

External Funding of Faculty and Staff in the Dept. of Environmental Science & Biology at SUNY Brockport

(Aggregate value of external funds, 1970 through 2006 = **\$10,209,843**)

- ENV-EF-0192. **Norment, C.J.** 2006. Shrubland bird habitat relations and management. U.S. Fish and Wildlife Service Challenge Cost Share Program. \$15,036.
- ENV-EF-0191. **Norment, C.J.**, and **M.R. Norris**. 2006. Grassland bird habitat selection and vegetation at John White Wildlife Management Area, NY. NYS Department of Environmental Conservation. \$2,500.
- ENV-EF-0190. **Makarewicz, J.C.** 2006. The status of water quality in Lake Ontario embayments, streams and watersheds. Center for Environmental Information. Rochester, NY. \$100,000.
- ENV-EF-0189. **Makarewicz, J.C.** 2006. Update on Best Management Practices impacts on Sandy Creek. Tug Hill Commission. \$8,000.
- ENV-EF-0188. **Makarewicz, J.C.** 2005-2008. Experimental manipulation of entire watersheds through Best Management Practices. U.S. Department of Agriculture. \$564,000.
- ENV-EF-0187. **Haynes, J.M.**, and **J.A. Zollweg**. 2005. Distribution of host fishes for listed and rare freshwater mussel species, and of state-listed fishes, in Muddy Creek on the Erie National Wildlife Refuge. U.S. Fish and Wildlife Service. \$21,239.
- ENV-EF-0186. **Makarewicz, J.C.**, for SUNY Brockport. 2005-2007. Development funds for construction of a Great lakes Facility. U.S. Congress from Congressman Reynolds via the Department of Housing and Urban Development. \$148,000.
- ENV-EF-0185. **Makarewicz, J.C.** 2005. Mitigation of agriculturally related degradation of water quality – Conesus Lake Watershed. Altria/Kraft Group. \$75,000
- ENV-EF-0184. **Norment, C.J.** 2005. Shrubland bird habitat relations and management. U.S. Fish and Wildlife Service. \$13,651.
- ENV-EF-0183. **Haynes, J.M.** 2004. NY Dept. of Environmental Conservation. Status of longear sunfish populations in western New York. \$35,000.
- ENV-EF-0182. **Haynes, J.M.** 2004. Monroe County Dept. of Health. Benthic macroinvertebrates of the Irondequoit Bay wetland. \$4,995.
- ENV-EF-0181. **Makarewicz, J.C.** 2004. Center for Environmental Information. North Coast Initiative: Environmental status of the nearshore of Lake Ontario. \$60,000.
- ENV-EF-0180. **Makarewicz, J.C.** 2004. Princeton Hydro. Sodus Bay: Current status of water quality. \$30,000.
- ENV-EF-0179. **Makarewicz, J.C.** 2004. Great Lakes Protection Fund. Development funds for a building for a Great Lakes Research Facility. \$18,000.
- ENV-EF_0178. **Norment, C.J.** 2004. A multi-scale analysis of grassland bird habitat relations in the St. Lawrence River Valley. New York State Biodiversity Research Institute. \$19,986.
- ENV-EF-0177. **Norment, C.J.** 2004. Influence of distance to habitat edge on depredation rates of simulated grassland bird nests. Challenge Cost Share Grant, United States Fish and Wildlife Service, region 5. \$5,800.
- ENV-EF-0176. **Haynes, J.M.**, J.J. Pagano, and S.T. Wellman*. 2003. New York Great Lakes Protection Fund. RAP progress in the Rochester Embayment of Lake Ontario: Population monitoring and levels of bioaccumulative chemicals of concern in mink, a sentinel species. \$199,984.

- ENV-EF-0175. **Makarewicz, J.C.** 2003. Wyoming and Genesee County Soil and Water Districts. Segment analysis of Oatka Creek. \$18,000.
- ENV-EF-0174. **Makarewicz, J.C.** 2003. Central New York Regional Planning and Development Board. Segment analysis of Oneida Creek. \$8,000.
- ENV-EF-0173. **Makarewicz, J.C.** 2003. Niagara County Soil and Water Conservation District. Sediment and nutrient monitoring in streams. \$8,000.
- ENV-EF-0172. **Makarewicz, J.C.** 2003. Great Lakes Research Consortium. Development funds for a Great lakes Research Facility. \$18,000.
- ENV-EF-0171. **Norment, C. J.** 2003. A multi-scale analysis of grassland bird habitat relations in the St. Lawrence River Valley, with a focus on the Henslow's Sparrow. New York State Biodiversity Research Institute. \$15,819.
- ENV-EF-0170. **Norment, C.J.** (1) 2003. A comparison of the Vickery Reproductive Index, and nest searching and monitoring, as methods for estimating the productivity of grassland birds in the Northeast. (2) Grassland breeding bird use of managed grasslands on National Wildlife refuges in region 5. U.S. Fish and Wildlife Service, Northeast Region. \$15,000.
- ENV-EF-0169. **Haynes, J.M.**, R.C. Dilcher, **C.J. Norment**, and **J.A. Zollweg**. 2002. Monroe County Dept. of Planning and Development. Biological survey for Irondequoit Bay. \$49,997.
- ENV-EF-0168. **Haynes, J.M.** 2002-2007. Lamoka and Waneta Lakes Association. Fishery study of Waneta and Lamoka Lakes. \$45,809.
- ENV-EF-0167. **Makarewicz, J.C.** 2002. United States Department of Agriculture. Experimental manipulation of entire watersheds. \$680,000.
- ENV-EF-0166. **Makarewicz, J.C.** (Co-PI) and others. 2002-2007. National Oceanic and Atmospheric Administration. Monitoring Event Responsive Harmful Algal Blooms (MERHAB). Tier-based monitoring for toxic Cyanobacteria in the lower Great Lakes. Collaboration with SUNY ESF, University of Vermont, University of Tennessee. \$2.5 million. (~\$437,000 for Brockport).
- ENV-EF-0165. Noll, M.R., and **J.C. Makarewicz**. 2002. NY Great Lakes Protection Fund. Impact of anoxia and alum on phosphorus release from internal load in Irondequoit Bay, Rochester Embayment Area of Concern. \$134,216.
- ENV-EF-0164. **Norment, C.J.** 2002. U.S. Fish and Wildlife Service. A comparison of nest monitoring and a reproductive index as methods for estimating the productivity of grassland birds. \$12,000.
- ENV-EF-0163. **Norment, C.J.** 2002. U.S. Fish and Wildlife Service. Grassland bird use of managed grasslands on National Wildlife Refuges in Region 5. \$6,500.
- ENV-EF-0162. **Haynes, J.M.**, S.M. Millar, and M.M. Hluchy. 2001. National Science Foundation. Assessment and evaluation supplement to "Regional Workshops Led by Successful Innovators and Experienced Investigators." \$331,248.
- ENV-EF-0161. **Haynes, J.M.**, and **J.C. Makarewicz**. 2001. New York Great Lakes Protection Fund. Measuring RAP progress in the Rochester Embayment of Lake Ontario: determining baseline levels of bioaccumulative chemicals of concern in air, water, sediment and sentinel species. \$83,786.
- ENV-EF-0160. **Norment, C.J.** 2001. NYS Department of Environmental Conservation. Created wetlands as wildlife habitat: A comparison of bird and amphibian populations in created and natural wetlands in western New York. \$4,983.

- ENV-EF-0159. **Norment, C.J.** 2001. U.S. Fish and Wildlife Service. Grassland breeding bird use of managed grasslands on National Wildlife Refuges. \$4,500.
- ENV-EF-0158. **Haynes, J.M.**, and M.M. Hluchy. 2000. National Science Foundation. Disseminating successful undergraduate science curriculum development, adaptation and implementation strategies and CCLI grant writing techniques: Regional workshops led by successful innovators and experienced investigators. \$713,803.
- ENV-EF-0157. **Haynes, J.M.** 2000. Great Lakes Research Consortium. Co-director for research and academic programs taskforce chairperson. \$5,000.
- ENV-EF-0156. **Hunter, J. C., P.M. Harris**, M.R. Noll, and J.A. Zollweg. 2000. Habitat Assessment and Restoration, Inc. Evaluation of biotechnical protection of levees and marsh restorations in the Sacramento River Delta. \$9,600.
- ENV-EF-0155. **Norment, C.J.** 2000. Bergen Swamp Preservation Society. Small mammal survey of Bergen Swamp. \$1,600.
- ENV-EF-0154. **Haynes, J.M.**, J. Chiarenzelli, A. Nelson, J. Pagano, and T.C. Young. Great Lakes Research Consortium. 1999. Academic program assessment task force. \$2,500.
- ENV-EF-0153. **Hunter, J.C.**, and M.R. Noll. 1999. U.S. Geological Survey. Dynamics and effects of managed water levels upon a coastal marsh along Lake Ontario. \$10,028.
- ENV-EF-0152. **Makarewicz, J.C.**, and **J.M. Haynes** (Principal Investigators) and **R.C. Dilcher, J.C. Hunter** and **C.J. Norment** (Co-Principal Investigators). 1999. Office of Parks, Recreation and Historic Preservation. Biological survey of Yanty Creek Marsh. \$47,000.
- ENV-EF-0151. **Makarewicz, J.C.**, H. McLissac, and E.J. Mills. 1999. New York Sea Grant Institute. *Cercopagis* - a new exotic zooplankter in Lake Ontario. \$220,000.
- ENV-EF-0150. **Makarewicz, J.C.**, H. McLissac, and E.J. Mills. U.S. 1999. Environmental Protection Agency. *Cercopagis* - a new exotic zooplankter in Lake Ontario. \$80,000.
- ENV-EF-0149. **Makarewicz, J.C.** 1999. Travel funds, workshops, seed grants. Great Lakes Research Consortium. \$26,500
- ENV-EF-0148. **Silverstone, S.E.**, B. DeFeo, B. English, M. Esler, **P. Harris, J. Haynes, J. Maliekal, M. Noll, T. Rao, K. Schlecht, M. Tahar, and J. Zollweg.** 1999. GTE Focus Program. Science and math summer leadership institute. \$28,624.
- ENV-EF-0147. Tisch, N.A., **J.M. Haynes** and C.M. Mayer. 1999. Great Lakes Research Consortium. Impact assessment of the introduced amphipod, *Echinogammarus ischnus*, in the Great Lakes. \$22,950.
- ENV-EF-0146. Donovan, T., and **C. J. Norment.** 1998. Great Lakes Research Consortium. Assigning conservation priorities to Great Lakes coastal habitats used by migrating songbirds. \$20,000.
- ENV-EF-0145. **Haynes, J.M.** (Lead Instructor), T. Young, J. Pagano, R. Scudato, D. Stewart, J. Manno, and R. Smardon. 1998. National Science Foundation. Great Lakes Research Consortium summer practicum for applied environmental problem-solving: new approaches and techniques for undergraduate faculty. \$75,576.
- ENV-EF-0144. **Makarewicz, J.C.** 1998. Canandaigua Lake Watershed Task Force. Ontario County aquatic weed management program. \$58,000.
- ENV-EF-0143. **Makarewicz, J.C.** 1998. Niagara County Soil and Water Conservation District. Water quality monitoring system for the Niagara County. \$66,200.
- ENV-EF-0142. **Makarewicz, J.C.** 1998. U.S. Environmental Protection Agency. STAR Fellowship for graduate student Stephen Bland. \$6,917.

- ENV-EF-0141. **Makarewicz, J.C.** 1998. Great Lakes Research Consortium. Sea Bird sampler. \$25,000.
- ENV-EF-0140. **Norment, C.J.** 1998. U.S. Department of Defense. Evaluation of the effects of military training on the relative health of Henslow's Sparrow populations at Fort Drum, NY. \$40,000.
- ENV-EF-0139. **Norment, C.J.** 1998. New York State Department of Environmental Conservation. Spatial structure of Grasshopper Sparrow populations: Implications for conservation. \$3,600.
- ENV-EF-0138. **Haynes, J.M., J.C. Makarewicz, J.K. Buttner, K.D. Fausch, T.W. Lewis, C.J. Norment, and S.E. Silverstone.** 1997. National Science Foundation. Stressed Stream Analysis: Addressing real environmental problems to stimulate undergraduate faculty. \$132,423.
- ENV-EF-0137. **Makarewicz, J.C.** 1997. Orleans County Soil and Water Conservation District. Orleans County watershed inventory and stressed stream analysis. \$47,050.
- ENV-EF-0136. **Makarewicz, J.C.** 1997. Oswego County Soil and Water Conservation District. Evaluation of a muckland demonstration project using a wetland to improve water quality. \$29,050.
- ENV-EF-0135. **Makarewicz, J.C.** 1997. Monroe County Health Department. Monroe County carbon dating. \$1,500.
- ENV-EF-0134. **Norment, C.J.** 1997. U.S. Fish and Wildlife Service Challenge Grant. Effects of habitat manipulations on grassland bird populations. \$15,500.
- ENV-EF-0133. **Norment, C.J.** 1997. U.S. Fish and Wildlife Service Challenge Grant. Follow-up studies on USFWS wetland restoration efforts as enhanced wildlife habitat. \$14,700.
- ENV-EF-0132. **Buttner, J.K., J.C. Makarewicz, and R. Findlay.** 1996. National Oceanic & Atmospheric Administration/Sea Grant. Impacts and mitigation of commercial net pen culture in the Great Lakes. \$174,815.
- ENV-EF-0131. **Haynes, J.M.** 1996. Monroe County Health Department. Macroinvertebrate survey, sampling strategy, and biotic index for the Irondequoit Creek wetland. \$8,240.
- ENV-EF-0130. **Haynes, J.M.** (Lead Instructor), T. Young, J. Pagano, R. Scudato, J. DePinto, D. Stewart, J. Manno, and R. Smardon. 1996. National Science Foundation. Great Lakes Research Consortium summer practicum for applied environmental problem-solving: New approaches and techniques for undergraduate faculty. \$142,288.
- ENV-EF-0129. **Makarewicz, J.C.** 1996. U.S. Environmental Protection Agency. Limnological survey of Lakes Erie and Huron. \$124,575.
- ENV-EF-0128. **Makarewicz, J.C.** 1996. New York Great Lakes Protection Fund. Seasonal fate and distribution of corn-applied atrazine in agricultural watersheds. \$41,496.
- ENV-EF-0127. **Makarewicz, J.C.** 1996. SUNY College of Environmental Science and Forestry. Watershed education module for CD-ROM. \$6,500.
- ENV-EF-0126. **Norment, C.J.** 1996. Bergen Swamp Preservation Society. Assessment of bog turtle populations in Bergen Swamp. \$1,100.
- ENV-EF-0125. **Buttner, J.K.** 1995. Great Lakes Research Consortium. The detoxification potential of bullhead and trout in polluted waters. \$9,764.
- ENV-EF-0124. **Buttner, J.K.** Ekohawk, Inc. (Ecological consulting firm operated by the Mohawks of Akwesasne, subcontracted from the Province of Quebec). 1995. Design and operation of a yellow perch holding facility on Cornwall Island, Akwesasne. \$25,662.

- ENV-EF-0123. **Haynes, J.M., J.C. Makarewicz, B.L. Brett, J.K. Buttner, K.D. Fausch, T.W. Lewis, and C.J. Norment.** 1995. National Science Foundation. Stressed Stream Analysis: Addressing real environmental problems to stimulate undergraduate faculty. \$113,593.
- ENV-EF-0122. **Makarewicz, J.C.** 1995. Onondaga Lake Management Conference. Biology and limnology of Onondaga Lake. \$70,650.
- ENV-EF-0121. **Makarewicz, J.C.** 1995. West Valley Nuclear Services Co. Inc. Biological sampling. \$7,500.
- ENV-EF-0120. **Silverstone, S.E.** 1995. U.S. Environmental Protection Agency. Detection of microorganisms capable of anaerobic degradation of hazardous substances in natural environments. \$132,405.
- ENV-EF-0119. **Haynes, J.M.** (Lead Instructor), T. Young, J. Pagano, R. Scudato, J. DePinto, D. Stewart, J. Manno, and R. Smardon. 1994. National Science Foundation. Great Lakes Research Consortium summer practicum for applied environmental problem-solving: New approaches and techniques for undergraduate faculty. \$125,826.
- ENV-EF-0118. **Haynes, J.M.** 1994. U.S. Fish and Wildlife Service. Community ecology of the Niagara County artificial reef and nearby natural areas of Lake Ontario. \$18,875.
- ENV-EF-0117. **Haynes, J.M.** 1994. Monroe County Transportation Department. Survey of Buttonwood Creek, Monroe County, NY to determine habitat availability for and relative abundance of a species of special concern, the pirate perch (*Aphredoderus sayanus*). \$1,914.
- ENV-EF-0116. **Makarewicz, J.C.** 1994. National Science Foundation. Infrastructure improvement grant for renovating the Lennon Hall science building. \$457,369 (plus ~\$9 million cash match from the NYS Construction Fund for the renovation of Lennon Hall).
- ENV-EF-0115. **Makarewicz, J.C.** 1994. Ontario County Board of Supervisors. Ontario County aquatic weed management program. \$55,666.
- ENV-EF-0114. **Norment, C.J.** 1994. U.S. Fish and Wildlife Service Challenge Grant. Effects of grassland management on grassland bird community structure and productivity. \$24,200.
- ENV-EF-0113. **Norment, C.J.** 1994. NYS Department of Environmental Conservation. Effects of grassland management on grassland bird community structure and productivity. \$2,700.
- ENV-EF-0112. **Silverstone, S.E.** 1994. McKittrick Solid Waste Treatment Management Corp. *In situ* bioremediation of petroleum-contaminated soils. \$4,000.
- ENV-EF-0111. **Buttner, J.K.** 1993. National Oceanic and Atmospheric Administration/Sea Grant. Impacts and mitigation of large-scale aquaculture in the Great Lakes. \$109,601.
- ENV-EF-0110. **Buttner, J.K.** 1993. Mohawks of the Bay of Quinte, Tyendinaga, Ontario, Canada. Development of aquaculture at Tyendinaga. \$58,552.
- ENV-EF-0109. **Buttner, J.K.** 1993. Appian Acquicoltura. Aquaculture in Avellino, Italy: phase I - technical and economic feasibility. \$3,693 (part of a larger project with several U.S. and European collaborators).
- ENV-EF-0108. **Haynes, J.M., J.C. Makarewicz, B.L. Brett, J.K. Buttner, K.D. Fausch, C.L. Lending, and T.W. Lewis.** 1993. National Science Foundation. Stressed Stream Analysis: Addressing real environmental problems to stimulate undergraduate faculty. \$89,941.
- ENV-EF-0107. **Makarewicz, J.C.** 1993. Oswego County Soil and Water Conservation District. Neatahwanta watershed monitoring project. \$39,286.
- ENV-EF-0106. **Makarewicz, J.C.** 1993. U.S. Environmental Protection Agency. Phytoplankton and zooplankton analysis of Lakes Michigan and Ontario. \$100,000.

- ENV-EF-0105. **Makarewicz, J.C.** 1993. Monroe County Department of Health. Monitoring of four ponds in the Town of Greece. \$2,300.
- ENV-EF-0104. **Buttner, J.K.** 1992. Northeastern Regional Aquaculture Center. Detection of fish pathogens for fish health inspection by non-lethal methods. \$8,900 (part of larger project with six collaborators).
- ENV-EF-0103. **Buttner, J.K.** 1992. Town of Batavia, NY. Water quality, macrobenthos, and fish populations in sewage treatment ponds. \$16,461.
- ENV-EF-0102. **Buttner, J.K.** 1992. Mohawks of the Bay of Quinte, Tyendinaga, Ontario, Canada. Instruct a six-day course on aquaculture. \$1,817.
- ENV-EF-0101. **Buttner, J.K.** 1992. Northeastern Regional Aquaculture Center. Domestication of striped bass for aquaculture production. \$3,470 (part of larger project with 10 other agencies).
- ENV-EF-0100. **Buttner, J.K.** 1992. Great Lakes Research Consortium. Potential for, status of, and constraints to aquaculture in the Great Lakes. \$3,000.
- ENV-EF-0099. **Buttner, J.K.** 1992. Connecticut Sea Grant College Program and New York Sea Grant Institute. Travel support to represent Sea Grant at a conference in Galway, Ireland. \$1,150.
- ENV-EF-0098. **Haynes, J.M.** (Lead Instructor), T. Young, J.Pagano, R. Scudato, J. DePinto, D. Stewart, J. Mann,o and R. Smardon. 1992. National Science Foundation. Great Lakes Research Consortium summer practicum for applied environmental problem-solving: New approaches and techniques for undergraduate faculty. \$106,010.
- ENV-EF-0097. **Haynes, J.M.** 1992. SUNY at Stony Brook. Deployment and recovery of sediment samplers and side-scan sonar in Lake Ontario. \$2,490.
- ENV-EF-0096. **Makarewicz, J.C.** 1992. National Oceanic and Atmospheric Administration/Sea Grant. Phosphorus cycling in zebra mussel populations relative to hydrologic loading of phosphorus. \$120,440.
- ENV-EF-0095. **Makarewicz, J.C.** 1992. U.S. Environmental Protection Agency. Limnology practicum: Graduate training course on Lake Huron aboard the USEPA R.V. Lake Guardian. \$6,331.
- ENV-EF-0094. **Makarewicz, J.C.** 1992. Keuka Lake Foundation. Keuka Lake limnology. \$33,969.
- ENV-EF-0093. **Makarewicz, J.C.** O'Brien and Gere Engineers. 1992. Webster lake water supply project. \$27,660.
- ENV-EF-0092. **Makarewicz, J.C.** 1992. Monroe Co. Department of Health. Sandy Creek surfactant analysis. \$7,985.
- ENV-EF-0091. **Haynes, J.M.** 1991. Niagara County Department of Planning and Industrial Development. Relative fish abundance at an artificial reef in Lake Ontario. \$4,788.
- ENV-EF-0090. **Makarewicz, J.C.** 1991. Seneca County Soil and Water Conservation District. Water quality monitoring program for Seneca County. \$45,650.
- ENV-EF-0089. **Makarewicz, J.C.** 1991. U.S. Environmental Protection Agency. Acid deposition monitoring program for Lake Ontario. \$61,854.
- ENV-EF-0088. **Buttner, J.K.** and G. Rivara. 1990. Northeastern Regional Aquaculture Center. Production of quarterly NRAC newsletter, 1990-1992. \$40,840.

- ENV-EF-0087. **Buttner, J.K.**, and **J.C. Makarewicz**. 1990. National Oceanic & Atmospheric Administration/Sea Grant. Uptake and retention of contaminants by fish maintained on artificial diets in Lake Ontario. \$62,662.
- ENV-EF-0086. **Buttner, J.K.**, B. Doyle, G. Flimlin, D. Webster, D. Dow, and S. Jacobsen. 1990. Northeastern Regional Aquaculture Center. Northeast regional aquaculture extension program for a more viable, profitable aquaculture industry. \$72,550.
- ENV-EF-0085. **Buttner, J.K.** 1990. Rochester Gas and Electric Corporation. Survival of rainbow trout and black bullhead in the chlorinated discharge of Russell Station. \$3,246.
- ENV-EF-0084. **Buttner, J.K.** 1990. University of Rochester. Fish holding and aeration equipment. \$1,780 donation.
- ENV-EF-0083. **Buttner, J.K.** 1990. New York Sea Grant Institute. Travel support to represent New York at extension specialist workshop in Monterey, CA. \$960.
- ENV-EF-0082. **Haynes, J.M.** (Lead Instructor), T. Young, H. Sikka, R. Scudato, J. DePinto, D. Stewart, J. Manno, and R. Smardon. 1990. National Science Foundation. Great Lakes Research Consortium summer practicum for applied environmental problem-solving: New approaches and techniques for undergraduate faculty. \$98,000.
- ENV-EF-0081. **Haynes, J.M.** 1990. Town of Greece, NY. Sediment sampling and analysis, Braddock Bay. Town of Greece, NY. \$3,648.
- ENV-EF-0080. **Makarewicz, J.C.** 1990. Livingston County Planning Department. Land use as a determinant of watershed chemistry, Conesus Lake. \$31,766.
- ENV-EF-0079. **Makarewicz, J.C.** 1990. NY Sea Grant Institute. Trophic interactions: Relative importance of *Dreissena* and *Daphnia* grazing on phytoplankton abundance and water clarity. \$6,050.
- ENV-EF-0078. Simon, R., and **J.C. Makarewicz**. 1990. Great Lakes Research Consortium. Concentration and metabolism of pesticides at the air-water interface of Lake Ontario. \$20,000.
- ENV-EF-0077. **Buttner, J.K.** 1989. Miami Univ./Ohio. Propagation of wood frog tadpoles in the laboratory. \$250.
- ENV-EF-0076. **Buttner, J.K.** 1989. New York Sea Grant Institute. Represent New York at the Applied Aquaculture Workshop, Galway, Ireland. \$1,178.
- ENV-EF-0075. **Buttner, J.K.** 1989. New York Sea Grant Institute. Support for pond monitoring as required by NYSDEC permit. \$4,000.
- ENV-EF-0074. **Buttner, J.K.** 1989. America Friends Service Committee and Tribal Council. Instruct courses in aquaculture on St. Regis Indian Reservation. \$3,496.
- ENV-EF-0073. **Buttner, J.K.** 1989. SUNY Albany. Promotion of the Indonesian Program. \$2,500.
- ENV-EF-0072. **Buttner, J.K.** 1989. Eastman Kodak Company. Culture tanks and benthos samplers. \$4,500 donation.
- ENV-EF-0071. **Buttner, J.K.** 1989. Niagara River Anglers Association. Walleye culture in Niagara County. \$4,505.
- ENV-EF-0070. **Buttner, J.K.**, and **J.C. Makarewicz**. 1989. Research Foundation of SUNY. Research equipment in the aquatic sciences. \$23,364.
- ENV-EF-0069. **Haynes, J.M.**, and N.J. Frisch. 1989. Hudson River Foundation. Illustrated guide and slide set for Hudson River fishes. \$18,832.

- ENV-EF-0068. **Haynes, J.M.**, and **J.C. Makarewicz**. 1989. U.S. Army Corps of Engineers. Sediment core sampling, Olcott Harbor, NY. \$4,443.
- ENV-EF-0067. **Makarewicz, J.C.** 1989. Wayne County Soil and Water Conservation District. Environmental analysis of selected waters of Wayne County. \$98,972.
- ENV-EF-0066. **Makarewicz, J.C.** 1989. Great Lakes Research Consortium. Equipment grant. \$6,000
- ENV-EF-0065. **Makarewicz, J.C.** 1989. Great Lakes Research Consortium. Graduate student support. \$7,500.
- ENV-EF-0064. **Buttner, J.K.** 1988. NYS Department of Agriculture and Markets. Development of three aquaculture cooperatives to cage culture bullhead catfish. \$34,700.
- ENV-EF-0063. **Buttner, J.K.** 1988. Great Lakes Research Consortium. Culture techniques for walleye fingerlings in earthen ponds. \$1,000.
- ENV-EF-0062. **Buttner, J.K.**, and **J.C. Makarewicz**. 1988. Rochester Gas & Electric Company. Uptake and retention of contaminants by fish cultured on prepared diets in waters of Lake Ontario. \$27,000.
- ENV-EF-0061. **Buttner, J.K.**, and **J.C. Makarewicz**. 1988. NYS Science and Technology Foundation. Uptake and retention of contaminants by fish cultured on prepared diets in water of Lake Ontario. \$37,500.
- ENV-EF-0060. MacNeill, D.B., **J.K. Buttner**, **J.M. Haynes**, and D. Green. 1988, New York Sea Grant Institute/Cornell College of Agriculture and Life Sciences Applied Research Program. Preliminary evaluation of dispersal, growth, and survival of pond reared walleye fingerlings stocked into Lake Ontario waters. \$1,300.
- ENV-EF-0059. **Makarewicz, J.C.** 1988. U.S. Environmental Protection Agency. Evaluation of the phosphorus reduction plan in the offshore waters of Lakes Erie, Michigan and Huron, 1985. \$115,500.
- ENV-EF-0058. **Makarewicz, J.C.** 1988. Great Lakes Research Consortium. Travel funds, workshops, seed grants. \$32,500.
- ENV-EF-0057. **Makarewicz, J.C.** 1988. Woodward Clyde Consultants. Hudson River survey in preparation for the Halfmoon Co-generation Plant. \$15,000.
- ENV-EF-0056. Black, J., H. Sikka, and **J.K. Buttner**. 1987. Great Lakes Research Consortium. Carcinogenic response of brown bullheads to dietary benzopyrene. \$21,246.
- ENV-EF-0055. **Buttner, J.K.**, J. Spotila, and D. Cox. 1987. Great Lakes Research Consortium. Formation of 4-H aquaculture clubs on the Great Lakes. \$16,033.
- ENV-EF-0054. **Buttner, J.K.** 1987. SUNY College at Buffalo. Brown bullhead for toxicological studies. \$738.
- ENV-EF-0053. **Buttner, J.K.**, and **J.M. Haynes**. 1987. Research Foundation of SUNY. Research improvement funds to promote aquaculture capabilities on campus at SUNY Brockport. \$68,024.
- ENV-EF-0052. **Dilcher, R.C.**, and **J.C. Makarewicz**. 1987. National Science Foundation. Environmental impact analysis techniques for secondary schools. \$110,000.
- ENV-EF-0051. **Dilcher, R.C.**, and **J.C. Makarewicz**. 1987. NY Sea Grant Institute. Macrophyte development on Wautoma Shoals, Lake Ontario. \$7,000.

- ENV-EF-0050. **Haynes, J.M.**, and **J.K. Buttner**. 1987. U.S. Dept. of Education. Expanding existing freshwater educational facilities and capabilities on campus at SUNY Brockport. \$75,023.
- ENV-EF-0049. **Haynes, J.M.**, D.J. Stewart and R.G. Werner. 1987. Great Lakes Research Consortium. Dynamics of salmonine predation in Lake Ontario, 1983-88. \$11,028.
- ENV-EF-0048. **Haynes, J.M.** 1987. Great Lakes Research Consortium. Developing a trophic web model for the Lake Ontario salmonid fishery: Identifying basic and applied research needed to test the model. \$2,420.
- ENV-EF-0047. **Haynes, J.M.** 1987. Stone and Webster Engineering Corp. Attraction of fishes to the thermal plume at Somerset Station under two-pump operating conditions. \$33,118.
- ENV-EF-0046. **Makarewicz, J.C.** 1987. U.S. Environmental Protection Agency. Acid precipitation monitoring at Grand Isle, Olcott and Sodus Bay. \$56,700.
- ENV-EF-0045. **Makarewicz, J.C.** 1987. Monroe County Department of Health. Urban runoff: A watershed approach. \$32,000.
- ENV-EF-0044. **Buttner, J.K.** 1986. Research Foundation of SUNY. Construction of aquaculture research ponds. \$12,679.
- ENV-EF-0043. **Buttner, J.K.** 1986. Fred and Floy Wilmott Foundation. Matching funds for construction of aquaculture research ponds on campus. \$3,000.
- ENV-EF-0042. **Buttner, J.K.** 1986. Exxon Chemical Company. Geomembrane liners for aquaculture research ponds on campus. \$15,000 donation.
- ENV-EF-0041. **Buttner, J.K.** 1986. Great Lakes Research Consortium. Workshop to explore aquaculture potential in the Great Lakes. \$1,425.
- ENV-EF-0040. **Haynes, J.M.** 1986. NY State Electric and Gas Corp. Activity and survival of winter-impinged fish at Somerset Station. \$12,000.
- ENV-EF-0039. **Haynes, J.M.** 1986. Great Lakes Tomorrow, Inc. Decisions for the Great Lakes program. \$1,800.
- ENV-EF-0038. **Makarewicz, J.C.** 1986. U.S. Environmental Protection Agency. Chemical and biological processes of the nearshore of Lake Ontario. \$231,516.
- ENV-EF-0037. **Buttner, J.K.** 1985. Eastman Kodak Company. Development of a cost effective method to spawn, rear and maintain fathead minnows, *Pimephales promelas*. \$24,894.
- ENV-EF-0036. **Buttner, J.K.** 1985. NYS Dept. Agriculture and Markets. Aquaculture potential of the brown bullhead, *Ictalurus nebulosus*, cultured in cages suspended in ponds. \$12,197.
- ENV-EF-0035. **Buttner, J.K.** 1985. NY Sea Grant Institute. Cage culture of bullhead in Braddock Bay. \$1,245.
- ENV-EF-0034. **Buttner, J.K.** 1985. National Oceanic and Atmospheric Administration/Sea Grant. Developing an aquaculture production system to manipulate zooplankton populations and culture walleye fingerlings in earthen ponds. \$53,610.
- ENV-EF-0033. **Makarewicz, J.C.** 1985. Livingston County Health Department. Water quality and watershed analysis of Conesus Lake. \$62,330 (plus \$60,000 of NYS matching funds).
- ENV-EF-0032. **Haynes, J.M.** 1984. Ontario Ministry of Natural Resources/Ontario Charter Boat Association. Summer locations and temperatures of Pacific salmon in Western Lake Ontario. \$16,454.
- ENV-EF-0031. **Haynes, J.M.** 1984. New York State Electric and Gas Corp. Thermal ecology of Lake Ontario fishes. \$298,576.

- ENV-EF-0030. **Makarewicz, J.C.**, and S. Brandt. 1984. National Oceanic and Atmospheric Administration/Sea Grant. Dynamics of zooplankton in relation to forage fish stocks in Lake Ontario. \$22,477.
- ENV-EF-0029. **Makarewicz, J.C.** 1984. U.S. Environmental Protection Agency. Development of a computer retrieval system for phytoplankton data from the Great Lakes. \$18,333.
- ENV-EF-0028. **Makarewicz, J.C.** 1984. U.S. Environmental Protection Agency. Distribution and abundance of phytoplankton in relation to zooplankton stocks in Lakes Erie, Michigan and Huron, 1983. \$81,524.
- ENV-EF-0027. **Haynes, J.M.** 1983. Faculty Grant for the Improvement of Undergraduate Instruction. Photographic and illustrated key for selected New York fishes. \$2,500.
- ENV-EF-0026. **Haynes, J.M.** 1983. NY Sea Grant Institute. Recreation facility design and environmental impacts on the Great Lakes: A developmental proposal. \$9,923.
- ENV-EF-0025. **Makarewicz, J.C.** U.S. 1983. Department of Education. Development of an interdisciplinary course in Population Biology. \$1,500.
- ENV-EF-0024. **Makarewicz, J.C.** 1983. NYS Department of Transportation. Fishery survey of the Champlain and Erie sections of the NYS Barge Canal. \$42,840.
- ENV-EF-0023. **Makarewicz, J.C.** 1983. Research Foundation of the State of New York. Grant to SUNY Brockport to develop a Lake Ontario Research Consortium. \$20,000.
- ENV-EF-0022. **Makarewicz, J.C.** 1982. NYS Department of Transportation. Evaluation of dredging in the NYS Barge Canal (Erie Canal). \$1,000.
- ENV-EF-0021. **Haynes, J.M.**, and J.D. Winter. 1981. National Oceanic and Atmospheric Administration/Sea Grant. Movements, distribution and habitat preferences of Lake Ontario salmonids. \$97,620.
- ENV-EF-0020. **Makarewicz, J.C.** 1981. U.S. Army Corps of Engineers. Evaluation of potential dredging in Buffalo Harbor, Lake Erie, New York. \$45,132.
- ENV-EF-0019. **Haynes, J.M.** 1980. University Awards Program. Spawning movements of Lake Ontario brown trout using radiotelemetry. \$3,871.
- ENV-EF-0018. **Makarewicz, J.C.** 1979. U.S. Environmental Protection Agency. Multivariate analysis of fifty years of plankton data from water intake cribs at Chicago, Illinois. \$29,230.
- ENV-EF-0017. **Haynes, J.M.**, and **J.C. Makarewicz.** 1978. U.S. Army Corps of Engineers. Biological study - Cape Vincent Harbor, New York. \$10,425.
- ENV-EF-0016. **Makarewicz, J.C.**, and **J.M. Haynes.** 1978. U.S. Army Corps of Engineers. Biological study - Oak Orchard Harbor, New York. \$10,344.
- ENV-EF-0015. **Makarewicz, J.C.** 1978. National Oceanic and Atmospheric Administration. Long-term analysis of phytoplankton of Lake Michigan at Chicago. \$18,000.
- ENV-EF-0014. **Haines, T.A, R.H. Ellis,** and **J.C. Makarewicz.** 1977. U.S. Army Corps of Engineers. Spring movement, spawning activity and food habits of Irondequoit Bay fishes in the vicinity of the proposed dredging operations. \$5,100.
- ENV-EF-0013. **Makarewicz, J.C.** 1977 National Science Foundation. Instructional equipment for limnology. \$9,200.
- ENV-EF-0012. **Makarewicz, J.C.** 1976. Research Foundation of SUNY. Niche analysis of a zooplankton community. \$3,250.
- ENV-EF-0011. **Makarewicz, J.C.** 1976, Edmund Niles Huyck Preserve. Taxonomic identification of a rotifer found in Lake Myosotis, New York. \$770.

- ENV-EF-0010. **Makarewicz, J.C.**, and **T.A. Haines**. 1976. U.S. Army Corps of Engineers. Impact of opening Irondequoit Bay by dredging to Lake Ontario. \$13,865.
- ENV-EF-0009. **Makarewicz, J.C.** 1975. Research Foundation of SUNY. Generation times of zooplankton in eutrophic lakes. \$3,200.
- ENV-EF-0008. **Makarewicz, J.C.** 1975. Edmund Niles Huyck Preserve. Niche analysis of a zooplankton community. \$2,000.
- ENV-EF-0007. **Haines, T.A, R.H. Ellis**, and **J.C. Makarewicz**. 1974. NYS Division of Parks and Recreation. An ecological study of the Rochester-Lockport section of the NYS Barge Canal. \$56,022.
- ENV-EF-0006. **Dilcher, R.C.** 1972. National Science Foundation. Ecological training for school teachers. \$72,000.
- ENV-EF-0005. **Ellis, R.H.**, and **T.A Haines**. 1973. NYS Division of Parks and Recreation. An ecological study of the Rochester-Lockport section of the New York State Barge Canal. \$76,224.
- ENV-EF-0004. **Haines, T.A.** 1972. Union Carbide Corporation. Effects of hypolimnetic oxygenation of Attica Reservoir. \$72,000.
- ENV-EF-0003. **Damann, K.** 1971. National Science Foundation. Oxygenation of hypolimnetic lake waters. \$54,000.
- ENV-EF-0002. **Costa, R.R.** 1971. National Science Foundation. Equipment for updating the aquatic ecology program at Fancher Campus. \$64,000.
- ENV-EF-0001. **Kibby, H.** 1970. National Science Foundation. Student originated studies: A study of the New York State Barge Canal. \$13,000.