmon and steelhead trout in two streams in Idaho. Doctoral dissertation. University of Idaho, Moscow.

Everest, F.H., and D.W. Chapman. 1972. Habitat selection and spatial interaction by juvenile chinook salmon and steelhead trout in two Idaho streams. Journal of the Fisheries Research Board of Canada 29 (1): 91-100.

Everitt, B.L. 1968. Use of the cottonwood in an investigation of the recent history of a floodplain. American Journal of Science 266 (6): 417-439.

Extence, C.A. 1981. The effect of drought on the benthic communities in a lowland river. Hydrobiologia 83: 217-224.

Facey, D.E., and G.D. Grossman. 1990. The metabolic cost of maintaining position of four North American stream fishes: effects of season and velocity. Physiological Zoology 63: 757-776.

Facey, D.E., and G.D. Grossman. 1992. The relationship between water velocity, energetic costs, and microhabitat use in four North American stream fishes. Hydrobiologica 239: 1-6.

Faler, M.P., L.M. Miller, and K.I. Welke. 1988. Effects of variation in flow on distributions of northern squawfish in the Columbia River below McNary Dam. North American Journal of Fisheries Management 8 (1): 30-35.

Fallau, S.S. 1995. Seasonal streamflow effects on salmonid habitat, and observations of movement in Beaver Creek, Idaho-Utah. Master's thesis, Utah State University, Logan.

Fausch, K.D. 1984. Profitable stream positions for salmonids: relating specific growth rate to net energy gain. Canadian Journal of Zoology 62: 441-451.

Fausch, K.D. 1993. Experimental analysis of microhabitat selection by juvenile steelhead (*Oncorhynchus mykiss*) and coho salmon (*O. kisutch*) in a British Columbia stream. Canadian Journal of Fisheries and Aquatic Sciences 50 (6): 1198-1207.

Fausch, K.D., and R.G. Bramlett. 1991. Disturbance and fish communities in intermittent tributaries of a western great plains river. Copeia 1991: 659-674.

Fausch, K.D., C.L. Hawkes, and M.G. Parsons. 1988. Models that predict standing crop of stream fish from habitat variables: 1950-85. USDA Forest Service Gen. Tech. Rep. PNW-GTR-213. Portland, Pacific Northwest Research Station. 52 pp.

Fausch, K.D., S. Nakano, and S. Kitano. 1997. Experimentally induced foraging mode shift by sympatric charrs in a Japanese mountain stream. Behav. Ecol. 8: 414-420.

Fausch, K.D., Y. Taniguch, S. Nakano, G.D. Grossman, and C.R. Townsend. 2001. Flood disturbance regimes influence rainbow trout invasion success among five Holarctic regions. Ecological Applications 11: 1438-1455.

Fausch, K.D., and R.J. White. 1981. Competition between brook trout (*Salvelinus fontinalis*) and brown trout (*Salmo trutta*) for position in a Michigan stream. Canadian Journal of Fisheries and Aquatic Sciences 38: 1220-1227.

Fausch, K.D., and R.J. White. 1986. Competition among juveniles of coho salmon, brook trout, and brown trout in a laboratory stream, and implications for Great Lakes tributaries. Transactions of the American Fisheries Society 115: 363-381.

Felley, J.D., and L.G. Hill. 1983. Multivariate assessment of environmental preference of cyprinid fishes of the Illinois River, Oklahoma. American Midland Naturalist 109: 209-221.

Fenner, P., W.W. Brady, and D.R. Patton. 1985. Effects of regulated water flows on regeneration of Fremont cottonwood. Journal of Range Management 38 (2): 135-138.

Ferguson, R.I., A.D. Kirkbride, and A.G. Roy. 1996. Markov analysis of velocity fluctuations in gravel-bed rivers. Pp. 165-181 *in*: P.J. Ashworth, S.J. Best, and S.J. Mclelland (eds), Coherent flow structures in open channels. John Wiley and Sons Ltd., Chichester.

Fernandes, C.C. 1997. Lateral migration of fishes in Amazon floodplains. Ecology of Freshwater Fish 6: 36-44.

Finger, T.R., and E.M. Stewart. 1987. Response of fishes to flooding regime in lowland hardwood wetlands. Pp. 86-92 in: W.J. Matthews and D.C. Heins (eds) Community and evolutionary ecology of North American stream fishes. University of Oklahoma Press, Norman.

Finlay, J.C., M.E. Power, and G. Cabana. 1999. Effects of water velocity on algal carbon isotope ratios: implications for river food web studies. Limnology and Oceanography 44:1198-1203.

Fisher, S.G., L.J. Gray, N.B. Grimm, and D.E. Busch. 1982. Temporal succession in a desert stream ecosystem following flash flooding. Ecological Monographs 52: 93-110.

Fisher, S.H., and A. LaVoy. 1972. Differences in littoral fauna due to fluctuating water levels below a hydroelectric dam. Journal of the Fisheries Research Board of Canada 29: 1220-1227.

Fisher, S.J., and D.W. Willis. 2000. Seasonal dynamics of aquatic fauna and habitat parameters in a perched upper Missouri River wetland. Wetlands 20: 470-478.

Fjellheim, A., J. Havardstun, G.G. Raddum, and O.A. Schnell. 1993. Effects of increased discharge on benthic invertebrates in a regulated river. Regulated Rivers: Research and Management 8: 179-187.

Flannery, M.S., E.B. Peebles, and R.T. Montgomery. 2002. A percent-of-flow approach for managing reductions of freshwater inflows from unimpounded rivers to southwest Florida estuaries. Estuaries 25 (6B): 1318-1332.

Flebbe, P.A., and C.A. Dolloff. 1995. Trout use of woody debris and habitat in Appalachian wilderness streams of North Carolina. North American Journal of Fisheries Management 15: 579-590.

Fleming, I.A., and M.R. Gross. 1994. Breeding competition in a Pacific salmon (coho: *Oncorhynchus kisutch*): measures of natural and sexual selection. Evolution 48: 637-657.

Flodmark, L., H.A. Urke, J.H. Halleraker, J.V. Arnekleiv, L.A. Vollestad, and A.B.S. Poleo. 2002. Cortisol and glucose responses in juvenile brown trout subjected to a fluctuating flow regime in an artificial stream. Journal of Fish Biology 60: 238-248.

Folmar, L.C., and W.W. Dickoff. 1980. The parr-smolt transformation (smoltification)and seawater adaptation in salmonids. A review of selected literature. Aquaculture 21: 1-37.

Fonseca, D.M. 1999. Fluid-mediated dispersal in streams: models of settlement from the drift. Oecologia 121: 212-223.

Fonseca, D.M., and D.D. Hart. 1996. Density-dependent dispersal of black fly neonates is mediated by flow. Oikos 75: 49-58.

Fonseca, D.M., and D.D. Hart. 2001. Colonization history masks habitat preferences in local distributions of stream insects. Ecology 82 (10): 2897-2910.

Fontenot, Q.C., D.A. Rutherford, and W.E. Kelso. 2001. Effects of environmental hypoxia associated with the annual flood pulse on the distribution of larval sunfish and shad in the Atchafalaya River Basin, Louisiana. Transactions of the American Fisheries Society 130: 107-116.

Ford, J.E. 1997. Over-winter survival and habitat use of juvenile coho salmon (*Oncorhynch*us *kisutch*) in Lake Superior tributaries. Master's thesis. University of Wisconsin, Eau Claire.

Forlong, R.G. 1994. Determining minimum flows for rivers in the Kapiti Coast district. Proceedings of 1994 Limnological Society Conference, New Zealand Limnological Society, Hamilton.

Fowler, C.W. 1977. A stream habitat model based on physical variability. Encyclia (54): Part 1: 46-56.

Fraley, J.J., and P.J. Graham. 1981. Physical habitat, geological bedrock types and trout densities in tributaries of the Flathead River drainage, Montana. In: N.B. Armantrout, editor. Acquisition and utilization of aquatic habitat inventory information. Proceedings of a symposium, Portland, Oregon. American Fisheries Society, Western Division, Bethesda.

Fraley, J.J., S.L. McMullin, and P.J. Graham. 1986. Effects of hydroelectric operations on the kokanee population in the Flathead River system, Montana. North American Journal of Fisheries Management 6: 560-568.

Franz, E.H., and F.A. Bazzaz. 1977. Simulation of vegetation response to modified hydrologic regimes: A probabilistic model based on niche differentiation in a floodplain forest. Ecology 58: 176-183.

Fraser, F.J. 1969. Population density effects on survival and growth of juvenile coho salmon and steelhead trout in experimental stream-channels. Pp. 253-266 *in*: T.G. Northcote, editor. Salmon and trout in streams. University of British Columbia, Vancouver, Canada.

Fraser, J.C. 1970. An annotated bibliography on the establishment of acceptable flows for fish life in controlled streams. European Inland Fisheries Advisory Commission. Symposium...water pollution...fisheries...Europe, Jablonna, Poland. UNFAO.

Fraser, J.C. 1972. Regulated stream discharge for fish and other aquatic resources - an annotated bibliography. FAO Fish. Tech. Paper No. 112. 103 pp.

Fraser, J.C. 1972. Regulated discharge and the stream environment. Pp. 263-286 in: R. Oglesby, C.A. Carlson, and J. McCann (eds), River ecology and man. Academic Press, New York.

Fraser, J.C. 1972. Water levels, fluctuations and minimum pools in reservoirs for fish and other aquatic resources: an annotated bibliography. FAO Fish. Tech. Pap. No. 113. 42 pp.

Fraser, J.C. 1975. Determining discharges for fluvial resources. FAO Fish. Tech. Pap. No. 143 (FIRS/T143). 102 pp.

Fraser, J.C. 1978. Suggestions for developing flow recommendations for in-stream uses of New Zealand streams. Water and Soil Miscellaneous Publication 6. Ministry of Works and Development, Wellington.

Freeman, M.C., Z.H. Bowen, and K.D. Bovee. 1999. Transferability of habitat suitability criteria: Response to comment. North American Journal of Fisheries Management 19 (2): 626-628.

Freeman, M.C., Z.H. Bowen, K.D. Bovee, and E.R. Irwin. 2000. Flow and habitat effects on juvenile fish abundance in natural and altered flow regimes. Ecological Applications 11 (1): 179-190.

Freeman, M.C., Z.H. Bowen, and J.H. Crance. 1997. Transferability of habitat suitability criteria for fishes in warmwater streams. North American Journal of Fisheries Management 17 (1): 20-31.

Freeman, M.C., and J.H. Crance. 1993. Evaluating impacts to stream flow alteration on warmwater fishes. Pp. 303-305 *in*: Proceedings of the 1993 Georgia Water Resources Conference. University of Georgia, Athens.

Freeman, M.C., and G.D. Grossman. 1993. Effects of habitat availability on dispersion of a stream cyprinid. Environmental Biology of Fishes 37: 121-130.

Freeman, M.C., J.M. Nestler, and P.N. Johnson. 1997. Riverine resources: water needs and environmental effects analyses in the Alabama-Coosa-Tallapoosa and Apalachicola-Chattahoochee-Flint River basins. U.S. Geological Survey, Biological Resources Division, Patuxtent Research Center, Athens, Georgia.

Fremling, C.R., J.L. Rasmussen, R.E. Sparks, et al. 1989. Mississippi River fisheries: a case history. Pp. 309-351 in: Dodge, D.P. (Ed.) Proceedings of the International Large Rivers Symposium. Can. Special Publ. Fish. Aquatic Sciences 106.

Frenette, M., M. Caron, and P. Julien. 1984. Interaction entre le debit et les populations de tacons (*Salmo salar*) de la riviere Matamec. Canadian Journal of Fisheries and Aquatic Sciences 41: 954-963.

Friedman, J.M., W.R. Osterkamp, and W.R. Lewis, Jr. 1996. Channel narrowing and vegetation development following a Great Plains flood. Ecology 77: 2161-2181.

Friedman, J.M., W.R. Osterkamp, M.L. Scott, and G.T. Auble. 1998. Downstream effects of dams on channel geometry and bottomland vegetation: Regional patterns in the Great Plains. Wetlands 18: 619-633.

Frissell, C.A., W.J. Liss, C.E. Warren, and M.D. Hurley. 1986. A hierarchical framework for stream habitat classification: viewing streams in a watershed context. Environmental Management 10: 199-214.

Frissel, C.A., and D.G. Lonzarich. 1996. Habitat use and competition among stream fishes. Pages 493-510 in: F.R. Hauer and G.A. Lamberti, editors. Methods in stream ecology. Academic Press, San Diego, California.

Fukushima, M. 2001. Salmonid habitat-geomorphology relationships in low-gradient streams. Ecology 82 (5): 1238-1246.

Fukushima, M., T.J. Quinn, and W.W. Smoker. 1998. Estimation of eggs lost from superimposed pink salmon (*Oncorhynchus gorbuscha*). Canadian Journal of Fisheries and Aquatic Sciences 55 (3): 618-625.

Fukushima, M., and W.W. Smoker. 1997. Determinants of stream life, spawning efficiency, and spawning habitat in pink salmon in the Auke Lake system, Alaska. Canadian Journal of Fisheries and Aquatic Sciences 54: 96-104.

Fukushima, M., and W.W. Smoker. 1998. Spawning habitat segregation of sympatric sockeye and pink salmon. Transactions of the American Fisheries Society 127 (2): 253-260.

Furukawa-Tanaka, T. 1992. Optimal feeding position for stream fishes in relation to invertebrate drift. Humans and Nature 1: 63-81.

Fuss, H.J. 1983. Age, growth, and instream movement of Olympic Peninsula coastal cutthroat trout, *Salmo clarki clarki*. Pp. 125-133 in: J.M. Walton and D.B. Houston (eds.), Proceedings of the Olympic Wild Fish Conference, March 23-25, 1983. Peninsula College, Port Angeles.

Galat, D.L., L.H. Frederickson, D.D. Humburg, K.J. Bataille, J.R. Bodie, J. Dohrenwend, G.T. Gelwicks, J.E. Havel, D.L. Helmers, J.B. Hooker, J.R. Jones, M.F. Knowlton, J. Kubisiak, J.

Mazourek, A.C. McColpin, R.B. Renken, and R.D. Semlitsch. 1998. Flooding to restore connectivity of regulated, large-river wetlands. BioScience 48: 721-733.

Galat, D.L., and R. Lipkin. 2000. Restoring ecological integrity of great rivers: Historical hydrographs aid in defining reference conditions for the Missouri River. Hydrobiologia 422/423: 29-48.

Galindo-Bect, M.S., E.P. Glenn, H.M. Page, L.A. Galindo-Bect, J.M., Hernandez-Ayon, R.L. Petty, and J. Garcia-Hernandez. 2000. Analysis of the Penaeid shrimp catch in the northern Gulf of California in relation to Colorado River discharge. Fishery Bulletin 98: 222-225.

Gallagher, A.F., Jr. 1979. An analysis of factors affecting brood year returns of wild stocks of Puget Sound chum (*Oncorhynchus keta*) and pink salmon (*Oncorhynchus gorbuscha*). Master's thesis. University of Washington, Seattle.

Gallagher, S.P., and M.F. Gard. 1999. Relationship between chinook salmon (*Oncorhynchus tshawytscha*) redd densities and PHABSIM-predicted habitat in the Merced and Lower American rivers, California. Canadian Journal of Fisheries and Aquatic Sciences 56 (4): 570-577.

Gammelsrod, T. 1992. Variation in shrimp abundance on the Sofala Bank, Mozambique, and its relation to the Zambezi River runoff. Estuarine, Coastal and Shelf Science 35: 91-103.

Gan, K., and T. McMahon. 1990. Variability of results from the use of PHABSIM in estimating habitat area. Regulated Rivers: Research and Management 5 (3): 233-239.

Gangmark, H.A., and R.D. Brand. 1956. Further observations on stream survival of king salmon spawn. California Fish and Game 42: 37-49.

Garcia de Jalon, D., P. Sanchez, and J.A. Camargo. 1994. Downstream effects of a new hydropower impoundment on macrophytes, macroinvertebrate and fish communities. Regulated Rivers: Research and Management 9: 253-261.

Gard, M. 1997. Techniques for adjusting spawning depth habitat utilization curves for availability. Rivers 6 (2): 94-102.

Gard, M., and E. Ballard. 2003. Application of new technologies to instream flow studies in large rivers. North American Journal of Fisheries Management 23 (4): 1114-1125.

Garland, R.D., K.F. Tiffan, D.W. Rondorf, and L.O. Clark. 2002. Comparison of subyearling fall chinook salmon's use of riprap revetments and unaltered habitats in Lake Wallula of the Columbia River. North American Journal of Fisheries Management 22 (4): 1283-1289.

Gasith, A., and V.H. Resh. 1999. Streams in Mediterranean climate regions: abiotic influences and biotic responses to predictable seasonal events. Annu. Rev. Ecol. Syst. 30: 51-81.

Gatz, A.J., Jr., M.J. Sale, and J.M. Loar. 1987. Habitat shifts in rainbow trout: competitive influences of brown trout. Oecologia 74: 7-19.

Gebhardt, G.A. 1970. The influence of stream disturbance activity on aquatic organisms - a review. U.S. Department of the Interior, Bureau of Land Management, Salem, Oregon. 58 pp.

Gebhardt. K.A., C. Bohn, S. Jensen, and W.S. Platts. 1989. Use of hydrology in riparian classification. Pp. 53-60 in: R.E. Gresswell, B. Barton, and J.L. Kershner (eds.), Practical Approaches to Riparian Resource Management. U.S. Bureau of Land Management, Billings, MT.

Geddes, M.C., and J.T. Puckridge. 1989. Survival and growth of larval and juvenile native fish: the importance of the floodplain. Pp. 101-114 in: Proceedings of the workshop on native fish management. Murray-Darling Basin Commission, Canberra, Australia.

Geer, W.H. 1987. A method for treatment of data from the Instream Flow Incremental Methodology for instream flow determination. Pp. 1-26 in: J.F. Craig and J.B. Kemper, editors. Regulated Streams: Advances in Ecology. Plenum Press, New York and London.

Geist, D.R. 2000. Hyporheic discharge of river water into fall chinook salmon (*Oncorhynchus tshawytscha*) spawning areas in the Hanford Reach, Columbia River. Canadian Journal of Fisheries and Aquatic Sciences 57 (8): 1647-1656.

Geist, D.R., and D.D. Dauble. 1998. Redd site selection and spawning habitat use by fall chinook salmon: the importance of geomorphic features in large rivers. Environmental Management 22: 655-669.

Geist, D.R., T.P. Hanrahan, E.V. Arntzen, G.A. McMichael, C.J. Murray, and Y.-J. Chien. 2002. Physicochemical characteristics of the hyporheic zone affect redd site selection by chum salmon and fall chinook salmon in the Columbia River. North American Journal of Fisheries Management 22 (4): 1077-1085.

Geist, D.R., J. Jones, C.J. Murray, and D.D. Dauble. 2000. Suitability criteria analyzed at the spatial scale of redd clusters improved estimates of fall chinook salmon *(Oncorhynchus tshawytscha*) spawning habitat use in the Hanford Reach, Columbia River. Canadian Journal of Fisheries and Aquatic Sciences 57 (8): 1636-1646.

Georgian, T., and J.H. Thorp. 1992. Effects of microhabitat selection on feeding rates of net-spinning caddisfly larvae. Ecology 73 (1): 229-240.

Gerhardt, D.R., and W.A. Hubert. 1990. Spawning habitat of channel catfish in the Powder River system, Wyoming-Montana. Prairie Naturalist 22: 155-164.

Ghanem, A., P. Steffler, F. Hicks, and C. Katapodis. 1994. Two-dimensional finite element modeling of physical fish habitat. Proceedings of the 1st International Symposium on Habitat Hydraulics. August 18-20, 1994. Trondheim, Norway.

Ghanem, A., P. Steffler, F. Hicks, and C. Katapodis. 1996. Two dimensional hydraulic simulation of physical conditions in flowing streams. Regulated Rivers: Research and Management 12: 185-200.

Giannico, G.R. 2000. Habitat selection by juvenile coho salmon in response to food and woody debris manipulations in suburban and rural stream sections. Canadian Journal of Fisheries and Aquatic Sciences 57 (9): 1804-1813.

Giannico, G.R., and M.C. Healey. 1998. Effects of flow and food on winter movements of juvenile coho salmon. Transactions of the American Fisheries Society 127 (4): 645-651.

Giannico, G.R., and M.C. Healey. 1999. Ideal free distribution theory as a tool to examine juvenile coho salmon (*Oncorhynchus kisutch*) habitat choice under different conditions of food abundance and cover. Canadian Journal of Fisheries and Aquatic Sciences 56 (12): 2362-2373.

Gibbins, C.N., H.J. Moir, J.H. Webb, and C. Soulsby. 2002. Assessing discharge use by spawning Atlantic salmon: a comparison of discharge electivity indices and PHABSIM simulations. River Research and Applications 18 (4): 383-396.

Giberson, D.J., and D. Caissie. 1998. Stream habitat hydraulics: interannual variability in three reaches of Catamaran Brook, New Brunswick. Canadian Journal of Fisheries and Aquatic Sciences 55 (2): 485-494.

Giberson, D.J., and R.J. Hall. 1988. Seasonal variation in faunal distribution within the sediments of a Canadian Shield stream, with emphasis on responses to spring floods. Canadian Journal of Fisheries and Aquatic Sciences 45: 1994-2002.

Gibson, R.J. 1978. The behaviour of juvenile Atlantic salmon (*Salmo salar*) and brook trout (*Salvelinus fontinalis*) with regard to temperature and to water velocity. Transactions of the American Fisheries Society 107: 703-712.

Gibson, R.J. 1983. Water velocity as a factor in the change from aggressive to schooling behavior and subsequent migration of Atlantic salmon... Naturaliste can. (Rev. Ecol. Syst.) 110:143-148

Gibson, R.J. 1988. Mechanisms regulating species composition, population structure, and production of stream salmonids: a review. Polskie Archiwum Hydrobiologii 35: 469-495.

Gibson, R.J., and R.A. Myers. 1988. Influence of seasonal river discharge on survival of juvenile Atlantic salmon, *Salmo salar*. Canadian Journal of Fisheries and Aquatic Sciences 45: 344-348.

Gibson, R.J., and G. Power. 1975. Selection by brook trout (*Salvelinus fontinalis*) and juvenile Atlantic salmon (*Salmo salar*) of shade related to water depth. Journal of the Fisheries Research Board of Canada 32: 1652-1656.

Gibson, R.J, D.E. Stansbury, R.R. Whalen, and K.G. Hillier. 1993. Relative habitat use, and interspecific and intra-specific competition of brook trout (*Salvelinus fontinalis*) and juvenile Atlantic salmon (*Salmo salar*) in Newfoundland rivers. In: R.J. Gibson and R.E. Cutting (eds.), Production of juvenile Atlantic salmon, *Salmo salar*, in natural waters. Canadian Special Publication in Fisheries and Aquatic Sciences 118: 53-69.

Gido, K.B., D.L. Propst, and M.C. Molles. 1997. Spatial and temporal variation of fish communities in secondary channels of the San Juan River, New Mexico and Utah. Environmental Biology of Fishes 49: 417-434.

Giger, R.D. 1973. Streamflow requirements of salmonids. Oregon Wildlife Commission, Job Final Report, Project Number AFS62-1, Portland, Oregon.

Gillespie, B.M., and J.R. Giardino. 1997. The nature of channel platform change: Brazos River, Texas. Texas Journal of Science 49: 109-142.

Gilliam, J.F., and D.F. Fraser. 1987. Habitat selection under predation hazard: test of a model with foraging minnows. Ecology 68: 1856-1862.

Gillilan, D.M., and T.C. Brown. 1997. Instream flow protection: seeking a balance in western water use. Island Press, Covelo, CA, and Washington, DC.

Gilvear, D.J, T.M. Waters, and A.M. Milner. 1995. Image analysis of aerial photography to quantify changes on channel morphology and instream habitat following placer mining in interior Alaska. Freshwater Biology 34 (2): 389-398.

Giorgi, A.E., T.W. Hillman, J.R. Stevenson, S.G. Hays, and Peven. 1997. Factors that influence the downstream migration rates of juvenile salmon and steelhead through the hydroelectric system. North American Journal of Fisheries Management 17 (2): 268-282.

Girard, P., D. Boisclair, and M. Leclerc. 2003. The effect of cloud cover on the development of habitat quality indices for juvenile Atlantic salmon (*Salmo salar*). Canadian Journal of Fisheries and Aquatic Sciences 60 (11): 1386-1397.

Gislason, J.C. 1985. Aquatic insect abundance in a regulated stream under fluctuating and stable diel flows. North American Journal of Fisheries Management 5 (1): 39-46.

Glenn, E.P., C. Lee, R. Felger, and S. Zengel. 1996. Effects of water management on the wetlands of the Colorado River delta, Mexico. Conservation Biology 10: 1175-1186.

Glova, G.L. 1986. Interactions for food and space between experimental populations of juvenile coho salmon (*Oncorhynchus kisutch*) and coastal cutthroat trout (*Salmo clarki*) in a laboratory stream. Hydrobiologia 131: 155-168.

Glova, G.J., and M.J. Duncan. 1985. Potential effects of reduced flows on fish habitats in a large braided river, New Zealand. Transactions of the American Fisheries Society 114 (2): 165-181.

Glova, G.J., and J.C. Mason. 1974. Interactive ecology of juvenile salmon and trout in streams. I. Progress during 1973. Fisheries Research Board of Canada, Manuscript Report.

Glova, G.J., and J.C. Mason. 1977. Interactions for food and space between sympatric populations of juvenile coho salmon and coastal cutthroat trout in a ... Fisheries and Marine Resources of Canada, Manuscript Report 1429, Nanaimo, Canada.

Glozier, N.E., J.M. Culp, and G.J. Scrimgeour. 1997. Transferability of habitat suitability curves for a benthic minnow, *Rhinichthys cataractae*. Journal of Freshwater Ecology 12 (3): 379-393.

Godin, J.-G.J. 1980. Temporal aspects of juvenile pink salmon (*Oncorhynchus keta* Walbaum) emergence from a simulated gravel redd. Canadian Journal of Zoology 58: 735-744.

Godin, J.J., and R.W. Rangeley. 1989. Living in the fast lane: effects of cost of locomotion on foraging behaviour in juvenile Atlantic salmon. Animal Behaviour 37: 943-954.

Goodson, J.M., A.M. Gurnell, P.G. Angold, and I.P. Morrissey. 2003. Evidence for hydrodhory and the deposition of viable seeds within winter flow-deposited sediments: the River Dove. River Research and Applications 19 (4): 317-334.

Gordon, N.D., T.A. McMahon, and B.L. Finlayson. 1992. Stream hydrology: An introduction for ecologists. John Wiley and Sons, Toronto.

Gore, J.A. 1987. Development and applications of macroinvertebrate instream flow models for regulated flow management. Pp. 99-116 in: Craig, J.F., and J.B. Kemper (eds.), Regulated streams, Advances in Ecology. Plenum Press, New York & London.

Gore, J.A. 1989. Models for predicting benthic macroinvertebrate habitat suitability under regulated flows. Pp. 254-265 *in*: Gore, J.A. and G.E. Petts (Eds.) Alternatives in Regulated River Management. CRC Press, Boca Raton, Florida.

Gore, J.A., D.J. Crawford, and D.S. Addison. 1998. An analysis of artificial riffles and enhancement of benthic community diversity by physical habitat simulation (PHABSIM) and direct observation. Regulated Rivers Research and Management 14: 69-77.

Gore, J.A., and S.W. Hamilton. 1996. Comparison of flow-related habitat evaluations downstream of low-head weirs on small and large fluvial ecosystems. Regulated Rivers Research and Management 12: 459-469.

Gore, J.A., and R.D. Judy, Jr. 1981. Predictive models of benthic macroinvertebrate density for use in instream flow studies and regulated flow management. Canadian Journal of Fisheries and Aquatic Sciences 38: 1363-1370.

Gore, J.A., J.M. King, and K.C.D. Hamman. 1991. Application of the Instream Flow Incremental Methodology to South African river: protecting endemic fishes of the Olifants River. Water SA 17 (3): 225-236.

Gore, J.A., J.B. Layzer, and I.A. Russell. 1992. Non-traditional applications of instream flow techniques for conserving habitat of biota in the Sabie River of southern Africa. Pages 161-177 in: P.J. Boon, P. Calow, and G.E. Petts, editors. River conservation and management. Wiley, New York.

Gore, J.A., and J.M. Nestler. 1988. Instream flow studies in perspective. Regulated Rivers: Research & Management 2: 93-101.

Gore, J.A., S. Niemela, B. Statzner, and V.H. Resh. 1994. Near substrate hydraulic conditions under artificial floods from peaking hydropower operation: disturbance intensity and duration. Regulated Rivers: Research and Management 9: 15-34.

Gore, J.A., and F.D. Shields, Jr. 1995. Can large rivers be restored? BioScience 45: 142-152.

Gorman, O.T. 1978. Habitat structure and stream fish communities. Ecology 59: 507-515.

Gorman, O.T. 1988. The dynamics of habitat use in a guild of Ozark minnows. Ecological Monographs 58: 1-18.

Gorman, O.T. 1988. An experimental study of habitat use in an assemblage of Ozark minnows. Ecology 69: 1239-1250.

Gorman, O.T., and J.R. Karr. 1978. Habitat structure and stream fish communities. Ecology 59: 507-515.

Gosse, J.C., and W.T. Helm. 1982. A method for measuring microhabitat components for lotic fishes and its application with regard to brown trout. Pages 138-149 in: N.B. Armantrout, editor, Acquisition and utilization of aquatic habitat inventory information. Portland, OR: American Fisheries Society, Western Division.

Goulding, M., N.J.H. Smith, and D.J. Mahar. 1996. Floods of Fortune: Ecology and Economy along the Amazon. Columbia University Press, New York.

Gowan, C. 1984. The impacts of irrigation water withdrawals on brown trout (*Salmo trutta*) and two species of benthic macroinvertebrates in a typical southern Michigan stream. Master's thesis. Michigan State University, Lansing.

Gowan, C.G., and K.D. Fausch. 1996. Long-term demographic responses of trout populations to habitat populations to habitat manipulation in six Colorado streams. Ecological Applications 6: 931-946.

Graham, R.J., and D.J. Orth. 1986. Effects of temperature and streamflow on time and duration of spawning by smallmouth bass. Transactions of the American Fisheries Society 115 (5): 693-702.

Graham, W.D., J.E. Thorpe, and N.B. Metcalfe. 1996. Seasonal current holding performance of juvenile Atlantic salmon in relation to temperature and smolting. Canadian Journal of Fisheries and Aquatic Sciences 53 (1): 80-86.

Grand, T.C. 1997. Foraging site selection by juvenile coho salmon: ideal free distributions of unequal competitors. Animal Behaviour 53: 185-196.

Grand, T.C., and L.M. Dill. 1997. The energetic equivalence of cover to juvenile coho salmon (*Oncorhynchus kisutch*): ideal free distribution theory applied. Behav. Ecol. 47: 469-471.

Grange, N., and P.R. Allanson. 1995. The influence of freshwater inflow on the nature, amount and distribution of seston in estuaries of the Eastern Cape, South Africa. Estuarine, Coastal and Shelf Science 40: 403-420.

Grange, N., A.K. Whitfield, C.J. De Villiers, and P.R. Allanson. 2000. The response of two South African east coast estuaries to altered river flow regimes. Aquatic Conservation: Freshwater and Marine Ecosystems 10: 155-177.

Grant, J.W.A., and D.L. Kramer. 1990. Territory size as a predictor of the upper limit to population density of juvenile salmonids in streams. Canadian Journal of Fisheries and Aquatic Sciences 47 (9): 1724-1737.

Grant, J.W.A., and D.L.G. Noakes. 1987. Movers and stayers: foraging tactics of young-of-the-year brook charr, *Salvelinus fontinalis*. Journal of Animal Ecology 56: 1001-1013.

Grant, J.W.A., and D.L.G. Noakes. 1987. Escape behaviour and use of cover by young-of-the-year brook trout, *Salvelinus fontinalis*. Canadian Journal of Fisheries and Aquatic Sciences 44: 1390-1396.

Grant, J.W.A., and D.L.G. Noakes. 1987. A simple model of optimal territory size for drift-feeding fish. Can. J. Zool. 65: 270-276.

Grant, J.W.A., and D.L.G. Noakes. 1988. Aggressiveness and foraging mode of young-of-the-year brook charr, *Salvelinus fontinalis* (Pisces, Salmonidae). Behav. Ecol. Sociobiol. 22: 435-445.

Grant, J.W.A., D.L.G. Noakes, and K.M. Jonas. 1989. Spatial distribution of defence and foraging in young-of-the-year brook charr, *Salvelinus fontinalis*. Journal of Animal Ecology 58: 773-784.

Grant, J.W.A., S.O Steingrimsson, E.R. Keeley, and R.A. Cunjak. 1998. Implications of territory size for the measurement and prediction of salmonid abundance in streams. Canadian Journal of Fisheries and Aquatic Sciences 55 (Suppl. 1): 181-190.

Gray, L.J., and S.G. Fisher. 1981. Postflood recolonization pathways of macrroinvertebrates in a lowland Sonoran Desert stream. American Midland Naturalist 106: 249-257.

Gray, L.J., and S.G. Fisher. 1989. Stability of periphyton and macroinvertebrates to disturbance by flash floods in a desert stream. Journal of the North American Benthological Society 8: 293-307.

Greenberg, L.A. 1991. The effect of discharge and predation on habitat use by wild and hatchery brown trout (*Salmo trutta*). Regulated Rivers: Research and Management 117: 205-212.

Greenberg, L.A., and J. Dahl. 1998. Effect of habitat type on growth and diet of brown trout, *Salmo trutta*, in stream enclosures. Fisheries Management and Ecology 5: 331-348.

Greenberg, L., and P.S. Giller. 2001. Individual variation in habitat use and growth of male and female brown trout. Ecography 24: 212-224.

Greenberg, L.A., T. Steinwall, and H. Persson. 2001. Effect of depth and substrate on use of stream pools by brown trout. Transactions of the American Fisheries Society 130 (4): 699-705.

Greenberg, L., P. Svendsen, and A. Harby. 1996. Availability of microhabitats and their use by brown trout (*Salmo trutta*) and grayling (*Thymallus thymallus*) in the River Vojman, Sweden. Regulated Rivers: Research and Management 12: 287-303.

Gregory, J.S., and J.S. Griffith. 1996. Aggressive behaviour of underyearling rainbow trout in simulated winter concealment habitat. J. Fish Biol. 49: 237-245.

Gregory, J.S., and J.S. Griffith. 1996. Winter concealment by subyearling rainbow trout: space size selection and reduced concealment under surface ice and in turbid water conditions. Canadian Journal of Zoology 74: 451-455.

Gregory, J.S., and R.W. Smith. 1996. Use of winter concealment cover by juvenile cutthroat and brown trout in the South Fork of the Snake River, Idaho. North American Journal of Fisheries Management 13: 823-830.

Gregory, S.V., and P.A. Bisson. 1997. Degradation and loss of anadromous salmonid habitat in the Pacific Northwest. Pp. 288-314 *in*: D.J. Stouder, P.A. Bisson, and R.J. Naiman (eds.), Pacific salmon and their ecosystems. Chapman and Hall, New York.

Gresswell, R.E. 1999. Fire and aquatic ecosystems in forested biomes of North America. Transactions of the American Fisheries Society 128 (2): 193-221.

Gries, G., and F. Juanes. 1998. Microhabitat use by juvenile Atlantic salmon (*Salmo salar*) sheltering during the day in summer. Can. J. Zool. 76: 1441-1449.

Griffith, J.S., Jr. 1972. Comparative behavior and habitat utilization of brook trout (*Salvelinus fontinalis*) and cutthroat trout (*Salmo clarki*) in small streams in northern Idaho. Journal of the Fisheries Research Board of Canada 29 (3): 265-273.

Griffith, J.S., Jr., and R.W. Smith. 1993. Use of winter concealment cover by juvenile cutthroat and brown trout in the South Fork of the Snake River, Idaho. North American Journal of Fisheries Management 13: 823-830.

Griffith, J.S., Jr., and R.W. Smith. 1995. Failure of submersed macrophytes to provide cover for rainbow trout throughout their first winter in Henry's Fork of the Snake River, Idaho. North American Journal of Fisheries Management 15: 42-48.

Grimes, C.B. 2001. Fishery production and the Mississippi River discharge. Fisheries 26 (8): 17-26.

Grimes, C.B., and M.J. Kingsford. 1996. How do riverine plumes of different sizes influence fish larvae: do they enhance recruitment? Marine and Freshwater Research 47: 191-208.

Grimm, N.B., and S.G. Fisher. 1984. Exchange between surface and interstitial water: implications for stream metabolism and nutrient cycling. Hydrobiologia 111: 219-228.

Grimm, N.B., and S.G. Fisher. 1989. Stability of periphyton and macroinvertebrates to disturbance by flash floods in a desert stream. Journal of the North American Benthological Society 8: 293-307.

Grizzell, R.A. 1976. Flood effects on stream ecosystems. Journal of Soil and Water Conservation 31 (6): 283-285.

Groeneveld, D. and T.E. Griepentrog. 1985. Interdependence of groundwater, riparian vegetation, and streambank stability: A case study. Pp. 44-48 in: Symposium on Riparian Ecosystems and their Management: Reconciling Conflicting Uses. U.S. Forest Service General Technical Report RM-120.

Groot, C., and L. Margolis, eds. 1991. Pacific salmon life histories. U.B.C. Press, Vancouver, B.C. 564 p.

Groshens, T.P., and D.J. Orth. 1993. Transferability of habitat suitability criteria for smallmouth bass, *Micropterus dolomieui*. Rivers 4 (3): 194-212.

Grossman, G.D., and M.A. Freeman. 1987. Microhabitat use in a stream fish assemblage. Journal of Zoology (London) 212: 151-176.

Grossman, G.D., R.E. Fatajczak, Jr., M. Crawford, and M.C. Freeman. 1998. Assemblage organization in stream fishes: effects of environmental variation and interspecific interactions. Ecological Monographs 68: 395-420.

Grossman, G.D., J. Hill, and J.T. Petty. 1995. Observations on habitat structure, population regulation, and habitat use with respect to evolutionary significant units: a landscape perspective for lotic systems. *In*: J. Nielsen (ed.), Evolution and the aquatic ecosystem: defining unique units in population conservation. American Fisheries Society Symposium 17: 381-391.

Grossman, G.D., R.E. Ratajczak, Jr., M. Crawford, and M.C. Freeman. 1998. Assemblage organization in stream fishes: effects of environmental variation and interspecific interactions. Ecological Monographs 68: 395-420.

Grost, R.T., W.A. Hubert, and T.A. Wesche. 1990. Redd site selection by brown trout in Douglas Creek, Wyoming. Journal of Freshwater Ecology 5: 365-371.

Grost, R.T., W.A. Hubert, and T.A. Wesche. 1991. Description of brown trout redds in a mountain stream. Transactions of the American Fisheries Society 120: 582-588.

Groves, P.A., and J.A. Chandler. 1999. Spawning habitat used by fall chinook salmon in the Snake River. North American Journal of Fisheries Management 19 (4): 912-922.

Grubb Journal, H. 1981. Freshwater inflow planning in Texas, p. 88-95. In: R. Cross and D. Williams (eds.). Proceedings of the national Symposium on Freshwater Inflow to Estuaries. FWS/OBS-81/04. U.S. Fish and Wildlife Service, Office of Biological Services, Washington, D.C.

Gu, R., S. McCutcheon, and C.-J. Chen. 1999. Development of weather-dependent flow requirements for river temperature control. Environmental Management 24: 529-540.

Guay, J.C., D. Boisclair, M. Leclerc, and M. Lapointe. 2003. Assessment of the transferability of biological habitat models for juveniles of Atlantic salmon (*Salmo salar*). Canadian Journal of Fisheries and Aquatic Sciences 60 (11): 1398-1408.

Guay, J.C., D. Boisclair, D. Rioux, M. Leclerc, M. Lapointe, and P. Legendre. 1999. Validation of numerical habitat model for juveniles of Atlantic salmon (*Salmo salar*). In T.B. Hardy, ed. Proceedings of 3rd international symposium on ecohydraulics. Utah State University, Logan.

Guay, J.C., D. Boisclair, D. Rioux, M. Leclerc, M. Lapointe, and P. Legendre. 2000. Development and validation of numerical habitat models for juveniles of Atlantic salmon (*Salmo salar*). Canadian Journal of Fisheries and Aquatic Sciences 57(10): 2065-2075.

Guay, J.C., D. Boisclair. D. Rioux, M. Leclerc, M. Lapointe, and P. Legendre. 2001. Science on the edge of spatial scales: a reply to the comments of Williams (2001). Canadian Journal of Fisheries and Aquatic Sciences 58 (10): 2108-2111.

Guensch, G.R., T.B. Hardy, and R.C. Addley. 2001. Examining feeding strategies and position choice of drift-feeding salmonids using an individual-based, mechanistic foraging model. Canadian Journal of Fisheries and Aquatic Sciences 58(3): 446-457.

Gunderson, D.R. 1968. Floodplain use related to stream morphology and fish populations. Journal of Wildlife Management 32: 507-517.

Gunckel, S.L., A.R. Hemmingsen, and J.L. Li. 2002. Effect of bull trout and brook trout interactions on foraging habitat, feeding behavior, and growth. Transactions of the American Fisheries Society 131 (6): 1119-1130.

Gunter, G., and J.C. Edwards. 1969. The relation of rainfall and fresh-water drainage to the production of the penaeid shrimps (Penaeus fluviatilis Say and Penaeus aztecus Ives) in Texas and Louisiana waters. FAO Fishery Report 57: 875-892.

Gustard, A. 1984. The characterization of flow regimes for assessing the impact of water resource management on river ecology. Pp. 53-60 in: A. Lillehammer and S.J. Saltveit (eds). Regulated Rivers. New York: Columbia University Press.

Gutreuter, S., A.D. Bartels, K. Irons, and M.B. Sandheimrich. 1999. Evaluation of the flood-pulse concept based on statistical models of growth of selected fishes of the Upper Mississippi River system. Canadian Journal of Fisheries and Aquatic Sciences 56 (12): 2282-2291.

Hackney, C.T. 1978. Summary of information: Relationship of freshwater inflow to estuarine productivity along the Texas coast. FWS/OBS-78/73. U.S. Fish and Wildlife Service, Biological Service Program, Washington, D.C.

Haeuber, R.A., and W.K. Mitchener. 1998. Natural flood control. Issues in Science and Technology (Fall 1998): 74-80.

Hagen, J. and E.B. Taylor. 2001. Resource partitioning as a factor limiting gene flow in hybridizing populations of Dolly Varden char (*Salvelinus malma*) and bull trout (*Salvelinus confluentus*). Canadian Journal of Fisheries and Aquatic Sciences 58 (10): 2037-2047.

Haines, G.B., and H.M. Tyus. 1990. Fish associations and environmental variables in age-0 Colorado squawfish habitats, Green River, Utah. Journal of Freshwater Ecology 5 (4): 427-436.

Hale, J.G., and D.A. Hilden. 1970. The influence of flow on the spawning of brook trout in the laboratory. Transactions of the American Fisheries Society 99 (3): 595-597.

Hale, S.S., T.E. McMahon, and P.C. Nelson. 1985. Habitat suitability index models and instream flow suitability curves: chum salmon. U.S. Fish and Wildlife Service Biological Report 82.

Hallisey, J.E., and G.H. Belt. 1996. Relationships between particle movement and channel morphology in some northern Idaho streams. Water Resources Bulletin 32 (2): 383-391.

Hamilton, D.P. 2000. Record summer rainfall induced first recorded major cyanobacterial bloom in the Swan River. Environmental Engineer 1: 25.

Hamilton, R.E. 1978. Fisheries resource maintenance flows for Pacific salmon. M.A.S. thesis, Department of Civil Engineering, University of British Columbia, Vancouver. 143 pp.

Hamilton, R., and J.W. Buell. 1976. Effects of modified hydrology on Campbell River salmonids. Environment Canada, Fisheries and Marine Service, Technical Report Series No. PAC/T-76-20, Habitat Protection Dir., Vancouver.

Hampton, M. 1988. Development of habitat preference criteria for anadromous salmonids of the Trinity River. U.S. Fish and Wildlife Service, Division of Ecological Services, Sacramento, CA.

Hankin, D.G., and G.H. Reeves. 1988. Estimating total fish abundance and total habitat area in small streams based on visual estimation methods. Canadian Journal of Fisheries and Aquatic Sciences 45: 834-844.

Hansen, E.A. 1975. Some effects of groundwater on brown trout redds. Transactions of the American Fisheries Society 104: 100-110.

Hansen, R., D.D. Hart, and R.A. Merz. 1991. Flow mediates predator-prey interactions between triclad flatworms and larval black flies. Oikos 60: 187-196.

Hanson, D.L., and T.F. Waters. 1974. Recovery of standing crop and production rate of a brook trout population in a flood-damaged stream. Transactions of the American Fisheries Society 103 (3): 431-439.

Harby, A., and J.H. Halleraker. 2001. Ecological impacts of hydro peaking in rivers. Hydropower and Dams 4: 132-134.

Harding, L.W., Jr. 1994. Long-term trends in the distribution of phytoplankton in Chesapeake Bay: roles of light, nutrients and streamflow. Marine Ecology Progress Series 104: 267-291.

Hardy, T.B. 1998. The future of habitat modeling and instream flow assessment techniques. Regulated Rivers: Research and Management 14 (5): 405-420.

Hardy, T.B., C.G. Prewitt, and K.A. Voos. 1982. Application of a physical habitat usability model to the fish community in a small spring-fed desert stream. Pp. 391-397 in: W.K. Lauenroth, G.V. Skogerboe, and M. Flug (eds), Analysis of ecological systems: state of the art in ecological modeling. Elsevier.

Harner, M.J., and J.A. Stanford. 2003. Differences in cottonwood growth between a losing and a gaining reach of an alluvial floodplain. Ecology 84 (6): 1453-1458.

Haro, R.J., and M.A. Brusven. 1994. Effects of cobble embeddedness on the microdistribution of the sculpin *Cottus beldingi* and its stonefly prey. Great Basin Naturalist 54: 64-70.

Harper, D.D., and A.M. Farag. 2004. Winter habitat use by cutthroat trout in the Snake River near Jackson, Wyoming. Transactions of the American Fisheries Society 133 (1): 15-25.

Harpman, D.A., E.W. Sparling, and T.J. Waddle. 1993. A methodology for quantifying and valuing the impacts of flow changes on a fishery. Water Resources Research 29: 575-582.

Harr, R.D., and F.M. McCorisin. 1979. Initial effects of clearcut logging on size and timing of peak flows in a small watershed in western Oregon. Water Resour. Res. 15: 90-94.

Harrell, H.L. 1978. Responses of the Devil's River (Texas) fish community to flooding. Copeia 1978: 60-68.

Harris, D.D., W.A. Hubert, and T.A. Wesche. 1991. Brown trout population and habitat response to enhanced minimum flow in Douglas Creek, Wyoming. Rivers 2 (4): 285-294.

Harris, D.D., W.A. Hubert, and T.A. Wesche. 1992. Habitat use by young-of-the-year brown trout and effects on weighted usable area. Rivers 3 (2): 99-105.

Harris, J.H., and P.C. Gehrke. 1994. Modelling the relationship between streamflow and population recruitment to manage freshwater fisheries. Agric. Syst. Inform. Technol. 6: 28-30.

Harris, R.D., R.J. Risser, and C.J. Fox. A method for evaluating streamflow discharge - plant species occurrence patterns on headwater streams. Pp. 87-90 in: Johnson, R.R., et al. (Eds), Riparian ecosystems and their management: reconciling conflicting uses. USDA Forest Service, Gen. Tech. Report RM-120.

Harris, R.R. C.A. Fox, and R. Risser. 1987. Impacts of hydroelectric development on riparian vegetation in the Sierra Nevada, California, USA. Environmental Management 12 (2): 219-228.

Hart, D.D., B.D. Clark, and A. Jasentuliyana. 1996. Fine-scale field measurement of benthic flow environments inhabited by stream invertebrates. Limnology and Oceanography 41: 297-308.

Hart, D.D., and C.M. Finelli. 1999. Physical-biological coupling in streams: the pervasive effects of flow on benthic organisms. Annual Review of Ecology and Systematics 30: 363-395.

Hart, D.D., and D.M. Fonseca. 1995. Relationships between benthic distributions and heterogeneous flow environments: processes and patterns at three spatial scales. J. N. Am. Benthol. Soc. 12: 274.

Hart, D.D., and R.A. Merz. 1998. Predator-prey interactions in a benthic stream community: a field test of flow-mediated interactions. Oecologia 114: 263-273.

Hartman, G.F. 1965. The role of behavior in the ecology and interaction of underyearling coho salmon (*Oncorhynchus kisutch*) and steelhead trout (*Salmo gairdneri*). Journal of the Fisheries Research Board of Canada 22 (4): 1035-1081.

Hartman, G.F., and J.C. Scrivener. 1990. Impacts of forestry practices on a coastal stream ecosystem, Carnation Creek, British Columbia. Canadian Bulletin of Fisheries and Aquatic Sciences 223: viii+148 pp. Department of Fisheries and Oceans, Ottawa.

Harvey, B. 1987. Susceptibility of young-of-the year fishes to downstream displacement by flooding. Transactions of the American Fisheries Society 116: 851-855.

Harvey, B.C. 1991. Interactions among stream fishes: predator-induced shifts and larval survival. Oecologia 87: 29-36.

Harvey, B.C. 1991. Interaction of abiotic and biotic factors influences larval fish survival in an Oklahoma stream. Canadian Journal of Fisheries and Aquatic Sciences 48: 1476-1480.

Harvey, B.C., and R.J. Nakamoto. 1997. Habitat-dependent interactions between two size-classes of juvenile steelhead in a small stream. Canadian Journal of Fisheries and Aquatic Sciences 54 (1): 27-31.

Harvey, B.C., R.J. Nakamoto, and J.L. White. 1999. Influence of large woody debris and a bankfull flood on movement of adult resident coastal cutthroat trout (*Oncorhynchus clarki*) during fall and winter. Canadian Journal of Fisheries and Aquatic Sciences 56 (11): 2161-2166.

Harvey, B.C., and A.J. Stewart. 1991. Fish size and habitat depth relationships in headwater streams. Oecologia 87: 336-342.

Harvey, B.C., J.L. White, and R.J. Nakamoto. 2002. Habitat relationships and larval drift of native and nonindigenous fishes in neighboring tributaries of a coastal California river. Transactions of the American Fisheries Society 131 (1): 159-170.

Harvey, J.W., and K.E. Bencala. 1993. The effect of streambed topography on surface-subsurface water exchange in mountain catchments. Water Resources Res. 29: 89-98.

Harwood, A.J., N.B. Metcalfe, S.W. Griffiths, and J.D. Armstrong. 2002. Intra- and inter-specific competition for winter concealment in juvenile salmonids. Canadian Journal of Fisheries and Aquatic Sciences 59 (9): 1515-1523.

Haschenburger, J.K. 1999. A probability model of scour and fill depths in gravel-bed channels. Water Resources Research 35: 2857-2869.

Hatfield, T. and J. Bruce. 2000. Predicting salmon habitat-flow relationship for streams from western North America. North American Journal of Fisheries Management 20 (4): 1005-1015.

Havey, K.A. 1974. Effects of regulated flows on standing crops of juvenile salmon and other fishes at Barrow Stream, Maine. Transactions of the American Fisheries Society 103 (1): 1-9.

Havey, K.A., and R.M. Davis. 1970. Factors influencing standing crops and survival of juvenile salmon at Barrows Stream, Maine. Transactions of the American Fisheries Society 99 (2): 297-311.

Hawes, S.R., and H.M. Perry. 1978. Effects of 1973 floodwaters on plankton populations in Louisiana and Mississippi. Gulf Research Reports 6: 109-124.

Hawkes, C.L., D.L. Miller, and W.G. Layher. 1986. Fish ecoregions of Kansas: stream fish assemblage patterns and associated environmental correlates. Environmental Biology of Fishes 17: 267-279.

Hawkes, H.A. 1975. River zonation and classification. Pages 312-374 in: B.A. Whitton, editor. River ecology. University of California Press, Berkeley.

Hawkins, C.P., J.L. Kershner, P.A. Bisson, M.D. Bryant, L.M. Decker, S.V. Gregory, D.A. McCullough, C.K. Overton, G.H. Reeves, R.J. Steedham, and M.K. Young. A hierarchical approach to classifying habitat features. Fisheries 18 (6): 3-12.

Hawkins, C.P., M.L. Murphy, N.H. Anderson, and M.A. Wilzbach. 1983. Density of fish and salamanders in relation to riparian canopy and physical habitat in streams of the northwestern United States. Canadian Journal of Fisheries and Aquatic Sciences 40: 1173-1185.

Hayes, D.B., C.P. Ferreri, and W.W. Taylor. 1996. Linking fish habitat to their population dynamics. Canadian Journal of Fisheries and Aquatic Sciences 53 (Suppl. 1): 383-390.

Hayes, F.R. 1953. Artificial freshets and other factors controlling the ascent and populations of Atlantic salmon in the LaHave River, Nova Scotia. Bulletin of the Fisheries Research Board of Canada 99: 1-47.

Hayes, J.W. 1996. Bioenergetic model for drift-feeding brown trout. In: The 2nd International Symposium on Ecohydraulics, June 1996, Quebec, Canada. Pp. 465-476.

Hayes, J.W., and I.G. Jowett. 1994. Microhabitat models of large drift-feeding brown trout in three New Zealand rivers. North American Journal of Fisheries Management 14 (4): 710-725.

Healy, B.D., and D.G. Lonzarich. 2000. Microhabitat use and behavior of overwintering juvenile coho salmon in a Lake Superior tributary. Transactions of the American Fisheries Society 129 (3): 866-872.

Heard, W.R. 1991. Life history of pink salmon (*Oncorhynchus gorbuscha*). Pp. 119-230 in: C. Root and L. Margolis (eds.), Pacific salmon life histories. UBC Press, Vancouver.

Hearn, W.E. 1987. Interspecific competition and habitat segregation among stream-dwelling trout and salmon: a review. Fisheries 12 (5): 24-31.

Hearn, W.E., and B.E. Kynard. 1986. Habitat use and behavioral interaction of juvenile Atlantic salmon (*Salmo salar*) and rainbow trout (*S. gairdneri*) in tributaries of the White River in Vermont. Canadian Journal of Fisheries and Aquatic Sciences 43 (10): 1988-1998.

Hearne, J., I. Johnshom, and P. Armitage. 1994. Determination of ecologically acceptable flows in rivers with seasonal changes in the density of macrophyte. Regulated Rivers: Research and Management 9: 177-184.

Heede, B.H., and J.N. Rinne. 1990. Hydrodynamic and fluvial geomorphological processes: implications for fisheries management and research. North American Journal of Fisheries Management 10: 249-268.

Heggenes. J. 1988. Effect of experimentally increased intraspecific competition on sedentary adult brown trout (*Salmo trutta*) movement and stream habitat choice. Canadian Journal of Fisheries and Aquatic Sciences 45 (7): 1163-1172.

Heggenes. J. 1988. Substrate preferences of brown trout fry (*Salmo trutta*) in artificial stream channels. Canadian Journal of Fisheries and Aquatic Sciences 45 (10): 1801-1806.

Heggenes. J. 1988. Effects of short-term flow fluctuations on displacement of, and habitat use by, brown trout in a small stream. Transactions of the American Fisheries Society 117 (4): 336-344.

Heggenes, J. 1988. Physical habitat selection by brown trout (*Salmo trutta*) in riverine systems. Nordic Journal of Freshwater Research 64: 74-90.

Heggenes, J. 1990. Habitat utilization and preferences in juvenile Atlantic salmon (*Salmo salar*) in streams. Regulated Rivers: Research and Management 5: 341-354.

Heggenes, J. 1991. Comparisons of habitat availability and habitat use by an allopatric cohort of juvenile Atlantic salmon *Salmo salar* under conditions of low competition in a Norwegian stream. Holarctic Ecology 14: 51-62.

Heggenes, J. 1994. Physical habitat selection by brown trout (*Salmo trutta*) and young Atlantic salmon (*S. salar*) in spatially and temporally heterogeneous streams: implications for hydraulic modeling. Pp. 12-30 in: Proceedings of the 1st International Conference on Habitat Hydraulics. International Association of Hydraulic Research, Trondheim, Norway.

Heggenes, J. 1996. Habitat selection by brown trout (*Salmo trutta*) and young Atlantic salmon (*S. salar*) in streams: static and dynamic hydraulic modeling. Regulated Rivers: Research and Management 12: 155-169.

Heggenes, J. 2002. Flexible summer habitat selection by wild, allopatric brown trout in lotic environments. Transactions of the American Fisheries Society 131 (2): 287-298.

Heggenes, J., J.L. Bagliniere, and R.A. Cunjak. 1999. Spatial niche variability for young Atlantic salmon, *Salmo salar* L., and brown trout, *S. trutta* L., in heterogeneous streams. Ecology of Freshwater Fish 8: 1-21.

Heggenes, J., and R. Borgstrom. 1991. Effects of habitat types on survival, spatial distribution and production of an allopatric cohort of Atlantic salmon, *Salmo salar* L., under conditions of low competition. Journal of Fish Biology 38: 267-280.

Heggenes, J., A. Braband, and S.K. Saltveit. 1990. Comparison of three methods for studies of stream habitat use by young brown trout and Atlantic salmon. Transactions of the American Fisheries Society 119: 101-111.

Heggenes, J., A. Braband, and S.K. Saltveit. 1991. Microhabitat use by brown trout *(Salmo trutta)*, and Atlantic salmon *(Salmo salar)* in a stream: a comparative study of underwater and riverbank observation. Journal of Fish Biology 38: 259-266.

Heggenes, J., T.G. Northcote, and A. Peter. 1991. Spatial stability of cutthroat trout (*Oncorhynchus clarki*) in a small coastal stream. Canadian Journal of Fisheries and Aquatic Sciences 48 (5): 757-762.

Heggenes, J., T.G. Northcote, and A. Peter. 1991. Seasonal habitat selection and preferences by cutthroat trout (*Oncorhynchus clarki*) in a small, coastal stream. Canadian Journal of Fisheries and Aquatic Sciences 48: 1364-1370.

Heggenes. J., and S.J Saltveit. 1990. Seasonal and spatial microhabitat selection and segregation in young Atlantic salmon, *Salmo salar* L., and brown trout, *S. trutta* L. Journal of Fish Biology 36: 707-720.

Heggenes, J., S.J. Saltveit, K.A. Vaskinn, and O. Lingas. 1996. Predicting fish habitat use to changes in water flow: modeling critical minimum flows for Atlantic salmon, *Salmo salar*, and brown trout, *S. trutta*. Regulated Rivers: Research and Management 12: 331-344.

Heggenes. J., and T. Traaen. 1988. Downstream migration and critical water velocities in stream channels for fry of four salmonid species. Journal of Fish Biology 32: 717-727.

Helfrich, L.A., K.W. Nutt, and D.L. Weigmann. 1991. Habitat selection by spawning redbreast sunfish in Virginia streams. Rivers 2 (2): 138-147.

Helvey, J.D. 1972. First-year effects of wildfire on water yield and stream temperature in north-central Washington. Pp. 308-312 in: S.C. Callany, T.G. McLaughlin, and W.D. Striffler (eds.), Watersheds in transitions. American Water Resources Association, Proceeding Series 14, Urbana, Illinois.

Helvey, J.D. 1980. Effects of a north-central Washington wildfire on runoff and sediment production. Water Resources Bulletin 16: 627-634.

Herger, L.G., W.A. Hubert, and M.K. Young. 1996. Comparison of habitat composition and cutthroat trout abundance at two flows in small mountain streams. North American Journal of Fisheries Management 16 (2): 294-301.

Heritage, G.L., A.W. van Niekerk, B.P. Moon, L.J. Broadhurst, K.H. Rogers, and C.S. James. 1997. The geomorphological response to changing flow regimes of the Sabie and Letaba river systems. Water Research Commission, Pretoria, South Africa.

Hesse, L.W., and B.A. Newcomb. 1982. Effects of flushing Spencer Hydro on water quality, fish, and insect fauna in the Niobara River, Nebraska. North American Journal of Fisheries Management 2: 45-52.

Hicks, B.J. 1989. The influence of geology and timber harvest on channel morphology and salmonid populations in Oregon Coast Range streams. Doctoral dissertation. Oregon State Unviersity, Corvallis.

Hicks, B.J., R.L. Beschta, and R.D. Harr. 1991. Long-term changes in streamflow following logging in western Oregon and associated fisheries implications. Water Resources Bulletin 27: 217-226.

Hicks, B.J, and J.D. Hall. 2003. Rock type and channel gradient structure salmonid populations in the Oregon Coast Range. Transactions of the American Fisheries Society 132 (3): 468-482.

Hicks, B.J., J.D. Hall, P.A. Bisson, and J.R. Sedell. 1991. Responses of salmonids to habitat changes. Pp. 483-518 in: W.R. Meehan (ed.) Influences of forest and rangeland management on salmonid fishes and their habitats. American Fisheries Society Special Publication 19, Bethesda, Maryland.

Hildebrand, R.H., A.D. Lemly, and C.A. Dolloff. 1999. Habitat sequencing and the importance of discharge in inferences. North American Journal of Fisheries Management 19(1): 198-202.

Hill, J. 1989. The energetic significance of microhabitat use in two stream fishes. Ph.D. dissertation, University of Georgia, Athens.

Hill, J., and G.D. Grossman. 1993. An energetic model of microhabitat use for rainbow trout and rosyside dace. Ecology 74 (3): 685-698.

Hill, M.T., W.S. Platts, and R.L. Beschta. 1991. Ecological and geomorphological concepts for instream and out-of-channel flow requirements. Rivers 2: 198-210.

Hillman, T.J., and G.P. Quinn. 2002. Temporal changes in macroinvertebrate assemblages following experimental flooding in permanent and temporary wetlands in an Australian floodplain forest. River Research and Applications 18 (2): 137-154.

Hillman, T.W., J.S. Griffith, and W.S. Platts. 1987. Summer and winter habitat selection by juvenile chinook salmon in a highly sedimented Idaho stream. Transactions of the American Fisheries Society 116 (2): 185-195.

Hinton, S.A., and R.L. Emmett. 1994. Juvenile salmonid stranding in the lower Columbia River, 1992 and 1993. U.S. National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Northwest Fisheries Center Technical Memorandum 20: 48 pp.

Hirsch, C.L. 1995. Seasonal shifts in redband trout use of pools and their microhabitats in three central Oregon streams. Master's thesis, Oregon State University, Corvallis.

Hiscock, M.J., D.A. Scruton, J.A. Brown, and K.D. Clarke. 2002. Winter movement of radio-tagged juvenile Atlantic salmon in Northeast Brook, Newfoundland. Transactions of the American Fisheries Society 131 (3): 577-581.

Hobs, N.T., and T.A. Hanley. 1990. Habitat evaluation: do use/availability data reflect carrying capacity? Journal of Wildlife Management 54: 515-522.

Hoel, S.M. 1998. Evaluation of the relations of fish and invertebrate communities to habitat conditions affected by low and variable flows in two Missouri prairie streams. M.S. thesis, University of Missouri, Columbia. 246 pp.

Hoese, H.D. 1960. Biotic changes in a bay associated with the end of a drought. Limnology and Oceanography 5: 326-336.

Hoffman, J.P. 1980. Determining optimum releases from Lewiston Dam to improve salmon and steelhead habitat in the Trinity River, California. Proc. Ann. Conf. Western Assoc. Fish Wildlife Agencies 80: 366-388.

Hogan, D.L., and M. Church. 1989. Hydraulic geometry in small, coastal streams: progress toward quantification of salmonid habitat. Canadian Journal of Fisheries and Aquatic Sciences 46 (5): 844-852.

Hollis, G.E. 1975. The effect of urbanization on floods of different recurrence interval. Water Resources Research 11 (3): 431-435.

Holmquist, J.G., J.M. Schmidt-Gengenback, and B.B. Yoshioka. 1998. High dams and marine-freshwater linkages: effects on native and introduced fauna in the Caribbean. Conservation Biology 12: 621-630.

Holtby, L.B., and G.F. Hartman. 1982. The population dynamics of coho salmon (*Oncorhynchus kisutch*) in a west coast rainforest stream subject to logging. Pp. 308- in: G.F. Hartman (ed), Proceedings of the Carnation Creek Workshop, a 10 year review. Pacific Biological Station, Nanaimo, British Columbia. 404 pp.

Holtby, L.B., and Healy, M.C. 1986. Selection for adult size in female coho salmon (*Oncorhynchus kisutch*). Canadian Journal of Fisheries and Aquatic Sciences 43: 1946-1959.

Holtby, L.B., and J.C. Scrivener. 1989. Observed and simulated effects of climatic variability, clear-cut logging and fishing on the number of chum salmon (*Oncorhynchus keta*) and coho salmon (*O. kisutch*) returning to Carnation Creek, British Columbia. Canadian Special Publication on Fisheries and Aquatic Sciences 105: 62-81.

Hoopes, D.T. 1972. Selection of spawning sites by sockeye salmon in small streams. U.S. Fish and Wildlife Service, Fishery Bulletin 70: 447-458.

Hoopes, R.L. 1975. Flooding as a result of Hurricane Agnes, and its effect on a native brook trout population in an infertile headwater. Transactions of the American Fisheries Society 104 (1): 96-99.

Hopkinson, Jr., C.S., and J.J. Vallino. 1995. The relationships among man's activities in watersheds and estuaries: A model of runoff effects on patterns of estuarine community metabolism. Estuaries 18: 598-621.

Hornbeck, J.W., M.B. Adams, E.S. Corbett, E.S. Verry, and J.A. Lynch. 1993. Long-term impacts of forest treatments on forest yield: a summary for northeastern USA. J. Hydrol. 150: 323-340.

Hornbeck, J.W, C.W. Martin, and C. Eager. 1997. Summary of water yield experiments at Hubbard Brook Experimental Station, New Hampshire. Can. J. For. Res. 27: 2043-2052.

Hornbeck, J.W, C.W. Martin, R.S. Pierce, F.H. Bormann, G.E. Likens, and J.S. Eaton. 1986. Clearcutting northern hardwoods: effects on hydrologic and nutrient ion budgets. For. Sci. 32: 667-686.

Hoxmeier, R.J., and D.R. DeVries. 1997. Habitat use, diet, and population structure of adult and juvenile paddlefish in the lower Alabama River. Transactions of the American Fisheries Society 126: 288-301.

Huang, W., and E.K. Jones. 1997. Three-dimensional modeling of circulation and salinity for the low river flow season in Apalachicola Bay, Florida. Northwest Florida Water Management District Water Resources Special Report 97-10, Havana, Florida.

Hubert, W.A., D.D. Harris, and T.A. Wesche. 1994. Diurnal shifts in use of summer habitat by age-0 brown trout in a regulated mountain stream. Hydrobiologia 284: 147-156.

Hubert, W.A., and S.J. Kozel. 1993. Quantitative relations of physical habitat features to channel slope and discharge in unaltered mountain streams. Journal of Freshwater Ecology 8: 177-183.

Hubert, W.A., and F.J. Rahel. 1989. Relations of physical habitat to abundance of four nongame fishes in high-plains streams: a test of habitat suitability. North American Journal of Fisheries Management 9 (3): 332-340.

Hubert, W.A., C. Raley, and S.H. Anderson. 1990. Compliance with instream flow agreements in Colorado, Montana, and Wyoming. Fisheries 15 (2): 8-10.

Huet, M. 1959. Profiles and biology of Western European streams as related to fish management. Transactions of the American Fisheries Society 88: 155-163.

Huey, R.B. 1991. Physiological consequences of habitat selection. American Naturalist 130 (supplement): 90-115.

Hughes, F.M.R. 1994. Environmental change, disturbance and regeneration in semi-arid floodplain forests. Pp. 321-345 in: A.C. Millington and K. Pye, eds. Environmental change in drylands: biogeographical and geomorphological perspectives. Wiley, London.

Hughes, N.F. 1992. Ranking of feeding positions by drift-feeding Arctic grayling (*Thymallus arcticus*). Canadian Journal of Fisheries and Aquatic Sciences 49 (10): 1994-1998.

Hughes, N.F. 1992. Selection of positions by drift-feeding salmonids in dominance hierarchies: model and test for Arctic grayling (*Thymallus arcticus*). Canadian Journal of Fisheries and Aquatic Sciences 49 (10): 1999-2008.

Hughes, N.F. 1998. A model of habitat selection by drift-feeding salmonids at different scales. Ecology 79: 1097-1129.

Hughes, N.F., and L.M. Dill. 1990. Position choice by drift-feeding salmonids: model and test for Arctic grayling (*Thymallus arcticus*) in subarctic mountain streams, interior Alaska. Canadian Journal of Fisheries and Aquatic Sciences 47 (10): 2039-2048.

Hughes, N.F., and T.C. Grand. 2000. Physiological ecology meets the ideal-free distribution: predicting the distribution of size structured fish populations across temperature gradients. Environmental Biology of Fishes 59: 285-298.

Hughes, N.F., J.W. Hayes, K.A. Shearer, and R.G. Young. 2003. Testing a model of drift-feeding using three-dimensional videography of wild brown trout, *Salmo trutta*, in a New Zealand river. Canadian Journal of Fisheries and Aquatic Sciences 60 (12): 1462-1476.

Humborg, C., V. Ittekkot, A. Cocasiu, and B.V. Bodungen. 1997. Effects of Danbue River dam on Black Sea biogeochemistry and ecosystem structure. Nature 386: 385-388.

Humphries, P., A.J. King, and J.D. Koehn. 1999. Fish, flows and flood plains: links between freshwater fishes and their environment in the Murray-Darling River system, Australia. Environmental Biology of Fishes 56: 129-151.

Humphries, P., L. Serafini, and A.J. King. 2002. River regulation and fish larvae: variations through space and time. Freshwater Biology 47: 1307-1331.

Hunt, R.L. 1969. Overwinter survival of wild fingerling brook trout in Lawrence Creek, Wisconsin. Journal of the Fisheries Research Board of Canada 26: 1473-1483.

Hunter, J.G. 1959. Survival and production of pink and chum salmon in a coastal stream. J. Fish. Res. Bd. Can. 16 (6): 835-886.

Hunter, J.W. 1973. A discussion of game fish in the state of Washington as related to water requirements. Washington State Department of Game, Olympia.

Hunter, M.A. 1992. Hydropower flow fluctuations and salmonids: a review of the biological effects, mechanical causes, and options for mitigation. State of Washington Department of Fisheries Technical Report No. 119. Olympia. 46 pp.

Huntingford, F.A., N.B. Metcalfe, and J.E. Thorpe. 1988. Choice of feeding station in Atlantic salmon, *Salmo salar*, parr: effects of predation risk, season, and life history strategy. Journal of Fish Biology 33: 917-924.

Huntsman, A.G. 1945. Freshets and fish. Transactions of the American Fisheries Society 75: 257-266.

Hurley, S.T., W.A. Hubert, and J.G. Nickum. 1987. Habitats and movements of shovelnose sturgeon in the upper Mississippi River. Transactions of the American Fisheries Society 116: 655-662.

Huusko, A., and T. Yrjana. 1998. Effects of instream enhancement structures on brown trout, *Salmo trutta* L., habitat availability in a channelized boreal river: a PHABSIM approach. Fish. Manag. Ecol. 4: 453-466.

Hvidsten, N.A. 1985. Mortality of pre-smolt Atlantic salmon, *Salmo salar* L., and brown trout, *Salmo trutta* L., caused by fluctuating water le.... Journal of Fish Biology 1985: 711-718.

Hvidsten, N.A. 1993. High winter discharge after regulation increases production of Atlantic salmon, *Salmo salar*, smolts in the River Orkla, Norway. Pp. 175-177 *in*: R.J. Gibson and R.E. Cutting (eds.), Production of juvenile Atlantic salmon, *Salmo salar*, in natural waters. Can. Spec. Publ. Fish. Aquat. Sci. 118.

Hvidsten, N.A., A.J. Jensen, H. Vivas, O. Bakke, and T.G. Heggberget. 1995. Downstream migration of Atlantic salmon smolts in relation to water flow, water temperature, moon phase and social interaction. Nordic Journal of Freshwater Research 70: 38-48.

Hvidsten, N.A., and O. Ugedal. 1991. Increased densities of Atlantic salmon smolts in the River Orkla, Norway, after regulation for hydropower production. In: J. Colt and R.J. White (eds),

Fisheries Bioengineering Symposium. American Fisheries Society Symposium 10. Bethesda, Maryland.

Illies, J., and L. Botosaneau. 1963. Problemes et methodes de la classification et de la zonation ecologique des eaux courantes considerees surtout du point de vue faunistique. Mitt. Int. Ver. Limnol. 12: 1-57.

Imhof, J.B., J. Fitzgibbon, and W.K. Annable. 1996. A hierarchical evaluation system for characterizing watershed ecosystems for fish habitat. Canadian Journal of Fisheries and Aquatic Sciences 53 (Suppl. 1): 312-326.

Ingram, H., and C.R. Oggins. 1992. The Public Trust Doctrine and community values in water. Natural Resources Journal 32: 515-537.

Ingram, R.G., L. Legendre, Y. Simard, and S. Leparge. 1985. Phytoplankton response to freshwater runoff: The diversion of the Eastmain River, James Bay. Canadian Journal of Fisheries and Aquatic Sciences 42: 1216-1221.

Inoue, M., S. Nakano, and F. Nakamura. 1997. Juvenile masu salmon (*Oncorhynchus masou*) abundance and stream habitat relationships in northern Japan. Canadian Journal of Fisheries and Aquatic Sciences 54 (6): 1331-1341.

Irlandi, E., S. Macia, and J. Serafy. 1997. Salinity reduction from freshwater canal discharge: Effects on mortality and feeding of an urchin (*Lytechinus variegatus*) and a gastropod (*Lithopoma tectum*). Bulletin of Marine Science 61: 869-897.

Irvine, J.R. 1984. Effects of varying discharge on stream invertebrates and underyearling salmon and trout. Ph.D. thesis, University of Otago, Dunedin, New Zealand. 254 pp.

Irvine, J.R. 1985 or 1986. Effects of successive flow perturbations on stream invertebrates. Canadian Journal of Fisheries and Aquatic Sciences 42 : 1922-1927.

Irvine, J.R. 1986. Effects of varying discharge on the downstream movement of salmon fry, *Oncorhynchus tshawytscha* Walbaum. Journal of Fish Biology 28 (1): 17-28.

Irvine, J.R. 1987. Effects of varying flows in man-made streams on rainbow trout (*Salmo gairdneri* Richardson) fry. Pp. 83-98 in: J.F. Craig and J.B. Kemper, editors. Regulated Streams: Advances in Ecology. Plenum Press, New York and London.

Irvine, J.R., and P.R. Henriques. 1984. A preliminary investigation on effects of fluctuating flows on invertebrates of the Hawea River, a large regulated river. New Zealand Journal of Marine and Freshwater Research 18: 283-290.

Irvine, I.G. Jowett, and D. Scott. 1987. A test of the instream flow incremental methodology for underyearling rainbow trout (*Salmo gairdnerii* Richardson) in experimental New Zealand streams. New Zealand Journal of Marine and Freshwater Research 21: 35-40.

Irvine, J.R., and B.R. Ward. 1989. Patterns of timing and size of wild coho salmon (*Oncorhynchus kisutch*) smolts migrating from the Keough River watershed o... Canadian Journal of Fisheries and Aquatic Sciences 46 (7): 1086-1094.

Irvine, J.R., and N.E. West. 1979. Riparian tree species distribution and succession along the lower Escalante River, Utah. Southwestern Naturalist 24 (2): 331-346.

Irvine, K.N., and J.J. Drake. 1987. Spatial analysis of snow- and rain-generated highflows in southern Ontario. Can. Geogr. 31: 140-149.

Irving, D.B., and T. Modde. 2000. Home-range fidelity and use of historical habitat by adult Colorado squawfish (*Ptychocheilus lucius*) in the White River, Colorado, and Utah. Western North American Naturalist 60: 16-25.

Irwin, E.R., and M.C. Freeman. 2002. Proposal for adaptive management to conserve biotic integrity in a regulated segment of the Tallapoosa River, Alabama, U.S.A. Conservation Biology 16: 1212-1222.

Iverson, M., P. Wiberg-Larsen, S.B. Hansen, and F.S. ... 1978. The effect of partial and total drought on the macroinvertebrate community of three small Danish streams. Hydrobiol. 60: 235-242.

Jackson, D.C., A.V. Brown, and W.D. Davies. 1991. Zooplankton transport and diel drift in the Jordan Dam tailwater during a minimum flow regime. Rivers 2 (3): 190-197.
Jackson, R.I. 1950. Variations in flow patterns at Hell's Gate and their relationships to the migration of sockeye salmon. International Pacific Salmon Fisheries Commission, Bulletin 3: 85-129.

Jackson, W., T. Martinez, P. Cuplin, and W. Minkley. 1987. Assessment of water conditions and management opportunities in support of riparian values: BLM San Pedro River Properties... Denver, CO: U.S. Bureau of Land Management (BLM-YA-PT-88).

Jager, H.I., H.E. Cardwell, M.J. Sale, M.S. Bevelhimer, C.C. Coutant, and W. van Winkle. 1997. Modelling the linkages between flow management and salmon recruitment in streams. Ecological Modelling 103: 171-191.

Jager, H.I., D.L. DeAngelis, M.J. Sale, W. Van Winkle, D.D. Schmoyer, M.J. Sabo, D.J. Orth, and J.A. Lukas. 1993. An individual-based model for smallmouth bass reproduction and young-of-year dynamics in streams. Rivers 4 (2): 91-113.

Jager, H.I., and E. Pert. 1997. Comment: testing the independence of microhabitat preferences and flow (part 2). Transactions of the American Fisheries Society 126 (3): 537-540.

Jager, H.I., and K.A. Rose. 2003. Designing optimal flow patterns for fall chinook salmon in a Central Valley, California, river. North American Journal of Fisheries Management 23 (1): 1-21.

Jager, H.I., W. Van Winkle, and B.D. Holcomb. 1999. Would hydrologic climate change in Sierra Nevada streams influence trout persistence? Transactions of the American Fisheries Society 128 (2): 222-240.

Jakober, M.J. 1995. Autumn and winter movement and habitat use of resident bull trout and westslope cutthroat trout in Montana. M.Sc. thesis, Montana State University, Bozeman, Montana.

Jakober, M.I., T.E. McMahon, R.F. Thurow, and C.G. Clancy. 1997. Role of stream ice on fall and winter movements and habitat use by bull trout and cutthroat trout in Montana headwater streams. Transactions of the American Fisheries Society 127 (2): 223-235.

Jang, I.K., and C.H. Kim. 1992. A study on the changes of the molluscan and crustacean fauna after the construction of the Naktong estuary barrage. Bulletin of the Korean Fisheries Society 25: 265-281.

Jarrett, R.D. 1990. Hydrologic and hydraulic research in mountain rivers. Water Resources Bulletin 26: 419-429.

Jassby, A.S., W.J. Kimmerer, S.G. Monismith, C.Arbor, J.E. Cloern, T.M. Powell, J.R. Schubel, and T.J. Vendlinski. 1995. Isohaline position as a habitat indicator for estuarine populations. Ecological Applications 5: 272-289.

Jay, D.A., and C.A. Simenstad. 1996. Downstream effects of water withdrawn in a small high-gradient basin: erosion and deposition on the Skokomish delta. Estuaries 19: 501-517.

Jenkins, K.M., and A.J. Boulton. 1998. Community dynamics of invertebrates emerging from reflooded lake sediments: flood pulse and aeolian influences. International Journal of Ecology and Environmental Sciences 24: 179-192.

Jenkins, K.M., and A.J. Boulton. 2003. Connectivity in a dryland river: short-term aquatic microinvertebrate recruitment following floodplain inundation. Ecology 84 (10): 2708-2723.

Jenkins, T.M., Jr. 1969. Social structure, position choice and microdistribution of two trout species (*Salmo trutta* and *S. gairdneri*) resident in mountain streams. Animal Behaviour Monographs 2: 56-123.

Jenkins, T.M., Jr., S. Diehl, K.W. Kratz, and S.D. Cooper. Effects of population density on individual growth of brown trout in streams. Ecology 80 (3): 941-956.

Jensen, A.J., and B.O. Johnsen. 1999. The functional relationship between peak spring floods and survival and growth of juvenile Atlantic salmon (*Salmo salar*) and brown trout (*Salmo trutta*). Functional Ecology 13: 778-785.

Jirka, K.J., and J. Homa, Jr. 1990. Development and preliminary evaluation of suitability index curves for juvenile brook trout. Rivers 1 (3): 207-217.

Johnson, D.H. 1980. The comparison of usage and availability measurements for evaluating resource preference. Ecology 69: 125-134.

Johnson, I.W., C.R.N. Elliott, A. Gustard, and A.T. Newton. 1993. River Allen instream flow requirements, pp. 5.15-5.21 in: Proceedings of British Hydrological Society Fourth National Hydrological Symposium, British Hydrological Society, Cardiff.

Johnson, I.W., C.R.N. Elliott, and A. Gustard. 1995. Modeling the effect of groundwater abstraction on salmonid habitat availability in the River Allen, Dorset, England. Regulated Rivers: Research & Management 10: 229-238.

Johnson, I.W., and F.M. Law. 1995. Computer models for quantifying the hydro-ecology of British rivers. J. CIWEM 9: 290-297.

Johnson, J.H., D.S. Dropkin, and P.G. Schaffer. 1992. Habitat use by a headwater stream fish community in north-central Pennsylvania. Rivers 3 (2): 69-79.

Johnson, J.H., and P.A. Kucera. 1985. Summer-autumn habitat utilization of subyearling steelhead trout in tributaries of the Clearwater River, Idaho. Canadian Journal of Zoology 63: 2283-2290.

Johnson, N.S., and R.M. Adams. 1988. Benefits of increased streamflow: the case of the John Day River steelhead fishery. Water Resources Research 24: 1839-1846.

Johnson, S.C., R. Burgess, and W. Kaemmerer. 1976. Forest overstory vegetation and environment on the Missouri River floodplain in North Dakota. Ecological Monographs 46 (1): 59-84.

Johnson, T.H. 1985. Density of steelhead parr for mainstem rivers in western Washington during the low flow period, 1984. Washington State Department of Game, Fishery Management Division 85-6, Olympia.

Johnson, W.C. 1992. Dams and riparian forests: case study from the upper Missouri River. Rivers 3: 229-242.

Johnson, W.C. 1993. Divergent response of riparian vegetation to flow regulation on the Missouri and Platte rivers. U.S. National Biological Survey Biological Report 19: 426-431.

Johnson, W.C. 1994. Woodland expansion in the Platte River, Nebraska: patterns and causes. Ecological Monographs 64: 45-84.

Johnson, W.C. 1998. Adjustment of riparian vegetation to river regulation in the Great Plains, USA. Wetlands 18: 608-618.

Johnson, W.C., M.D. Dixon, R. Simons, S. Jenson, and K. Larson. 1995. Mapping the response of riparian vegetation to possible flow reductions in the Snake River, Idaho. Geomorphology 13: 159-173.

Johnston, T.A., M.N. Gaboury, R.A. Janusz, and L.R. Janusz. 1995. Larval fish drift in the Valley River, Manitoba: Influence of abiotic and biotic factors and relationships with future year class strengths. Canadian Journal of Fisheries and Aquatic Science 52: 2423-2431.

Johnston, J.W. 1986. Environmental significance of instream flows. St. Mary's Law Review 17: 1297-1342.

Jones, D.R., J.W. Kiceniuk, and O.S. Bamford. 1974. Evaluation of the swimming performance of several fish species from the Mackenzie River. Journal of the Fisheries Research Board of Canada 31: 1641-1647.

Jones, J.A., and G.E. Grant. 1996. Peak flow responses to clear-cutting and roads in small and large basin, western Cascades, Oregon. Water Resour. Res. 32: 959-974.

Jones, WK., and W. Huang. 1996. Modeling changing freshwater delivery to Apalachicola Bay, Florida. Pp. 116-127 in: M.L. Spaulding and R.T. Cheng (editors) Estuarine and coastal modeling. Proceedings of the 4th International Conference 1996. American Society of Civil Engineering, New York.

Jonsson, N. 1991. Influence of water flow, water temperature, and light on fish migration in rivers. Nordic Journal of Freshwater Research 66: 20-35.

Jonsson, N., B. Jonsson, and L.P. Hansen. 1990. Partial segregation in the timing of migration of Atlantic salmon of different ages. Animal Behaviour 40: 313-321.

Jordan, T.E., D.L. Correll, J. Miklas and D.E. Weller. 1991. Long-term trends in estuarine nutrients and chlorophyll, and short-term effects of variation in watershed discharge. Marine Ecology Progress Series 75: 121-132.

Jowett, I.G. 1990. Factors related to the distribution and abundance of brown and rainbow trout in New Zealand clear-water rivers. New Zealand Journal of Marine and Freshwater Research 24: 429-440.

Jowett, I.G. 1992. Models of the abundance of large brown trout in New Zealand rivers. North American Journal of Fisheries Management 12 (3): 417-432.

Jowett, I.G. 1993. A method for objectively identifying pool, run, and riffle habitats from physical measurements. New Zealand Journal of Marine and Freshwater Research 27: 241-248.

Jowett, I.G. 1993. Minimum flow assessments for instream habitat in Wellington rivers. New Zealand Freshwater Miscellaneous Report No. 63. National Institute of Water and Atmospheric Research, Chistchurch, p. 33.

Jowett, I.G. 1993. Report of minimum instream flow requirements for instream habitat in Taranaki rivers. New Zealand Freshwater Miscellaneous Report No. 75. National Institute of Water and Atmospheric Research, Chistchurch, p. 35.

Jowett, I.G. 1995. Spatial and temporal variability of brown trout abundance: a test of regression models. Rivers 5 (1): 1-12.

Jowett, I.G. 1997. Instream flow methods: a comparison of approaches. Regulated Rivers: Research and Management 13 (2): 115-128.

Jowett, I.G. 1998. Hydraulic geometry of New Zealand rivers and its use as a preliminary method of habitat assessment. Regulated Rivers: Research and Management 14 (5): 451-.

Jowett, I.G. 2002. In-stream habitat suitability criteria for feeding inanga (*Galaxias maculatus*). New Zealand Journal of Marine and Freshwater Research 36: 399-407.

Jowett, I.G., and M.J. Duncan. 1990. Flow variability in New Zealand rivers and its relationship to in-stream habitat and biota. New Zealand Journal of Marine and Freshwater Research 24: 305-317.

Jowett, I.G., and J. Richardson. 1989. Effects of a severe flood on instream habitat and trout populations in seven New Zealand rivers. New Zealand Journal of Marine and Freshwater Research 23: 11-17.

Jowett, I.G., and J. Richardson. 1990. Microhabitat preferences of benthic invertebrates in a New Zealand river and the development of in-stream flow-habitat models for *Deleatidium* spp. New Zealand Journal of Marine and Freshwater Research 24: 19-30.

Jowett, I.G., and J. Richardson. 1994. Comparison of habitat use by fish in normal and flooded river conditions. New Zealand Journal of Marine and Freshwater Research 28: 409-416.

Jowett, I.G., and J. Richardson. 1995. Habitat preferences of common, riverine New Zealand native fishes and implications for flow management. New Zealand Journal of Marine and Freshwater Research 29: 13-23.

Jowett, I.G., J. Richardson, B.J.F. Biggs, C.W. Hickey, and J.M. Quinn. 1991. Microhabitat preferences of benthic invertebrates and the development of generalised *Deleatidium* spp. habitat suitability curves, applied to four New Zealand streams. New Zealand Journal of Marine and Freshwater Research 25: 187-199.

June, J.A. 1981. Life history and habitat utilization of cutthroat trout (*Salmo clarki*) in a headwater stream on the Olympic Peninsula, Washington. M.S. thesis, University of Washington, Seattle.

Junk, W.J., P.B. Bayley, and R.E. Sparks. 1989. The flood pulse concept in river floodplain systems. Pp. 110-127 in: Dodge, D.P. (Ed.) Proceedings of the International Large Rivers Symposium. Can. Special Publ. Fish. Aquatic Sciences 106.

Jurajda, P. 1995. Effect of channelization and regulation on fish recruitment in a flood plain river. Regulated Rivers: Research & Management 10: 207-215.

Jurajda, P. 1999. Comparative nursery habitat use by 0+ fish in a modified lowland river. Regulated Rivers: Research and Management 15: 113-124.

Kaartvedt, S. and D.L. Aksnes. 1992. Does freshwater discharge cause mortality of fjord-living zooplankton. Estuarine, Coastal and Shelf Science 34: 305-313.

Kahler, T.H., P. Roni, and T.P. Quinn. 2001. Summer movement and growth of juvenile anadromous salmonids in small western Washington streams. Canadian Journal of Fisheries and Aquatic Sciences 58 (10): 1947-1956.

Kalke, R.D., and P.A. Montagna. 1991. The effect of freshwater inflow on macrobenthos in the Lavaca River delta and upper Lavaca Bay, Texas. Contributions in Marine Science 32: 49-72.

Kandem, Toham, A., and G.G. Teugels. 1997. Patterns of microhabitat use among fourteen abundant fishes of the lower Ntem River basin (Cameroon). Aquat. Liv. Resour. 10: 289-298.

Kappesser, G.B. 2002. A riffle stability index to evaluate sediment loading to streams. Journal of the American Water Resources Association 38: 1069-1081.

Karim, K., M.E. Gubbels, and I.C. Goutler. 1995. Review of determination of instream flow requirements with special application to Australia. Water Resources Bulletin 31 (6): 1063-1077.

Karr, J.R. 1991. Biological integrity: a long-neglected aspect of water resource management. Ecological Applications 1: 66-84.

Karr, J.M., and E.W. Chu. 1999. Restoring Life in Running Waters: Better Ecological Monitoring. Island Press, Washington.

Keeley, E.R. 2001. Demographic responses to food and space competition by juvenile steelhead trout. Ecology 82 (5): 1247-1259.

Keeley, E.R., and J.W.A. Grant. 1995. Allometric and environmental correlates of territory size in juvenile Atlantic salmon (*Salmo salar*). Canadian Journal of Fisheries and Aquatic Sciences 52: 186-196.

Keeley, E.R., and J.D. McPhail. 1998. Food abundance, intruder pressure, and body size as determinants of territory size in juvenile steelhead trout (*Oncorhynchus mykiss*). Behaviour 135: 65-82.

Keenleyside, M.H.A., and H.M.C. Dupuis. 1988. Courtship and spawning competition in pink salmon (*Oncorhynchus gorbuscha*). Canadian Journal of Zoology 66: 262-265.

Keith, R.M., T.C. Bjornn, W.R. Meehan, N.J. Hetrick, and M.A. Brusven. 1998. Response of juvenile salmonids to riparian and instream cover modifications in small streams flowing through second-growth forests in southeast Alaska. Transactions of the American Fisheries Society 124: 886-897.

Kennard, N.R. 2000. Development and testing of a rapid assessment methodology for instream habitat. Master's thesis, Utah State University, Logan, Utah. 69 pp.

Kennedy, G.J.A., and C.D. Strange. 1982. The distribution of salmonids in upland streams in relation to depth and gradient. Journal of Fish Biology 20: 579-591.

Kennedy, G.J.A., and C.D. Strange. 1986. The effects of intra and inter-specific competition on the distribution of stocked juvenile Atlantic, *Salmo salar* L., in relation to depth and gradient in an upland trout *Salmo trutta* L. stream. Journal of Fish Biology 29: 199-214.

Kershner, J.L., and W.M. Snider. 1992. Importance of a habitat-level classification system to design instream flow studies. Pp. 179-193 in: P.J. Boon, P. Calow, and G.E. Petts (eds.), River Conservation and Management. John Wiley & Sons, New York.

Khoroshko, P.N. 1972. The amount of water in the Volga basin and its effect on the reproduction of sturgeon (Acipenseridae) under conditions of normal and regulated discharge. Journal of Ichthyology 12: 608-616.

Kieffer, S.W. 1985. The 1983 hydraulic jump in Crystal Rapid: implications for river-running and geomorphic evloution in the Grand Canyon. Journal of Geology 93: 385-406.

Kiflawi, M., and A. Genin. 1997. Prey flux manipulation and the feeding rates of reef-dwelling planktivorous fish. Ecology 78 (4): 1062-1077.

Kimmerer, W.J. 2002. Effects of freshwater flow on abundance of estuarine organisms: Physical effects or trophic linkages? Marine Ecology Progress Series 243: 39-55.

Kimmerer, W.J. 2002. Physical, biological, and management responses to variable freshwater flow into the San Francisco estuary. Estuaries 25: 1275-1290.

Kimmerer, W.J. and J.R. Schubel. 1994. Managing freshwater flows into San Francisco Bay using a salinity standard: Results of a workshop, pp. 411-416. In: K.R. Dyer and R.J. Orth

(eds.). Changes in fluxes in estuaries: Implications from science to management. Olsen and Olsen, Fredensborg, Denmark.

King, A.J., P. Humphries, and P.S. Lake. 2003. Fish recruitment on floodplains: the roles of patterns of flooding and life history characteristics. Canadian Journal of Fisheries and Aquatic Sciences 60 (7): 773-786.

King, J.M., C. Brown, and H. Sabet. In press (2003) A scenario-based holistic approach to environmental flow assessments for rivers. River Research and Applications. 19

King, J.M., and D. Louw. 1998. Instream flow assessments for regulated rivers in South Africa using the building block methodology. Aquatic Ecosystem Health and Management 1: 109-124.

King, J.M., and R.E. Tharme. 1994. Assessment of the Instream Flow Incremental Methodology and initial development of alternative instream flow methodologies for South Africa. Water Research Commission, Pretoria, South Africa.

King, J.M., R.E. Tharme, and M.S. DeVilliers, eds. 2000. Environmental flow assessments for rivers: Manual for the Building Block Methodology. Water Research Commission, Pretoria, South Africa.

Kingsford, R.T. 2000. Ecological impacts of dams, water diversion and river management on floodplain wetlands in Australia. Austral Ecol 25: 109-127

Kingsford, R.T., A.L. Curtin, and J. Porter. 1999. Water flows on Cooper Creek in arid Australia determine "boom" and "bust" periods for waterbirds. Biological Conservation 88: 231-248.

Kinsolving, A.D., and M.B. Bain. 1993. Fish assemblage recovery along a riverine disturbance gradient. Ecological Applications 3: 531-544.

Kinzie, R.A., and J.I. Ford. 1988. A test of transferability of habitat utilization curves. Pp. 336-362 *in* K. Bovee and J.R. Zuboy, editors. Proceedings of a workshop on the development and evaluation of habitat suitability criteria. U.S. Fish and Wildlife Service, Biological Report 88 (11).

Kirkbride, A.D. 1993. Observations on the influence of bed roughness on turbulence structure in depth limited flows over gravel beds. Pp. 185-196 in: N.J Clifford, J.R. French, and J. Hardisty (eds.), Turbulence: perspectives on flow and sediment transport. John Wiley and Sons Ltd., Chichester.

Kirkbride, A.D., and R. Ferguson. 1995. Turbulent flow structure in a gravel-bed river: Markov chain analysis of he fluctuating velocity profile. Earth Surf. Processes Landforms 20: 721-733.

Kitano, S., K. Maekawa, S. Nakano, and K.D. Fausch. 1994. Spawning behavior of bull trout in the upper Flathead drainage, Montana, with special reference to hybridization with brook trout .... Transactions of the American Fisheries Society 123 (6): 988-992.

Kjelson, M.A., and P.L. Brandes. 1989. The use of smolt survival estimates to quantify the effects of habitat changes on salmonid stocks in the Sacramento-San Joaquin Rivers, California. Canadian Special Publication of Fisheries and Aquatic Sciences 105: 100-115.

Klima, C.V. 1988. River regulation effects on floodplain hydrology and ecology. Pp. 40-49 in: Hook, D.D. et al. (eds) The ecology and management of wetlands. Portland, OR: Timber Press.

Klock, G.O., and J.D. Helvey. 1976. Soil-water trends following wildfire on the Entiat Experimental Forest. Proceedings, Tall Timbers Fire Ecology Conference 15: 193-200.

Knapp, R.A., and H.K. Preisler. 1999. Is it possible to predict habitat use by spawning salmonids? A test using California golden trout (*Oncorhynchus mykiss aguabonita*). Canadian Journal of Fisheries and Aquatic Sciences 56 (9): 1576-1584.

Knapp, R.A., and V.T. Vredenburg. 1996. Spawning by California golden trout: characteristics of spawning fish, seasonal and daily timing, redd characteristics, and microhabitat preferences. Transactions of the American Fisheries Society 125 (4): 519-531.

Knapp, R.A., V.T. Vredenburg, and K.R. Matthews. 1998. Effects of stream channel morphology on golden trout spawning habitat and recruitment. Ecological Applications 8: 1104-1117.

Knights, B.C., J.M. Vallazza, S.J. Zigler, and M.R. Dewey. 2002. Habitat and movement of lake sturgeon in the upper Mississippi River system, USA. Transactions of the American Fisheries Society 131 (3): 507-522.

Knudsen, E.E., and S.J. Dilley. 1987. Effects of riprap bank reinforcement on juvenile salmonids in four western Washington streams. North American Journal of Fisheries Management 7: 351-356.

Knudsen, E.E., C.E. Stephens, and W.H. Bradshaw. 1984. A method for measuring flow in rivers. North American Journal of Fisheries Management 4 (4B): 459-461.

Kocik, J.F., and C.P. Ferreri. 1998. Juvenile production variation in salmonids: population dynamics, habitat, and the role of spatial relationships. Canadian Journal of Fisheries and Aquatic Sciences 55 (Suppl. 1): 191-200.

Kocik, J.F., and W.W. Taylor. 1987. The effects of fall and winter instream flow on year-class strength of Pacific salmon evolutionarily adapted to early fry outmigration: a Great Lakes perspective. American Fisheries Symposium 1: 430-440.

Kocik, J.F., and W.W. Taylor. 1996. Effect of juvenile steelhead on juvenile brown trout habitat use in a low-gradient Great Lakes tributary. Transactions of the American Fisheries Society 125: 244-252.

Kondolf, G.M. 1998. Development of flushing flows for channel restoration on Rush Creek, California. Rivers 6 (3): 183-193.

Kondolf, G.M. 2000. Assessing salmonid spawning gravel quality. Transactions of the American Fisheries Society 129 (1): 262-281.

Kondolf, G.M., G.F. Cada, and M.J. Sale. 1987. Assessing flushing-flow requirements for brown trout spawning gravels in steep streams. American Water Resources Association Water Resources Bulletin 23: 927-935.

Kondolf, G.M., G.F. Cada, M.J. Sale, and T. Felando. 1991. Distribution and stability of potential salmonid spawning gravels in steep boulder-bed streams of the eastern Sierra Nevada. Transactions of the American Fisheries Society 120 (2): 177-186.

Kondolf, G.M., S.S. Cook, H.R. Maddux, and W.R. Persons. 1989. Spawning gravels of rainbow trout in Glen and Grand canyons, Arizona. Journal of the Arizona-Nevada Academy of Science 23: 19-28.

Kondolf, G.M., E.M. Larsen, and J.G. Williams. 2000. Measuring and modeling the hydraulic environment for assessing instream flows. North American Journal of Fisheries Management 20 (4): 1016-1028.

Kondolf, G.M., L.Maloney, and J.G. Williams. 1987. Effects of bank storage and well pumping on baseflow, Carmel River, Monterey County, California. Journal of Hydrology 91: 351-369.

Kondolf, G.M., M.J. Sale, and M.G. Wolman. 1993. Modification of gravel size by spawning salmonids. Water Resources Research 29: 2265-2274.

Kondolf, G.M., J.C. Vick, and T.M. Ramirez. 1996. Salmon spawning habitat rehabilitation on the Merced River, California: An evaluation of project planning and performance. Transactions of the American Fisheries Society 125 (6): 899-912.

Kondolf, G.M., J.W. Webb, M.J. Sale, and T. Felando. 1987. Basic hydrologic studies for assessing impacts of flow diversions on riparian vegetation: Examples from streams of the eastern Sierra Nevada, California. Environmental Management 11 (6): 757-769.

Kondolf, G.M., and P.R. Wilcock. 1996. The flushing flow problem: Defining and evaluating objectives. Water Resources Research 32 (8): 2589-2599.

Kondolf, G.M., and M.G. Wolman. 1993. The sizes of salmonid spawning gravels. Water Resources Research 27: 2275-2285.

Kope, R.G., and L.W. Botsford. 1990. Determination of factors affecting recruitment of chinook salmon *Oncorhynchus tshawytscha* in central California. U.S. National Marine Fisheries Service Fishery Bulletin 88: 257-269.

Kozlowski, T.T., ed. 1984. Flooding and plant growth. Academic Press, San Diego, California.

Kraft, M.E. 1972. Effects of controlled flow reduction on a trout stream. Journal of the Fisheries Research Board of Canada 29: 1405-1411.

Kramer, D.L., R.W. Rangeley, and L.J. Chapman. 1997. Habitat selection: patterns of spatial distribution from behavioural decisions. Pp. 37-80 in: Behavioural ecology of teleost fishes, J-G.J. Godin, ed. Oxford University Press, Oxford.

Kroger, R.L. 1973. Biological effects of fluctuating water levels in the Snake River, Grand Teton National Park, Wyoming. American Midland Naturalist 89: 478-481.

Kruzic, L.M., D.L. Scarnecchia, and B.B. Roper. 2001. Comparison of midsummer survival and growth of age-0 hatchery coho salmon held in pools and riffles. Transactions of the American Fisheries Society 130: 147-154.

Kwak, T.J. 1988. Lateral movement and use of floodplain habitat by fishes in the Kankakee River, Illinois. American Midland Naturalist 120: 241-249.

Kwak, T.J., M.J. Wiley, L.L. Osborne, and Larimore. 1992. Application of diel feeding chronology to habitat suitability analysis of warmwater stream fishes. Canadian Journal of Fisheries and Aquatic Sciences 49 (7): 1417-1430.

Labbe, T.R., and K.D. Fausch. 2000. Dynamics of intermittent stream habitat regulate persistence of a threatened fish at multiple scales. Ecological Applications 10: 1774-1791.

Lacroix, G.L., D.J. Hood, and J.A. Smith. 1995. Stability of microhabitat use by brook trout and juvenile Atlantic salmon after stream acidification. Transactions of the American Fisheries Society 124 (4): 588-598.

Ladle, M., and J.A.B. Bass. 1981. The ecology of a small chalk stream and its responses to drying during drought conditions. Arch. Hydrobiol. 90: 448-466.

Lafferty, K.D., C.C. Swift, and R.F. Ambrose. 1999. Extirpation and recolonization in a metapopulation of an endangered fish, the tidewater goby. Conservation Biology 13 (6): 1447-1453.

Lafferty, K.D., C.C. Swift, and R.F. Ambrose. 1999. Post flood persistence and recolonization of endangered tidewater goby populations. North American Journal of Fisheries Management 19: 618-622.

Lamb, B.L. 1989. Comprehensive technologies and decision-making: reflections on the instream flow incremental methodology. Fisheries 14 (5): 122-16.

Lamb, B.L. 1993. Quantifying instream flows: matching policy and technology. Pages 7-1 to 7-22 in: L.J. MacDonnell and T.A. Rice, editors. Instream flow protection in the West. Revised edition. University of Colorado Natural Resources Law Center, Boulder.

Lambert, T.R., and J.M. Handley. 1980. An instream flow needs study involving smallmouth bass (*Micropterus dolomieui*) in the San Joaquin River, California. Proceedings of the Annual Conference of the Western Association of Fish and Wildlife Agencies 80: 433-442.

Lambert, T.R., and D.F. Hanson. 1989. Development of habitat suitability criteria for trout in small streams. Regulated Rivers: Research and Management 3 (1-4): 291-303.

Lambert, W.P., and E.G. Fruh. 1978.A methodology for investigating freshwater inflow requirements for a Texas estuary, p. 403-413 in: M.L. Wiley (ed.), Estuarine Interactions. Academic Press, New York.

Lamouroux, N. 1998. Depth probability distributions in stream reaches. Journal of Hydraulic Engineering 124: 224-227.

Lamouroux, N., H. Capra, and M. Pouilly. 1998. Predicting habitat suitability for lotic fish: linking statistical hydraulic models with multivariate habitat usage models. Regulated Rivers: Research and Management 3 (1-4): 291-442.

Lamouroux, N., H. Capra, M. Pouilly, and Y. Souchon. 1999. Fish habitat preferences at the local scale in large streams of southern France. Freshwater Biology 42: 1-25.

Lamouroux, N., J.M. Olivier, H. Persat, M. Pouilly, Y. Souchon, and B. Statzner. 1999. Predicting community characteristics from habitat conditions: fluvial fish and hydraulics. Freshwater Biology 42: 1-25.

Lamouroux, N., N.L. Poff, and P.L. Angermeier. 2002. Intercontinental convergence of stream fish community traits along geomorphic and hydraulic gradients. Ecology 83 (7): 1792-1807.
Lamouroux, N., and Y. Souchon. 2002. Simple prediction of instream habitat model outputs for fish habitat guilds in large streams. Fresh Water Biology 47: 1531-1542.

Lamouroux, N., Y. Souchon, and E. Herouin. 1995. Predicting velocity frequency distributions in stream reaches. Water Resources Research 31: 2367-2375.

Lamouroux, N., B. Statzner, U. Fuchs, F. Kohmann, and U. Schmedtje. 1992. An unconventional approach to modeling spatial and temporal variability of local shear stress in stream segments. Water Resources Research 28: 3251-3258.

Lancaster, J., and A.G. Hildrew. 1993. Flow refugia and the microdistribution of lotic invertebrates. J. North Am. Benthol. Soc. 12 (4): 385-393.

Lancaster, J., and A.G. Hildrew. 1993. Characterizing in-stream flow refugia. Canadian Journal of Fisheries and Aquatic Sciences 50: 1663-1675.

Lane, E.W. 1955. The importance of fluvial morphology in hydraulic engineering. Proceedings of the American Society of Civil Engineers 81 (745): 1-17.

Lane, E.W., and W.M. Borland. 1972. River-bed scour during floods. Pages 303-313 in: S.A. Schumm, editor. Benchmark papers in geology: river morphology. Dowden, Hutchinson, and Ross, Inc., Stroudsburg, Pennsylvania.

Lanka, R.P., W.A. Hubert, and T.A. Wesche. 1987. Relations of geomorphology to stream habitat and trout standing stock in small Rocky Mountain streams. Transactions of the American Fisheries Society 116 (1): 21-28.

Lapointe, M., B. Eaton, S. Driscoll, and C. Latulippe. 2000. Modelling the probability of salmonid egg pocket scour due to floods. Canadian Journal of Fisheries and Aquatic Sciences 57 (6): 1120-1130.

Larimore, R.W., W.F. Childers, and C. Heckrotte. 1959. Destruction and reestablishment of stream fish and invertebrates affected by drought. Transactions of the American Fisheries Society 88: 261-285.

Larimore, R.W., and D.D. Garrels. 1985. Assessing habitats used by warmwater stream fishes. Fisheries 10 (2): 10-16.

Lasserre, G., M.I. Bebars, and T. Lam Hoai. 1997. Analysis of Egyptian marine and lagoon fishery landings in relation to the construction of the Aswan Dam. Oceanologica Acta 20: 421-436.

Latka, D.C. 1994. Habitat use by shovelnose sturgeon in the channelized Missouri River and selected tributary confluences. Master's thesis, Iowa State University, Ames.

Latka, D.C., and J.W. Yahnke. 1986. Simulating the roosting habitat of sandhill cranes and validating suitability-of-use indices. Pages 19-22 in: J. Verner, M.L. Morrison, and C.J. Ralph (eds.). Wildlife 2000: modelling habitat relationships of terrestrial vertebrates. Univ. Wisc. Press, Madison, WI.

Latterell, J.J., K.D. Fausch, C.Gowan, and S.C. Riley. 1998. Relationship of trout recruitment to snowmelt runoff flows and adult trout abundance in six Colorado mountain streams. Rivers 6 (4): 240-250.

Latterell, J.J., R.J. Naiman, B.R. Fransen, and P.A. Bisson. 2003. Physical constraints on trout (*Oncorhynchus* spp.) distribution in the Cascade Mountains: a comparison of logged and unlogged stream. Canadian Journal of Fisheries and Aquatic Sciences 60 (8): 1007-1017.

Lavin, M.F., V.M. Godinez, and L.G. Alvarez. 1998. Inverse-estuarine features of the upper Gulf of California. Estuarine, Coastal and Shelf Science 47:769-795.

Lavin, M.F., and S. Sanchez. 1999. On how the Colorado River affected the hydrology of the upper Gulf of California. Continental Shelf Research 19: 1545-1560.

Lawson, P.W. 1993. Cycles in ocean productivity, trends in habitat quality, and the restoration of salmon runs in Oregon. Fisheries 18 (8): 6-10.

Layher, W.G., and K.L. Brunson. 1992. A modification or the Habitat Evaluation Procedure for determining instream flow requirements in warmwater streams. North American Journal of Fisheries Management 121 (1): 47-54.

Layher, W.G., and O.E. Maughan. 1985. Relations between habitat variables and channel catfish populations in prairie streams. Transactions of the American Fisheries Society 114 (6): 771-781.

Layher, W.G., and O.E. Maughan. 1987. Modeling habitat requirements of a euryhabitat species. Transactions of the Kansas Academy of Science 90 (1-2): 60-70.

Layher, W.G., and O.E. Maughan. 1987. Spotted bass habitat suitability related to fish occurrence and biomass and measurements of physicochemical variables. North American Journal of Fisheries Management 7 (2): 238-251.

LeCren, E.D. 1965. Some factors regulating the size of populations of freshwater fish. Mitt. Int. Ver. Theor. Angew. Limnol. 13: 88-105.

Leclerc, M., J.A. Bechara, P. Boudreau, and L. Belzile. 1996. Numerical method for modelling spawning habitat dynamics of landlocked salmon (*Salmo salar*). Regulated Rivers: Research and Management 12: 273-287.

Leclerc, M., A. Boudreault, J.A. Bechara, L. Belzile, and D. Villeneuve. 1990. A model of habitat dynamics applied to landlocked salmon (*Salmo salar*) juveniles of the Ashuapmushuan River (Quebec, Canada). Bull. Fr. Peche Piscic. 332: 11-32.

Leclerc, M., A. Boudreault, J.A. Bechara, and G. Corfa. 1995. Two-dimensional hydrodynamic modeling: a neglected tool in the instream flow incremental methodology. Transactions of the American Fisheries Society 124 (5): 645-662.

Leclerc, M., A. Saint-Hilaire, and J. Bechara. 2003. State-of-the-art and perspectives of habitat modelling for determining conservation flows. Canadian Water Resources Journal 28 (2): 135-151.

LeCoarer, Y., and B. Dumont. 1995. Modelisation de la morphodynamique fluviale pour la recherche des relations habitat/faune aquatique. Coloque “Habitat-Poissons” Bulletin Francaise de la Peche et de la Pisciculture 337/338/339: 309-316.

Leftwich, K.N., P.L. Angermeier, and C.A. Dolloff. 1997. Factors influencing behavior and transferability of habitat models for a benthic stream fish. Transactions of the American Fisheries Society 126: 725-734.

Leidy, R.A. 1992. Microhabitat selection by the johnny darter, *Etheostoma nigrum* Rafinesque, in a Wyoming stream. Great Basin Naturalist 52:68-74.

Leith, R.M., and P.H. Whitfield. 1998. Evidence of climate change effects on hydrology of streams in south-central B.C. Can. Water Resources J. 23: 219-230.

Leitman, H.M., M.R. Darst, and J.J. Nordhaus. 1991. Fishes in the forested floodplain of the Ochlockonee River, Forida, during flood and drought conditions. U.S. Geological Survey, Water Resources Investigations Report 90-4202, Denver, Colorado.

Leitman, H.M., J.E. Sohm, and M.A. Franklin. 1983. Wetland hydrology and tree distribution of the Apalachicola River flood plain, Florida. USGS Water Supply Paper 2196-A.

Leman, V.N. 1993. Spawning sites of chum salmon, *Oncorhynchus keta*: microhydrological regime and viability of progeny in redds (Kamchatka River Basin). Journal of Ichthyology 33: 104-117.

Leonard, P.M., and D.J. Orth. 1988. Use of habitat guilds to determine instream flow requirements. North American Journal of Fisheries Management 8 (4): 399-409.

Leonard, P.M., and D.J. Orth. 1988. Habitat-use guilds and selection of instream flow target species. U.S. Fish and Wildlife Service (Biological Report 89 [11]: 1-20).

Leonard, P.M., D.J. Orth, and C.J. Goudreau. 1986. Development of a method for recommending instream flows for fishes in the upper James River basin. Virginia Water Resources Research Bulletin 152, Blacksburg.

Leopold, L.B. 1962. Rivers. American Scientist 50: 511-537.

Leopold, L.B. 1994. A view of the river. Harvard University Press, Cambridge, MA.

Leopold, L.B., M.G. Wolman, and J.P. Miller. 1962. Fluvial processes in geomorphology. W.H. Freeman and Co., San Francisco.

Lercari, D., and O. Defeo. 1999. Effects of freshwater discharge in sandy beach populations: The mole crab *Emerita brasiliensis* in Uruguay. Estuarine, Coastal and Shelf Science 49: 457-468.

Letcher, B.H, and T.D. Terrick. 1998. Maturation of male age-0 Atlantic salmon following a massive, localized flood. Journal of Fish Biology 53: 1243-1252.

Lewin, J. 1978. Floodplain geomorphology. Progress in Physical Geography 2: 408-437.

Lewis, F.G. 1997. Relationships of river flow and other environmental characteristics with the structure and function of biological communities in Apalachicola Bay, Florida. Northwest Florida Water Management District, Draft final report to the ACF/ACT Comprehensive Study, Havana, Florida.

Lewis, F.G. 1997. Apalachicola River and Bay water demand element: summary and integration of Apalachicola Bay studies. Northwest Florida Water Management District, Draft final report to the ACF/ACT Comprehensive Study, Havana, Florida.

Lewis, S.L. 1969. Physical factors influencing fish populations in pools of a trout stream. Transactions of the American Fisheries Society 98 (1): 14-19.

Li, H.W., C.B. Schreck, and K.J. Rodnick. 1984. Assessment of habitat quality models for cutthroat trout (*Salmo clarki*) and coho salmon (*Oncorhynchus kisutch*) for Oregon... In: J.W. Terrell (ed.), Proceedings of a workshop on fish habitat suitability index models. Washington, D.C.: U.S. Fish and Wildlife Service (Biological Report 85[6]).

Lichatowich, J.A. 1989. Habitat alteration and changes in abundance of coho (*Oncorhynchus kisutch*) and chinook salmon (*O. tshawytscha*) in Oregon coastal streams. In: Proceedings of the National Workshop on Effects of Habitat Alteration on Salmonid Stocks, C.D. Levings, L.B. Holtby, and M.A. Henderson (eds.). Can. Spec. Publ. Fish. Aquat. Sci. No. 105, pp. 92-99.

Light, H.M., M.R. Darst, and J.W. Grubbs. 1998. Aquatic habitats in relation to river flow in the Apalachicola River floodplain, Florida. U.S. Geological Survey Professional Paper 1594. U.S. Government Printing Office, Washington, D.C.

Ligon, F.K., W.E. Dietrich, and W.J. Trush. 1995. Downstream ecological effects of dams. BioScience 45: 183-192.

Lima, A.F., F.A. Lansactoha, and C.C. Bonecker. 1996. Zooplankton in the floodplains of a tributary to the Parana River in Mato Grosso Do Sul, Brazil. Studies on Neotropical Fauna and Environment 31: 112-116.

Lima, A.F., F.A. Lansactoha, L.F.M. Velho, and L.M. Bini. 1998. Environmental influence on planktonic cladocerans and copepods in the floodplain of the Upper River Parana, Brazil. Studies on Neotropical Fauna and Environment 22: 188-196.

Lisle, T.E. 1986. Stabilization of a gravel channel by large streamside obstructions and bedrock bends, Jacoby Creek, northwestern California. Geol. Soc. Am. Bull. 97: 999-1011.

Lisle, T.E. 1987. Using "residual depths" to monitor pool depths independently of discharge. U.S. Forest Service Research Note PSW-394.

Lisle, T.E. 1989. Sediment transport and resulting deposition in spawning gravels, north coastal California. Water Resources Research 25: 1303-1319.

Lisle, T.E., and J. Lewis. 1992. Effects of sediment transport on survival of salmonid embryos in a natural stream: a simulation approach. Canadian Journal of Fisheries and Aquatic Sciences 49: 2337-2344.

Lister, D.B., and H.S. Genoe. 1970. Stream habitat utilization by cohabiting underyearlings of chinook (*Oncorhynchus tshawytscha*) and coho (*Oncorhynchus kisutch*) in the Big Qualicum River. Journal of the Fisheries Research Board of Canada 27: 1215-1224.

Lister, D.B., and C.E. Walker. 1966. The effect of flow control on freshwater survival of chum, coho and chinook salmon in the Big Qualicum River. Canadian Fish Culturist 37: 3-25.

Livingston, R.J. 1997. Trophic response of estuarine fishes to long-term changes of river runoff. Bulletin of Marine Science 60: 984-1004.
Livingston, R.J., F.G. Lewis, G.C. Woodum, X.-F. Niu, B. Galperin, W. Huang, J.D. Christensen, M.E. Monaco, T.A. Battista, C.J. Klein, R.L. Howell IV, and G.L. Ray. 2000. Modelling oyster population response to variation in freshwater input. Estuarine, Coastal and Shelf Science 50: 655-672.

Livingston, R.J., X. Niu, F.G. Lewis, III, and G. Woodsum. 1997. Freshwater input to a Gulf estuary: long-term control of trophic organization. Ecological Applications 7(1): 277-299.

Loar, J.M., and M.J. Sale. 1981. Analysis of environmental issues related to small-scale hydroelectric development. V. Instream flow needs for fishery resources. Oak Ridge National Laboratory, Environmental Sciences Division Publication 1829, ORNL/TM-7861.

Loar, J.M., M.J. Sale, G.F. Cada, D.K. Cox, R.M. Cushman, G.K. Eddlemon, J.L. Elmore, A.J. Gatz, P. Kanciruk, J.A. Solomon, and D.S. Vaughan. 1985. Application of habitat evaluation models in southern Appalachian trout streams. Oak Ridge National Laboratory, Environmental Sciences Division, Publication No. 2382, ORNL/TM-9323, Oak Ridge, TN.

Loar, J.M., M.J. Sale, and G.F. Cada. 1986. Instream needs to protect fishery resources. Water Forum 1986: World Water Issues in Evolution 2: 2098-2105.

Loar, S.C., and J.L. West. 1992. Microhabitat selection by brook and rainbow trout in a southern Appalachian stream. Transactions of the American Fisheries Society 121: 729-736.

Lobb, M.D., III, and D.J. Orth. 1991. Habitat use by an assemblage of fishes in a large warmwater stream. Transactions of the American Fisheries Society 120 (1): 65-78.

Lobon-Cervia, J. 1996. Response of a stream fish assemblage to a severe spate in northern Spain. Transactions of the American Fisheries Society 125 (6): 913-919.

Lobon-Cervia, J. 2003. Spatiotemporal dynamics of brown trout production in a Cantabrian stream: effects of density and habitat quality. Transactions of the American Fisheries Society 132 (4): 621-637.

Locke, A. 1988. IFIM - microhabitat criteria development: data pooling considerations. Pages 31-54 in K. Bovee and J.R. Zuboy, editors. Proceedings of a workshop on the development of habitat suitability criteria. U.S. Fish and Wildlife Service, Biological Report 88 (11), Washington D.C.

Lockwood, J.L., M.S. Ross, and J.P. Sah. 2003. Smoke on the water: the interplany of fire and water flow on Everglades restoration. Frontiers in Ecology and the Environment 1 (9): 462-468.

Loganathan, G.V., C.Y. Kuo, and T.C. McCormick. 1985. Methods of analyzing instream flows. Virginia Water Research Center Bulletin 148: 1-70.

Lohr, S.C., and J.L. West. 1992. Microhabitat selection by brook and rainbow trout in a southern Appalachian stream. Transactions of the American Fisheries Society 121: 729-736.

Lohr, S.C., and R.G. White. 1995. Influence of food and habitat on residency of cutthroat trout in artificial channels. Rivers 5 (1): 13-21.

Lohr, S.M. 1993. Wetted stream channel, fish-food organisms and trout relative to the wetted perimeter inflection point instream flow method. Ph.D. thesis, Montana State University, Bozeman.

Longley, W.L. 1994. Freshwater inflows to Texas bays and estuaries: ecological relationships and methods for determination of needs. Texas Water Development Board and Texas Parks and Wildlife Department, Austin. 386 pp.

Lonzarich, D.G., and T.P. Quinn. 1995. Experimental evidence for the effect of depth and structure on the distribution, growth, and survival of stream fishes. Canadian Journal of Zoology 73: 2223-2230.

Loomis, J.B. 1987. The economic value of instream flow methodology and benefits for optimum flows. Journal of Environmental Mgmt. 24: 169-179.

Lorenz, J.M., and J.H. Eiler. 1989. Spawning habitat and redd characteristics of sockeye salmon in the glacial Taku River, British Columbia and Alaska. Transactions of the American Fisheries Society 118: 495-502.

Lowe-McConnell, R.H. 1987. Ecological studies in tropical fish communities. Cambridge University Press, Cambridge. 382 pp.

Lubinski, K.S., G. Carmody, D. Wilcox, and B. Drazkowski. 1991. Development of water level regulation strategies for fish and wildlife, Upper Mississippi River system. Regulated Rivers: Research and Management 6: 117-124.

Ludlow, J.A., and T.B. Hardy. 1996. Comparative evaluation of suitability curve based habitat modeling and a mechanistic based bioenergetic model using two-dimensional hydraulic

simulations in a natural river system. Proceedings of the 2nd International Symposium on Habitat Hydraulics. June 1996, Quebec, Canada. B519-B530.

Lukas, J.A., and D.J. Orth. 1995. Factors affecting nesting success of smallmouth bass in a regulated Virginia stream. Transactions of the American Fisheries Society 124 (5): 726-735.

Lytle, D.A. 1999. Use of rainfall cues by *Abedus herberti* (Hemiptera: Belostomatidae): a mechanism for avoiding flash floods. Journal of Insect Behavior 12: 1-12.

Lytle, D.A. 2000. Biotic and abiotic effects of flash flooding in a montane desert stream. Archiv fur Hydrobiologie 150: 85-100.

Lytle, D.A. 2002. Flash floods and aquatic insect life-history evolution: evaluation of multiple models. Ecology 83 (2): 370-385.

Maciolek, J.A., and P.R. Needham. 1952. Ecological effects of winter conditions on trout and trout foods in Convict Creek, California, 1951. Transactions of the American Fisheries Society 81: 202-217.

Madariaga, I. de, L. Gonzalez-Azpiri, F. Villate, and E. Orive. 1992. Plankton responses to hydrological changes induced by freshets in a shallow mesotidal estuary. Estuarine, Coastal and Shelf Science 35: 425-434.

Maddock, I. 1999. The importance of physical habitat assessment for evaluating river health. Freshwater Biology 41: 373-391.

Madsen, T.V., and M. Sondergaard. 1983. The effects of current velocity on the photosynthesis of *Callitriche stagnalis* Scop. Aquatic Botany 15: 187-193.

Madsen, T.V., and E. Warncke. 1983. Velocities of currents around and within submerged aquatic vegetation. Archiv fur Hydrobiologie 97: 389-394.

Magee, J.P., T.E. McMahon, and R.F. Thurow. 1996. Spatial variation in spawning habitat of cutthroat trout in a sediment-rich stream basin. Transactions of the American Fisheries Society 125: 768-779.

Mahoney, J.M., and S.B. Rood. 1998. Streamflow requirements for cottonwood seedling recruitment: An integrative model. Wetlands 18: 634-645.

Mains, E.M., and J.M. Smith. 1964. The distribution, size, time, and current preferences of seaward migrating chinook salmon in the Columbia and Snake rivers. Washington Department of Fisheries, Fisheries Research Papers 2 (3): 5-43.

Maki-Petays, A., A. Huusko, J. Erkinaro, and T. Muotka. 2002. Transferability of habitat suitability criteria of juvenile Atlantic salmon (*Salmo salar*). Canadian Journal of Fisheries and Aquatic Sciences 59 (2): 218-228.

Maki-Petays, A., T. Muotka, and A. Huusko. 1999. Densities of juvenile brown trout (*Salmo trutta*) in two subarctic rivers: assessing the predictive capability of habitat preference indices. Canadian Journal of Fisheries and Aquatic Sciences 56 (8): 1420-1427.

Maki-Petays, A., T. Muotka, A. Huusko, P. Tikkanen, and P. Kreivi. 1997. Seasonal changes in habitat use and preferences by juvenile brown trout, *Salmo trutta*, in a northern boreal river. Canadian Journal of Fisheries and Aquatic Sciences 54: 520-530.

Maki-Petays, A., T. Vehanen, and T. Muotka. 2000. Microhabitat use by age-0 brown trout and grayling: seasonal responses to streambed restoration under different flows. Transactions of the American Fisheries Society 129 (3): 771-781.

Malanson, G.P. 1993. Riparian landscapes. Cambridge University Press, Cambridge, U.K.

Mallin, M.A., HW. Paerl, J. Rudek, and P.W. Bates. 1993. Regulation of estuarine primary production by watershed rainfall and river flow. Marine Ecology Progress Series 93: 199-203.

Malmqvist, B. 1980. Habitat selection of larval brook lampreys (*Lampetra planeri* Bloch) in a south Swedish stream. Oecologia 45: 35-38.

Malmqvist, B., and G. Sackman. 1996. Changing risk of predation for a filter-feeding insect along a current velocity gradient. Oecologia 108:450-458.

Malone, T.C., L.H. Crocker, S.E. Pike, and B.W. Wendler. 1988. Influence of river flow on the dynamics of phytoplankton production in a partially stratified estuary. Marine Ecology Progress Series 48: 235-249.

Mancy, K.H. 1981. The environmental and ecological impacts of Aswan High Dam. *In*: H. Shuval, ed., Developments in Arid Zone Ecology and Environmental Quality. Balaban ISS, Philadelphia.

Manly, B.F.J., L.L. McDonald, and D.L. Thomas. 1993. Resource selection by animals: statistical design and analysis for field studies. Chapman and Hall, London, United Kingdom. 175 pp.

Mantua, N.J., S.R. Hare, Y. Zhang, J.M. Wallace, and R.C. Francis. 1997. A Pacific interdecadal climate oscillation with impacts on salmon production. Bulletin of the American Meteorological Society 78: 1069-1079.

March, J.G., J.P. Benstead, C.M. Pringle, and F.N. Scatena. 1998. Migratory drift of larval freshwater shrimps in two tropical streams, Puerto Rico. Freshwater Biology 40: 261-273.

Marchetti, M.P., and P.B. Moyle. 2001. Effects of flow regime on fish assemblages in a regulated California stream. Ecological Applications 11: 530-539.

Marschall, E.A., and L.B. Crowder. 1995. Density-dependent survival as a function of size in juvenile salmonids in streams. Canadian Journal of Fisheries and Aquatic Sciences 52: 136-140.

Martin, C.W., J.W. Hornbeck, G.E. Likens, and D.C. Buso. 2000. Impacts of intensive harvesting on hydrology and nutrient dynamics of northern hardwood forests. Canadian Journal of Fisheries and Aquatic Sciences 57 (Suppl. 2): 19-29.

Martin, Q. 1987. Estimating freshwater inflow needs for Texas estuaries by mathematical programming. Water Resources Research 23: 230-238.

Mason, J.C. 1976. Response of underyearling coho salmon to supplemental feeding in a natural stream. Journal of Wildlife Management 40: 775-778.

Mason, J.C., and D.W. Chapman. 1965. Significance of early emergence, environmental rearing capacity, and behavioral ecology of juvenile coho salmon in stream channels. Journal of the Fisheries Research Board of Canada 22: 173-190.

Matern, S.A., P.B. Moyle, and L.C. Pierce. 2002. Native and alien fishes in a California estuarine marsh: twenty-one years of changing assemblages. Transactions of the American Fisheries Society 131 (5): 797-816.

Matheny, M.P., IV, and C.F. Rabeni. 1995. Patterns of movement and habitat use by northern hog suckers in an Ozark stream. Transactions of the American Fisheries Society 124 (6): 886-897.

Mathews, S.B., and F.W. Olson. 1980. Factors affecting Puget Sound coho salmon (*Oncorhynchus kisutch*) runs. Canadian Journal of Fisheries and Aquatic Sciences 37 (9): 1373-1378.

Mathur, D., W.H. Bason, E.J. Purdy, Jr., and C.A. Silver. 1985. A critique of the Instream Flow Incremental Methodology. Canadian Journal of Fisheries and Aquatic Sciences 42: 825-831.

Mathur, D., W.H. Bason, E.J. Purdy, Jr., and C.A. Silver. 1986. A reply to "In defense of the Instream Flow Incremental Methodology" by D.J. Orth and O.E. Maughan. Canadian Journal of Fisheries and Aquatic Sciences 43: 1093-1094.

Matsumoto, J., G. Powell, and D. Brock. 1994. Freshwater-inflow need of estuary computed by Texas estuarine MP model. Journal of Water Resources Planning and Management 120: 693-714.

Matthews, R.C., Jr., and Y. Bao. 1991. Alternative instream flow assessment methodologies for warm water river systems. Pp. 189-196 in: J.L. Cooper and R.H. Hamre, eds. Proceedings of Warmwater Fisheries Symposium 1. Fort Collins, CO: U.S. Forest Service (General Technical Report RM-207).

Matthews, K.R. 1996. Habitat selection and movement patterns of California golden trout in degraded and recovered stream sections in the Golden Trout Wilderness, California. North American Journal of Fisheries Management 16: 579-590.

Matthews, W.J. 1985. Critical current speeds and microhabitats of the benthic fishes *Percina roanoka* and *Etheostoma flabellare*. Environmental Biology of Fishes 12: 303-308.

Matthews, W.J. 1986. Fish faunal structure in an Ozark stream: stability, persistence, and a catastrophic flood. Copeia 1986: 388-397.

Matthew, W.J. 1990. Spatial and temporal variation in fishes of riffle habitats: a comparison of analytical approaches for the Roanoke River. American Midland Naturalist 124: 31-45.

Mattraw, H.C., Jr., and J.F. Elder. 1984. Nutrient and detritus transport in the Apalachicola River, Florida. U.S. Geological Survey Water Supply Paper 2196-C.

Mattson, R. 2002. A resource-based framework for establishing freshwater inflow requirements for the Suwanne River estuary. Estuaries 25 (6B): 1333-1342.

McBride, J.R., and J. Strahan. 1984. Establishment and survival of woody riparian species on gravel bars of an intermittent stream. American Midland Naturalist 112 (2): 235-245.

McBride, J.R., N. Sugihara, and E. Norberg. 1988. Growth and survival of three riparian species in relation to simulated water table dynamics. Report to Pacific Gas and Electric Company, San Ramon, CA.

McCreadie, J.W., and M.H. Colbo. 1993. Larval and pupal microhabitat selection by *Simulium truncatum* Lundstrom, *S. rostratum* Lundstrom, and *S. verecundum* AA (Diptera: Simuliidae). Canadian Journal of Zoology 71: 358-367.

McCully, P. 1996. Silenced Rivers: The Ecology and Politics of Large Dams. Zed Books, London.

McHugh, P., and P. Budy. 2004. Patterns of spawning habitat selection and suitability for two populations of spring Chinook salmon, with an evaluation of generic versus site-specific suitability criteria. Transactions of the American Fisheries Society. 133 (1): 89-97.

McIntosh, M.D., M.E. Benbow, and A.J. Burky. 2002. Effects of stream diversion on riffle macroinvertebrate communities in a Maui, Hawaii, stream. River Research and Applications 18 (6): 569-582.

McIvor, C.C., J.A. Ley, and R.D. Bjork. 1994. Changes in freshwater inflow from the Florida Everglades to Florida Bay including effects on biota and biotic processes: A review, p. 117-146. In: S.M. Davis and J.C. Ogden (eds.). Everglades: The ecosystem and its restoration. St. Lucie Press, Delray Beach, Florida.

McKay, S.J., R.H. Devlin, and M.J. Smith. 1996. Phylogeny of Pacific salmon and trout based on growth hormone type-2 and mitochondrial NADH dehydrogenase subunit 3 DNA sequences. Canadian Journal of Fisheries and Aquatic Sciences 53 (5): 1165-1176.

McKenney, R. 1997. Formation and maintenance of hydraulic habitat units in the streams of the Ozark Plateaus. Doctoral dissertation. Pennsylvania State University, State College.

McKernan, D.L., D.R. Johnson, and J.I. Hodges. 1950. Some factors influencing the trends of salmon populations in Oregon. Transactions of the North American Wildlife Conference 15: 427-449.

McKinney, M.J., and J.G. Taylor. 1988. Western state instream flow programs, a comparative assessment. Instream Flow Information Paper 18. U.S. Fish and Wildlife Service Biol. Rep. 89 (2).

McKinney, T., R.S. Rogers, and W.R. Persons. 1999. Effects of flow reductions on aquatic biota of the Colorado below Glen Canyon Dam, Arizona. North American Journal of Fisheries Management 19 (4): 984-991.

McKinney, T., D.W. Speas, R.S. Rogers, and W.R. Persons. 2001. Rainbow trout in a regulated river below Glen Canyon Dam, Arizona, following increased minimum flows and reduced discharge variability. North American Journal of Fisheries Management 21: 216-222.

McLaughlin, R.L., and J.W. Grant. 1994. Morphological and behavioral differences among recently emerged brook charr in slow- vs. fast-running water. Environmental Biology of Fishes 39: 289-300.

McLaughlin, R.L., and D.L.G. Noakes. 1998. Going against the flow - an examination of the propulsive movements made by young brook trout in streams. Canadian Journal of Fisheries and Aquatic Sciences 55: 853-860.

McMahon, T.E., and G.F. Hartman. 1989. Influence of cover complexity and current velocity on winter habitat use by juvenile coho salmon (*Oncorhynchus kisutch*). Canadian Journal of Fisheries and Aquatic Sciences 46: 1551-1557.

McNeil, W.J. 1964. Redd superimposition and egg capacity of pink salmon spawning beds. Journal of the Fisheries Research Board of Canada 21: 1385-1396.

McNeil, W.J. 1966. Randomness in distribution of pink salmon redds. Journal of the Fisheries Research Board of Canada 24: 1629-1634.

McNeil, W.J. 1966. Effect of spawning bed environment on reproduction of pink and chum salmon. U.S. Fish and Wildlife Service Fishery Bulletin 65: 495-523.

McNeil, W.J. 1968. Effect of streamflow on survival of pink and chum salmon in spawning beds. Pp. 96-114 in: R.T. Myren (ed.), Logging and salmon. Proc. Forum Am. Inst. Fish. Res. Biol., Alaska District, Juneau, Alaska.

McNeil, W.J. 1969. Survival of pink and chum salmon and alevins. In: Symposium on salmon and trout in streams. Northcote, T.G. (ed.). H.R. MacMillan Lectures in Fisheries, University of British Columbia, Institute of Fisheries, Vancouver, B.C. Pp. 101-117.

McNeil, W.J., and W.H. Ahnell. 1964. Success of pink salmon relative to the size of spawning bed material. U.S. Fish and Wildlife Service, Special Scientific Report 469. 15 pp.

McNicol, R.E., E. Scherer, and E.J. Murkin. 1985. Quantitative field investigations of feeding and territorial behaviour of young-of-the-year brook charr, *Salvelinus fontinalis*. Environmental Biology of Fishes 12: 219-229.

McQueen, I.S., and R.F. Miller. 1972. Soil-moisture and energy relationships associated with riparian vegetation near San Carlos, Arizona. Washington, D.C.: U.S. Geological Survey (Professional Paper 655-E).

Meeter, D.A., R.J. Livingston, and G. Woodsum. 1979. Long-term climatological cycles and population changes in a river-dominated estuarine system. Pp. 315-338 in: R.J. Livingston (editor) Ecological processes in coastal and marine systems. Plenum Press, New York.

Mellina, E., R.D. Moore, S.G. Hinch, J.S. Macdonald, and G. Pearson. 2002. Stream temperature responses to clearcut logging in British Columbia: the moderating influences of groundwater and headwater lakes. Canadian Journal of Fisheries and Aquatic Sciences 59 (12): 1886-1900.

Meretsky, V.J., D.L. Wagner, and L.E. Stevens. 2000. Balancing endangered species and ecosystems: a case study of adaptive management in the Grand Canyon. Environmental Management 25: 579-586.

Merritt, D.M., and D.J. Cooper. 2000. Riparian vegetation and channel change in response to river regulation: a comparative study of regulated and unregulated streams in the Green River basin, USA. Regulated Rivers: Research and Management 16: 543-564.

Mesick, C.F. 1988. Effect of food and cover on numbers of apache and brown trout establishing residency in artificial stream channels. Transactions of the American Fisheries Society 117 (5): 421-431.

Mesick, C.F. 1995. Response of brown trout to streamflow, temperature, and habitat restoration in a degraded stream. Rivers 5(2): 75-95.

Metcalfe, N.B., S.K Valdimarsson, and N.H.C. Fraser. 1997. Habitat profitability and choice in a sit-and-wait predator: juvenile salmon prefer slower currents on darker nights. Journal of Animal Ecology 66: 866-875.

Meyer, K.A., and J.S. Griffith. 1997. Effects of cobble-boulder substrate configuration on winter residency of juvenile rainbow trout. North American Journal of Fisheries Management 17: 77-84.

Michener, W.K., and R.A. Haeuber. 1998. Flooding: natural and managed disturbances. BioScience 48: 677-680.

Milhous, R.T. 1982. Effect of sediment transport and flow regulation on the ecology of gravel bed rivers. Pp. 819-841 in: R.D. Hayes, T.C. Bathurst, and C.R. Thorne (eds), Gravel bed rivers. John Wiley & Sons, London.

Milhous, R.T. 1988. Hydraulics, sedimentation, and physical habitat simulation. Hydrosoft 1: 146-151.

Milhous, R.T. 1990. Calculation of flushing flows for gravel and cobble-bed rivers. Pp. 598-603 in: H.H. Chang and J.C. Hill (eds.), Hydraulic Engineering: Proceedings of the 1990 Conference, Volume 1. American Society of Civil Engineers, New York.

Milhous, R.T. 1991. Instream flow needs below peaking hydroelectric projects. Pp. 163-172 *in*: D.D. Darling, editor. Proceedings of the International Conference on Hydropower, American Society of Civil Engineers, New York.

Milhous, R.T. 1992. Determining the minimum instream flow for hydro peaking projects. Hydro Review 1992 (Oct.): 67-74.

Milhous, R.T. 1994. Instream flows and cottonwood establishment in the Bosque del Apache reach of the Rio Grande. Pp. 535-544 in: R.A. Marston and V.R. Hasfurther (eds.) "Effects of human-induced changes on hydrologic systems" Proceedings of the Annual Summer Symposium of the American Water Resources Association.

Milhous, R.T. 1994. On habitat simulation in mountain rivers. Pp. 850-854 in: G.V. Cotroneo and R.R. Rumer (eds) "Hydraulic Engineering '94" Proceedings of the 1994 Conference of the American Society of Civil Engineers.

Milhous, R.T. 1995. The Physical Habitat Simulation System: structure and logic. In: L. Ahiya, J. Leppert, and K. Rojas (eds) Workshop on Computer Applications in Water Management, proceedings of 1995 workshop.

Milhous, R.T. 1998. Modelling of instream flow needs: the link between sediment and aquatic habitat. Regulated Rivers: Research & Management 14: 79-94.

Milhous, R.T., R.L. Smith, and W.J. Carswell, Jr. 1987. Average annual fulfillment of instream uses: discussion and closure. Journal of Water Resource Planning and Management 113: 443-446.

Milhous, R.T., M.A. Updike, and D.M. Schneider. 1989. Physical habitat simulation system reference manual - version II. Instream Flow Information Paper 26, U.S. Fish and Wildlife Service Biological Report 89 (16).

Milhous, R.T., D.L. Wegner, and T. Waddle. 1984. User's guide to the Physical Habitat Simulation System (PHABSIM). Instream Flow Information Paper No. 11, U.S. Fish and Wildlife Service, FWS/OBS-81/43 Revised.

Milner, N.J., J. Scullion, P.A. Carling, and T. Crisp. 1981. The effects of discharge on sediment dynamics and consequent effects on invertebrates and salmonids in upland rivers. Adv. Appl. Biol. 6: 152-220.

Minckley, W.L., and G.K. Meffe. 1987. Differential selection by flooding in stream-fish communities of the arid American Southwest. Pp. 93-104 in: W.J. Matthews and D.C. Heins, (eds.) Community and evolutionary ecology of North American stream fishes. University of Oklahoma Press, Norman.

Minns, C.K., J.R.M. Kelso, and R.G. Randall. 1996. Detecting the response of fish to habitat alterations in freshwater ecosystems. Canadian Journal of Fisheries and Aquatic Sciences 53: 403-414.

Minshall, G. 1984. Aquatic insect-substratum relationships. Pp. 358-400 *in*: V.H. Resh and D.M. Rosenberg, editors. The ecology of aquatic insects. Praeger Publishers, Eastbourne, New York.

Minshall, G.W., K.W. Cummins, R.C. Peterson, C.E. Cushing, D.A. Bruns, J.R. Sedell, and R.L. Vannote. 1985. Developments in stream ecosystem theory. Canadian Journal of Fisheries and Aquatic Sciences 42: 1045-1055.

Minshall, G.W., and P.V. Winger. 1968. The effect of reduction in stream flow on invertebrate drift. Ecology 49: 580-582.

Mitro, M.G., and A.V. Zale. 2002. Seasonal survival, movement, and habitat use of age-0 rainbow trout in the Henrys Fork of the Snake River, Idaho. Transactions of the American Fisheries Society 131 (2): 271-286.

Mitro, M.G., A.V. Zale, and B.A. Rich. 2003. The relation between age-0 rainbow trout (*Oncorhynchus mykiss*) abundance and winter discharge in a regulated river. Canadian Journal of Fisheries and Aquatic Sciences 60 (2): 135-139.

Modde, T., and T.B. Hardy. 1992. Influences of different microhabitat criteria on salmonid habitat simulation. Rivers 3 (1): 37-44.

Modde, T., R.T. Muth, and G.B. Haynes. 2001. Floodplain wetland suitability, access, and potential use by juvenile razorback suckers in the middle Green River, Utah. Transactions of the American Fisheries Society 130: 1095-1105.

Modde, T., and B. Platz. 1990. Influence of operator position on the precision of measurements taken with hand-held velocity meters in rivers. North American Journal of Fisheries Management 10 (2): 247-248.

Moen, C.T., D.L. Scarnecchia, and J.S. Ramsey. 1992. Paddlefish movement and habitat use in Pool 13 of the upper Mississippi River during abnormally low river stages and discharges. North American Journal of Fisheries Management 12: 744-751.

Molles, M. 1980. The impacts of habitat alterations and introduced species on the native fishes of the upper Colorado River basin. Pp. 163- in: W.O. Spofford, Jr., A.L. Parker, and A.V. Kneese (eds). Energy development in the Southwest. Washington, D.C., Resources Futur...

Molles, M.C., Jr. 1985. Recovery of a stream invertebrate community from a flash flood in Tesuque Creek, New Mexico. Southwestern Naturalist 30: 279-287.

Molles, M.C., C.S. Crawford, L.M. Ellis, H.M. Valett, and C.N. Dahm. 1998. Managed flooding for riparian ecosystem restoration. BioScience 48: 749-756.

Monahan, J.T. 1991. Development of habitat suitability data for smallmouth bass (*Micropterus dolomieui*) and rock bass (*Ambloplites rupestris*). M.S. thesis, Michigan State University, East Lansing.

Montagna, P.A., M. Alber, P. Doering, and M.S. Connor. 2002. Freswater inflow: science, policy, management. Estuaries 25 (6B): 1243-1245.

Montagna, P.A., and R.D. Kalke. 1992. The effect of freshwater inflow on meiofaunal and macrofaunal populations in the Guadalupe and Nueces estuaries, Texas. Estuaries 15: 307-326.

Montagna, P.A., R.D. Kalke, and C. Ritter. 2002. Effect of restored freshwater inflow on macrofauna and meiofauna in upper Rincon Bayou, Texas, USA. Estuaries 25 (6B): 1436-1447.

Montagna, P.A., and W.B. Yoon. 1991. The effect of freshwater inflow on meiofauunal consumption of sediment bacteria and microphytobenthos in San Antonio Bay, Texas, USA. Estuarine, Coastal and Shelf Science 33: 529-547.

Montgomery, D.R. 1999. Process domains and the river continuum. Journal of the American Water Resources Association 35: 397-410.

Montgomery, D.R., E.M. Beamer, G.R. Pess, and T.P. Quinn. 1999. Channel type and salmonid spawning distribution and abundance. Canadian Journal of Fisheries and Aquatic Sciences 56: 377-387.

Montgomery, D.R., J.M. Buffington, N.P. Peterson, D. Schuett-Hames, and T.P. Quinn. 1996. Stream-bed scour, egg burial depths, and the influence of salmonid spawning on bed surface mobility and embryo survival. Canadian Journal of Fisheries and Aquatic Sciences 53 (5): 1061-1070.

Moog, O. 1993. Quantification of daily peak hydropower effects on aquatic fauna and management to minimize environmental impacts. Regulated Rivers: Research and Management 8: 5-14.

Moore, K.M.S., and S.V. Gregory. 1988. Summer habitat utilization and ecology of cutthroat trout fry (*Salmo clarki*) in Cascade Mountain streams. Canadian Journal of Fisheries and Aquatic Sciences 45 (11): 1921-1930.

Moore, K.M.S., and S.V. Gregory. 1988. Response of young-of-the-year cutthroat trout to manipulation of habitat structure in a small stream. Transactions of the American Fisheries Society 117 (2): 162-170.

Morantz, D.L., R.K. Sweeney, C.S. Shirvell, and D.A. Longard. 1987. Selection of microhabitat in summer by Atlantic salmon (*Salmo salar*). Canadian Journal of Fisheries and Aquatic Sciences 44 (1): 120-129.
Morhardt, E.J., and E.G. Altouney. 1986. Instream flow methodologies. Research Project 2194-2, The Electric Power Research Institute, Palo Alto.

Morhardt, E.J., and D.F. Hanson. 1988. Habitat availability considerations in the development of suitability criteria. Pages 392-403 in K. Bovee and J.R. Zuboy, editors. Proceedings of a workshop on the development of habitat suitability criteria. U.S. Fish and Wildlife Service, Biological Report 88 (11), Washington D.C.

Morhardt, J.E., D.F. Hanson, and P.J. Coulston. 1983. Instream flow analysis: increased accuracy using habitat mapping. Pp. 1294-1304 *in*: Waterpower 83: an international conference of hydropower. Tennessee Valley Authority, Norris, Tennessee.

Morin, A., P.-P. Harper, and R.H. Peters. 1986. Microhabitat-preference curves of blackfly larvae (Diptera: Simulidae): a comparison of three estimation methods. Canadian Journal of Fisheries and Aquatic Sciences 43: 1235-1241.

Morin, A., and R.H. Peters. 1988. Effect of microhabitat features, seston quality, and periphyton on abundance of overwintering black fly larvae in southern Quebec. Limnology and Oceanography 33: 431-446.

Morin, J., M. Leclerc, Y. Secretan, and P. Boudreau. 2000. Integrated two-dimensional macrophytes - hydrodynamic modelling application to Lake Saint-Francois (St. Lawrence River, Quebec, Canada). Journal of Hydraulic Research (IAHR) 3 (38): 163-172.

Morris, S.E. 1992. Geomorphic assessment of effects of flow diversion on anadromous fish spawning habitat: Newhalem Creek, Washington. Professional Geographer 44 (4): 444-452.

Mortazavi, B., R.L. Iverson, and W. Huang. 2001. Dissolved organic nitrogen and nitrate in Apalachicola Bay, Florida: spatial distributions and monthly budgets. Marine Ecology Progress Series 214: 79-91.

Mortazavi, B., R.L. Iverson, W. Huang, F.G. Lewis, and J.M. Caffrey. 2000. Nitrogen budget of Apalachicola Bay, a bar-built estuary in the northeastern Gulf of Mexico. Marine Ecology Progress Series 195: 1-14.

Mortazavi, B., R.L. Iverson, W.M. Landing, and W. Huang. 2000. Phosphorus budget of Apalachicola Bay: a river-dominated estuary in the northeastern Gulf of Mexico. Marine Ecology Progress Series 198: 33-42.

Mortazavi, B., R.L. Iverson, W.M. Landing, F.G. Lewis, and W. Huang. 2000. Control of phytoplankton production and biomass in a river-dominated estuary: Apalachicola Bay, Florida, USA. Marine Ecology Progress Series 198: 19-31.

Moscrip, A.L., and D.R. Montgomery. 1997. Urbanization, flood frequency, and salmon abundance in Puget Sound lowland streams. Journal of American Water Resources Association 33: 1289-1297.

Mosley, M.P. 1982. Critical depths for passage in braided rivers, Canterbury, New Zealand. New Zealand Journal of Marine and Freshwater Research 16: 351-357.

Mosley, M.P. 1985. River channel inventory, habitat and instream flow assessment. Prog. In Phys. Geog. 9: 494-523.

Mosely, P.M., and C.P. Pearson. 1997. Floods and droughts: the New Zealand experience. The Caxton Press, Christchurch, New Zealand.

Moyle, P.B., and D.M. Baltz. 1985. Microhabitat use by an assemblage of California stream fishes: developing criteria for instream flow determinations. Transactions of the American Fisheries Society 114 (5): 695-704.

Moyle, P., M.P. Marchetti, J. Baldrige, and T.L. Taylor. 1998. Fish health and diversity: justifying flows for a California stream. Fisheries 23 (7): 6-15.

Muhlfield, C.C. 2002. Spawning characteristics of redband trout in a headwater stream in Montana. North American Journal of Fisheries Management 22 (4): 1314-1320.

Muhlfeld, C.C., D.H. Bennett, and B. Marotz. 2001. Fall and winter habitat use and movement by Columbia River redband trout in a small stream in Montana. North American Journal of Fisheries Management 21 (1): 170-177.

Muhlfeld, C.C., D.H. Bennett, and B. Marotz. 2001. Summer habitat use by Columbia River redband trout in the Kootenai River drainage, Montana. North American Journal of Fisheries Management 21 (1): 223-235.

Muhlfeld, C.C., S. Glutting, R. Hunt, D. Daniels, and B. Marotz. 2003. Winter diel habitat use and movement by subadult bull trout in the upper Flathead River, Montana. North American Journal of Fisheries Management 23 (1): 163-171.

Mullner, S.A., W.A. Hubert, and T.A. Wesche. 1998. Snorkeling as an alternative to depletion electrofishing for estimating abundance and length-class frequencies of trout in small streams. North American Journal of Fisheries Management 18 (4): 947-953.

Mundie, J.H. 1991. Overview of effects of Pacific coast river regulation on salmonids and the opportunities for mitigation. Pp. 1-11 in: J. Colt and R.J. White (eds) Fisheries bioengineering symposium. American Fisheries Society Symposium 10. Bethesda, Maryland.

Murphy, M.L., J. Heifetz, J.F. Thedinga, S.W. Johnson, and K.V. Koski. 1989. Habitat utilization by juvenile Pacific salmon (*Oncorhynchus*) in the glacial Taku River, southeast Alaska. Canadian Journal of Fisheries and Aquatic Sciences 46 (10): 1677-1685.

Murray and Beacham. 1986a. Effect of varying temperature regimes on the development of pink salmon (*Oncorhynchus gorbuscha*) eggs and alevins. Canadian Journal of Zoology 64: 670-676.

Murray and Beacham. 1986b. Effect of density and substrate on the development of chum salmon (*Oncorhynchus keta*) eggs and alevins. Progressive Fish-Culturist 48: 242-249.

Musick, J.A., and 17 coauthors. 2000. Marine, estuarine, and diadromous fish stocks at risk of extinction in North America (exclusive of Pacific salmonids). Fisheries 25(11): 6-30.

Muth, R.T., L.W. Crist, K.E. LaGory, J.W. Hayse, K.R. Bestgen, T.P. Ryan, J.K. Lyons, and R.A. Valdez. 2000. Flow and temperature recommendations for endangered fishes in the Green River downstream of Flaming Gorge Dam. Upper Colorado River Recovery Program, Lakewood, Colorado.

Muth, R.T., and J.C. Schmulbach. 1984. Downstream transport of fish larvae in a shallow prairie river. Transactions of the American Fisheries Society 113: 224-230.

Naesje, T.F., B. Jonsson, and O.T. Sandlund. 1986. Drift of cisco and whitefish larvae in a Norwegian river. Transactions of the American Fisheries Society 115: 89-93.

Naesje, T, B. Jonsson, and J. Skurdal. 1995. Spring flood: a primary cue for hatching of river spawning Coregoninae. Canadian Journal of Fisheries and Aquatic Sciences 52 (10): 2190-2196.

Naiman, R.J., S.E. Bunn, C. Nilsson, et al. 2002. Legitimizing fluvial ecosystems as users of water. Environmental Management 30: 455-467.

Naiman, R.J., C.A. Johnston, and J.C. Kelley. 1988. Alteration of North American streams by beavers. BioScience 38: 753-762.

Nakano, S., and M. Kaeriyama. 1995. Summer microhabitat use and diet in four sympatric stream-dwelling salmonids in a Kamchatkan stream. Fisheries Science 61: 926-930.

Nakano, S., S. Kitano, K. Nakai, and K.D. Fauch. 1998. Competitive interactions for foraging microhabitat among introduced brook char, *Salvelinus fontinalis*, native bull char *S. confluentus*, and westslope cutthroat trout *Oncorhynchus clarki lewisi* in a Montana stream. Environmental Biology of Fishes 52: 345-355.

Naslund, I., E. Degerman, and F. Nordwall. 1998. Brown trout (*Salmo salar*) habitat use and life history in Swedish streams: possible effects of biotic interactions. Canadian Journal of Fisheries and Aquatic Sciences 55: 1034-1042.

National Research Council (USA). 1992. Restoration of Aquatic Ecosystems: Science, Technology, and Public Policy. National Academy Press, Washington, D.C.

National Research Council (USA). 2002. The Missouri River Ecosystem: Exploring the Prospects for Recovery. National Academy Press, Washington, D.C.

Neave, F. 1949. Game fish populations of the Cowichan River. Fisheries Research Board of Canada Bulletin 84.

Neave, F., and W.P. Wickett. 1953. Factors affecting the freshwater development of Pacific salmon in British Columbia. Proceedings of the 7th Pacific Science Congress (1949) 4: 548-555.

Nehlsen, W., J.E. Williams, and J.A. Lichatowich. 1991. Pacific salmon at the crossroads: stocks at risk from California, Oregon, Idaho, and Washington. Fisheries 16 (2): 4-21.

Nehring, R.B., and R.M. Anderson. 1993. Determination of population-limiting critical salmonid habitats in Colorado streams using the Physical Habitat Simulation system. Rivers 4(1): 1-19.

Nehring, R.B., and D.D. Miller. 1987. The influence of spring discharge levels on rainbow and brown trout recruitment and survival, Black Canyon of the Gunnison. Proceedings of the Annual Conference, Western Association of Fish and Wildlife Agencies, Salt Lake City, Utah.

Neilson, J.D., and C.E. Banford. 1983. Chinook salmon (*Oncorhynchus tshawytscha*) spawning characteristics in relation to redd physical features. Canadian Journal of Zoology 61: 1524-1531.

Nelson, F.A. 1986. Effect of flow fluctuations on brown trout in the Beaverhead River, Montana. North American Journal of Fisheries Management 6 (4): 551-559.

Nelson, J.A., P.S. Gotwalt, and J.W. Snodgrass. 2003. Swimming performance of blacknose dace (*Rhinichthys atratulus*) mirrors home-stream current velocity. Canadian Journal of Fisheries and Aquatic Sciences 60 (3): 301-308.

Nelson, R.W., J.R. Dwyer, and W.E. Greenberg. 1987. Regulated flushing in a gravel-bed river for channel habitat maintenance: a Trinity River fisheries case study. Env. Mgmt. 11: 479-493.

Nesler, T.P., R.T. Muth, and A.F. Wasowicz. 1988. Evidence for baseline flow spikes as spawning cues for Colorado squawfish in the Yampa River, Colorado. Pages 68-79 in: R.D. Hoyt (ed). 11th annual larval fish conference. American Fisheries Society, Symposium 5, Bethesda, Maryland.

Nestler, J.M. 1990. Considerations in applying IFIM to warmwater streams. Pp. 34-35 in: M.B. Bain (ed.), Ecology and assessment of warmwater streams: Workshop synopsis. Washington, D.C.: U.S. Fish and Wildlife Service (Biological Report 90[5]).

Nestler, J.M., L.T. Schneider, and D. Latka. 1993. RCHARC: a new method for physical habitat analysis, in Engineering Hydrology, a symposium sponsored by the Hydraulics Division/ASCE. July 25-30, San Francisco, CA. Pp. 294-299.

Neu, C.W., C.R. Byers, and J.M. Peek. 1974. Techniques for analysis of utilization-availability data. Journal of Wildlife Management 8: 22-36.

Neuman, H.R., and C.P. Newcombe. 1977. Minimum acceptable stream flows in British Columbia: a review. British Columbia Ministry of Recreation and Conservation, Habitat Protection Section, Fisheries Management Report No. 70. 80 pp.

Newbury, R.W. 1996. Dynamics of flow. Pp. 75-92 in: F.R. Hauer and G.A. Lamberti (eds) Methods in stream ecology. Academic Press, San Diego, California.

Newbury, R., and M. Gaboury. 1993. Exploration and rehabilitation of hydraulic habitats in streams using principles of fluvial behaviour. Freshwater Biology 29: 195-210.

Newcomb, T.J., S.A. Perry, and W.B. Perry. 1995. Comparison of habitat suitability criteria for smallmouth bass (*Micropterus dolomieui*) from three West Virginia rivers. Rivers 5(3): 170-183.

Newcombe, C. 1981. A procedure to estimate changes in fish populations caused by changes in stream discharge. Transactions of the American Fisheries Society 110 (3): 382-390.

Newman, R.M., and T.F. Waters. 1989. Differences in brown trout (*Salmo trutta*) production among contiguous sections of an entire stream. Canadian Journal of Fisheries and Aquatic Sciences 46 (2): 203-213.

Newson, M. 1994. Hydrology and the river environment. Clarendon Press, Oxford, UK.

Nicholas, A.P., and D.E. Walling. 1997. Modeling hydraulics and overbank deposition on river floodplains. Earth Surface Processes and Landforms 22: 59-77.

Nichols, M.M. 1977. Response and recovery of an estuary following a river flood. Journal of Sedimentary Petrology 47: 1171-1186.

Nickelson, T.E. 1998. Population viability of coho salmon, *Oncorhynchus kisutch*, in Oregon coastal basins: application of a habitat-based life cycle model. Canadian Journal of Fisheries and Aquatic Sciences 55 (11):2383-2392.

Nickelson, T.E., J.D. Rogers, S.L. Johnson, and M.F. Solazzi. 1992. Seasonal changes in habitat use by juvenile coho salmon (*Oncorhynchus kisutch*) in Oregon coastal streams. Canadian Journal of Fisheries and Aquatic Sciences 49: 783-789.

Nickelson, T.E., M.F. Solazzi, S.L. Johnson, and J.D. Rogers. 1992. Effectiveness of selected stream improvement techniques to create suitable summer and winter rearing habitat for juvenile coho salmon (*Oncorhynchus kisutch*) in Oregon coastal streams. Canadian Journal of Fisheries and Aquatic Sciences 49: 790-794.

Nielsen, D.L., T.J. Hillman, F.J. Smith, and R.J. Shiel. 2002. The influence of seasonality and duration of flooding on zooplankton in experimental billabongs. River Research and Applications 18 (3): 227-238.

Nielsen, G. 1986. Dispersion of brown trout (*Salmo trutta* L.) In relation to stream cover and water depth. Pol. Arch. Hydrobiol. 33: 475-488.

Nielsen, J.L. 1992. Microhabitat-specific foraging behavior, diet and growth of juvenile coho salmon. Transactions of the American Fisheries Society 121 (5): 617-634.

Nikolskii, G.V. 1933. On the influence of the rate of flow on the fish fauna of the rivers of central Asia. Journal of Animal Ecology 2: 266-281.

Nilo, P., P. Dumont, and R. Fortin. 1997. Climate and hydrological determinants of year-class strength of St. Lawrence River lake sturgeon (*Acipenser fulvescens*). Canadian Journal of Fisheries and Aquatic Sciences 54: 774-480.

Nillson, C., A. Ekblad, M. Gardfjell, and B. Carlberg. 1991. Long-term effects of river regulation on river margin vegetation. J. Appl. Ecol. 28: 963-987.

Nilsson, C. 1984. Effects of stream regulation on riparian vegetation. Pp. 93-106 in: A. Lillehammer and S.J. Saltveit (eds.) Regulated Rivers. New York: Columbia University Press.

Nilsson, C. 1987. Distribution of stream-edge vegetation along a gradient of current velocity. Journal of Ecology 75: 513-522.

Nilsson, C., R. Janson, and U. Zinko. 1997. Long-term responses of river-margin vegetation to water-level regulation. Science 276: 798-200.

Nislow, K.H., C.L. Folt, and D.L. Parrish. 1999. Favorable foraging locations for young Atlantic salmon: application to habitat and population restoration. Ecological Applications 9: 1085-1099.

Nislow, K.H., C.L. Folt, and D.L. Parrish. 2000. Spatially explicit bioenergetic analysis of habitat quality for age-0 Atlantic salmon. Transactions of the American Fisheries Society 129: 1067-1081.

Nislow, K.H., C. Folt, and M. Seandel. 1998. Food and foraging behavior in relation to microhabitat use and survival of age-0 Atlantic salmon. Canadian Journal of Fisheries and Aquatic Sciences 55 (1): 116-127.

Nislow, K.H., A.J. Sepulveda, and L.C. Folt. 2004. Mechanistic linkage of hydrologic regime to summer growth of age-0 Atlantic salmon. Transactions of the American Fisheries Society 133 (1): 79-88.

Nordwall, F., I. Nasslund, and E. Degerman. 2001. Intercohort competition effects on survival, movement, and growth of brown trout (*Salmo trutta*) in Swedish streams. Canadian Journal of Fisheries and Aquatic Sciences 58 (11): 2298-2308.

Northcote, T.G. 1984. Mechanisms of fish migration in rivers. Pp. 317-355 in: J.D. McCleave, G.P. Arnold, J.J. Dodson, and W.H. Neill, editors. Mechanisms of migration in fishes. Plenum Press, New York. 574 pp.

Northcote, T.G. 1992. Prediction and assessment of potential effects of global environmental change on freshwater fish habitat in British Columbia. GeoJournal 28: 38-49.

Novak, M.A., and R.G. White. 1990. Impact of fire and flood on the trout population of Beaver Creek, upper Missouri basin, Montana. Pp. 120-127 in: F. Richardson and R.H. Hamre (eds), Wild trout IV: proceedings of the symposium. Trout Unlimited, Arlington, Virginia.

Novitzki, R.P. 1973. Improvement of trout streams in Wisconsin by augmenting low flows with ground waters. U.S. Geological Survey Water Supply Paper No. 2017. 52 pp.

Nowel, A.R.M., and P.A. Jumars. 1984. Flow environments of aquatic benthos. Annual Review of Ecology and Systematics 15: 303-328.

Nuhfer, A.J., R.D. Clark, Jr., and G.R. Alexander. 1994. Recruitment of brown trout in the South Branch of the Au Sable River, Michigan in relation to streamflow and winter severity. Michigan Department of Natural Resources Fisheries Division (Fisheries Research Report 2006), Lansing.

O'Brien, J.S. 1992. A case study of minimum streamflow for fishery habitat in the Yampa River. Pp. 921-946 in: C.R. Thorne, J.C. Bathurst, and R.D. Hey (eds.), Sediment Transport in Gravel-bed Rivers. John Wiley and Sons, Chichester.

O'Brien, W.J., M. Barfield, and K. Sigler. 2001. The functional response of drift-feeding Arctic grayling: the effects of prey density, water velocity, and location efficiency. Canadian Journal of Fisheries and Aquatic Sciences 58 (10): 1957-1963.

O'Brien, W.J., and J.J. Showalter. 1993. Effects of current velocity and suspended debris on the drift feeding of Arctic grayling. Transactions of the American Fisheries Society 122 (4): 609-615.

O'Hop, J., and J.B. Wallace. 1983. Invertebrate drift, discharge, and sediment relations in a southern Appalachian headwater stream. Hydrobiologia 98: 71-98.

O'Keeffe, J.H. 2000. Environmental flow assessments within the South African integrated planning process for water resources. Pp. 41-64 *in*: King, J.M., R.E. Tharme, and M.S. DeVilliers, eds. Environmental flow assessments for rivers: Manual for the Building Block Methodology. Water Research Commission, Pretoria, South Africa.

O'Shea, D.T. 1995. Estimating minimum instream flow requirements for Minnesota streams from hydrologic data and watershed characteristics. North American Journal of Fisheries Management 15: 569-578.

Onodera, K., and T. Ueno. 1961. On the survival of trout fingerlings stocked in a mountain brook. II. Survival rate measured and scouring effect of flood as a cause of mortality. Bulletin of the Japanese Society of Scientific Fisheries 27: 530-557.

Orsborn, J.F., and C.H. Allman (eds.). 1976. Instream flow needs. American Fisheries Society, Bethesda, Maryland.

Orsborne, L.L., M.J. Wiley, and R.W. Larimore. 1988. Assessment of the water surface profile model: accuracy of predicted instream habitat conditions in low-gradient, warmwater... Regulated Rivers: Research and Management 1: 171-181.

Orth, D.J. 1983. Aquatic habitat measurements. Pp. 61-84 in: L.A. Nielsen and D.A. Johnson, editors. Fisheries Techniques. American Fisheries Society, Bethesda.

Orth, D.J. 1987. Ecological considerations in the development and application of instream flow habitat models. Regulated Rivers: Research and Management 1: 171-181.

Orth, D.J. 1995. Food web influences on fish population responses to instream flow. Bulletin Francais de la Peche et de la Pisciculture 337/338/339: 317-328.

Orth, D.J., R.N. Jones, and O.E. Maughan. 1981. Considerations in the development of curves for habitat suitability criteria. Pages 124-133 in N.B. Armantrout, editor. Acquisition and utilization of aquatic habitat inventory information. Proceedings of a symposium, Portland, Oregon. American Fisheries Society, Western Division, Bethesda.

Orth, D.J., and P.M. Leonard. 1990. Comparison of discharge methods and habitat optimization for recommending instream flows to protect fish habitat. Regulated Rivers: Research and Management 5(2): 129-138.

Orth, D.J., and O.E. Maughan. 1982. Evaluation of the Incremental Methodology for recommending instream flows for fish. Transactions of the American Fisheries Society 111 (4): 413-445.

Orth, D.J., and O.E. Maughan. 1983. Microhabitat preferences of benthic fauna in a woodland stream. Hydrobiologia 106: 157-168.

Osborne, L.L., M.J. Wiley, and R.W. Larimore. 1988. Assessment of the water surface profile: accuracy of predicted instream fish habitat conditions in low-gradient, warmwater streams. Regulated Rivers 2: 269-631.

Ottaway, E.M., P.A. Carling, A. Clark, and N.A. Reader. 1981. Observations on the structure of brown trout, *Salmo trutta* Linnaeus redds. Journal of Fish Biology 19: 593-607.

Ottaway, E.M., and A. Clarke. 1981. A preliminary investigation into the vulnerability of young trout (*Salmo trutta* L.) and Atlantic salmon (*S. salar* L.) to downstream displacement by high water velocities. Journal of Fish Biology 19: 135-145.

Ottaway, E.M., and D.R. Forrest. 1983. The influence of water velocity on downstream movement of alevins and fry of brown trout, *Salmo trutta* L. Journal of Fish Biology 23: 221-227.

Owen, M. 1991. Groundwater abstraction and river flows. J. Inst. Wat. Environ. Management 5: 697-702.

Pajak, P., and R.J. Neves. 1987. Habitat suitability and fish production: A model evaluation for rock bass in two Virginia streams. Transactions of the American Fisheries Society 116 (6): 839-850.

Palik, B., S.W. Golladay, P.C. Goebel, and B.W. Taylor. 1998. Geomorphic variation in riparian tree mortality and stream coarse woody debris recruitment from record flooding in a coastal plain stream. Ecoscience 5: 551-560.

Paller, M.H., S.F. Modica, and E.G. Hofstetter. 1992. Short-term changes in a southeastern coastal plain fish assemblage following artificial increases in streamflow. Rivers 3: 243-259.

Palmer, T., P. Montagna, and R. Kalke. 2002. Downstream effects of restored freshwater inflow to Rincon Bayou, Nueces Delta, Texas, USA. Estuaries 25 (6B): 1448-1456.

Paloumpis, A.A. 1958. Responses of some minnows to flood and drought conditions in an intermittent stream. Iowa State College Journal of Science 32 (4): 547-561.

Panja, K., T.B. Hardy, and C.M.U. Neale. 1993. Comparison of meso-scale hydraulic features at different discharges in a turbid river system using multispectral videography. *In*: Proceedings of the 14th Workshop on Color Photography and Videography for Resource Monitoring. Utah State University, Logan, Utah, May 25-29.

Paragamian, V.L., and G. Kruse. 2001. Kootenai River white sturgeon spawning migration behavior and a predictive model. North American Journal of Fisheries Management 21 (1): 10-21.

Paragamian, V.L., G. Kruse, and V. Wakkinen. 2001. Spawning habitat of Kootenai River white sturgeon, post-Libby Dam. North American Journal of Fisheries Management 21 (1): 22-33.

Paragamian, V.L., and M.J. Wiley. 1987. Effects of variable streamflows on growth of smallmouth bass in the Maquoketa River, Iowa. North American Journal of Fisheries Management 7 (3): 357-362.

Parasiewicz, P. 2001. MesoHABSIM: A concept for application of instream flow models in river restoration planning. Fisheries 26 (9): 6-13.

Parasiewicz, P. 2003. Upscaling: integrating habitat model into river management. Canadian Water Resources Journal 28 (2):

Parasiewicz, P., and M.J. Dunbar. 2001. Physical habitat modelling for fish - a developing approach. Archiv fur Hydrobiologie Supplement. 135/2-4: 1-30.

Parasiewicz, P., M. Mattl, and K. Moder. 1999. A study of effectiveness of alternative physical habitat sampling strategies in streams. *In:* T.B. Hardy, ed. Proceedings of 3rd international symposium on ecohydraulics. Utah State University, Logan.
Parasiewicz, P., S. Schmutz, and A. Melcher. 1999. A hybrid model - assessment of habitat conditions combining state of the art modeling tools. *In*: T.B. Hardy, ed. Proceedings of 3rd international symposium on ecohydraulics. Utah State University, Logan.

Parrish, D.L, R.J. Behnke, S.R. Gephard, S.D. McCormick, and G.H. Reeves. 1998. Why aren't there more Atlantic salmon (*Salmo salar*)? Canadian Journal of Fisheries and Aquatic Sciences 55 (Suppl. 1): 281-287.

Parsley, M.J., and L.G. Beckman. 1994. White sturgeon spawning and rearing habitat in the lower Columbia River. North American Journal of Fisheries Management 14 (4): 812-827.

Parsley, M.J., L.G. Beckman, and G. McCabe, Jr. 1993. White sturgeon spawning and rearing habitat in the Columbia River downstream of McNary Dam. Transactions of the American Fisheries Society 122: 217-228.

Parsons, B.G.M., and W.A. Hubert. 1988. Influence of habitat availability on spawning site selection by kokanee in streams. North American Journal of Fisheries Management 8 (4): 426-431.

Patten, D.T., D.A. Harpman, M.I. Voita, and T.J. Randle. 2001. A managed flood on the Colorado River: background, objectives, design, and implementation. Ecological Applications 11: 635-643.

Patten, D.T., and L.E. Stevens. 2001. Restoration of the Colorado River ecosystem using planned flooding. Ecological Applications 11: 633-634.

Patton, T.M., and W.A. Hubert. 1988. Reservoirs on a Great Plains stream affect downstream habitat and fish assemblages. Journal of Freshwater Ecology 8: 279-285.

Pautou, G., and H. Decamps. 1985. Ecological interactions between the alluvial forests and hydrology of the upper Rhone. Archiv fur Hydrobiologie 104: 13-37.

Payne, B.A., and M.F. Lapointe. 1997. Channel morphology and lateral stability: effects on distribution of spawning and rearing habitat for Atlantic salmon in a wandering cobble-bed river. Canadian Journal of Fisheries and Aquatic Sciences 54: 2627-2636.

Pearson, L.S., K.R. Conover, and R.E. Sams. 1970. Factors affecting the natural rearing of juvenile coho salmon during the summer low-flow season. Oregon Fish Commission, Portland. 64 pp. Unpublished.

Pearsons, T.N., H.W. Li, and G.A. Lamberti. 1992. Influence of habitat complexity on resistance to flooding and resilience of stream fish assemblages. Transactions of the American Fisheries Society 121 (4): 427-436.

Peckarsky, B.L., S.C. Horn, and B. Statzner. 1990. Stonefly predation along a hydraulic gradient: a field test of the harsh-benign hypothesis. Freshwater Biology 24: 181-191.

Perrin, C.J., L.L. Rempel, and M.L. Rosenau. 2003. White sturgeon spawning habitat in an unregulated river, Fraser River, Canada. Transactions of the American Fisheries Society 132 (1): 154-165.

Perry, S.A., and W.B. Perry. 1986. Effects of experimental flow regulation on invertebrate drift and stranding in the Flathead and Kootenai Rivers, Montana, USA. Hydrobiologia 134: 171-182.

Person, G.N. 1950. Cyclic variations in Columbia River flow studied. Civil Engineering 20 (4): 47-48.

Pert, E.J., and D.C. Erman. 1994. Habitat use by adult rainbow trout under moderate artificial fluctuations in flow. Transactions of the American Fisheries Society 123 (6): 913-923.

Peters, J.C. 1982. Effects of river and streamflow alteration on fishery resources. Fisheries 7 (2): 20-22.

Peters, R.J. 1996. An evaluation of habitat enhancement and wild fry supplementation as a means of increasing coho salmon production of the Clearwater River, Washington. Ph.D. dissertation, University of Washington, Seattle. 206 pp.

Peterson, C.G. 1986. Effects of discharge reduction on diatom colonization below a large hydroelectric dam. Journal of the American Benthological Society 5: 278-289.

Peterson, C.G. 1987. Influences of flow regime on development and dessication response of lotic diatom communities. Ecology 68: 946-954.

Peterson, J.T., and C.F. Rabeni. 2001. Evaluating the physical characteristics of channel units in an Ozark stream. Transactions of the American Fisheries Society 130 (5): 898-910.

Peterson, J.T., and C.F. Rabeni. 2001. The relation of fish assemblages to channel units in an Ozark stream. Transactions of the American Fisheries Society 130 (5): 911-926.

Peterson, N.P., and T.P. Quinn. 1996. Persistence of egg pocket architecture in redds of chum salmon, *Oncorhynchus keta*. Environmental Biology of Fishes 46: 243-253.

Petts, G.E. 1996. Water allocation to protect river ecosystems. Regulated Rivers 12: 353-365.
Petts, G., P. Armitage, and E. Castella. 1993. Physical habitat changes and macroinvertebrate response to river regulation: the River Rede, U.K. Regulated Rivers: Research and Management 8: 167-176.

Petts, G.E., J.G. Imhof, B.A. Manny, J.F.B. Maher, and .... 1989. Management of fish populations in large rivers: a review of tools and approaches. Pp. 578-588 in: D.P. Dodge (ed.) Proceedings of the International Large Rivers Symposium. Can. Special Publ. Fish. Aquatic Sciences 106.

Petts, G.E., and I. Maddock. 1996. Flow allocation for in-river needs. Pp. 60-79 in: G. Petts and P. Calow, eds. River restoration. Blackwell Science. London.

Petty, J.T., and G.D. Grossman. 1996. Patch selection by mottled sculpin (Pisces: Cottidae) in a southern Appalachian stream. Freshwater Biology 35: 261-276.

Pitman, V.M., and O.J. Parks. 1994. Habitat use and movement of young paddlefish (*Polyodon spathula*). Journal of Freshwater Ecology 9: 181-189.

Pezeshki, S.R., R.D. DeLaune, and W.H. Patrick, Jr. 1987. Response of baldcypress (*Taxodium distichum* L. var. *distichum*) to increases in flooding salinity in Louisiana's Mississippi River deltaic plain. Wetlands 7: 1-10.

Platts, W.S., W.F. Megahan, and G.W. Minshall. 1983. Methods for evaluating stream, riparian, and biotic conditions. U.S. Forest Service Gen. Tech. Rep. INT-138. Intermountain Forest and Range Experiment Station, Ogden, Utah.

Plumstead, E.E. 1990. Changes in ichthyofaunal diversity and abundance within the Mbashe estuary, Transkei, following construction of a river barrage. South African Journal of Marine Science 9: 399-407.

Poff, N.L. 1992. Why disturbance can be predictable: a perspective on the definition of disturbance in streams. Journal of the North American Benthological Society 11: 405-422.

Poff, N.L. 1996. A hydrogeography of unregulated streams in the United States and an examination of scale-dependence in some hydrological descriptors. Freshwater Biology 36: 71-91.

Poff, N.L. 2002. Ecological response to and management of increased flooding caused by climate change. Phil. Trans. Royal Society London A 360: 1497-1510.

Poff, N.L., and J.D. Allen. 1995. Functional organization of stream fish assemblages in relation to hydrological variability. Ecology 76: 606-627.

Poff, N.L., J.D. Allan, M.B. Bain, J.R. Karr, K.L. Prestergaard, B. Richter, R. Sparks, and J. Stromberg. 1997. The natural flow regime: a paradigm for river conservation and restoration. Bioscience 47: 769-784.

Poff, N.L., J.D. Allan, M.A. Palmer, D.D. Hart, B.D. Richter, A.H. Arthington, K.H. Rogers, J.L. Meyer, and J.A. Stanford. 2003. River flows and water wars: emerging science for environmental decision making. Frontiers in Ecology and the Environment 1 (6): 298-306.

Poff, N.L., and A.D. Huryn. 1998. Multi-scale determinants of secondary production in Atlantic salmon (*Salmo salar*) streams. Canadian Journal of Fisheries and Aquatic Sciences 55 (Suppl. 1): 201-217.

Poff, N.L., and J.V. Ward. 1989. Implications of streamflow variability and predictability for lotic community structure: a regional analysis of streamflow patterns. Canadian Journal of Fisheries and Aquatic Sciences 46 (10): 1805-1818.

Poff, N.L., and J.V. Ward. 1990. Physical habitat template of lotic systems: recovery in the context of historical pattern of spatiotemporal heterogeneity. Environmental Management 14: 629-645.

Poff, N.L., and J.V. Ward. 1991. Drift responses of benthic invertebrates to experimental streamflow variation in a hydrologically stable stream. Canadian Journal of Fisheries and Aquatic Sciences 48: 1926-1936.

Poizat, G., and A.J. Crivelli. 1997. Use of seasonally flooded marshes by fish in a Mediterranean wetland: timing and demographic consequences. Journal of Fish Biology 51: 106-119.

Polzin, M.L. 1998. River and riparian dynamics and black cottonwoods in the Kootenay River basin. Master's thesis, University of Lethbridge, Department of Biology, Alberta.

Polzin, M.L., and S.B. Rood. 2000. Effects of damming and flow stabilization on riparian processes and black cottonwoods along the Kootenay River. Rivers 7 (3): 221-232.

Poole, G.C., C.A. Frissell, and S.C. Ralph. 1997. Instream habitat unit classification: inadequacies for monitoring and some consequences for management. Water Resources Bulletin 33: 879-896.

Pope, D.P. 1984. Methods of vegetative regeneration and moisture requirements of selected Southwest riparian species. Master's thesis. Arizona State University, Tempe.

Postel, S.L., G.C. Daily, and P.R. Ehrlich. 1996. Human appropriation of renewable fresh water. Science 271: 785-788.

Postel, S., and B. Richter. 2003. Rivers for Life: Managing Water for People and Nature. Island Press, Washington, Covelo, London.

Powell, G.L. 1979. Estuarine fishery dynamics and freshwater inflow fluctuations in the San Antonio Bay System, Texas. Proceedings of the 31st Southeastern Association of Fish and Wildlife Agencies 31: 498-504.

Powell, G.L. and J. Matsumoto. 1994. Texas Estuarine Mathematical Programming Model: A tool for freshwater inflow management, pp. 401-406. In: K.R. Dyer and R.J. Orth (eds.). Changes in fluxes in estuaries: Implications from science to management. Olsen and Olsen, Fredensborg, Denmark.

Powell, G.L., J. Matsumoto, and D.A. Brock. 2002. Methods for determining minimum freshwater inflows needs of Texas bays and estuaries. Estuaries 25 (6B): 1262-1274.

Power, G. 1981. Stock characteristics and catches of Atlantic salmon (*Salmo salar*) in Quebec, and Newfoundland and Labrador in relation to environmental variables. Canadian Journal of Fisheries and Aquatic Sciences 38: 1601-1611.

Power, M.E. 1987. Predator avoidance by grazing fishes in temperate and tropical streams: importance of stream depth and prey size. Pages 333-351 in: W.C. Kerfoot and A. Sih, editors. Predation: direct and indirect impacts in aquatic communities. University Press of New England, Dartmouth, New Hampshire.

Power, M.E. 1995. Floods, food chains, and ecosystem processes in rivers. Pages 52-60 in: C.G. Jones and J.H. Lawton, editors. Linking species and ecosystems. Chapman and Hall, New York, New York, USA.

Power, M.E., W.E. Dietrich, and J.C. Finlay. 1996. Dams and downstream aquatic biodiverstiy: potential food web consequences of hydrologic and geomorphic change. Environmental Management 20: 887-895.

Power, M.E., R..J. Stout, C.E. Cushing, P.P. Harper, F.R. Hauer, W.J. Matthews, P.B. Moyle, B. Statzner, and I.R. Wais de Badgen. 1988. Biotic and abiotic controls in river and stream communities. Journal of the North American Benthological Society 7: 456-479.

Powers, P.D., and J.F. Orsborn. 1985. Analysis of barriers to upstream fish migration: An investigation of the physical conditions affecting fish passage success at culverts and waterfalls. Final Report 1984 (Project No. 82-14). Portland, OR: U.S. Department of Energy, Bonneville Power Administration, Division of Fish and Wildlife. xiii+120 pp.
Pratt, K.L. 1984. Habitat selection and species interactions of juvenile westslope cutthroat trout (*Salmo clarki lewisi*) and bull trout (*Salvelinus confluentus*) in the upper Flathead River basin. Master's thesis, University of Idaho, Moscow.

Press, G.R., D.R. Montgomery, E.A. Steel, R.E. Bilby, B.E. Feist, and H.M. Greenberg. 2002. Landscape characteristics, land use, and coho salmon (Oncorhynchus kisutch) abundance, Snohomish River, Wash., U.S.A. Canadian Journal of Fisheries and Aquatic Sciences 59 (4): 613-623.

Prevost, M., A.P. Plamondon, and P. Belleau. 1999. Effects of drainage of a forested peatland on water quality and quantity. J. Hydrol. 214: 130-143.

Prewitt, C.G. 1982. The effects of depth-velocity correlations on aquatic physical habitat usability estimates. Doctoral dissertation. Fort Collins: Colorado State University.

Pringle, C.M. 1997. Exploring how disturbance is transmitted upstream: going against the flow. Journal of the North American Benthological Society 16: 425-438.

Pringle, C.M. 2000. River conservation in tropical versus temperate latitudes. Pp. 371-381 *in*: P.J. Boon, B.R. Davies, and G.E. Petts, eds. Global Perspectives on River Conservation: Science, Policy and Practice. John Wiley & Sons, New York.

Pringle, C.M. 2001. Hydrological connectivity and the management of biological reserves: a global perspective. Ecological Applications 11: 981-988.

Pringle, C.M., M.C. Freeman, and B.J. Freeman. 2000. Regional effects of hydrological alterations on riverine macrobiota in the New World: Tropical-temperate comparisons. BioScience 50: 807-823.

Pringle, C.M., R.J. Naiman, G. Bretschko, J.R. Karr, M.W. Oswood, J.R. Webster, R.L. Welcomme, and M.J. Winterbourn. 1988. Patch dynamics in lotic systems: the stream as a mosaic. Journal of the North American Benthological Society 7: 503-524.

Prowse, T.D. 1994. Environmental significance of ice to streamflow in cold regions. Freshwater Biology 32: 241-259.

Puckett, K.J., and L.M. Dill. 1985. The energetics of feeding territoriality in juvenile coho salmon (*Oncorhynchus kisutch*). Behaviour 92: 97-111.

Puckridge, J.T., F. Sheldon, K.F. Walker, and A.J. Boulton. 1998. Flow variability and the ecology of large rivers. Australian Journal of Marine and Freshwater Research 49: 55-72.

Pulwarty, R.S., and K.T. Redmond. 1997. Climate and salmon restoration in the Columbia River basin: the role and usability of seasonal forecasts. Bulletin of the American Meteorological Society 78: 381-397.

Quammen, M.L., and C.P. Onuf. 1993. Laguna Madre: Seagrass changes continue decades after salinity reduction. Estuaries 16: 1163-1174.

Quinn, J.W. and T.J. Kwak. 2003. Fish assemblage changes in an Ozark river after impoundment: a long-term perspective. Transactions of the American Fisheries Society 132 (1): 110-119.

Quinn, T.P., and D.J. Adams. 1996. Environmental changes affecting migratory timing of American shad and sockeye salmon. Ecology 77 (4): 1151-1162.

Quinn, T.P., and G.B. Buck. 2001. Size- and sex-selective mortality of adult sockeye salmon: bears, gulls, and fish out of water. Transactions of the American Fisheries Society 130: 995-1005.

Quinn, T.P., S. Hodgson, and C. Peven. 1997. Temperature, flow, and the migration of adult sockeye salmon (*Oncorhynchus nerka*) in the Columbia River. Canadian Journal of Fisheries and Aquatic Sciences 54 (6): 1349-1360.

Quinn, T.P., and N.P. Peterson. 1996. The influence of habitat complexity and fish size on over-winter survival and growth of individually marked juvenile coho salmon (*Oncorhynchus kisutch*) in Big Beef Creek, Washington. Canadian Journal of Fisheries and Aquatic Sciences 53 (7): 1555-1564.

Quiros, R., and S. Cuch. 1989. The fisheries and limnology of the lower Plata Basin. Pp. 429-443 in: D.P. Dodge (ed.) Proceedings of the International Large Rivers Symposium. Can. Special Publ. Fish. Aquatic Sciences 106.

Quist, M.C., J.S. Tillma, M.N. Burlingame, and C.S. Guy. 1999. Overwinter habitat use of shovelnose sturgeon in the Kansas River. Transactions of the American Fisheries Society 128 (3): 522-527.

Rabeni, C.F., and R.B. Jacobson. 1993. The importance of fluvial hydraulics to fish-habitat restoration in low-gradient alluvial streams. Freshwater Biology 29: 211-220.

Raibley, P.T., T.M. O'Hara, K.S. Irons, K.D. Blodgett, and R.E. Sparks. 1997. Largemouth bass size distributions under varying annual hydrological regimes in the Illinois River. Transactions of the American Fisheries Society 126: 850-856.

Railsback, S. 1999. Reducing uncertainties in instream flow studies. Fisheries 24 (4): 24-26.

Railsback, S.F., R.F. Blackett, and N.D. Pottinger. 1993. Evaluation of the fisheries impact assessment and monitoring program for the Terror Lake hydroelectric project. Rivers 4 (4): 312-327.

Railsback, S.F., and B.C. Harvey. 2002. Analysis of habitat-selection rules using an individual-based model. Ecology 83(7): 1817-1830.

Raleigh, R.F., T. Hickman, R.C. Solomon, and P.C. Nelson. 1984. Habitat suitability information: rainbow trout. U.S. Fish and Wildlife Service FWS/OBS-82/10.60.

Raleigh, R.F., L.D. Zuckerman, and P.C. Nelson. 1986. Habitat suitability index models and instream flow suitability curves: brown trout, revised U.S. Fish and Wildlife Service, Biological Report 82 (10: 124)

Rand, P.S., and S.G. Hinch. 1998. Swim speeds and energy use of upriver-migrating sockeye salmon (*Oncorhynchus nerka*): simulating metabolic power and assessing risk of energy depletion. Canadian Journal of Fisheries and Aquatic Sciences 55: 1832-1841.

Rankin, E.T. 1986. Habitat selection by smallmouth bass in response to physical characteristics in a natural stream. Transactions of the American Fisheries Society 115 (2): 322-334.

Raymond, H.L. 1968. Migration rates of yearling chinook salmon in relation to flow and impoundments in the Columbia and Snake River. Transactions of the American Fisheries Society 97 (4): 356-359.

Raymond, H.L. 1979. Effects of dams and impoundments on migrations of juvenile chinook salmon and steelhead from the Snake River, 1966 to 1975. Transactions of the American Fisheries Society 108: 505-529.

Raymond, H.L. 1988. Effects of hydroelectric development and fisheries enhancement on spring and summer chinook salmon and steelhead in the .... North American Journal of Fisheries Management 8 (1): 1-24.

Rea, A.M. 1977. Historic changes in avifauna of the Gila River Indian Reservation, central Arizona. Ph.D. dissertation, University of Arizona.

Reddering, J.S.V. 1988. Prediction of the effects of reduced river discharge on the estuaries of the south-eastern Cape Province. South African Journal of Science 84: 726-730.

Redmond, K.T., and R.W. Koch. 1991. Surface climate and streamflow variability in the western United States and their relationship to large-scale circulation indices. Water Resources Research 27: 2381-2399.

Reeves, G.H., F.H. Everest, J.R. Sedell, and Hohler. 1990. Influence of habitat modifications on habitat composition and anadromous fish populations in Fish Creek, Oregon 1983-88. U.S.

Department of Energy, Bonneville Power Administration, Division of Fish and Wildlife, Portland, OR. 44 pp.

Reid, K.A. 1955. Increasing summer stream flows. Trans. 20th North American Wildlife Conference 229-241.

Reily, P.W., and W.C. Johnson. 1982. The effects of altered hydrological regime on tree growth along the Missouri River in North Dakota. Canadian Journal of Botany 60 (11): 2410-2423.

Reinhardt, U.G., and M.C. Healey. 1997. Size-dependent foraging behaviour and use of cover in juvenile coho salmon under predation risk. Can. J. Zool. 75: 1642-1651.

Reiser, D.W. 1981. In situ dewatering of salmonid eggs: effects on hatching success and fry quality. Proceedings of the 60th Annual Conference of the Western Association of Fish and Wildlife Agencies: 443-465.

Reiser, D.W., M.P. Ramey, and T.R. Lambert. 1985. Reviewing of flushing flow requirements in regulated streams. Dep. Eng. Res. Pacific Gas and Electric Co., San Ramon, CA. 97 pp.
.
Reiser, D.W., M.P. Ramey, and T.R. Lambert. 1987. Considerations in assessing flushing flow needs in regulated stream systems. Pp. 45-58 in: J.F. Craig and J.B. Kemper, editors. Regulated Streams: Advances in Ecology. Plenum Press, New York and London.

Reiser, D.W., M.P. Ramey, and T.A. Wesche. 1989. Flushing flows. Pp. 91-135 *in*: J.A. Gore and G.E. Petts, editors. Alternatives in regulated river management. CRC Press, Boca Raton, Florida.

Reiser, D.W., and T.A. Wesche. 1977. Determination of physical and hydraulic preferences of brown and brook trout in the selection of spawning locations. Laramie: University of Wyoming, Water Resources Research Institute (Publication 64).

Reiser, D.W., T.A. Wesche, and C. Estes. 1989. Status of instream flow legislation and practices in North America. Fisheries 14 (2): 22-29.

Reiser, D.W., and R.G. White. 1983. Effects of complete redd dewatering on salmonid egg-hatching success and development of juveniles. Transactions of the American Fisheries Society 112 (4): 532-540.
Reiser, D.W., and R.G. White. 1988. Effects of two sediment size-classes on survival of steelhead and chinook salmon eggs. North American Journal of Fisheries Management 8 (4): 432-437.

Reiser, D.W., and R.G. White. 1990. Effects of streamflow reductions on chinook salmon egg incubation and fry quality. Rivers 1 (2): 110-118.

Rempel, L.L., J.S. Richardson, and M.C. Healey. 1999. Flow refugia for benthic macroinvertebrates during flooding of a large river. J. North Am. Benthol. Soc. 18: 34-48.

Rennie, C.D., and R.G. Millar. 2000. Spatial variability of stream bed scour and fill: a comparison of scour depth in chum salmon (*Oncorhynchus keta*) redds and adjacent bed. Canadian Journal of Fisheries and Aquatic Sciences 57 (5): 928-938.

Richards, K. 1982. Rivers: form and process in alluvial channels. Methuen, London.

Richardson, B.A. 1986. Evaluation of in-stream flow methodologies for freshwater fish in New South Wales. Pp. 143-167 *in*: I.C. Campbell, ed., Stream Protection: The Management of Rivers for Instream Uses. Water Studies Centre, Chisholm Institute of Technology, Victoria, Australia.

Richter, B.D., J.V. Baumgartner, D.P. Braun, and J. Powell. 1998. A spatial assessment of hydrologic alteration within a river network. Regulated Rivers 14: 329-340.

Richter, B.D., J.V. Baumgartner, J. Powell, and D.P. Braun. 1996. A method for assessing hydrologic alteration within a river network. Conservation Biology 10: 1163-1174.

Richter, B.D., J.V. Baumgartner, R. Wigington, and D.P. Braun. 1997. How much water does a river need? Freshwater Biology 37 (1): 231-249.

Richter, B.D., R. Matthews, D.L. Harrison, and R. Wigington. 2003. Ecologically sustainable water management: managing river flows for ecological integrity. Ecological Applications 13: 206-224.

Richter, B.D., D.T. Patten, and J.C. Stromberg. 1990. Evaluating the role of flooding in a Southwestern riparian system. Journal of the Arizona-Nevada Academy of Science 25 (1): 35.

Richter, B.D., and J. Powell. 1996. Simple hydrologic models for use in floodplain research. Natural Areas Journal 16: 362-366.

Richter, B.D., and H.E. Richter. 1992. Development of groundwater and ecological models for protecting a southwestern riparian ecosystem. Pp. 231-245 in: J.A. Stanford and J.J. Simons, eds. Proceedings of the First International Conference on Ground Water Ecology. American Water Resources Association, Bethesda, Md.

Richter, B.D., and H.E. Richter. 2000. Prescribing flood regimes to sustain riparian ecosystems along meandering rivers. Conservation Biology 14 (5): 1467-1478.

Richter, H.E. 1992. Development of a conceptual model for floodplain restoration in a desert riparian system. Arid Lands Newsletter 32: 13-17.

Richter, H.E. 1999. Alteration of forest structure and ecosystem function along the Yampa River, Colorado. Ph.D. dissertation, Colorado State University, Fort Collins.

Ricker, W.E., H.T. Bilton, and K.V. Iro. 1978. Causes of decrease in size of pink salmon (*Oncorhynchus gorbuscha*). Tech. Rep. Fish. Mar. Serv. Can. No. 820.

Riehle, M.D., and J.S. Griffith. 1993. Changes in habitat use and feeding chronology of juvenile rainbow trout (*Oncorhynchus mykiss*) in fall and the onset of winter in Silver Creek, Idaho. Canadian Journal of Fisheries and Aquatic Sciences 50 (10): 2119-2128

Rieman, B.E., and J.D. McIntyre. 1995. Occurrence of bull trout in naturally fragmented habitat patches of varied sizes. Transactions of the American Fisheries Society 124: 285-296.

Riley, G.A. 1937. The significance of the Mississippi River drainage for biological conditions in the northern Gulf of Mexico. Journal of Marine Research 1: 60-74.

Riley, S.C., and K.D. Fausch. 1995. Trout population response to habitat enhancement in six northern Colorado streams. Canadian Journal of Fisheries and Aquatic Sciences 52 (1): 34-53.

Rimmer, D.M. 1985. Effects of reduced discharge on production and distribution of age-0 rainbow trout in seminatural channels. Transactions of the American Fisheries Society 114: 388-396.

Rimmer, D.M., U. Paim, and R.L. Saunders. 1983. Autumnal habitat shift in juvenile Atlantic salmon *(Salmo salar*) in a small river. Canadian Journal of Fisheries and Aquatic Sciences 40: 671-680.

Rimmer, D.M., U. Paim, and R.L. Saunders. 1984. Changes in the selection of microhabitat by juvenile Atlantic salmon (*Salmo salar*) at the summer-autumn transition in a small river. Canadian Journal of Fisheries and Aquatic Sciences 41: 469-475.

Rimmer, D.M., R.L. Saunders, and U. Paim. 1985. Effects of temperature and season on the position holding performance of juvenile Atlantic salmon (*Salmo salar*). Canadian Journal of Zoology 63: 92-96.

Rincon, P.A., and J. Lobon-Cervia. 1993. Microhabitat use by stream-resident brown trout: bioenergetic consequences. Transactions of the American Fisheries Society 122 (4): 575-587.

Rincon, P.A., and J. Lobon-Cervia. 2002. Nonlinear self-thinning in a stream-resident population of brown trout (*Salmo trutta*). Ecology 83(7): 1808-1816.

Ringler, N.H., and D.F. Brodowski. 1983. Functional response of brown trout (*Salmo trutta* L.) To invertebrate drift. J. Freshwater Ecology 2: 45-57.

Rinne, J.N. 1980. Spawning habitat and behavior of Gila trout, a rare salmonid of the southwestern United States. Transactions of the American Fisheries Society 109: 83-91.

Rinne, J.N. 1982. Movement, home range, and growth of a rare southwestern trout in improved an unimproved habitats. North American Journal of Fisheries Management 2: 150-157.

Risser, R.J., and R.R. Harris. 1989. Mitigation for impacts to riparian vegetation of western montane streams. Pp. 235-252 in: J.A. Gore and G.E. Petts (eds.) Alternatives in Regulated River Management. Boca Raton: CRC Press.

Robertson, A.I., P. Bacon, and G. Heagney. 2001. The responses of floodplain primary production to flood frequency and timing. Journal of Applied Ecology 38: 126-136.

Rodriguez, C.A., K.W. Flessa, and D.L. Dettman. 2001. Effects of upstream diversion of Colorado River water on the estuarine bivalve mollusc *Mulinaria coloradoensis*. Conservation Biology 15 (1): 249-258.

Rodriguez, M.A. 2002. Restricted movement in stream fish: The paradigm is incomplete, not lost. Ecology 83 (1): 1-13.

Rogers, K.H., D. Roux, and H. Biggs. 2000. Challenges for catchment management agencies: lessons from bureaucracies, business and resource management. Water SA 26: 505-511.

Roghair, C.N., C.A. Dolloff, and M.K. Underwood. 2002. Response of a brook trout population and instream habitat to a catastrophic flood and debris flow. Transactions of the American Fisheries Society 131 (4): 718-730.

Roni, P. 2002. Habitat use by fishes and Pacific giant salamanders in small western Oregon and Washington streams. Transactions of the American Fisheries Society 131 (4): 743-761.

Roni, P., and T.P. Quinn. 2001. Density and size of juvenile salmonids in response to placement of large woody debris in western Oregon and Washington streams. Canadian Journal of Fisheries and Aquatic Sciences 58 (2): 282-292.
Rood, S.B., and S. Heinze-Milne. 1989. Abrupt downstream forest decline following river damming in southern Alberta. Canadian Journal of Botany 67: 1744-1749.

Rood, S.B., A.R. Kalischuk, and J.M. Mahoney. 1998. Initial cottonwood seedling recruitment following the flood of the century of the Oldman River, Alberta, Canada. Wetlands 8: 557-570.

Rood, S.B., and J.M. Mahoney. 1990. Collapse of riparian poplar forests downstream from dams in western Canada in western prairies: Probable causes and prospects for mitigation. Environmental Management 14 (4): 451-464.

Rood, S.B., and J.M. Mahoney. 1995. River damming and riparian cottonwoods along the Marias River, Montana. Rivers 5 (3): 195-207.

Rood, S.B., and J.M. Mahoney. 2000. Revised instream flow regulation enables cottonwood recruitment along the St. Mary River, Alberta, Canada. Rivers 7 (2): 109-125.

Rood, S.B., J.M. Mahoney, D.E. Reid, and L. Zilm. 1995. Instream flows and the decline of riparian cottonwoods along the St. Mary River, Alberta. Canadian Journal of Botany 73: 1250-1260.

Rood, S.B., K. Taboulchanas, C.E. Bradley, and A.R. Kalischuk. 1999. Influence of flow regulation on channel dynamics and riparian cottonwoods along the Bow River, Alberta. Rivers 7 (1): 33-48.

Roper, B.R., and D.L. Scarnecchia. 1999. Emigration of age-0 chinook salmon (*Oncorhynchus tshawytscha*) smolts from the upper South Umpqua River basin, Oregon, U.S.A. Canadian Journal of Fisheries and Aquatic Sciences 56 (6): 939-946.

Roper, B.B., D.L. Scarnecchia, and T.J. Marr. 1994. Summer distribution of and habitat use by chinook salmon and steelhead within a major basin of the south Umpqua River, Oregon. Transactions of the American Fisheries Society 123: 298-308.

Rosenberg, D.M., P. McCully, and C.M. Pringle. 2000. Global-scale environmental effects of hydrological alterations: Introduction. BioScience 50: 746-751.

Rosenfeld, J.S. 2003. Assessing the habitat requirements of stream fishes: An overview and evaluation of different approaches. Transactions of the American Fisheries Society 132 (5): 953-968.

Rosenfeld, J.S., and S. Boss. 2001. Fitness consequences of habitat use for juvenile cutthroat trout: energetic costs and benefits in pools and riffles. Canadian Journal of Fisheries and Aquatic Sciences 58 (3): 585-593.

Rosenfeld, J.S., M. Porter, and E. Parkinson. 2000. Habitat factors affecting the abundance and distribution of juvenile cutthroat trout (*Oncorhynchus clarki*) and coho salmon (*Oncorhynchus kisutch*). Canadian Journal of Fisheries and Aquatic Sciences 57: 766-774.

Rosgen, D.L. 1994. A classification of natural rivers. Catena 22: 169-199.

Rosgen, D. 1996. Applied river morphology. Wildland Hydrology. Pagosa Springs, Colorado.

Rosgen, D.L., H.S. Silvey, and J.P. Potyondy. 1986. The use of channel maintenance flow concepts in the Forest Service. Hydrological Science and Technology 2(1): 19-26.

Ross, S.T. 1986. Resource partitioning in fish assemblages: a review of field studies. Copeia 1986: 352-388.

Ross, S.T., and J.A. Baker. 1983. The response of fishes to periodic spring floods in a southeastern stream. American Midland Naturalist 109: 1-14.

Ross, Stephen T., J.G. Knight, and S.D. Wilkins. 1990. Longitudinal occurrence of the bayou darter (Percidae: *Etheostoma rubrum*) in Bayou Pierre - a response to stream order... Polskie Archiwum Hydrobiologii 37 (1-2): 221-233.

Ross, Stephen T., J.G. Knight, and S.D. Wilkins. 1992. Distribution and microhabitat dynamics of the threatened Bayou Darter, *Etheostoma rubrum*. Copeia 1992 (3): 658-671.

Ross, S.T., W.J. Matthews, and A.J. Echelle. 1985. Persistence of stream fish assemblages: effects of environmental change. American Naturalist 126: 24-40.

Roussel, J.M., and A. Bardonnet. 1997. Diel and seasonal patterns of habitat use by fish in a natural salmonid brook: an approach to the functional role of the riffle-pool sequence. Bulletin Francais Peche Pisciculture 346:573-588.

Roussel, J.M., and A. Bardonnet. 1999. Ontogeny of diel pattern of stream-margin habitat use by emerging brown trout, Salmo trutta, in experimental channels: influence of food and predator presence. Environmental biology of Fishes 56: 253-262.

Roy, A.G., R. Roy, and N. Bergeron. 1988. Hydraulic geometry and changes in flow velocity at a river confluence with coarse bed material. Earth Surface Processes and Landforms 13: 583-598.

Rozengurt, M.A., and J.W. Hedgpeth. 1989. The impact of altered river flow on the ecosystem of the Caspian Sea. CRC Critical Reviews in Aquatic Science 1: 337-362.

Rubec, P.J., J.C.W. Bexley, H. Norris, M.S. Coyne, M.E. Monaco, S.G. Smith, and J.S. Ault. 1999. Suitability modeling to delineate habitat essential to sustainable fisheries. American Fisheries Society Symposium 22: 108-133.

Rubin, D.M. D.J. Topping, J.C. Schmidt et al. 2002. Recent sediment studies refute Glen Canyon Dam hypothesis. Eos 83: 273-278.

Rubin, S.P., T.C. Bjornn, and B. Dennis. 1991. Habitat suitability curves for juvenile chinook salmon and steelhead development using a habitat-oriented sampling approach. Rivers 2 (1): 12-29.

Ruggles, C.P. 1966. Depth and velocity as a factor in stream rearing and production of juvenile coho salmon. Canadian Fish Culturist 38: 215-228.

Rulifson, R.A., and C.S. Manooch, III. 1990. Recruitment of juvenile striped bass in the Roanoke River, North Carolina, as related to reservoir discharge. Nortth American Journal of Fisheries Management 10: 397-407.

Rutherford, D.A., K.R. Gelwicks, and W.E. Kelso. 2001. Physicochemical effects of the flood pulse on fishes in the Atchafalaya River basin, Louisiana. Transactions of the American Fisheries Society 130 (2): 276-288.

Sabo, M.J. 1993. Microhabitat use and its effect on growth of age-0 smallmouth bass in the North Anna River, Virginia. Ph.D. dissertation, Virginia Polytechnic Institute and State University, Blacksburg. 174 pp.

Sabo, M.J., and D.J. Orth. 1994. Temporal variation in microhabitat use by age-0 smallmouth bass in the North Anna River, Virginia. Transactions of the American Fisheries Society 123: 733-746.

Sabo, M.J., D.J. Orth, and E.J. Pert. 1996. Effect of stream microhabitat characteristics on rate of net energy gain by juvenile smallmouth bass, *Micropterus dolomieui*. Environmental Biology of Fishes 46: 393-403.

Sabo, M.J., C.F. Bryan, W.E. Kelso, and D.A. Rutherford. 1999. Hydrology and aquatic habitat characteristics of a riverine swamp: I. Influence of flow on water temperature and chemistry. Regulated Rivers: Research and Management 15: 505-523.

Saffel, P.D., and D.L. Scarnecchia. 1995. Habitat use by juvenile bull trout in belt-series geology watersheds of northern Idaho. Northwest Science 69: 304-317.
Sagnes, P., J.-Y. Champagne, and R. Morel. 2000. Shifts in drag and swimming potential during grayling ontogenesis: relations with habitat use. Journal of Fish Biology 57: 52-68.

Sagnes, P. P. Gaudin, and B. Statzner. 1997. Shifts in morphometrics and their relation to hydrodynamic potential and habitat use during grayling ontogenesis. Journal of Fish Biology 50: 846-858.

Sahin, V., and M.J. Hall. 1996. The effects of afforestation on water yields. J. Hydrol. 178: 293-309.

Sale, M.J., E.D. Brill, Jr., and E.E. Herricks. 1982. An approach to optimizing reservoir operations for downstream aquatic resources. Water Res. Research 18: 705-712.

Sale, M.J., S.F. Railsback, and E.E. Herricks. 1982. Frequency analysis of aquatic habitat: a procedure for determining instream flow needs. Pp. 340-346 in: N.B. Armantrout (ed.) Acquisition and utilization of aquatic habitat inventory information. Proceedings of a symposium, Portland, Oregon. American Fisheries Society, Western Division, Bethesda.

Salo, J. R. Kalliola, I, Hakkinen, Y. Makinen, P. Niemela, M. Puhakka, and P.D. Coley. 1986. River dynamics and the diversity of Amazon lowland forest. Nature 322: 254-258.

Saltveit, S.J., T. Bremnes, and O.R. Lindas. 1995. Effect of sudden increases in discharge in a large river on newly emerged Atlantic salmon (*Salmo salar*) and brown trout (*S. trutta*) fry. Ecology of Freshwater Fish 4: 126-136.

Saltveit, S.J., J.H. Halleraker, J.V. Arnekleiv, and A. Harby. 2001. Field experiments on stranding in juvenile Atlantic salmon (*Salmo salar*) and brown trout (*Salmo trutta*) during rapid flow decreases caused by hydropeaking. Journal of Regulated Rivers 17: 609-622.

Sando, S.K. 1981. The spawning and rearing habitats of rainbow trout and brown trout in two rivers in Montana. M.S. thesis, Montana State University.

Scarnecchia, D.L. 1981. Effects of streamflow and upwelling on yield of wild coho salmon (*Oncorhynchus kisutch*) in Oregon. Canadian Journal of Fisheries and Aquatic Sciences 38: 471-475.

Scarnecchia, D.L., and E.P. Bergersen. 1987. Trout production and standing crop in Colorado's small streams, as related to environmental features. North American Journal of Fisheries Management 7 (3): 315-330.

Scatena, F.N., and S.L. Johnson. 2001. Instream-flow analysis for the Luquillo Experimental Forest, Puerto Rico: Methods and analysis. U.S. Forest Service and International Institute of Tropical Forestry, Rio Piedras, Puerto Rico.

Scheerer, P.D. 2002. Implications of floodplain isolation and connectivity on the conservation of an endangered minnow, Oregon chub, in the Willamette River, Oregon. Transactions of the American Fisheries Society 131 (6): 1070-1080.

Scheidegger, K.L., and M.B. Bain. 1995. Larval fish distribution and macrohabitat use in free-flowing and regulated rivers. Copeia 1995: 125-135.

Scheurer, J.A., K.D. Fausch, and K.R. Bestgen. 2003. Multiscale processes regulate brassy minnow persistence in a Great Plains river. Transactions of the American Fisheries Society 132 (5): 840-855.

Schlacher, T.A., and T.H. Wooldridge. 1996. Ecological responses in freshwater supply and quality in South Africa's estuaries: Lessons for management and conservation. Journal of Coastal Conservation 2: 115-130.

Schlosser, I.J. 1982. Fish community structure and function along two habitat gradients in a headwater stream. Ecological Monographs 52: 395-414.

Schlosser, I.J. 1985. Flow regime, juvenile abundance, and the assemblage structure of stream fishes. Ecology 66: 1484-1490.

Schlosser, I.J. 1987. The role of predation in age-and-size related habitat use by stream fishes. Ecology 68: 651-659.

Schlosser, I.J. 1987. A conceptual framework for fish communities in small warmwater streams. Pp. 17-24 in: W.J. Matthews and D.C. Heins (eds.) Community and evolutionary ecology of North American freshwater fishes. Oklahoma University Press.

Schlosser, I.J. 1990. Environmental variation, life history attributes, and community structure in stream fishes: implications for environmental management and assessment. Environmental Management 14 (5): 621-628.

Schlosser, I.J. 1992. Effects of life-history attributes and stream discharge on filter-feeder colonization. Journal of the North American Benthological Society 11: 366-376.

Schlosser, I.J. 1995. Dispersal, boundary processes, and trophic-level interactions in streams adjacent to beaver ponds. Ecology 76 (3): 907-925.

Schlosser, I.J., and P.J. Angermeier. 1990. The influence of environmental variability, resource abundance, and predation on juvenile cyprinid and centrarchid fishes. Pol. Arch. Hydrobiol. 37: 265-284.

Schlosser, I.J., and K.K. Ebel. 1989. Effects of flow regime and cyprinid predation on a headwater stream. Ecological Monographs 59: 41-57.

Schlosser, I.J., J.D. Johnson, W.L. Knotek, and M. Lapinska. 2000. Climate variability and size-structured interactions among juvenile fish along a lake-stream gradient. Ecology 81 (4): 1046-1057.

Schlosser, I.J., and L.A. Toth. 1984. Niche relationships and population ecology of rainbow (*Etheostoma caeruleum*) and fantail (*E. flabellare*) darters in a .... Oikos 42: 229-238.

Schmetterling, D.A. 2000. Redd characteristics of fluvial westslope cutthroat trout in four tributaries to the Blackfoot River, Montana. North American Journal of Fisheries Management 20 (3): 776-783.

Schmetterling, D.A. 2001. Seasonal movements of fluvial westslope cutthroat trout in the Blackfoot River drainiage, Montana. North American Journal of Fisheries Management 21 (3): 507-520.

Schmidt, J.C., R.H. Webb, R.A. Valdez, G.R. Marzolf, and L.E. Stevens. 1998. Science and values in river restoration in the Grand Canyon. BioScience 48: 735-747.

Scholz, O., B. Gawne, B. Ebner, and I. Ellis. 2002. The effects of drying and re-flooding on nutrient availability in ephemeral deflation basin lakes in western New South Wales, Australia. River Research and Applications 18 (2): 185-196.

Schrader, W.C. 1989. Trout mortality, movements, and habitat selection during winter in South Willow Creek, Montana. M.S. thesis, Montana State University, Bozeman. 89 pp.

Schroeder, W.W. 1978. Riverine influence on estuaries: A case study, p. 347-364 in: M.L. Wiley (ed.), Estuarine Interactions. Academic Press, Inc., New York.

Schuett-Hames, D.E., N.P. Peterson, R. Conrad, and T.P. Quinn. 2000. Patterns of gravel scour and fill after spawning by chum salmon in a western Washington stream. North American Journal of Fisheries Management 20 (3): 610-617.

Schultz, A.A., O.E. Maughan, S.A. Bonar, and W.J. Matter. 2003. Effect of flooding on abundance of native and nonnative fishes downstream from a small impoundment. North American Journal of Fisheries Management 23 (2): 503-511.

Scott, D., and C.S. Shirvell. 1987. A critique of the Instream Flow Incremental Methodology and observations on flow determination in New Zealand. Pages 27-44 in J.F. Craig and J.B. Kemper, editors. Regulated Streams: Advances in Ecology. Plenum Press, New York and London. 431 pp.

Scott, M.L., G.T. Auble, and J.M. Friedman. 1996. Fluvial processes and the establishment of bottomland trees. Geomorphology 14: 327-339.

Scott, M.L., G.T. Auble, and J.M. Friedman. 1997. Flood dependency of cottonwood establishment along the Missouri River, Montana, USA. Ecological Applications 7: 677-690.

Scott, M.L., J.M. Friedman, and G.T. Aubele. 1996. Fluvial processes and the establishment of bottomland trees. Geomorphology 14: 327-339.

Scott, M.L., P.B. Shafroth, G.T. Aubele, and E.D. Eggleston. 1997. Flood dependency of cottonwood establishment along the Missouri River, Montana, USA. Ecological Applications 7: 677-690.

Scott, M.L., M.A. Wondzell, and G.T. Auble. 1993. Hydrograph characteristics relevant to the establishment and growth of western riparian vegetation. Pp. 237-246 in: H.J. Morrel-Soytoux, editor. Proceedings of the Thirteenth Annual American Geophysical Union Hydrology Days. Atherton, CA: Hydrology Days Publications.

Scrivener, J.C., and M.J. Brownlee. 1989. Effect of forest harvesting on spawning gravel and incubation survival of chum (*Oncorhynchus keta*) and coho salmon (*O. kisutch*) in Carnation Creek, British Columbia. Canadian Journal of Fisheries and Aquatic Sciences 46: 681-696.

Sear, D.A. 1993. Fine sediment infiltration into gravel spawning beds within a regulated river experiencing floods: ecological implications for salmonids. Regulated Rivers: Research and Management 8: 373-390.

Sechnick, C.W., R.F. Carline, R.A. Stein, and E.T. Rankin. 1986. Habitat selection by smallmouth bass in response to physical characteristics of a simulated stream. Transactions of the American Fisheries Society 115 (2): 314-321.

Secretan, Y., M. Leclerc, S. Duchesne, and M. Heniche. 2001. Une methodologie de modelisation numerique de terrain pour la simulation hydrodynamique bidimensionnelle. Revue de Sciences de l'eau 14 (2): 187-212.

Seegrist, D.W., and R. Gard. 1972. Effects of floods on trout in Sagehen Creek, California. Transactions of the American Fisheries Society 101: 478-482.

Seelbach, P.W. 1993. Population biology of steelhead in a stable-flow, low-gradient tributary of Lake Michigan. Transactions of the American Fisheries Society 122: 179-198.

Segelquist, C.A., M.L. Scott, and G.T. Auble. 1993. Establishment of *Populus deltoides* under simulated alluvial groundwater declines. American Midland Naturalist 130: 274-285.

Sempeski, P., and P. Gaudin. 1995. Habitat selection by grayling. II. Preliminary results on larval and juvenile daytime habitats. Journal of Fish Biology 47: 345-349.

Serafy, J.E., K.C. Lindeman, T.E. Hopkins, and J.S. Ault. 1997. Effects of freshwater canal discharge on fish assemblages in a subtropical bay: Field and laboratory observations. Marine Ecology Progress Series 160: 161-172.

Serchuk, F.M., C.J. Schmidt, and B. Floyd. 1980. Rainbow trout: a population simulation based on individual responses to varying environmental and demographic parameters. Environmental Biology of Fishes 5: 15-26.

Sexauer, H.M., and P.W. James. 1997. A comparison of the microhabitat use by juvenile bull trout in four streams located in the eastern Cascades, Washington. Pp. 361-370 in: W.C. Mackay, M.K. Brewin, and M. Monita, eds. Trout Unlimited Canada. Bull Trout Task Force, Calgary, Alberta.

Shafroth, P.G., G.T. Auble, J.C. Stromberg, and D.T. Patten. 1998. Establishment of woody riparian vegetation in relation to annual patterns of streamflow, Bill Williams River, Arizona. Wetlands 18: 577-590.

Shankman, D. 1993. Channel migration and vegetation patterns in the southeastern coastal plain. Conservation Biology 7: 176-183.

Shapovalov, L., and A.C. Taft. 1954. The life histories of the steelhead rainbow trout (*Salmo gairdneri gairdneri*) and silver salmon (*Oncorhynchus kisutch*) with special reference to Waddell Creek, California, and recommendations regarding their management. California Department of Fish and Game, Fisheries Bulletin 98, 375 pp.

Sharma, R., and R. Hilborn. 2001. Empirical relationships between watershed characteristics and coho salmon (*Oncorhynchus kisutch*) smolt abundance in 14 western Washington streams. Canadian Journal of Fisheries and Aquatic Sciences 58 (7): 1453-1463.

Sheldon, A.L., and G.K. Meffe. 1995. Path analysis of collective properties and habitat relationships of fish assemblages in coastal plain streams. Canadian Journal of Fisheries and Aquatic Sciences 52 (1): 23-33.

Sheldon, F., A.J. Boulton, and J.T. Puckridge. 2002. Conservation value of variable connectivity: aquatic invertebrate assemblages of channel and floodplain assemblages of channel and floodplain habitats of a central Australian arid-zone river, Cooper Creek. Biological Conservation 103: 13-31.

Sheldon, J.E., and M. Alber. 2002. A comparison of residence time calculations using simple compartment models of the Altamaha River estuart, Georgia. Estuaries 25 (6B): 1304-1317.

Shellberg, J.G. 2002. Hydrologic, geomorphic, and biologic influences on redd scour in bull char (Salvelinus confluentus) spawning streams. M.Sc. thesis, University of Washington. Seattle, WA. 206 pp. (http://depts.washington.edu/cwws/Theses/shellberg.html).

Shepard, M.F. 1972. Timing of adult steelhead migrations as influenced by flow and temperature in four representative Washington streams. M.Sc. thesis, University of Washington. Seattle, WA. 197 pp.

Sheppard, J.D., and J.H. Johnson. 1985. Probability-of-use for depth, velocity, and substrate by subyearling coho salmon and steelhead in Lake Ontario tributary streams. North American Journal of Fisheries Management 5 (2B): 277-282.

Sheridan, W.L. 1962. Waterflow through a salmon spawning riffle in southeastern Alaska. U.S. Fish and Wildlife Service, Special Rep. - Fish. 407. 20 pp.

Sherton, C.C. 1981. Preserving instream flows in Oregon's rivers and streams. Environmental Law 11: 379-419.

Shields, F.D., Jr., S.S. Knight, and C.M. Cooper. 1994. Effects of channel incision on base flow stream habitat and fishes. Environmental Management 18: 43-57.

Shirvell, C.S. 1986. Pitfalls of physical habitat simulation in the Instream Flow Incremental Methodology. Canadian Technical Report of Fisheries and Aquatic Sciences 1460: 68 pp.

Shirvell, C.S. 1989. Ability of PHABSIM to predict chinook salmon spawning habitat. Regulated Rivers: Research & Management 3 (1-4): 277-289.

Shirvell, C.S. 1989. Habitat models and their predictive capability to infer habitat effects on stock size. In: C.D. Levings, L.B. Holtby, and M.A. Henderson (eds.), Proceedings of the National Workshop on Effects of Habitat Alteration on Salmonid Stocks. Can. Spec. Publ. Fish. Aquat. Sci. No. 105. Pp. 173-179.

Shirvell, C.S. 1990. Role of instream rootwads as juvenile coho salmon (*Oncorhynchus kisutch*) and steelhead trout (*O. mykiss*) cover habitat under varying streamflows. Canadian Journal of Fisheries and Aquatic Sciences 47 (5): 852-861.

Shirvell, C.S. 1994. Effects of changes in streamflow on the microhabitat use and movements of sympatric juvenile coho salmon (*Oncorhynchus kisutch*) and chinook salmon (*O. tshawytscha*) in a natural stream. Canadian Journal of Fisheries and Aquatic Sciences 51 (7): 1644-1652.

Shirvell, C.S., and R.G. Dungey. 1983. Microhabitats chosen by brown trout for feeding and spawning in rivers. Transactions of the American Fisheries Society 112 (3): 355-367.

Shuler, S.W., and R.B. Nehring. 1993. Using the Physical Habitat Simulation Model to evaluate a stream habitat enhancement project. Rivers 4: 175-193.

Shuler, S.W., R.B. Nehring, and K.D. Fausch. 1994. Diel habitat selection by brown trout in the Rio Grande River, Colorado, after placement of boulder structures. North American Journal of Fisheries Management 14: 99-111.

Shumway, D.L., G.E. Warren, and P. Doudoroff. 1964. Influence of oxygen concentration and water movement on the growth of steelhead trout and coho salmon embryos. Transactions of the American Fisheries Society 93 (4): 342-356.

Shuter, B.J., and J.R. Post. 1990. Climate, population variability, and the zoogeography of temperate fishes. Transactions of the American Fisheries Society 119: 314-336.

Silk, N., J. McDonald, and R. Wigington. 2000. Turning instream flow water rights upside down. Rivers 7: 298-313.

Silver, S.J., G.E. Warren, and P. Doudoroff. 1963. Dissolved oxygen requirements of developing steelhead trout and chinook salmon embryos at different water velocities. Transactions of the American Fisheries Society 92 (4): 327-343.

Simm, D.J., D.E. Walling, P.D. Bates, and M.G. Anderson. 1997. The potential application of finite element modelling of flood plain inundation to predict patterns of overbank deposition. Hydrological Sciences 42: 859-875.

Simmons, D.L., and R.J. Reynolds. 1982. Effect of urbanization on base flow of selected south-shore streams, Long Island, New York. Water Resources Bulletin 18: 797-805.

Simons, D.B., 1979. Effects of stream regulation on channel morphology. Pp. 95-111 in J.V. Ward and J.A. Stanford, editors. The ecology of regulated streams. Plenum Press, New York.

Simonson, Timothy D., and William A. Swenson. 1990. Critical stream velocities for young-of-year smallmouth bass in relation to habitat use. Transactions of the American Fisheries Society 119 (5): 902-909.

Simonson, T.D., and R.J. Neves. 1993. Habitat suitability and reproductive traits of the orangefin madtom *Noturus gilberti* (Pisces: Ictaluridae). American Midland Naturalist 127: 115-124.

Simpkins, D.G., W.A. Hubert, and T.A. Wesche. 2000. Effects of fall-to-winter changes in habitat and frazil ice on the movements and habitat use of juvenile rainbow trout in a Wyoming tailwater. Transactions of the American Fisheries Society 129 (1): 101-118.

Sinha, M., M.K. Mukhopadhyay, P.M. Mitra, M.M. Bagchi, and H.C. Karamkar. 1996. Impact of the Farakka barrage on the hydrology and fishery of the Hooghly Estuary. Estuaries 19 (3): 710-722.

Sklar, F.H. and J.A. Browder. 1998. Coastal environmental impacts brought about by alterations to freshwater flow in the Gulf of Mexico. Environmental Management 22: 547-562.

Skreslet, S. (ed.) 1986. The role of freshwater outflow in coastal marine ecosystems. NATO ASI Series, G edition. Springer, Berlin.

Skreslet, S. 1986. Freshwater outflow in relation to space and time dimensions of complex ecological interactions in coastal waters, p. 3-12. In: S. Skreslet (ed.). The role of freshwater outflow in coastal marine ecosystems. Springer-Verlag, Berlin, Germany.

Slinger, J.H., S Taljaard, and J.L. Largier. 1994. Changes in estuarine water quality in response to a freshwater flow event, p. 551-56. In: K.R. Dyer and R.J Orth (eds.), Changes in fluxes in Estuaries: Implications from Science to Management. Olsen and Olsen, Fredensborg, Denmark.

Smetacek, V.S. 1986. Impact of freshwater discharge on production and transfer of materials in the marine environment. Pages 85-106 *in*: S. Skeslet (ed.). The role of freshwater outflow in coastal marine ecosystems. Springer, Berlin.

Smith, A.K. 1973. Development and application of spawning velocity and depth criteria for Oregon salmonids. Transactions of the American Fisheries Society 102 (2): 312-316.

Smith, B.D. 2000. Trends in wild adult steelhead (*Oncorhynchus mykiss*) abundance for snowmelt-driven watersheds of British Columbia in relation to freshwater discharge. Canadian Journal of Fisheries and Aquatic Sciences 57 (2): 285-297.

Smith, F.E. 1976. Water development impact on fish resources and associated values on the Trinity River, California. Pp. 98-111 in: J.F. Orsborn and C.H. Allman (eds) Instream Flow Needs, vol. ii, Bethesda, Maryland: American Fisheries Society.

Smith, G.L. (Ed.) 1979. Proceedings, workshop in instream flow habitat criteria and modeling. Colorado Water Resour. Res. Inst. Inform. Ser. 40.

Smith, I.M., and M.J. Sale. 1993. Standardizing instream flow requirements at hydropower projects in the Cascades Mountains, Washington. Pp. 286-295 in W.D. Hall, ed. Waterpower '93, proceedings of the international conference on hydropower. American Society of Civil Engineers, New York.

Smith, J.J., and H.W. Li. 1984. Energetic factors influencing foraging tactics of juvenile steelhead trout, *Salmo gairdneri*. Pp. 173-180 in: D.L.G. Noakes et al. (Eds) Predators and prey in fishes. The Hague: Junk Publishers.

Smith, S.D., J.L. Nachlinger, A.B. Wellington, and Fox. 1989. Water relations of obligate riparian plants as a function of streamflow diversion on the Bishop Creek watershed. Pp. 360-

365 in: D.L. Abell (ed) California riparian systems conference: Protection, management and restoration for the 1990s. U.S. Forest Service General Technical Report PSW-110.

Smith, S.D., R.B. Wellington, J. Nachlinger, and Fox. 1991. Functional responses of riparian vegetation to streamflow diversion in the eastern Sierra Nevada. Ecological Applications 1 (1): 89-97.

Smith, S.G., W.D. Muir, E.E. Hockersmith, R.W. Zabel, R.J. Graves, C.V. Ross, W.P. Connor, and B.D. Arnesberg. 2003. Influence of river conditions on survival and travel time of Snake River subyearling fall Chinook salmon. North American Journal of Fisheries Management 23 (3): 939-961.

Smith, S.G., W.D. Muir, J.G. Williams, and J.R. Skalski. 2002. Factors associated with travel time and survival of migrant yearling chinook salmon and steelhead in the lower Snake River. North American Journal of Fisheries Management 22 (2): 385-405.

Smock, L.A., J.E. Gladden, J.L. Riekenberg, L.C. Smith, and C.R. Black. 1992. Lotic macroinvertebrate production in three dimensions: channel surface, hyporheic, and floodplain environments. Ecology 73: 876-886.

Smoker, W.A. 1953. Stream flow and silver salmon production in western Washington. Washington Department of Fisheries, Fisheries Research Papers 1 (1): 5-12.

Smoker, W.A. 1955. Effects of streamflow on silver salmon production in western Washington. Doctoral dissertation. University of Washington, Department of Fisheries, Seattle.

Smoker, W.A. 1956. Preliminary report on Minter Creek streamflows on the juvenile production of silver salmon, chum salmon and steelhead trout. Unpublished report, Washington Department of Fisheries, Olympia.

Smolders, A.J.P., M.A. Guerrero Hiza, G. van der Velde, and J.G.M. Roelofs. 2002. Dynamics of discharge, sediment transport, heavy metal pollution and sabalo (*Prochilodus lineatus*) catches in the lower Pilcomato River (Bolivia). River Research and Applications 18 (5): 415-428.

Snedaker, S., D. De Sylva, and D. Cottrell. 1977. A review of the role of freshwater in estuarine ecosystems. Final report, Southwest Florida Water Management District, Brooksville, Florida.

Snedden, G.A., W.E. Kelso, and D.A. Rutherford. 1999. Diel and seasonal patterns of spotted gar movement and habitat use in the lower Atchafalaya River basin, Louisiana. Transactions of the American Fisheries Society 128: 144-154.

Sokal, R.R., and F.J. Rohlf. 1981. Biometry. Second edition. W.H. Freeman and Company, San Francisco.

Solazzi, M.F., T.E. Nickelson, S.L. Johnson, and J.D. Rodgers. 2000. Effects of increasing winter rearing habitat on abundance of salmonids in two coastal Oregon streams. Canadian Journal of Fisheries and Aquatic Sciences 57 (5): 906-914.

Soloman, D.J., and D. Paterson. 1980. Influence of natural and regulated streamflow on survival of brown trout (*Salmo trutta* L.) in a chalkstream. Environmental Biology of Fishes 5: 379-382.

Sommer, T., B. Harrell, M. Nobriga, R. Brown, P. Moyle, W. Kimmerer, and L. Schemel. 2001. California's Yollo Bypass: evidence that flood control can be compatible with fisheries, wetlands, wildlife, and agriculture. Fisheries 26: 6-16.

Sommer, T.R., M.L. Nobrigua, W.C. Harrell, W. Batham, and W.J. Kimmerer. 2001. Floodplain rearing of juvenile chinook salmon: evidence of enhanced growth and survival. CJFAS or Ecology?

Souchon, Y. F. Trocherie, E. Fragnoud, and C. Lacombe. 1989. Les modeles numerique des microhabitats des poissons: applications et nouveaux developpements. Rev. Sci. Eau 2: 807-830.

Southall, P.D., and W.A. Hubert. 1984. Habitat use by adult paddlefish in the upper Mississippi River. Transactions of the American Fisheries Society 113: 125-131.

Sowa, S.P., and C.F. Rabeni. 1995. Regional evaluation of the relation of habitat to distribution and abundance of smallmouth bass and largemouth in Missouri streams. Transactions of the American Fisheries Society 124: 240-251.

Sowden, T.K., and G. Power. 1985. Prediction of rainbow trout embryo survival in relation to groundwater seepage and particle size of spawning substrates. Transactions of the American Fisheries Society 114: 804-812.

Spalding, S., N.P. Peterson, and T.P. Quinn. 1995. Summer distribution, survival, and growth of juvenile coho salmon under varying experimental conditions of brushy instream cover. Transactions of the American Fisheries Society 124 (1): 124-130.

Sparks, R.E. 1992. Risks of altering the hydrologic regime of large rivers. Pp. 119-152 in: J. Cairns, Jr., B.R. Niederlehner, and D.R. Orvos, editors. Predicting ecosystem risk: advances in modern environmental toxicology, volume 20. Princeton Scientific Publishing, Princeton, New Jersey.

Sparks, R.E. 1995. Need for ecosystem management of large rivers and their floodplains. BioScience 45: 168-182.

Sparks, R.E., J.C. Nelson, and Y. Yin. 1998. Naturalisation of the flood regime in regulated rivers. BioScience 48: 706-720.

Sparks, R.E., and A. Spink. 1998. Disturbance, succession and ecosystem processes in rivers and estuaries: effects of extreme hydrologic events. Regulated Rivers: Research and Management 14: 155-159.

Speas, D.W. 2000. Zooplankton density and community composition following an experimental flood in the Colorado River, Grand Canyon, Arizona. Regulated Rivers: Research and Management 16: 73-81.

Speed, T. 1993. Modeling and managing a salmon population. Pp. 267-292 in: V. Barnett and K.F. Turkman, eds. Statistics for the environment. Wiley, New York.

Spina, A.P. 2001. Incubation discharge and aspects of brown trout population dynamics. Transactions of the American Fisheries Society 130: 322-327.

Stalnaker, C.B. 1980. The use of habitat structure preferenda for establishing flow regimes necessary for the maintenance of fish habitat. Pp. 321-337 in: J.V. Ward and J.A. Stanford (eds.) The ecology of regulated streams. Plenum Publishing Corporation, New York.

Stalnaker, C.B. 1981. Low flow as a limiting factor in warmwater streams. Pp. 192-199 in: L. Krumholz (ed.) Warmwater Streams Symposium. Bethesda, Maryland: American Fisheries Society.

Stalnaker, C.B. 1982. Instream flow assessment comes of age in the decade of the 1970s. Pp. 119-142 in: W.T. Mason, Jr., and S. Iker (ed.) Research on fish and wildlife habitat. EPA-600/8-82-022.

Stalnaker, C.B. 1990. Minimum flow is a myth, p. 31-33. In: M.B. Bain (ed.). Ecology and Assessment of Warm Water Streams: Workshop Synopsis. U.S. Fish and Wildlife Service, Washington, D.C.

Stalnaker, C.B. 1993. Fish habitat models in environmental assessments. Pp. 104-162 in: S.G. Hildebrand and J.B. Cannon (eds.) Environmental Analysis: The NEPA Experience. CRC Press, Boca Raton, Florida.

Stalnaker, C.B. 1994. Evolution of instream flow habitat modeling. Chapter 14. P. Calow and G.E. Petts (eds.) The Rivers Handbook, Hydrological and Ecological Principles. Vol. II. Blackwell Scientific ...

Stalnaker, C.B., and J.L. Arnette. 1976. Methodologies for determination of stream resource flow requirements: an assessment. U.S. Fish and Wildlife Service, Office of Biological Services, Washington, D.C.

Stalnaker, C.B., K.D. Bovee, and T.J. Waddle. 1996. Importance of the temporal aspects of habitat hydraulics to fish population studies. Regulated Rivers: Research and Management 12: 145-153.

Stalnaker, C.B., B.L. Lamb, J. Henriksen, K. Bovee, and J. Bartholow. 1995. The instream flow incremental methodology: a primer for IFIM. National Biological Service Biological Report 29. 45 pp.

Stalnaker, C.B., R.T. Milhous, and K.D. Bovee. 1989. Hydrology and hydraulics applied to fishery management in large rivers, pp. 13-30 in: D.P. Dodge (ed.), Proceedings of the International Large Rivers Symposium. Canadian Sp. Publ. Fish. Aquatic. Sci. 106.

Stalnaker, C.B., and E.J. Wick. 2000. Planning for flow requirements to sustain stream biota. Chapter 16 *in*: E.E. Wohl, ed. Inland Flood Hazards: Human, Riparian, and Aquatic Communities. Cambridge University Press, London.

Stancil, V.F. 2000. Effects of watershed and habitat conditions on stream fishes of the upper Roanoke River watershed, Virginia. M.S. thesis, Virginia Poytechnic Institute and State University, Blacksburg, Virginia.

Stanford, J.A. 1994. Instream flows to assist the recovery of endangered fishes of the upper Colorado River basin. National Biological Survey Biological Report 24. 47 pp.

Stanford, J.A., and J.V. Ward. 1993. An ecosystem perspective of alluvial rivers: connectivity and the hyporheic corridor. J. North Am. Benthol. Soc. 12: 48-62.

Stanford, J.A., J.V. Ward, W.J. Liss, C.A. Frissell, R.N. Williams, J.A. Lichatowich, and C.C. Coutant. 1996. A general protocol for restoration of regulated rivers. Regulated Rivers 12: 391-414.

Stanley, E.H., D.L. Buschman, A.J. Boulton, N.B. Grimm, and S.G. Fisher. 1994. Invertebrate resistance and resilience to intermittency in a desert stream. American Midland Naturalist 131: 288-300.

Stanley, E.H., S.G. Fisher, and N.B. Grimm. 1997. Ecosystem expansion and contraction in streams. BioScience 47: 427-435.

Stanley, J.G., and J.G. Trial. 1995. Habitat suitability index models: nonmigatory freshwater life history stages of Atlantic salmon. U.S. DOI, Biol. Sci. Rep. 3.

Starrett, W.C. 1951. Some factors affecting the abundance of minnows in the Des Moines River, Iowa. Ecology 32: 13-27.

Statzner, B., J.A. Gore, and V.H. Resh. 1988. Hydraulic stream ecology: observed patterns and potential applications. Journal of the North American Benthological Society 17: 324-337.

Statzner, B., and B. Higler. 1986. Stream hydraulics as a major determinant of benthic invertebrate zonation patterns. Freshwater Biology 16: 127-139.

Stearly, R.F., and G.R. Smith. 1993. Phylogeny of the Pacific trouts and salmons (*Oncorhynchus*) and genera of the family Salmonidae. Transactions of the American Fisheries Society 122 (1): 1-33.

Stednick, J.D. 1996. Monitoring the effect of timber harvest on annual water yield. J. Hydrol. 176: 79-95.

Stefferud, J.A. 1993. Spawning season and microhabitat use by California golden trout (*Oncorhynchus mykiss aquabonita*) in the southern Sierra Nevada. California Fish and Game 79: 133-144.

Steingrimsson, S.O., and J.W.A. Grant. 1999. Allometry of territory-size and metabolic rate as predictors of self-thinning in young-of-the-year Atlantic salmon. Journal of Animal Ecology 68: 17-26.

Stevens, D.E. 1977. Striped bass (*Morone saxatilis*) year class strength in relation to river flow in the Sacramento-San Joaquin estuary, California. Transactions of the American Fisheries Society 106 (1): 34-42.

Stevens, D.E. and L.W. Miller. 1983. Effects of river flow on abundance of young chinook salmon, American shad, longfin smelt, and delta smelt in the Sacramento-San Joaquin River system. North American Journal of Fisheries Management 3: 425-437.

Stevens, L.E., J.C. Schmidt, T.J. Ayers, and B.T. Brown. 1995. Flow regulation, geomorphology, and Colorado River marsh development in the Grand Canyon, Arizona. Ecological Applications 5: 1025-1039.

Stevenson, R.J. 1990. Benthic algal community and dynamics in a stream during and after a spate. Journal of the North American Benthological Society 9:277-288.

Stevenson, R.J. 1996. The stimulation and drag of current. Pages 321-341 in: R.J. Stevenson, M.L. Bothwell, and R.L. Lowe, editors. Algal ecology: freshwater benthic ecosystems. Academic Press, New York, New York, USA.

Stier, D.J., and J.H. Crance. 1985. Habitat suitability index models and instream flow suitability curves: American shad. U.S. Fish and Wildlife Service Biological Report 82 (10.88).

Stine, S., D. Gaines, and P. Vorster. 1984. Destruction of riparian systems due to water development in the Mono Lake watershed. Pp. 528-533 in: R.E. Warner and K.L. Hendrix (eds.) California riparian systems: Ecology, conservation, and productive management. Berkeley: University of California Press.

Stober, Q.J. 1984. Interpretation of IFIM results. Unpublished paper presented at Pacific Fishery Biologists, 46th annual conference, Ocean Shores, WA, March 19-21.

Stockton, C.W., and G.C. Jacoby. 1976. Long-term surface-water supply and streamflow trends in the Upper Colorado River Basin based on tree ring analyses. Bulletin 18. Lake Powell Research Project, University of California, Los Angeles.

Stolbov, A.Y., and Y.S. Alikin. 1978. Temperature dependence of active metabolism and swimming speed of the Baikal grayling, *Thymallus arcticus baicalensis*. Journal of Ichthyology 17: 178-179.

Stromberg, J.C. 1993. Instream flow models for mixed deciduous riparian vegetation within a semiarid region. Regulated Rivers: Research & Management 8: 225-235.

Stromberg, J.C. 1997. Growth and survivorship of Fremont cottonwood, Goodding willow, and salt cedar after large floods in central Arizona. Great Basin Naturalist 57: 198-208.

Stromberg, J.C., J. Fry, and D.T. Patten. 1997. Marsh development after large floods in an alluvial, arid-land river. Wetlands 17: 292-300.

Stromberg, J.C., and D.T. Patten. 1989. Early recovery of an eastern Sierra Nevada riparian system after forty years of stream diversion. Pp. 399-404 in: D.L. Abell (ed.) California riparian systems conference: Protection, management and restoration for the 1990s. U.S. Forest Service General Technical Report PSW-110.

Stromberg, J.C., and D.T. Patten. 1990. Riparian vegetation instream flow requirements: A case study from a diverted stream in the eastern Sierra Nevada, California. Environmental Management 14 (2): 185-194.

Stromberg, Julie, and Duncan T. Patten. 1991. Instream flow requirements for cottonwoods at Bishop Creek, Inyo County, California. Rivers 2 (1): 1-11.

Stromberg, J.C., and D.T. Patten. 1992. Mortality and age of black cottonwood stands along diverted and undiverted streams in the eastern Sierra Nevada, California. Madrono 39: 205-223.

Stromberg, J.C., D.T. Patten, and B.D. Richter. 1991. Flood flows and dynamics of Sonoran riparian forests. Rivers 2 (3): 221-235.

Stromberg, J.C., B.D. Richter, D.T. Patten, and L.G. Wolden. 1993. Response of a Sonoran riparian forest to a 10-year return flood. Great Basin Naturalist 53: 118-130.

Stromberg, J.C., J.A. Tress, S.D. Wilkins, and Clark. 19??. Response of velvet mesquite to groundwater decline. Journal of Arid Environments

Stoneman, C.L., and M.L. Jones. 2000. The influence of habitat features on the biomass and distribution of three species of southern Ontario salmonines. Transactions of the American Fisheries Society 129 (3): 639-657.

Studley, T.K., S.F. Railsback, and J.E. Baldrige. 1996. Predicting fish population response to instream flows. Hydro Review 15 (6): 48-57.

Studley, T.K., and 10 coauthors. 1995. Response of fish populations to altered flows project, volumes I-III, predicting trout populations from streamflow and habitat variables. Pacific Gas and Electric Company, Report 009.4-94.3, San Ramon, California.

Sullivan, A.M. 2000. Habitat suitability index modeling for fisheries management using a geographic information system: an analysis of environmental factors and essential fish habitat. Master's thesis, Florida Institute of Technology, Melbourne.

Sullivan, K. 1986. Hydraulics and fish habitat in relation to channel morphology. Doctoral dissertation, John Hopkins University, Baltimore, Maryland.

Sutcliffe, W.H., Jr. 1973. Correlations between seasonal river discharge and local landings of American lobster (*Homarus americanus*) and Atlantic halibut (*Hippoglossus hippoglossus*) in the Gulf of St. Lawrence. Journal of the Fisheries Research Board of Canada 30 (6): 856-859.

Swales, S., F. Caron, J.R. Irvine, and C.D. Levings. 1988. Overwintering habitats of coho salmon (*Oncorhynchus kisutch*) and other juvenile salmonids in the Keogh River system, British Columbia. Canadian Journal of Zoology 66: 254-261.

Swales, S., R.B. Lauzier, and C.D. Levings. 1986. Winter habitat preferences of juvenile salmonids in two interior rivers in British Columbia. Canadian Journal of Zoology 64: 1506-1514.

Swan, G.A. 1989. Chinook salmon spawning surveys in deep waters of a large, regulated river. Regulated Rivers: Research and Management 4: 355-370.

Swanberg, T. 1997. Movements and habitat use by fluvial bull trout in the Blackfoot River, Montana. Transactions of the American Fisheries Society 126: 735-746.

Swift, C.H., III. 1976. Estimation of stream discharges preferred by steelhead trout for spawning and rearing in western Washington. U.S. Geological Survey Open-File Report 75-155, Tacoma.

Symons, P.E.K. 1976. Behavior and growth of juvenile Atlantic salmon (*Salmo salar*) and three competitors at two stream velocities. Journal of the Fisheries Research Board of Canada 33: 2766-2773.

Symons, P.E.K., and M. Heland. 1978. Stream habitats and behavioral interactions of underyearling and yearling Atlantic salmon (*Salmo salar*). Journal of the Fisheries Research Board of Canada 35: 175-183.

Talbot, M.M., W.T. Knoop, and G.C. Bate. 1990. The dynamics of estuarine macrophytes in relation to flood/siltation cycles. Botanica Marina 33: 159-164.

Talmage, P.J., J.A. Perry, and R.M. Goldstein. 2002. Relation of instream habitat and physical conditions to fish communities of agricultural streams in the northern midwest. North American Journal of Fisheries Management 22 (3): 825-833.

Tan, L.W., and R.J. Shiel. 1993. Responses of billabong rotifer communities to inundation. Hydrobiologia 255/256: 361-369.

Tarbet, K., and T.B. Hardy. 1996. Evaluation of one-dimensional and two-dimensional hydraulic modeling in a natural river and implications in instream flow assessment methods. In: Proceedings of the 2nd International Symposium on Habitat Hydraulics. June 1996, Quebec, Canada. B395-B406.

.

Tautz , A.F., and C. Groot. 1975. Spawning behavior of chum salmon (*Oncorhynchus keta*) and rainbow trout (*Salmo gairdneri*). Journal of the Fisheries Research Board of Canada 32: 633-642.

Taylor, B.E., and D.L. Mahoney. 1990. Zooplankton in Rainbow Bay, a Carolina Bay pond: population dynamics in a temporary habitat. Freshwater Biology 24: 597-612.

Taylor, C.M. 1997. Fish species richness and incidence patterns in isolated and connected stream pools: effects of pool volume and spatial position. Oecologia 110: 560-566.

Taylor, E.B. 1988. Water temperature and velocity as determinants of microhabitats of juvenile chinook and coho salmon in a laboratory stream. Transactions of the American Fisheries Society 117: 22-28.

Taylor, E.B. 1991. Behavioural interaction and habitat use in juvenile chinook, *Oncorhynchus tshawytscha*, and coho, *O. kisutch*, salmon. Anim. Behav. 42: 729-744.

Tennant, D.L. 1976. Instream flow regimes for fish, wildlife, recreation and related environmental resources. Fisheries 1 (4): 6-10.

Tennant, D.L. 1976. Instream flow regimes for fish, wildlife, recreation and related environmental resources. Pp. 359-373 in: N.B. Armantrout, editor. Acquisition and utilization of aquatic habitat inventory information. Proceedings of a symposium, Portland, Oregon. American Fisheries Society, Western Division, Bethesda.

Terrell, J.W. (Editor). 1984. Proceedings of a workshop on fish habitat suitability index models. Washington, D.C.: U.S. Fish and Wildlife Service (Biological Report 85[6])

Tessman, S.A. 1980. Environmental Assessment, Technical Appendix E, in Environmental Use sector Reconnaissance Elements of the Western Dakotas Region of South Dakota study. Water Resources Research Institute, South Dakota State University, Brookings, South Dakota.

Tharme, R.E. 1996. Review of international methodologies for the quantification of the instream flow requirements of rivers. Department of Water Affairs and Forestry, Pretoria, South Africa.

Tharme, R.E. 1997. Sabie-Sand River system: Instream flow requirements. Department of Water Affairs and Forestry, Pretoria, South Africa.

Tharme, R.E. In press. A global perspective on environmental flow assessment: emerging trends in the development and application of environmental flow methodologies for rivers. Rivers Research and Application.

Tharme, R.E., and J.M. King. 1998. Development of building block methodology for instream flow assessments and supporting research on the effects of different magnitude flows on riverine ecosystems. Water Research Commission, Cape Town, South Africa.

Thielke, J. 1985. A logistic regression approach for developing suitability-of-use functions for fish habitat. Pp. 32-38 in: F.W. Olson, R.G. White, and R.H. Hamre (editors), Proceedings of the Symposium on Small Hydropower and Fisheries. American Fisheries Society, Aurora, Colorado.

Thomas, A.E. 1975. Migration of chinook salmon fry from simulated incubation channels in relation to water temperature, flow, and turbidity. Progressive Fish-Culturist 37 (4): 219-223.

Thomas, D.L., and E.J. Taylor. 1990. Study designs and tests for comparing resource use and availability. Journal of Wildlife Management 54: 322-330.

Thomas, J.A., and K.D. Bovee. 1993. Application and testing of a procedure to evaluate transferability of habitat suitability criteria. Regulated Rivers: Research & Management 8: 285-294.

Thomas, R.B., and W.F. Megahan. 1998. Peak flow responses to clear-cutting and roads in small and large basins, western Cascades, Oregon: a second opinion. Water Resour. Res. 34: 3393-3403.

Thompson, K.E. 1972. Determining instream flows for fish life. Pp. 31-50 in: Proceedings of the instream flow requirement workshop. Pacific Northwest River Basins Commission, Portland, Oregon.

Thoms, M.C., and F. Sheldon. 2000. Water resource development and hydrological change in a large dryland river: the Barwon-Darling River, Australia. Journal of Hydrology 228: 10-21.

Thorne, R.E., and J.J. Ames. 1987. A note on the variability of marine survival of sockeye salmon (*Oncorhynchus nerka*) and effects of flooding on spawning success. Canadian Journal of Fisheries and Aquatic Sciences 44: 1791-1795.

Thurow, R.F. 1997. Habitat utilization and diel behaviour of juvenile bull trout (*Salvelinus confluentus*) at the onset of winter. Ecology of Freshwater Fish 6: 1-7.

Thurow, R.F., and J.G. King. 1994. Attributes of Yellowstone cutthroat trout redds in a tributary of the Snake River, Idaho. Transactions of the American Fisheries Society 123 (1): 37-50.

Tiffan, K. F., R.D. Garland, and D.W. Rondorf. 2002. Quantifying flow-dependent changes in subyearling fall chinook salmon rearing habitat using two-dimensional spatially explicit modeling. North American Journal of Fisheries Management 22 (3): 713-726.

Tockner, K., F. Malard, and J.V. Ward. 2000. An extension of the flood pulse concept. Hydrol. Process. 14: 2861-2883.

Tockner, K., F. Scheimer, C. Baumgartner, G. Kum, E. Weigand, I. Zweimuller, and J.V. Ward. 1999. The Danube restoration project: species diversity patterns across connectivity gradients in the floodplain system. Regulated Rivers: Research and Management 15: 245-258.

Todd, B.L., and C.F. Rabeni. 1989. Movement and habitat use by stream-dwelling smallmouth bass. Transactions of the American Fisheries Society 118 (3): 229-242.

Tomasko, D.A. and M.O. Hall. 1999. Productivity and biomass of the seagrass *Thalassia testudineum* along a gradient of freshwater influence in Charlotte Harbor, Florida. Estuaries 22: 592-602.

Torgerson, C.E., D.M. Price, H.W. Li, and B.A. McIntosh. 1999. Multiscale thermal refugia and stream habitat associations of chinook salmon in northeastern Oregon. Ecological Applications 9: 327-345.

Toth, L.A. 1995. Principles and guidelines for restoration of river/floodplain ecosystem - Kissimmee River, Florida. Pp. 49-73 *in*: J. Cairns, ed. Rehabilitating Damaged Ecosystems. Lewis Publications, CRC Press, Cherry Hill, NJ.

Toth, L.A., S.L. Melvin, D.A. Arrington, and J. Chamberlain. 1998. Hydrological manipulation of the channelized Kissimmee River: implications for restoration. BioScience 48: 757-764.

Townsend, C.R., and A.G. Hildrew. 1994. Species traits in relation to a habitat templet for river systems. Freshwater Biology 31: 265-276.

Travnichek, V.H., M.B. Bain, and M.J. Maceina. 1995. Recovery of a warmwater fish assemblage after the initiation of a minimum-flow release downstream from a hydroelectric dam. Transactions of the American Fisheries Society 124 (6): 836-844.

Travnichek, V.H., and M.J. Maceina. 1994. Comparison of flow regulation effects on fish assemblages in shallow and deep water habitats in the Tallapoosa River, Alabama. Journal of Freshwater Ecology 9: 207-216.

Trihey, E.W. 1981. Using time series stream flow data to determine project effects on physical habitat for spawning pink salmon. Pp. 232-240 in: N.B. Armantrout, editor. Acquisition and utilization of aquatic habitat inventory information. Proceedings of a symposium, Portland, Oregon. American Fisheries Society, Western Division, Bethesda.

Trihey, E.W., and D.L. Wegner. 1983. Field data collection procedures for use with the Physical Habitat Simulation system of the Instream Flow Group. U.S. Fish and Wildlife Service, Cooperative Instream Flow Service Group, Fort Collins, Colorado.

Trimble, S.W., F.H. Weirich, and B.L. Hoag. 1987. Reforestation and the reduction of water yield on the Southern Piedmont since circa 1940. Water Resour. Res. 23: 425-437.

Tripp, D.B., and V.A. Poulin. 1985. Gravel scour as a factor limiting chum and coho spawning success. In: Proceedings of the 1985 northeast Pacific pink and chum salmon workshop. Department of Fisheries and Oceans. Pages 27-37.

Troendle, C.A., and G.S. Bevenger. 1996. Effects of fire on streamflow and sediment transport Shoshone National Forest, Wyoming. Pp. 43-52 in: J. Greenlee (ed.), Proceedings of the second biennial conference on the Greater Yellowstone Ecosystem: the ecological implications of fire in Greater Yellowstone. International Association of Wildland Fire, Fairfield, Washington.

Trotzky, H.M., and R.W. Gregory. 1974. The effects of water flow manipulation below a hydroelectric power dam on the bottom fauna of the upper Kennebec River, ... Transactions of the American Fisheries Society 103 (2): 318-324.

Trush, W.J., S.F. McBain, and L.B. Leopold. 2000. Attributes of an alluvial river and their relation to water policy and management. Proceedings of the National Academy of Sciences 97 (22): 11858-11863.

Tschaplinski, P.J., and G.F. Hartman. 1983. Winter distribution of juvenile coho salmon (*Oncorhynchus kisutch*) before and after logging in Carnation Creek, British Columbia, and some implications for overwintering survival. Canadian Journal of Fisheries and Aquatic Sciences 40: 452-461.

Tsou, T.-S., and R.E. Matheson, Jr. 2002. Seasonal changes in the nekton community of the Suwannee River estuary and the potential impactts of freshwater withdrawal. Estuaries 25 (6B): 1372-1381.

Tung, Y.-K., Y. Bao, L.W. Mays, and G.H. Ward. 1990. Optimization of freshwater inflow to estuaries. Journal of Water Resources Planning and Management 116: 567-584.

Turner, J.L., and H.K. Chadwick. 1972. Distribution and abundance of young-of-the-year striped bass, *Morone saxatilis*, in relation to river flow in the Sacramento-San Joaquin estuary. Transactions of the American Fisheries Society 101: 442-452.

Tyler, J.A. 1993. Effects of water velocity, group size, and prey availability on the stream-drift capture efficiency of blacknose dace, *Rhinichthys*.... Canadian Journal of Fisheries and Aquatic Sciences 50 (5): 1055-1061.

Tyler, J.A., and J.F. Gilliam. 1995. Ideal free distributions of stream fish: a model and test with minnows, *Rhinichthys atratulus*. Ecology 76 (2): 580-592.

Tyus, H.M. 1990. Effects of altered stream flows on fishery resources. Fisheries 15 (3): 18-20.

Tyus, H.M. 1992. An instream flow philosophy for recovering endangered Colorado River fishes. Rivers 3 (1): 27-36.

Tyus, H.M., and G.B. Haines. 1991. Distribution, habitat use, and growth of age-0 Colorado squawfish in the Green River Basin, Colorado and Utah. Transactions of the American Fisheries Society 120 (1): 79-89.

Tyus, H.M., and C.A. Karp. 1989. Habitat use and streamflow needs of rare and endangered fishes, Yampa River, Colorado. Washington, D.C.: USFWS (Biological Report 89 [14]).
Tyus, H.M., and C.W. McAda. 1984. Migration, movements, and habitat preferences of Colorado squawfish, Ptychocheilus lucius, in the Green, White, and Yampa rivers, Colorado and Utah. Southwestern Naturalist 29: 289-299.

Unwin, M.J. 1997. Survival of chinook salmon, *Oncorhynchus tshawytscha*, from a spawning tributary of the Rakaia River, New Zealand, in relation to spring and summer mainstem flows. U.S. National Marine Fisheries Service Fishery Bulletin 95: 812-825.

U.S. Environmental Protection Agency. 2000. Ensuring adequate instream flows in New England. USEPA, New England Office, Boston.

Vadas, R.L., Jr. 1992. Seasonal habitat use, species associations, and assemblage structure of forage fishes in Goose Creek, northern Virginia. II. Mesohabitat patterns. Journal of Freshwater Ecology 7: 149-164.

Vadas, R.L., Jr. 1994. Habitat tools for assessing instream-flow needs for fishes in the upper Roanoke River, Virginia. Doctoral dissertation. Virginia Polytechnic Institute and State University, Blacksburg.

Vadas, R.L., Jr. 2000. Instream-flow needs for anadromous salmonids and lamprey on the Pacific coast, with special reference to the Pacific Southwest. Environmental Monitoring and Assessment 64: 331-358.

Vadas, R.L., Jr., and D.J. Orth. 1993. A new technique for estimating the abundance and habitat use of stream fishes. Journal of Freshwater Ecology 8: 305-317.

Vadas, R.L., Jr., and D.J. Orth. 1997. Species associations and habitat use of stream fishes: the effects of unaggregated-data analysis. Journal of Freshwater Ecology 12: 27-37.

Vadas, R.L., Jr., and D.J. Orth. 1998. Use of physical variables to discriminate visually determined mesohabitat types in North American streams. Rivers 6 (3): 143-159.

Vadas, R.L., Jr., and D.J. Orth. 2000. Habitat use of fish communities in a Virginia stream system. Environmental Biology of Fishes 59: 253-269.

Vadas, R.L., Jr., and D.J. Orth. 2001. Formulation of habitat-suitability models for stream-fish guilds: Do the standard methods work? Transactions of the American Fisheries Society 130 (2): 217-235.

Vadas, R.L., Jr., and D.L. Weigmann. 1993. The concept of instream flow and its relevance to drought management in the James River basin. Virginia Water Resources Research Center, Bulletin 182. Virginia Polytechnic Institute and State University, Blacksburg.

Valdez, R.A., P.B. Holden, and T.B. Hardy. 1990. Habitat suitability index curves for humpback chub of the upper Colorado River basin. Rivers 1 (1): 31-42.

Valdimarsson, S.K., and N.B. Metcalfe. 1998. Shelter selection in juvenile Atlantic salmon, or why do salmon seek shelter in winter? Journal of Fish Biology 52: 42-49.

Valdimarsson, S.K., N.B. Metcalfe, J.E. Thorpe, and F.A. Huntingford. 1997. Seasonal changes in sheltering: effect of light and temperature on diel activity in juvenile salmon. Animal Behavior 54: 1405-1412.

Valentin, S., P. Sempeski, Y. Souchon, and P. Gaudin. 1994. Short-term habitat use by young grayling (*Thymallus thymallus*) under variable flow conditions in an experimental stream. Fisheries Research and Management 1: 57-65.

Van den Avyle, M.J., and M.A. Maynard. 1994. Effects of saltwater intrusion and flow diversion on reproductive success of striped bass in the Savannah River estuary. Transactions of the American Fisheries Society 123 (6): 886-903.

Van den Berghe, E.P., and M.R. Gross. 1989. Natural selection resulting from female breeding competition in a Pacific salmon (coho: *Oncorhynchus kisutch*). Evolution 43 (1): 125-140.

Van Horne, B. 1983. Density as a misleading indicator of habitat quality. Journal of Wildlife Management 47: 893-901.

Van Kirk, R.W., and R. Martin. 2000. Interaction among aquatic vegetation, waterfowl, flows, and the fishery below Island Park Dam. Intermountain Journal of Science 6: 249-262.

Van Winkle, W., C.C. Coutant, H.I. Jager, J.S. Mattice, D.J. Orth, R.G. Otto, S.F. Railsback, and M.J. Sale. 1997. Uncertainty and instream flow standards: Perspectives based on hydropower research and assessment. Fisheries 22 (7): 21-22.

Van Winkle, W., H.I. Jager, S.F. Railsback, B.D. Holcomb, T.K. Studley, and J.E. Baldrige. 1998. Individual-based model of sympatric populations of brown and rainbow trout for instream flow assessment: model description and calibration. Ecological Modelling 110: 175-207.

Vannote, R.L., G.W. Minshall, K.W. Cummins, J.R. Sedell, and C.E. Cushing. 1980. The river continuum concept. Canadian Journal of Fisheries and Aquatic Sciences 37: 130-137.

Vaux, W.G. 1968. The flow and interchange of water in a stream bed. U.S. Fish and Wildlife Service Fishery Bulletin 66: 479-489.

Vehanen, T., P.L. Bjerke, J. Heggenes, A. Huusko, and A. Maki-Petays. 2000. Effect of fluctuating flows and temperature on cover type selection by juvenile brown trout in artificial flumes. Journal of Fish Biology 56: 923-937.

Verry, E.S., J.R. Lewis, and K.N. Brooks. 1983. Aspen clear-cutting increases snowmelt and storm peak flows in north central Minnesota. Water Resour. Bull. 19: 59-67.

Vinson, M.R., D.K. Vinson, and T.R. Angradi. 1992. Aquatic macrophytes and instream flow characteristics of a Rocky Mountain river. Rivers 3 (4): 260-265.

Viroux, L. 1997. Zooplankton development in two large lowland rivers, the Moselle (France) and the Meuse (Belgium), in 1993. Journal of Plankton Research 19: 1743-1762.

Vogel, S. 1981. Life in moving fluids: the physical biology of flow. Willard Grant Press, Boston, Mass.

Vondracek, B., and D.R. Longanecker. 1993. Habitat selection by rainbow trout *Oncorhynchus mykiss* in a California stream: implications for the Instream Flow Incremental Methodology. Ecology of Freshwater Fish 2: 173-186.

Voos, K.A. 1981. Simulated use of the exponential polynomial/maximum likelihood technique in developing suitability of use functions for ... Ph.D. thesis. Utah State University, Logan, Utah. 85 pp.

Vorosmarty, C.J., P. Green, J. Salisbury, and R.B. Lammers. 2000. Global water resources: Vulnerability from climate change and population growth. Science 289: 284-288.

Vorosmarty, C., and D. Sahagian. 2000. Anthropogenic disturbance of the terrestrial water cycle. BioScience 50: 753-765.

Vronskiy, B.B. 1972. Reproductive biology of the Kamchatka River chinook salmon [*Oncorhynchus tshawytscha (Walbaum)*]. J. Ichthyol. 12: 259-273.

Vronskii, B.B., and V.N. Leman. 1991. Spawning station, hydrological regime and survival of progeny in nests of chinook salmon, *Oncorhynchus tshawytscha*, in the Kamchatka River basin. Journal of Ichthyology 31: 91-102.

Waddle, T. 1992. Are high and low flow habitat values really the same? Pp. 374-379 *in* M. Karamouz, editor. Water resources planning and management: saving a threatened resources - in search of solutions. American Society of Civil Engineers, New York.

Waddle, T., P. Steffler, A. Ghanem, C. Katopodis, and A. Locke. 2000. Comparison of one and two-dimensional open channel flow models for a small habitat stream. Rivers 7 (3): 205-220.

Waite, I. R., and R.A. Barnhart. 1992. Habitat criteria for rearing steelhead: A comparison of site-specific and standard curves for use in the Instream Flow Incremental Methodology. North American Journal of Fisheries Management 12 (1): 40-46.

Walburg, C.H., J.F. Novotny, K.E. Jacobs, W.D. Swink, T.M. Campbell, J.M. Nestler, and G.E. Saul. 1981. Effect of reservoir releases on tailwater ecology: a literature review. U.S. Army Engineer Waterways Experiment Station, Technical Report E-81-12, Vicksburg, Mississippi.

Walker, K.F., F. Sheldon, and J.T. Puckridge. 1995. A perspective on dryland river ecosystems. Regulated Rivers 11: 85-104.

Wallace, J.B., J.R. Webster, and J.L. Meyer. 1995. Influence of log additions on physical and biotic characteristics of a mountain stream. Canadian Journal of Fisheries and Aquatic Sciences 52 (10): 2120-2137.

Walters, C., L. Gunderson, and C.S. Holling. 1992. Experimental policies for water management in the Everglades. Ecological Applications 2: 189-202.

Walters, C.J., and F Juanes. 1993. Recruitment limitation as a consequence of natural selection for use of restricted feeding habits and predation risk tak.... Canadian Journal of Fisheries and Aquatic Sciences 50 (10): 2058-2070.

Walters, M.A., R.O. Teskey, and T.M. Hinckley. 1980. Impact of water level changes on woody riparian and wetland communities. Washington, D.C.: U.S. Fish and Wildlife Service (OBS-78/95).

Wang, L., J. Lyons, and P. Kanehl. 2003. Impacts of urban land cover on trout streams in Wisconsin and Minnesota. Transactions of the American Fisheries Society 132 (5): 825-839.

Wankowski, J.W.J. 1981. Behavioral aspects of predation by juvenile Atlantic salmon (*Salmo salar* L.) on particulate, drifting prey. Animal Behaviour 29: 557-571.

Wankowski, J.W.J., and J.E. Thorpe. 1979. Spatial distribution and feeding in Atlantic salmon *Salmo salar* L. juveniles. J. Fish Biol. 14: 239-247.

Ward, B.R. 2000. Declivity in steelhead (Oncorhynchus mykiss) recruitment at the Keogh River over the past decade. Canadian Journal of Fisheries and Aquatic Sciences 57 (2): 298-306.

Ward, B.R., and P.A. Slaney. 1988. Life history and smolt-to-adult survival of Keogh River steelhead trout (*Salmo gairdneri*) and the relationship to smolt size. Canadian Journal of Fisheries and Aquatic Sciences 45: 1110-1122.

Ward, B.R., P.A. Slaney, A.R. Fachin, and R.W. Land. 1989. Size-biased survival in steelhead trout: back-calculated lengths from adults' scales compared to migrating smolts at the Keogh River, B.C. Canadian Journal of Fisheries and Aquatic Sciences 46: 1853-1858.

Ward, G.H. 1985. Evaluation of marsh enhancement by freshwater diversion. Journal of Water Resources Planning and Management, ASCE 111: 1-23.
Ward, G.H., M.J. Irlbeck, and P.A. Montagna. 2002. Experimental river diversion for marsh enhancement. Estuaries 25 (6B): 1416-1425.

Ward, J.V. 1989. Riverine-wetland interactions. Pp. 385-400 in: R.R. Sharitz and W. Gibbons, eds. Freshwater wetlands and wildlife. United States Department of Energy, Office of Scientific and Technical Information, Oak Ridge, Tennessee.

Ward, J.V., and J.A. Stanford. 1995. Ecological connectivity in alluvial river ecosystems and its disruption by flow regulation. Regulated Rivers: Research and Management 11: 105-119.

Ward, J.V., L. Tockner, and F. Schiemer. 1999. Biodiversity of floodplain river ecosystems: ecotones and connectivity. Regulated Rivers: Research and Management 15: 125-139.

Weatherly, N.S., E.W. Campbellendrum, and S.J. Ormerod. 1991. The growth of brown trout in mild winters and summer droughts in upland Wales - model validation and preliminary prediction. Freshwater Biology 26: 121-131.

Webb, B.W., and D.E. Walling. 1993. Temporal variaability in the impact of river regulation on thermal regime and some biological implications. Freshw. Biol. 29: 167-182.

Webb, J.H., R.J. Fryer, J.B. Taggart, C.E. Thompson, and A.F. Youngson. 2001. Dispersion of Atlantic salmon (*Salmo salar*) fry from competing families as revealed by DNA profiling. Canadian Journal of Fisheries and Aquatic Sciences 52 (12): 2386-2395.

Webster, D.A., and G. Eiriksdottir. 1976. Upwelling as a factor influencing choice of spawning sites by brook trout (*Salvelinus fontinalis*). Transactions of the American Fisheries Society 105: 416-421.

Weisberg, S.B., and W. H. Burton. 1993. Enhancement of fish feeding and growth after an increase in minimum flow below the Conowingo Dam. North American Journal of Fisheries Management 13 (1): 103-109.

Weisberg, S.B., A.J. Janicki, J. Gerritsen, and H.T. Wilson. 1990. Enhancement of benthic macroinvertebrates by minimum flow from a hydroelectric dam. Regulated Rivers: Research and Management 5: 265-277.

Weise, A.M., M. Levasseur, F.J. Saucier, S. Senneville, E. Bonneau, S. Roy, G. Sauve, S. Michaud, and J. Fauchot. 2002. The link between precipitation, river runoff, and blooms of the toxic dinoflagellate *Alexandrium tamarense* in the St. Lawrence. Canadian Journal of Fisheries and Aquatic Sciences 59 (3): 464-473.

Welcomme, R. 1979. Fisheries ecology of floodplain rivers. Longman, London. 317 pp.

Welcomme, R. 1989. Review of the present state of knowledge of fish stocks and fisheries of African rivers. Pp. 515-532 in: D.P. Dodge (ed.), Proceedings of the International Large Rivers Symposium. Canadian Sp. Publ. Fish. Aquatic. Sci. 106.

Welcomme, R., and D. Hagborg. 1977. Towards a model of a floodplain fish population and its fishery. Environmental Biology of Fishes 2: 7-74.

Welcomme, R., R.A. Ryder, and J.A. Sedell. 1989. Dynamics of fish assemblages in river systems - a synthesis. Pp. 569-577 in: D.P. Dodge (ed.), Proceedings of the International Large Rivers Symposium. Canadian Sp. Publ. Fish. Aquatic. Sci. 106.

Welsh, H.H., Jr., G.R. Hodgson, B.C. Harvey, and M.F. Roche. 2001. Distribution of juvenile coho salmon in relation to water temperatures in tributaries of the Mattole River, California. North American Journal of Fisheries Management 21 (3): 464-470.

Wesche, T.A. 1973. Parametric determination of minimum stream flow for trout. Water Resources Research Institute, University of Wyoming, Laramie. 102 pp.

Wesche, T.A. 1974. Evaluation of trout cover in smaller streams. Proceedings of the Annual Conference of the Western Association of Game and Fisheries Commissioners 54: 286-294.

Wesche, T.A. 1980. A procedure for measuring trout cover in smaller streams. Proceedings of the Annual Conference of the Western Association of Fish and Wildlife Agencies 80: 466-479.

Wesche, T.A., C.M. Goertler, and W.A. Hubert. 1987. Modified habitat suitability index model for brown trout in southeastern Wyoming. North American Journal of Fisheries Management 7 (2): 232-237.

Wesche, T.A., V.R. Hasfurther, W.A. Hubert, and Q.D. Skinner. 1987. Assessment of flushing flow needs in a steep, rough, regulated tributary. Pp. 59-70 in: J.F. Craig and J.B. Kemper, editors. Regulated Streams: Advances in Ecology. Plenum Press, New York and London.

Wesche, T.A., S.W. Wolff, and Q.D. Skinner. 1989. Response of mountain stream channels and associated areas to flow regulation. P. 182 *in*: R.E. Gresswell, B. Barton, and J.L. Kershner (eds.), Practical Approaches to Riparian Resource Management. U.S. Bureau of Land Management, Billings, MT.

Westlake, D.F. 1967. Some effect of low-velocity currents on the metabolism of aquatic macrophytes. Journal of Experimental Botany 18: 187-205.

Wetherall, J.A. 1971. Estimation of survival rates for chinook salmon during their downstream migration in the Green River, Washington. Ph.D. dissertation. College of Fisheries, University of Washington, Seattle. 170 pp.

Wetmore, S.H., R.J. Mackay, and R.W. Newbury. 1990. Characterization of the hydraulic habitat of *Brachycentrus occidentalis*, a filter-feeding caddisfly. Journal of the American Benthological Society 9: 157-169.

Whalen, K.G., and D.L. Parrish. 1999. Nocturnal habitat use of Atlantic salmon parr in winter. Canadian Journal of Fisheries and Aquatic Sciences 56 (9): 1543-1550.

Whalen, K.G., D.L. Parrish, and M.E. Mather. 1999. Effect of ice formation on selection of habitats and winter distribution of post-young-of-the-year Atlantic salmon parr. Canadian Journal of Fisheries and Aquatic Sciences 56 (1): 87-96.

Wheeler, A.P., and M.S. Allen. 2003. Habitat and diet partitioning between shoal bass and largemouth bass in the Chipola River, Florida. Transactions of the American Fisheries Society 132 (3): 438-449.

White, D.S. 1990. Biological relationships to convective flow patterns within stream beds. Hydrobiologia 196: 149-158.

White, G. 1988. The environmental effects of the high dam at Aswan. Environment

White, R.G., A.E. Bingham, R.A. Ruediger, and T.S. Vogel. 1981. Response of fish and fish-food organisms to reduction in stream discharge. Proceedings of the 60th Annual Conference of the Western Association of Fish and Wildlife Agencies: 480-493.

White, R.J. 1973. Stream channel suitability for coldwater fish. Proceedings of the 28th Annual Meeting of the Soil Conservation Society of America (Plants, Animals and Man), September 30 - October 3, Hot Springs, Arkansas. pp. 61-79.

White, R.J. 1975. Trout population responses to streamflow fluctuation and habitat management in Big Roche-a-Cri Creek, Wisconsin. Internationale Vereinigung fur Theoretische und Angewandte Limnologie Verhandlungen 19: 2469-2477.

White, R.J. 1978. Limitations of trout stream management. ??

Whited, D., J.A. Stanford, and J.S. Kimball. 2002. Application of airborne multispectral digital imagery to quantify riverine habitats at different base flows. River Research and Application 18: 583-594.

Whitfield, A.K. 1994. Abundance of larval and 0+ juvenile marine fishes in the lower reaches of three southern African estuaries with differing freshwater inputs. Marine Ecology Progress Series 105: 257-267.

Whitfield, A.K. and M.N. Bruton. 1989. Some biological implications of reduced fresh water inflow into eastern Cape estuaries: A preliminary assessment. South African Journal of Science 85: 691-694.

Whitfield, A.K., and T.H. Wooldridge. 1994. Changes in freshwater supplies to southern African estuaries: Some theoretical and practical considerations, p. 41-50. In: K.R. Dyer and R.J. Orth (eds.). Changes in Fluxes in Estuaries: Implications from Science and Management. Olsen and Olsen, Fredensborg, Denmark.

Whitfield, P.H., and H. Schreier. 1981. Hysteresis in relationships between discharge and water chemistry in the Fraser River Basin, British Columbia. Limnology and Oceanography 26: 1179-1182.

Whiting, P.J. 1998. Floodplain maintenance flows. Rivers 6 (3): 160-170.

Whiting, P.J., and M. Pomeranets. 1997. A numerical study of bank storage and its contribution to streamflow. Journal of Hydrology 202: 121-136.

Wiberg, P.L., and J.D. Smith. 1991. Velocity distribution and bed roughness in high-gradient streams. Water Resources Research 27: 825-838.

Wickett, W.P. 1951. The coho salmon population of Nile Creek. Fisheries Research Board of Canada Pacific Prog. Rep. 89: 88-89.

Wickett, W.P. 1958. Review of certain environmental factors affecting the production of pink and chum salmon. Journal of the Fisheries Research Board of Canada 15: 1103-1126.

Wickham, M.G. 1967. Physical microhabitat of trout. M.S. thesis. Colorado State University, Fort Collins.

Wilber, D.H. 1992. Association between freshwater inflows and oyster productivity in Apalachicola Bay, Florida. Estuar Coast Shelf Sci 35: 179-190.

Wilber, D.H. 1994. The influence of Apalachicola River flows on the blue crab, *Callinectes sapidus*, in north Florida. Fishery Bulletin 92: 180-188.

Wilber, D.A., and R. Bass. 1998. Effect of Colorado River diversion on Matagordo Bay epifauna. Estuarine, Coastal and Shelf Science 47: 309-318.

Wilcock, P.R., G.M. Kondolf, W.V. Matthews, and A.F. Barta. 1996. Specification of sediment maintenance flows for a large gravel-bed river. Water Resources Research 32 (9): 2911-2921.

Wildhaber, M.L., V.M. Tabor, J.E. Whitaker, A.L. Allert, D.W. Mulhern, P.J. Lamberson, and K.L. Powell. 2000. Ictalurid populations in relation to the presence of a main-stem reservoir in a midwestern warmwater stream with emphasis on the threatened Neosho madtom. Transactions of the American Fisheries Society 129 (6): 1264-1280.

Wildhaber, M.L., P.J. Lamberson, and D.L. Galat. 2003. A comparison of measures of riverbed form for evaluating distributions of benthic fishes. North American Journal of Fisheries Management 23 (2): 543-557.

Wiley, D. 1995. Development and evaluation of flushing flow recommendations for the Big Horn River. Master's thesis, University of Wyoming, Laramie.

Wiley, M.J., and S.J. Kohler. 1981. An assessment of biological interactions in an epilithic stream community using time lapse cinematography. Hydrobiologia 78: 183-188.

Williams, D.D. 1980. Temporal patterns in recolonization of stream benthos. Archives of Hydrobiology 90: 56-74.

Williams, G.P. 1978. Bankfull discharge of rivers. Water Resources Research 14: 1141-1153.

Williams, G.P., and M.G. Wolman. 1984. Downstream effects of dams on alluvial rivers. U.S. Geological Survey Professional Papers 1286.

Williams, J.G. 1996. Lost in space: minimum confidence intervals for idealized PHABSIM studies. Transactions of the American Fisheries Society 125 (3): 458-465.

Williams, J.G. 1997. Comment: testing the independence of microhabitat preferences and flow (part 1). Transactions of the American Fisheries Society 126 (3): 536-537.

Williams, J.G. 2001. Tripping over spatial scales: a comment on Guay et al. (2000). Canadian Journal of Fisheries and Aquatic Sciences 58 (10): 2105-2107.

Williams, J.G. 2001. Testing models used for instream flow assessment. Fisheries 26 (12): 19-20.

Williams, J.G., and G.M. Matthews. 1995. A review of flow and survival relationships for spring and summer chinook salmon, *Oncorhynchus tshawytscha*, from the Snake River basin. Fishery Bulletin 93: 732-740.

Williams, J.G., S.G. Smith, and W.D. Muir. 2001. Survival estimates for downstream migrant yearling juvenile salmonids through the Snake and Columbia Rivers hydropower system, 1966-1980 and 1993-1999.

Williams, J.G., T.P. Speed, and W.F. Forrest. 1999. Comment: Transferability of habitat suitability criteria. North American Journal of Fisheries Management 19 (2): 623-625.

Williams, P.B. 1989. Managing freshwater inflow to the San Francisco Bay estuary. Regulated Rivers: Research and Management 4: 285-298.

Williams, R.D., and R.N. Winget. 1979. Macroinvertebrate response to flow manipulation in the Strawberry River, Utah. Pp. 365-376 in: J.V. Ward and J.A. Stanford (eds.) The ecology of regulated streams. Plenum Publishing Corporation, New York.

Williams, R.N., P.A. Bisson, D.L. Bottom, L.D. Calvin, C.C. Coutant, M.W. Erho, C.A. Frissell, J.A. Lichatowich, W.J. Liss, W.E. McConnaha, P.R. Mundy, J.A. Stanford, and R.R. Whitney. 1999. Return to the river: scientific issues in the restoration of salmonid fishes in the Columbia River. Fisheries 24: 10-19.

Williams, R.W., R.M. Laramie, and J.J. Ames. 1975. A catalog of Washington streams and salmon utilization, Volume 1 Puget Sound region. Washington Department of Fisheries, Olympia.

Williamson, S.C., J.M. Bartholow, and C.B. Stalnaker. 1993. A conceptual model for quantifying pre-smolt production from flow-dependent physical habitat and water temperature. Regulated Rivers: Research & Management 8: 15-28.

Wilzbach, M.A. 1985. Relative roles of food abundance and cover in determining the habitat distribution of stream-dwelling cutthroat trout (*Salmo clarki*). Canadian Journal of Fisheries and Aquatic Sciences 42: 1668-1672.

Wilzbach, M.A., K.W. Cummins, and J.D. Hall. 1986. Influence of habitat manipulations on interactions between cutthroat trout and invertebrate drift. Ecology 67: 898-911.

Wing, M.G., and A. Skaugset. 2002. Relationships of channel characteristics, land ownership, and land use patterns to large woody debris in western Oregon streams. Canadian Journal of Fisheries and Aquatic Sciences 59 (5): 796-807.

Winkle, P.L., W.A. Hubert, and F.J. Rahel. 1990. Relations between brook trout standing stocks and habitat features in beaver ponds in southeastern Wyoming. North American Journal of Fisheries Management 10 (1): 72-79.

Winterbottom, S.J., and D.J. Gilvear. 1997. Quantification of channel bed morphology in gravel-bed rivers using airborne multispectral imagery and aerial photography. Regulated Rivers: Research and Management 13: 489-499.

Wiseman, W.J. and F.J. Kelly. 1994. Salinity variability within the Louisiana coastal current during the 1982 flood season. Estuaries 17: 732-739.

Wissmar, R.C. (and S. Craig.) 1997. Bull trout spawning activity, Gold Creek, Washington. University of Washington School of Fisheries, Fisheries Research Institute FRI-UW-9701. 15 pp.

Witzel, L.D., and H.R. MacCrimmon. 1983. Redd-site selection by brook trout and brown trout in southwestern Ontario streams. Transactions of the American Fisheries Society 112 (6): 760-771.

Wolff, S.W., T.A. Wesche, D.D. Harris, and W.A. Hubert. 1990. Brown trout population and changes associated with increased minimum flows in Douglas Creek, Wyoming. U.S. Fish and Wildlife Service Biological Report 90 (11).

Wolman, M.G., and J.P. Miller. 1960. Magnitude and frequency of forces in geomorphic processes. Journal of Geology 68: 54-74.

Wondzell, S.M., and F.J. Swanson. 1996. Seasonal and storm dynamics of the hyporheic zone of a 4th-order mountain stream. I. Hydrological processes. J. North Am. Benthol. Soc. 15: 3-19.

Wondzell, S.M., and F.J. Swanson. 1999. Floods, channel change, and the hyporheic zone. Water Res. 35: 555-567.

Wong, S. 2002. Villagers chart recovery since Pak Mun gates opened. World Rivers Review 17: 10-11.

Woo, M-K., and P.R. Waylen. 1984. Areal prediction of annual floods generated by two distinct processes. Hydrol. Sci. J. 29: 75-88.

Wood, P.J., and G.E. Petts. 1994. Low flows and recovery of macroinvertebrates in a small regulated chalk stream. Regulated Rivers: Research and Management 9: 303-316.

Wood, R.K., and Whelon. 1965. Low-flow regulations as a means of improving stream fishing. Proceedings of the Annual Conference of Southeastern Game and Fish Commissioners 16: 375-386.

Wootton, J.T., M.S. Parker, and M.E. Power. 1996. Effects of disturbance on river food webs. Science 273: 1558-1561.

Wright, J.F., and A.D. Berrie. 1987. Ecological effects of groundwater pumping and a natural drought on the upper reaches of a chalk stream. Regulated Rivers: Research and Management 1: 145-160.

Wright, J.F., P.D. Hiley, D.A. Cooling, A.C. Cameron, Wigha.... 1984. The invertebrate fauna of a small chalk stream in Berkshire, England, and the effect of intermittent flow. Arch. Hydrobiol. 99: 176-199.

Wu, F.-C., and C.-F. Wang. 2002. Effect of flow-related substrate alteration on physical habitat: a case study of the endemic river loach *Sinogastromyzon puliensis* (Cypriniformes, Holmalopteridae) downstream of Chi-Chi diversion weir, Chou-Shi Creek, Taiwan. River Research and Applications 18 (2): 155-170.

Yin, K., P.J. Harrison, and R.J. Beamish. 1997. Effects of a fluctuation in Fraser River discharge on primary production in the central Strait of Georgia, British Columbia, Canada. Canadian Journal of Fisheries and Aquatic Sciences 54 (5): 1015-1024.

Young, A.A., and H.F. Blaney. 1942. Use of water by native vegetation. California Department of Public Works, Division of Water Resources, Sacramento 160 pp.

Young, K. A. 2001. Habitat Diversity and Species Diversity: Testing the Competition Hypothesis With Juvenile Salmonids. Oikos 95: 87-93.

Young, M.K. 1996. Summer movements and habitat use by Colorado River cutthroat trout (*Oncorhynchus clarki pleuriticus*) in small, montane streams. Canadian Journal of Fisheries and Aquatic Sciences 53: 1403-1408.

Young, M.K. 1998. Absence of autumnal changes in habitat use and location of adult Colorado River cutthroat trout in a small stream. Transactions of the American Fisheries Society 127: 147-151.

Yu, S.-L., E.J. Peters, and W.W. Stroup. 1995. Application of logistic regression to develop habitat suitability criteria for sand shiner, *Notropis stramineus*. Rivers 5 (1): 22-34.

Zalewski, M., and R.J. Naiman. 1985. The regulation of riverine fish communities by a continuum of abiotic-biotic factors. Pages 3-9 in: J.S. Alabaster, editor. Habitat modification and freshwater fisheries. Food and Agriculture Organization of the United Nations, EIFAC/85, Rome.

Zedler, J.B. 1983. Freshwater impacts in normally hypersaline marshes. Estuaries 6: 346-355.

Zigler, S.J., M.R. Dewey, and B.C. Knights. 1999. Diel movement and habitat use by paddlefish in Navigation Pool 8 of the Upper Mississippi River. North American Journal of Fisheries and Aquatic Sciences 19 (1): 180-187.

Zigler, S.J., M.R. Dewey, B.C. Knights, Zigler, S.J., M.R. Dewey, and B.C. Knights, A.L. Runstrom, and M.T. Steingraeber. 2003. Movement and habitat use by radio-tagged paddlefish in the upper Mississippi River and tributaries. North American Journal of Fisheries and Aquatic Sciences 23 (1): 189-205.

Zillges, G. 1977. Methodology for determining Puget Sound coho escapement goals, escapement estimates, 1977 preseason run size prediction and in-season run assessment. Washington Department of Fisheries Technical Report 28. Olympia.

Zincone, L.H., Jr., and R.A. Rulifson. 1991. Instream flow and striped bass recruitment in the lower Roanoke River, North Carolina. Rivers 2 (2): 125-137.

Zorn, T.G., and P.W. Seelbach. 1995. The relation between habitat availability and the short-term carrying capacity of a stream reach for smallmouth bass. North American Journal of Fisheries Management 15: 773-783.

Zorn, T.G., P.W. Seelbach, and M.J. Wiley. 2002. Distributions of stream fishes and their relationship to stream size and hydrology in Michigan's lower peninsula. Transactions of the American Fisheries Society 131 (1): 70-85.