

## **Peter D.S. Morrison Curriculum Vitae**

### **Education and Work History**

#### **Education, Qualifications**

B.Sc. (with distinction) – Stanford University  
M.A. (Economics) – Carleton University  
Ph.D. (Zoology) – University of British Columbia  
French – Federal public service tests – E (reading), E (writing),  
C(oral interaction)

#### **Work History**

##### **2016 - present**

#### **Principal, EcoEcoAnalysis**

Providing consulting services that combine ecological and economic analysis for sustainability solutions. Projects include an analysis of options for integrated natural resource management in Canada, advice to Canadian think tanks and non-governmental organizations regarding effective conservation measures, and international training programs for environment statistics in support of the Sustainable Development Goals.

##### **2006 – 2016**

#### **Director, Office of the Auditor General of Canada**

Lead director and author for several chapters in the Reports of the Auditor General and of the Commissioner of the Environment and Sustainable Development. Topics included:

- Canada's commitments to reduce emissions of greenhouse gases;
- Atlantic offshore petroleum boards;
- federal programs for environmental monitoring;
- managing fisheries for sustainability; and
- surveillance of infectious diseases.

Most recent audit examined the federal support for sustainable communities, mainly through infrastructure programs for municipalities.

Led strategic planning exercises to identify possible audits for the Industry portfolio and more recently for the Commissioner of the Environment and Sustainable Development. Contributed scientific, economic, and information technology expertise to several other audits and studies, including to reports on biodiversity, environmental data, managing environmental risks, and environmental impact assessment.

Received the Auditor General's Award for Product Management Excellence in 2013.

##### **2004 – 2006**

#### **Assistant Director, Statistics Canada (executive interchange)**

Assistant director for a group of roughly 30 technical staff, responsible for administration and management, and for

overseeing several statistical products. Led, on behalf of Statistics Canada, an interdepartmental initiative to develop and implement a new set of national environmental indicators.

**1997 – 2004**

**Director, Office of the Auditor General of Canada**

Lead director and author for several chapters in the Reports of the Commissioner of the Environment and Sustainable Development. Topics included pesticides management, agriculture in the Great Lakes/St. Lawrence, performance measurement, interdepartmental co-ordination, and accounting for sustainable development.

Contributed scientific, economic and information technology expertise to several other audits and studies. Acted as informal and formal members of advisory committees for several audits. Co-designed and delivered course on the environment and sustainable development. Participated as an external auditor by providing scientific and management analysis input to the review of the World Heritage Centre for UNESCO in Paris. Led analysis of environmental issues for special examination of AECL.

**1994 – 1997**

**Associate, Resource Futures International**

Provided consulting services in the areas of regulatory design, environmental impact assessment, environmental protection, environmental and natural resource policy, economic analysis and information technologies.

**1989 – 1994**

**Senior systems ecologist, ESSA Technologies Ltd.**

Provided consulting services to government and industry clients in Canada and south-east Asia in the areas of resource analysis and management, resource economics, simulation modelling, expert systems, and environmental assessment. Established and managed new Ottawa office.

**1987 – 1989**

**Assistant professor, Environmental and Resource Studies Program, Trent University**

Developed and taught courses on forest management, environmental impact assessment, computer modelling in environmental studies, energy policy in Ontario, pesticide use, forest policy analysis, and theory and management of natural resources in Canada. Supervised honours students and advised graduate students.

**1984 – 1986**

**Resource analyst, Forest Economics and Policy Analysis Project, University of British Columbia**

Managed a subproject within the FEPA Project, a group set up to develop policy tools for strategic analysis of the Canadian forest sector. Provided technical and policy leadership during model development and evaluation. Coordinated with outside researchers and industry.

**1983 – 1984**            **Programmer/analyst, Forest Planning Systems**  
Designed and developed large computer programs for forestry applications.

**1983 – 1983**            **Research technician, Agriculture Canada Research Station**  
Designed and conducted field experiments on the biological control of weeds.

**Contact  
information**

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Home e-mail: [pmorrison3@sympatico.ca](mailto:pmorrison3@sympatico.ca)

**Publications and Reports**

**2019**

**Fahrig, L., V. Arroyo-Rodríguez, J.R. Bennett, V. Boucher-Lalonde, E. Cazetta, D.J. Currie, F. Eigenbrod, A.T. Ford, S.P. Harrison, J.A.G. Jaeger, N. Koper, A.E. Martin, J.-L. Martin, J.P. Metzger, P. Morrison, J.R. Rhodes, D.A. Saunders, D. Simberloff, A.C. Smith, L. Tischendorf, M. Vellend, and J.I. Watling. 2019.** Is habitat fragmentation bad for biodiversity? *Biological Conservation* 230: 179-186.

**McCune, J.L., and P. Morrison. 2019.** Conserving plant species at risk in Canada: land tenure, threats, and representation in federal programs. *Submitted for publication.*

**Morrison, P., A.M. Rous, I.M. Mulder, C.J. Hill, T. Prystay, H. Rosner-Katz, S.J. Cooke, J.R. Bennett. 2019.** A decision framework to improve outcomes of ecosystem restoration. *Submitted for publication.*

**2017**

**Midsummer Analytics. 2017.** Values and Benefits of Integrated Natural Resource Management. Final report submitted to the Council of Canadian Academies.

**2016**

**Commissioner of the Environment and Sustainable Development. 2016.** Federal Support for Sustainable Municipal Infrastructure. Report of the Commissioner of the Environment and Sustainable Development to the House of Commons. Ottawa.

**2014**

**Commissioner of the Environment and Sustainable Development. 2014.** Mitigating Climate Change Report of the Commissioner of the Environment and Sustainable Development to the House of Commons. Ottawa.

**2013**

**Kate Kooka, Peter Morrison, and Kimberley Leach. 2013.** Use of Environmental Assessment by the Canadian Offshore Petroleum Boards. IAIA13 Conference Proceedings. Impact

Assessment the Next Generation. 33rd Annual Meeting of the International Association for Impact Assessment. 13-16 May 2013, Calgary, Alberta.

**Office of the Auditor General of Canada and the United States Government Accountability Office. 2013.** Environmental Data: Resources and Options for Supreme Audit Institutions. Prepared for the Working Group on Environmental Auditing. International Organization of Supreme Audit Institutions.

## **2012**

**Commissioner of the Environment and Sustainable Development. 2012.** Atlantic Offshore Oil and Gas Activities. Report of the Commissioner of the Environment and Sustainable Development to the House of Commons. Ottawa.

## **2011**

**Commissioner of the Environment and Sustainable Development. 2011.** A Study of Environmental Monitoring. Report of the Commissioner of the Environment and Sustainable Development to the House of Commons. Ottawa.

**Commissioner of the Environment and Sustainable Development. 2011.** A Study of Managing Fisheries for Sustainability. Report of the Commissioner of the Environment and Sustainable Development to the House of Commons. Ottawa.

## **2009**

**Office of the Auditor General of Canada. 2009.** Canada Post Corporation – Special Examination Report. Report to the Board of Directors, Canada Post Corporation.

## **2008**

**Office of the Auditor General of Canada. 2008.** Surveillance of Infectious Diseases – Public Health Agency of Canada. Report of the Office of the Auditor General of Canada to the House of Commons. Ottawa.

## **2006**

**Office of the Auditor General of Canada. 2006.** Verification of the 2006 Health Indicators Reports. Report of the Office of the Auditor General of Canada to the House of Commons. Ottawa.

## **2005**

**Office of the Auditor General of Canada. 2005.** Transport Canada – Overseeing the National Airports System. Report of the Office of the Auditor General of Canada to the House of Commons. Ottawa.

**Statistics Canada. 2005.** Canadian Environmental Sustainability Indicators. Publication 16-251-XWE.

## **2003**

**Commissioner of the Environment and Sustainable Development. 2003.** Managing the Safety and Accessibility of Pesticides. Report of the Commissioner of the Environment and Sustainable Development to the House of Commons. Ottawa.

**Commissioner of the Environment and Sustainable Development. 2003.** Road Transportation in Urban Areas: Accountability for Reducing Greenhouse Gases. Report of the Commissioner of the Environment and Sustainable Development to the House of Commons. Ottawa.

## **2002**

**Morrison, P. 2002.** Full-Cost Accounting and Sustainable Transportation. Working paper prepared for the Commissioner of the Environment and Sustainable Development.

**Morrison, P. 2002.** Manure and Fertilizer Management in the Great Lakes-St. Lawrence River Basin. Paper presented to the Agricultural Institute of Canada Foundation Conference. April 29, 2002.

**Office of the Auditor General of Canada. 2002.** Atomic Energy of Canada Limited. Special Examination Report. Report to the Board of Directors of Atomic Energy of Canada Limited.

## **2001**

**Commissioner of the Environment and Sustainable Development. 2001.** Toward a Stewardship Economics in the Government of Canada: Monitoring the Progress of Federal Departments. Paper presented to the Canadian Society of Ecological Economics, Montreal.

**Commissioner of the Environment and Sustainable Development. 2001.** Overview and Recommendations. Great Lakes and St. Lawrence River Basin. Report of the Commissioner of the Environment and Sustainable Development to the House of Commons. Ottawa.

**Commissioner of the Environment and Sustainable Development. 2001.** Manure and Fertilizer Management. Great Lakes and St. Lawrence River Basin. Report of the Commissioner of the Environment and Sustainable Development to the House of Commons. Ottawa.

**Commissioner of the Environment and Sustainable Development. 2001.** Soil Erosion. Great Lakes and St. Lawrence River Basin. Report of the Commissioner of the Environment and Sustainable Development to the House of Commons. Ottawa.

**Commissioner of the Environment and Sustainable Development. 2001.** Environmental Impacts of Agricultural Policies and Programs. Great Lakes and St. Lawrence River Basin. Report of the Commissioner of the Environment and Sustainable Development to the House of Commons. Ottawa.

**Commissioner of the Environment and Sustainable Development. 2001.** Working Toward Environmental Sustainable Agriculture. Great Lakes and St. Lawrence River Basin. Report of the Commissioner of the Environment and Sustainable Development to the House of Commons. Ottawa.

## **2000**

**Commissioner of the Environment and Sustainable Development. 2000.** Partnerships for Sustainable Development – Overview. Report of the Commissioner of the Environment and Sustainable Development to the House of Commons. Ottawa.

**Commissioner of the Environment and Sustainable Development. 2000.** Working Together in the Federal Government. Report of the Commissioner of the Environment and Sustainable Development to the House of Commons. Ottawa.

## **1999**

**Commissioner of the Environment and Sustainable Development. 1999.** Greening Government Operations: Measuring Progress. Report of the Commissioner of the Environment and Sustainable Development to the House of Commons. Ottawa.

**Commissioner of the Environment and Sustainable Development. 1999.** Greening Policies and Programs: Supporting Sustainable Development Decisions. Report of the Commissioner of the Environment and Sustainable Development to the House of Commons. Ottawa.

**Morrison, P. 1999.** Culture, Museums, and the Federal Role in Sustainable Development. Presentation to the Canadian Museums Association Annual Conference, April 30, 1999. Toronto, Ontario.

**Morrison, P. 1999.** The Social Dimension of Sustainable Development. Paper presented to the Canadian Society of Ecological Economics, Regina, Saskatchewan.

### 1998

**Commissioner of the Environment and Sustainable Development. 1998.** Greening the Government of Canada – Strategies for Sustainable Development. Report of the Commissioner of the Environment and Sustainable Development to the House of Commons. Ottawa.

**Commissioner of the Environment and Sustainable Development. 1998.** Working Globally – Canada's International Environmental Commitments. Report of the Commissioner of the Environment and Sustainable Development to the House of Commons. Ottawa.

**Commissioner of the Environment and Sustainable Development. 1998.** Counting the Environment In. Report of the Commissioner of the Environment and Sustainable Development to the House of Commons. Ottawa.

**Commissioner of the Environment and Sustainable Development. 1998.** Performance Measurement for Sustainable Development Strategies. Report of the Commissioner of the Environment and Sustainable Development to the House of Commons. Ottawa.

**Morrison, P. 1998.** Visions of sustainability: Canada's new requirements for sustainable development strategies. Paper presented at the fifth biennial meeting of the International Society for Ecological Economics, Santiago, Chile, November 15-19, 1998.

### 1997

**Morrison, P. 1997.** Canada's Green Plan: an expression of the popular will? pp. 55-73 in A. Frizzell and J.H. Pammett (eds.) Shades of Green: Environmental Attitudes in Canada and Around the World. Carleton University Press, Ottawa.

**Morrison, P. 1997.** Vulnerability of forest-dependent systems in Ontario to climate change. Paper presented at the Canadian Society for Ecological Economics, Hamilton, Ontario, October 6-7, 1997.

**Morrison, P., and S. Peck. 1997.** Responding to climate change. In: Climate Variability, Atmospheric Change and Human Health. Conference Proceedings. Toronto, November 4-5, 1996. Pollution Probe, Toronto.

**Office of the Auditor General of Canada. 1997.** Report of the External Auditor to the Director-General of UNESCO on the Management Review of the World Heritage Convention.

**Resource Futures International. 1997.** 1,2-dichloroethane strategic options process: Phase 2 report. Prepared for Environment Canada.

**Resource Futures International. 1997.** A baseline study of grants, subsidies and taxes to identify barriers to sound environmental practices. Prepared for the Department of Indian Affairs and Northern Development.

**Resource Futures International. 1997.** Review of proposals to the power sector strategic options process issue table. Final report. Prepared for Environment Canada.

## **1996**

**Morrison, P. 1996.** Comments on Discussion Paper: Looking Ahead - Toward an R&D Agenda for EA in Canada. Prepared for the Canadian Environmental Assessment Agency.

**Morrison, P. 1996.** Managing biodiversity in developing countries. Prepared for Colloque international sur "L'économie du XXIème siècle".

**Morrison, P., V. Nishi, and J. Moffet. 1996.** Environmental risks associated with regulations under the Canadian Environmental Protection Act and the Fisheries Act. Prepared for the Enforcement Branch, Environment Canada.

**Resource Futures International. 1996.** 1,2-dichloroethane strategic options process: Phase 1 report. Prepared for Environment Canada.

**Resource Futures International. 1996.** An examination of The National Framework for Sustainable Transportation. Prepared for Transport Canada.

**Resource Futures International. 1996.** Marketing SIMSys - the sustainability information management system: Strategy. Prepared for Sustainability Branch, Environment Canada.

**Resource Futures International. 1996.** Socio-economic analysis of proposed control options for Royal Oak's Giant gold mine. Prepared for Environment Canada.

**Resource Futures International and Marbek Resource Consultants. 1996.** Screening federal government actions for potential effects on greenhouse gas emissions. Prepared for Global Air Issues Branch, Environment Canada.

**Resource Futures International, SNC-Lavalin, Informetrica, GlobalTox, Marbek Resource Consultants, and Sustainable Futures. 1996.** Evaluation of technical control options and management options for toxic releases from the fossil fuel-fired electric power sector. Phase 1 report. Prepared for Environment Canada.

**Resource Futures International, SNC-Lavalin, Informetrica, GlobalTox, Marbek Resource Consultants, and Sustainable Futures. 1996.** Evaluation of technical control options and management options for toxic releases from the fossil fuel-fired electric power sector. Phase 2 report. Prepared for Environment Canada.

**Resource Futures International, Torrie Smith Associates and Policy Assessment Corporation. 1996.** Reviewing the progress made under Canada's National Action Program on Climate Change. Interim Report. Prepared for the Canadian Council of Ministers of the Environment.

**Resource Futures International, Torrie Smith Associates and Policy Assessment Corporation. 1996.** Reviewing the progress made under Canada's National Action Program on

Climate Change. Final Report. Prepared for the Canadian Council of Ministers of the Environment.

## 1995

**Bregha, F., T Conway, J. Moffet, and P. Morrison. 1995.** Ecological tax reform: a discussion paper. Prepared for the National Round Table on Environment and Economy.

**Hyde, D and P. Morrison. 1995.** The ecosystem approach. Prepared for Environment Canada by Resource Futures International.

**Morrison, P. 1995.** Social impacts: challenges for prediction and monitoring. Paper presented to the Ontario Association for Impact Assessment Seminar, Effects Monitoring in Environmental Impact Assessment. February 18, 1995.

**Resource Futures International. 1995.** Rare and endangered species legislation: economic analysis. Prepared for the Canadian Endangered Species Coalition.

**Resource Futures International. 1995.** Feasibility study of new railway line construction in northeast region of Thailand: environmental and social impacts. Phase 1. Prepared with Canadian Pacific Consulting Services and National Engineering Consultants Co. for the Government of Thailand.

**Resource Futures International. 1995.** Feasibility study of new railway line construction in northeast region of Thailand: environmental and social impacts. Phase 2. Prepared With Canadian Pacific Consulting Services and National Engineering Consultants Co. for the Government of Thailand.

**Resource Futures International. 1995.** AQUAMIN Part 3 initiation workshop proceedings. Prepared for the AQUAMIN Secretariat.

**Resource Futures International and ARA Consulting Group. 1995.** Evaluation of Canada's Eco-Research Program: report on the deliberations of an expert panel. Prepared for the Eco-Research Program Evaluation Steering Committee.

**Resource Futures International and ESSA Technologies Ltd. 1995.** Socio-economic impact assessment guidance document. Prepared for Environment Canada.

**Robinson, D.C.E., C.J. Daniel, and P. Morrison. 1995.** Canopy gap models of forest succession: review of models and design proposal. Prepared for Parks Canada.

## 1994

**ESSA Technologies Ltd. 1994.** Benefits of environmental assessment. Prepared for the Canadian International Development Agency.

**ESSA Technologies Ltd. 1994.** Draft strategic plan for the Lake Abitibi Model Forest. Prepared for the Lake Abitibi Model Forest Steering Committee.

**ESSA Technologies Ltd. 1994.** Development of computerized systems for EIA: Knowledge base working report. Prepared for the Asian Development Bank.

**ESSA Technologies Ltd. and Resource Futures International. 1994.** Practitioner's handbook on the assessment of cumulative environmental effects: draft sections. Prepared for the Federal Environmental Assessment Review Office.



**ESSA Technologies Ltd. and Resource Futures International. 1994.** Generic guidelines for environmental assessment reports. Draft for discussion. Prepared for the Federal Environmental Assessment and Review Office and Natural Resources Canada.

**ESSA Environmental and Social Systems Analysts Ltd. and M.H. Fortin. 1994.** Handbook for the identification and valuation of the direct benefits of water quality improvements in Ontario watersheds. Prepared for Economic Services Branch, Ontario Ministry of Environment and Energy.

**ESSA Environmental and Social Systems Analysts Ltd. and Hickling Corporation. 1994.** An economic evaluation of integrating forestry and wildlife objectives within the boreal forests of Saskatchewan. Prepared by ESSA Ltd. and Hickling Corporation for Forestry Canada.

**Morrison, P. 1994.** Helping practitioners: decision support tools for cumulative effects assessment. Paper presented at "Cumulative Effects Assessment in Canada: From Concept to Practice", April 13-14, 1994, Calgary.

**Morrison, P. 1994.** Techniques for cumulative environmental effects assessment: choices, gaps and opportunities. Paper presented at the 14th annual meeting of the International Association for Impact Assessment, Quebec City, June 14-18, 1994.

**Morrison, P. 1994.** Valuing changes in ecosystem health. Paper presented at the First International Symposium on Ecosystem Health and Medicine, Ottawa, June 19-23, 1994.

**Resource Futures International. 1994.** Data and policy formulation: improving the use of data by decision makers. Prepared for the Environmental Assessment and Compliance Division, Canadian International Development Agency.

**Resource Futures International. 1994.** Valuing the environment: core data and environmental assessment of economic activities. Prepared for the Environmental Assessment and Compliance Division, Canadian International Development Agency.

## **1993**

**ESSA Environmental and Social Systems Analysts Ltd. 1993.** Implementation monitoring plan for PWC-SCREENER environmental screening system. Prepared by ESSA Ltd., Ottawa, Ontario, for Public Works Canada. 14 pp.

**ESSA Environmental and, Social Systems Analysts Ltd. 1993.** Mitigation Selection System: design document. Prepared by ESSA Ltd. for Canadian Parks Service, Environment Canada. 53 pp.

**ESSA Environmental and Social Systems Analysts Ltd. 1993.** Overview of the environmental and socioeconomic-economic implications of hamburger production and consumption. Prepared by ESSA Ltd., Richmond Hill, Ontario, for Environment Canada, State of the Environment Reporting. 69 pp.

**ESSA Environmental and Social Systems Analysts Ltd. 1993.** Procedures manual for PWC-SCREENER environmental screening system. Prepared by ESSA Ltd., Ottawa, Ontario, for Public Works Canada. 43 pp.

**Fortin, M., and P. Morrison. 1993.** Overview of economic tools for resource management studies. Prepared for the Ontario Old Growth Policy Advisory Committee.

## **1992**

**Blancher, P.J., D.K. McNicol, R.K. Ross, C.H.R. Wedeles, and P. Morrison. 1992.** Towards a model of acidification effects on waterfowl in Eastern Canada. *Environ. Pollut.* 78: 57-63.

**ESSA Environmental and Social Systems Analysts Ltd. 1992.** A project screening system for the Trent-Severn. Waterways: prototype description and future implementation. Prepared by ESSA Ltd., Ottawa, Ontario for Trent-Severn Waterway, Canadian Parks Service, Environment Canada, 77 pp.

**ESSA Environmental and Social Systems Analysts Ltd. 1992.** Editeur de base de connaissances version 3.0: guide de l'utilisateur. Prepared by ESSA Ltd., Richmond Hill, Ontario, for Public Works Canada, 43 pp.

**ESSA Environmental and Social Systems Analysts Ltd. 1992.** ENVED: Editeur d'inventaire écologique, Version 3.8. Prepared by ESSA Ltd., Vancouver, B.C. for Public Works Canada.

**ESSA Environmental and Social Systems Analysts Ltd. 1992.** ENVED: Editeur d'inventaire écologique, Version 3.7. Prepared by ESSA Ltd., Vancouver, B.C. for Public Works Canada.

**ESSA Environmental and Social Systems Analysts Ltd. 1992.** Knowledge base description for CPS-SCREENER: Knowledge base version CPS007. Prepared by ESSA Ltd., Vancouver, B.C. for Canadian Parks Service, Environment Canada, Ottawa, 113. pp.

**ESSA Environmental and Social Systems Analysts Ltd. 1992.** Preliminary SCREENER Version 4 design document. Prepared by ESSA Ltd., Vancouver, B.C. for SCREENER Users Group, 70 pp.

**ESSA Environmental and Social Systems Analysts Ltd. 1992.** SCREENER: guide de l'utilisateur - Travaux publics Canada, Version 3.6. Prepared by ESSA Ltd., Vancouver, B.C. for Public Works Canada.

**ESSA Environmental and Social Systems Analysts Ltd. 1992.** SCREENER: système d'examen environnemental préalable: version 3.7. Prepared by ESSA Ltd., Vancouver, B.C. for Public Works Canada.

**Wedeles, C.H.R. and P.D.S. Morrison. 1992.** Action plan for the development of recreational indicators for the "State of Canada's Forests" reports. Prepared by ESSA Ltd., Richmond Hill, Ont. for Forestry Canada, 11 pp.

## **1991**

**ESSA Environmental and Social Systems Analysts Ltd. 1991.** A project screening system for the Trent-Severn Waterway: prototype description and future implementation. Draft prepared for Trent-Severn Waterway, Canadian Parks Service, Environment Canada, 79 pp.

**ESSA Environmental and Social Systems Analysts Ltd. 1991.** PWC-SCREENER: An adaptation of the SCREENER environmental screening system for Public Works Canada – design document. Prepared for Public Works Canada, 109 pp.

**Greig, L., P. Bunnell, P. Morrison, and C. Wedeles. 1991.** Effects monitoring at the Darlington Nuclear Generating Station: post-operational workshop report. Prepared for Ontario Hydro, Environmental Studies and Assessment Department, 38 pp.

**Greig, L., P. Bunnell, P. Morrison, and C. Wedeles. 1991.** Post-operational effects monitoring at the Darlington Nuclear Generating Station: workshop report. Prepared for Ontario Hydro, Environmental Studies and Assessment Department, 44 pp.

**Marmorek, D.R., D.P. Bernard, P.D.S. Morrison, and C.H.R. Wedeles. 1991.** Northern biosphere observation and modeling experiment (NBIOME): draft science plan. Prepared by ESSA Ltd., Vancouver, B.C. for NBIOME Science Steering Committee, 52 pp.

**Martnerek, D.R., D.P. Bernard, P.D.S. Morrison, and C.H.R. Wedeles. 1991.** Northern biosphere observation and modeling experiment (NBIOME): summary workshop report. Prepared by ESSA Ltd., Vancouver, B.C. for NBIOME Science Steering Committee, 20 pp.

**Morrison, P. and W.A. Kurz. 1991.** Forestry Canada aspen and mixedwood decision support systems: workshop briefing materials. Prepared by ESSA Ltd., Ottawa, ON. and Vancouver, B.C. for Forestry, Canada, Northwest Region, 24 pp.

**Morrison, P.D.S. and W.A. Kurz. 1991.** Forestry Canada aspen and mixedwood decision support systems: workshop report. Prepared by ESSA Ltd., Vancouver, B.C. for Forestry Canada, Northwest Region, Edmonton, Alberta, 72 pp.

**Morrison, P. and C. Murray. 1991.** Scoping workshop for PWC/INAC SCREENER system: workshop report. Prepared by ESSA Ltd., Ottawa, Ont. and Victoria, B.C. for DIAND Technical Services, Hull, Quebec, 50 pp.

## **1990**

**Bernard, D.P., C. Perrin, and P. Morrison. 1990.** Air quality criteria for oxides of nitrogen. Chapter 11: Effects of nitrogen oxides on vegetation and ecosystems: Section 11.12 Aquatic Effects. Prepared for Environmental Protection Agency, 77 pp.

**ESSA Environmental and Social Systems Analysts Ltd. 1990.** A bird habitat vulnerability assessment system: system design and prototype documentation. Prepared for Land Use and Environmental Planning Department, Ontario Hydro, 41 pp. and appendix.

**ESSA Environmental and Social Systems Analysts Ltd. 1990.** The knowledge base for PARKS-SCREENER. Prepared for Canadian Parks Service, Environment Canada, 113 pp.

**ESSA Environmental and Social Systems Analysts Ltd. 1990.** The knowledge base editor: user's guide. Prepared for Directorate Conservation and Environment, National Defence, 36 pp.

**ESSA Environmental and Social Systems Analysts Ltd. 1990.** The knowledge base for Waterways Development Environmental Screening System. Prepared for Waterways Development, Canadian Coast Guard, 96 pp.

**ESSA Environmental and Social Systems Analysts Ltd. 1990.** The knowledge base editor user's guide. Prepared for Waterways Development, Canadian Coast Guard, 36 pp.

**ESSA Environmental and Social Systems Analysts Ltd. 1990.** Workshop on natural capital. Prepared for Canadian Environmental Assessment Research Council, 25 pp. and appendices.

**Morrison, P.D. and R.A. Muller. 1990.** Witness statement no. 7: Economics, environmental assessment and forest management in Ontario. Filed on behalf of Forests for Tomorrow, a coalition of The Botany Conservation Group of, the University of Toronto, The Federation of Ontario Naturalists, The Sierra Club of Ontario, The Temiskaming Environmental Action Committee, and The Wildlands League. 211 pp.

**Sutherland, G.D., P.D.S. Morrison, R.R. Everitt, and T.M. Webb. 1990.** CAESAR computer-aided environmental screening and review system. Design document prepared for Directorate Conservation and Environment, National Defence, 94 pp.

**Sutherland, G.D., J. Korman, T.M. Webb, and P.D.S. Morrison. 1990.** Waterways development - SCREENER. An adaptation of the SCREENER environmental screening system for Waterways Development: Design document. Prepared for Waterways Development, 48 pp.

**Webb, T.M., P. D.S. Morrison, and G.D. Sutherland. 1990.** PARKS-SCREENER: An adaptation of the SCREENER environmental screening system for the Canadian Parks Service. Design document prepared for Canadian Parks Service, 66 pp.

**Wedeles, C.H.R., C. Tyroler, and P.D.S. Morrison. 1990.** A review of black bear models. Prepared for Wildlife Branch, Ontario Ministry of Natural Resources, 90 pp.

**Wedeles, C.H.R., P.D.S. Morrison, and M. Rose. 1990.** A review of simulation modeling and its potential application at Elk Island National Park. Prepared for Canadian Parks Service, 33 pp.

#### **1989**

**Marmorek, D.P., P. Morrison, D.P. Bernard, and L.A. Greig. 1989.** A preliminary framework for determining critical loads for nitrogen. A workshop report prepared for the Office of Environmental Processes and Effects Research, EPA, Washington, D.C.

**Morrison, P. 1989.** Conceptual design for a cell conversion expert system. Prepared for the Land Use and Environmental Planning Department, Ontario Hydro, 51 pp.

**Morrison P.D., P.A.M. Phillips, and G. Priddle. 1989.** Environmental Impact Assessment in Hinterland Areas. Course materials for EA4110. Lakehead/Waterloo Distance Education Projects.

#### **1988-1984**

**Morrison, P. and A. Muller. 1988.** Economics, environmental assessment, and forest management in Ontario. Prepared for the Federation of Ontario Naturalists, 251 pp. and appendix.

**Morrison, P.D.S. 1987.** Host plant variation and population limitation of two introduced insects. Ph.D. Thesis, Department of Zoology, University of British Columbia, 222 pp.

**Morrison, P.D. and, L. Wilimovsky. 1987.** Estimating haul distances. In: D.H. Williams (ed.). The Economic Stock of Timber in the Coastal Region of British Columbia: Technical Appendices. Forest Economics and Policy Analysis Project, University of British Columbia, Vancouver, B.C. Information Report 86-11 (11), pp. 37-43.

**Morrison, P.D. and D.H. Williams. 1987.** The distribution of slopes in British Columbia. In: D.H. Williams (ed.). The Economic Stock of Timber in the Coastal Region of British Columbia: Technical Appendices. Forest Economics and Policy Analysis Project, University of British Columbia, Vancouver, B.C. Information Report 86-11 (11), pp. 23-36.

**Uhler, R.S. and P.D. Morrison. 1986.** Utilization Standards and Economic Efficiency in British Columbia Forests. Forest Economics and Policy Analysis Project, University of British Columbia, Vancouver, B.C. Information Report 86-1.

**Morrison, P. D. 1985.** Book review of "Green gold: the forest industry in British Columbia" by Patricia Marchak. B.C. Studies 65: 69-70.

**Morrison, P.D., R. Gasson, G.W. Armstrong, and D.H. Williams. 1985.** The Recovery Cost of the Merchantable Timber in Coastal British Columbia. Forest Economics and Policy Analysis Project. University of British Columbia, Vancouver, B.C. Information Report 85-8.

**Williams, D.H. and P.D. Morrison. 1985.** An economic timber supply model of coastal British Columbia. In: Proceedings of The Third North American International Institute for Applied Systems Analysis Network Meeting. (March 21-23, 1985. Victoria, B.C.) Forest Economics and Policy Analysis Project, University of British Columbia, Vancouver, B.C., pp. 15-25.

**Morrison, P.D. 1984.** Evaluating the Effectiveness of *Urophora affinis* as a Control Agent for Diffuse and Spotted Knapweed. Bulletin 1315. Plant and Soil Science Department and Cooperative Extension Service, Montana State University. Bozeman, Montana.

**Pearse, P.H., D.H. Williams, D.L. Booth, J.M. Fullerton, and P.D. Morrison. 1984.** Developing a system for analyzing Canada's forest economy. In: Policy Analysis for Forestry Development. Volume II. Proceedings of the International Conference (August 27-31, 1984. Thessaloniki, Greece). I.U.F.R.O., Thessaloniki, pp. 379-395.